NIKKEN

NC TOTAL TOOLING SYSTEM



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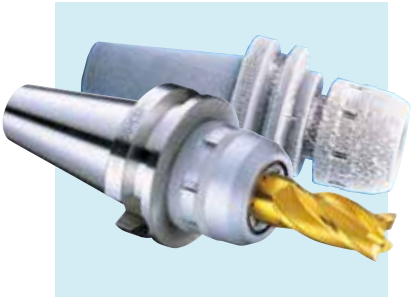
NIKKEN KOSAKUSHO WORKS, LTD.
CAT.NO.303K

NIKKEN's Proposal for Improved Quality and Productivity.

Total management of M/C manufacturing methods & technologies.



HUMANWARE

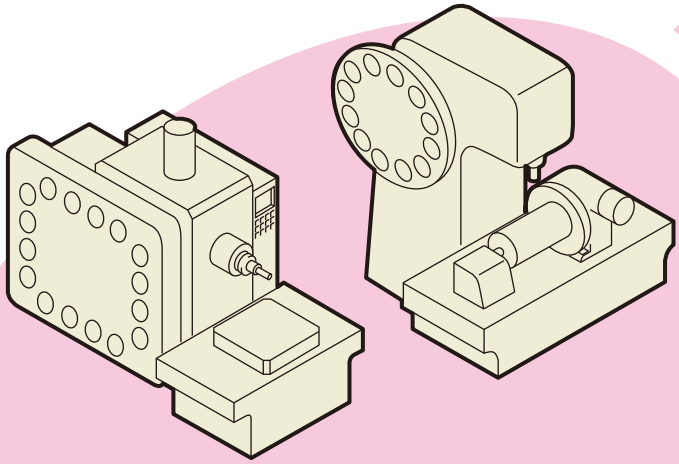
The effective utilization of M/C depends upon the insight and skill of shop floor people. Harmonization in the selection of machine, tooling, fixtures, peripherals, cutting tools under a coordinated shop floor management is the key to success.



COMBAT Z DRILL
☞ P.295



REAMER SERIES
☞ P.293

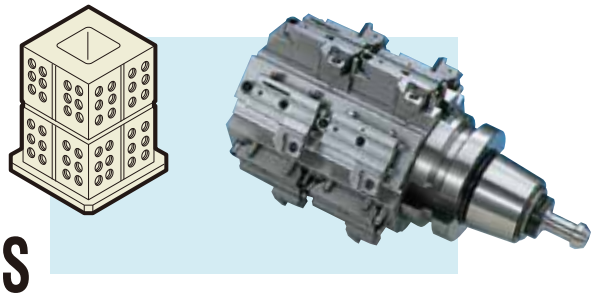


M/C OFFERS INVALUABLE OPPORTUNITIES FOR AUTOMATED, UNATTENDED MACHINING, when proper tooling, work holding and fixtures technologies are applied all in HARMONY.

CUTTING TOOLS

Relatively simple tools like drills and face mills also need careful attention for stable and effective swarf making. For instance, high speed steel tools can be more effective than carbide tools with certain work pieces and materials.

For another instance, why not a reamer for inspection/proof after boring?



FIXTURES

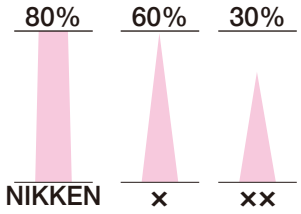
Work holding fixtures and power clamping systems for a variety of large or small batch work pieces.

Well designed fixtures can achieve cost effective parts manufacture. Fixtures (as shown above) effectively reduce ATC operations and drastically reduce cycle time.

TOOLING

MORE THAN 80% TAPER CONTACT is needed for this vital linkage between machine and workpiece. ;

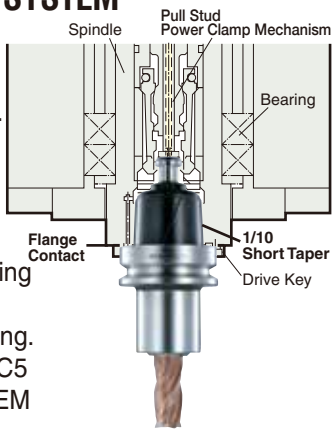
① NIKKEN holders protect the spindle. (They eliminate "dance" in the spindle.)



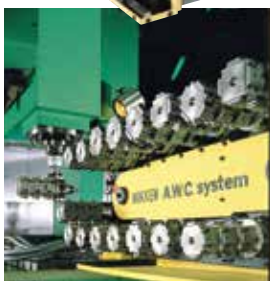
② NIKKEN milling chucks are SUB-ZERO TEMPERATURE (-90℃) TREATED for stable particle composition : Heat treated to HRC60.

The Next Generation Tool Interface NC5 TOOLING SYSTEM ☞ P.229

This newly developed Tool Interface featured. A Double Contact 1/10 Short Taper for improved High Speed & High Precision Machining and High Stock Removal Machining. Please refer to NC5 TOOLING SYSTEM catalogue.







PERIPHERALS

AUTOMATIC WORK CHANGER
Operator-friendly AWC system for vertical machining centres.

CNC ROTARY TABLES
Precision worm screw made of solid tungsten carbide drives hardened and ionnitrided worm wheel made of steel.
THE ONE AND ONLY SOLUTION FOR ELIMINATING SPOT WEAR.



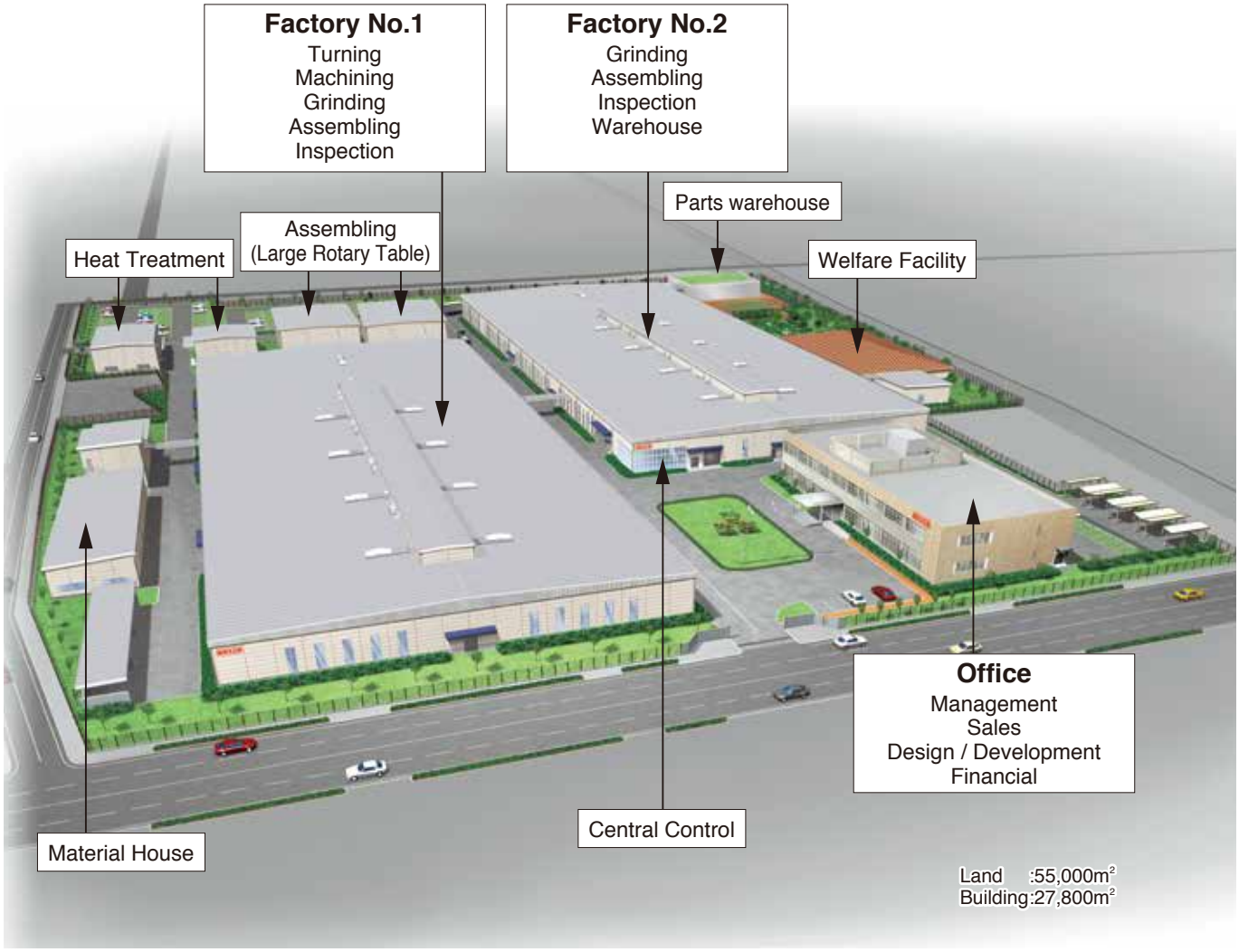
KOKORO = Human Heart

Our company's name, "NIKKEN," is derived from our desire to "always maintain the willingness to study patiently on a daily basis and contribute to future industry with technology and ideas."
Pursuing the development and production of tools for **50** years, we have developed peripheral instruments such as NC tooling systems, reamers, CNC rotary tables and controllers (NIKKEN-α21 series), etc. conforming to customers' demands.
Today's effort and study bear tomorrow's fruits.
NIKKEN wishes to provide you with original products of the highest quality founded in **everyday study and research.**



OSAKA·DAITO NEW OFFICE & FACTORY
LAND:55,000m²
BUILDING:27,000m²

OSAKA·DAITO Office & Factory

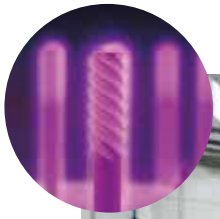


Carbonizing & Sub-Zero Treatment

NIKKEN is the only tooling product manufacturer which performs sub-zero treatment for tooling. This refers to a technique where -90 deg. ultra-low-temperature processing is performed after carbonizing and quenching in order to eliminate the residual austenite and to form 100% martensite compositions to prevent deterioration over time. This technique has been applied for block gauges and for bearings of the highest grade in the past. It is an example of how **NIKKEN** pays attention to those aspects which are often hidden from view and how we put our hearts and souls into each and every tooling product.









Ion Nitriding

Ion nitriding refers to a nitriding process where glow discharges are generated in a vacuum of a nitrogen-mixed gas atmosphere to heat the workpieces at a low temperature of 450 deg. while at the same time nitriding them by a sputtering action. This processing improves both the wear resistance and sliding performance.(It reduces the surface friction coefficient.)The experience and know-how of ion nitriding have been utilized in a large number of **NIKKEN**'s products, including worm wheels for CNC Rotary Tables and Tough-Cut Skill Reamers.



NC Lathe Line

NIKKEN Oil Jetter System and **Combat Z Drill** ☞**P.295** resolved the problems from the cooling of the cutting edge and the swarf removal, then, night time un-manned operation could be done.

M/C Line

The M/Cs with **3Lock** spindle and **NC5** spindle are working with high accuracy and high productivity through the night.

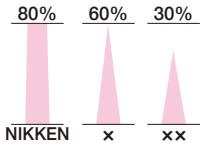




Tool Grinding Line

More than 80% Taper Contact is needed for this vital linkage between M/C and workpiece.

NIKKEN holders protect the spindle.
(They eliminate"dance"in the spindle.)





Reamer Grinding Line

Reamer grinding line to seek the ultimate unmanned operation with high accuracy and high productivity.



RADICAL MILL REAMER



CNC Rotary Table Assembling Line

NIKKEN builds the most rigid, precise and durable CNC Rotary Table for the worldwide manufacturing market.

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NIKKEN is keeping the manufacturing not only the quality, but also the safety in mind.
Please be careful for the content maked ⚠. e.g. ☞ P.290 CATION

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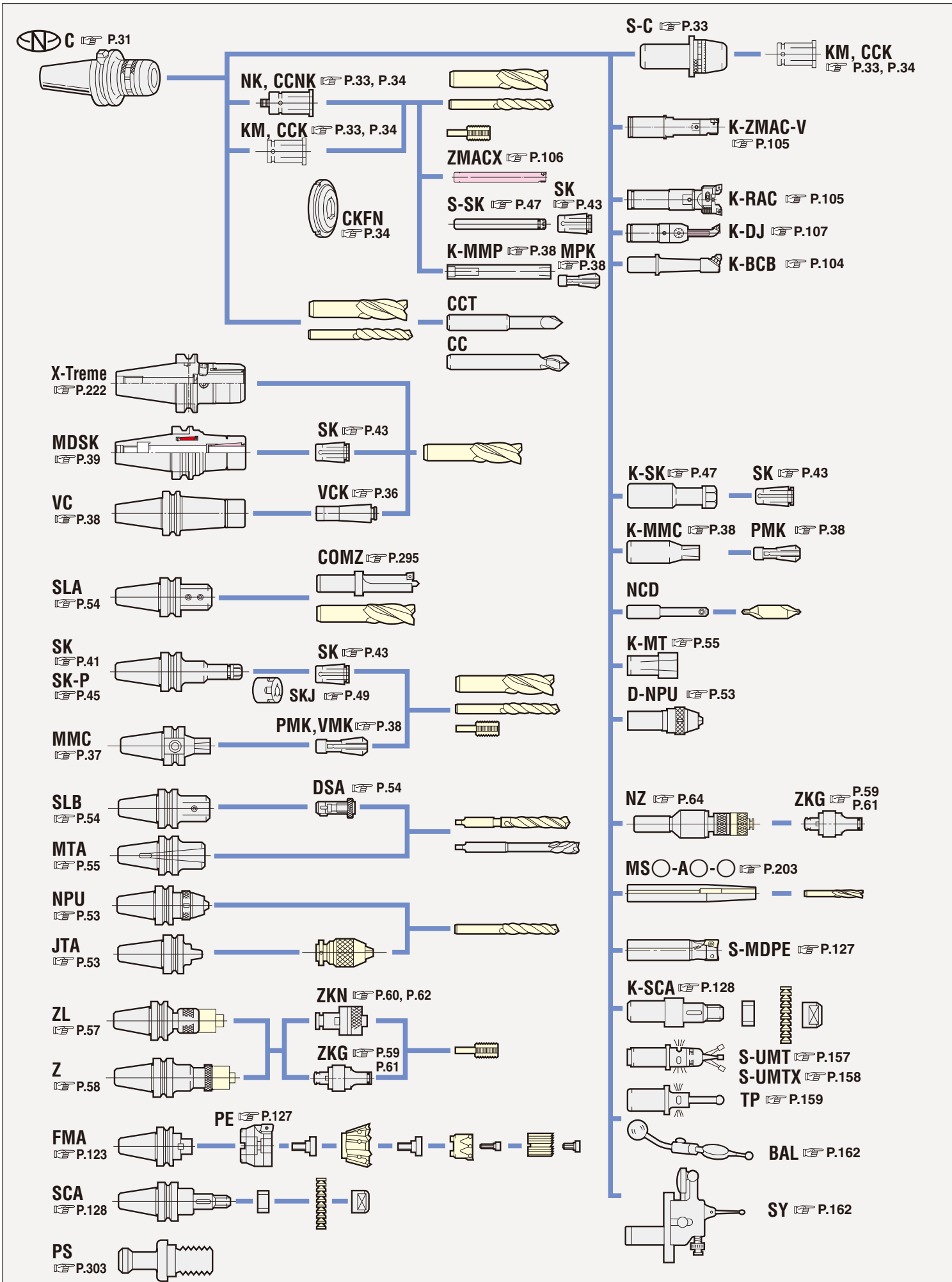
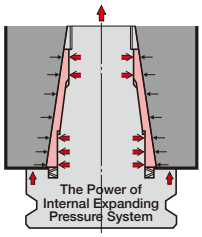
NIKKEN NC TOOLING SYSTEM



NEXT GENERATION TOOL INTERFACE



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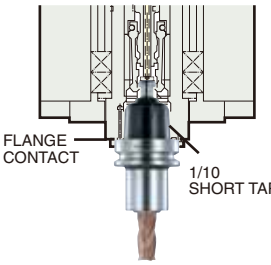
2LOCK SYSTEM ☞P.189



NC5 TOOLING SYSTEM ☞P.229

ISO•DIN/CAT

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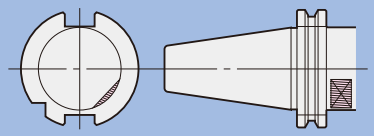

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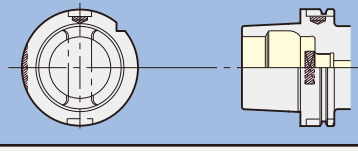
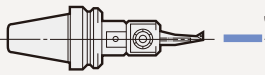


DJ ☞P.99



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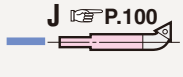

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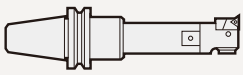
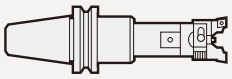
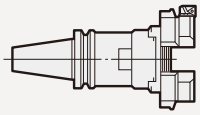


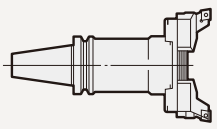
RAC ☞P.71



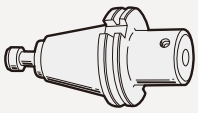
BAC-V ☞P.91



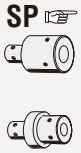
RAC ☞P.81



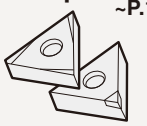
Q HOLDER ☞P.101



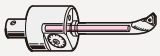
SP ☞P.102



Insert Tip ☞P.119 ~P.121



DJ ☞P.99



ZMAC-V ☞P.87



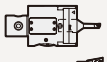
BCB ☞P.104



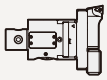
RAC ☞P.79



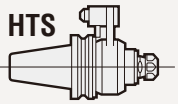
e-MAC ☞P.109



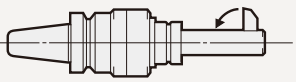
e-MACW ☞P.110



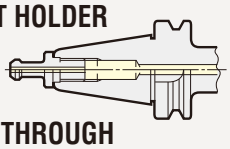
NX, PX, HTS ☞P.137



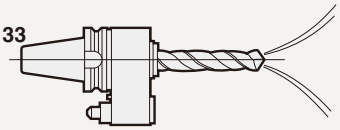
AF ☞P.149



CENTRE THROUGH COOLANT HOLDER ☞P.129



MO ☞P.133



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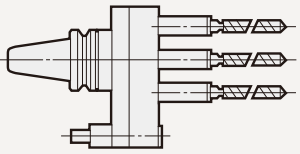
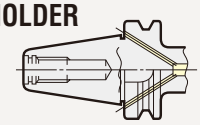
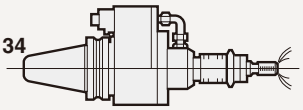


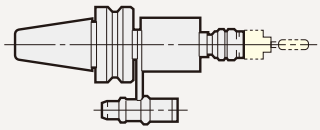
FLANGE THROUGH COOLANT HOLDER ☞P.131



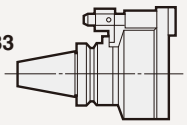
OZL ☞P.134



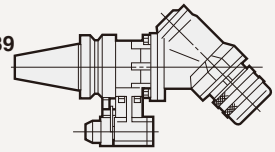
ZR ☞P.64



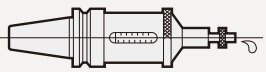
CLE ☞P.183



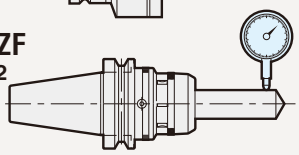
AH ☞P.139



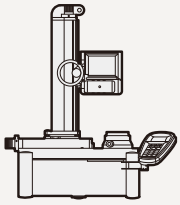
ZP ☞P.183



CZF, SZF ☞P.182

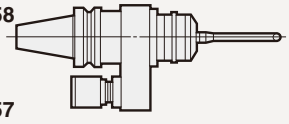


E ☞P.165

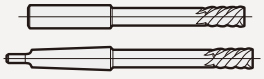


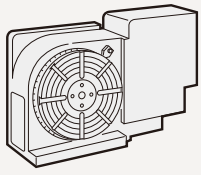
UMTX ☞P.158

UMT UMS ☞P.157

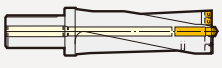


REAMER ☞P.293

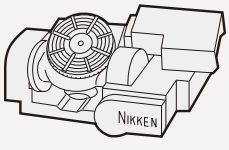




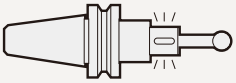
COMBAT Z DRILL ☞P.295



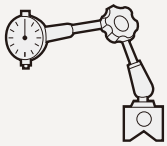
CNC ☞P.299



TP ☞P.159



UDS ☞P.160



HP ☞P.161



CLP ☞P.303

Spanner ☞P.48
GH Handle ☞P.48

NIKKEN "ANNIVERSARY" type

MULTI LOCK MILLING CHUCK

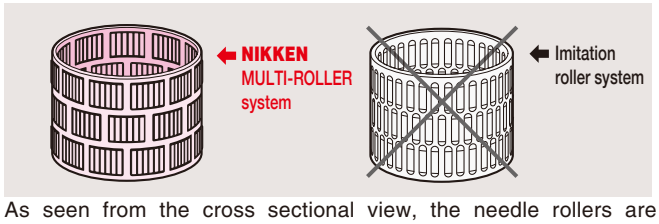
It has been 55 years since NIKKEN developed the MULTI-LOCK MILLING CHUCK,
NIKKEN's technology has developed the new generation universal chuck.
We call this MULTI -LOCK MILLING CHUCK "ANNIVERSARY"type. 松本政一



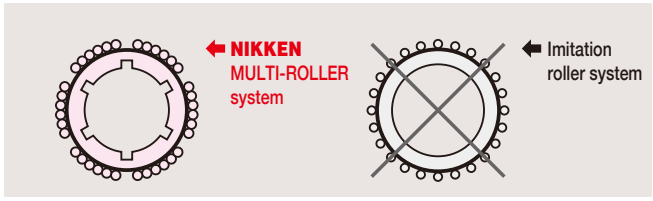
Sub-zero Treatment
NIKKEN Toolings are all subjected to ultra-low temperature treatment of -90˚C after carburizing, as shown. This treatment removes residual austenite to prevent from deformation for many years. Thus all of our NIKKEN toolings are produced one by one with greatest possible care of NIKKEN spirits.

1 Chucking Torque and Durability

All the NIKKEN MULTI-LOCK Milling Chucks incorporate the multi-roller system including **140% more needle rollers** than the other imitations. Besides, the retainer is not made of phosphor bronze but of special steel which will never break.



As seen from the cross sectional view, the needle rollers are arranged in perfect order with a dense production, but they are arranged to be scattered in the imitations.



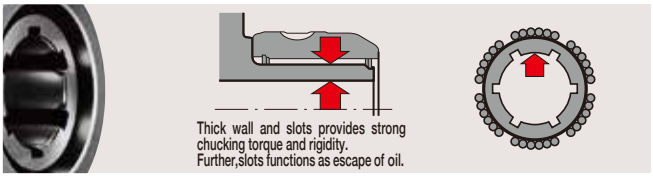
The larger quantity of needle rollers enables the moving of the same load with a small force and less damage on the bearing surface, thus providing a stronger chucking torque without creating even rolling when tightening.

2 Rigidity and Chucking Torque

Internal slots together with thickened wall of chuck body ensure no distortion even at heavier milling. Thus, smooth milling work is attained without the vibration or slipping of end mill.

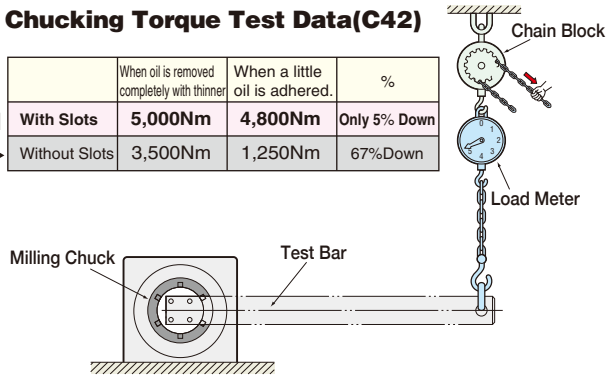
Effects of Internal Slots

Thanks to internal slots, even if oil remains on the end mill shank, there is no decreasing of chucking torque. In case of imitations without slots, chucking torque is largely reduced by oil, causing the shank to slip down.



Chucking Torque Test Data(C42)

		When oil is removed completely with thinner	When a little oil is adhered.	%
NIKKEN	With Slots	5,000Nm	4,800Nm	Only 5% Down
Others ➡	Without Slots	3,500Nm	1,250Nm	67%Down



MULTI LOCK MILLING CHUCK P.31

Same Appearance, but a Remarkable Improvement can be found when cutting.



The cutting chips show us the actual machining capability

Quiet, high speed heavy milling



Stable finishing



3 New Clamping at Root & Anti-Vibration Mechanism

Cutting Data **HSS** Endmill·**Carbide** Endmill

CHUCK	ENDMILL	CUTTING CONDITION	Ad×Rd
BT50-C32-90	**HSS** Coating 32Φ4t	V 38m/min S 380min^{-1} F 152mm/min	S55C 60mm OIL 12mm
BT50-C42-95	**HSS** Roughing 42Φ 45Φ6t	V 30m/min S 210min^{-1} F 130mm/min	S55C 110mm OIL 20mm
BT50-C20-135 KM20-16	**Carbide** Coating 16Φ4t	V 176m/min S 3,500min^{-1} F 2,000mm/min	S55C 35mm 3mm
BT40-C25-70	**HSS** Coating 25Φ4t	V 38m/min S 480min^{-1} F 192mm/min	S55C 50mm OIL 8mm
BT40-C16-60	**Carbide** Coating 16Φ4t	V 200m/min S 4,000min^{-1} F 2,000mm/min	S55C 30mm 3mm
BT30-C12-55 KM12-10	**Carbide** Coating 10Φ4t	V 160m/min S 5,000min^{-1} F 2,000mm/min	S50C 15mm 3mm
BT30-C12-55	**HSS** Non Coating 12Φ4t	V 30m/min S 800min^{-1} F 250mm/min	S50C 18mm WATER 4mm
		V 228m/min S 6,000min^{-1} F 3,600mm/min	ALUMINIUM 20mm WATER 3mm

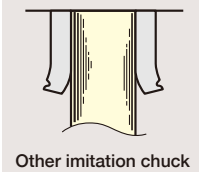
The End Mill can perform at 100% of their capability by using the cutting data. If cutting condition is exceeded, they may cause tool failure. For the M/C with ball guide mechanism, **MAJOR DREAM HOLDER** might perform better than MULTI-LOCK milling chuck.

4 Clamping at Nose Mechanism

Clamping at nose - key Condition for Precise Milling.

Surface Finish and Tool Life are decided by Clamping at Nose, Rigidity and Run-Out Accuracy. Only our mechanism performs real clamping at nose, never rivalled by imitations : ideal for heavy milling to fine finishing. Only the NIKKEN MULTI-LOCK Milling Chuck perfectly clamps even at 3mm from chuck nose.



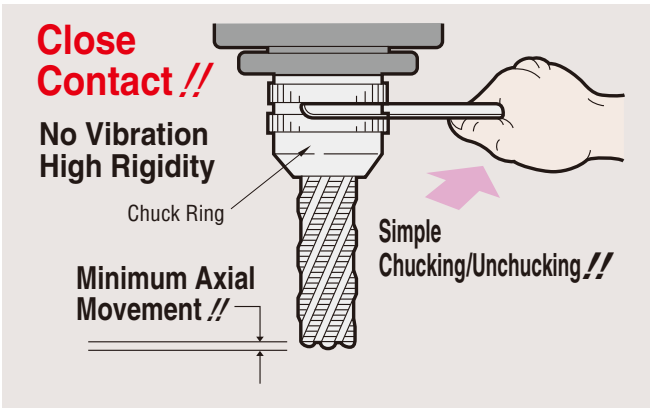


5 Stable Milling with Stopper

Easy for "anyone to attain a stable torque."

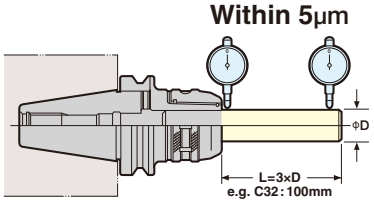
Wear of the bearing surface is only 1～2microns even after practical use of 4～5years owing to the use of 140% more needle rollers than imitations, the use of special material (steel) of NIKKEN own. and the know-how of hardening. The stopper is therefore located to the MULTI-LOCK Milling Chuck where the maximum efficiency of chucking torque is exerted. Tightening the chuck close to the flange face gives a sign of"MILLING OK"to ensure smooth, stable and reliable milling work.

(Important : Good production with Assurance!!)



6 Fine Run-Out Accuracy

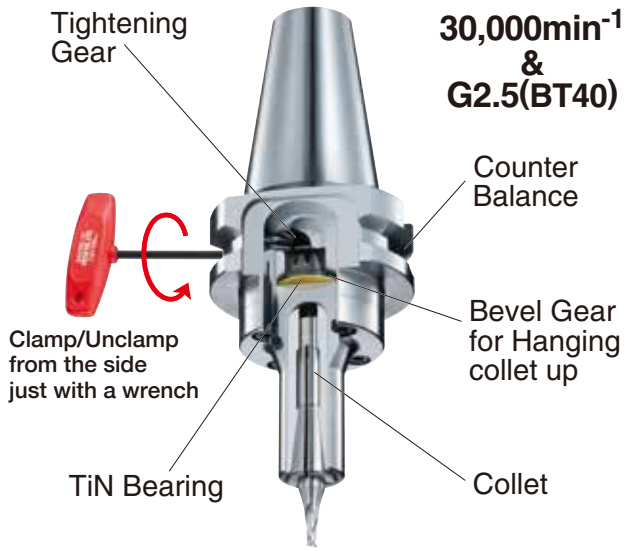
Only NIKKEN MULTI-LOCK Milling Chuck can obtain the run-out accuracy within 5μm(T. I. R)at the position 100mm apart from the nose.(C32 Style)



NIKKEN MINI-MINI CHUCK ADVANCED ALPHA NEW PAT. P. 37

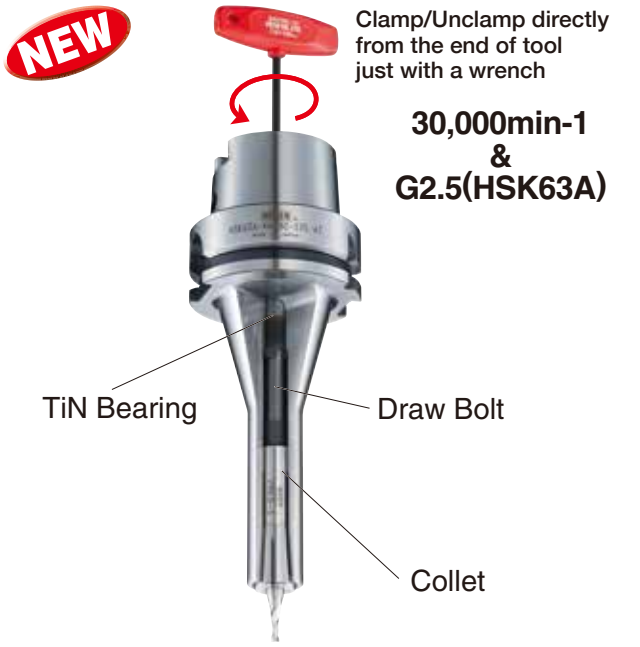
High Speed·High Precision
Best Chuck for Small Diameter Cutting Tool

Standard Type



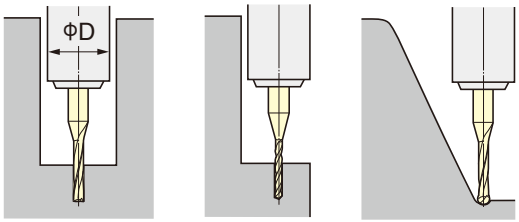
Direct Screw Type

Please add "**-AT** " at the end of Code No. **e.g. HSK63A-MMC8C-107-AT**

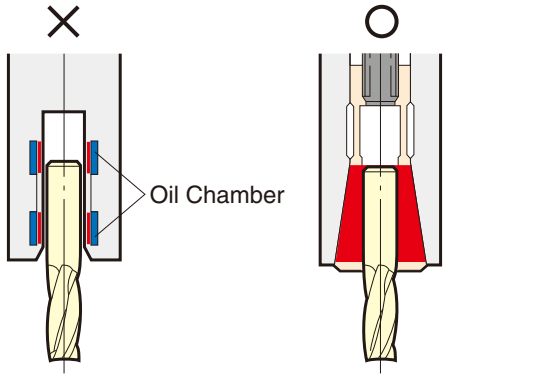


Slim & Compact

ΦD : **MMC 4 : Φ15mm**
MMC 8 : Φ20mm
MMC12 : Φ30mm



Gripping from Front Nose



HYDRAULIC CHUCK
No Gripping at Front Nose
Gripping Torque?

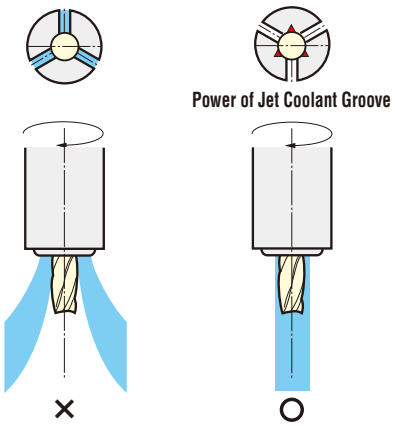
MINI-MINI CHUCK
Gripping from Front Nose
Powerful Gripping Torque/3times

High Speed

MAX. 30,000min-1 & G2.5

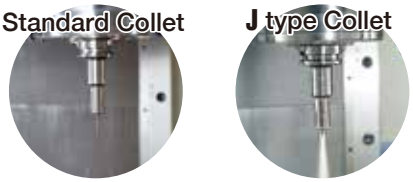
Coolant Through Tool Capability

J type Collet + End Mill
High Pressure Coolant Through Jet Spread Groove



Coolant will be spread out through the Slit at high rpm

Oil Jet Coolant System No Coolant Spreading out even at high rpm



NIKKEN SLIM CHUCK with TiN BEARING NUT P. 41

HIGH SPEED ROTATION•HIGH ACCURACY•HIGH PRESSURE COOLANT THROUGH
Power of TiN BEARING NUT

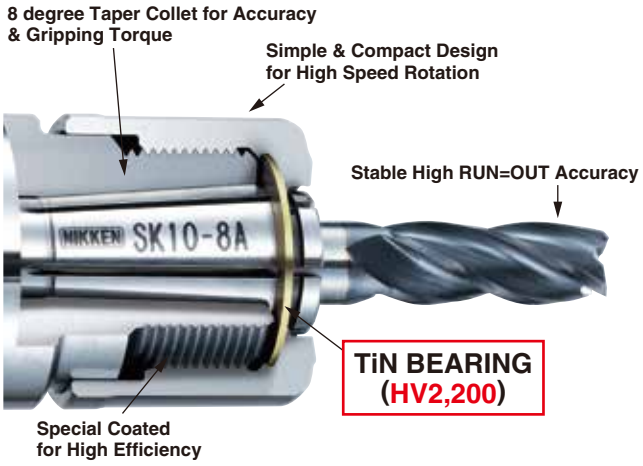
TiN Bearing Nut is used for Nikken Slim Chuck, MAJOR DREAM Holder and VC Holder with great popularity.



JAPAN, USA, EU, KOREA PAT.

High Speed Slim Chuck
MAX. 40,000min^{-1} & G2.5

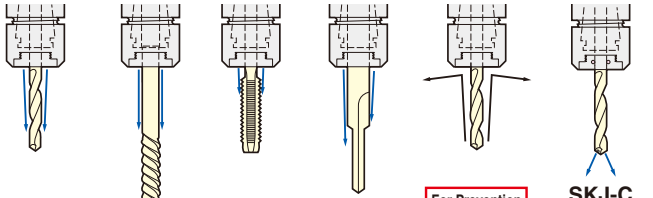
Power of TiN Bearing Nut





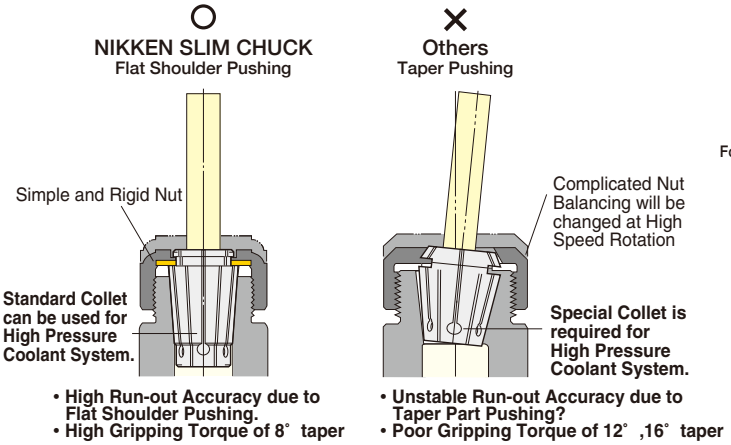
J nut is the best solution for the centre through coolant application, and strongly recommended to use for the high accuracy and the high productivity.

Standard Nut & J Type Nut



When SK J type nut is used, the total chuck length will be extended by 6mm.

Flat Shoulder Pushing & Taper Pushing

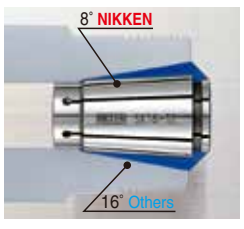


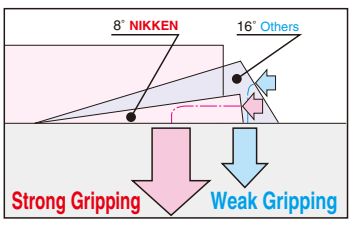
- High Run-out Accuracy due to Flat Shoulder Pushing.
- High Gripping Torque of 8° taper

- Unstable Run-out Accuracy due to Taper Part Pushing?
- Poor Gripping Torque of 12° ,16° taper

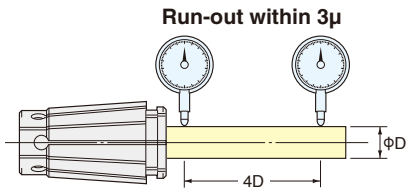
The Secret of strong gripping power and high rigidity... 8°Taper

8°Taper and Wedge Principle is the Answer.
The smaller the Taper Angle,the better Concentricity is obtained. Besides, thanks to Wedge principle, Strong Gripping Power is generated with small torque.





P Class Concentric Accuracy



NIKKEN 2LOCK MAJOR DREAM HOLDER

P. 39
P.199

PAT.

Revolutionary Dampening Mechanism

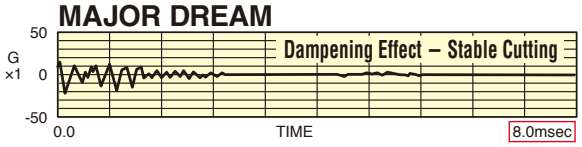


Internal Dampening Mechanism is built-in to the MAJOR DREAM Holder.

BT DOUBLE FACE CONTACT TOOL



MAJOR DREAM



Difference due to Dampening Technique and Effect

Excellent Machining on { Linear Guide M/C / Box Guide M/C

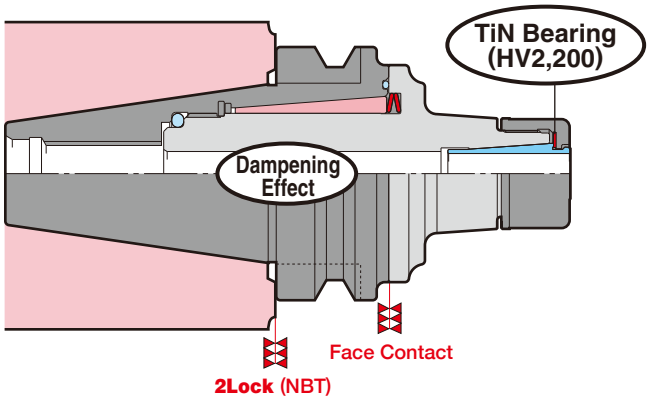


End Mill Life
Carbide : 3 times
HSS : 1.5 times

Powerful heavy cutting and high speed high feed cutting , excellent high precision and surface finish and extended tool life with the dampening effect.

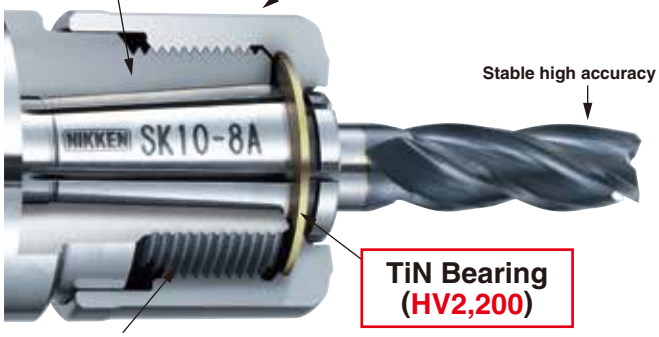


Dampening Effect & Power of TiN Bearing Nut



Slim Collet with 8 degree taper to satisfy the accuracy and the high gripping torque.

Simple design without the flats for the hook spanner. The GH handle is used to tighten / loosen precisely. The external diameter is more compact than the external diameter of the ball bearing nut.



Stable high accuracy

TiN Bearing
(HV2,200)

The molybdenum is coated to the internal thread of the nut, then the efficiency of the thread is highly improved.



J nut is the best solution for the centre through coolant application, and strongly recommended to use for the high accuracy and the high productivity.

Great Popularity of MAJOR DREAM 3 Brothers

■MAJOR DREAM SHRINK FIT HOLDER ☞P.200
■MAJOR DREAM PRO ENDMILL ☞P.202





NIKKEN VC HOLDER with TiN BEARING NUT

P. 36
P.201

This is the Mighty End Mill Holder from the series of Tin Bearing Nut type collet chuck to satisfy the gripping torque, run-out accuracy, cutting rigidity, high precision finish and high speed rotation.

2LOCK tooling can be used as the BT double face contact tooing on the machine with the BT double face contact spindle. It can be also used as the BT tooling on the machine with BT standard spindle.

PAT.

◇ Power of TiN Bearing Nut

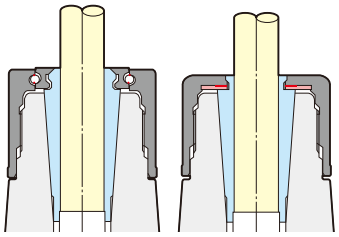
Good sliding effect due to the surface hardness of HV2,200.
More efficient than conventional ball bearing built-in nut.

Unstable accuracy caused by tightening torque and the possibility of rust.





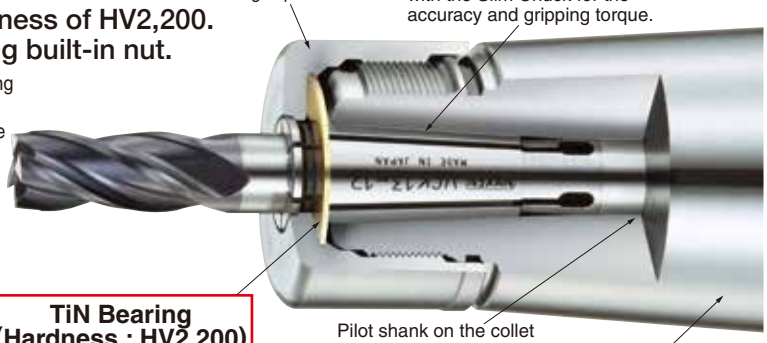
The Tin coated bearing plate reduced friction. This is the best for the thrust load.



Competitors NIKKEN

Simple external design without the notches to be tightened with GH handle Ultra high speed rotation

8 deg. internal taper proven with the Slim Chuck for the accuracy and gripping torque.



TiN Bearing (Hardness : HV2,200)

Pilot shank on the collet for further stability of the accuracy.

The thick wall design of the VC Holder body improves its cutting rigidity.

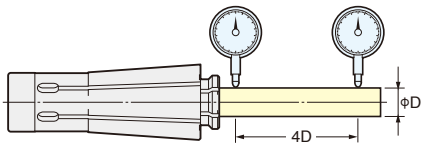
◇ Less micron vibration due to the collet flange contact

Improves the cutting capability and tool life.

◇ Run-out accuracy : Less than 3 microns at 4XD

Better stability on run-out accuracy
Improves the surface finish
Suitable for finish on die-mould machining.

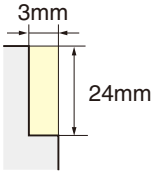
Less than 3 microns





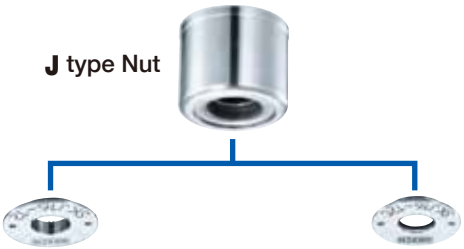


12mm, 4teeth Carbide Endmill
Material : Mild Steel
V=220m/min
S=6,000min^{-1}
F=3,000mm/min



Power of TiN Bearing Cutting Rigidity High Precision Finish

◇ Jet coolant splash with J type Nut.



Cap with triangular grooves
The jet coolant pressure creates a tornado effect.



Cap with O-ring
For oil hole cutting tool



◇ High Speed Rotation MAX.40,000min^{-1} & G2.5

◇ Easy, safe and reliable handling with GH Handle

USA PAT.

The nut has no notches for high speed rotation and **GH Handle** can tighten the nut with half of the tightening torque of the conventional C type spanner, thus, substantial improvement for quality of safety, reliability and operational efficiency will be obtained.







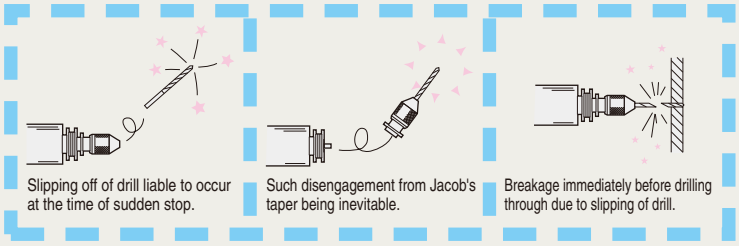
NIKKEN NC DRILL CHUCK

P.53

"Solid"means Compact, Precision, Rigidity and Safety.



Such troubles will not only hinder an unmanned oper-ation in FMS but cause successive occurrence of detective products to obstruct the rationalization of factory.



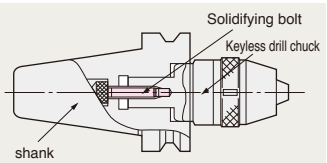
Slipping off of drill liable to occur at the time of sudden stop.

Such disengagement from Jacob's taper being inevitable.

Breakage immediately before drilling through due to slipping of drill.

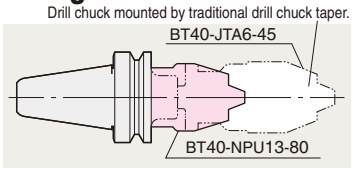
Solid design eliminates the slipping off.

The keyless drill chuck is tightened by the solidifying bolt to the shank, so that there is no possibility of slipping off during rotation or drilling.



Compact Design with Small Head

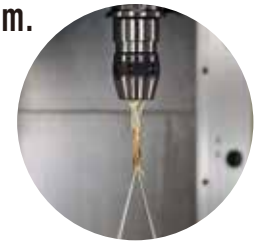
—— - - - line illustrates the ISO or conventional drill chuck.



Run-out Accuracy of MAX. 0.04mm.

3 Times Larger Chucking Power

Even Carbide Drill does not occur Slipping.



Centre through tool coolant

NPU13 can be used as centre through tool coolant holder for the shank diameter bigger equal to ϕ6mm.(Option)

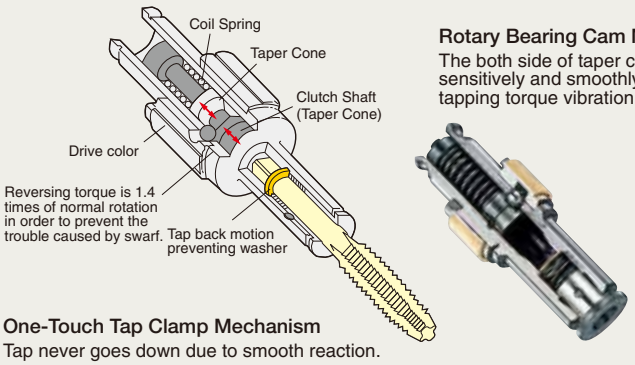
NIKKEN TAPPER CHUCK

P.58

Rotary Bearing Cam ensuring Precision, Sensitivity & Long Tap Life.



Rotary Bearing Cam



Rotary Bearing Cam Mechanism

The both side of taper cones act sensitively and smoothly to the tapping torque vibration.

One-Touch Tap Clamp Mechanism

Tap never goes down due to smooth reaction.

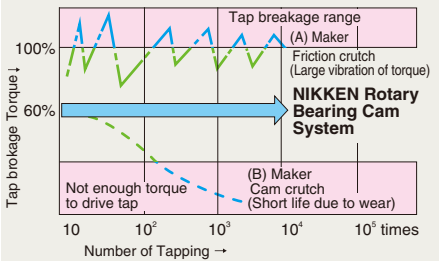
Slim Body & Fine Floating

External Diameter as small as ever. Only **NIKKEN** Tapper Chuck performs even big size Tapping with slim body. The floating part is not a simple slide key, but plural preloaded balls are arranged in V-shape. That is why the tap slides smoothly without chattering accompanied.



Torque Life Curve

The bearing cam with no sliding friction has been developed for the tap collet to protect the tap from breakage. The principle of this collet is fundamentally different from that of the conventional brake system utilizing a rubber reaction or a friction resistance as shown by the following graphs (A) & (B) , so that constant torque characteristic as illustrated is obtainable to secure safety of tapping



NIKKEN DJ BORING HEAD with DJ BORING BITS P.99

φ3～50 Developed with all of NIKKEN Knowhows-Best Help of Fine Boring



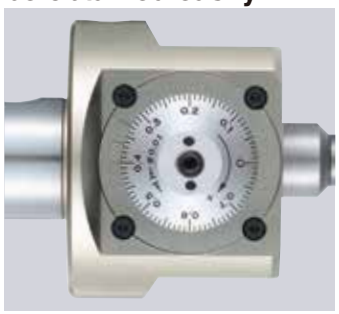
Photo shows new **DJ8** series.

Easy to Set Micron Accuracy

Easy operation with big dial graduations together with a wide adjusting range for fine boring of dia.3～50mm.

Dial Graduation
1 Graduation:dia.0.01mm
Vernier reading:dia. 0.005mm
Smooth and High Preci-sion Boring is ensured.

Micron accuracy can be obtained easily



Special Carbide Indexable Insert for φ5mm Boring

Now Special Carbide Indexable Inserts for φ5～15mm are avail-able for DJ Bit. No more regrinding and the **shank is solid Carbide.** Fine boring of φ5mm from 4.5mm drilled hole can be done without vibration and without bending. Fine boring of Safety and Sureness by DJ Boring Head.



No Vibration and Least Wearing of Carbide Insert.

4 pcs of DJ Boring Bits are provided as standard accessories. Even 1mm stock removal on diameter can be done with maintaining fine surface finish without vibration.



New Byte Series for DJ8 ☞P.100

High Pressure Coolant Through Type



- Cutting Speed····· 100m/min.
- Feed····· 0.05mm/rev
- Stock Removal····· 0.5mm(on Dia.)
- Boring dia.····· φ30mm
- Material····· SKD11

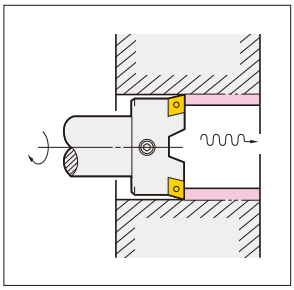
NIKKEN BALANCE CUT BORING ARBOR P.71

ϕ25~580 Scram Type Cartridge Power & Smooth Boring with 250% Productivity



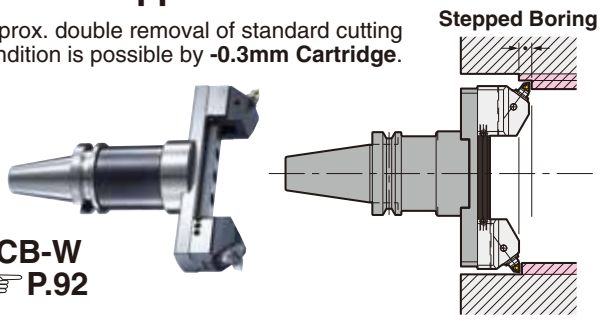
Double Cutting Capability

From ϕ25~580mm, all Balance Cut Boring Bars execute boring in 2 Carbide Inserts. One side cutting will not occur, and vibration is absorbed each other. The faster the feed rate (0.2~0.4mm/rev.) , the better swarf ejection. Ideal for Rough and Medium Boring.



2 Stepped Balance Cut

Approx. double removal of standard cutting condition is possible by **-0.3mm Cartridge**.



BCB-W
☞P.92

Various Cartridges & Inserts ☞P.79

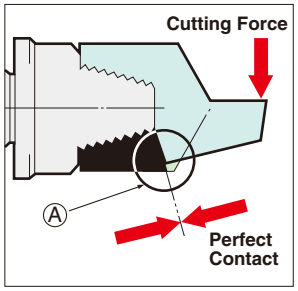
Good Chip Ejection ensures no trouble Heavy Boring. Standard carbide insert is suitable both for Steel and Cast Iron. Besides, optional cartridges for steel, for Aluminium, through hole or multi-sheets are available.

RAC-E **RAC-A** **RAC-K**



Power of Scram Type Cartridge

Cutting force is supported by the shoulders of both cartridges. This is the secret of heavy and powerful boring even at the intermittent bore.



High Pressure Coolant Through Tool

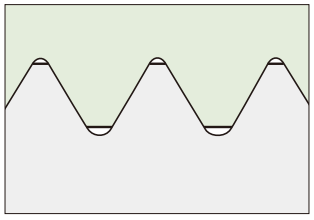


- Cutting Speed ····· 150m/min
- Feed Rate ····· 0.4~0.6mm/rev
- Stock Removal ····· 6~10mm(on dia.)
- Boring Dia ····· ϕ60mm
- Material ····· SNCM420 (Ni, Cr, Mo Alloy Steel)

Precision Ground Serration

High Precision Serration is the base of high accurate performance of BALANCE CUT Boring Bar.

- Even strong cutting force is accepted by High Precision Serration, resulting in smooth boring without micro vibration.
- All slides are finished by precision grinding. Even micro adjustment can be done smoothly as you desire.



Precision Ground = Basic Serration

BALANCE-CUT RACα BORING ARBOR NEW for LARGE DIA ☞P95 ULTRA LIGHT WEIGHT



NIKKEN ZMAC ADVANCED BORING HEAD PAT.

P.83

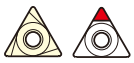
ϕ16～180 The World Leading Boring Head



Various types of Insert Tips









Steel, cast iron, and stainless steel can be machined by the same coated insert tip. Specifications that support insert tips which are widely circulating on the market are also available. ☞P.119 ZMAC-V-1

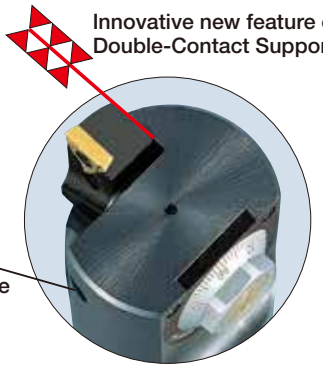
Application



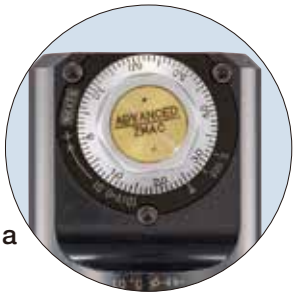
NIKKEN makes use of its abundant experiences and results to provide special boring bars, which are suited for various work shapes as part of the solutions to streamline production.

Available for Multi-Stage Boring Bar
☞P.83, P85, P107

High rigidity Double-contact support



High-precision / Easy micro-adjustment / High durability / High rigidity



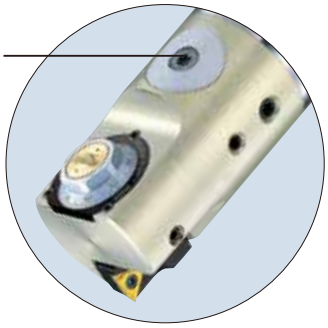
New lock flanges reduce dial torque and increase visibility. ZMAC25-V and larger also have a sub scale for easier and more accurate diameter adjustments.

Coolant Specifications for All Sizes



All sizes from ø16 to ø180 have coolant holes positioned so that the coolant is applied directly to the cutting edge.
ZMAC70-V and larger use a variable nozzle system.

High Speed Boring 12,000nin^{-1}, Deep Hole Boring



ZMACα-V
Special Hardened Light Alloy Metal Head with Balancing for Anti-Vibration.

BALANCE-CUT BACα BORING ARBOR for LARGE DIA ☞P97 ULTRA LIGHT WEIGHT

NEW

NIKKEN eMAC BORING HEAD

P.108

ϕ6～200 Easy-to-See Digital Displays / Supports Small to Large Diameters



Digital Displays for Easy Diameter Adjustments

A digital display enables easily made adjustments, even in increments as small as 2 microns in diameter.
Various settings can be changed by operating the single Select Button.
Sizes are switchable between metric and imperial units.
The minimum set value for imperial size display is 0.0001".



Combination Systems Support a Wide Machining Range

A combination system realizes a wide machining range as it enables the mounting of boring cartridges that use both a cylindrical boring bit and serration.

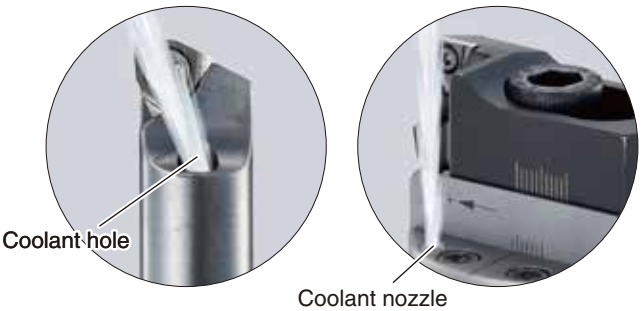
eMAC :ϕ6～110
eMAC-W:ϕ6～200

※Set products capable of boring in the range of ø6 to ø110 are also available. ☞**P.109, P110**



Coolant through Tool Capability Provided as a Standard

Coolant through tool capability that supports pressures up to 4 MPa is provided as a standard.
Coolant is discharged from the cutting edge of cylindrical boring bits, or from a coolant nozzle located near the cutting edge of cartridges.



Waterproof Rating: IP67

Waterproof Rating: IP67
Waterproof specifications at an IP67 rating help keep the internal electronics safe, and the cover for the SR44 batteries (2 pcs) has seal specifications that enable repeated removal and attachment.



INDUSTRY PROVEN TO ELIMINATE PULL-OUT

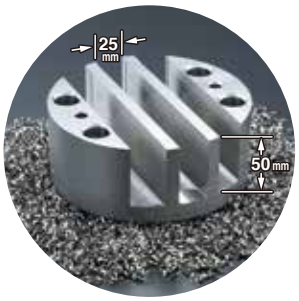


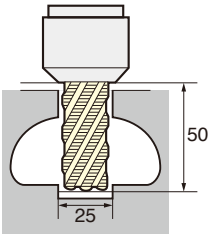
PATENT

JAPAN, USA, EU PAT.
CHINA PAT.P

Excellent Run-out & Powerful Gripping

Exclusively developed for demanding Applications and materials associated With the aircraft and energy industry.

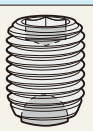




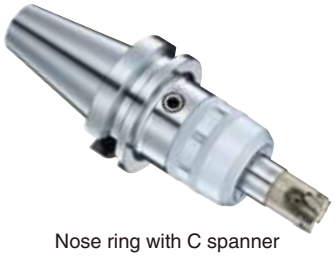
Material: Ti6Al4V Titanium 25mm, 6teeth Carbide Roughing End Mill 25 X Depth 50mm 1 Path Milling Never Pull-Out

Selection of the Accessories

Please select the proper stopper and the face cap according to your application.（end mill with/without coolant hole）
The stopper and the face cap for the end mill with oil hole are attached as standard accessory.

	End mill with oil hole		End mill without oil hole		Support bolt	Drive bolt
	Stopper	Face cap	Stopper*1	Face cap (V grooves)*1		
C12EX	9MC12HEX- 6L(8.5L)*3	9C12SL-FS-EX-A1	9MC12HEX- 6L(8.5L)※3-J	9C12SL-FS-EX-J1	—	M10×16L-EX
C16EX	9MC16HEX-6.5L(9.5L)*3	9C16SL-FS-EX-A1	9MC16HEX-6.5L(9.5L)※3-J	9C16SL-FS-EX-J1	—	M12×16L-EX
C20EX*2	9MC20HEX-12L(13.5L)*3	9C20 -FS-EX-A1	9MC20HEX-12L(13.5L)※3-J	9C20 -FS-EX-J1	FSMB12-20	M12×20L-EX
C25EX	9MC25HEX-6.2L(8.7L)*3	9C25SL-FS-EX-A1	9MC25HEX-6.2L(8.7L)※3-J	9C25SL-FS-EX-J1	FSMB16-20-H8	M16×20L-EX
C32EX	9MC32HEX-7L(10L)*3	9C32SL-FS-EX-A1	9MC32HEX-7L(10L)※3 -J	9C32SL-FS-EX-J1		
C42EX	9MC42HEX-9L(11.5L)*3	9C42SL-FS-EX-A1	9MC42HEX-9L(11.5L)※3 -J	9C42SL-FS-EX-J1		
	 O-ring Please insert the stoper which small hole diameter is located at the end mill side. (C42: Same hole diameter)		 Cross groove Please insert the stoper which cross groove is located at the end mill side.			

*1 Please contact us for the stopper for **X-Treme** chuck Inch series.
*2 The Code No. of the stopper for **NBT40-C20EX,HSK63A-C20EX** and **C8-C20EX** is **9MC20HEX-7L(8.5L)**
*3 The length in ( ) is used for **Code No.** of extended stopper.
eg. 9MC32HEX-10L
It can be used, when length of end mill become shorter after re-grinding.
★ **X-Treme** chuck with nose ring for C spanner is available as an option.
Please add "-A" at the end of Code No.
eg) NBT50-C25EX-116-J-A



Nose ring with C spanner

Chuck	Handle
12EX-○○○-A	9HC16
16EX-○○○-A	9HC22
20EX-○○○-A	9HC25
25EX-○○○-A	9HC25
32EX-○○○-A	9HC32
42EX-○○○	9HC42

2LOCK tooling can be used as the BT double face contact tooing on the machine with the BT double face contact spindle. It can be also used as the BT tooling on the machine with BT standard spindle.

NIKKEN ZERO FIT HOLDER

"0" Fit with Accurate, Quick and Simple Operation.

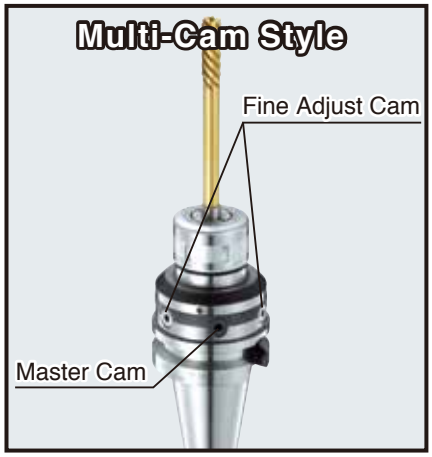
P.147,148

JAPAN, USA, UK, GERMANY, KOREA, TAIWAN PAT.

When the machine has been used for 2～3 years, the run-out accuracy of the spindle will be declining with accuracy of 0.01mm～0.04mm at 100mm from the gauge line, the Zero Fit Holder allows correction of this error back to the run-out of 0.001～0.002mm.



At Machine Spindle



Multi-Cam Style

The minute run-out after adjusting by a master cam can be adjusted by fine adjust cams at the same position.
e.g. BT40-SZF16-90-C3 (3 Cams)
The multi-cam style can not be made for all zero fit holders.



CF-CZF
☞P.147

FLANGE STYLE ZERO FIT TYPE MILLING SHUCK

- Ideal for adjusting cutter run-out on an NC grinding machine or universal grinding machine
- 3-point cam as a standard feature makes it easy to adjust run-out on a grinding machine!

With "0" Fitting the Tool Run-out Accuracy;

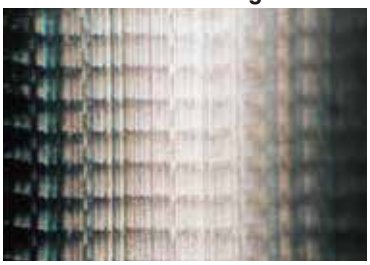
The milling surface finish and quality can be improved.

Materials : Pre-Hardened Steel NAK55 (HRC39)
End Mill : 10mm, 2 teeth Carbide Ball End Mill
Cutting Speed : V =200m/min
Spindle Rotation : S =6,366min^{-1}
Feed per tooth : f =0.15mm/min
Feed : F =1,910mm/min
Dry Cutting with Air blow

Before Zero Fitting :
Run-out at cutter front edge = 20 microns



After Zero Fitting :
Run-out at cutter front edge = 1 micron

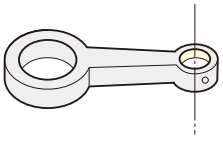


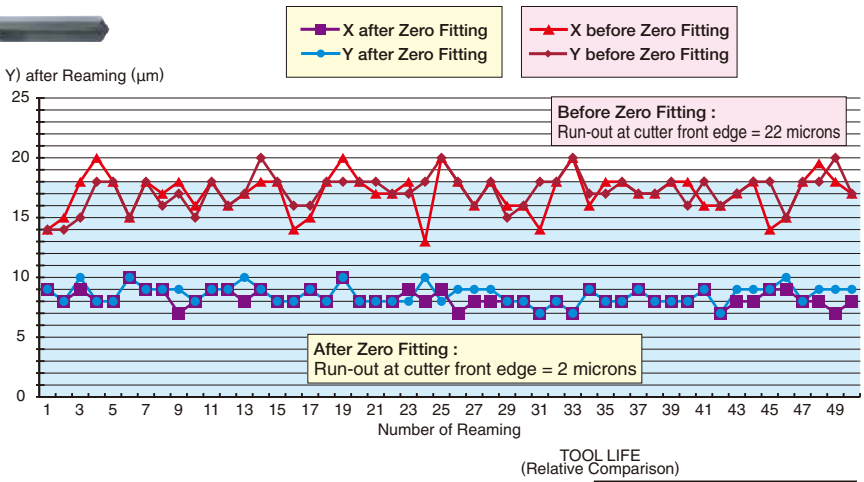
For better and stable finish tolerance for machining holes

…The variation at finish tolerance can be minimized, thus the finish size tolerance can be reduced.



Materials : Tempered Steel (HRC25～30)
Tool :φ13mm CBN Reamer
Cutting Speed : V=80m/min
Spindle Rotation: S=2,000min^{-1}
Feed per tooth : f=0.1mm/min
Feed : F=200mm/min
External coolant supply : Water soluble





The tool life can be extended.

Fig.1 shows the relation between run-out accuracy and tool life, and when the run-out accuracy of 21 microns is reduced to 3 microns, the tool life can be improved by approximately 5 times.

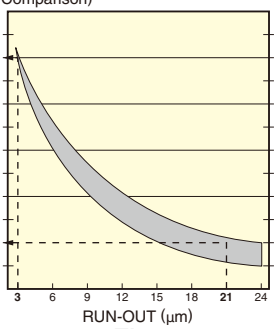


Fig.1

Zero Fit Holder has wide adjustment range compared with competitors equivalent, and its mechanism performs simple, quick and secured operation.

The choice of the Slim Chuck style "SZF" & the Anniversary type Milling Chuck style "CZF" can be selected depending on your cutter.

NIKKEN FACTORY AUTOMATION SERIES

Spindle Speeder ☞P.137



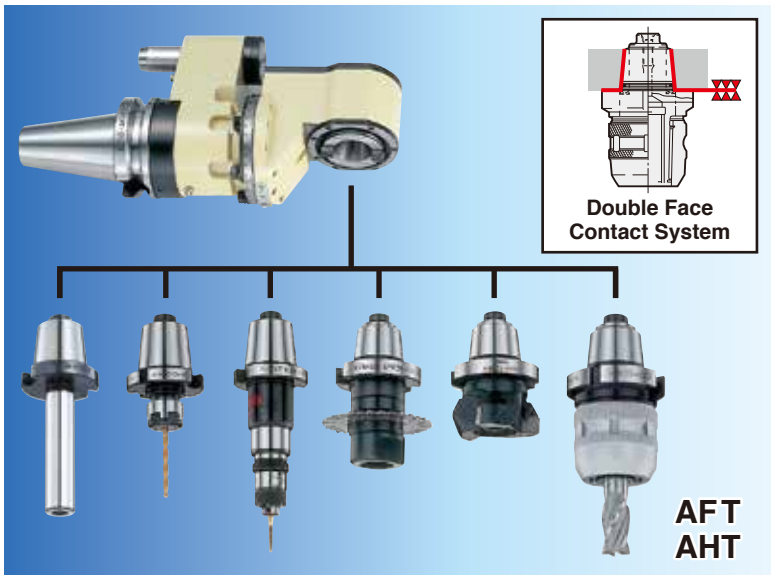
Air Motor Spindle Tool ☞P.138



Air Turbine Spindle Tool ☞P.137



Quick Change type Angular Head ☞P.141



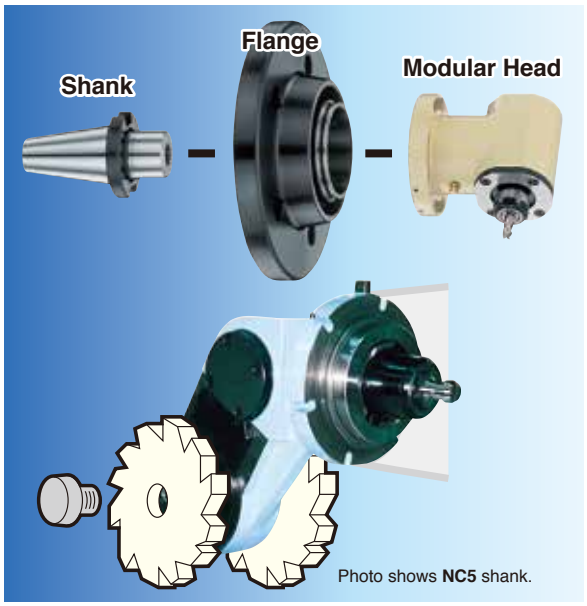
Modular type Angular Head ☞P.143



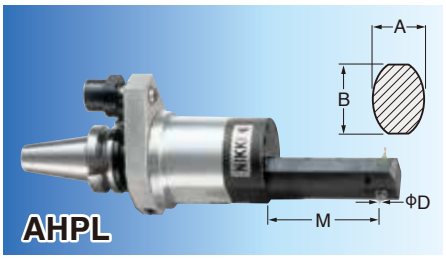
Solid type Angular Head ☞P.144



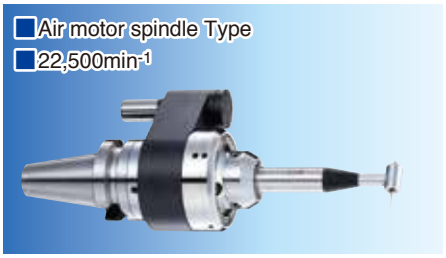
Direct Mount Flange type Angular Head ☞P.146



Compact type Angular Head for Deep Hole ☞P.143



Air Drive Angular Head ☞P.145



NIKKEN FACTORY AUTOMATION SERIES





Centre Through Tool Coolant ☞ P.129

Flange Through Tool Coolant ☞ P.131



8 Years used

RPT 18 years used



RP Treatment ☞ P.130

The RP treatment creates a fine film of the contents (Fe_2O_4) and (Fe_2O_3) , and penetrates into the tool holder 1~2 micron deep. This fine film inhibits the rust and corrosion of your tool holder taper and stops it from being transmitted to your machine spindle. The RP treatment will not effect the accuracy and the hardness of your tool holder.

Multi Spindle Drill Head ☞ P.146



Multi Spindle Tapper Head ☞ P.146



Automatic/Manual Back Spot Facing Arbor ☞ P.149



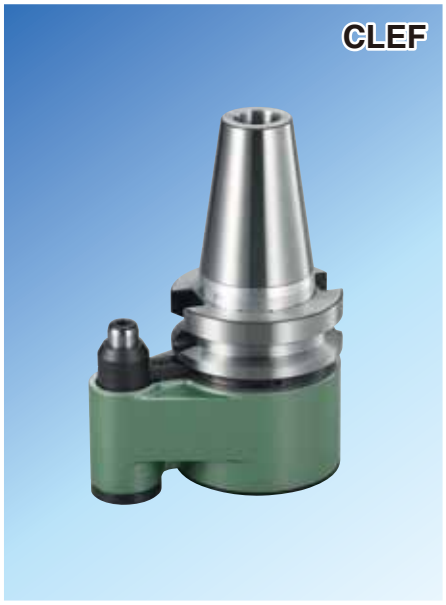
Oil Piaster ☞ P.183



Spindle Taper Cleaner ☞ P.183

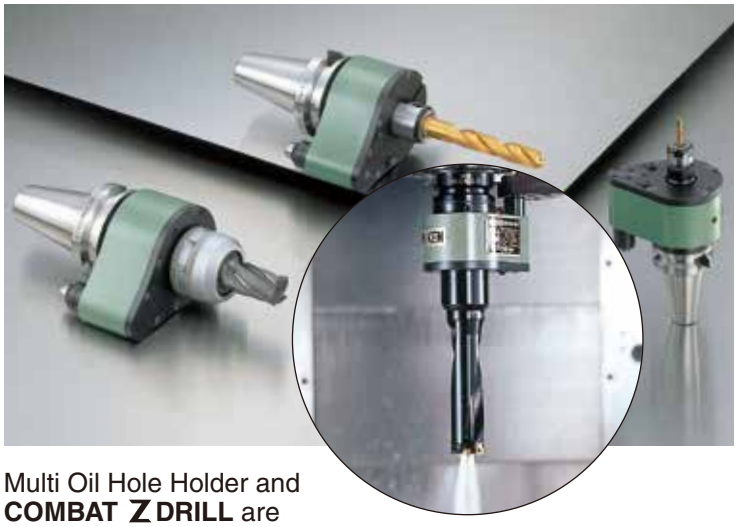


Spindle Flange Cleaner ☞ P.183



NIKKEN MULTI OIL HOLE HOLDER P.133

Conventional Oil Hole Holder ⊕ Multi Coolant Nozzles



Multi Oil Hole Holder and **COMBAT Z DRILL** are recommended for drilling on M/C to increase productivity.

Combination of Coolant Through Tool Type and Outside Nozzle Type

Can be used to both oil hole cutter and normal cutter without oil hole. When normal cutter (drill, end mill, tap etc.) is used, coolant is fed as Jet Streams exactly to cutting point.



Oil Hole Drill

⊕



Multi-Nozzles

Zero Fit Type Oil Hole Holder ☞P.136

Zero Fit Holder for Side Through



- Standard MT Drill & Reamer
- Standard Straight Drill & Reamer
- Tap
- End Mill
- Boring Bar

NIKKEN COMBAT Z DRILL P.295

ϕ16～80mm Power of Pilot Drill & 3 Phases Heat Treatment





NC Lathe



M/C

Power of Pilot Drill

No Vibration with Pilot Drill

L/D=3 and 4 times as standard



3 Phases Heat Treatment & Suitable Twisted Shape improves Ejecting Cutting Swarf.

3 Phases Heat Treatment

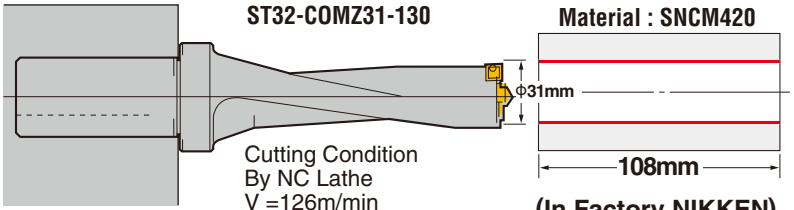
- It significantly improves Rigidity and Ejecting Cutting Swarf by suitable twisted shape and special surface treatment. Tool life of Insert and Drill grows 3 times longer.
- Pilot Drill prevents Inserts from chipping by reducing vibration.
- Powerful drilling speed of 120～150m/min. with small torque.
- Less cutting resistance with Rhomboid Inserts.

PN Treatment (Ejecting Cutting Swarf)



IN Treatment (HV900)

3 Phases Heat Treatment



Cutting Condition
By NC Lathe
V =126m/min
S =1,300min^{-1}
f =0.15mm/rev.
F =195mm/min
Water Soluble Coolant

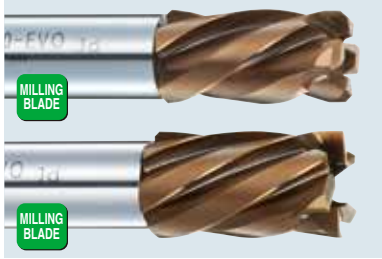
(In Factory NIKKEN) Machining Time = 35sec.

It can be used after total cutting length = 65mm.

NIKKEN NIKKEN REAMER SERIES

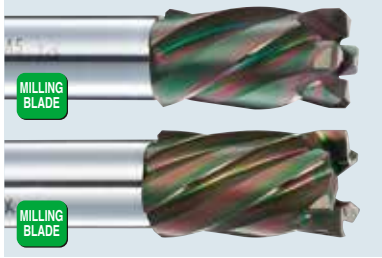
P.293

Carbide Reamer Series



For difficult-to-cut materials evolution series NEW

Designed for difficult-to-cut materials with an extremely heat-resistant alloy coating for such as Inconel, Hastelloy, and Waspaloy.



For aluminium, aluminium casting Spectrum Reamer Series NEW

Super-hard with a new thin-film hydrogen-free SPX coating



PF Radical Reamer Series

The run-out accuracy and the tool life have been substantially improved with Press Fit type Radical Reamer.
This is sophisticated reamer with fine powder carbide and TiCN-2 coated for low friction purpose and hardness HV3,500, thus its tool life is extremely extended even with water soluble coolant.



Carbide Radical Mill Reamer DLC Coating

DLC(Diamond-Like Carbon) coating provides improvement for aluminium and non-ferrous metals reaming. 3 type of the reamers with milling blade are into a line up

Carbide Mill Reamer DLC Coating

DLC(Diamond-Like Carbon) coating provides improvement for aluminium and non-ferrous metals reaming. 3 type of the reamers with milling blade are into a line up



Carbide Mill Reamer

As the Mill Reamer made by K10 grade carbide, the cutting speed can be substantially increased for the productivity improvement. Especially it performs very well on Cast Iron, Meehanite, Aluminium, and Non-steel metal.



Carbide Broach Reamer

The Carbide Broach Reamer maintain the excellent surface finish for Aluminium and Cast Iron reaming operation.

HSS Reamer Series



NC Sensor Reamer

The NC Sensor Reamer is dedicated for better surface finish, especially effective on Stainless Steel, Die Steel, Annealed and Tempered Steel. The high precision finish surface can be achieved with its TiN Coated and its burnishing effect. The reamer can be used with even water soluble coolant.



Tough-Cut Skill Reamer

This is all-mighty reamer, which is made by powder HSS & ion-nitrided and good for tough materials, die steel, annealed and tempered steel.

NEW Turning Skill Reamer

Short type Skill Reamer for NC Lathe



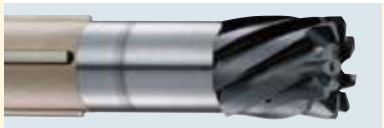
Broach Reamer

The ultra high left-handed helix of 60 degree performs smooth reaming operation.



Long Type Reamer

Longer neck type for deep hole is also available.



Recommended Cutting Conditions and Special Made Reamer/ Technical Information

Various Application - Through Hole, Stepped Hole and Blind Hole

Through Hole series



Excellent Circularity and Straightness

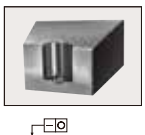
Stepped Hole series



JAPAN PAT.

Excellent Circularity and Straightness

Blind Hole series



Excellent Circularity and Straightness

NIKKEN MEASURING ATTACHMENT

P.157

Pioneer for Work Preparation



Height Presetter

No need of test cut! Basic position of workpiece can be measured quickly without damaging tool teeth.

The distance from reference surface to tool end can be measured very quickly and accurately. This is a MUST for M/C, NC Lathe and NC Milling Machine.

3D Sensor



UM-TX
Internal Contact System

Micro-Touch

This is 3D sensor enabling instantaneous detection of position, measurement and alignment of center by means of Red Lamp and Electric Beep.

The Red Lamp lights the moment when the stylus touches a measurement part. Owing to the conductive detection system, a time delay caused by a relay etc. is eliminated and a highly sensitive measurement can be made.

Small Measuring Tool, but Great Time-Saver



Micro-Stand

Free flexing with single knob, no dead angle and long reach.

Two arms incorporating ball joint mechanism at both ends provide free movement in any direction such as vertical, lateral, longitudinal or rotational etc. If stretched horizontally, a reach as long as 300mm can be attached. Measurements of inside dia., outside dia., end face and back face etc. can be made at will.

Easy Micron Check



Touch Point

Highly sensitive electronic edge finder.

Ideal for Milling Machine, Boring Machine, Drilling Machine as well as Machining Center. Instant indication by LED lamp at very light contact of sensor ball with workpiece.
Easy location of work face, O.D., I.D.

NIKKEN TOOL PRESETTER

P.165

NIKKEN's Tool Presetter increasing Cost Performance of High Price Machining Centre.

E236N ☞ P.165
Spindle can be exchanged.
(BT, HSK, POLYGONAL TAPER)



E346I ☞ P.166
Spindle can be exchanged.



E460N ☞ P.167
Spindle can be exchanged.



E4060L ☞ P.168



Photo shows **E4060L**

NIKKEN CNC ROTARY TABLE

P.299

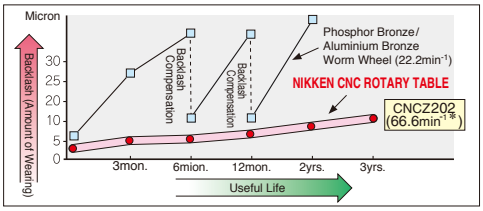
CNC ROTARY TABLE for Full Automation

Worldwide Field-proven NIKKEN CNC ROTARY TABLE
Consequently and finally, NIKKEN Carbide Worm Screw System



Carbide Worm System

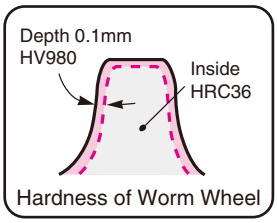
For heavy duty capability and high speed rotation with maintaining the high accuracy, the carbide worm screw is used for the hardened worm wheel. The wearing of the worm wheel is reduced and rotary table is used for more years comparing with the conventional worm system of soft material. For better impact capability, the special alloy steel worm screw is used for the worm screw of the small tooth module.



*Rotation speed of motor = 3,000min^{-1}

Worm Wheel

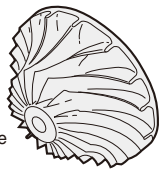
Material is special NIKKEN order made steel. Specially hardened and furthermore ion-nitro treated on teeth. Thus, the problem of sliding friction is solved.

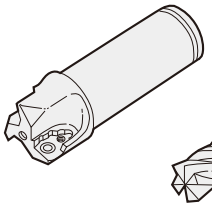


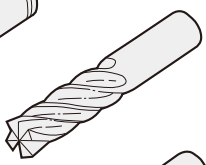
Work Sample

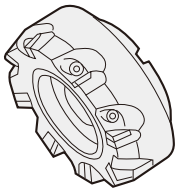


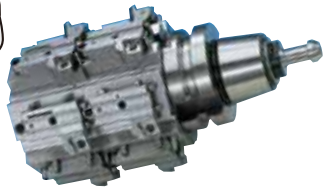
Turbine Blade
High Speed CNC Rotary Table Z series for high speed milling marked arrow.





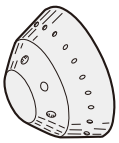




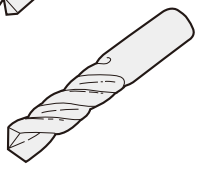


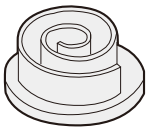
Multi-setting on Multi-planes

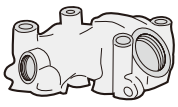


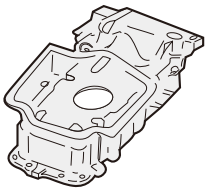


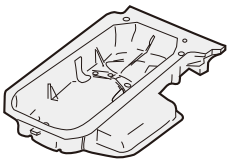


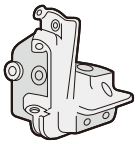


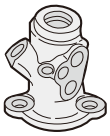


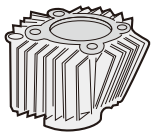


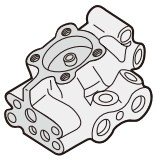


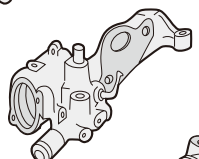


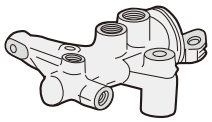


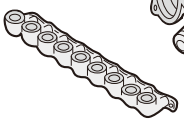


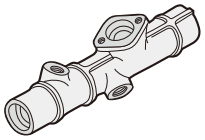


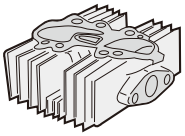


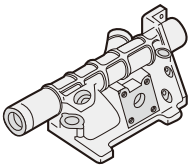


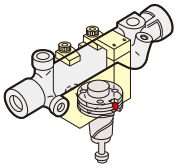












☞ Please refer to **CNC ROTARY TABLE** Catalogue.

NIKKEN CNC ROTARY TABLE

HIGH SPEED ROTATION Z SERIES
HIGH PRESSURE OIL FILM EFFECT

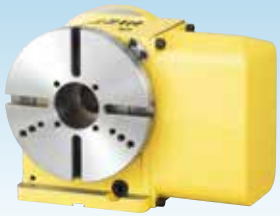
● CNC 105, CNCZ 105 P.300



● CNC 180, CNCZ 180 P.300



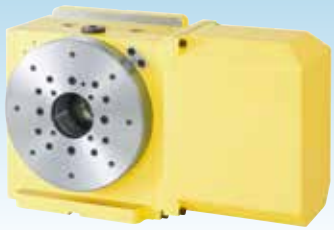
● CNC 202, CNCZ 202 P.300



● CNC 205, CNCZ 205 NEW P.300



● NCT 200, NCTZ 200 NEW P.300



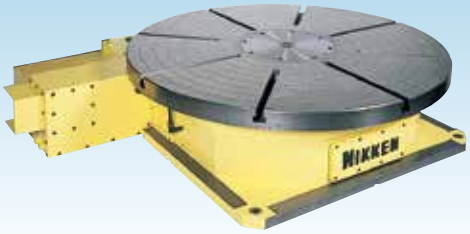
● CNC 260, 302, CNCZ 260, 302 P.300



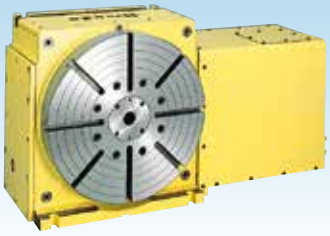
● CNC 321,401,501,601,802
CNCZ 321,401,501,601,801 P.301



● CNC 1000, 1200, 1201, 1600 P.301



● NSVX400, 500 NSVZ180, 300



● NST 250, 300, 500



● 5AX-130, -201 P.302



● 5AX-250, -350, -550, -800, -1200 P.302



● CNC100-2W, -3W, -4W, -120



● 5AX-2MT-105, -170, -200
5AX-4MT-120



☞ Please refer to **CNC ROTARY TABLE** Catalogue.

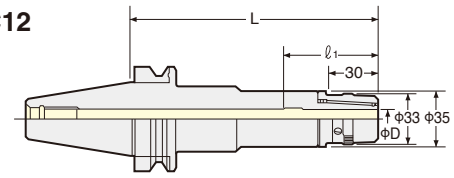
MILLING CHUCK

NIKKEN

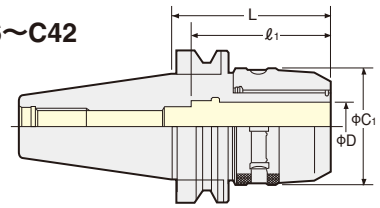


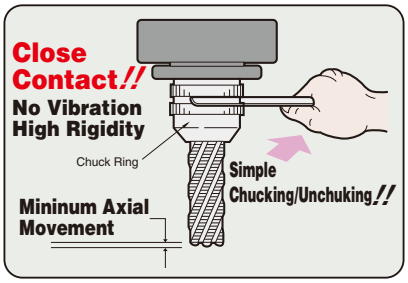
C

C12



C16～C42





FEATURES:

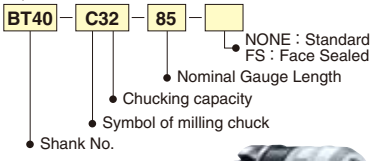
- Doubled rigidity & increased cutting ability!
- Run-out Accuracy: 5μm at 3×D

TAPER	Code No.	C_1	L	ℓ_1	Suitable Collet	Weight(kg)
No.30	BT30-C12- 55	33	58	58	CCK12 KM12	0.6
	-C16- 55	44	57	65	CCK16 KM16	0.7, 0.8
	-C20- 65*1, 75	52	67, 75	80	CCK20 CCNK20 KM20 NK20	1.0, 1.1
	-C25- 75*2, 80	55*4	75, 82	68	CCK25 CCNK25 KM25 NK25	1.2, 1.3
	-C32- 90*3,100	64*4	90, 100	68, 76	CCK32 CCNK32 KM32 NK32	1.4, 1.5
No.40	BT40-C12- 65,90,120	33	65, 90,120	58	CCK12 KM12	1.3, 1.6, 1.9
	-C16- 60,90,120	44	63, 90,120	65	CCK16 KM16	1.4, 1.7, 2.0
	-C20- 70,90,105,120	52	71, 90,105,120	80	CCK20 CCNK20 KM20 NK20	1.6, 1.8, 2.0, 2.2
	-C25- 70,90,120	60	70,90,120		CCK25 CCNK25 KM25 NK25	1.8,2.1,2.5
	-C32- 85,105,120	69	85,105,120	77,90,105	CCK32 CCNK32 KM32 NK32	2.1, 2.5, 2.8
No.50	BT50-C12-105,135,165	33	105,135,165	58	CCK12 KM12	4.0, 4.3, 4.6
	-C16-105,135,165	44	105,135,165	65	CCK16 KM16	4.2, 4.5, 4.8
	-C20-105,135,165,180	52	105,135,165,180	80	CCK20 CCNK20 KM20 NK20	4.5, 4.8, 5.1, 5.4
	-C25-105,135,165	60	105,135,165		CCK25 CCNK25 KM25 NK25	4.8, 5.2, 5.6
	-C32- 90,105,120,135,165 -200,250,300,400,500	69	90,105,120,135,165 200,250,300,400,500	105	CCK32 CCNK32 KM32 NK32	4.3, 4.6, 5.1, 5.6, 6.4 7.8, 9.2, 10.6, 13.4, 16.2
	-C42- 95,105,120,135,165 -200,250,300,400,500	86	95,105,120,135,165 200,250,300,400,500	125	CCK42 CCNK42 KM42 NK42	5.5, 5.8, 6.6, 7.2, 8.6 9.5, 11.7, 14.0, 18.4, 22.8

★**MULTI LOCK Milling Chuck is a Base Holder for machining centre.**
The following straight shank tooling to suit Milling Chucks are available.

[**S-C**] Milling Chuck (Extension Type) ☞ **P.33**
[**K-MMP**] MINI-MINI Chuck ☞ **P.37**
[**K-MMC**] MINI-MINI Chuck ☞ **P.37**
[**K-SK**] Slim Chuck ☞ **P.47**
[**S-SK**] Long Size Slim Chuck ☞ **P.47**
[**D-NPU**] NC Drill Chuck ☞ **P.53**
[**NZ**] Tapper Chuck ☞ **P.64**
[**K-MT**] Morse Taper Socket ☞ **P.55**
[**K-ZMAC-V**] ZMAC-V Boring Bar ☞ **P.105**
[**K-RAC**] RAC Boring Bar ☞ **P.105**
[**S-ZMACX-V**] ZMAC-V Boring Bar for Deep Hole ☞ **P.106**
[**K-DJ**] DJ Boring Bar ☞ **P.107**
[**K-SCA**] Stub Arbor ☞ **P.90**
[**S-MDPE**] PRO-END MILL ☞ **P.127**
[**MS○-A○-○**] Straight shank shrink fit holder ☞ **P.203**

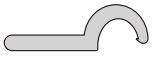
Explanation of the Code No.



★Please refer ☞ **P.190** for heavy duty type milling chuck with larger arbor diameter.
★Please refer ☞ **P.33**, **P34** for **KM**, **NK**, **CCK**, **CCNK** collet.
★**CKFN-D** and **CKFN-DC** (With O-ring) can be used for the direct chucking application, when centre through tool coolant. **CCK** collet and **CKFN** nut can be used for collet application.



★For "**L**" dimension of centre through coolant type milling chuck is same as the above standard, however , refer ☞ **P.129** for Code No.
★For "**L**" dimension of flange through coolant type milling chuck is same as the above standard, however , refer ☞ **P.131** for Code No.
★Spanner is available as an option. **C12 : 9HC12A, C16: 9HC16, C20: 9HC22, C25 (ϕC1=55mm) : 9HC22, C25 (ϕC1=60mm) , C32 (ϕC1=64mm) : 9HC25, C32 (ϕC1=69mm) : 9HC32, C42: 9HC42**
∗4 C25(ϕC1=55mm): 9HC22, ∗4 C32(ϕC1=64mm): 9HC25.





FS type
For machining of aluminum
PAT.

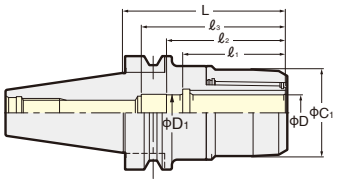
★Please note the acceptable shank tolerance is h7.
★The milling chucks marked ∗1, ∗2 and ∗3 may not be used by the restriction of the diameter under V flange of your M/C.
★**FS** (Face Seal) types are available for **C25～C42** of BT40/BT50. There are 2 types; **FSJ**: With J groove, **FS**: Without J groove

HIGH SPEED MILLING CHUCK

NIKKEN



C-G
High Pressure Centre Through (MAX. 7MPa)





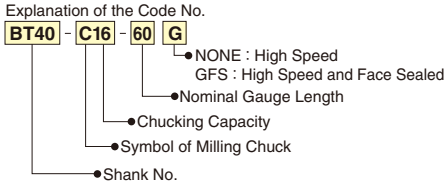
GFS type
For machining of aluminum
PAT.

High Speed

TAPER	Code No.	D	D_1	C_1	L	ℓ_1	ℓ_2	ℓ_3	MAX. min^{-1}	Suitable Collet	Weight(kg)
No.30	BT30-C12- 55G	12	12	33	58	48	53	58	40,000	CCK12 KM12	0.5
	-C16- 55G	16	16	40	57	50	58	65		CCK16 KM16	0.6
	-C20- 65G*1, 75G	20	20	48	67, 75	57	66	80	30,000	CCK20 CCNK20 KM20 NK20	0.9, 1.0
	-C25- 75G*2, 80G	25	25	55	75, 82	56	65	68	25,000	CCK25 CCNK25 KM25 NK25	1.2, 1.3
	-C32- 90G*3,100G	32	32	62	90, 100	67	66,73	68,76	10,000	CCK32 CCNK32*5 KM32 NK32*5	1.4, 1.5
No.40	BT40-C12- 65G, 90G	12	12	33	65, 90	48	53	58	30,000	CCK12 KM12	1.1, 1.3
	-C16- 60G, 90G	16	16	40	63, 90	50	58	65	25,000	CCK16 KM16	1.2, 1.5
	-C20- 70G, 90G	20	20	48	71, 90	57	66	80		CCK20 CCNK20 KM20 NK20	1.4, 1.7
	-C25- 70G, 90G	25	25	55	70, 90	60	72		20,000	CCK25 CCNK25 KM25 NK25	1.6, 2.0
	-C32- 85G,105G	32	32	68	85,105	67, 70	73,82	77, 90		CCK32 CCNK32 KM32 NK32	1.9, 2.3
No.50	BT50-C12-105G,135G	12	12	33	105,135	48	53	58	20,000	CCK12 KM12	3.9, 4.2
	-C16-105G,135G	16	16	40		50	58	65		CCK16 KM16	4.1, 4.4
	-C20-105G,135G	20	20	48		57	66	80		CCK20 CCNK20 KM20 NK20	4.4, 4.8
	-C25-105G,135G	25	25	55		60	72		15,000	CCK25 CCNK25 KM25 NK25	4.6, 5.2
	-C32- 90G,105G,120G -135G,165G	32	32	68	90,105,120 135,165	70	97	105		CCK32 CCNK32 KM32 NK32	4.3, 4.7, 5.2 5.7, 6.5
	-C42-*4 95P,105P,120P	42	42	86	95,105,120	73	110	125	12,000	CCK42 CCNK42 KM42 NK42	5.5, 5.8, 6.6

★All high speed type milling chuck are centre through coolant type. Please use a stopper or **CCK**, **CCNK** collet, when endmill shank length is shorter than "ℓ1" dimension. The Code No. of stopper for direct chucking
C20: 9MC20H, C25: 9MC25H (BT30-C25-75G: 9MC25HSB) , C32: 9MC32HD (BT40-C32-85G: 9MC32HDA, BT40-C32-105G: 9MC32HDB) , C42: 9MC42H
★The milling chucks marked *1, *2 and *3 may not be used by the restriction of the diameter under V flange of your M/C.
★*4 : The Code No. of the wrench for **C42** is **9HC42**.
★**GFS**(Face Seal)types are available for **C25～C42** of **BT40/BT50**. There are 2 types;
GFSJ: With J groove, **GFS**: Without J groove
★The milling chucks marked *1, *2 and *3 may not be used by the restriction of the diameter under V flange of your M/C.
★*5 **NK32** and **CCNK32** collet can not be used on **BT30-C32-90.**

Explanation of the Code No.



JAPAN, USA, KOREA, TAIWAN

GH Handle for HIGH SPEED TOOLING

NIKKEN



GH

GH Handle has a two-way tightening/loosening ratchet on the handle that has been developed to provide quick and convenient loading of the tool. The **GH Handle** also dispenses with the need for notches on the nose ring.

JAPAN, USA, KOREA, TAIWAN PAT.



Code No.	Milling Chuck	Slim Chuck	MAJOR DREAM	VC Holder
GH 6*	—	SK 6-P / SKT 6	MDSK 6	—
GH10*	—	SK10-P / SKT10	MDSK10	VC6
GH12*	C12-G	SK13-P / SKT13	MDSK13	—
GH16*	C16-G	SK16-P / SKT16	MDSK16	VC13
GH20*	C20-G	SK20-P / SKT20	MDSK20	—
GH25*	C25-G	SK25-P / SKT25	MDSK25	—
GH32S	C32-G(Nose Ring:φ62mm)	—	—	—
GH32	C32-G(Nose Ring:φ68mm)	—	—	—

★Torque adjustable **GH Handle** is available for * marked handle.
The Code No. is **GH6-TLS, GH10-TLS, GH16-TLS, GH25-TLS.**



Tightening



Loosening

STRAIGHT COLLET (KM COLLET)

NIKKEN



Photo shows **ANNIVERSARY type KM Collet**.



○means with internal grooves for gripping strongly to eliminate the oil.

Explanation of the Code No.

KM 32 – 10
- 10: ID of Collet
- 32: OD of Collet
- KM: Symbol of Collet

KM :Standard
NK :Adjustable
CCK :Centre Coolant
CCNK:Centre Coolant, Adjustable

KM

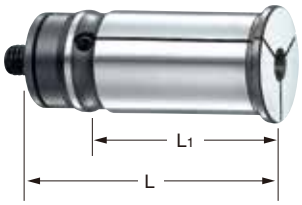
Style	L	KM Collet Code No. (OD-ID)
KM12	40	**KM12-**2, 3, 4, 5, 6, **7**, **8**, **9**,**10**
KM16	47.5	**KM16-**2, 3, 4, 5, 6, 7, **8**, **9**,**10**,**11**,**12**
KM20	53	**KM20-**2, 3, 4, 5, 6, 7, 8, 9,**10**,**11**,**12**,13,**14**,**15**,**16**
KM22	57	**KM22-**3, 4, 5, 6, 7, 8, 9,10,**11**,**12**,13,**14**,**15**,**16**,17,**18**,**19**, **20**
KM25	59	**KM25-**3, 4, 5, 6, 7, 8, 9,**10**,**11**,**12**,13,**14**,**15**,**16**,17,**18**,**19**, **20**, **21**, **22**
KM32	64.5	**KM32-**3, 4, 5, 6, 7, 8, 9,10,11,**12**,13,**14**,**15**,**16**,17,**18**,**19**, **20**, 21, **22**, 23, **24**, **25**, 26, **30**
KM42	73(78)	**KM42-**3, 4, 5, 6, 7, 8, 9,10,11,**12**,13,**14**,**15**,16,17,**18**,**19**, **20**, 21, **22**, 23, **24**, **25**, 26, 27, 28, 29, 30, 31, **32**, **40**

★For Synchronous Tapping Program : Special ID Collets for Tap Shank are also available.
★Other metric sizes and imperial sizes, 1/8, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 13/16, 7/8, 1, 1·1/8, 1·1/4, 1·1/2"are also available.
★The collets with bold character are the **"ANNIVERSARY" type** (N) **KM Collet**.
Ordinary **KM** Collet can be used with **"ANNIVERSARY" type** (N) **Milling Chuck**, but better performance can be found with the **"ANNIVERSARY" type** (N) **KM Collet**.
★Please note the acceptable shank tolerance is h6～h7.
★( ): L dimension for **KM42-12** or larger ID.
★Collet removal (**9CKR**) is an optional accessory for NC milling chuck.



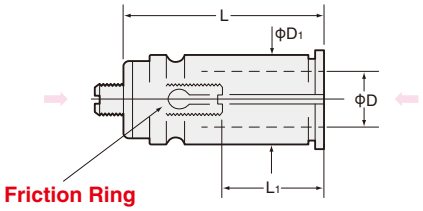
STRAIGHT COLLET (NK COLLET)

NIKKEN



NK

Cutter length adjustment on the collet is possible from front and back.



○means with internal grooves for gripping strongly to eliminate the oil.

Style	L	L_1	NK Collet Code No. (OD-ID)
NK20	63	20～40	**NK20-**3, 4, 5, **6**, 7, **8**, 9,**10**,11,**12**,13,14,15,**16**
NK22	70	30～50	**NK22-**3, 4, 5, **6**, 7, **8**, 9,**10**,11,**12**,13,14,15,**16**,17,18
NK25	68	30～55	**NK25-**3, 4, 5, **6**, 7, **8**, 9,**10**,11,**12**,13,14,15,**16**,17,18,19, **20**, 21, 22
NK32	75	30～60	**NK32-**3, 4, 5, **6**, 7, **8**, 9,**10**,11,**12**,13,14,15,**16**,17,18,19, **20**, 21, 22, 23, 24, **25**, 26
NK42	85(92)	30～65	**NK42-**3, 4, 5, **6**, 7, **8**, 9,**10**,11,**12**,13,14,15,**16**,17,18,19, **20**, 21, 22, 23, 24, **25**, 26, 27, 28, 29, 30, 31, **32**

★For Synchronous Tapping Program : Special ID Collets for Tap Shank are also available.
★Other metric sizes and imperial sizes, 1/8, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 13/16, 7/8, 1, 1·1/8, 1·1/4, 1·1/2"are also available.
★The collets with bold character are standard.
★Please note the acceptable shank tolerance is h6～h7.
★( ): L dimension for **NK42-12** or larger ID.
★Collet removal (**9CKR**) is an optional accessory for NC milling chuck.



Straight Shank MILLING CHUCK

NIKKEN

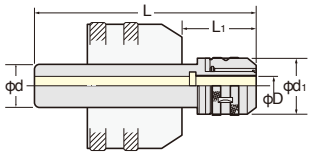
S-C for Multi-Lock Milling Chuck

■For Extension



Photo. shows **S32-C12-200**





Style	Code No.	Φd	ΦD	Φd1	L	MAX. L_1	Collet	Weight(kg)
32	**S32-C12-120, 160, 200**	32	12	33	120, 160, 200	60, 100, 140	KM12	0.6, 0.9, 1.1
	-C16-130		16	44	130	70	KM16	0.7
	-C20-150		20	52	150	90	KM20	1.1
42	**S42-C16-180**	42	16	44	180	120	KM16	1.6
	-C20-185		20	52	185	125	KM20	1.7

★**S32-C22-150, S42-C22-185, S42-C25-150** are also available as semi-standard.
★**The MC and NC straight shank Milling Chuck is unified to the above Code No.** ★Please refer☞**P.33** for **KM** Collet.

CENTRE COOLANT STRAIGHT COLLET

PAT.

NIKKEN



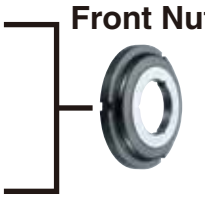
Suitable for all models of the NIKKEN MILLING CHUCK

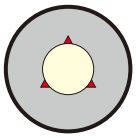
CCK Collet



CCNK Collet

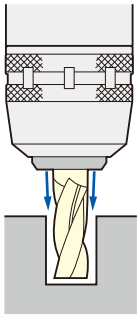




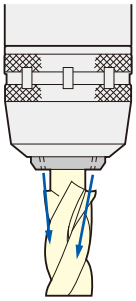


Jet Coolant
⊕
Prevention of Swarf entering the collet through the slots

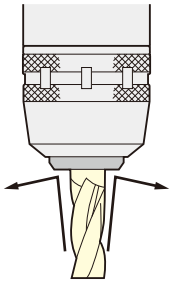
- J Coolant type Nut (For the cutter without oil hole)
- Nut with O-ring (For the oil hole cutter)
- Nut with multi coolant nozzles
  (For the cutter that the cutter dia. is larger than the shank dia.)



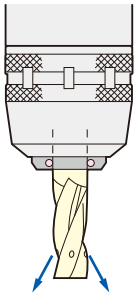
For grooving.



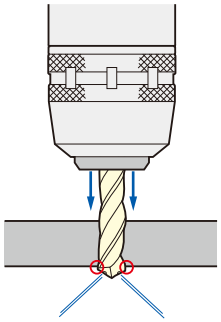
For cutters with cutting diameter which is larger than the shank diameter.



Prevention of the swarf contamination.



A front nut with an O-ring seal, for use with oil hole cutter, is also available as option.



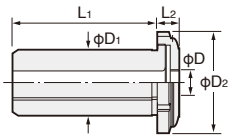
Supply coolant to the shoulder when oil hole drill is passes through the hole.

CCK Collet

○ means with internal grooves for gripping strongly to eliminate the oil.







Explanation of the Code No.

CCK 32 – 10

- 10: ID of Collet
- 32: OD of Collet
- CCK: Symbol of Centre Coolant Collet

It can be used for the standard collet.

Style	φD1	φD2	L1	L2	CCK Collet Code No. (OD-ID)	Front Nut Code No.
CCK12	12	19.5	38	7	**CCK12**-3, 4, 5, 6, **8**, **10**	**CKFN12**
CCK16	16	28.5	45	8	**CCK16**-3, 4, 5, 6, **8**, **10**, **12**	**CKFN16**
CCK20	20	33	50.5	8	**CCK20**-6, 8, **10**, **12**, **16**	**CKFN20**
CCK25	25	39	56	8.5	**CCK25**-6, 8, **10**, **12**, **16**, **20**	**CKFN25**
CCK32	32	46.5, 43	61.5	9	**CCK32**-6, 8, **10**, **12**, **16**, **20**, **25**	**CKFN32, CKFN32T**
CCK42	42	59.5	70(75)	9	**CCK42**-6, 8, **10**, **12**, **16**, **20**, **25**, **32**	**CKFN42**

★Above bold figures indicate **"ANNIVERSARY" type** Ⓝ **CCK Collet**.
★Please note the acceptable shank tolerance is h6~h7.
★Other metric sizes and imperial sizes, 1/8, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 13/16, 7/8, 1, 1·1/8, 1·1/4, 1·1/2"are also available.
★**CKFN** front nut and **CCKL** spanner are optional accessories.
★Collet removal (**9CKR**) is an optional accessory for NC milling chuck.



CCNK Collet

○ means with internal grooves for gripping strongly to eliminate the oil.

Cutter length adjustment on the collet is possible from front and back.



Photo shows with front nut.

Explanation of the Code No.

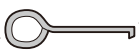
CCNK 32 – 10

- 10: ID of Collet
- 32: OD of Collet
- CCNK: Symbol of Centre Coolant Collet for NC

It can be used for the standard collet.

Style	CCNK Collet Code No.(OD-ID)	Front Nut Code No.
CCNK20	**CCNK20**-6, 8, 10, 12, 16	**CKFN20**
CCNK25	**CCNK25**-6, 8, 10, 12, 16, 20	**CKFN25**
CCNK32	**CCNK32**-6, 8, 10, 12, 16, 20, 25	**CKFN32, CKFN32T**
CCNK42	**CCNK42**-6, 8, 10, 12, 16, 20, 25, 32	**CKFN42**

★Please note the acceptable shank tolerance is h6~h7.
★Other metric sizes and imperial sizes, 1/8, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 13/16, 7/8, 1, 1·1/8, 1·1/4, 1·1/2"are also available.
★**CKFN** front nut and **CCKL** spanner are optional accessories.
★Collet removal (**9CKR**) is an optional accessory for NC milling chuck.



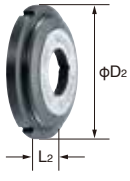


★Jet Coolant type for the cutter with a cutter dia. larger than shank dia. is also available.
CKFN25-20MN
32-25MN
42-32MN



★Front Nut fitted with an O-ring is also available.
e.g. The Code No. is **CKFN32-10C**

Front Nut



Explanation of the Code No.

CKFN 32 – 10

- 10: ID of Collet
- 32: OD of Collet
- CKFN: Symbol of Front Nut

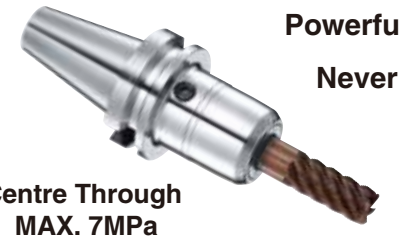
Style	φD2	L2	Front Nut Code No.
CKFN12	19.5	7	**CKFN12** -3, 4, 5, 6, 8,10
CKFN16	28.5	8	**CKFN16** -3, 4, 5, 6, 8,10,12
CKFN20	33	8	**CKFN20** -6, 8,10,12,16
CKFN25	39	8.5	**CKFN25** -6, 8,10,12,16, 20
CKFN32	46.5	9	**CKFN32** -6, 8,10,12,16, 20, 25
CKFN32T	43	9	**CKFN32T**-6, 8,10,12,16, 20, 25
CKFN42	59.5	9	**CKFN42** -6, 8,10,12,16, 20, 25, 32

★**For C32 there are 2 sizes, CKFN32 = for nose ring diameter of φ69mm, CKFN32T = for nose ring diameter of φ64mm.**
★The spanner is available as an option.
CKFN12 : CCKL12, CKFN16 : CCKL16, CKFN20 : CCKL20, CKFN25, CKFN32T : CCKL25, CKFN32 : CCKL32, CKFN42 : CCKL42



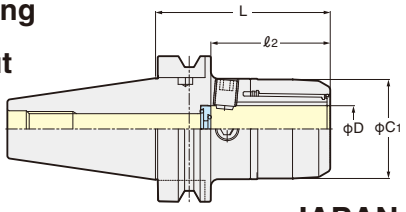
★The front nut for direct chucking is also available.
e.g. CKFN20-20D, CKFN25-25D, CKFN32-32D
★The Code No. fitted with O-ring is ;
e.g. CKFN20-20DC, CKFN25-25DC, CKFN32-32DC

X-Treme Shank 2LOCK NBT X-Treme Chuck NEW NIKKEN



Powerful Gripping & Never Pull-out

Centre Through MAX. 7MPa



Explanation of the Code No.

NBT50 – C32EX – 121 – J

- J: J-Type (Jet Groove)
- Nominal Gauge Length
- X-Treme Chuck
- Chucking Capacity
- Symbol of Milling Chuck
- Shank No.

JAPAN, USA, EU PAT. CHINA PAT.P

TAPER	Code No. (φD - L)	C1	L	ℓ2	End mill with oil hole		Handle (Option)	Weight (kg)
					Stopper*	Face cap*		
No.40	NBT40-C12EX- 86	40	86	58	9MC12HEX- 6L	9C12SL-FS-EX-A1	GH16	1.6
	-C16EX- 96	48	96	68	9MC16HEX-6.5L	9C16SL-FS-EX-A1	GH20	1.7
	-C20EX- 96	55	96	71	9MC20HEX- 7L	9C20 -FS-EX-A1	GH25	1.8
No.50	NBT50-C12EX- 96	40	96	58	9MC12HEX- 6L	9C12SL-FS-EX-A1	GH16	4.0
	-C16EX-106	48	106	68	9MC16HEX-6.5L	9C16SL-FS-EX-A1	GH20	4.4
	-C20EX-116	55	116	71	9MC20HEX- 12L	9C20 -FS-EX-A1	GH25	5.0
	-C25EX-116	55	116.3	77.3	9MC25HEX-6.2L	9C25SL-FS-EX-A1	GH25	4.8
	-C32EX-121	68	121.3	83.3	9MC32HEX- 7L	9C32SL-FS-EX-A1	GH32	5.3
	-C42EX-126	86	126	86	9MC42HEX- 9L	9C42SL-FS-EX-A1	9HC42	6.3

Please use direct chucking without KM collet.

★MAX. 7MPa of center through coolant is available with the stopper.
★Please use **J**-type **X-Treme** chuck, when end mill without oil hole is used. **eg)** NBT50-C32EX-121-J
In case of **J**-type **X-Treme** chuck, **J**-type stopper and **J**-type face cap (with Jet grooves) are attached. **9MC32HEX-7L-J, 9C32L-FS-EX-J**
J-type **X-Treme** chuck is used for the pocket milling and side milling.
★Extended length **X-Treme** chuck is also available. NBT50-C20EX-135, NBT50-C25EX-135, NBT50-C32EX-135



GH Handle ☞P. 48

2LOCK tooling (NBT) can be used as the double face contact tooling on the M/C where spindle is BT double face contact system.
2LOCK tooling can also be used on the M/C with BT standard spindle.

X-Treme Shank 2LOCK NIT/NCAT X-Treme Chuck NEW NIKKEN

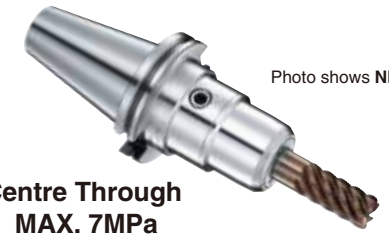
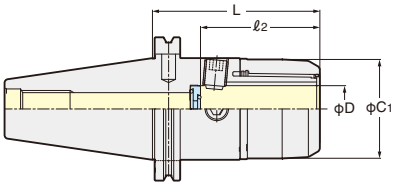


Photo shows **NIT** Shank.

Centre Through MAX. 7MPa



Explanation of the Code No.

NIT50 – C32EX – 116 – J

- J: J-Type (Jet Groove)
- Nominal Gauge Length
- X-Treme Chuck
- Chucking Capacity
- Symbol of Milling Chuck
- Shank No.

JAPAN, USA, EU PAT. CHINA PAT.P

TAPER	Code No. (φD - L)	C1	L	ℓ2	End mill with oil hole		Handle (Option)	Weight (kg)
					Stopper*	Face cap*		
NIT50	NIT50 -C12EX- 96	40	96	58	9MC12HEX- 6L	9C12SL-FS-EX-A1	GH16	3.4
	-C16EX-106	48	106	68	9MC16HEX-6.5L	9C16SL-FS-EX-A1	GH20	3.8
	-C20EX-106	55	106	71	9MC20HEX- 12L	9C20 -FS-EX-A1	GH25	4.3
	-C25EX-111	55	111.3	77.3	9MC25HEX-6.2L	9C25SL-FS-EX-A1	GH25	4.2
	-C32EX-116	68	116.3	83.3	9MC32HEX- 7L	9C32SL-FS-EX-A1	GH32	4.7
	-C42EX-126	86	136	86	9MC42HEX- 9L	9C42SL-FS-EX-A1	9HC42	6.0
NCAT50	NCAT50-C12EX- 96U	40	96	58	9MC12HEX- 6L	9C12SL-FS-EX-A1	GH16	3.4
	-C16EX-106U	48	106	68	9MC16HEX-6.5L	9C16SL-FS-EX-A1	GH20	3.8
	-C20EX-106U	55	106	71	9MC20HEX- 12L	9C20 -FS-EX-A1	GH25	4.3
	-C25EX-111U	55	111.3	77.3	9MC25HEX-6.2L	9C25SL-FS-EX-A1	GH25	4.2
	-C32EX-116U	68	116.3	83.3	9MC32HEX- 7L	9C32SL-FS-EX-A1	GH32	4.7
	-C42EX-126U	86	126	86	9MC42HEX- 9L	9C42SL-FS-EX-A1	9HC42	6.0

Please use direct chucking without KM collet.

★MAX. 7MPa of center through coolant is available with the stopper.
★Please use **J**-type **X-Treme** chuck, when end mill without oil hole is used. **eg) NCAT50-C32EX-116U-J**
In case of **J**-type **X-Treme** chuck, **J**-type stopper and **J**-type face cap (with Jet grooves) are attached. **9MC32HEX-7L-J, 9C32L-FS-EX-J**
J-type **X-Treme** chuck is used for the pocket milling and side milling.



GH Handle ☞P. 48

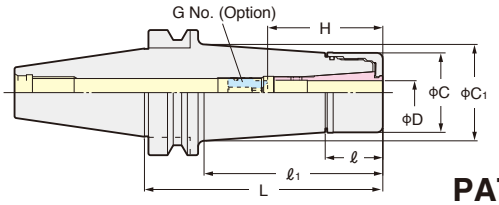
VC HOLDER

NIKKEN



VC

With TiN Bearing Nut
MAX. 40,000min^{-1} & G2.5
Run-Out Accuracy : Within 3μm at 4D



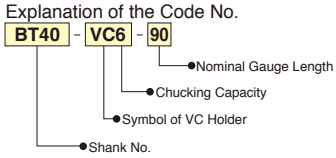
High Speed

PAT.

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	H	G No. (Option)	Weight (kg)	MAX. min^{-1}	Collet
No.30	BT30-VC 6- 45	2.0～ 6.0	45	23	23	27.5	27.5	35～45	VCG 6- 8A	0.5	40,000	VCK 6
	- 60		60		35		31.7			0.6		
	- 90		90		65		33.4			0.8		
	-VC13- 60	3.0～12.0	60	29	37	40	41.1	50～60	VCG13-15A	0.7		VCK13
	- 90		90		67		41.3			0.9		
	-120		120		97		42.4			1.2		
No.40	BT40-VC 6- 60	2.0～ 6.0	60	23	30	27.5	30.0	35～45	VCG 6- 8A	1.1	30,000	VCK 6
	- 90		90		60		32.7			1.3		
	-120		120		90		36.9			1.5		
	-VC13- 60	3.0～12.0	60	29	31	40	40.3	50～60	VCG13-15A	1.2		VCK13
	- 90		90		60		44.3			1.5		
	-120		120		90		48.5			1.9		
No.50	BT50-VC 6-105	2.0～ 6.0	105	23	62	27.5	33.0	35～45	VCG 6- 8A	3.9	20,000	VCK 6
	-135		135		92		37.1			4.1		
	-165		165		122		41.3			4.4		
	-VC13-105	3.0～12.0	105	29	62	40	44.6	50～60	VCG13-15A	4.1		VCK13
	-135		135		92		48.8			4.5		
	-165		165		122		53.0			4.9		

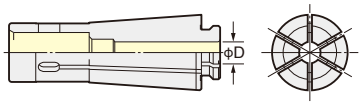
★TiN Bearing Nut is supplied as standard.
★Collet, adjust screw (G No.) and **GH Handle** are available as an option. The Code No. of the **GH Handle** is **VC6: GH10, VC13: GH16**
★Please add "**-RP**" at the end of Code No. for Rust Proof Treatment **VC** Holder. e.g : **BT40-VC13-60-RP**
★Please use **VC J** type Nut & Cap for Centre Through Coolant. When **VC J** type Nut is used, the total holder length will be extended to 6mm.
★**BT40-VC 6-150, BT40-VC13-150, BT50-VC13- 90, -120** are available as semi-standard.
★When the axial stopper is required, please use Adjust Screw (G No.)
★All series are for High Speed Rotation.

Explanation of the Code No.



VCK Collet





VCK Collet Code No.
VCK 6-2, 3, (3.175), 4, 5, 6
VCK13-3, (3.175), 4, 5, 6, 7, 8, 9, 10, 11, 12

VCK Collet (Inch) Code No.
VCK 6 -1/8, 3/16, 1/4
VCK13 -1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2

★The acceptable shank tolerance of **VCK** collet is h8.
★**VCK6-3.175** is same as **VCK6-1/8** : **VCK13-3.175** is same as **VCK13-1/8**.

■ Jet coolant splash with J type Nut.



Cap with triangular grooves
The jet coolant pressure creates a tornado effect.



Cap with O-ring
For oil hole cutting tool



J type NUT Code.

Style	J-type NUT	GH Handle	Cap	Wenche
VC 6	VCN- 6BJ	GH10	Cap With triangular grooves **SKJ10-○.○**	SKJL-10
			Cap With O-rong **SKJ10-○.○C**	
VC13	VCN-13BJ	GH16	Cap With triangular grooves **SKJ16-○.○**	SKJL-16
			Cap With O-rong **SKJ16-○.○C**	

■ Easy, safe and reliable handling with GH Handle ☞P. 48



MINI-MINI CHUCK ADVANCED ALPHA NEW

NIKKEN

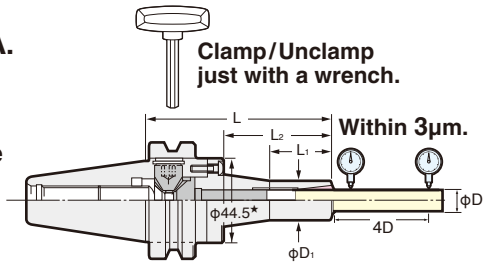


MMC

Extra-long sizes are added

EXPERT for SMALL DIA. END MILLING

30,000min^{-1} & G2.5 Gripping from Front Nose Run-Out Accuracy : 3μm at 4D



Dimension marked ★ is 52.4 for **MMC12**.

PAT.

High Speed

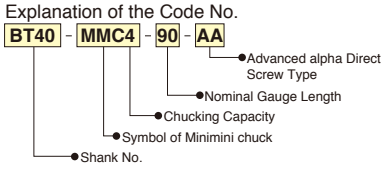
TAPER	Code No.	D	L	φD1	L1	L2	Collet	MAX.min-1	Weight(kg)
No.30	BT30-MMC 4 -105-AA	1～ 4	105	15	30	43	MPK 4	30,000	0.9
	MMC 8C-105-AA	2～ 8		20	33	42	PMK 8 VMK 8		0.9
	MMC 12C-105-AA	4～12		30	35	44	PMK12 VMK12		1.1
No.40	BT40-MMC 4 - 90-AA	1～ 4	90	15	30	43	MPK 4	30,000	1.2
	8C- 90-AA	2～ 8		20	33	42	PMK 8 VMK 8		1.2
	-120-AA		120		40	72			1.3
	-150-AA		150			102			1.4
	-180-AA		180		70	132			1.5
	12C- 90-AA	4～12	90	30	35	44	PMK12 VMK12		1.4
	-120-AA		120		60	74			1.5
	-150-AA		150		70	104			1.6
	-180-AA		180		100	134			1.7
No.50	BT50-MMC 4 -105-AA	1～ 4	105	15	30	43	MPK 4	20,000	3.8
	8C-105-AA	2～ 8		20	33	42	PMK 8 VMK 8		3.8
	-135-AA		135		40	72			3.9
	-165-AA		165			102			4.0
	-195-AA		195		70	132			4.1
	12C-105-AA	4～12	105	30	35	44	PMK12 VMK12		4.0
	-135-AA		135		60	74			4.1
	-165-AA		165		70	104			4.2
	-195-AA		195		100	134			4.3

★Wrench **EA573KL-6 : MMC4, MMC8C MMCL12-M6T62 : MMC12** is attached as standard.
★**Extra-long sizes are added ＊Extra-long sizes : longer +30～90㎜ than conventional.**
★Collet is available as an option. Please refer ☞P.38
★Center through tool coolant type MINI-MINI Chuck is available for **MMC8** and **MMC12** type only.
Please add the letter **"C"** to the Code No. **e.g. BT40-MMC8C-90**



EA573KL-6

Explanation of the Code No.



Extra-long sizes are added*

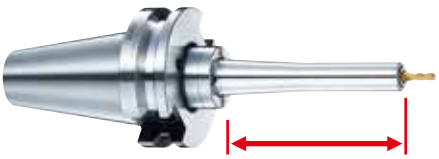


Photo shows **BT50** type

longer than +30～90㎜ than conventional.

Easy to approach a complicated work piece due to compact and extra-long design

DIRECT SCREW TYPE MINI-MINI CHUCK

NIKKEN

TAPER	Code No.	D	L	φD1	L1	L2	Collet	MAX.min-1	Weight(kg)
No.30	BT30-MMC8-65-AT	2～8	65	20	30	40	VMK 8	30,000	0.43

★Wrench **EA573KL-15** is attached as standard. ★Wrench both for chuck and pull stud is available as an option. Code No. is **MMCLA-BT30.**
★Collet is available as an option. Please refer ☞P.38

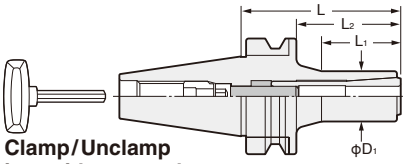
Direct Screw Type



Photo shows **BT30-MMC8-65-AT**

High Accuracy and High Gripping Torque by rigid and smooth shape body

HSK Direct Screw Type : ☞P.255



Clamp/Unclamp just with a wrench.

MINI-MINI COLLET (MPK/PMK/VMK COLLET)

NIKKEN

BT

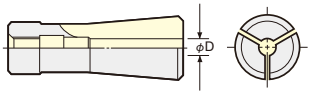
■STANDARD COLEET : MPK COLEET / PMK COLEET



Explanation of the Code No.

PMK 8 – 2

- 2 : ID of Collet
- 8 : Style No.
- PMK : Symbol of PMK collet



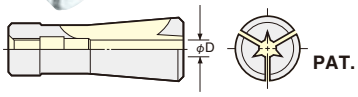
■FOR CENTRE THROUGH TOOL COOLANT : VMK Collet / VMK-J Collet



Explanation of the Code No.

VMK 12 – 6 J

- J : Non: Without Jet Spread Groove / J : With Jet Spread Groove
- 6 : ID of Collet
- 12 : Style No.
- VMK : Symbol of VMK collet



Jet Spread Groove (J Type)

Code No.	最少把握長
MPK 4- 1	6
- 1.5	8
- 2	10
- 2.5	12
- 3	16
- 3.5	16
- 4	16
-1/16	8
-3/32	10
- 1/8	16

Code No.	最少把握長
PMK 8- 2	10
- 2.2	10
- 2.4	12
- 2.6	12
- 2.8	12
- 3	16
- 3.2	16
- 3.4	16
- 3.6	16
- 3.8	16
- 4	20
- 4.2	20
- 4.4	20
- 4.6	22
- 4.8	22
- 5	22
- 5.2	22
- 5.4	22
- 5.6	22
- 5.8	22
- 6	22
- 6.2	22
- 6.4	22
- 6.6	22

Code No.	最少把握長
PMK 8- 6.8	22
- 7	22
- 7.2	22
- 7.4	22
- 7.6	22
- 7.8	22
- 8	22
- 1/8	16
-3/16	22
PMK 12- 4	19
- 5	22
- 6	30
- 8	31
- 10	31
- 12	31

Code No.	最少把握長
VMK 8 - 2	10
- 3	16
- 4	20
- 5	22
- 6	22
- 7	22
- 8	22
- 2 J	10
- 3 J	16
- 4 J	20
- 5 J	22
- 6 J	22
- 7 J	22
- 8 J	22
- 1/8	15
- 3/16	22
- 1/4	22
- 5/16	22
- 3/8	22
- 1/8 J	16
- 3/16 J	22
- 1/4 J	22
- 5/16 J	22
- 3/8 J	22

Code No.	最少把握長
VMK12- 4	19
- 5	22
- 6	30
- 8	31
- 10	31
- 12	31
- 4 J	19
- 5 J	22
- 6 J	30
- 8 J	31
- 10 J	31
- 12 J	31
- 3/16	22
- 1/4	30
- 5/16	31
- 3/8	31
- 7/16	31
- 1/2	31
- 3/16 J	22
- 1/4 J	30
- 5/16 J	31
- 3/8 J	31
- 7/16 J	31
- 1/2 J	31

★Please note the acceptable shank tolerance of **MPK** Collet is h6.
★Even the gripping range of **PMK** Collet is 0.2mm / dia. **(e.g. PMK8-2 : 1.8～2.0)** but the shank tolerance of **h6 highly** recommended for precision machining.

★**FOR Centre through tool Coolnant type MINI-MINI Chuck :**
★Standard **VMK** Collet is for the cuttinhg tool with coolant hole.
★**VMK-J** Collet is for the cuttinhg tool without Coolant hole.
★Please note the acceptable shank tolerance h6.
★**VMK8-2J** is Jet Spresd Hole type.



VMK



VMK-J

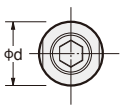
Straight Shank MINI-MINI CHUCK

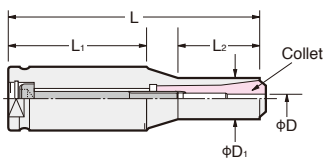
NIKKEN

K-MMC









Style	Code No.	Chucking Range φD	L	φD1	L1	L2	Collet	Weight(kg)
16	K16-MMP 4- 70, 150	1～ 4	70, 150	15	50, 130	20	MPK 4	0.1, 0.2
20	K20-MMC 8-100	2～ 8	100	20	80	20	PMK 8 VMK 8	0.2
32	K32-MMC 8-122, 160	2～ 8	122, 160	20	67	40	PMK 8 VMK 8	0.5, 0.7
	K32-MMC12-170S	4～12	170	30	120	50	PMK12 VMK12	1.0

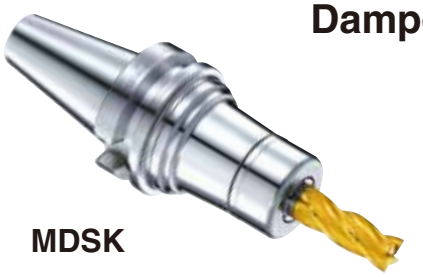
★Wrench is supplied as standard. Collet is available as an option.

MAJOR DREAM HOLDER 2LOCK MAJOR DREAM HOLDER

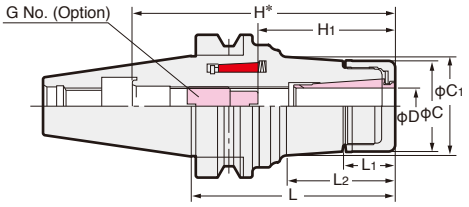
NIKKEN

Holder with an adjust screw for axial adjustment is supplied as an option. Please contact us.

Dampening Effect
TiN Bearing Effect



MDSK



H : MAX. Cutter Shank Length to be inserted

2LOCK tool can be used on the M/C with BT standard spindle.

PAT.

TAPER	Code No.	D	L	L1	L2	C	C1	H*	H1	G No. (Option)	Weight (kg)	Collet
No.30	NBT30-MDSK 6- 50	3.0～6.0	50	16.2	19.5	19.5	20.0	73	21～35	SKG- 8	0.5	SK 6 A
	- 60		60		25.5		20.8	83			0.6	
	- 75		75		40.5		22.9	98			0.7	
	- 90		90		55.5		25.0	113			0.8	
	-MDSK10- 50	3.0～10.0	50	18.0	19.0	27.5	27.5	72	30～50	SKG-12L	0.5	SK10 A
	- 60		60		25.7		28.6	82			0.6	
	- 75		75		42.9		31.0	97			0.8	
	- 90		90		58.7		33.2	112			0.8	
	-MDSK13- 60	3.0～13.0	60	22.0	29.0	33.0	34.0	83	31～43	SKG-15	0.8	SK13 A
	- 75		75		45.0		36.2	98	31～60		0.8	
	- 90		90		60.0		38.3	113			0.8	
	-MDSK16- 75	3.0～16.0	75	23.0	47.5	40.0	40.0	60	45～60	SKG-12L	1.1	SK16 A
	- 90		90		62.5			75	45～70	SKG-12	1.3	
No.40	NBT40-MDSK 6- 60	3.0～6.0	60	16.2	18.0	19.5	19.5	86	21～35	SKG- 8	0.8	SK 6 A
	- 75		75		33.0		21.9	101			0.9	
	- 90		90		48.0		24.0	116			1.1	
	-105		105		63.0		26.1	131			1.2	
	-120		120		78.0		28.2	146			1.4	
	-MDSK10- 60	3.0～10.0	60	18.0	19.0	27.5	27.5	86	30～50	SKG-12L	1.1	SK10 A
	- 75		75		33.0		29.6	101			1.3	
	- 90		90		48.0		31.7	116			1.5	
	-105		105		63.0		33.8	131			1.6	
	-120		120		78.0		35.9	146			1.8	
	-150		150		110.0		40.4	176			2.2	
	-MDSK13- 65	3.0～13.0	65	22.0	24.0	33.0	33.0	91	31～60	SKG-15	1.2	SK13 A
	- 75		75		33.0		34.6	101			1.4	
	- 90		90		48.0		36.7	116			1.7	
	-105		105		63.0		38.8	131			1.8	
	-120		120		78.0		40.9	146			2.0	
	-150		150		110.0		45.4	176			2.4	
	-180		180		144.0		50.1	206			2.6	
	-MDSK16- 65	3.0～16.0	65	23.0	24.0	40.0	40.0	91	45～60	SKG-18L	1.2	SK16 A
	- 75		75		33.0		41.4	101	45～70		1.5	
	- 90		90		48.0		43.5	116			1.9	
	-105		105		64.0		45.8	131			2.0	
	-120		120		80.0		48.0	146			2.2	
	-150		150		113.0		52.6	176			2.5	
	-MDSK20- 75	4.0～20.0	75	25.2	41.2	48.0	51.3	80	50～73	SKG-12	1.9	SK20 A
	- 90		90		55.0		53.2	95		SKG-12-55L	2.1	
	-105		105		70.0		52.2	110		SKG-12-70L	2.3	
	-120		120		85.0		53.2	125		SKG-12-85L	2.6	

★**Please use A type SK collet for the end milling operation.** ☞ **P.43**
★Please refer ☞ **P.49** for the Jet coolant system, **J** type nut and cap.
★**GH handle** is available as an option. ☞ **P.48** Please order with the Code No. **GH6 : MDSK6 &, GH10 : MDSK10, GH12 : MDSK13, GH16 : MDSK16, GH20 : MDSK20, GH25 : MDSK25**
★**Please add "P" at the end of Code No. for high speed specification, e.g NBT40-MDSK10-60P**
★**Holder with an adjust screw for axial adjustment is supplied as an option. Please contact us.**



Explanation of the Code No.

NBT40 - MDSK10 - 90

- 90 : Nominal Gauge Length
- MDSK10 : Chucking Capacity
- MAJOR DREAM HOLDER
- NBT40 : Shank No.

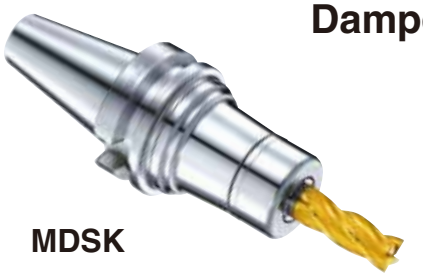
MAX. min^{-1}

Code No.	MAX. min^{-1}	Code No.	MAX. min^{-1}	Code No.	MAX. min^{-1}
NBT30-MDSK 6-P	30,000	NBT40-MDSK 6-P	25,000	NBT50-MDSK 6-P	20,000
-MDSK10-P		-MDSK10-P		-MDSK10-P	
-MDSK13-P		-MDSK13-P		-MDSK13-P	
-MDSK16-P	25,000	-MDSK16-P	20,000	-MDSK16-P	
		-MDSK20-P		-MDSK20-P	
				-MDSK25-P	15,000

MAJOR DREAM HOLDER 2LOCK MAJOR DREAM HOLDER

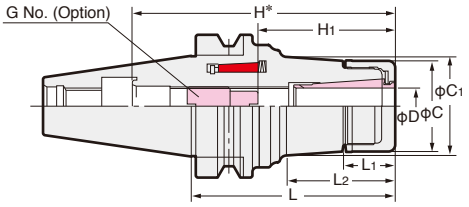
NIKKEN

Dampening Effect
TiN Bearing Effect



MDSK

Holder with an adjust screw for axial adjustment is supplied as an option. Please contact us.



H : MAX. Cutter Shank Length to be inserted

2LOCK tool can be used on the M/C with BT standard spindle.

PAT.

TAPER	Code No.	D	L	L1	L2	C	C1	H*	H1	G No. (Option)	Weight (kg)	Collet
No.50	NBT50-MDSK 6-105	3.0～6.0	105	16.2	48.0	19.5	24.0	116	21～35	SKG- 8	3.6	SK 6 A
	-120		120		63.0		26.1	131			3.7	
	-MDSK10-105	3.0～10.0	105	18.2	48.0	27.5	31.7	116	30～50	SKG-12L	4.3	SK10 A
	-120		120		63.2		33.8	131			4.4	
	-135		135		78.2		35.9	146			4.7	
	-165		165		110.2		40.4	176			5.0	
	-195		195		141.2		44.8	206			5.3	
	-MDSK13-105	3.0～13.0	105	22.0	48.0	33.0	36.7	116	31～60	SKG-15	4.2	SK13 A
	-120		120		63.0		38.8	131			4.7	
	-135		135		78.0		40.9	146			5.0	
	-165		165		110.0		45.4	176			5.3	
	-195		195		144.0		50.1	206			5.6	
	-MDSK16-105	3.0～16.0	105	23.0	48.0	40.0	43.5	116	45～70	SKG-18L	4.1	SK16 A
	-120		120		64.0		45.8	131			4.9	
	-135		135		80.1		48.0	146			5.2	
	-165		165		114.7		52.6	176			5.5	
	-195		195		144.6		52.8	206			5.8	
	-MDSK20-105	4.0～20.0	105	25.2	42.3	48.0	51.4	159	47～80	SKG-22	4.9	SK20 A
	-135		135		72.0		55.6	175			5.3	
	-165		165		102.0		59.8	205			5.9	
	-195		195		132.0		64.0	235			6.7	
	-MDSK25-105	8.0～25.4	105	27.0	42.3	55.0	57.2	159	55～85	SKG-28	4.9	SK25 A
	-135		135		74.0		61.6	175			5.7	
	-165		165		105.0		66.0	205			6.5	
	-195		195		135.0		70.2	235			7.5	

★**Please use A type SK collet for the end milling operation.**
★Please refer ☞ **P.49** for the Jet coolant system, **J** type nut and cap.
★**GH handle** is available as an option. ☞ **P.48** Please order with the Code No. **GH6 : MDSK6 &, GH10 : MDSK10, GH12 : MDSK13, GH16 : MDSK16, GH20 : MDSK20, GH25 : MDSK25**
★**Please add "P" at the end of Code No. for high speed specification, e.g NBT40-MDSK10-60P**
★**Holder with an adjust screw for axial adjustment is supplied as an option. Please contact us.**



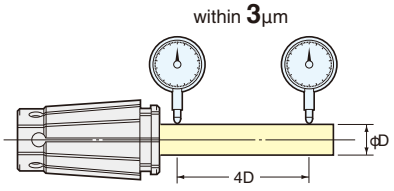
Explanation of the Code No.
NBT40 - MDSK10 - 90
- 90 : Nominal Gauge Length
- MDSK10 : Chucking Capacity
- MDSK : MAJOR DREAM HOLDER
- NBT40 : Shank No.

A TYPE SLIM COLLET

NIKKEN



SK



SK Collet A Type
SK 6-3A, 4A, 5A, 6A
SK10-3A, 4A, 5A, 6A, 8A, 10A
SK13-3A, 4A, 5A, 6A, 8A, 10A, 12A, 13A
SK16-3A, 4A, 5A, 6A, 8A, 10A, 12A, 16A
SK20-4A, 5A, 6A, 8A, 10A, 12A, 16A, 20A
SK25-8A, 10A, 12A, 16A, 20A, 25A

★**The acceptable shank tolerance of A Type collet is h_8.**

Inch	mm	Collet ID	Inch	mm	Collet ID
1/8	3.175	3.5	7/16	11.113	11.5
3/16	4.763	5	1/2	12.7	13
1/4	6.35	6.5	5/8	15.875	16
5/16	7.938	8.0	3/4	19.05	19.5
3/8	9.525	10	1	25.4	25.4

SK Collet A Type (Inch)
SK 6 -1/8A, 3/16A
SK10 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A
SK13 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A
SK16 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A, 9/16A, 5/8A
SK20 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A, 9/16A, 5/8A, 3/4A
SK25 -3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A, 5/8A, 3/4A, 25.4A

SLIM CHUCK HIGH SPEED ROTATION • HIGH ACCURACY

NIKKEN

JAPAN, USA, EU, KOREA PAT.



SK

Photo shows **SK10** type.

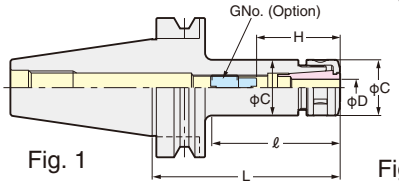


Fig. 1

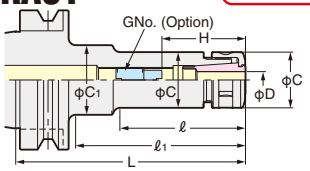


Fig. 2

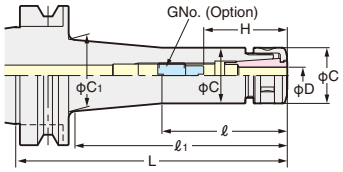


Fig. 3

When SK J type nut is used, the total chuck length will be extended by 6mm.

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	H	G No. (Option)	Weight (kg)	Fig	SK Collet
No.30	BT30-SK 6- 60	0.7 ～ 6.0	60	33	33	19.5	19.5	21～35	SKG- 8	0.7	1	SK 6
	- 90		90	56	65		32			0.7	2	
	-120		120	62	95					0.8		
	-SK10- 45	1.75～10.0	45	22	22	27.5	27.5	30～50	SKG-12S	0.8	1	SK10
	- 60		60	35	35				SKG-12L	0.9		
	- 75		75	50	50					1.0		
	- 90		90	65	65					1.0		
	-120		120	95	95					1.1		
	-SK13- 60	2.75～13.0	60	35	35	33	33	31～50	SKG-15	1.0		SK13
	- 75		75	50	50			31～65		1.1		
	- 90		90	65	65					1.1		
	-120		120	95	95					1.2		
	-SK16- 60	2.75～16.0	60	37	37	40	40	45～60	SKG-12L	1.1		SK16
	- 75		75	52	52			45～65		1.2		
	- 90		90	67	67				SKG-12	1.2		
	-120		120	97	97			40～70	SKG-18L	1.3		
	-SK20- 60	3.5～20.0	60	37	37	48.5	48.5	65～70	SKG-12S	0.7		SK20
	- 75		75	52	52			70～75	SKG-12L	0.9		
	- 90		90	67	67			65～75	SKG-12	1.2		
	-SK25- 90	7.5～25.4				55	55	55～75		1.5		SK25
No.40	BT40-SK 6- 60	0.7 ～ 6.0	60	30	30	19.5	19.5	21～35	SKG- 8	1.0	1	SK 6
	- 90		90	51	60		32			1.1	2	
	-120		120	60	90					1.4		
	-150		150		120		25			1.5	3	
	-SK10- 60	1.75～10.0	60	32	32	27.5	27.5	30～50	SKG-12L	1.1	1	SK10
	- 75		75	45	45					1.2		
	- 90		90	48	60		40			1.2	2	
	-120		120	73	90					1.4		
	-150		150		118		34.5			1.6	3	
	-180		180		148		39			1.6		
	-200		200		168					1.8		
	-250		250		218					2.1		
	-SK13- 60	2.75～13.0	60	28	28	33	33	31～65	SKG-15	1.2	1	SK13
	- 75		75	43	43					1.3		
	- 90		90	58	58					1.4		
	-120		120	88	88					1.6		
	-150		150		118		40			1.8	3	
	-180		180	88	148					1.8		
	-200		200		168					2.0		
	-250		250		218					2.4		
	-SK16- 60	2.75～16.0	60	32	32	40	40	50～65	SKG-18S	1.3	1	SK16
	- 75		75	43	43			40～67	SKG-18L	1.4		
	- 90		90	58	58			40～70		1.5		
	-120		120	88	88					1.7		
	-150		150	118	118					1.9		
	-180		180	148	148					2.0		
	-200		200	168	168					2.2		
	-250		250	218	218					2.7		
	-SK20- 60	3.5～20.0	60	32	32	48.5	48.5	47～60	SKG-22	1.3		SK20
	- 75		75	45	45			47～70		1.4		
	- 90		90	60	60			47～80		1.6		
	-120		120	90	90					2.0		
	-SK25- 75	7.5～25.4	75	47	47	55	55	55～75	SKG-12	1.7		SK25
	- 90		90	61	61				SKG-28	1.8		
	-120		120	91	91			55～85		2.0		

SLIM CHUCK HIGH SPEED ROTATION • HIGH ACCURACY

NIKKEN

JAPAN, USA, EU, KOREA PAT.



SK

Photo shows **SK16** type.

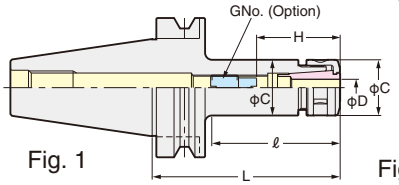


Fig. 1

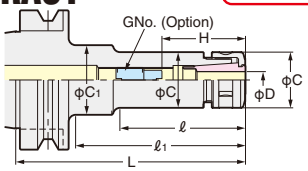


Fig. 2

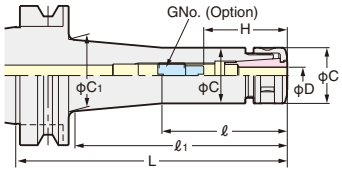


Fig. 3

When SK J type nut is used, the total chuck length will be extended by 6mm.

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	H	G No. (Option)	Weight (kg)	Fig	SK Collet
No.50	BT50-SK 6-105	0.7 ～ 6.0	105	55	64	19.5	32	21～35	SKG- 8	3.8	2	SK 6
	-135		135	60	92					3.9		
	-165		165		114					4.0		
	-200		200		151		30			4.2	3	
	-SK10-105	1.75～10.0	105	57	57	27.5	27.5	30～50	SKG-12L	4.2	1	SK10
	-135		135	70	92		32			4.4	2	
	-165		165	75	114					4.6		
	-200		200		151		36			4.8	3	
	-225		225		178		40			5.0		
	-250		250		203					5.2		
	-300		300		253		60			5.6		
	-SK13-105	2.75～13.0	105	62	62	33	33	31～65	SKG-15	4.5	1	SK13
	-135		135	92	92					4.7		
	-165		165		122		45			4.9	2	
	-200		200		157					5.2	3	
	-250		250		207					5.7		
	-300		300		257					6.2		
	-SK16-105	2.75～16.0	105	62	62	40	40	40～70	SKG-18L	4.7	1	SK16
	-135		135	92	92					4.9		
	-165		165	90	122		50			5.1	2	
	-200		200		157		52			5.5	3	
	-250		250		207					6.0		
	-300		300		257		60			6.5		
	-SK20-105	3.5～20.0	105	62	62	48.5	48.5	47～80	SKG-22	4.3	1	SK20
	-135		135	92	92					4.6		
	-165		165	122	122					5.0		
	-200		200	157	157					5.4		
	-250		250	207	207					6.1		
	-300		300	257	257					6.8		
	-SK25-105	7.5～25.4	105	62	62	55	55	50～85	SKG-28	5.2		SK25
	-135		135	92	92					5.4		
	-165		165	122	122					5.6		
	-200		200	157	157					6.0		
	-250		250	207	207					6.7		
	-300		300	257	257					7.4		

★Please refer ☞ **P.65** for use as Tap Holder for Synchronized Tapping.
★Collet, adjust screw (G No.) and spanner are available as an option. **Please refer ☞ P.43 for SK Collet.**
The Code No. of the spanner is **SK6 (C=φ18) : SKL-6, SK6 (C=φ19.5) : SKL-6W, SK10: SKL-10, SK13: 9HC12A, SK16: 9HC16, SK20: 9HC22, SK25: 9HC25**



★**Please refer ☞ P.45, P.46 for High Speed Slim Chuck (40,000min^{-1})**
★All Slim Chucks can be used for Centre Through Coolant type. Please refer ☞ **P.52** for Centre Through Coolant Adjust Screw and ☞ **P.304** for Centre Through Pull Stud.
★Please refer ☞ **P.129** for High Pressure (MAX.7MPa) Centre Through Coolant type. ★Please refer ☞ **P.131** for Flange Through Coolant type.
★**BT40-SK10-200, 250 BT50-SK10-250, 300** are also available as semi-standard.
-SK16-200, 250 -SK16-250, 300
★Please add "**-RP**" at the end of Code No. for Rust Proof Treatment Slim Chuck. **e.g. BT40-SK10-90-RP**

BT15 Shank

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	H	G No. (Option)	Weight (kg)	Fig	SK Collet
No.15	BT15BR-SK 6- 40	0.7 ～ 6.0	40	26	26	19.5	19.5	21～30	SKG- 6	0.10	1	SK 6
	- 55		55	39	39			21～35	SKG- 8	0.14		
	- 65		65	49	49					0.15		
	-SK10- 40	1.75～10.0	40	26	26	27.5	27.5	30～37	SKG- 6L	0.14		SK10
	- 55		55	41	41			35～45		0.20		

★**BT15BR** is the solid tool integrated with pull stud for BROTHER.
★**BT15HW** is the solid tool integrated with pull stud for HOWA.
★**BT20P** and **BT25M** are the solid tools with integrated with pull stud without drive key groove for MAKINO SEIKI.
e.g. BT20P-SK10-40S, BT25M-SK16-70
★**S20T** is the short taper tool for SUGINO.

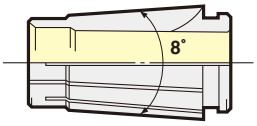


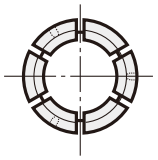
BT15BR

SLIM CHUCK COLLET

NIKKEN







Explanation of the Code No.

SK 10 - 6 P

- P: Non: Standard; P:P class (Run-out Accuracy=3μm); A:A type (for End Mill Shank)
- 6: MAX. Chucking Dia.
- 10: Style No.
- SK: Symbol of SK Collet

SK **"A" type SK collet (for End Mill Shank) are marked ● . The acceptable shank tolerance is h8.Code No. is e.g. SK10-10A**
"P" class SK collet (for drill) are available for all series. e.g. SK10-10P

Code No.	Chucking D
SK 6- 0.8	0.7 ~ 0.8
- 1	0.9 ~ 1.0
- 1.25	1.15~ 1.25
- 1.5	1.3 ~ 1.5
- 1.75	1.55~ 1.75
- 2	1.8 ~ 2.0
- 2.25	2.05~ 2.25
- 2.5	2.3 ~ 2.5
- 2.75	2.55~ 2.75
- 3	2.8 ~ 3.0
- 3.5	3.0 ~ 3.5
- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
SK10- 2	1.75~ 2.0
- 2.25	2.0 ~ 2.25
- 2.5	2.25~ 2.5
- 2.75	2.5 ~ 2.75
- 3	2.75~ 3.0
- 3.5	3.0 ~ 3.5
- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
- 6.5	6.0 ~ 6.5
- 7	6.5 ~ 7.0
- 7.5	7.0 ~ 7.5
- 8	7.5 ~ 8.0
- 8.5	8.0 ~ 8.5
- 9	8.5 ~ 9.0
- 9.5	9.0 ~ 9.5
-10	9.5 ~10.0

Code No.	Chucking D
SK13- 3	2.75~ 3.0
- 3.5	3.0 ~ 3.5
- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
- 6.5	6.0 ~ 6.5
- 7	6.5 ~ 7.0
- 7.5	7.0 ~ 7.5
- 8	7.5 ~ 8.0
- 8.5	8.0 ~ 8.5
- 9	8.5 ~ 9.0
- 9.5	9.0 ~ 9.5
- 10	9.5 ~10.0
- 10.5	10.0~10.5
- 11	10.5~11.0
- 11.5	11.0~11.5
- 12	11.5~12.0
- 12.5	12.0~12.5
- 13	12.5~13.0

Code No.	Chucking D
SK16- 3	2.75~ 3.0
- 3.5	3.0 ~ 3.5
- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
- 6.5	6.0 ~ 6.5
- 7	6.5 ~ 7.0
- 7.5	7.0 ~ 7.5
- 8	7.5 ~ 8.0
- 8.5	8.0 ~ 8.5
- 9	8.5 ~ 9.0
- 9.5	9.0 ~ 9.5
- 10	9.5 ~10.0
- 10.5	10.0~10.5
- 11	10.5~11.0
- 11.5	11.0~11.5
- 12	11.5~12.0
- 12.5	12.0~12.5
- 13	12.5~13.0
- 13.5	13.0~13.5
- 14	13.5~14.0
- 14.5	14.0~14.5
- 15	14.5~15.0
- 15.5	15.0~15.5
- 16	15.5~16.0

Code No.	Chucking D
SK20- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
- 6.5	6.0 ~ 6.5
- 7	6.5 ~ 7.0
- 7.5	7.0 ~ 7.5
- 8	7.5 ~ 8.0
- 8.5	8.0 ~ 8.5
- 9	8.5 ~ 9.0
- 9.5	9.0 ~ 9.5
- 10	9.5 ~ 10.0
- 10.5	10.0~ 10.5
- 11	10.5~ 11.0
- 11.5	11.0~ 11.5
- 12	11.5~ 12.0
- 12.5	12.0~ 12.5
- 13	12.5~ 13.0
- 13.5	13.0~ 13.5
- 14	13.5~ 14.0
- 14.5	14.0~ 14.5
- 15	14.5~ 15.0
- 15.5	15.0~ 15.5
- 16	15.5~ 16.0
- 16.5	16.0~ 16.5
- 17	16.5~ 17.0
- 17.5	17.0~ 17.5
- 18	17.5~ 18.0
- 18.5	18.0~ 18.5
- 19	18.5~ 19.0
- 19.5	19.0~ 19.5
- 20	19.5~ 20.0

Code No.	Chucking D
SK25- 8	7.5~8.0
- 10	9.5~10.0
- 12	11.5~12.0
- 16	15.5~16.0
- 16.5	16.0~16.5
- 17	16.5~17.0
- 17.5	17.0~17.5
- 18	17.5~18.0
- 18.5	18.0~18.5
- 19	18.5~19.0
- 19.5	19.0~19.5
- 20	19.5~20.0
- 20.5	20.0~20.5
- 21	20.5~21.0
- 21.5	21.0~21.5
- 22	21.5~22.0
- 22.5	22.0~22.5
- 23	22.5~23.0
- 23.5	23.0~23.5
- 24	23.5~24.0
- 24.5	24.0~24.5
- 25	24.5~25.0
- 25.4	25.0~25.4

★**SK6** collet with the special internal dia. is also available.

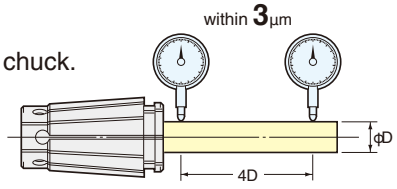


Collet removal **(SKR-6)** is supplied as standard only for **SK6**. **SKR-10**, **SKR-16** and **SKR-25** are available as an option. Collet removal is not necessary for **the new types of collet (SK10 to SK25 collet including SK13 and SK20)**.

★**Please refer ☞P.44 for SK Coolant Collet AC.**

"P" class SK collet for drill

It guarantees the Run-out accuracy within 3 micron at the nose (4D) from the chuck.
Additionally Collet Set is also available.



"A" type SK collet for endmill

The acceptable shank tolerance ids h8.

SK Collet A Type
SK 6-3A, 4A, 5A, 6A
SK10-3A, 4A, 5A, 6A, 8A, 10A
SK13-3A, 4A, 5A, 6A, 8A, 10A, 12A, 13A
SK16-3A, 4A, 5A, 6A, 8A, 10A, 12A, 16A
SK20-4A, 5A, 6A, 8A, 10A, 12A, 16A, 20A
SK25-8A, 10A, 12A, 16A, 20A, 25A

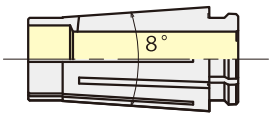
SK Collet A Type (Inch)
SK 6 -1/8A, 3/16A
SK10 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A
SK13 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A
SK16 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A, 9/16A, 5/8A
SK20 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A, 9/16A, 5/8A, 3/4A
SK25 -3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A, 5/8A, 3/4A, 25.4A

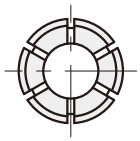
CENTER-THRU COOLANT COLLET (SK-AC) for NIKKEN SLIM CHUCK

NIKKEN



NEW





Code number reference

SK 10 - 6 AC

- AC: Center-thru coolant
- 6: Max clamping diameter
- 10: Style
- SK: Slim Chuck

SK-AC

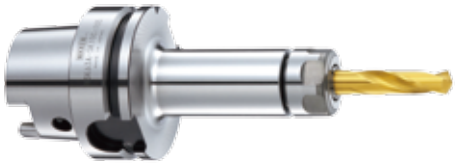
The acceptable shank tolerance is h8.

Style	Code No.	Chucking D
SK 6	SK 6- 3AC	3.0
	- 4AC	4.0
	- 5AC	5.0
	- 6AC	6.0
SK10	SK10- 3AC	3.0
	- 4AC	4.0
	- 5AC	5.0
	- 6AC	6.0
	- 7AC	7.0
	- 8AC	8.0
	- 9AC	9.0
	-10AC	10.0
SK13	SK13- 4AC	4.0
	- 5AC	5.0
	- 6AC	6.0
	- 7AC	7.0
	- 8AC	8.0
	- 9AC	9.0
	-10AC	10.0
	-11AC	11.0
	-12AC	12.0
SK16	SK16- 6AC	6.0
	- 7AC	7.0
	- 8AC	8.0
	- 9AC	9.0
	-10AC	10.0
	-11AC	11.0
	-12AC	12.0
	-13AC	13.0
	-14AC	14.0
	-15AC	15.0
	-16AC	16.0
SK20	SK20-12AC	12.0
	-16AC	16.0
	-20AC	20.0
SK25	SK25-16AC	16.0
	-20AC	20.0
	-25AC	25.0

★Clamping range: h8

Quick & Easy to block coolant diffusion

Slim Chuck
Major Dream Holder



SK standard nut
SKT/MDSK standard nut



New SK coolant collet



Image



HIGH SPEED SLIM CHUCK

NIKKEN

MAX.40,000min^{-1} & G2.5



SK-P

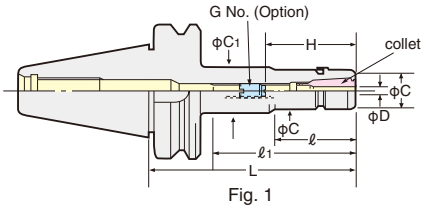


Fig. 1

Explanation of the Code No.

BT40 - SK 10 - 90 P

- P: Symbol of High Speed
- 90: Nominal Gauge Length mm
- 10: Chucking Capacity
- SK: Symbol of Slim Chuck
- BT40: Shank No.

When SK J type nut is used, the total chuck length will be extended by 6mm. **PAT.**

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	H	G No. (Option)	MAX. (min-1)	collet	weight (kg)
No.30	BT30-SK 6- 60P	0.7 ～ 6.0	60	33	33	19.5	19.5	21～35	SKG- 8	40,000	SK 6	0.7
	- 90P		90	56	65		32					0.7
	-120P		120	62	95							0.8
	-SK10- 45P	1.75～10.0	45	22	22	27.5	27.5	30～50	SKG-12S		SK10	0.8
	- 60P		60	35	35				SKG-12L			0.9
	- 75P		75	50	50							1.0
	- 90P		90	65	65							1.0
	-120P		120	95	95							1.1
	-SK13- 60P	2.75～13.0	60	35	35	33	33	31～50	SKG-15		SK13	1.0
	- 75P		75	50	50			31～65				1.1
	- 90P		90	65	65							1.1
	-120P		120	95	95							1.2
	-SK16- 60P	2.75～16.0	60	37	37	40	40	45～60	SKG-12L	30,000	SK16	1.1
	- 75P		75	52	52			45～65				1.2
	- 90P		90	67	67				SKG-12			1.2
	-120P		120	97	97			40～70	SKG-18L			1.3
	-SK20- 60P	3.5～20.0	60	37	37	48.5	48.5	65～70	SKG-12S		SK20	0.7
	- 75P		75	52	52			70～75	SKG-12L			0.9
	- 90P		90	67	67			65～75	SKG-12			1.2
	-SK25- 90P	7.5～25.4				55	55	55～75			SK25	1.5
No.40	BT40-SK 6- 60P	0.7 ～ 6.0	60	30	30	19.5	19.5	21～35	SKG- 8	30,000	SK 6	1.0
	- 90P		90	51	60		32					1.1
	-120P		120	60	90							1.4
	-150P		150		120		25					1.5
	-SK10- 60P	1.75～10.0	60	32	32	27.5	27.5	30～50	SKG-12L		SK10	1.1
	- 75P		75	45	45							1.2
	- 90P		90	48	60		40					1.2
	-120P		120	73	90							1.4
	-150P		150		118		34.5					1.6
	-180P		180		148		39					1.6
	-SK13- 60P	2.75～13.0	60	28	28	33	33	31～65	SKG-15		SK13	1.2
	- 75P		75	43	43							1.3
	- 90P		90	58	58							1.4
	-120P		120	88	88							1.6
	-150P		150	88	118		40					1.8
	-180P		180		148							1.8
	-SK16- 60P	2.75～16.0	60	32	32	40	40	50～65	SKG-18S	25,000	SK16	1.3
	- 75P		75	43	43			40～67	SKG-18L			1.4
	- 90P		90	58	58							1.5
	-120P		120	88	88			40～70				1.7
	-150P		150	118	118							1.9
	-180P		180	148	148							2.0
	-SK20- 60P	3.5～20.0	60	32	32	48.5	48.5	47～60	SKG-22		SK20	1.3
	- 75P		75	45	45			47～70				1.4
	- 90P		90	60	60			47～80				1.6
	-120P		120	90	90							2.0
	-SK25- 75P	7.5～25.4	75	47	47	55	55	55～75	SKG-12	20,000	SK25	1.7
	- 90P		90	61	61				SKG-28			1.8
	-120P		120	91	91			55～85				2.0

HIGH SPEED SLIM CHUCK

NIKKEN

MAX.40,000min^{-1} & G2.5



SK-P

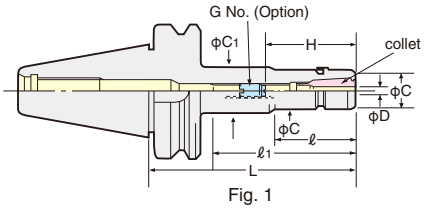


Fig. 1

Explanation of the Code No.

BT40 - SK 10 - 90 P

- P: Symbol of High Speed
- 90: Nominal Gauge Length mm
- 10: Chucking Capacity
- SK: Symbol of Slim Chuck
- BT40: Shank No.

When SK J type nut is used, the total chuck length will be extended by 6mm. **PAT.**

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	H	G No. (Option)	MAX. (min-1)	collet	weight (kg)
No.50	BT50-SK 6-105P	0.7 ～ 6.0	105	55	64	19.5	32	21～35	SKG- 8	20,000	SK 6	3.8
	-135P		135	60	92							3.9
	-165P		165		114							4.0
	-200P		200		151		30					4.2
	-SK10-105P	1.75～10.0	105	57	57	27.5	27.5	30～50	SKG-12L		SK10	4.2
	-135P		135	70	92		32					4.4
	-165P		165	75	114							4.6
	-200P		200		151		36					4.8
	-225P		225		178		40					5.0
	-SK13-105P	2.75～13.0	105	62	62	33	33	31～65	SKG-15		SK13	4.5
	-135P		135	92	92							4.7
	-165P		165		122		45					4.9
	-200P		200		157							5.2
	-SK16-105P	2.75～16.0	105	62	62	40	40	40～70	SKG-18L		SK16	4.7
	-135P		135	92	92							4.9
	-165P		165	90	122		50					5.1
	-200P		200		157		52					5.5
	-SK20-105P	3.5～20.0	105	62	62	48.5	48.5	47～80	SKG-22		SK20	4.3
	-135P		135	92	92							4.6
	-165P		165	122	122							5.0
	-200P		200	157	157							5.4
	-SK25-105P	7.5～25.4	105	62	62	55	55	50～85	SKG-28	15,000	SK25	5.2
	-135P		135	92	92							5.4
	-165P		165	122	122							5.6
	-200P		200	157	157							6.0

★Collet, adjust screw (G No.) and **GH Handle** are available as an option.
The Code No. of the **GH Handle** is **SK6-P: GH6, SK10-P: GH10, SK13-P: GH12, SK16-P: GH16, SK20-P: GH20, SK25-P: GH25**
★Please refer ☞ **P.49** for TiN Bearing Nut.
★Please refer ☞ **P.43** for **SK** collet.
★Adjust screw with centre hole ☞ **P.52** can be used for centre through tool coolant application (MAX. 1MPa).
Please refer ☞ **P.52** for adjust screw (G No.).



GH Handle ☞**P.48**

Code No. for SLIM CHUCK with SPECIAL NUT

NIKKEN

Code No. for Slim Chuck with special nut

Standard nut (for C-spanner) is attached for standard slim chuck.
Nut for high speed (for **GH Handle**) is attached for high speed slim chuck.

- Standard slim chuck + **J** type nut : Please add "**-J**" at the end of Code No. **e.g. BT40-SK10-90-J**
- Standard slim chuck + Nut for high speed : Please add "**-G**" at the end of Code No. **e.g. BT40-SK10-90-G**
- Standard slim chuck + **J** type nut for high speed : Please add "**-GJ**" at the end of Code No. **e.g. BT40-SK10-90-GJ**
- High speed slim chuck + **J** type nut : Please add "**-J**" at the end of Code No. **e.g. BT40-SK10-90P-J**

Code No. for VC holder with special nut

- With **J** type nut : Please add "**-J**" at the end of Code No. **e.g. BT40-VC13-90-J**

Code No. for **MAJOR DREAM** holder with special nut

- With **J** type nut : Please add "**-J**" at the end of Code No. **e.g. BT40-MDSK13-90-J**
- With nut for C-spanner : Please add "**-SN**" at the end of Code No. **e.g. BT40-MDSK13-90-SN**
- With **J** type nut for C-spanner : Please add "**-SNJ**" at the end of Code No. **e.g. BT40-MDSK13-90-SNJ**

When **RPT** treatment is required at same time, please add "**-RP**" first. **e.g. BT40-SK10-90-RP-J**

Straight Shank SLIM CHUCK

NIKKEN

Suitable for Multi-Lock Milling Chuck





K-SK

Explanation of the Code No.

K 20 - SK 6 - 100

- 100: Length
- 6: MAX Chucking Dia.
- SK: Symbol of Slim Chuck
- 20: OD of shank
- K: Symbol of straight shank

Fig. 1

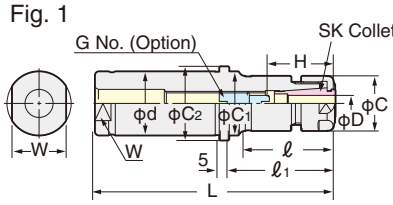
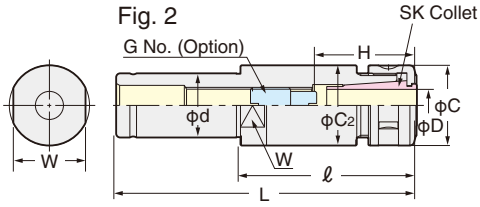


Fig. 2



PAT.

Code No.	D	ℓ	ℓ1	C	C1	C2	W	H	G No. (Option)	Weight (kg)	Fig	SK Collet
K20-SK 6-100, 120	0.7~6.0	37, 57		19.5		27	18	21~35	SKG-8	0.2, 0.2	1	SK 6
-SK10-100, 120	1.75~10.0	40, 60		27.5		27.5		30~50	SKG-12L	0.3, 0.3	2	SK10
K22-SK 6-100, 120	0.7~6.0	37, 57	-	19.5	-	27	19	21~35	SKG-8	0.2, 0.2	1	SK 6
-SK10-100, 120	1.75~10.0	40, 60		27.5		27.5		30~50	SKG-12L	0.3, 0.3	2	SK10
K25-SK 6-100, 130	0.7~6.0	32, 62		19.5		30	22	21~35	SKG-8	0.3, 0.3		SK 6
-SK10-120, 150	1.75~10.0	50, 80		27.5				30~50	SKG-12L	0.4, 0.5		SK10
K32-SK 6-120, 140, 170	0.7~6.0	45, 65, 63	53, 73, 100	19.5	32, 32, 24			21~35	SKG-8	0.5, 0.5, 0.5	1	SK 6
-SK10-120, 150, 180, 210	1.75~10.0	45, 75, 75, 75	53, 83, 111, 141	27.5	32, 32, 31.5, 33.5	37	27	30~50	SKG-12L	0.6, 0.7, 0.8, 1.0		SK10
-SK13-120, 150, 180, 210	2.75~13.0	52, 82, 112, 142		33				31~65	SKG-15	0.7, 0.8, 1.0, 1.2		SK13
-SK16-120, 150, 180, 210	2.75~16.0	58, 88, 118, 148	-	40	-	40	36	45~70	SKG-18L	0.7, 0.9, 1.2, 1.4	2	SK16
-SK20-120, 150, 180	3.5~20.0	58, 88, 118		48.5		40	41	47~80	SKG-22	0.9, 1.3, 1.7		SK20
-SK25-150	7.5~25.4	88		55		42	46	55~65	SKG-18L	1.3		SK25
K42-SK 6-150, 170	0.7~6.0	52, 62	61, 78	19.5	32			21~35	SKG-8	1.0, 1.1		SK 6
-SK10-150, 180	1.75~10.0	56, 78		27.5		47	36	30~50	SKG-12L	1.1, 1.3		SK10
-SK13-150, 180	2.75~13.0	56, 86		33				31~65	SKG-15	1.2, 1.4	1	SK13
-SK16-150, 180	2.75~16.0	58, 88	-	40	-			45~70	SKG-18L			SK16
-SK20-150, 180	3.5~20.0	68, 98		48.5		48.5		47~80	SKG-22	1.5, 1.9		SK20
-SK25-170	7.5~25.4	88		55		44.5	46	55~65	SKG-18L	1.8	2	SK25

★Collet, adjust screw (G No.) and spanner are available as an option.
The Code No. of the spanner is **SK6 (C=Φ18) : SKL-6, SK6 (C=Φ19.5) : SKL-6W, SK10: SKL-10, SK13: 9HC12A, SK16: 9HC16, SK20: 9HC22, SK25: 9HC25**



★Please refer ☞ **P.43** for **SK** Collet. ★All Slim Chucks are Centre Through Coolant type.
★Please refer ☞ **P.52** for adjust screw (G No.).

Straight Shank SLIM CHUCK ULTRA LONG TYPE

NIKKEN

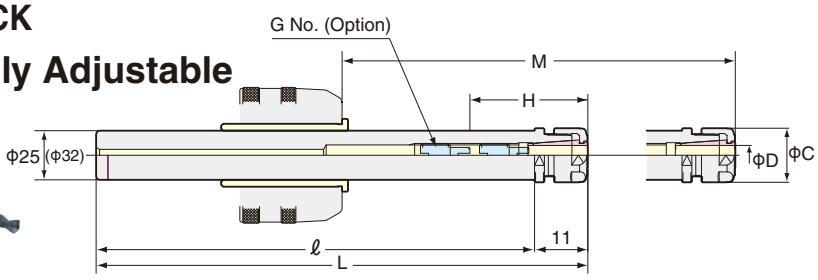
ULTRA LONG SLIM CHUCK

Axially Adjustable



S-SK

Photo. shows solid carbide type.



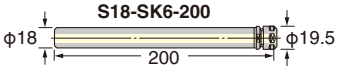
Solid Carbide type is also available.
Please add "**X**" to the Code No. **e.g. S25-SK10X-250, S25-SK10X-300**

PAT.

Code.No.	Chucking Range D	Length L	ℓ1	ℓ2	C	Over Hang Length M	H	G No. (Option)	Weight (kg)	Collet
S25-SK10-250	1.75~10.0	250	223	27	27.5	145~200	30~60	SKG-12L	0.9	SK10
-300		300	273			195~250			1.1	
S32-SK13-250	2.75~13.0	250	224	26	33	145~185	31~65	SKG-15	1.4	SK13
-300		300	274			195~235			1.7	
S32-SK16-250	2.75~16.0	250	192	58	40	145~185	40~70	SKG-18	1.5	SK16
-300		300	242			195~235			1.8	

★Nut, Adjust Screw (G No.) and Collet Extractor are supplied as standard. ★Spanner "**SKL-10**" is available as an option.
★Please refer ☞ **P.43** for **SK** collet. ★Please add "**C**" at the Code No. for Centre Through Coolant type. **e.g. S25-SK10C-250**
★**S18-SK6-200** is also available ★Please refer ☞ **P.52** for adjust screw (G No.).

S18-SK6-200



HANDLE / SPANNER / WRENCH

NIKKEN

Handle for Milling Chuck

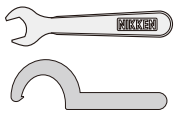
Style	Code No.
C12 (C_1=φ30mm)	9HC12
C12 (C_1=φ33mm)	9HC12A
C16	9HC16
C20	9HC22
C25 (C_1=φ55mm)	9HC22
C25 (C_1=φ60mm)	9HC25
C32 (C_1=φ64mm)	9HC25
C32 (C_1=φ69mm)	9HC32
C42	9HC42

Spanner for Slim Chuck

Style	Code No.
SK6 (C=φ18mm)	SKL-6
SK6 (C=φ19.5mm)	SKL-6W
SK10	SKL-10
SK13	9HC12A
SK16	9HC16
SK20	9HC22
SK25	9HC22

Wrench for NPU Drill Chuck

Style	Code No.
NPU 8	NPUL- 8
NPU13	NPUL-13



GH HANDLE for HIGH SPEED TOOLING

NIKKEN



GH Handle has a two-way tightening/loosening ratchet on the handle that has been developed to provide quick and convenient loading of the tool. The **GH Handle** also dispenses with the need for notches on the nose ring.

PAT.



GH

Code No.	Milling Chuck	Slim Chuck	MAJOR DREAM	VC Holder
GH 6*	—	SK 6-P / SKT 6	MDSK 6	—
GH10*	—	SK10-P / SKT10	MDSK10	VC6
GH12*	C12-G	SK13-P / SKT13	MDSK13	—
GH16*	C16-G	SK16-P / SKT16	MDSK16	VC13
GH20*	C20-G	SK20-P / SKT20	MDSK20	—
GH25*	C25-G	SK25-P / SKT25	MDSK25	—
GH32S	C32-G(Nose Ring:φ62mm)	—	—	—
GH32	C32-G(Nose Ring:φ68mm)	—	—	—

★Torque adjustable **GH Handle** is available for * marked handle.
The Code No. is **GH6-TLS, GH10-TLS, GH16-TLS, GH25-TLS.**



Tightening



Loosening

CLAMPING HANDLE "BENKEI"

NEW NIKKEN

PAT.

Clamp Nose Ring (Milling Chuck) by pair of clamping handles.
New designed clamping handle "BENKEI"

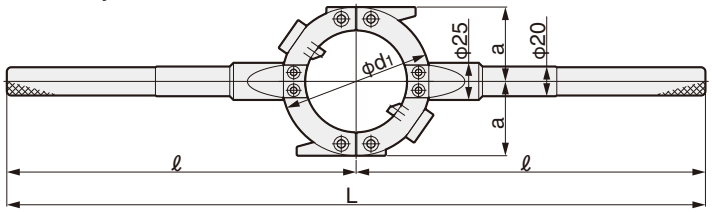


3 easy steps make it possible to clamp, unclamp milling chuck very safely and easily.



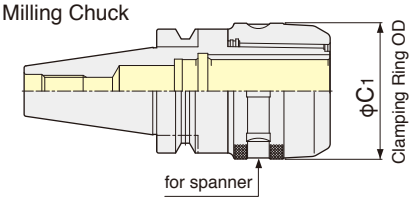
HC-TW

Reference of the code number
9HC32 - TW
- TW: Clamping handle
- 9HC32: Corresponding Milling Chuck (Ex. "32" is available for C32(φC_1=69mm) milling chuck



Code No.	Dimensions(mm)				Corresponding Milling Chuck
	a	ℓ	L	φd1	
9HC32TW	50	235	470	100	C32(φC_1=69mm)
9HC42TW	59	285	570	117	C42(φC_1=86mm)
9HC50TW	69	285	570	138	C50EX(φC_1=105mm)

Milling Chuck

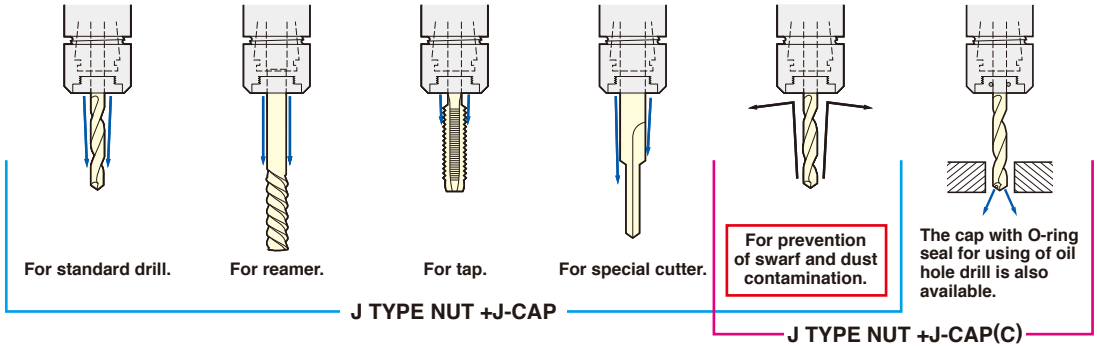


TiN BEARING NUT, J-TYPE NUT, J-CAP

NIKKEN

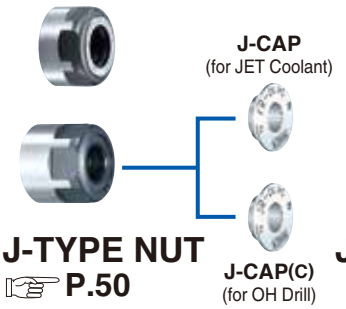
J-TYPE NUT & J-CAP for Various Coolant SYSTEM



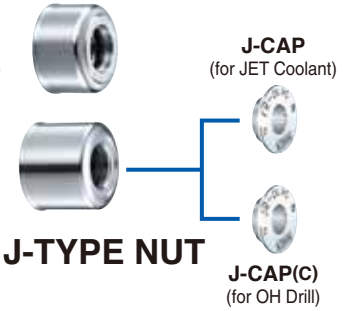


Various Coolant SYSTEM with combination of Slim Chuck, Nut & J-CAP

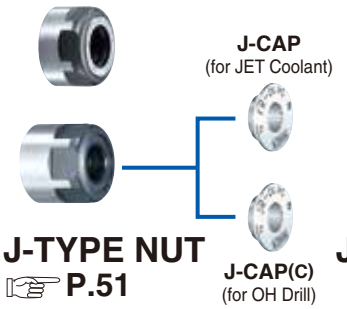
SK standard Nut (for C-Spanner)



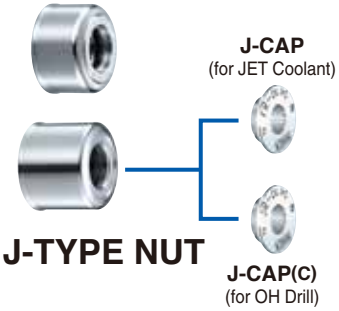
SK-P standard Nut (for GH Handle)



SKT/MDSK Nut (for C-Spanner)



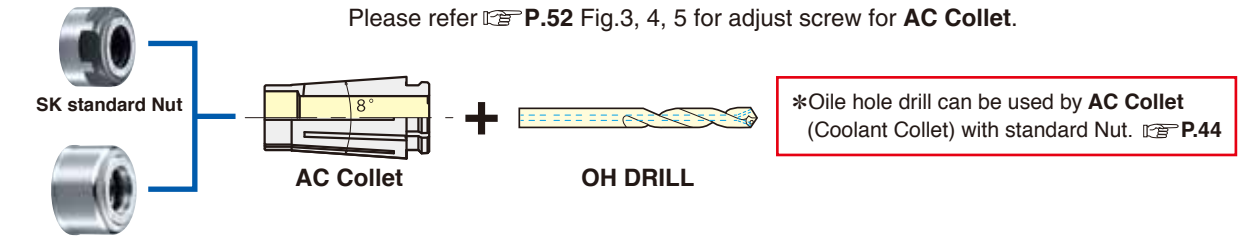
SKT/MDSK Nut (for GH Handle)



⚠ To keep run-out accuracy high, you are recommended to change nuts periodically when slim chuck is used very frequently.

SK standard Nut + AC Collet (for using of oil holl drill)

Please refer ☞**P.52** Fig.3, 4, 5 for adjust screw for **AC Collet**.



✻Oile hole drill can be used by **AC Collet** (Coolant Collet) with standard Nut. ☞**P.44**

Style	Nut for C-Spanner	SPANNER	Nut for GH Handle	GH Handle	OPTION AC Collet
SK 6 SK 6(P)	SKN-6WK	SKL-6W	SKN-6WK (GH)	GH6	SK 6-3AC, 4AC, 5AC, 6AC
SKT 6 MDSK 6	SKTN-6K		MDSKN-6K		
SK10 SK10(P)	SKN-10K	SKL-10	SKN-10K (GH)	GH10	SK10-3AC, 4AC, 5AC,6AC, 7AC, 8AC, 9AC, 10AC
SKT 10 MDSK10	SKTN-10K		MDSKN-10K		
SK13 SK13(P)	SKN-13B	9HC12A	SKN-13B (GH)	GH13	SK13-4AC, 5AC, 6AC, 7AC, 8AC, 9AC, 10AC, 11AC, 12AC
SKT 13 MDSK13	SKTN-13B		MDSKN-13B		
SK16 SK16(P)	SKN-16B	9HC16	SKN-16B (GH)	GH16	SK16-6AC, 7AC, 8AC, 9AC10AC, 11AC, 12AC, 13AC, 14AC, 15AC, 16AC
SKT 16 MDSK16	SKTN-16B		MDSKN-16B		
SK20 SK20(P)	SKN-20B	9HC22	SKN-20B (GH)	GH20	SK20-12AC, 16AC, 20AC, 25AC
SKT 20 MDSK20	SKTN-20B		MDSKN-20B		
SK25 SK25(P)	SKN-25B		SKN-25B (GH)	GH25	SK25-16AC, 20AC, 25AC
SKT 25 MDSK25	SKTN-25B		MDSKN-25B		

★Please refer ☞**P.44** for **SK-AC** Collet.

COMBINATION of J-TYPE NUT for SK & SK-P

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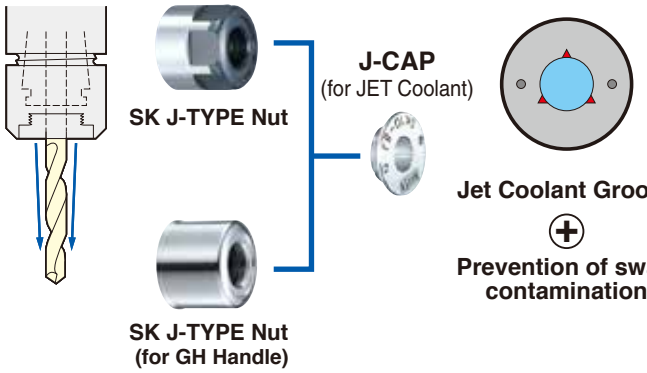
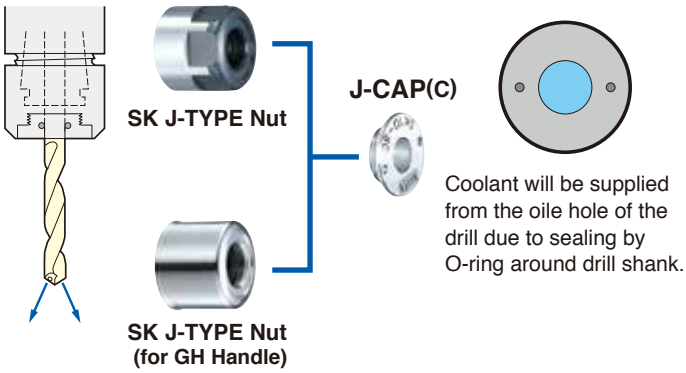
JET COOLANT SYSTEM

Please refer ☞**P.52** Fig.5 for adjust screw for **J-TYPE Nut**



WITH OIL HOLE DRILL

Please refer ☞**P.52** Fig.3, 4, 5 for adjust screw for **J-TYPE Nut** & Oile hole drell



Coolant will be supplied from the oile hole of the drill due to sealing by O-ring around drill shank.

Style	コレット選定	OPTION				
		J-TYPE Nut	SPANNER	J-CAP Code No. for JET COOLANT SYSTEM	J-CAP(C) Code No. for OIL HOLL DRILL	Wrench for J-cap Code No.
SK 6 SK 6(P) (High Speed)	SK 6-○.○ SK 6-○.○A	(for C-Spanner) SKN-6WKJ (for GH Handle) SKN-6WKJ (GH)	(C-Spanner) SKL-6W (GH Handle) GH6	SKJ 6-3, 3.3, 4, 4.2, 5, 6	SKJ 6-3C, 3.3C, 4C, 4.2C, 5C, 6C	SKJL-6
SK10 SK10(P) (High Speed)	SK10-○.○ SK10-○.○A	(for C-Spanner) SKN-10KJ (for GH Handle) SKN-10KJ (GH)	(C-Spanner) SKL-10 (GH Handle) GH10	SKJ10-3, 4, 5, 5.5, 6, 6.2, 6.8, 7, 8, 8.5, 10	SKJ10-3C, 4C, 5C, 5.5C, 6C, 6.2C, 6.8C, 7C, 8C, 8.5C, 10C	SKJL-10
SK13 SK13(P) (High Speed)	SK13-○.○ SK13-○.○A	(for C-Spanner) SKN-13BJ (for GH Handle) SKN-13BJ (GH)	(C-Spanner) 9HC12A (GH Handle) GH13	SKJ16-7, 8, 8.5, 10, 10.3, 12, 12.5	SKJ16-7C, 8C, 8.5C, 10C, 10.3C, 12C, 12.5C	SKJL-16
SK16 SK16(P) (High Speed)	SK16-○.○ SK16-○.○A	(for C-Spanner) SKN-16BJ (for GH Handle) SKN-16BJ (GH)	(C-Spanner) 9HC16 (GH Handle) GH16	SKJ16-7, 8, 8.5, 10, 10.3, 12, 12.5, 14, 15, 16	SKJ16-7C, 8C, 8.5C, 10C, 10.3C, 12C, 12.5C, 14C, 15C, 16C	
SK20 SK20(P) (High Speed)	SK20-○.○ SK20-○.○A	(for C-Spanner) SKN-20BJ (for GH Handle) SKN-20BJ (GH)	(C-Spanner) 9HC22 (GH Handle) GH20	SKJ25-8, 10, 12, 16, 17.5, 20	SKJ25-8C, 10C, 12C, 16C 17.5C, 20C	SKJL-25
SK25 SK25(P) (High Speed)	SK25-○.○ SK25-○.○A	(for C-Spanner) SKN-25BJ (for GH Handle) 5KN-25BJ (GH)	(C-Spanner) 9HC22 (GH Handle) GH25	SKJ25-8, 10, 12, 16, 17.5, 20, 25	SKJ25-8C, 10C, 12C, 16C 17.5C, 20C, 25C	

★Please refer ☞ **P.43** for **SK** Collet.

COMBINATION of J-TYPE NUT for SKT & MDSK

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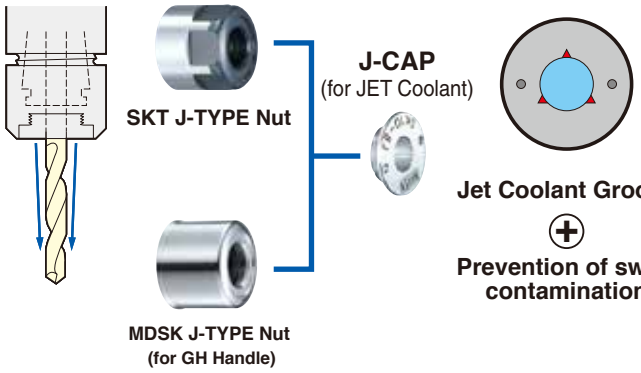
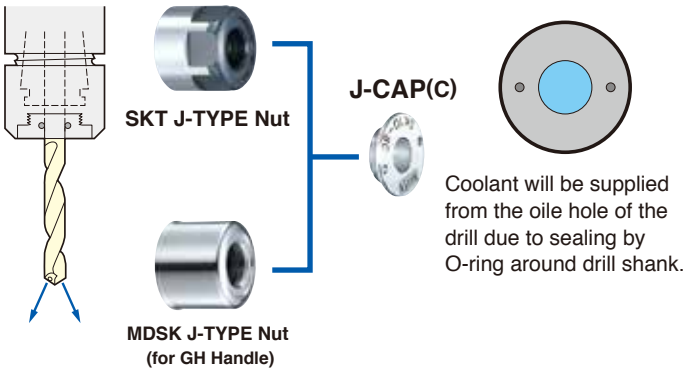
JET COOLANT SYSTEM

Please refer ☞**P.52** Fig.5 for adjust screw for **J-TYPE Nut**



WITH OIL HOLE DRILL

Please refer ☞**P.52** Fig.3, 4, 5 for adjust screw for **J-TYPE Nut** & Oile hole drill



Coolant will be supplied from the oile hole of the drill due to sealing by O-ring around drill shank.

Style	コレット選定	OPTION				
		J-TYPE Nut	SPANNER	J-CAP Code No. for JET COOLANT SYSTEM	J-CAP(C) Code No. for OIL HOLL DRILL	Wrench for J-cap Code No.
SKT 6 MDSK 6	SK 6-○.○ SK 6-○.○A	(for C-Spanner) SKTN-6KJ	(C-Spanner) SKL-6W	SKJ 6-3, 3.3, 4, 4.2, 5, 6	SKJ 6-3C, 3.3C, 4C, 4.2C, 5C, 6C	SKJL-6
		(for GH Handle) MDSKN-6KJ	(GH Handle) GH6			
SKT 10 MDSK10	SK10-○.○ SK10-○.○A	(for C-Spanner) SKTN-10KJ	(C-Spanner) SKL-10	SKJ10-3, 4, 5, 5.5, 6, 6.2, 6.8, 7, 8, 8.5, 10	SKJ10-3C, 4C, 5C, 5.5C, 6C, 6.2C, 6.8C, 7C, 8C, 8.5C, 10C	SKJL-10
		(for GH Handle) MDSKN-10KJ	(GH Handle) GH10			
SKT 13 MDSK13	SK13-○.○ SK13-○.○A	(for C-Spanner) SKTN-13BJ	(C-Spanner) 9HC12A	SKJ16-7, 8, 8.5, 10, 10.3, 12, 12.5	SKJ16-7C, 8C, 8.5C, 10C, 10.3C, 12C, 12.5C	SKJL-16
		(for GH Handle) MDSKN-13BJ	(GH Handle) GH13			
SKT 16 MDSK16	SK16-○.○ SK16-○.○A	(for C-Spanner) SKTN-16BJ	(C-Spanner) 9HC16	SKJ16-7, 8, 8.5, 10, 10.3, 12, 12.5, 14, 15, 16	SKJ16-7C, 8C, 8.5C, 10C, 10.3C, 12C, 12.5C, 14C, 15C, 16C	
		(for GH Handle) MDSKN-16BJ	(GH Handle) GH16			
SKT 20 MDSK20	SK20-○.○ SK20-○.○A	(for C-Spanner) SKTN-20BJ	(C-Spanner) 9HC22	SKJ25-8, 10, 12, 16, 17.5, 20	SKJ25-8C, 10C, 12C, 16C 17.5C, 20C	SKJL-25
		(for GH Handle) MDSKN-20BJ	(GH Handle) GH20			
SKT 25 MDSK25	SK25-○.○ SK25-○.○A	(for C-Spanner) SKTN-25BJ	(C-Spanner) 9HC22	SKJ25-8, 10, 12, 16, 17.5, 20, 25	SKJ25-8C, 10C, 12C, 16C 17.5C, 20C, 25C	
		(for GH Handle) MDSKN-25BJ	(GH Handle) GH25			

★Please refer ☞ **P.43** for **SK** Collet.

ADJUST SCREW for SLIM CHUCK

NIKKEN

The adjust Screw for the High Speed Slim Chuck **"GSK-P type"** is identical to the Standard Slim Chuck as below.
e.g. The adjust Screw for BT30-GSK10-45P is SKG-12S, is the same as the screw for BT30-SK10-45.

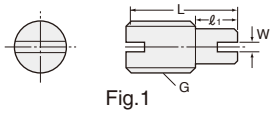


Fig.1

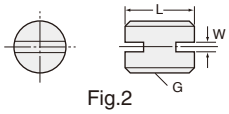


Fig.2

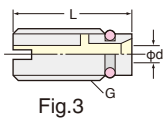


Fig.3

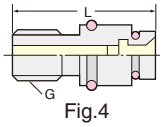


Fig.4

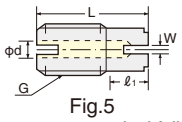


Fig.5

Please remove standard Adjust Screw or use the Adjust Screw specially designed to J type Nut for the stopper.

SK

Explanation of the Code No. of the Adjust screw for Standard Slim Chuck

e.g. SKG – 12 L – J
- None, -J : Symbol of adjust screw used with J type nut (Fig.5)
- None, S, L : Length indication
- 8, 12, 18, 28 : Screw size
- Symbol of adjust screw

Style	Adjust Screw Code No.	Fig.	Slim Chuck Code No.
SK 6	SKG- 8	1	All **SK6** Slim Chucks
SK10	SKG-12L	1	All **SK10** Slim Chucks except below
	SKG-12S	2	BT30-SK10-45, HSK50A-SK10-90, HSK63F-SK10-90
SK13	SKG-15	1	All **SK13** Slim Chucks
SK16	SKG-18L	1	All **SK16** Slim Chucks except below
	SKG-12	2	BT30-SK16-90
	SKG-12L	1	BT30-SK16-60
	SKG-18S	2	BT40-SK16-60
SK20	SKG-22	1	All **SK20** Slim Chucks except below
	SKG-12	2	BT30-SK20-90
	SKG-12L	1	BT30-SK20-75
	SKG-12S	2	BT30-SK20-60
SK25	SKG-28	1	All **SK25** Slim Chucks except below
	SKG-12	2	BT30-SK25-90, BT40-SK25-75
	SKG-12MF	2	NC5-46-SK25-90

★W=2mm is standard. W=2.4, 3, 4, 5, 6, 8, 12mm are also available. e.g.**SKG-12L-W2.4**
Please choose suitable one for the tang width of your drill.

Explanation of the Code No. of the Adjust screw with centre hole for Standard Slim Chuck

e.g. SKG – 12 H A
- None, A : Centre hole indication
- H : With centre hole
- 12, 18, 28 : Screw size
- Symbol of adjust screw

Style	Screw Size	Adjust Screw Code No.	Fig.	Hole Dia.	Cutter Shank Dia.	Wrench width
SK10	M12	SKG-12H	3	φ4	φ6～	3
		SKG-12HA		φ2.5	φ4～	2
SK13	M15 P1.0	SKG-15H		φ4	φ6～	3
		SKG-15HA		φ2.5	φ4～	2
SK16	M12	SKG-12H		φ4	φ6～	3
		SKG-12HA		φ2.5	φ4～	2
	M18 P1.5	SKG-18H		φ7.2	φ10～	6
		SKG-18HA		φ3.5	φ5～	3
SK20	M12	SKG-12H		φ4	φ6～	3
		SKG-12HA		φ2.5	φ4～	2
	M22 P1.5	SKG-22H		φ8	φ10～	5
SK25	M12	SKG-12H		φ4	φ6～	3
		SKG-12HA		φ2.5	φ4～	2
	M28 P2.0	SKG-28H		φ12	φ16～	8

★The adjust screw for oil hole tap is also available. Please contact with us.
★These adjust screws are for the coolant pressure up to 1MPa.

SK-C There is no leakage of coolant from screw, because OD of the straight portion of the adjust screw is sealed.

Explanation of the Code No. of the Adjust screw for High Pressure Coolant Slim Chuck

e.g. SKG 10 – 10 HG B – J
- None, -J : Symbol of adjust screw used with J type nut (Fig.5)
- None, A, B,··· : Specification (Length, for small drill, for Tap...)
- Suymbol of high pressure coolant
- 6, 10, 12, 18, 24 : Screw size
- 6, 10, 16, 25 : Slim chuck style
- Symbol of adjust screw

3LOCK tool (MBT, MIT and MCAT) , 2LOCK tool (NBT, NIT and NCAT) , NC5 tool and HSK tool can be used at high pressure centre through tool coolant application (MAX.7MPa) .

Please change the shank No. from **BT** to **MBT** or **NBT** for **3LOCK tool or 2LOCK tool**.

The adjust screw for **BT40-SK16F-90** is same as the adjust screw for **MBT40-SK16F-90** and **NBT40-SK16F-90**.

Please refer adjust screw for oil hole holder.
SKO ☞P.135, MOK ☞P.133

Style	Adjust Screw Code No.	Fig.	Hole Dia.	Cutter Shank Dia.	Slim Chuck Code No.	Wrench width
SK 6	SKG 6- 6HG	4	φ2.5	φ4～	All **SK6C/SK6F** Slim Chucks	2
SK10	SKG10-10HG		φ4	φ6～	All **SK10C/SK10F** Slim Chucks	4
	SKG10-10HGA		φ2.5	φ4～		2
SK13	SKG13-10HG		φ4	φ6～	All **SK13C/SK13F** Slim Chucks	4
	SKG13-10HGA		φ2.5	φ4～		2
SK16	SKG16-12HG		φ7.2	φ10～	All **SK16C/SK16F** Slim Chucks except below	6
	SKG16-12HGB				BT40-SK16F-90	
	SKG16-10HG				HSK40A-SK16C-120, HSK50A-SK16C-120 HSK63A-SK16C-120, 150, HSK100A-SK16C-120 NC5-46-SK16C-90, -120, NBT40-SK16C-60, NBT30-SK16C-75	
	SKG16-12HGE				NBT30-SK16C-60	
	SKG16-12HGA		φ3.5	φ5～	All **SK16C/SK16F** Slim Chucks except below	3
	SKG16-12HGBA				BT40-SK16F-90	
	SKG16-10HGA				HSK40A-SK16C-120, HSK50A-SK16C-120 HSK63A-SK16C-120, 150, HSK100A-SK16C-120 NC5-46-SK16C-90, -120, NBT40-SK16C-60, NBT30-SK16C-75	
SK20	SKG20-18HG		φ6.8	φ10～	All **SK20C/SK20F** Slim Chucks except below	5
	SKG20-12MFHG				NC5-46-SK20C-90, NC5-53-SK20C-90, HSK63A-SK20C-120,-135	
	SKG20-12HG				NC5-46-SK20C-120, NC5-53-SK20C-120, NBT30-SK20C-90 HSK100A-SK20C-150, -200	
	SKG20-12HGE				NBT30-SK20C-75	
	SKG20-16HG				NBT40-SK20C-60	
	SKG20-18HGB				BT40-SK20F-90	
SK25	SKG25-24HG		φ12	φ16～	All **SK25C/SK25F** Slim Chucks except below	8
	SKG25-24HGA				BT40-SK25F-120, BT50-SK25F-105	
	SKG25-18HGC				BT40-SK25F-90	
	SKG25-18HGD				BT40-SK25C-90, NC5-63-SK25C-135 NC5-85-SK25C-135, NBT40-SK25C-90	
	SKG25-18HGE				HSK63A-SK25C-135, HSK100A-SK25C-145, NBT40-SK25C-75	

★The adjust screw for oil hole tap is different from standard. The front end of the adjust screw is flat, not taper.
Please add **"S"** at the end of Code No. **e.g. SKG10-10HGAS, SKG16-12HGAS, SKG16-12HGBAS**
★The adjust screw for extra small cutter shank dia. (φ3) is available. Please contact with us.
★The steel made adjust screw for **SK10** or **SK16** is available.
Please add **"-FE"** at the end of Code No. **e.g. SKG10-10HG-FE**


For Drill


For Tap

NC DRILL CHUCK

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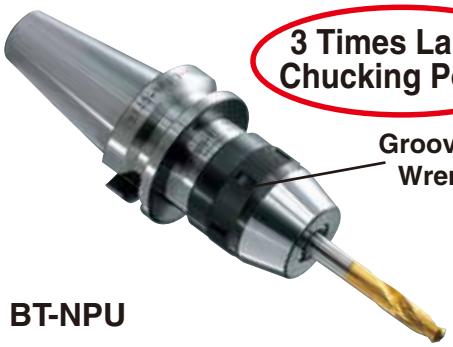
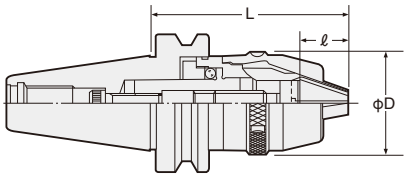


BT-NPU

Being given favorable reception for its Compactness, High Precision & High Rigidity.

- The shank body fabricated solidly with the keyless drill chuck eliminates the possibility of slipping-off.
- The attached tightening wrench prevents slipping-off of drill to ensure the safety in unmanned operation.
- Chucking torque three times as large as ever before. There is no possibility of slipping-off of the carbide drill etc.



Chucking Length (ℓ)
NPU 8 : 18.8mm
NPU13 : 26.5mm

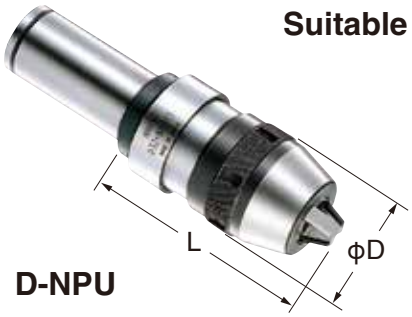
TAPER	Code No.	Chucking Dia	D	L MIN.	L MAX.	Weight (kg)
No.30	BT30-NPU 8- 70	0.3～8	38	76.5	83.5	0.7
	-NPU13- 95	1～13	48.5	102.1	113.1	1.2
No.40	BT40-NPU 8- 70	0.3～8	38	76.5	83.5	1.2
	(IT40) -110			115.5	122.5	1.5
	-155			160.5	167.5	1.7
	-NPU13- 80	1～13	48.5	86.1	97.1	1.5
	-130			137.1	148.1	2.2
	-175			182.1	193.1	2.7
No.50	BT50-NPU 8- 85	0.3～8	38	87.5	94.5	3.8
	(IT50) -110			115.5	122.5	3.9
	-170			175.5	182.5	4.3
	-NPU13- 90	1～13	48.5	97.1	108.1	4.1
	-130			137.1	148.1	4.6
	-190			197.1	208.1	5.2

★Centre Through Type Drill Chuck has different L-length & Code No. ☞ P.107, Pull Stud with Oil Hole☞ P.304.
★Flange Through Type Drill Chuck has different L-length & Code No. ☞ P.109.
★Wrench is available as an option. **NPU8: NPUL-8, NPU13: NPUL-13**.
★In case of IT40, **IT40-NPU8-80** is the shortest length.
★In case of IT50, **IT50-NPU8-80** is the shortest length.

Straight Shank NC DRILL CHUCK

NIKKEN

Suitable For MULTI-LOCK Milling Chuck



D-NPU

Style	Code No.	Chucking Dia	L MIN.	L MAX.	Weight (kg)
32	D32-NPU 8	0.3～8	65.5	72.5	0.9
	-NPU13	1～13	84.5	96.5	1.4
42	D42-NPU 8	0.3～8	55.5	62.5	1.2
	-NPU13	1～13	79.5	91.5	1.7

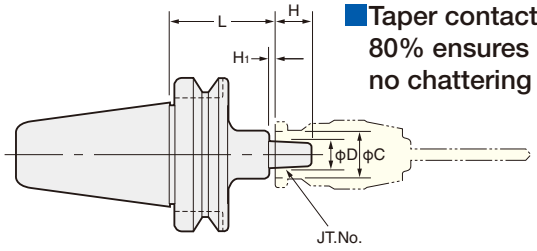
★ϕD : **NPU 8** : 36.5mm Chucking Length : **NPU 8** : 18.8mm
NPU13 : 48mm **NPU13** : 26.5mm
★Wrench is available as an option. **NPU8: NPUL-8, NPU13: NPUL-13**.

JACOBS TAPER ADAPTER

NIKKEN



JTA



- Taper contact area of more than 80% ensures reliable drilling with no chattering accompanied.

TAPER	Code No. -L	JT. No.	D	H	H_1	C	Weight (kg)
No.30	BT30-JTA6-30	6	17.17	24	4	30	1.0
No.40	BT40-JTA6-45, 90						1.1, 1.4
No.50	BT50-JTA6-45, 105						4.0, 4.4

★Each Drill chuck Adapter is supplied without drill chuck.
★For high speed and high accurate application, Slim Chuck ☞ P.41 is highly recommended.

SIDE LOCK HOLDER A TYPE (for END MILL)

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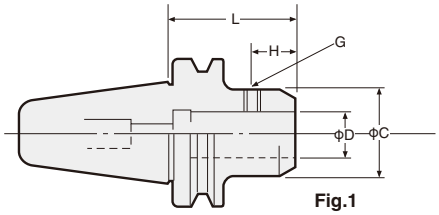


Fig.1

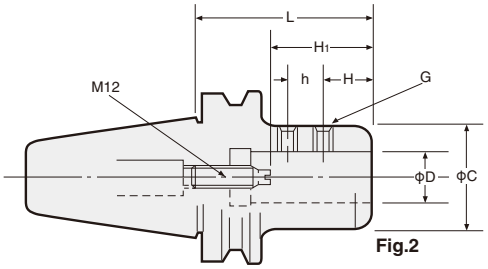


Fig.2

SL,SLA

■Taper contact area of more than 80% ensures reliable cutting with no chattering.

TAPER	Code No.	D	L	C	H	h	H1 MIN.～MAX.	G	fig	Weight (kg)
No.30	BT30-SL 6-60	6	60	20	15	—	—	M 6	1	1.2
	-SL 8-60	8		24	16			M 8		1.2
	-SL 10-60	10		30						1.2
	-SL 12-60	12		35	20			M10		1.2
	-SL 16-60	16		40	22.5					1.2
	-SLA20-75	20	75	50	24	15	55～ 70	M14 P=1.5	2	1.3
No.40	BT40-SL 6-65	6	65	20	15	—	—	M 6	1	1.6
	(IT40)-SL 8-65	8		24				M 8		1.6
	-SL 10-65	10		30	16					1.6
	-SL 12-65	12		35	20			M10		1.6
	-SL 16-65	16		40	23					1.7
	-SLA20-90	20	90	50	24	21	55～ 70	M14 P=1.5	2	1.8
	-SLA25-90	25								1.7
	-SLA32-90	32		60	25	25		M16 P=1.5		1.9
No.50	BT50-SL 6-75	6	75	20	15	—	—	M 6	1	4.3
	(IT50)-SL 8-75	8		24				M 8		4.3
	-SL 10-75	10		30	16					4.3
	-SL 12-75	12		35	20			M10		4.3
	-SL 16-75	16		40	23					4.5
	-SLA20-105	20	105	50	24	21	55～ 70	M14 P=1.5	2	4.8
	-SLA25-105	25								4.7
	-SLA32-105	32		60	25	25	65～ 80	M16 P=1.5		4.9
	-SLA42-115	42	115	90	30	32	85～100	M20 P=2.0	2	6.6

★Code No. of Side Lock Holder for Combination Shank is DM.
★The Code No.of Centre Through Coolant type is "SLOC". ☞P.107

BT50-DM32 -120
-DM50.8-120



SIDE LOCK HOLDER B TYPE (for DRILL)

NIKKEN

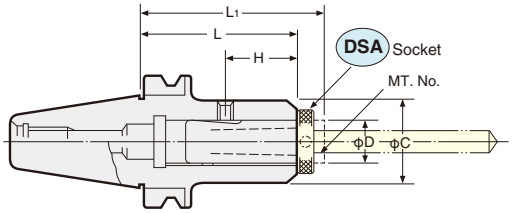
SLB



DSA-MT



■Taper contact area of more than 80% ensures reliable drilling with no chattering.



TAPER	Code No.	D	L	L1 MIN.～MAX.	H	C	W	DSA Socket-MT.No.	Weight (kg)
No.30	BT30-SLB26-105	26	105	117～142	40	50	5	DSA26-MT1,MT2	1.5
									1.4
No.40	BT40-SLB26-105	26	105	117～142	40	50	5	DSA26-MT1,MT2	2.1
									2.0
	-SLB35-135	35	135	147～182	55	60	6	DSA35-MT2,MT3	3.3
									3.2
No.50	BT50-SLB26-105	26	105	117～142	40	50	5	DSA26-MT1,MT2	4.8
									4.7
	-SLB35-120	35	120	132～167	55	60	6	DSA35-MT2,MT3	5.4
									5.3
	-SLB35-135	35	135	147～182	55	60	6		5.7
									5.6
	-SLB48-165	48	165	181～227	65	80	8	DSA48-MT3,MT4	8.4
									8.1

MORSE TAPER ADAPTER A TYPE

NIKKEN



MTA

■Taper contact area of more than 80% ensures high repeatability run-out accuracy.

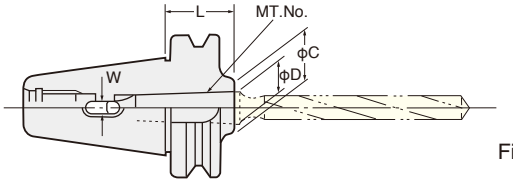


Fig. 1

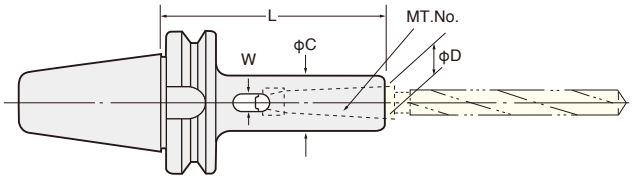


Fig. 2

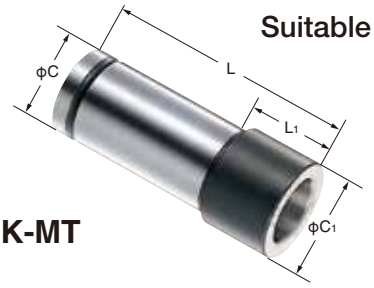
TAPER	Code No.	MT. No.	D	L	C	W	Fig	Weight (kg)
No.30	BT30-MTA1- 45	1	12.065	45	20	5.6	1	0.8
	-MTA1-105			105	25		2	0.9
	-MTA2- 60	2	17.780	60	30	6.6	1	0.9
	-MTA2-120			120			2	1.2
	-MTA3- 80	3	23.825	80	40	8.4	1	1.0
No.40	BT40-MTA1- 45	1	12.065	45	25	5.6	1	1.0
	(IT40)-MTA1-120			120			2	1.3
	-MTA2- 60	2	17.780	60	32	6.6	1	1.1
	-MTA2-120			120			2	1.4
	-MTA3- 75	3	23.825	75	40	8.4	1	1.2
	-MTA3-135			135			2	1.8
	-MTA4- 95	4	31.267	95	50	12.4	1	1.4
	-MTA4-165			165			2	2.4
No.50	BT50-MTA1- 45	1	12.065	45	25	5.6	1	4.0
	(IT50)-MTA1-120			120			2	4.3
	-MTA1-180			180				4.3
	-MTA2- 45	2	17.780	45	32	6.6	1	4.0
	-MTA2-135			135			2	4.4
	-MTA2-180			180				4.6
	-MTA3- 45	3	23.825	45	40	8.4	1	3.9
	-MTA3-150			150			2	4.7
	-MTA3-180			180				4.9
	-MTA4- 75	4	31.267	75	50	12.4	1	4.0
	-MTA4-180			180			2	5.4
	-MTA5-105	5	44.399	105	65	16.5	1	4.6

★Centre through type MT Adapter has different dimensions.
★Flange through type MT Adapter has different dimensions.

For high pressure coolant through, please use Milling Chuck ☞P.31, Slim Chuck ☞P.41 or Side Lock Holder ☞P.54 instead of MT Adapter.

Straight Shank MORSE TAPER SOCKET

NIKKEN



K-MT

Suitable for MULTI-LOCK Milling Chuck

Style	Code No.	L	L1	C	C1
20	K20-MT1, MT2	59, 70.5	5, 20	20	25
25	K25-MT1, MT2	59, 70.5	3, 10.5	25	29
32	K32-MT1, MT2, MT3	59, 70.5, 88	3, 8.5, 26	32	37
42	K42-MT1, MT2, MT3, MT4	59, 70.5, 89, 113.5	5, 5, 5, 18	42	48

MORSE TAPER ADAPTER B TYPE with DRAW BOLT

NIKKEN



MTB

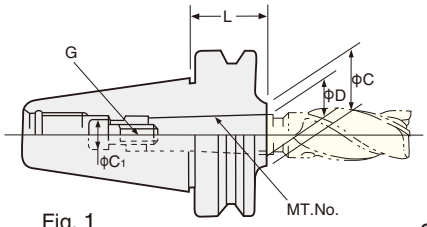


Fig. 1

Draw bolt type

■Taper contact area of more than 80% ensures reliable machining without vibration.

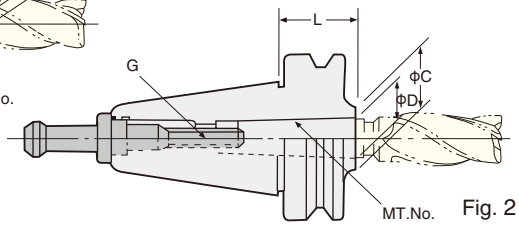


Fig. 2

Pull stud draw bolt type.

TAPER	Code No.	MT.No.	D	L	C	C_1	G	Fig	Weight (kg)
No.30	BT30-MTB1- 45	1	12.065	45	25	10	M 6×1	1	0.8
	-MTB2- 25	2	17.780	25	32	—	M10×1.5	2	0.8
	-MTB3- 80	3	23.825	80	40		M12×1.75		1.0
No.40	BT40-MTB1- 45	1	12.065	45	25	10	M 6×1	1	1.0
	-MTB2- 60	2	17.780	60	32	13.5	M10×1.5		1.1
	-MTB3- 45	3	23.825	45	40	—	M12×1.75	2	1.1
	-MTB4- 85	4	31.267	85	50		M16×2		1.3
No.50	BT50-MTB1- 45	1	12.065	45	25	10	M 6×1	1	3.9
	-MTB2- 45	2	17.780		32	16	M10×1.5		3.9
	-MTB3- 60	3	23.825	60	40	18	M12×1.75		3.9
	-MTB4- 75	4	31.267	75	50	20.5	M16×2		3.9
	-MTB5-105-M16	5	44.399	105	70	—			4.2
	-MTB5-105						M20×2.5	2	4.0

★Adapter in Fig.1 is supplied with a special draw bolt.
★Morse Taper Adapters B type as illustrated in Fig.2 need the special pull stud. The pull stud is optional accessory. When ordering, please specify the pull stud code number.

■PULL STUD for MORSE TAPER ADAPTER B TYPE



MT No.	DRAW BOLT
MT 2	M10×1.5
MT 3	M12×1.75
MT4 / MT5	M16×2
MT 5	M20×2.5

TAPER	Standard pull stud Code No.	MTB2	MTB3	MTB4	MTB5
No.30	PS- 16	PS-27	PS- 32	—	—
	- 17	-28	- 33	—	—
No.40	PS- 1	—	PS- 7	PS- 8	—
	- 2	—	- 29	- 10	—
	- 08-1	—	- 017	- 018	—
	- P5-1	—	- P51	- P52	—
	- G51	—	- G56	- G57	—
	- 805	—	- 872	- 873	—
No.50	PS- 5	—	—	PS- 57	PS-15*
	- 6	—	—	- 65	-61*
	- 0	—	—	- 016	-06*

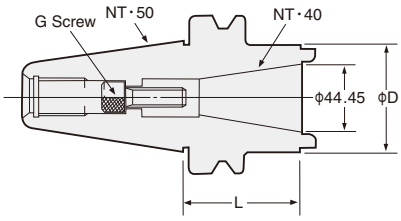
★For standard pull stud Code No. Please refer ☞P.303.
★The other type of pull stud is available, please specify the pull stud Code No.
★The screw of the pull stud marked * is **M20**.

SLEEVE for NT40 TOOL

NIKKEN



TSA



Code No.	L	D	G	Weight (Kg)
BT50-TSA40M-75	75	70	M16P=2	4.6
(IT50) -TSA40U-75			5/8-11UNC	4.6

★G Screw is standard accessory. When ordering, please specify **M** (metric) or **U** (inch).
★Above Code No. is the sleeve which internal taper is for conventional **T40U (M)**. When internal taper is **BT40**, G screw **9TSA40-M16-70L** (option) is necessary.

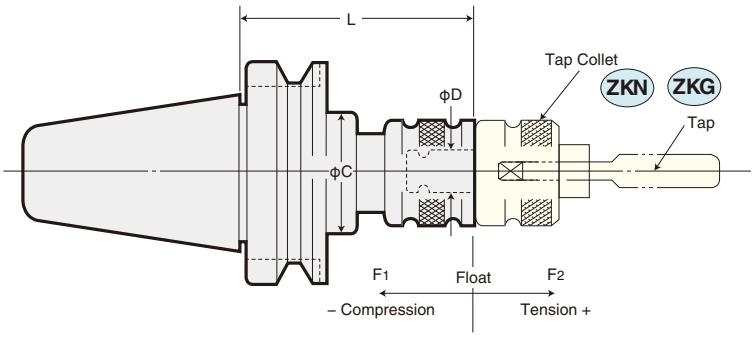
AUTO. DEPTH CONTROL TAPPER CHUCK

NIKKEN



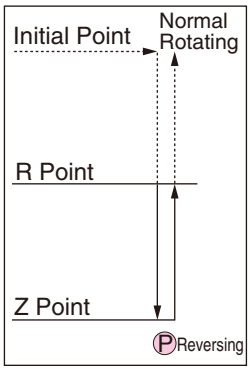
ZL

- Most suitable for tapping gas threads, blind-end threads and light alloys.
- When normal rotation of machine is stopped at specified position, the Tapper Chuck runs idle after progressing by its elongation (4mm for ZL12 type). Simply rotate the machine in the reverse direction, and the tap depth will be made uniform within a high-precision.



TAPER	Code No.	Tapping Capability M	Tapping Capability U	Tapping Capability P	D	L	C	Float F1	Float F2	Tap Collet	Weight (kg)
No.30	BT30-ZL 8-110*1	M 2～ 8	1/8～1/4	—	13	110	34	3	3	ZKN 8 *1	1.5
	-ZL12-130	M 2～12	1/8～1/2	P1/16～1/4	19	130	58	5	4	ZKG12	1.9
No.40	BT40-ZL 8-120*1	M 2～ 8	1/8～1/4	—	13	120	34	3	3	ZKN 8 *1	1.6
	(IT40)-ZL12-100	M 2～12	1/8～1/2	P1/16～1/4	19	100	58	5	4	ZKG12	1.9
	-ZL12-130					130					2.3
	-ZL16-150	M 3～16	1/8～5/8	P1/8～3/8	25	150	60			ZKG16	2.9
	-ZL24-160	M 8～24	1/2～ 1	P1/4～5/8	30	160	73	6	7	ZKG24	3.3
	-ZL38-190	M18～38	3/4～1 3/8	P3/8～ 1	45	190	92	8	10	ZKN38	6.0
No.50	BT50-ZL 8-130*1	M 2～ 8	1/8～1/4	—	13	130	34	3	3	ZKN 8 *1	4.2
	(IT50)-ZL12- 85	M 2～12	1/8～1/2	P1/16～1/4	19	85	58	5	4	ZKG12	3.4
	-ZL12-130					130					4.3
	-ZL16-135	M 3～16	1/8～5/8	P1/8～3/8	25	135	60			ZKG16	4.6
	-ZL24-100	M 8～24	1/2～ 1	P1/4～5/8	30	100	73	6	7	ZKG24	4.5
	-ZL24-142					142					5.8
	-ZL38-150	M18～38	3/4～1 3/8	P3/8～ 1	45	150	92	8	10	ZKN38	6.9

★In Case of **IT40, IT40-ZL16-160** and **IT40-ZL24-175** are standard.
★In Case of **IT50, IT50-ZL12-130, IT50-ZL24-142** and **IT50-ZL38-180** are standard.
★Marked *1 **ZL8** Tapper Chuck and **ZK8** Tap Collet are available as semi-standard.
★Please refer ☞**P.59 (ZKG) ～P.52 (ZK) for ISO, IMPERIAL, DIN Tap Collet,** ☞**P.61 (ZKG) ～P.54 (ZKN) for JIS Tap Collet**, and ☞**P.63** for **Long Size Tap Collet.**
★Centre Coolant type Tapper Chuck is also available. Please contact with us.
★Flange through type Tapper Chuck is also available. Please contact with us.



Program of Auto•Depth Control Tapper Chuck

(ZL)

NO. 1	M03	S——;	Spindle Rotating
NO. 2	G00	X——Y——;	Initial Point
NO. 3	G00	Z——;	R Point
NO. 4	G01	Z——F——;	Z Point
NO. 5	G04	P——;	Dwell
NO. 6	M05		Spindle Stop
NO. 7	M04		Spindle Reversing
NO. 8	G01	Z——;	R Point
NO. 9	M05		Spindle Stop
NO.10	G00	Z—— M03;	Initial Point, Spindle Normal Rotating

⚠ When using **ZL** Tapper Chuck, please make sure of the following program.

G04 P —; — Threads are made only by Spindle Rotation during Dwell. Thus, exact depth is controlled.

M05 ; — Spindle stop.

M04 ; / **G01 Z —;** — First command Spindle Reversing. Then, upward movement of Z. If upward movement of Z is commanded earlier than Spindle Reversing, down movement of tap and up movement of Z may cause breakage of tap.

FLOATING TAPPER CHUCK

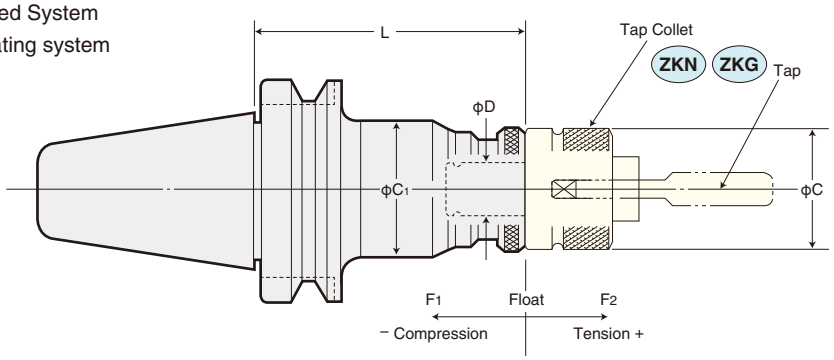
NIKKEN

Suitable Tapper Chuck for Conventional M/C



Z

- More convenient in tapping, thanks to stable torque and slim body
- Good Run-out, No Pull-out and No Tap Breakage with NIKKEN Tapper Chuck
  Ideal for Unmanned System
- With the axial floating system



TAPER	Code No.	Tapping Capability M	Tapping Capability U	Tapping Capability P	D	L	C	C1	Float F1	Float F2	Tap Collet	Weight (kg)
No.30	BT30-Z 8- 90*1	M 2～ 8	1/8～1/4	—	13	90	23	33	5	15	ZKN 8*1	1.2
	-Z12-105	M 2～ 12	1/8～1/2	P1/16～1/4	19	105	32	45	5	15	ZKG12	1.2
No.40	BT40-Z 8- 90*1	M 2～ 8	1/8～1/4	—	13	90	23	33	5	15	ZKN 8*1	1.4
	(IT40)-Z12- 90	M 2～ 12	1/8～1/2	P1/16～1/4	19	90	32	45	5	15	ZKG12	1.5
	-Z12-130					130			15			1.6
	-Z16-109	M 3～ 16	1/8～5/8	P1/8～3/8	25	109	39	55	8	20	ZKG16	2.0
	-Z24-100	M 8～ 24	1/2～ 1	P1/4～5/8	30	100	46	68	10	20	ZKG24	2.1
	-Z24-187					187		63	20			3.5
	-Z38-140	M18～ 38	3/4～13/8	P3/8～ 1	45	140	78	85	8	22	ZKN38	6.7
No.50	BT50-Z 8-105*1	M 2～ 8	1/8～1/4	—	13	105	23	33	5	15	ZKN 8*1	4.2
	(IT50)-Z12-130	M 2～ 12	1/8～1/2	P1/16～1/4	19	130	32	45	15	15	ZKG12	4.3
	-Z12-175					175						4.8
	-Z12-220					220						5.0
	-Z16-135	M 3～ 16	1/8～5/8	P1/8～3/8	25	135	39	55	8	20	ZKG16	5.2
	-Z24-142	M 8～ 24	1/2～ 1	P1/4～5/8	30	142	46	63	20	20	ZKG24	5.8
	-Z24-187					187						6.2
	-Z38-175	M18～ 38	3/4～13/8	P3/8～ 1	45	175	78	98	10	25	ZKN38	8.3
	-Z65-160	M36～100	1 ～33/4	P1 ～ 3	68	160	110*2 (125)	110	10	25	ZKN65	9.0

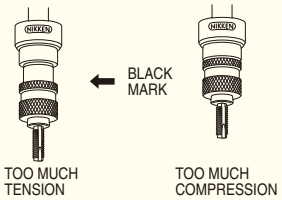
★In Case of **IT40, IT40-Z8-95*1** and **IT40-Z24-125** are standard.
★In Case of IT50, **IT50-Z8-105*1, IT50-Z38-187** and **IT50-Z65-165** are standard.
★Marked *1 **Z8** Tapper Chuck and **ZK8** Tap Collet are available as semi-standard.
★Please refer ☞**P.59 (ZKG) ～P.52 (ZK) for ISO, IMPERIAL, DIN Tap Collet,** ☞**P.61 (ZKG) ～P.54 (ZKN) for JIS Tap Collet**, and ☞**P.63** for **Long Size Tap Collet.**
★Marked *2 ( ) dimension is for M65 or more size of **ZK** Tap Collet.

⚠

① Caution for Floating Mechanism

(1). Too Much Tension
When tension movement exceeds the limitation, the black line will appear. In this case increase machine feed.

(2). Too Much Compression
When machine feed is too fast for the tap thread pitch, the compression floating mechanism will work. The machine program should be modified to slow feed rate down.



② When the drilled hole diameter is too small (this is often caused by the drilling of the tough materials, extended drilling diameter is not large enough.), the tap will slip before the breakage due to torque limitter mechanism. In this case enlarge the drilled hole and do not adjust the torque setting.

③ For a blind hole tapping, the tap might hit the bottom of the hole and the floating shaft will not extend any further, if the Z point is too close to the component. And the point of reversing the floating shaft could compress further than the extension, it may cause damage to the tapped hole. In this case, make the drilled hole deeper or restrict Z point at the higher position.

④ When the R point is too close to the component, the spindle will moves upwards with the fully extended float mechanism at reversing operation, and it might cause damage to the tapped hole as the tap may be still in the hole when the spindle try to return to the initial point at the rapid feed. In this case, give further distance between the R point and the component.

⑤ In case of the tapping with Z type tapper chuck, since the Z Axis stroke will move upwards after reversing operation starts at the Z point due to the machine tapping cycle features, it may cause damage to the tapped hole. In this case, input the dwell command at the Z point on the program in order to make the upward movement of Z Axis with the tapper chuck as its extended float mechanism.

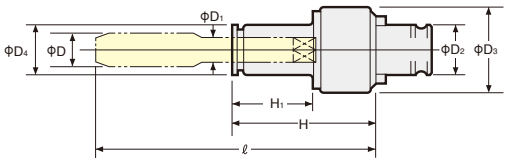
ONE TOUCH TAP COLLET (ISO, IMPERIAL, DIN)

NIKKEN

- Can be used with all NIKKEN Floating Tapper Chucks.
- Setting and Removal of Tap can be done in ONE TOUCH.
- Torque Limitter Mechanism built-in.
  Reversing Torque is 1.4 times of Normal Rotation in order to prevent the troubles caused by swarf.



ZKG



Tapping Capacity	ZKG12		ZKG16			ZKG24		
	M2～5	M6～12	M3～5	M6～12	M14～20	M8～12	M14～20	M22～24
D_2	19		25			30		
D_3	32		39			46		
D_4	13	19	13	19	26	19	26	32
H	54.5	55	64.5	65	66	73	74	
H_1	30.5	31	37.5	38	42	45	48	

TAP SPEC.	ZKG12	ΦD, ΦD₁, W□				ZKG16	ΦD, ΦD₁, W□				ZKG24	ΦD, ΦD₁, W□			
	Code No.	D	D_1	W	ℓ	Code No.	D	D_1	W	ℓ	Code No.	D	D_1	W	ℓ
ISO Metric	ZKG12-2S	2	2.5	2	74	ZKG16-4S	4	4	3.15	93	ZKG24-12S	12	9	7.1	129
	-3S	3	3.15	2.5	79	-5S	5	5	4	97	-14S	14	11.2	9	130
	-4S	4	4	3.15	83	-6S	6	6.3	5	102	-16S	16	12.5	10	136
	-5S	5	5	4	87	-8S	8	8	6.3	106	-18S	18	14	11.2	145
	-6S	6	6.3	5	92	-10S	10	10	8	113	-20S	20	14	11.2	145
	-8S	8	8	6.3	96	-12S	12	9	7.1	121	-22S	22	16	12.5	145
	-10S	10	10	8	103	-14S	14	11.2	9	122	-24S	24	18	14	155
	-12S	12	9	7.1	111	-16S	16	12.5	10	128					
ISO Pipe	ZKG12-1/8PS	9.728	8	6.3	87	ZKG16-1/8PS	9.728	8	6.3	97.5	ZKG24-1/4PS	13.157	10	8	110
						-1/4PS	13.157	10	8	103.5	3/8PS	16.662	12.5	10	116
						-3/8PS	16.662	12.5	10	109.5	-1/2PS	20.955	16	12.5	122
											-5/8PS	22.911	18	14	124
IMPERIAL BSW BSF	ZKG12-1/8S(No.5S)	3.175	3.15	2.5	78	ZKG16-1/8S(No.5S)	3.175	3.15	2.5	88	ZKG24-1/2S	12.7	9	7.1	129
	-No.6S	3.505	3.55	2.8	80	-No.6S	3.505	3.55	2.8	90	-9/16S	14.288	11.2	9	130
	-No.8S	4.166	4.5	3.55	82	-No.8S	4.166	4.5	3.55	92	-5/8S	15.875	12.5	10	136
	-3/16S(No.10S)	4.762	5	4	86	-3/16S(No.10S)	4.762	5	4	96	-3/4S	19.05	14	11.2	145
	-No.12S	5.48	5.6	4.5	90	-No.12S	5.48	5.6	4.5	100	-7/8S	22.225	16	12.5	145
	-1/4S	6.35	6.3	5	90	-1/4S	6.35	6.3	5	100	-1S	25.4	18	14	155
	-5/16S	7.937	8	6.3	95	-5/16S	7.937	8	6.3	105					
	-3/8S	9.525	10	8	101	-3/8S	9.525	10	8	111					
	-7/16S	11.112	8	6.3	108	-7/16S	11.112	8	6.3	118					
	-1/2S	12.7	9	7.1	111	-1/2S	12.7	9	7.1	121					
						-9/16S	14.288	11.2	9	122					
						-5/8S	15.875	12.5	10	128					
IMPERIAL Pipe	ZKG12-1/8PB	9.728	8.08	6	83.037	ZKG16-1/8PB	9.728	8.08	6	93.537	ZKG24-1/4PB	13.157	10.9	8.18	104.8
						-1/4PB	13.157	10.9	8.18	98.3	-3/8PB	16.662	13.77	10.31	106.388
						-3/8PB	16.662	13.77	10.31	99.888	-1/2PB	20.955	17.45	13.08	114.5
											-5/8PB	22.911	20.32	15.3	114.5
DIN Metric	ZKG12-2D(DIN352)	2	2.8	2.1	72	ZKG16-4D(DIN371)	4	4.5	3.4	102	ZKG24-12D(DIN376)	12	9	7	150
	-3D(DIN371)	3	3.5	2.7	85	-5D(DIN371)	5	6	4.9	107	-14D(DIN376)	14	11	9	145
	-4D(DIN371)	4	4.5	3.4	92	-6D(DIN371)	6	6	4.9	117	-16D(DIN376)	16	12	9	145
	-5D(DIN371)	5	6	4.9	97	-8D(DIN376)	8	6	4.9	127	-18D(DIN376)	18	14	11	158
	-6D(DIN371)	6	6	4.9	107	-8D7(DIN371)	8	8	6.2	123	-20D(DIN376)	20	16	12	168
	-8D(DIN376)	8	6	4.9	117	-10D(DIN376)	10	7	5.5	134	-22D(DIN376)	22	18	14.5	166
	-8D7(DIN371)	8	8	6.2	113	-10D7(DIN371)	10	10	8	131	-24D(DIN376)	24	18	14.5	186
	-10D(DIN376)	10	7	5.5	124	-12D(DIN376)	12	9	7	142					
	-10D7(DIN371)	10	10	8	121	-14D(DIN376)	14	11	9	137					
	-12D(DIN376)	12	9	7	132	-16D(DIN376)	16	12	9	137					
DIN Pipe	ZKG12-1/8R(DIN353)	9.728	7	5.5	92	ZKG16-1/8R(DIN353)	9.728	7	5.5	102.5	ZKG24-1/4R(DIN353)	13.157	11	9	105
						-1/4R(DIN353)	13.157	11	9	98.5	-3/8R(DIN353)	16.662	12	9	112
						-3/8R(DIN353)	16.662	12	9	105.5	-1/2R(DIN353)	20.955	16	12	116

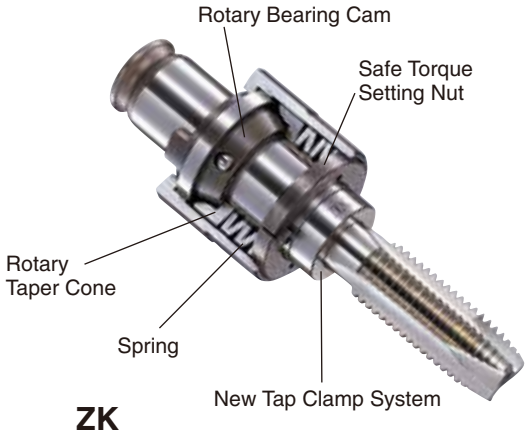
★Long size TAP Collet is available. ☞ P.63 **e.g. ZKG12-4S-50L**

★TAP Clamp Mechanism for PIPE TAP is Side Lock System.

★High torque setting type example for stainless steel is available. Please add "**-HT**" at the end of Code No. **e.g. ZKG12-3S-HT**

ZK TAP COLLET (ISO, IMPERIAL, DIN)

NIKKEN



ZK

- Can be used with all NIKKEN Floating Tapper Chucks.
- Torque Limitter Mechanism built-in.

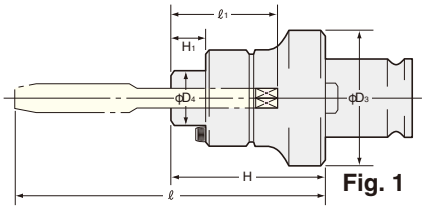


Fig. 1

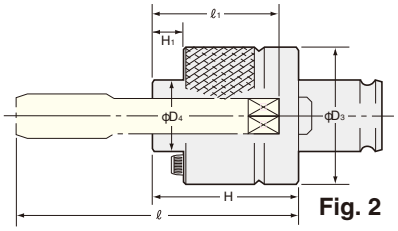


Fig. 2

Total length "ℓ" is calculated as ;
ℓ= Tap length – ℓ1 + H

	ZK8	ZK38	ZK65
D4	13	45	68
D3	23	78	110
H1	6.5	12	13
H	29.5	64	89

ZK8 type is semi-standard.

TAP SPEC.	ZK 8 Code No.	D	D1	W	ℓ1	Fig
ISO Metric	ZK8-2S	2	2.5	2.0	22.5	2
	-3S	3	3.15	2.5	23.5	
	-4S	4	4.0	3.15	24.5	
	-5S	5	5.0	4.0	25.5	
	-6S	6	6.3	5.0	26.5	
ISO Pipe						
IMPERIAL BSW BSF	ZK8-No.2S	2.18	2.8	2.24	23.5	2
	-No.3S	2.515				
	-No.4S	2.845	3.15	2.5	23.5	
	-No.5S(1/8S)	3.175				
	-No.6S	3.505	3.55	2.8		
	-No.8S	4.166	4.5	3.55	24.5	
	-No.10S(3/16S)	4.826	5.0	4.0	25.5	
	-No.12S	5.480	5.6	4.5		
	-1/4S	6.350	6.3	5.0	26.5	
IMPERIAL Pipe						
DIN Metric	ZK8-2D	2(Din 371)	2.8	2.1	23.5	2
	-3D	3(Din 371)	3.5	2.7	24.5	
	-4D	4(Din 371)	4.5	3.4		
	-5D	5(Din 371)	6.0	4.9	26.5	
	-6D	6(Din 371)				
	-8D	8(Din 376)				
DIN Pipe						

ZK38 Code No.	D	D1	W	ℓ1	Fig
ZK38-18S	18	14	11.2	44	1
-20S	20				
-22S	22	16	12.5	46	
-24S	24	18	14	48	
-27S	27	20	16	54	2
-30S	30				
-33S	33	22.4	18	56	
-36S	36	25	20	58	
ZK38-3/8PS	16.662	12.5	10	34	1
-1/2PS	20.955	16	12.5	38	
-5/8PS	22.911	18	14	40	
-3/4PS	26.441	20	16	46	2
-7/8PS	30.201	22.4	18	48	
- 1 PS	33.249	25	20	50	
ZK38- 3/4S	19.050	14	11.2	44	1
- 7/8S	22.225	16	12.5	46	
- 1 S	25.400	18	14	48	
-1 1/8S	28.575	20	16	54	2
-1 1/4S	31.750	22.4	18	56	
-1 3/8S	34.925	25	20	58	
ZK38- 3/8PB	16.662	13.77	10.31	33.7	1
- 1/2PB	20.955	17.45	13.08	39.9	
- 5/8PB	22.911	20.32	15.3	39.5	
- 3/4PB	26.441	23.01	17.3	43.5	2
- 7/8PB	30.201	27.76	20.6	45.1	
- 1 PB	33.249	28.57	21.4	46.6	
ZK38-18D	18(Din 376)	14	11	44	1
-20D	20(Din 376)	16	12	45	
-22D	22(Din 376)	18	14.5	47	
-24D	24(Din 376)				
-27D	27(Din 376)	20	16	53	2
-30D	30(Din 376)	22	18	55	
-33D	33(Din 376)	25	20	57	
-36D	36(Din 376)	28	22	59	
ZK38-3/8R	16.662	12	9	33	1
-1/2R	20.955	16	12	37	
-5/8R	22.911	18	14.5	39	
-3/4R	26.441	20	16	45	2
-7/8R	30.201	22	18	47	
- 1 R	33.249	25	20	49	

ZK65 Code No.	D	D1	W	ℓ1	Fig
ZK65-36S	36	25.0	20.0	58	2
-39S	39	28.0	22.4	60	
-42S	42				
-45S	45	31.5	25.0	65	
-48S	48				
-52S	52	35.5	28.0	68	
-56S	56				
-60S	60	40.0	31.5	71	
-64S	64				
ZK65-1 1/4PS	41.910	31.5	25	51	2
-1 1/2PS	47.803	35.5	28	55	
-1 3/4PS	53.746				
- 2 PS	59.614	40	31.5	62	
ZK65-1 1/2S	38.100	28	22.4	60	2
-1 3/4S	44.450	31.5	25.0	65	
- 2 S	50.800	35.5	28.0	68	
-2 1/4S	57.150	40.0	31.5	71	
-2 1/2S	63.500				
ZK65-1 1/4PB	41.910	33.32	25.0	51	2
-1 1/2PB	47.803	38.10	28.57	50	
-1 3/4PB	53.746	41.28	30.94	62	
- 2 PB	59.614	47.63	35.71	56	
ZK65-36D	36(Din 376)	28.0	22.0	59	2
-39D	39(Din 376)	32.0	24.0	61	
-42D	42(Din 376)				
-45D	45(Din 376)	36.0	29.0	69	
-48D	48(Din 376)				
-52D	52(Din 376)	40.0	32.0	72	
-56D	56(Din 376)	45.0	35.0	75	
-60D	60(Din 376)				
-64D	64(Din 376)	50.0	39.0	78	
ZK65-1 1/8R	37.898 (Din 353)	28.0	22.0	51	2
-1 1/4R	41.910 (Din 353)	32.0	24.0	53	
-1 3/8R	44.325 (Din 353)	36.0	29.0	55	
-1 1/2R	47.803 (Din 353)				
-1 3/4R	53.746 (Din 353)				
- 2 R	59.614 (Din 353)				

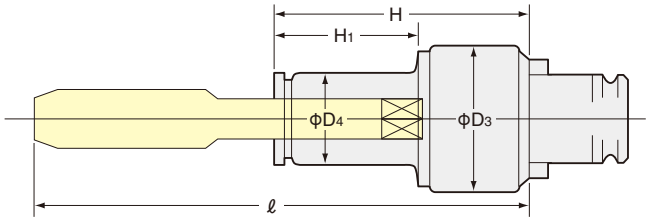
★Tap collet Code No. "**ZK**" is for **ISO**, **IMPERAL** and **DIN** Taps.
★Tap collet Code No. "**ZKN**" is for **JIS** Taps.

ONE TOUCH TAP COLLET (JIS)

NIKKEN

ZKG Tap Collet





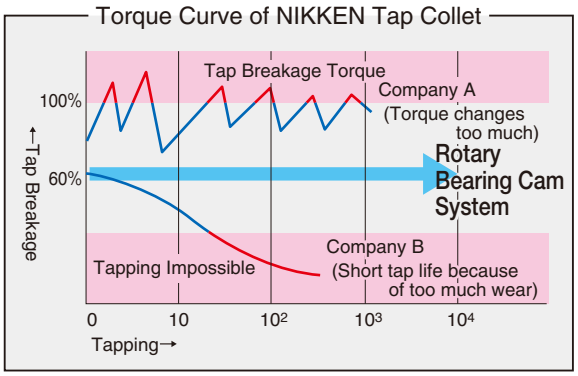
D3 Dimension
ZKG12:32mm
ZKG16:39mm
ZKG24:46mm

High Accuracy, Quick Response and Long Tap Life.

NIKKEN **ZKG** Tap Collet can be used with all of NIKKEN floating Tapper Chucks.

Rotary Bearing Cam Mechanism

The **ZKG** tap collet can response very smoothly for the change of the tapping torque.



- The torque of CCW is 1.4 times of the torque of CW to prevent the problem of the swarf.
- The tap can be clamped with one touch operation.
- The adjustment mechanism of the setting torque is not installed on the **ZKG** tap collet. The high torque setting type is available for the tapping on the stainless as an option. e.g **ZKG12-4-HT**

The **ZKG** tap collet is not interchangable with **ZKN** tap collet.

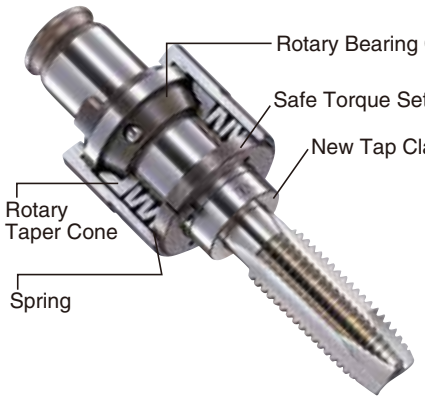
	ZKG12					ZKG16					ZKG24				
	Code.No	D4	H	H1	ℓ	Code.No	D4	H	H1	ℓ	Code.No	D4	H	H1	ℓ
Metric (M)	ZKG12- 2	13	54.5	30.5	72	ZKG16- 3	13	64.5	37.5	85.5	ZKG24- 8	19	73	45	111
	- 3				75	- 4				90.5	-10				116
	- 4				80	- 5				98.5	-12				122
	- 5				88	- 6	19	65	38	100.5	-14	26	74	48	123
	- 6	19	55	31	90	- 8				104	-16				128
	- 8				94	-10				109	-18				128
	-10				99	-12				115	-20				136
	-12				105	-14	26	66	42	116	-22	32			141
						-16				121	-24				144
Unified (U) or British Standard Whiteworth (W)	ZKG12-1/8	13	54.5	30.5	75	ZKG16-1/8	13	64.5	37.5	85.5	ZKG24-1/2	19	73	45	124
	-3/16				88	-3/16				98.5	-9/16	26	74	48	125
	-1/4	19	55	31	90	-1/4	19	65	38	100.5	-5/8				129
	-5/16				93.5	-5/16				104	-3/4				137
	-3/8				99	-3/8				109	-7/8	32			141
	-7/16				103	-7/16				113	-1				149
	-1/2				107	-1/2				117					
						-9/16	26	66	42	118					
						-5/8				122					
Pipe (PT) (PS) (PF)	ZKG12-1/8P	19	56	32	83	ZKG16-1/8P	19	66.5	39	93	ZKG24-1/4P	26	75	49	104
	-1/4P	26	60	36	89	-1/4P	26	68.5	44	97	-3/8P				105
	-1/16P	19	56	32	81.5	-3/8P				98	-1/2P	32			114
	-1/16P-Y	19	56	32	81.5						-5/8P				115

★Tap for pipe thread is clamped with the side lock screw.
★High torque setting type example for stainless steel is available. Please add **"-HT"** at the end of Code No. **e.g. ZKG12-4-HT**
★Low torque setting is **"-LT"**. **e.g. ZKG12-4-LT**
★Please refer ☞**P.63** for the long size tap collet.
★The ahank dimension of the 1/16P tap varies depending on the tap maker.
★The internal mechanism of the tap collet for the left handed tap is different from the standard one. Please use the special tap collet for the left handed tap.

ZKN TAP COLLET (JIS)

NIKKEN

ZKN Tap Collet



- **High Accuracy, Quick Response and Long Tap Life.**
- **Rotary Bearing Cam Mechanism**
  NIKKEN **ZKG** Tap Collet can be used with the all NIKKEN flaoting Tapper Chucks.
- **The torque of CCW is 1.4 times of the torque of CW to prevent the problem of the swarf.**
- **The setting torque can be adjusted.**

Smaller equal to **ZKG38-24**

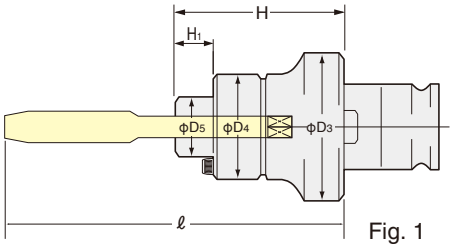


Fig. 1

All size for **ZKN8**
Larger equal to **ZKN38-27**
All size of **ZKN65**

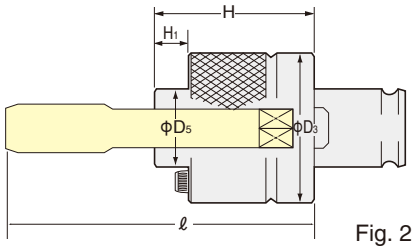


Fig. 2

ZKN65 : The tap collet fot the unified thread is also available. (U,W)
$1^{3}/_{8}$, $1^{1}/_{2}$, $1^{5}/_{8}$, $1^{3}/_{4}$, $1^{7}/_{8}$, 2, $2^{1}/_{4}$, $2^{1}/_{2}$, $2^{3}/_{4}$, 3, $3^{1}/_{4}$, $3^{1}/_{2}$, $3^{3}/_{4}$

	ZKN8	ZKN38		ZKN65	
		M18~24	M27~36	M36~65	M68~100
D_3	23	78		110	125
D_4	—	56	—	—	—

ZKN8 is semi-standard.

	ZKN 8					ZKN38					ZKN65				
	Code.No	D_5	H	H_1	ℓ	Code.No	D_5	H	H_1	ℓ	Code.No	D_5	H	H_1	ℓ
Metric (M)	ZKN 8-2	13	29.5	6.5	50	ZKN38-18	32	61	17	117	ZKN65- 36	68	89	20	179
	-3				55	-20				121	- 39				187
	-4				56	-22				130	- 42				189
	-5				64	-24				133	- 45				194
	-6				66	-27	45	64	12	142	- 48				198
	-8				73	-30				145	- 52				205
						-33				153	- 56				212
						-36				161	- 60				222
						-38				121	- 64				229
											- 65				229
											- 68				254
Unified (U) or British Standard Whiteworth (W)	ZKN 8-1/8	13	29.5	6.5	55	ZKN38-3/4	32	61	17	122	- 72	84	94	25	254
	-3/16				64	-7/8				130	- 80				264
	-1/4				66	-1				138	-100*				274
						-11/8	45	64	12	145	ZKN65-1P	68	89	20	127
						-11/4				153	-11/8P				135
						-13/8				161	-11/4P				139
											-13/8P				144
											-11/2P				144
											-15/8P				144
Pipe (PT) (PS) (PF)						ZKN38 -3/8P	26	61	24	91	-13/4P				144
						-1/2P	32		17	100	-2P				149
						-5/8P				104	-21/4P				159
						-3/4P	45	64	12	103	-21/2P	84	94	25	174
						-7/8P				106	-23/4P				174
						-1P				109	-3P				174

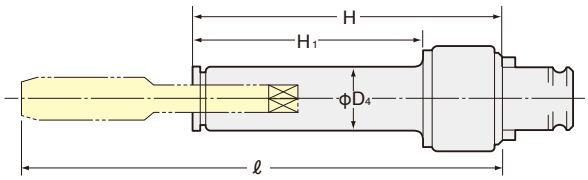
★*mark: The Code No. of tap collet for **M85** to **M90** is **ZKN65-100**.
The Code No. of tap collet for **M95** to **M100** is **ZKN65-100N**.
★The internal mechanism of the tap collet for the left handed tap is different from the standard one. Please use the special tap collet for the left handed tap.

LONG SIZE ONE TOUCH TAP COLLET (ISO)

NIKKEN

ZKG-L





(ISO)

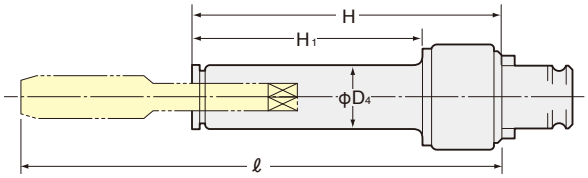
	ZKG12L					ZKG16L					ZKG24L				
	Code.No	D4	H	H1	ℓ	Code.No	D4	H	H1	ℓ	Code.No	D4	H	H1	ℓ
50mm Long	ZKG12- 3S- 50L	13	104.5	38.5	129	ZKG16- 3S- 50L	13	114.5	38.5	139	ZKG24- 8S- 50L	19	123	95	164
	- 4S- 50L				133	- 4S- 50L				143	-10S- 50L				171
	- 5S- 50L				137	- 5S- 50L				147	-12S- 50L				179
	- 6S- 50L	19	105	81	142	- 6S- 50L	19	115	88	152	-14S- 50L	26	124	98	180
	- 8S- 50L				146	- 8S- 50L				156	-16S- 50L				186
	-10S- 50L				153	-10S- 50L				163	-18S- 50L				195
	-12S- 50L				161	-12S- 50L				171	-20S- 50L				195
						-14S- 50L	26	116	92	172	-22S- 50L	32			195
						-16S- 50L				178	-24S- 50L				205
100mm Long	ZKG12- 3S-100L	13	154.5	88.5	179	ZKG16- 3S-100L	13	164.5	88.5	189	ZKG24- 8S-100L	19	173	145	214
	- 4S-100L				183	- 4S-100L				193	-10S-100L				221
	- 5S-100L				187	- 5S-100L				197	-12S-100L				229
	- 6S-100L	19	155	131	192	- 6S-100L	19	165	138	202	-14S-100L	26	174	148	230
	- 8S-100L				196	- 8S-100L				206	-16S-100L				236
	-10S-100L				203	-10S-100L				213	-18S-100L				245
	-12S-100L				211	-12S-100L				221	-20S-100L				245
						-14S-100L	26	166	142	222	-22S-100L	32			245
						-16S-100L				228	-24S-100L				255

LONG SIZE ONE TOUCH TAP COLLET (JIS)

NIKKEN

ZKG-L





(JIS)

	ZKG12L					ZKG16L					ZKG24L				
	Code.No	D4	H	H1	ℓ	Code.No	D4	H	H1	ℓ	Code.No	D4	H	H1	ℓ
50mm Long	ZKG12- 3- 50L	13	104.5	38.5	125	ZKG16- 3- 50L	13	114.5	38.5	135.5	ZKG24- 8- 50L	19	123	95	161
	- 4- 50L				130	- 4- 50L				140.5	-10- 50L				166
	- 5- 50L				138	- 5- 50L				148.5	-12- 50L				172
	- 6- 50L	19	105	81	140	- 6- 50L	19	115	88	150.5	-14- 50L	26	124	98	173
	- 8- 50L				144	- 8- 50L				154	-16- 50L				178
	-10- 50L				149	-10- 50L				159	-18- 50L				178
	-12- 50L				155	-12- 50L				165	-20- 50L				186
						-14- 50L	26	116	92	166	-22- 50L	32			191
						-16- 50L				171	-24- 50L				194
100mm Long	ZKG12- 3-100L	13	154.5	88.5	175	ZKG16- 3-100L	13	164.5	88.5	185.5	ZKG24- 8-100L	19	173	145	211
	- 4-100L				180	- 4-100L				190.5	-10-100L				216
	- 5-100L				188	- 5-100L				198.5	-12-100L				222
	- 6-100L	19	155	131	190	- 6-100L	19	165	138	200.5	-14-100L	26	174	148	223
	- 8-100L				194	- 8-100L				204	-16-100L				228
	-10-100L				199	-10-100L				209	-18-100L				228
	-12-100L				205	-12-100L				215	-20-100L				236
						-14-100L	26	166	142	216	-22-100L	32			241
						-16-100L				221	-24-100L				244

AUTO. REVERSING TAPPER CHUCK

NIKKEN



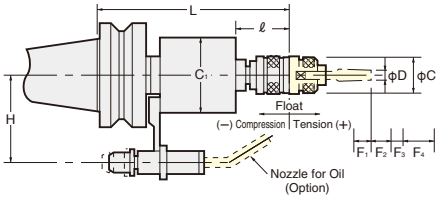
ZR

Explanation of the Code No.

BT40 – ZR 12

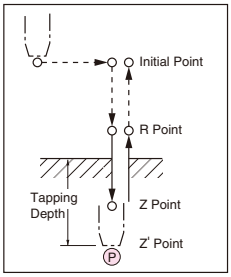
- 12: Max Tapping Capability
- ZR: Symbol of Auto Reversing Tapper Chuck
- BT40: Shank No.

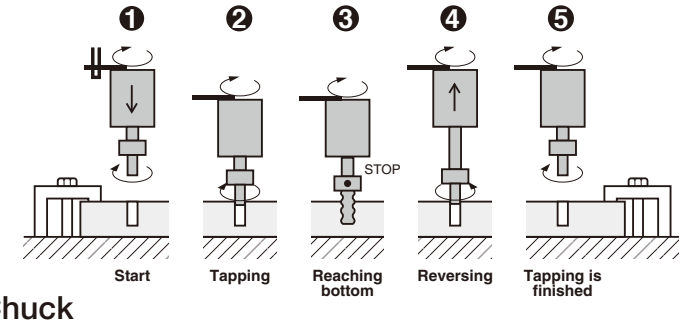
- As Self-Reversing Mechanism is built in Tapper Chuck body, this tapper is very suitable for the operation that the main spindle rotates and reverses frequently.
- Floating Mechanism:With a built in Floating Mechanism, High Accuracy Tapping Operations can be achieved.
- Tapping depth can be kept within ±0.1mm.



TAPER	Code. No.	Tapping Capability D	L	ℓ	C	C1	H	Float F1	Float F2	Float F3	Float F4	MAX.min-1	Weight (Kg)	Tap Collet
No.40	BT40-ZR 8*1	M 3～ 8	157	43	23	55	60	4	5	2	9	1,500	2.6	ZKN 8
	-ZR12	M 3～12	171	51	38	70						1,000	3.7	ZKG12
	-ZR20	M10～16	199	66	56	80		6	7	4	14	600	4.8	ZKG16
No.50	BT50-ZR 8*1	M 3～ 8	166	43	23	55	82	4	5	2	9	1,500	5.2	ZKN 8
	-ZR12	M 3～12	180	51	38	70						1,000	6.3	ZKG12
	-ZR20	M10～16	208	66	56	80		6	7	4	14	600	7.5	ZKG16

★Marked *1 **ZR8** Tapper Chuck and **ZK8** Tap Collet are available as semi-standard.
★Please refer ☞**P.59 for ISO, IMPERIAL, DIN Tap Collet,** ☞**P.61 for JIS Tap Collet**, and ☞**P.63** for **Long Size Tap Collet.**
★Positioning Block is not included. When ordering, please advise name of M/C Builder and Model No. and so on.





Program example of ZR Tapper Chuck

No. 1 M03 S——— ; Spindle Rotating
No. 2 G00 X———Y——— ; Initial Point
No. 3 Z——— ; R Point
No. 4 G01 Z———F——— ; Z Point
No. 5 G04 P——— ; Dwell:Only tap going to Z' Point
No. 6 G01 Z———F——— ; Only tap going to R Point with reversing
No. 7 G00 Z——— ;

★**ZR** tapper can be fed one block at a time. Check correct positions at the point No.3-No.5 and input correct values.
★Allow about 15mm for distance between Z-Z' (self-feed of the ZR tapper)
★Value F of No.4 is tapping self-feeding speed X 0.9.
★Value F of No.6 is tapping self-feeding speed X 1.1.

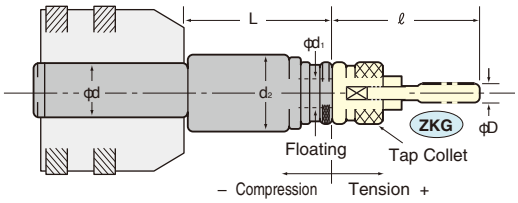
Straight Shank TAPPER CHUCK

NIKKEN

- For Slim body and Ultra Smooth Tapping Operations with Float Mechanism.



NZ



Style	Code. No.	Tapping Capability M	Tapping Capability P	L	d1	d	d2	Float Compression	Float Tension	Weight (kg)	Tap Collet
32	NZ32-12-105	M 2～12	P1/16 ～1/4	105～125	19	32	45	5	15	1.3	ZKG12
	-16-125	M 3～16	P1/8 ～3/8	125～145	25		55	8	20	2.2	ZKG16
	-24-140	M 8～24	P1/4 ～5/8	140～160	30		63			2.8	ZKG24
42	NZ42-12- 90	M 2～12	P1/16 ～1/4	90～125	19	42	45	5	15	2.0	ZKG12
	-16-125	M 3～16	P1/8 ～3/8	125～160	25		55	8	20	3.0	ZKG16
	-24-140	M 8～24	P1/4 ～5/8	140～175	30		63			3.6	ZKG24

SYNCHRONIZED TAPPING HOLDER (for 100% Synchronized Feed) NIKKEN

■Synchronized (Rigid or Direct) Tapping Feed Function is one of recent machining function to feed 1 pitch of tap per 1 revolution of machine spindle.
Please use High Run-Out Accuracy & Powerful Gripping of SLIM CHUCK or MULTI LOCK Milling Chuck for this application.

■Tapping holder & Collet for 100% Synchronized Tapping

■For JIS TAP Shank

Metric Tap	Tap Shank Dia.	SLIM CHUCK	SLIM COLLET	MILLING CHUCK	KM COLLET
M 2	3.0	SK10	SK10- 3		
M 3	4.0		SK10- 4		
M 4	5.0		SK10- 5		
M 5	5.5		SK10- 5.5	C20	KM20- 5.5
M 6	6.0		SK10- 6		KM20- 6
M 8	6.2		SK10- 6.5		KM20- 6.2
M10	7	SK13	SK13- 7		KM20- 7
M12	8.5		SK13- 8.5		KM20- 8.5
M14	10.5		SK13-10.5		KM20-10.5
M16	12.5	SK16	SK16-12.5		KM20-12.5
M18	14		SK16-14		KM20-14
M20	15		SK16-15		KM20-15
M22	17			C32	KM32-17
M24	19				KM32-19
M27	20				KM32-20
M30	23				KM32-23

★Tap Collet for Tap with Oil Hole is also available.
★At use of MILLING CHUCK, please use tap with shank tolerance h7.

■For ISO TAP Shank

Metric Tap	Tap Shank Dia.	SLIM CHUCK	SLIM COLLET	MILLING CHUCK	KM COLLET
M 2	3.0	SK10	SK10- 3		
M 3	4.0		SK10- 4		
M 4	6.0		SK10- 6	C20	KM20- 6
M 5	6.0				
M 6	6.0				
M 8	8.0	SK13	SK13- 8		KM20- 8
M10	8.0				
M12	10.0		SK13-10		KM20-10
M14	12.0		SK13-12		KM20-12
M16	16.0	SK16	SK16-16		KM20-16
M18	16.0				
M20	16.0				
M22	20.0			C32	KM32-20
M24	20.0				
M27	20.0				
M30	25.0				KM32-25

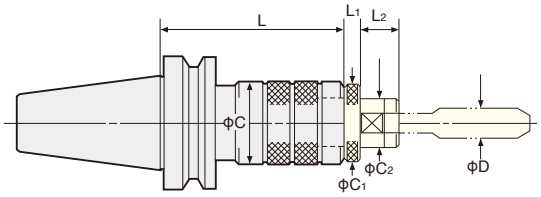
SYNCHRONIZED TAPPING HOLDER (with fine floating) NIKKEN

■This fine floating tapping holder improves tap life remarkably by absorbing fine pitch error completely with the small floating mechanism.



ZH-C

Center Through Tool Coolant



TAPER	Code No.	L	C	Weight (kg)	Tap Collet
No.40	BT40-ZH12CH- 80	80	36	1.2	ZMK12 OZMK12-OM
	-105	105		1.5	
	-135	135		1.8	
	-ZH16CH- 95	95	45	1.5	ZMK16 OZMK16-OM
	-120	120		1.9	
	-150	150		2.3	
	-ZH24CH-105	105	56	1.8	ZMK24 OZMK24-OM
	-120	120		2.0	
	-150	150		2.4	
No.50	BT50-ZH12CH- 90	90	36	3.9	ZMK12 OZMK12-OM
	-135	135		4.3	
	-165	165		4.6	
	-200	200		5.0	
	-ZH16CH-105	105	45	4.2	ZMK16 OZMK16-OM
	-135	135		4.6	
	-165	165		5.0	
	-200	200		5.5	
	-ZH24CH-105	105	56	4.4	ZMK24 OZMK24-OM
	-135	135		5.0	
	-165	165		5.6	
	-200	200		6.2	

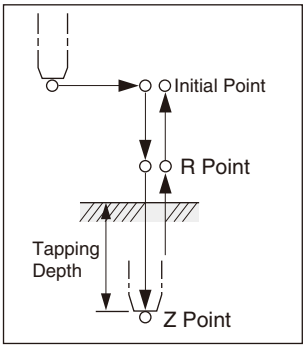
★Please use **OZMK-OM** tap collet for center through tool coolant.
★Please use **ZMK** ☞**P.66** tap collet for external coolant. In this case, the spacer attached as standard accessary is put on a tapper chuck.

ZH-C Tapping Holder has fine floating mechanism, but it's not standard floating system (Tension/Compression) like **Z** or **ZL** Tap Holder. Therefore, **please use this ZH Tap Holder only with synchronized tapping cycle, not with ordinary tapping cycle.**

OZMK-OM Tap Collet

	OZMK12-OM		OZMK16-OM			OZMK24-OM		
D	M8	M8-M12	M6	M8-M12	M14-M16	M12	M14-M16	M18-M24
D_2	19		25			30		
D_3	28		36			42		
D_4	13	19	13	19	26	19	26	32
H	16	20	21					29
H_1	6		6			8		
G	M4-0.5	M6-0.75	M4-0.5	M6-0.75		M6-0.75	M8-1.0	

■Example of RIGID TAP cycle



No.1 M03 S ··· ; Spindle Rotation
No.2 G84.2 X ··· Y ··· Z ··· R ··· F ··· ;
Rigid Tap Cycle / Initial point / Z point / R point / ★Feed

★F is calculated by Pitch of Tap and Spindle Rotation Speed.
For example, in case of M10×P1.5 and S400min^{-1} (Cutting Speed 12.6m/min.)
then F = 1.5mm×400min^{-1} = 600 mm/min.



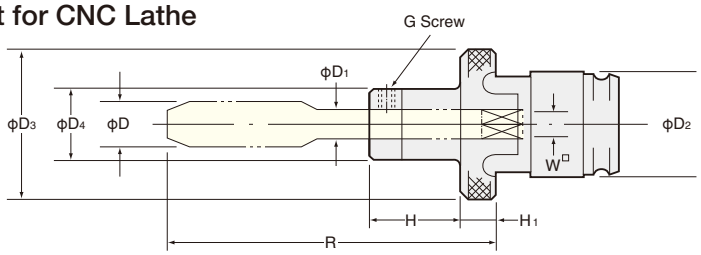
★When use **ZMK** Collett, please attach a spacer (white) to **ZH-C** Tapping Holder with an attached bolt.

TAP COLLET without TORQUE CONTROL (JIS)

NIKKEN



- Tap Collet for ZH Tapping Holder
- Tap Collet for CNC Lathe



ZMK

For Synchronized Tapping on M/C, use ZMK tap collet with ZH Tapping Holder, Please refer P.66.

⚠ Torque Control is not built-in. Careful attention must be paid to diameter of drilled hole, program and so on.

Dimension List of ZMK Tap Collet

	ZMK8		ZMK12		ZMK16			ZMK24		
D	M3～6	M8	M3～6	M8～12	M4～6	M8～12	M14～16	M12	M14～16	M18～24
D_2	13		19		25			30		
D_3	20		28		36			42		
D_4	13	19	13	19	13	19	26	19	26	32
H	14	24	16	20	21			25		29
H_1	4		6		6			8		
G	M4-0.5	M6-0.75	M4-0.5	M6-0.75	M4-0.5	M6-0.75		M6-0.75	M8-1.0	

	ZMK 8				ZMK12				ZMK16				ZMK24			
	Code No.	D_1	W	ℓ	Code No.	D_1	W	ℓ	Code No.	D_1	W	ℓ	Code No.	D_1	W	ℓ
Metric (M)	ZMK8-3	4	3.2	43.5	ZMK12- 3	4	3.2	47.5	ZMK16- 4	5	4.0	53.5	ZMK24-12	8.5	6.5	83
	-4	5	4.0	44.5	- 4	5	4.0	48.5	- 5	5.5	4.5	61.5	-14	10.5	8.0	84
	-5	5.5	4.5	52.5	- 5	5.5	4.5	56.5	- 6	6	4.5	63.5	-16	12.5	10.0	89
	-6	6	4.5	54.5	- 6	6	4.5	58.5	- 8	6.2	5.0	66	-18	14	11.0	93
	-8	6.2	5.0	67	- 8	6.2	5.0	65	-10	7	5.5	71	-20	15	12.0	97
					-10	7	5.5	70	-12	8.5	6.5	77	-22	17	13.0	106
					-12	8.5	6.5	76	-14	10.5	8.0	78	-24	19	15.0	109
									-16	12.5	10.0	83				
Unified (U) or British Standard Whiteworth (W)	ZMK8-1/8	4	3.2	43.5	ZMK12-1/8	4	3.2	47.5	ZMK16-1/8	4	3.2	52.5	ZMK24-1/2	9	7.0	85
	-3/16	5	4.5	52.5	-3/16	5.5	4.5	56.5	-3/16	5	4.5	61.5	-9/16	10.5	8.0	86
	-1/4	6	4.5	54.5	-1/4	6	4.5	58.5	-1/4	6	4.5	63.5	-5/8	12	9.0	90
					-5/16	6.1	5.0	65	-5/16	6.1	5.0	66	-3/4	14	11.0	98
					-3/8	7	5.5	70	-3/8	7	5.5	71	-7/8	17	13.0	106
					-7/16	8	6.0	74	-7/16	8	6.0	75	- 1	20	15.0	114
					-1/2	9	7.0	78	-1/2	9	7.0	79				
									-9/16	10.5	8.0	80				
									-5/8	12	9.0	84				
Pipe (PT) (PF)					ZMK12-1/8P	8	6.0	51	ZMK16-1/8P	8	6.0	54	ZMK24-3/8P	14	11.0	63
									-1/4P	11	9.0	56	ZMK24-1/2P	18	14.0	76
									-3/8P	14	11.0	57	ZMK24-5/8P	19	15.0	80

★For long size Tap Collets are also available. 50mm (**-50L**), 100mm (**-100L**) longer than standard type. **e.g. ZMK12-4-50L**

OLD SYNCHRONIZED TAPPING HOLDER (with fine floating)

NIKKEN



ZH

The sales of old **ZH** holder will be finished, when the stock is sold out.
Please use **ZH-C** holder
☞ **P.65**

TAPER	Code No.	L	C	Weight (kg)	Tap collet
No.40	BT40-ZH 8- 75	75	23	1.1	ZMK 8
	ZH12- 80	80	36	1.2	ZMK12
	ZH16- 95	95	45	1.5	ZMK16
	ZH24-105	105	56	1.8	ZMK24
No.50	BT50-ZH 8- 90	90	23	3.8	ZMK 8
	ZH12- 90	90	36	3.9	ZMK12
	ZH16-105	105	45	4.2	ZMK16
	ZH24-105	105	56	4.4	ZMK24

BORING SYSTEM

ROUGH BORING

RAC-E (Steel, Stainless Steel, Cast Iron)
BT ☞ P.71
MBT ☞ P.178
NBT ☞ P.209
NC5 ☞ P.240
HSK ☞ P.267



CC
Positive type
ϕ25～ϕ130

RAC (Heavy Duty Boring)
BT ☞ P.73
MBT ☞ P.178
NBT ☞ P.209
NC5 ☞ P.240
HSK ☞ P.269



CN
Negative type
ϕ43～ϕ130

RAC-A (Aluminium)
BT ☞ P.75
MBT ☞ P.178
NBT ☞ P.209
NC5 ☞ P.240
HSK ☞ P.271



ϕ25～ϕ130

ROUGH BORING

RAC-K (Through Hole / Multi Sheets)
BT ☞ P.77
MBT ☞ P.178
NBT ☞ P.209
NC5 ☞ P.240
HSK ☞ P.273



ϕ25～ϕ130

RAC (For Large Dia)
BT ☞ P.81
MBT ☞ P.180
NBT ☞ P.211
NC5 ☞ P.241
HSK ☞ P.275



ϕ130～ϕ580

ULTRA LIGHT BORING BAR FOR Large Dia NEW

ROUGH BORING



RAC-AA
☞ P.95

BAC-AA
☞ P.97



FINISH BORING

SEMI-FINISH BORING

ZMAC-VR
BT ☞ P.85
MBT ☞ P.117
NBT ☞ P.208
NC5 ☞ P.239
HSK ☞ P.279



ϕ32～ϕ180

BCB (For Large Dia)
BT ☞ P.92
HSK ☞ P.282



ϕ130～ϕ595

FINISH BORING

DJ
BT ☞ P.99
MBT ☞ P.179
NBT ☞ P.210
HSK ☞ P.284



ϕ3～ϕ50

FINISH BORING

ZMAC-V
BT ☞ P.83
MBT ☞ P.117
NBT ☞ P.208
NC5 ☞ P.239
HSK ☞ P.277



ϕ16～ϕ180

ZMAC α-V
BT ☞ P.84
MBT ☞ P.117
NBT ☞ P.208
NC5 ☞ P.239
HSK ☞ P.278



ϕ25～ϕ180

BAC-V (For Large Dia)
BT ☞ P.91
MBT ☞ P.180
NBT ☞ P.211
NC5 ☞ P.241
HSK ☞ P.281



ϕ130～ϕ595

MODULAR SYSTEM

Base Holder Q
BT ☞ P.101
MBT ☞ P.179
NBT ☞ P.210
NC5 ☞ P.215
HSK ☞ P.283



Spacer SP ☞ P.102



STRAIGHT SHANK

K-RAC K-ZMAC-V ☞ P.105 S-BCBX S-ZMACX-V ☞ P.106
K-DJ ☞ P.107



ϕ25～ϕ100 ϕ16～ϕ70 ϕ3～ϕ50 ϕ12.7～ϕ55

SPECIAL BORING BAR

Multi-Stage, External
☞ P.83, P. 85, P. 107



Boring, Overturning
☞ P.107



FINISH BORING

eMAC ☞ P.109



ϕ6～ϕ110

eMAC-W ☞ P.110



ϕ6～ϕ200

COOLANT THROUGH









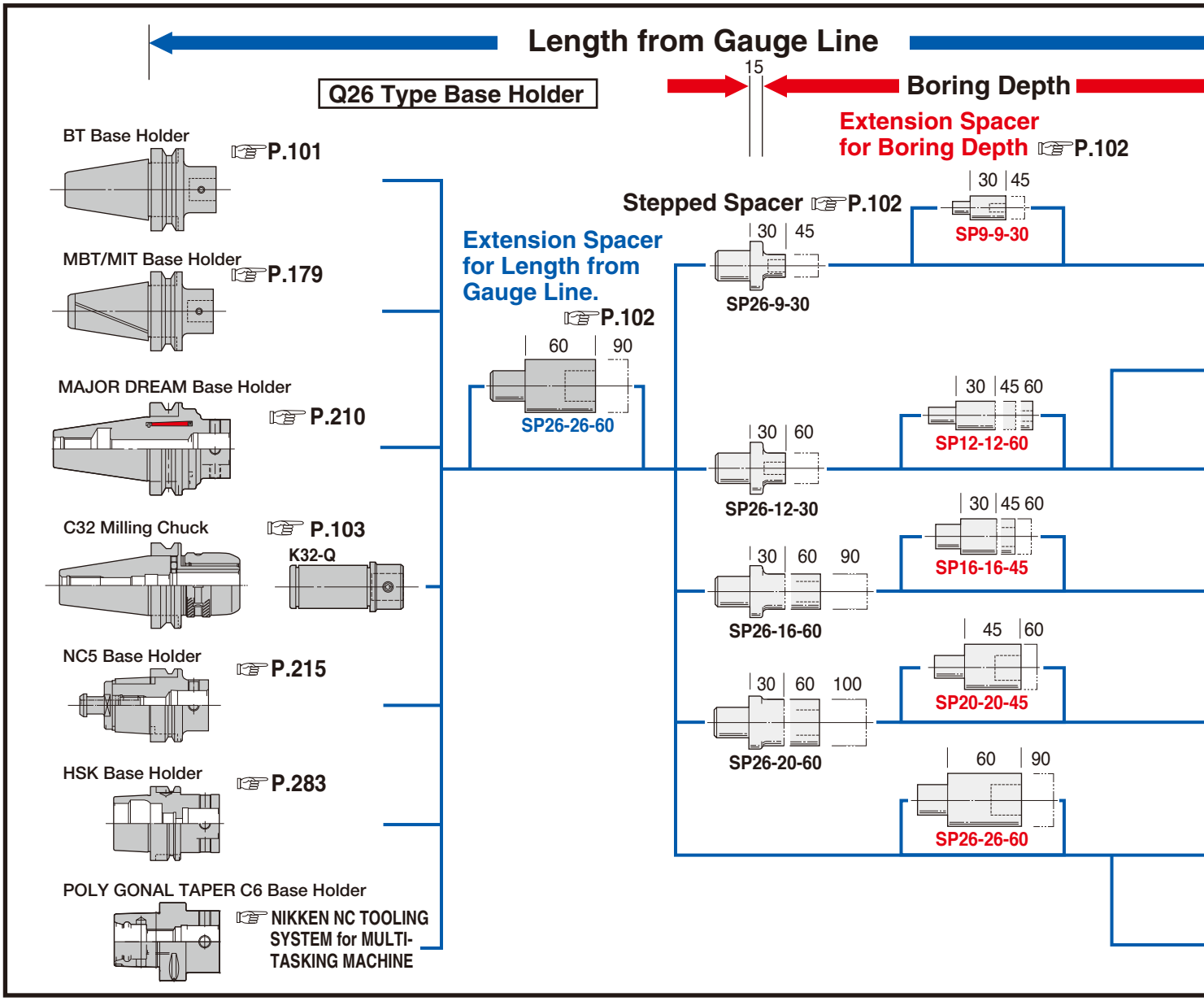
MODULAR ZMAC ADVANCED BORING BAR

BASE-HOLDER

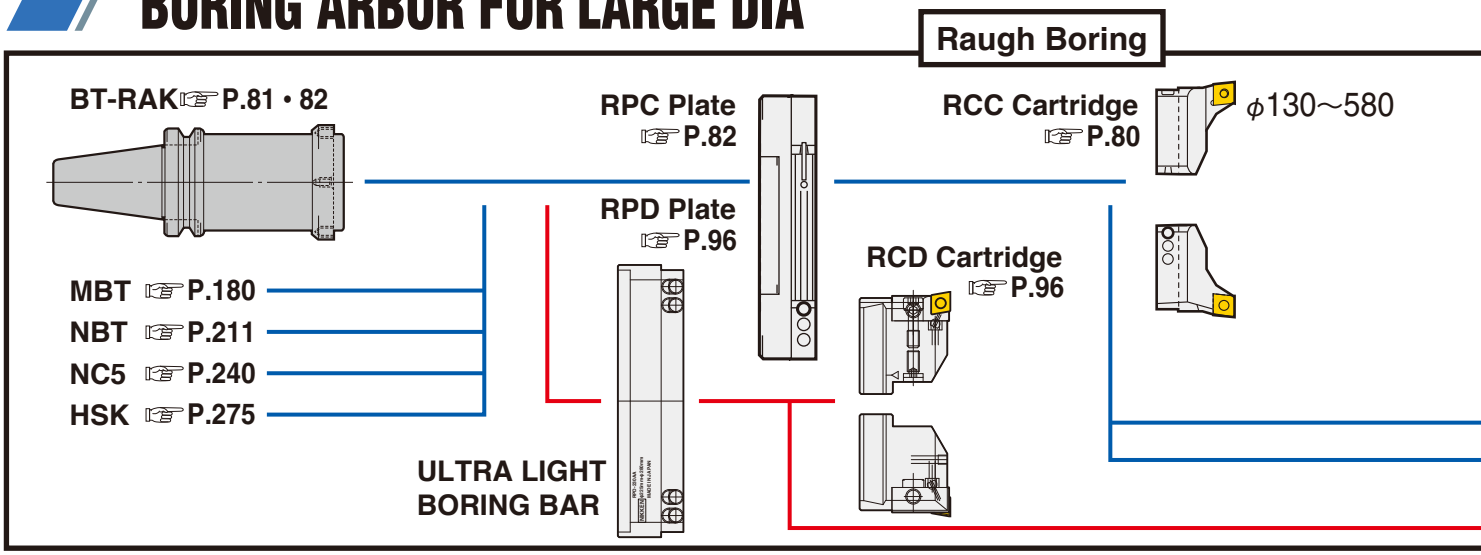
Q26 type base holder can be used for various combinations.
Ideal for low volume production on manual machine with wide variety of boring sizes.
We recommend that you also use the Q42 base holder on #50 M/C. ☞P.101

Spacer & Head

The extensive range of heads & spacers allow the correct selection to suit your boring applications.



BORING ARBOR FOR LARGE DIA



Method of Selection for Modular ZMAC-V Boring Arbors

Firstly, select a head,spacer and stepped spacer from boring diameter and depth.
Then select base holder and SP26 extension spacer by the length from gauge line.

ZMAC-V ☞P.87

Boringφ

Q9 40 — φ20~25 — ZMAC20-V

Q12 7 38 48 — φ16~20 — ZMAC16-V

Q12 40 — φ25~32 — ZMAC25-V

Q16 55 — φ32~42 — ZMAC32-V

Q20 70 — φ42~55 — ZMAC42-V

Q26 70 — φ55~70 — ZMAC55-V

RAC ☞P.79

Q12 55 — φ25~32 — RAC25

Q16 55 — φ32~45 — RAC32

Q20 70 — φ43~55 — RAC43

Q26 70 — φ53~70 — RAC53

DJ ☞P.99

Q26 — φ3~23 — DJ3

Q26 — φ3~50 — DJ8

eMAC ☞P.109

Q26 — φ6 ~ φ110 — EMAC6110

NIKKEN

Finish Boring

BAC-V type cartridge for large dia. ☞P.93 — φ130~595

MCDZ type cartridge for large dia. ☞P.98

BCB type cartridge for large dia. ☞P.93 — φ130~595

BALANCE-CUT BORING ARBOR (RAC-E)

NIKKEN

Rough Boring — For Steel, Stainless Steel and Cast Iron
CC Insert (Positive type)



RAC-E

Fig.1

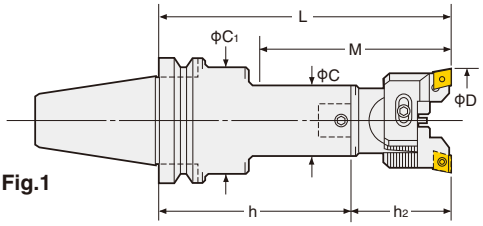
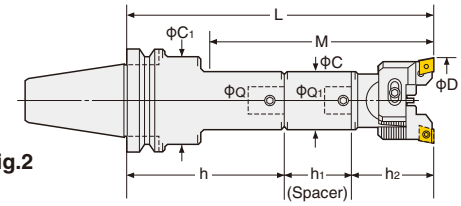
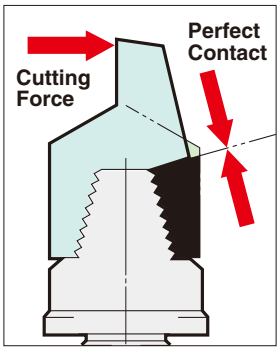


Fig.2



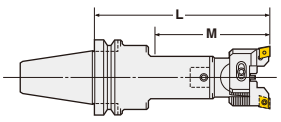
Power of Shoulder Support



TAPER	Code No.	Boring Range D	Boring Depth M	Cupling Dia Q	C	C1	Shank Code No.	Spacer Code No.	P.72 Head Code No.	P.72 Tip No.	Weight (kg)	Fig
No.40	BT40-RAC 25-135E	25～32	67	12	24	35	BT40-Q12- 80	—	12-RAC 25- 55E	CC07-C	2.0	1
	(IT40) -165E		105				-Q12-110				2.1	
	-180E		112				-Q12- 80	SP12-12-45			2.1	2
	-RAC 32-150E	32～45	77	16	31	42	-Q16- 95	—	16-RAC 32- 55E	CC08-C	2.4	1
	-180E		110				-Q16-125				2.6	
	-195E		122				-Q16- 95	SP16-16-45			2.6	2
	-RAC 43-150E	43～55	97	20	40	50	-Q20- 80	—	20-RAC 43- 70E	CC12-C	2.7	1
	-180E		130				-Q20-110				2.9	
	-210E		157				-Q20- 80	SP20-20-60			3.2	2
	-RAC 53-165E	53～70	135	26	50		-Q26- 95	—	26-RAC 53- 70E		2.5	1
	-210E		180				-Q26-140				3.3	
	-225E		195				-Q26- 95	SP26-26-60			3.2	2
	-RAC 70-180E	70～100	180	34	64	64	-Q34- 95	—	34-RAC 70- 85E		4.8	1
	-195E		195				-Q34-110				5.2	
	-240E		240				-Q34- 95	SP34-34-60			6.2	2
	-RAC100-195E	100～130	195	42	83	62	-Q42- 95	—	42-RAC100-100E		6.8	1

★"C" grade (Coated) inserts are supplied as standard with the head. ☞P.72 Please refer ☞P.116 for cutting condition.
★Please refer ☞P.101 for base holder, ☞P.102 for spacer and ☞P.79 for head.
★For centre through tool coolant type, please add "-C" at the end of Code No. e.g. BT40-RAC53-165-C
Code No. of RAC25 and RAC32 with CC inserts are changed to RAC25E and RAC32E.
★When L length is required longer than standard, please specify the boring depth M.

★Code No. of RAC25 and RAC32 are changed to RAC25E and RAC32E.
e.g. BT40-RAC25-135 → BT40-RAC25-135E
12-RAC25- 55 → 12-RAC25- 55E





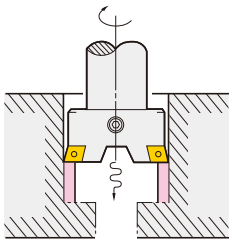
High Pressure Coolant Through Tool

BALANCE-CUT BORING ARBOR (RAC-E)

NIKKEN

Balance cut boring bar executes boring in 2 cartridge inserts absorbing the vibration each other. The faster the feed rate, the better swarf ejection. This is ideal for rough and medium boring.

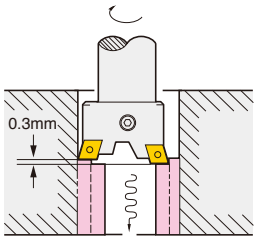
Double Cutting Capability



Please use RAC-K for through hole boring.
☞P.77, P.78



Example of 2 Stepped Balance Cut



Approx. double removal of below cutting condition is possible by **-0.3 Cartridge.**
☞P.80

TAPER	Code No.	Boring Range D	Boring Depth M	Cupling Dia Q	C	C1	Shank Code No.	Spacer Code No.	P.72 Head Code No.	P.72 Tip No.	Weight (kg)	Fig
No.50	BT50-RAC 25-150E	25～ 32	67	12	24	44	BT50-Q12- 95	—	12-RAC 25- 55E	CC07-C	4.7	1
	(IT50) -180E		105				-Q12-125				4.9	
	-195E		112				-Q12- 95	SP12-12-45			4.8	2
	-RAC 32-180E	32～ 45	77	16	31	50	-Q16-125N	—	16-RAC 32- 55E	CC08-C	5.4	1
	-210E		110				-Q16-155				5.6	
	-225E		122				-Q16-125N	SP16-16-45			5.6	2
	-RAC 43-180E	43～ 55	97	20	40	60	-Q20-110	—	20-RAC 43- 70E	CC12-C	5.7	1
	-195E		130				-Q20-125				5.8	
	-225E		142				-Q20-110	SP20-20-45			6.1	2
	-240E		157					SP20-20-60			6.2	
	-RAC 53-210E	53～ 70	117	26	50	65	-Q26-140	—	26-RAC 53- 70E		6.9	1
	-240E		182				-Q26-170N				7.0	
	-270E		177				-Q26-140	SP26-26-60			7.6	2
	-RAC 70-255E	70～100	205	34	64	80	-Q34-170	—	34-RAC 70- 85E		9.5	1
	-285E		235				-Q34-200				9.9	
	-315E		265				-Q34-170	SP34-34-60			10.9	2
	-RAC100-225E	100～130	225	42	83	83	-Q42-125	—	42-RAC100-100E		12.5	1
	-290E		290				-Q42-190				15.2	
	-325E		325				-Q42-225A				16.5	2

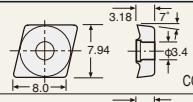
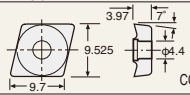
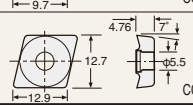
★**"C" grade (Coated)** inserts are supplied as standard with the head. ☞**P.72** Please refer ☞**P.116** for cutting condition.
★Please refer ☞**P.101** for base holder, ☞**P.102** for spacer and ☞**P.79** for head.
★**For centre through tool coolant type, please add "-C" at the end of Code No. e.g. BT50-RAC53-210E-C**
★**BT50-RAC100-375E, 425E and 475E are also available.**

★**Code No. of RAC25 and RAC32 with CC inserts are changed to RAC25E and RAC32E.**
e.g. BT50-RAC25-150 → BT50-RAC25-150E
12-RAC25- 55 → 12-RAC25- 55E

Insert tip for RAC-E

● : best ○ : good

Material		Coated Carbide M	Coated Carbide K
	Steel	●	
	Stainless Steel	●	
	Cast Iron	○	●
	Aluminium		

Applicable Arbor	Dimension	Code No.	Grade Material Nose R	C AC630M	C AC410K
RAC025E	 CCMT0803○L	CC07-○4	0.4	●	●
		CC07-○8	0.8	●	●
RAC25E(CC08), RAC32E	 CCMT09T3○N	CC08-○4	0.4	●	●
		CC08-○8	0.8	●	●
RAC43E - RAC530E	 CCMT1204○N	CC12-○4	0.4	●	●
		CC12-○8	0.8	●	●

★Minimum order quantity : 10pcs.

Please add the grade indication into ○, and add the insert tip material indication at the end off the Code No.
e.g. CC12-C8 (AC630M)

BALANCE-CUT BORING ARBOR (RAC)

NIKKEN

Rough Boring— For Heavy Duty Boring of Iron and Cast Iron CN Insert (Negative type)



Heavy Duty Boring

RAC

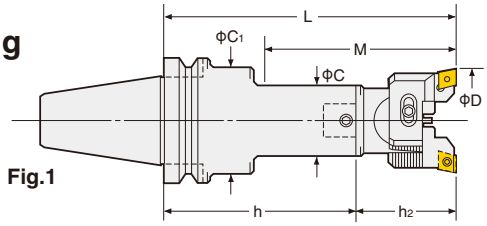


Fig.1

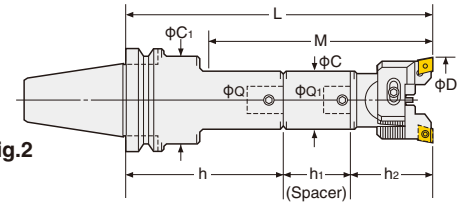
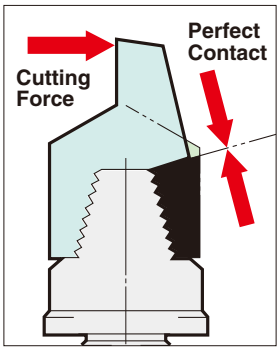


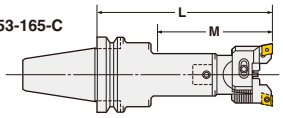
Fig.2

Power of Shoulder Support



TAPER	Code No.	Boring Range D	Boring Depth M	Cupling Dia Q	C	C1	Shank Code No.	Spacer Code No.	P.74 Head Code No.	P.74 Tip No.	Weight (kg)	Fig
No.40	BT40-RAC 43-150	43～55	97	20	40	50	BT40-Q20- 80	—	20-RAC 43- 70	CN08-C	2.7	1
	(IT40) -180		130				-Q20-110				2.9	
	-210		157				-Q20- 80	SP20-20-60			3.2	2
	-RAC 53-165	53～70	135	26	50		-Q26- 95	—	26-RAC 53- 70		2.5	1
	-210		180				-Q26-140				3.3	
	-225		195				-Q26- 95	SP26-26-60			3.2	2
	-RAC 70-180	70～100	180	34	64	64	-Q34- 95	—	34-RAC 70- 85		4.8	1
	-195		195				-Q34-110				5.2	
	-240		240				-Q34- 95	SP34-34-60			6.2	2
	-RAC100-195	100～130	195	42	83	62	-Q42- 95	—	42-RAC100-100		6.8	1

★**"C" grade (Coated)** inserts are supplied as standard with the head. ☞**P.74** Please refer ☞**P.116** for cutting condition.
★Please refer ☞**P.101** for base holder, ☞**P.102** for spacer and ☞**P.79** for head.
★**For centre through tool coolant type, please add "-C" at the end of Code No. e.g. BT40-RAC53-165-C**
★**When L length is required longer than standard, please specify the boring depth M.**



★Code No. of RAC25 and RAC32 with CC inserts are changed to RAC25E and RAC32E. Please refer ☞ P.71, P.72



High Pressure Coolant Through Tool

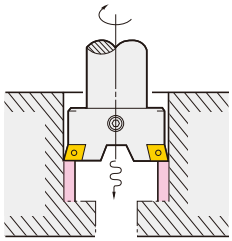
BALANCE-CUT BORING ARBOR (RAC)

NIKKEN

Balance cut boring bar executes boring in 2 cartridge inserts absorbing the vibration each other. The faster the feed rate, the better swarf ejection. This is ideal for rough and medium boring.

BT

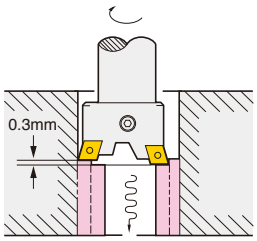
Double Cutting Capability



Please use RAC-K for through hole boring.
☞P.77, P.78



Example of 2 Stepped Balance Cut



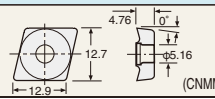
Approx. double removal of below cutting condition is possible by **-0.3 Cartridge.**
☞P.80

TAPER	Code No.	Boring Range D	Boring Depth M	Cupling Dia Q	C	C_1	Shank Code No.	Spacer Code No.	P.74 Head Code No.	P.74 Tip No.	Weight (kg)	Fig
No.50	**BT50-RAC 43-180**	43～ 55	97	20	40	60	BT50-Q20-110	—	**20-RAC 43- 70**	CN08-C	5.7	1
	(IT50) -195		130				-Q20-125				5.8	
	-225		142				-Q20-110	SP20-20-45			6.1	2
	-240		157					SP20-20-60			6.2	
	-RAC 53-210	53～ 70	117	26	50	65	-Q26-140	—	**26-RAC 53- 70**		6.9	1
	-240		182				-Q26-170N				7.0	
	-270		177				-Q26-140	SP26-26-60			7.6	2
	-RAC 70-255	70～100	205	34	64	80	-Q34-170	—	**34-RAC 70- 85**		9.5	1
	-285		235				-Q34-200				9.9	
	-315		265				-Q34-170	SP34-34-60			10.9	2
	-RAC100-225	100～130	225	42	83	83	-Q42-125	—	**42-RAC100-100**		12.5	1
	-290		290				-Q42-190				15.2	
	-325		325				-Q42-225A				16.5	2

★**"C" grade (Coated)** inserts are supplied as standard with the head. ☞**P.74** Please refer ☞**P.116** for cutting condition.
★Please refer ☞**P.101** for base holder, ☞**P.102** for spacer and ☞**P.79** for head.
★**For centre through tool coolant type, please add "-C" at the end of Code No. e.g. BT50-RAC53-210-C**
★**BT50-RAC100-375, 425 and 475 are also available.**
★**Code No. of RAC25 and RAC32 with CC inserts are changed to RAC25E and RAC32E. Please refer** ☞**P.71, P.72**

Insert tip for RAC for Heavy Duty Boring

Material	
	Steel ●
	Stainless Steel ●
	Cast Iron ●
	Aluminium

			Coated Carbide M
		Grade	C
		Material Nose R	AC630M
Applicable Arbor	Dimension	Code No.	
RAC43 - RAC530	 (CNMM120408)	CN08-○8	0.8 ●

Please add the grade indication into ○, and add the insert tip material indication at the end off the Code No.
e.g. CC08-C8 (AC630M)

★Minimum order quantity : 10pcs.
★**When CN08 insert (CN○○1204○○) in the market is used, please use the eccentric bolt type cartridge (S.RCC-○○Q)** ☞**P.113****. Nikken CN08-○8 insert can be used on the eccentric bolt type cartridge.**

BALANCE-CUT BORING ARBOR (RAC-A)

NIKKEN

Rough Boring—For Aluminium



RAC-A

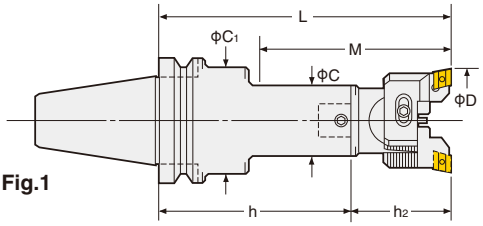


Fig.1

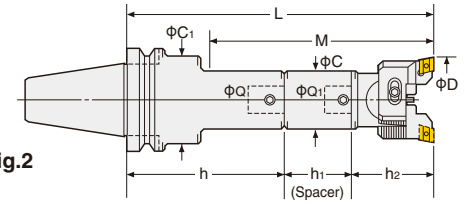
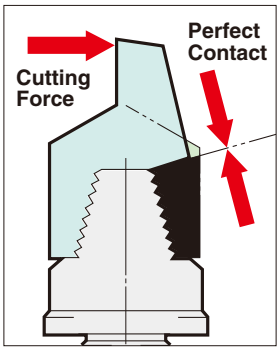


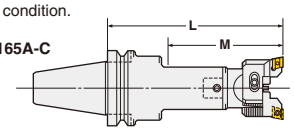
Fig.2

Power of Shoulder Support



TAPER	Code No.	Boring Range D	Boring Depth M	Cupling Dia Q	C	C1	Shank Code No.	Spacer Code No.	P.76 Head Code No.	P.76 Tip No.	Weight (kg)	Fig
No.40	BT40-RAC 25-135A	25～32	67	12	24	35	BT40-Q12- 80	—	12-RAC 25- 55A	AEG12	2.0	1
	(IT40) -165A		105				-Q12-110				2.1	
	-180A		112				-Q12- 80	SP12-12-45			2.1	2
	-RAC 32-150A	32～45	77	16	31	42	-Q16- 95	—	16-RAC 32- 55A		2.4	1
	-180A		110				-Q16-125				2.6	
	-195A		122				-Q16- 95	SP16-16-45			2.6	2
	-RAC 43-150A	43～55	97	20	40	50	-Q20- 80	—	20-RAC 43- 70A	AEG16	2.7	1
	-180A		130				-Q20-110				2.9	
	-210A		157				-Q20- 80	SP20-20-60			3.2	2
	-RAC 53-165A	53～70	135	26	50		-Q26- 95	—	26-RAC 53- 70A		2.5	1
	-210A		180				-Q26-140				3.3	
	-225A		195				-Q26- 95	SP26-26-60			3.2	2
	-RAC 70-180A	70～100	180	34	64	64	-Q34- 95	—	34-RAC 70- 85A		4.8	1
	-195A		195				-Q34-110				5.2	
	-240A		240				-Q34- 95	SP34-34-60			6.2	2
	-RAC100-195A	100～130	195	42	83	62	-Q42- 95	—	42-RAC100-100A		6.8	1

★**"F" grade** inserts are supplied as standard with the head. ☞**P.76** Please refer ☞**P.116** for cutting condition.
★Please refer ☞**P.101** for base holder, ☞**P.102** for spacer and ☞**P.79** for head.
★**For centre through tool coolant type, please add "-C" at the end of Code No. e.g. BT40-RAC53-165A-C**
★**When L length is required longer than standard, please specify the boring depth M.**





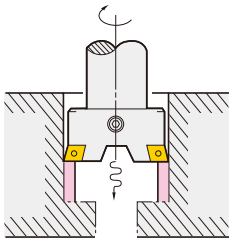
High Pressure Coolant Through Tool

BALANCE-CUT BORING ARBOR (RAC-A)

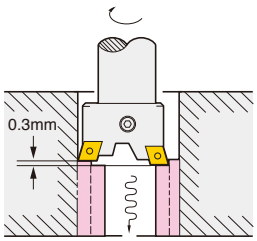
NIKKEN

Balance cut boring bar executes boring in 2 cartridge inserts absorbing the vibration each other. The faster the feed rate, the better swarf ejection. This is Ideal for rough and medium boring.

Double Cutting Capability



Example of 2 Stepped Balance Cut



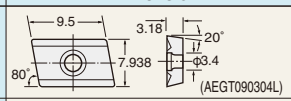
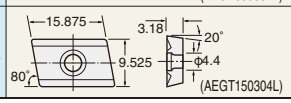
Approx. double removal of below cutting condition is possible by **-0.3 Cartridge.** ☞**P.80**

TAPER	Code No.	Boring Range D	Boring Depth M	Cupling Dia Q	C	C_1	Shank Code No.	Spacer Code No.	P.76 Head Code No.	P.76 Tip No.	Weight (kg)	Fig
No.50	BT50-RAC 25-150A	25～ 32	67	12	24	44	BT50-Q12- 95	—	12-RAC 25- 55A	AEG12	4.7	1
	(IT50) -180A		105				-Q12-125				4.9	
	-195A		112				-Q12- 95	SP12-12-45			4.8	2
	-RAC 32-180A	32～ 45	77	16	31	50	-Q16-125N	—	16-RAC 32- 55A		5.4	1
	-210A		110				-Q16-155				5.6	
	-225A		122				-Q16-125N	SP16-16-45			5.6	2
	-RAC 43-180A	43～ 55	97	20	40	60	-Q20-110	—	20-RAC 43- 70A	AEG16	5.7	1
	-195A		130				-Q20-125				5.8	
	-225A		142				-Q20-110	SP20-20-45			6.1	2
	-240A		157					SP20-20-60			6.2	
	-RAC 53-210A	53～ 70	117	26	50	65	-Q26-140	—	26-RAC 53- 70A		6.9	1
	-240A		182				-Q26-170N				7.0	
	-270A		177				-Q26-140	SP26-26-60			7.6	2
	-RAC 70-255A	70～100	205	34	64	80	-Q34-170	—	34-RAC 70- 85A		9.5	1
	-285A		235				-Q34-200				9.9	
	-315A		265				-Q34-170	SP34-34-60			10.9	2
	-RAC100-225A	100～130	225	42	83	83	-Q42-125	—	42-RAC100-100A		12.5	1
	-290A		290				-Q42-190				15.2	
	-325A		325				-Q42-225A				16.5	2

★**"F" grade** inserts are supplied as standard with the head. ☞**P.76** Please refer ☞**P.116** for cutting condition.
★Please refer ☞**P.101** for base holder, ☞**P.102** for spacer and ☞**P.79** for head.
★**For centre through tool coolant type, please add "-C" at the end of Code No. e.g. BT50-RAC53-210A-C**
★**BT50-RAC100-375A, 425A and 475A are also available.**

Insert tip for RAC-A

Material	
Steel	
Stainless Steel	
Cast Iron	
Aluminium	●

			Coated Carbide K
		Grade	F
		Material / Nose R	KW10
Applicable Arbor	Dimension	Code No.		
RAC25A, RAC32A		AEG12-○1	0.1	●
		AEG12-○2	0.2	●
		AEG12-○4	0.4	●
RAC43A-RAC530A		AEG16-○1	0.1	●
		AEG16-○2	0.2	●
		AEG16-○4	0.4	●

★Minimum order quantity : 10pcs.

Please add the grade indication into ○, and add the insert tip material indication at the end off the Code No.
e.g. AEG16-F2 (KW10)

BALANCE-CUT BORING ARBOR (RAC-K)

NIKKEN

Rough Boring—For Through Hole and Multi Sheets



RAC-K

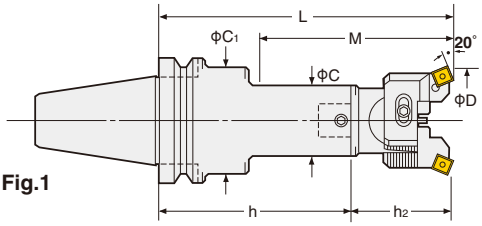


Fig.1

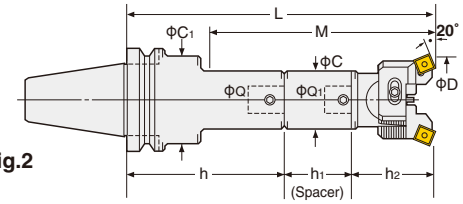
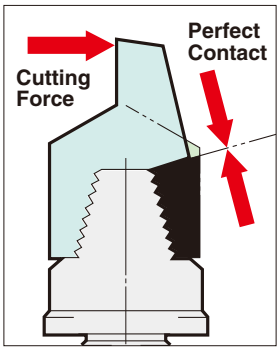


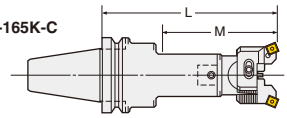
Fig.2

Power of Shoulder Support



TAPER	Code No.	Boring Range D	Boring Depth M	Cupling Dia Q	C	C1	Shank Code No.	Spacer Code No.	P.78 Head Code No.	P.78 Tip No.	Weight (kg)	Fig
No.40	BT40-RAC 25-135K	25～32	67	12	24	35	BT40-Q12- 80	—	12-RAC 25- 55K	SC09	2.0	1
	(IT40) -165K		105				-Q12-110				2.1	
	-180K		112				-Q12- 80	SP12-12-45			2.1	2
	-RAC 32-150K	32～45	77	16	31	42	-Q16- 95	—	16-RAC 32- 55K		2.4	1
	-180K		110				-Q16-125				2.6	
	-195K		122				-Q16- 95	SP16-16-45			2.6	2
	-RAC 43-150K	43～55	97	20	40	50	-Q20- 80	—	20-RAC 43- 70K	SC12	2.7	1
	-180K		130				-Q20-110				2.9	
	-210K		157				-Q20- 80	SP20-20-60			3.2	2
	-RAC 53-165K	53～70	135	26	50		-Q26- 95	—	26-RAC 53- 70K		2.5	1
	-210K		180				-Q26-140				3.3	
	-225K		195				-Q26- 95	SP26-26-60			3.2	2
	-RAC 70-180K	70～100	180	34	64	64	-Q34- 95	—	34-RAC 70- 85K		4.8	1
	-195K		195				-Q34-110				5.2	
	-240K		240				-Q34- 95	SP34-34-60			6.2	2
	-RAC100-195K	100～130	195	42	83	62	-Q42- 95	—	42-RAC100-100K		6.8	1

★**"C" grade (Coated)** inserts are supplied as standard with the head. ☞**P.78** Please refer ☞**P.116** for cutting condition.
★Please refer ☞**P.101** for base holder, ☞**P.102** for spacer and ☞**P.79** for head.
★**For centre through tool coolant type, please add "-C" at the end of Code No. e.g. BT40-RAC53-165K-C**
★**When L length is required longer than standard, please specify the boring depth M.**





High Pressure Coolant Through Tool

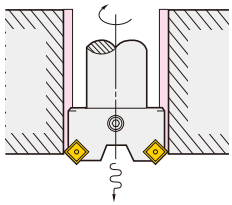
BALANCE-CUT BORING ARBOR (RAC-K)

NIKKEN

Balance cut boring bar executes boring in 2 cartridge inserts absorbing the vibration each other. The faster the feed rate, the better swarf ejection. This is Ideal for rough and medium boring.

BT

Double Cutting Capability



TAPER	Code No.	Boring Range D	Boring Depth M	Cupling Dia Q	C	C_1	Shank Code No.	Spacer Code No.	P.78 Head Code No.	P.78 Tip No.	Weight (kg)	Fig
No.50	BT50-RAC 25-150K	25～ 32	67	12	24	44	BT50-Q12- 95	—	12-RAC 25- 55K	SC09	4.7	1
	(IT50) -180K		105				-Q12-125				4.9	
	-195K		112				-Q12- 95	SP12-12-45			4.8	2
	-RAC 32-180K	32～ 45	77	16	31	50	-Q16-125N	—	16-RAC 32- 55K		5.4	1
	-210K		110				-Q16-155				5.6	
	-225K		122				-Q16-125N	SP16-16-45			5.6	2
	-RAC 43-180K	43～ 55	97	20	40	60	-Q20-110	—	20-RAC 43- 70K	SC12	5.7	1
	-195K		130				-Q20-125				5.8	
	-225K		142				-Q20-110	SP20-20-45			6.1	2
	-240K		157					SP20-20-60			6.2	
	-RAC 53-210K	53～ 70	117	26	50	65	-Q26-140	—	26-RAC 53- 70K		6.9	1
	-240K		182				-Q26-170N				7.0	
	-270K		177				-Q26-140	SP26-26-60			7.6	2
	-RAC 70-255K	70～100	205	34	64	80	-Q34-170	—	34-RAC 70- 85K		9.5	1
	-285K		235				-Q34-200				9.9	
	-315K		265				-Q34-170	SP34-34-60			10.9	2
	-RAC100-225K	100～130	225	42	83	83	-Q42-125	—	42-RAC100-100K		12.5	1
	-290K		290				-Q42-190				15.2	
	-325K		325				-Q42-225A				16.5	2

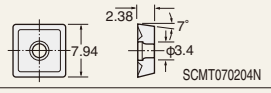
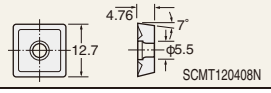
★**"C" grade (Coated)** inserts are supplied as standard with the head. ☞**P.78** Please refer ☞**P.116** for cutting condition.
★Please refer ☞**P.101** for base holder, ☞**P.102** for spacer and ☞**P.79** for head.
★**For centre through tool coolant type, please add "-C" at the end of Code No. e.g. BT50-RAC53-210K-C**
★**BT50-RAC100-375K, 425K and 475K are also available.**

Insert tip for RAC-K

● : best ○ : good

Material	Coated Carbide M	Coated Carbide K
Steel	●	
Stainless Steel	●	
Cast Iron	○	●
Aluminium		

Please add the grade indication into ○, and add the insert tip material indication at the end off the Code No.
e.g. SC12-C8 (AC630M)

Applicable Arbor	Dimension	Code No.	Grade: Material / Nose R	C: AC630M	C: AC410K
RAC25K, RAC32K		SC09-○4	0.4	●	●
RAC43K-RAC100K		SC12-○8	0.8	●	●

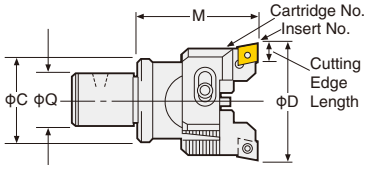
★Minimum order quantity : 10pcs.

MODULAR TYPE RAC BORING HEAD

NIKKEN

RAC-E Balance-Cut Boring Head





For Steel, Stainless Steel and Cast Iron
CC Insert (Positive type)

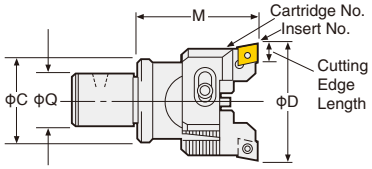
P.72

Head Code No.	Boring Range D	Boring Depth M	Coupling Dia Q	C	Cartridge No.	Insert No.	Cutting Edge Length	Weight (Kg)
12-RAC 25 - 55E	25～32	55	12	24	RCC-025E	CC07	8.0	0.4
16-RAC 32 - 55E	32～45		16	31	RCC- 32E	CC08	9.7	0.5
20-RAC 43 - 70E	43～55	70	20	40	RCC- 43E	CC12	12.9	0.7
26-RAC 53 - 70E	53～70		26	50	RCC- 53E			0.8
26-RAC 70 - 70E	70～100				RCC- 70E			1.0
34-RAC 70 - 85E		85	34	64				1.5
42-RAC100 -100E	100～130	100	42	83	RCC-100E			2.9

★**Code No. of RAC25 and RAC32 with CC inserts are changed to RAC25E and RAC32E.** ★Insert tips are supplied as an option. ☞P.72 Please refer ☞P.116 for cutting condition.
★For centre through tool coolant type, please add **"-C"** at the end of Code No. **e.g. 26-RAC53-70E-C**

RAC Balance-Cut Boring Head





For Heavy Duty Boring of Iron and Cast Iron
CN Insert (Negative type)

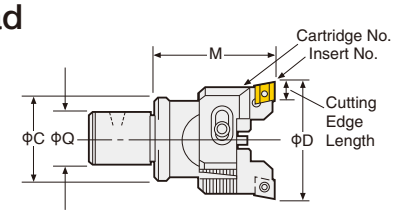
P.74

Head Code No.	Boring Range D	Boring Depth M	Coupling Dia Q	C	Cartridge No.	Insert No.	Cutting Edge Length	Weight (Kg)
20-RAC 43 - 70	43～55	70	20	40	RCC- 43	CN08	12.9	0.7
26-RAC 53 - 70	53～70		26	50	RCC- 53			0.8
26-RAC 70 - 70	70～100				RCC- 70			1.0
34-RAC 70 - 85		85	34	64				1.5
42-RAC100 -100	100～130	100	42	83	RCC-100			2.9

★Insert tips are supplied as an option. ☞P.74 Please refer ☞P.116 for cutting condition.
★For centre through tool coolant type, please add **"-C"** at the end of Code No. **e.g. 26-RAC53-70-C**

RAC-A Balance-Cut Boring Head





For Aluminum

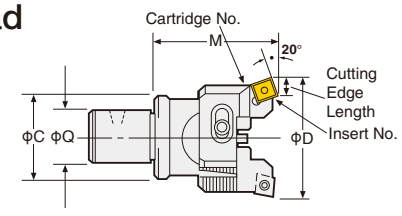
P.76

Head Code No.	Boring Range D	Boring Depth M	Coupling Dia Q	C	Cartridge No.	Insert No.	Cutting Edge Length	Weight (Kg)
12-RAC 25 - 55A	25～32	55	12	24	RAC- 25A	AEG12	9.5	0.4
16-RAC 32 - 55A	32～45		16	31	RAC- 32A			0.5
20-RAC 43 - 70A	43～55	70	20	40	RAC- 43A	AEG16	15.875	0.7
26-RAC 53 - 70A	53～70		26	50	RAC- 53A			0.8
26-RAC 70 - 70A	70～100				RAC- 70A			1.0
34-RAC 70 - 85A		85	34	64				1.5
42-RAC100 -100A	100～130	100	42	83	RAC-100A			2.9

★Insert tips are supplied as an option. ☞P.76 Please refer ☞P.116 for cutting condition.
★For centre through tool coolant type, please add **"-C"** at the end of Code No. **e.g. 26-RAC53-70A-C**

RAC-K Balance-Cut Boring Head





For Through Hole and Multi Sheets

P.78

Head Code No.	Boring Range D	Boring Depth M	Coupling Dia Q	C	Cartridge No.	Insert No.	Cutting Edge Length	Weight (Kg)
12-RAC 25 - 55K	25～32	55	12	24	RAC- 25K	SC09	7.4	0.4
16-RAC 32 - 55K	32～45		16	31	RAC- 32K			0.5
20-RAC 43 - 70K	43～55	70	20	40	RAC- 43K	SC12	11.9	0.7
26-RAC 53 - 70K	53～70		26	50	RAC- 53K			0.8
26-RAC 70 - 70K	70～100				RAC- 70K			1.0
34-RAC 70 - 85K		85	34	64				1.5
42-RAC100 -100K	100～130	100	42	83	RAC-100K			2.9

★Insert tips are supplied as an option. ☞P.78 Please refer ☞P.116 for cutting condition.
★For centre through tool coolant type, please add **"-C"** at the end of Code No. **e.g. 26-RAC53-70K-C**

CARTRIDGE for RAC BORING HEAD

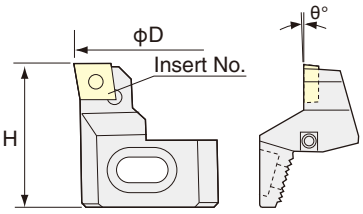
NIKKEN

RAC Base ( ) is common for all types of cartridges.
Please select suitable cartridge and insert tip for your application such as material and machining.

For Steel, Stainless Steel and Cast Iron
CC Insert (Positive type)

S.RCC-E Cartridge





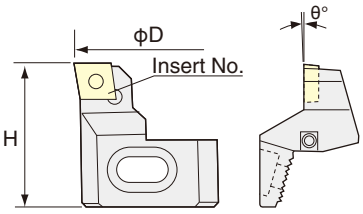
Set Code No.	Boring Range D	H	θ	Insert Code No. Steel, Stainless Steel	Insert Code No. Cast Iron
S.RCC- 25E	25 ~ 32	41	0°	CC08-C (AC630M)	CC08-C (AC410K)
-025E		38		CC07-C (AC630M)	CC07-C (AC410K)
- 32E	32 ~ 45	41		CC08-C (AC630M)	CC08-C (AC410K)
- 43E	43 ~ 55	46	+3°	CC12-C (AC630M)	CC12-C (AC410K)
- 53E	53 ~ 70	50			
- 70E	70 ~100	55			
-100E	100~130	57			

★**Code No. of RAC25 and RAC32 with CC inserts are changed to RAC25E and RAC32E.**
★Insert tips are supplied as an option. ☞**P.72** Please refer ☞**P.116** for cutting condition.
★Please order set of cartridges. **e.g S.RCC-70E**
★**2 stepped balance cut with H=-0.3 cartridge is also available. e.g. S.RCC-70E (0.3)**

For Heavy Duty Boring of Iron and Cast Iron
CN Insert (Negative type)

S.RCC Cartridge





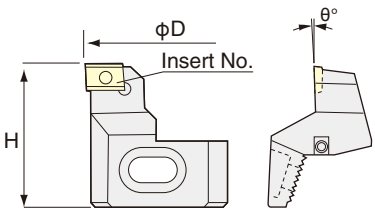
Set Code No.	D	H	θ	Insert Code No. Iron and Cast Iron
S.RCC- 43	43 ~ 55	46	-3°	CN08
- 53	53 ~ 70	50		
- 70	70 ~100	55		
-100	100~130	57		

★Insert tips are supplied as an option. ☞**P.74** Please refer ☞**P.116** for cutting condition.
★Please order set of cartridges. **e.g S.RCC-70**
★**When CN08 insert (CN○○1204○○) in the market is used, please use the eccentric bolt type cartridge (S.RCC-○○Q) ☞P.113. Nikken CN08-○8 insert can be used on the eccentric bolt type cartridge.**

For Aluminum

S.RCC-A Cartridge





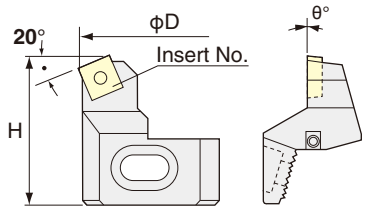
Set Code No.	D	H	θ	Insert Code No. For Aluminum
S.RCC- 25A	25 ~ 32	38	+6°	AEG12
- 32A	32 ~ 45	41		
- 43A	43 ~ 55	46		AEG16
- 53A	53 ~ 70	50		
- 70A	70 ~100	55		
-100A	100~130	57		

★Insert tips are supplied as an option. ☞**P.76** Please refer ☞**P.116** for cutting condition.
★Please order set of cartridges. **e.g S.RCC-70A**
★**2 stepped balance cut with H=-0.3 cartridge is also available. e.g. S.RCC-70A (0.3)**
★**S.RCC-A** cartridge can be used for the bottom face finishing of iron and cast iron.

For Through Hole and Multi Sheets

S.RCC-K Cartridge



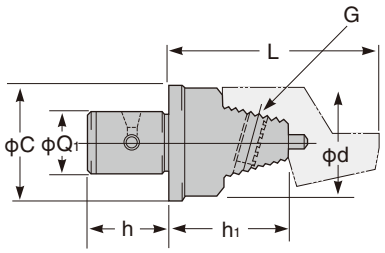


Set Code No.	D	H	θ	Insert Code No. Steel, Stainless Steel	Insert Code No. Cast Iron
S.RCC- 25K	25 ~ 32	41	0°	SC09-C (AC630M)	SC09-C (AC410K)
- 32K	32 ~ 45				
- 43K	43 ~ 55	46		SC12-C (AC630M)	SC12-C (AC410K)
- 53K	53 ~ 70	50			
- 70K	70 ~100	55			
-100K	100~130	57			

★Insert tips are supplied as an option. ☞**P.78** Please refer ☞**P.116** for cutting condition.
★Please order set of cartridges. **e.g S.RCC-70E**

Dimension of RAC Base





Code No.	Boring Range D	h	h1	C	G	d
12-RAC 25- 55B	25~33	18	31	24	M5	23
12-RAC025- 55B			34			
16-RAC 32- 55B	32~45	22	31	31	M6	30
20-RAC 43- 70B	43~55	24	42	40		35
26-RAC 53- 70B	53~70	28	40	50	M8	45
26-RAC 70- 70B	70~100		38			60
34-RAC 70- 85B		36	53	64		60
42-RAC100-100B	100~130	42	66	83		70

★Dimension **"L"** is **"58mm"** in combination of **RCC-25K** and **12-RAC25-55B**.
★For centre through tool coolant type except **26-RAC70-70B**, please add **"-C"** at the end of Code No. **e.g. 34-RAC70-85B-C**

BALANCE-CUT RAC BORING ARBOR for LARGE DIA.

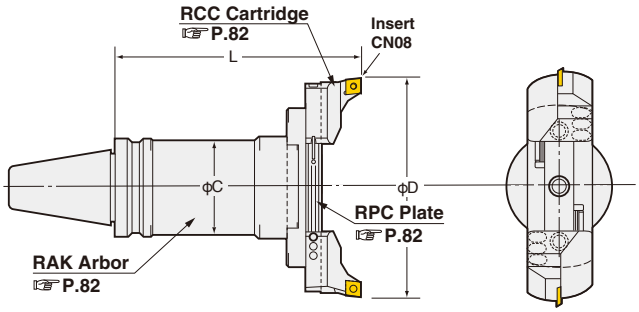
NIKKEN

For Roughing

- With the screws for slight adjustment
- Boring Dia. : ϕ130～ϕ580mm



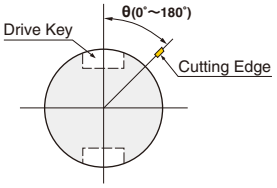
RAC



Boring Dia. : ϕ130～580mm

TAPE	Code.No	D MIN.～MAX.	L	C	RAK Arbor Code No.	RPC Plate No.	RCC Cartridge No.	Weight (Kg)
No.40	BT40-RAC130-205	130～180	205	61	BT40-RAK-130A	RPC-130	For Heavy Duty Boring of Iron and Cast Iron RCC-130 ×2 Insert Tip CN08	7.0
	(IT40)-RAC180-205	180～230				-180		8.0
No.50	BT50-RAC130-185	130～180	185	90	BT50-RAK-110A	RPC-130		9.8
	(IT50) -235		235		-160A			12.5
	-285		285		-210A			15.2
	-335		335		-260A			17.9
	-385		385		-310A			20.6
	-435		435		-360A			23.3
	-485		485		-410A			26.0
	-RAC180-185	180～230	185		-RAK-110A	RPC-180		10.4
	-235		235		-160A			13.1
	-285		285		-210A			15.8
	-335		335		-260A			18.5
	-385		385		-310A			21.2
	-435		435		-360A			23.9
	-485		485		-410A			26.6
	-RAC230-185	230～280	185		-RAK-110A	RPC-230		11.1
	-235		235		-160A			13.8
	-285		285		-210A			16.5
	-335		335		-260A			19.2
	-385		385		-310A			21.9
	-435		435		-360A			24.6
	-485		485		-410A			27.3
	-RAC280-185	280～330	185		-RAK-110A	RPC-280		11.7
	-235		235		-160A			14.4
	-285		285		-210A			17.1
	-335		335		-260A			19.8
	-385		385		-310A			22.5
	-435		435		-360A			25.2
	-485		485		-410A			27.9
	-RAC330-210*	330～380	210 (220*)	98	BT50-RAK330-125 I T50-RAK330-135	RPC-330		16.0
	-RAC380-210*	380～430				-380		17.0
	-RAC430-210*	430～480				-430		18.0
	-RAC480-210*	480～530				-480		19.0
	-RAC530-210*	530～580				-530		20.0

★The Code No. on above table are the boring arbors with **RCC-130** cartridge (Insert tip: **CN08**) the Heavy Duty Boring of Iron and Cast Iron. Please refer ☞ **P.116** for cutting condition.
★Boring arbor with cartridges & insert for Steel, Stainless Steel and Cast Iron (**E**) , for Aluminum (**A**) and for Through Hole & Multi Sheets (**K**) are available. Please refer ☞ **P.82** for cartridges. **e.g. BT50-RAC130-185E**
★Please refer ☞ **P.82** for **RAK** arbor and **RPC** plate.
★Arbor, plate and cartridges are delivered in separate packages.
★Please check the interference of the arbor with your M/C not to occur the interference in the tool magazine.
★The location of the cutting edge is same as the drive key for standard. The different location is available, please specify θ. **e.g. BT50-RAC180-235 (90˚)**
★**For centre through tool coolant type, please add "-C" at the end of Code No. e.g. BT50-RAC130-185-C**
★The boring arbors marked * with **IT50**, L (gauge length) is 220. **e.g. IT50-RAC330-220**



View from Cutting Edge



High Pressure Coolant Through Tool

NIKKEN

BALANCE CUT RAK BORING ARBOR for LARGE DIA. <RAK Arbor>



RAK

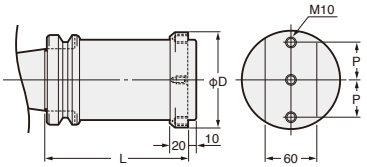


Fig.1

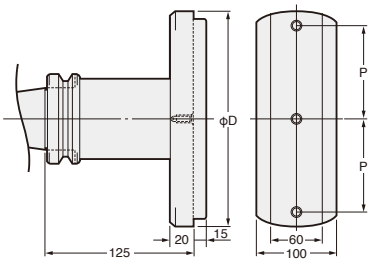


Fig.2

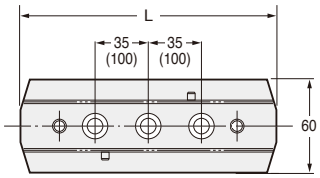
Code No.	Boring Range	L	D	P	Weight (Kg)	Applicable RPC Plate	Hex. Socket bolt	Fig.
BT40 (IT40)-RAK-130A	130～230	130	102	35	4.9	RPC-130, 180	M1035	1
BT50-RAK-110A	130～330	110			7.2	RPC-130, 180, 230, 280		
(IT50)-RAK-160A		160			9.9			
-RAK-210A		210			12.6			
-RAK-260A		260			15.3			
-RAK-310A		310			18.0			
-RAK-360A		360			20.7			
-RAK-410A		410			23.4			
-RAK330-125*	330～580	125	240	100	12.0	RPC-330, 380, 430, 480, 530	M1045	2

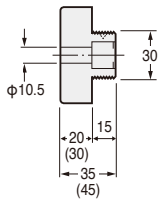
★The location of the cutting edge is same as the drive key for standard. The different location is available, please specify θ. **e.g. BT50-RAK-160A (90°)**
★**For centre through tool coolant type, please add "-C" at the end of Code No. e.g. BT50-RAK-160A-C 2 set of coolant nozzles are standard accessory.**
★**IT40-RAK-130** is available. ★* : In case of **IT50**, **IT50-RAK-330-135** is standard gauge length.



BALANCE CUT PLATE for LARGE DIA. <RPC Plate>







Dimensions in ( ) are for RPC-330, 380, 430, 480 and 530.

Code No.	Boring Range	L	Weight (Kg)	Code No.	Boring Range	L	Weight (Kg)	Code No.	Boring Range	L	Weight (Kg)
RPC-130	φ130～180	118	1.4	**RPC-330**	φ330～380	316	5.3	**RPC-530**	φ530～580	516	8.7
-180	φ180～230	166	2.0	**-380**	φ380～430	366	6.1				
-230	φ230～280	216	2.7	**-430**	φ430～480	416	7.0				
-280	φ280～330	266	3.3	**-480**	φ480～530	466	7.9				

Accessories for Balance-Cut RAC

Steel, Stainless Steel and Cast Iron
RCC-130 (CN08)



Heavy Duty Boring of Iron and Cast Iron
RCC-130E (CC12)



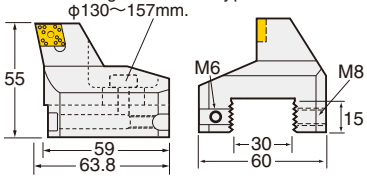
For aluminum
RCC-130A (AEG16)



For Through Hole and Multi Sheets
RCC-130K (SC12)



Cartridge Lock Bolt
Please remove the bolt when using **RAC-130** type for φ130～157mm.



Weight : 0.6Kg

Accessories	Insert Tip	Clamp Bolt	Adjust Screw	Adjust Wrench	Wrench for Insert	Set Screw (M8)	L-Wrench for M815 Bolt	Hex Socket Bolt	Applicable RPC Plate
Code No.	*	CSM-70	M540	M3	20S	M815	M4	M625	RPC-130,180,230,280,330,380,430,480,530

★* : The insert tip is **RCC-130: CN08 (☞P.74)** , **RCC-130E: CC12 (☞P.72)** , **RCC-130A: AEG16 (☞P.76)** , **RCC-130K: SC12 (☞P.78)** Please refer☞**P.116** for cutting condition.
★There are two different types clamping system. One is eccentric system, the other is screw on system. Above parts are for screw on system.
★Code No. **RCC-130** indicates a single cartridge. When ordering a pair cartridge, please appoint to us Code No. **S.RCC-130**.
★The Code No. of the cartridges for 2 stepped balance cut is **SRCC-130-0.3**

ZMAC ADVANCED BORING ARBOR (ZMAC-V)

NIKKEN

Boring for Finishing



ZMAC-V

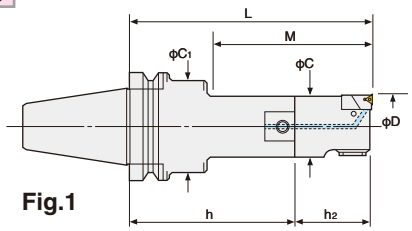


Fig.1

Only for ZMAC16-V

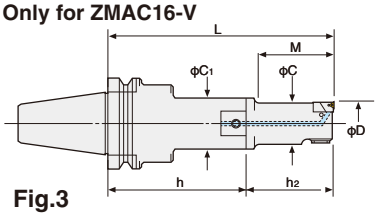


Fig.3

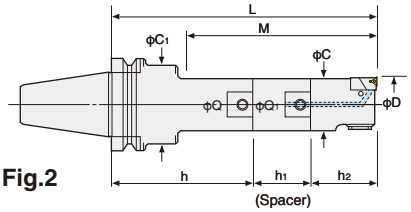


Fig.2

ZMAC100-V, 140-V

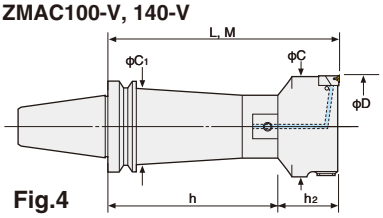


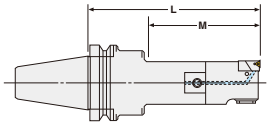
Fig.4

Code No. of the insert tip  are shown.

PAT.

TAPER	Code No.	Boring Range D	Boring Depth M	C	C1	Shank Code No.	Extension Spacer Code No.	P.119 Head No.	P.119 Insert No.	Weight (kg)	Fig.
						BT No.-Q-h	Q-Q1-h1	Q- Min.D -h2			
No.40	BT40-ZMAC16 -125V	15.9～20.2	38	15	24	BT40-Q12- 80	—	12-ZMAC16-45V	3MP-C,B	1.9	3
	(IT40) -135V		48					12-ZMAC16-55V		1.9	
	-ZMAC20 -120V	19.8～25.2	45	19	30	-Q 9- 80		9-ZMAC20-40V		1.9	1
	-135V		67			-Q 9- 95N				1.9	
	-150V		75			-Q 9- 80	SP9-9-30			2.0	2
	-ZMAC25 -120V	24.8～32.2	52	24	35	-Q12- 80	—	12-ZMAC25-40V		2.0	1
	-150V		90			-Q12-110				2.1	
	-165V		97			-Q12- 80	SP12-12-45			2.1	2
	-ZMAC32 -150V	31.8～42.2	77	31	42	-Q16- 95	—	16-ZMAC32-55V	4MP-C,B	2.5	1
	-180V		110			-Q16-125				2.7	
	-195V		122			-Q16- 95	SP16-16-45			2.7	2
	-ZMAC42 -150V	41.8～55.2	97	40	50	-Q20- 80	—	20-ZMAC42-70V	6MP-C,B	3.0	1
	-180V		130			-Q20-110				3.2	
	-210V		157			-Q20- 80	SP20-20-60			3.5	2
	-ZMAC55 -165V	54.8～70.2	135	53	50	-Q26- 95	—	26-ZMAC55-70V		3.9	1
	-210V		180			-Q26-140				4.6	
	-225V		195			-Q26- 95	SP26-26-60			4.6	2
	-ZMAC70 -165V	69.8～85.2	165	67	64	-Q34- 95	—	34-ZMAC70-70V		5.4	1
	-180V		180			-Q34-110				5.8	
	-225V		225			-Q34- 95	SP34-34-60			6.8	2
	-ZMAC85 -195V	84.8～100.2	195	83	62	-Q42- 95	—	42-ZMAC85-100V		9.0	1

★MIN. dial readout : **ZMAC25-V** & smaller is 0.02mm on diameter. **ZMAC32-V** and larger are 0.01mm on diameter.
★**"C" grade (Coated) insert for Steel, Stainless & Cast Iron is supplied as Standard with the head (Smooth boring & Long tool-life) .** ☞ Please refer ☞**P.117** for cutting condition.
We would recommend **"B"** grade **(CBN)** insert for Hardened Steel & High Speed boring of Cast Iron.
★Please refer ☞ **P.101,P102** for Shank&Spacer, and ☞**P.87, P.88** for Head.
★Centre Through Tool Coolant function is available as standard.
★For **BT30**, modular connection system is applied. Please refer ☞**P.101** for Base Holder.
★**When L length is required longer than standard, please specify boring depth M.**



Boring Arbor with Extension Spacer



ZMAC-V for Multi-Stage Boring Bar

Please contact us for the special boring bar.





High Pressure Coolant Through Tool

ZMAC ADVANCED BORING ARBOR (ZMAC-V)

NIKKEN

With ZMACα-V Boring Head

Please add "AA" at the end of Code No.
e.g. BT40-ZMAC42-150AAV



ZMACα-V

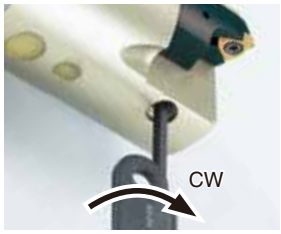
Diameter can be adjusted easily and quickly by new handle with wrench.



Unlock



Adjust diameter



Lock

Code No. of the insert tip  are shown.

PAT.

TAPER	Code No.	Boring Range D	Boring Depth M	C	C1	Shank Code No.	Extension Spacer Code No.	P.119 Head No.	P.119 Insert No.	Weight (kg)	Fig.
						BT No.-Q-h	Q-Q1-h1	Q- Min.D -h2			
No.50	BT50-ZMAC16 -140V	15.9～20.2	38	15	24	BT50-Q12- 95	—	12-ZMAC16-45V	3MP-C,B	4.7	3
	(IT50) -150V		48					12-ZMAC16-55V		4.7	
	-ZMAC20 -150V	19.8～25.2	45	19	40	-Q 9-110		9-ZMAC20-40V		4.8	1
	-165V		67			-Q 9-125N				4.8	
	-180V		75			-Q 9-110	SP9-9-30			4.9	2
	-ZMAC25 -135V	24.8～32.2	52	24	44	-Q12- 95	—	12-ZMAC25-40V		4.8	1
	-165V		90			-Q12-125				4.8	
	-180V		97			-Q12- 95	SP12-12-45			4.9	2
	-ZMAC32 -180V	31.8～42.2	77	31	50	-Q16-125N	—	16-ZMAC32-55V	4MP-C,B	5.5	1
	-210V		110			-Q16-155				5.6	
	-225V		122			-Q16-125N	SP16-16-45			5.7	2
	-ZMAC42 -180V	41.8～55.2	97	40	60	-Q20-110	—	20-ZMAC42-70V	6MP-C,B	6.0	1
	-195V		130			-Q20-125				6.0	
	-225V		142			-Q20-110	SP20-20-45			6.4	2
	-240V		157				SP20-20-60			6.5	
	-ZMAC55 -210V	54.8～70.2	117	53	65	-Q26-140	—	26-ZMAC55-70V		7.5	1
	-240V		182			-Q26-170N				7.6	
	-270V		177			-Q26-140	SP26-26-60			8.1	2
	-ZMAC70 -240V	69.8～85.2	190	67	80	-Q34-170	—	34-ZMAC70-70V		10.0	1
	-270V		220			-Q34-200				10.6	
	-300V		250			-Q34-170	SP34-34-60			11.5	2
	-ZMAC85 -225V	84.8～100.2	182	83	83	-Q42-125	—	42-ZMAC85-100V		12.5	1
	-290V		247			-Q42-190				15.0	
	-315V		272			-Q42-125	SP42-42-90			16.0	2
	-ZMAC100-225V	99.5～140.5	225	95	98	-Q42-125	—	42-ZMAC100-100V		12.4	4
	-290V		290			-Q42-190				15.1	
	-325V		325			-Q42-225A				17.8	
	-375V		375			-Q42-275A				20.5	
	-425V		425			-Q42-325A				23.2	
	-ZMAC140-225V	139.5～180.5	225	135	98	-Q42-125	—	42-ZMAC140-100V		13.8	
	-290V		290			-Q42-190				16.5	
	-325V		325			-Q42-225A				19.2	
	-375V		375			-Q42-275A				21.9	
	-425V		425			-Q42-325A				24.6	

★MIN. dial readout : **ZMAC25-V** & smaller is 0.02mm on diameter. **ZMAC32-V** and larger are 0.01mm on diameter.
★**When L length is required longer than standard, please specify boring depth M.** ★Centre Through Tool Coolant function is available as standard.
★**"C" grade (Coated) insert for Steel, Stainless&Cast Iron is supplied as Standard with the head (Smooth boring & Long tool-life) .** ☞**P.119**
We would recommend **"B"** grade (**CBN**) insert for Hardened Steel & High Speed boring of Cast Iron. Please refer ☞**P.117** for cutting condition.
★Please refer ☞ **P.101,P102** for Shank & Spacer,and ☞**P.87, P.88** for Head.

ZMAC ADVANCED BORING ARBOR (ZMAC-VR)

NIKKEN

Boring for Semi-Finishing—ZMAC-VR



ZMAC-VR

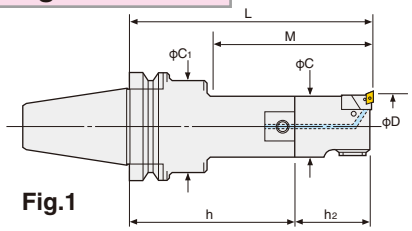


Fig.1

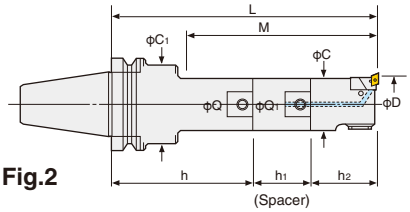


Fig.2 (Spacer)

ZMAC100-VR, 140-VR

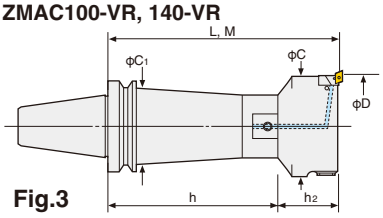


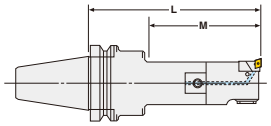
Fig.3

Code No. of the insert tip  are shown.

PAT.

TAPER	Code No.	Boring Range D	Boring Depth M	C	C1	Shank Code No.	Extension Spacer Code No.	P.86 Head No.	Insert No.	Weight (kg)	Fig.
						BT No.-Q-h	Q-Q1-h1	Q- Min.D -h2			
No.40	BT40-ZMAC32R -150V	31.8～42.2	77	31	42	BT40-Q16- 95	—	16-ZMAC32R-55V	CC06-C	2.5	1
	(IT40) -180V		110			-Q16-125				2.7	
	-195V		122			-Q16- 95	SP16-16-45			2.7	2
	-ZMAC42R -150V	41.8～55.2	97	40	50	-Q20- 80	—	20-ZMAC42R-70V		3.0	1
	-180V		130			-Q20-110				3.2	
	-210V		157			-Q20- 80	SP20-20-60			3.5	2
	-ZMAC55R -165V	54.8～70.2	135	53	50	-Q26- 95	—	26-ZMAC55R-70V		3.9	1
	-210V		180			-Q26-140				4.6	
	-225V		195			-Q26- 95	SP26-26-60			4.6	2
	-ZMAC70R -165V	69.8～85.2	165	67	64	-Q34- 95	—	34-ZMAC70R-70V	CC08-C	5.4	1
	-180V		180			-Q34-110				5.8	
	-225V		225			-Q34- 95	SP34-34-60			6.8	2
	-ZMAC85R -195V	84.8～100.2	195	83	62	-Q42- 95	—	42-ZMAC85R-100V		9.0	1

★MIN. dial readout : **ZMAC25-VR** & smaller is 0.02mm on diameter. **ZMAC32-VR** and larger are 0.01mm on diameter.
★**"C" grade (Coated) insert for Steel, Stainless & Cast Iron is supplied as Standard with the head (Smooth boring & Long tool-life) .** ☞**P.86** Please refer ☞**P.117** for cutting condition.
We would recommend "B" grade (CBN) insert for Hardened Steel & High Speed boring of Cast Iron.
★Please refer ☞**P.101,P102** for Shank&Spacer, and ☞**P.87, P.88** for Head.
★Centre Through Tool Coolant function is available as standard.
★For **BT30**, modular connection system is applied. Please refer ☞**P.101** for Base Holder.
★**When L length is required longer than standard, please specify boring depth M.**



Boring Arbor with Extension Spacer



ZMAC-V for Multi-Stage Boring Bar

Please contact us for the special boring bar.





High Pressure Coolant Through Tool

ZMAC ADVANCED BORING ARBOR (ZMAC-VR)

NIKKEN

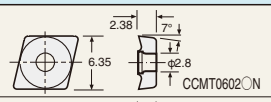
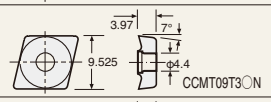
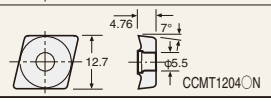
Insert Tip for ZMAC-VR

● : best ○ : good

Material		Coated Carbide M	Coated Carbide K
	Steel	●	
	Stainless Steel	●	
	Cast Iron	○	●
	Aluminium		
	High Speed finish for Cast Iron		
	Hardened Steel		
	High Speed finish for Aluminium		

Please add the grade indication into ○, and add the insert tip material indication at the end off the Code No. e.g. CC12-C8 (AC630M)

There is the CBN insert tip which both corners can be used.
Please refer ☞**P.120** for ISO code of the insert tip.

Applicable Arbor	Dimension	Code No.	Grade: Material / Nose R	C: AC630M	C: AC410K
ZMAC32-VR, ZMAC42-VR, ZMAC55-VR		CC06-○4	0.4	●	●
		CC06-○8	0.8	●	●
ZMAC70-VR, ZMAC85-VR		CC08-○4	0.4	●	●
		CC08-○8	0.8	●	●
ZMAC100-VR, ZMAC140-VR		CC12-○4	0.4	●	●
		CC12-○8	0.8	●	●

Code No. of the insert tip  are shown.

TAPER	Code No.	Boring Range D	Boring Depth M	C	C_1	Shank Code No.	Extension Spacer Code No.	P.86 Head No.	Insert No.	Weight (kg)	Fig.
						BT No.-Q-h	Q-Q_1-h_1	Q- Min.D -h_2			
No.50	BT50-ZMAC32R -180V	31.8～42.2	77	31	50	BT50-Q16-125N	—	16-ZMAC32R-55V	CC06-C	5.5	1
	(IT50) -210V		110			-Q16-155				5.6	
	-225V		122			-Q16-125N	SP16-16-45			5.7	2
	-ZMAC42R -180V	41.8～55.2	97	40	60	-Q20-110	—	20-ZMAC42R-70V		6.0	1
	-195V		130			-Q20-125				6.0	
	-225V		142			-Q20-110	SP20-20-45			6.4	2
	-240V		157				SP20-20-60			6.5	
	-ZMAC55R -210V	54.8～70.2	117	53	65	-Q26-140	—	26-ZMAC55R-70V		7.5	1
	-240V		182			-Q26-170N				7.6	
	-270V		177			-Q26-140	SP26-26-60			8.1	2
	-ZMAC70R -240V	69.8～85.2	190	67	80	-Q34-170	—	34-ZMAC70R-70V	CC08-C	10.0	1
	-270V		220			-Q34-200				10.6	
	-300V		250			-Q34-170	SP34-34-60			11.5	2
	-ZMAC85R -225V	84.8～100.2	182	83	83	-Q42-125	—	42-ZMAC85R-100V		12.5	1
	-290V		247			-Q42-190				15.0	
	-315V		272			-Q42-125	SP42-42-90			16.0	2
	-ZMAC100R-225V	99.5～140.5	225	95	98	-Q42-125	—	42-ZMAC100R-100V	CC12-C	12.4	3
	-290V		290			-Q42-190				15.1	
	-325V		325			-Q42-225A				17.8	
	-375V		375			-Q42-275A				20.5	
	-425V		425			-Q42-325A				23.2	
	-ZMAC140R-225V	139.5～180.5	225	135	98	-Q42-125	—	42-ZMAC140R-100V		13.8	
	-290V		290			-Q42-190				16.5	
	-325V		325			-Q42-225A				19.2	
	-375V		375			-Q42-275A				21.9	
	-425V		425			-Q42-325A				24.6	

★MIN. dial readout : **ZMAC25-VR** & smaller is 0.02mm on diameter. **ZMAC32-VR** and larger are 0.01mm on diameter.
★**When L length is required longer than standard, please specify boring depth M.** ★Centre Through Tool Coolant function is available as standard.
★**"C" grade (Coated) insert for Steel, Stainless&Cast Iron is supplied as Standard with the head (Smooth boring & Long tool-life) .** ☞**P.86**
We would recommend **"B"** grade (**CBN**) insert for Hardened Steel & High Speed boring of Cast Iron. Please refer ☞**P.117** for cutting condition.
★Please refer ☞**P.101,P102** for Shank & Spacer,and ☞**P.87, P.88** for Head.

MODULAR TYPE ZMAC ADVANCED BORING HEAD NIKKEN

ZMAC-V Triangular Insert type head



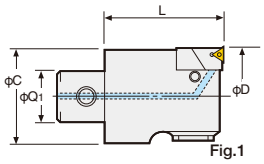


Fig.1

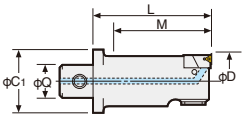


Fig.2

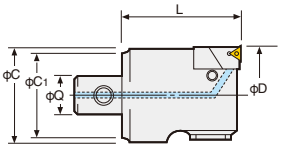
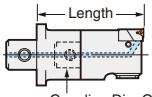


Fig.3

PAT. P.119

Head No.	Boring Range D	Boring Depth M	Coupling Dia. Q	Remarks					Weight (Kg)
				C	C1	Unit No.	Insert No.	Fig.	
12-ZMAC 16- 45V	15.9～20.2	38	12	15	24	M 2HZ- 16V	3MP-C,B	2	0.4
12-ZMAC 16- 55V		48							0.4
9-ZMAC 20- 40V	19.8～25.2	40	9	19	–	M 2HZ- 20V		1	0.4
12-ZMAC 25- 40V	24.8～32.2		12	24		M 3HZ- 25V			0.5
16-ZMAC 32- 55V	31.8～42.2	55	16	31		M 4HZ- 32V	4MP-C,B		0.7
20-ZMAC 42- 70V	41.8～55.2	70	20	40		M 5HZ- 42V	6MP-C,B		1.1
26-ZMAC 55- 70V	54.8～70.2		26	53		M 5HZ- 55V			1.2
34-ZMAC 70- 70V	69.8～85.2		34	67		M 7HZ- 70V			2.0
42-ZMAC 85-100V	84.8～100.2	100	42	83		M10HZ- 85V			4.3
42-ZMAC100-100V	99.5～140.5			95	83	M10HZ-100V		3	4.9
42-ZMAC140-100V	139.5～180.5			135		M10HZ-140V			6.3

★MIN. dial read out: **ZMAC25-V** and smaller is 0.02mm on dia.
ZMAC32-V and larger is 0.01mm on dia.
★The above boring ranges are based on heads with Nose/R 0.2 insert.
★**"C" grade (Coated) insert for Steel, Stainless & Cast Iron is supplied as Standard with the head (Smooth boring & Long tool-life)** . ☞P.119 Please refer ☞ P.117 for cutting condition.
We would recommend **"B"** grade (**CBN**) insert for Hardened Steel & High Speed boring of Cast Iron.
★Centre Through Tool Coolant function is available as standard.
★**Code No. of the set with SP26 stepped spacer is Q26-Coupling Dia.-ZMAC○-LengthV e.g. Q26-20-ZMAC42-100V**



ZMAC– VR Rhomboid Insert type head



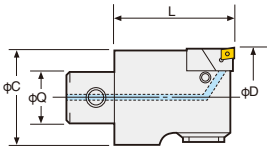


Fig.1

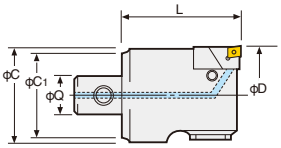
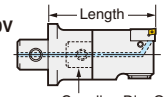


Fig.2

PAT. P.86

Head No.	Boring Range D	Boring Depth M	Coupling Dia. Q	Remarks					Weight (Kg)
				C	C1	Unit No.	Insert No.	Fig.	
16-ZMAC 32R - 55V	31.8～42.2	55	16	31	–	M 4HZ- 32VR	CC06-C	1	0.7
20-ZMAC 42R - 70V	41.8～55.2	70	20	40		M 5HZ- 42VR			1.1
26-ZMAC 55R - 70V	54.8～70.2		26	53		M 5HZ- 55VR			1.2
34-ZMAC 70R - 70V	69.8～85.2		34	67		M 7HZ- 70VR	CC08-C		2.0
42-ZMAC 85R -100V	84.8～100.2	100	42	83		M10HZ- 85VR			4.3
42-ZMAC 100R -100V	99.5～140.5			95	83	M10HZ-100VR	CC12-C	2	4.9
42-ZMAC 140R -100V	139.5～180.5			135		M10HZ-140VR			6.3

★MIN. dial read out: **ZMAC25-VR** and smaller is 0.02mm on dia.
ZMAC32-VR and larger is 0.01mm on dia.
★**"C" grade (Coated) insert for Steel, Stainless & Cast Iron is supplied as Standard with the head (Smooth boring & Long tool-life)** . ☞P.86 Please refer ☞P.117 for cutting condition.
★Centre Through Tool Coolant function is available as standard.
★**Code No. of the set with SP26 stepped spacer is Q26-Coupling Dia.-ZMAC○-LengthV e.g. Q26-20-ZMAC42R-100V**



MODULAR TYPE ZMACα ADVANCED BORING HEAD NIKKEN

For High Speed/Deep Hole Boring

ZMACα-V Triangular Insert type head



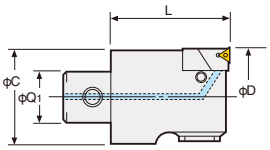


Fig.1

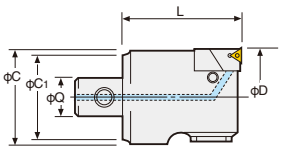
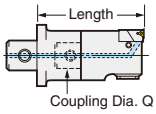


Fig2

PAT. P.119

Head No.	Boring Range D	Boring Depth M	Coupling Dia. Q	Remarks					Weight (Kg)
				C	C1	Unit No.	Insert No.	Fig.	
12-ZMAC 25- 40AAV	24.8～32.2	40	12	24	–	M 3HZ- 25V	3MP-C,B	1	0.4
16-ZMAC 32- 55AAV	31.8～42.2	55	16	31		M 4HZ- 32V	4MP-C,B		0.5
20-ZMAC 42- 70AAV	41.8～55.2	70	20	40		M 5HZ- 42V	6MP-C,B		0.8
26-ZMAC 55- 70AAV	54.8～70.2		26	53		M 5HZ- 55V			0.7
34-ZMAC 70- 70AAV	69.8～85.2		34	67		M 7HZ- 70V			1.1
42-ZMAC 85-100AAV	84.8～100.2	100	42	83		M10HZ- 85V			2.3
42-ZMAC100-100AAV	99.5～140.5			95	83	M10HZ-100V		2	2.8
42-ZMAC140-100AAV	139.5～180.5			135		M10HZ-140V			3.1

★MIN. dial read out: **ZMAC25α-V** and smaller is 0.02mm on dia.
ZMAC32α-V and larger is 0.01mm on dia.
★The above boring ranges are based on heads with Nose/R 0.2 insert.
★**"C" grade (Coated) insert for Steel, Stainless & Cast Iron is supplied as Standard with the head (Smooth boring & Long tool-life)** . ☞P.119 Please refer ☞P.117 for cutting condition.
We would recommend **"B"** grade (**CBN**) insert for Hardened Steel & High Speed boring of Cast Iron.
★Centre Through Tool Coolant function is available as standard.
★**Code No. of the set with SP26 stepped spacer is Q26-Coupling Dia.-ZMAC○-Length AAV e.g. Q26-20-ZMAC42-100AAV**



For High Speed/Deep Hole Boring

ZMACα – VR Rhomboid Insert type head



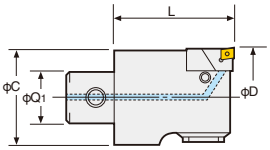


Fig.1

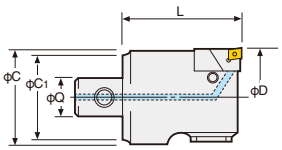
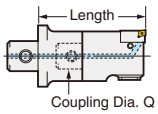


Fig.2

PAT. P.86

Head No.	Boring Range D	Boring Depth M	Coupling Dia. Q	Remarks					Weight (Kg)
				C	C1	Unit No.	Insert No.	Fig.	
16-ZMAC 32R - 55AAV	31.8～42.2	55	16	31	–	M 4HZ- 32VR	CC06-C	1	0.5
20-ZMAC 42R - 70AAV	41.8～55.2	70	20	40		M 5HZ- 42VR			0.8
26-ZMAC 55R - 70AAV	54.8～70.2		26	53		M 5HZ- 55VR			0.7
34-ZMAC 70R - 70AAV	69.8～85.2		34	67		M 7HZ- 70VR	CC08-C		1.1
42-ZMAC 85R -100AAV	84.8～100.2	100	42	83		M10HZ- 85VR			2.3
42-ZMAC 100R -100AAV	99.5～140.5			95	83	M10HZ-100VR	CC12-C	2	2.8
42-ZMAC 140R -100AAV	139.5～180.5			135		M10HZ-140VR			3.1

★MIN. dial read out: **ZMAC25α-VR** and smaller is 0.02mm on dia.
ZMAC32α-VR and larger is 0.01mm on dia.
★**"C" grade (Coated) insert for Steel, Stainless & Cast Iron is supplied as Standard with the head (Smooth boring & Long tool-life)** . ☞P.86 Please refer ☞P.117 for cutting condition.
We would recommend **"B"** grade (**CBN**) insert for Hardened Steel & High Speed boring of Cast Iron.
★Centre Through Tool Coolant function is available as standard.
★**Code No. of the set with SP26 stepped spacer is Q26-Coupling Dia.-ZMAC○-Length AAV e.g. Q26-20-ZMAC42R-100AAV**



MODULAR TYPE ZMAC ADVANCED (ISO) BORING HEAD NIKKEN

ZMAC-V-I Triangular Insert type head

Boring head for **ISO** insert tip widely available on the market.
* Only insert clamp bolts are supplied (Insert tips are not supplied).



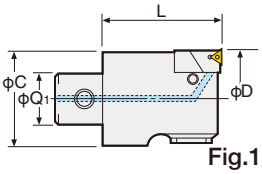


Fig.1

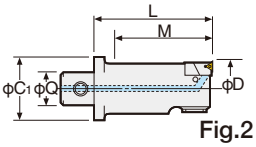


Fig.2

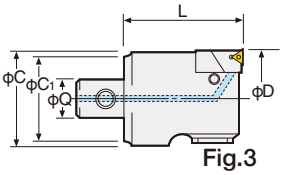
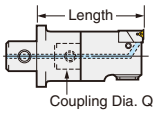


Fig.3

PAT. P.119

Head No.	Boring Range D	Boring Depth M	Coupling Dia. Q	Remarks						Weight (Kg)
				C	C1	Unit No.	Insert No.	チップクランプボルト ネジサイズ	Fig.	
16-ZMAC 32- 55V-I	31.8～42.2	55	16	31	–	M 4HZ- 32V-I	TC□□0902□□L	M2.2	1	0.7
20-ZMAC 42- 70V-I	41.8～55.2	70	20	40		M 5HZ- 42V(M3)	TP□□1103□□L	M3		1.1
26-ZMAC 55- 70V-I	54.8～70.2		26	53		M 5HZ- 55V(M3)				1.2
34-ZMAC 70- 70V-I	69.8～85.2		34	67		M 7HZ- 70V(M3)				2.0
42-ZMAC 85-100V-I	84.8～100.2	100	42	83		M10HZ- 85V(M3)				4.3
42-ZMAC100-100V-I	99.5～140.5			95	83	M10HZ-100V(M3)			3	4.9
42-ZMAC140-100V-I	139.5～180.5			135		M10HZ-140V(M3)				6.3

★MIN. dial read out: **ZMAC32-V-I** and larger is 0.01mm on dia.(Sub scale : 0.005)
★The above boring ranges are based on heads with Nose/R 0.2 insert.
★Centre Through Tool Coolant function is available as standard.
★Code No. of the set with SP26 stepped spacer is Q26-Coupling Dia.-ZMAC○-LengthV-I e.g. Q26-20-ZMAC42-100V-I



MODULAR TYPE ZMACα ADVANCED (ISO) BORING HEAD NIKKEN

For High Speed/Deep Hole Boring

ZMACα-V-I Triangular Insert type head

Boring head for **ISO** insert tip widely available on the market.
* Only insert clamp bolts are supplied (Insert tips are not supplied).



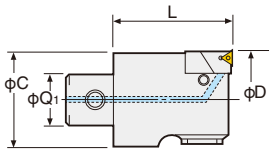


Fig.1

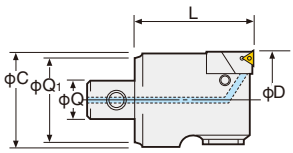
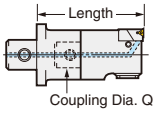


Fig.2

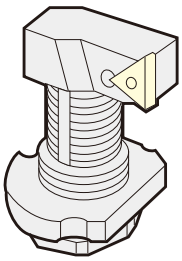
PAT. P.119

Head No.	Boring Range D	Boring Depth M	Coupling Dia. Q	Remarks						Weight (Kg)
				C	C1	Unit No.	Insert No.	チップクランプボルト ネジサイズ	Fig.	
16-ZMAC 32- 55AAV-I	31.8～42.2	55	16	31	–	M 4HZ- 32V-I	TC□□0902□□L	M2.2	1	0.5
20-ZMAC 42- 70AAV-I	41.8～55.2	70	20	40		M 5HZ- 42(M3)	TP□□1103□□L	M3		0.8
26-ZMAC 55- 70AAV-I	54.8～70.2		26	53		M 5HZ- 55(M3)				0.7
34-ZMAC 70- 70AAV-I	69.8～85.2		34	67		M 7HZ- 70(M3)				1.1
42-ZMAC 85-100AAV-I	84.8～100.2	100	42	83		M10HZ- 85(M3)				2.3
42-ZMAC100-100AAV-I	99.5～140.5			95	83	M10HZ-100(M3)			2	2.8
42-ZMAC140-100AAV-I	139.5～180.5			135		M10HZ-140(M3)				3.1

★MIN. dial read out: **ZMAC32α-V-I** and larger is 0.01mm on dia.(Sub scale : 0.005)
★The above boring ranges are based on heads with Nose/R 0.2 insert.
★Centre Through Tool Coolant function is available as standard.
★Code No. of the set with SP26 stepped spacer is Q26-Coupling Dia.-ZMAC○-Length AAV-I e.g. Q26-20-ZMAC42-100AAV-I



ZMAC ADVANCED (ISO) BORING UNIT PARTS LIST NIKKEN



ZMAC-V-I

NIKKEN ZMAC-V-I Boring Heads come complete with the ZMAC-V-I Boring Unit. Specify the part No. in the table below when ordering spares.
Triangular Insert Heads and Rhomboid Insert Heads use different boring units, cartridges, insert tips, insert clamp bolts, and insert clamp handles, but all other parts are common to both.

* The **ZMAC** units and new **ZMAC-V-I** units are interchangeable.

ZMAC-V-I Style	Boring Range	Unit	Triangular Insert	Insert Clamp Screw	Insert Clamp Handle	Lock Screw	Adjustment Handle	Unit Clamp Bolt
ZMAC 32-V-I	31.8～ 42.2	M 4HZ- 32V-I	TC□□0902□□L	M2255	T-6	M365	M 4HZL	M2577
ZMAC 42-V-I	41.8～ 55.2	M 5HZ- 42V(M3)	TP□□1103□□L	M3070	T-10	M364	M 5HZL	
ZMAC 55-V-I	54.8～ 70.2	M 5HZ- 55V(M3)				M366		
ZMAC 70-V-I	69.8～ 85.2	M 7HZ- 70V(M3)				M360	M 7HZL	M3090
ZMAC 85-V-I	84.8～100.2	M10HZ- 85V(M3)				M367	M10HZL	M4012
ZMAC 100-V-I	99.5～140.5	M10HZ-100V(M3)				M368		
ZMAC 140-V-I	139.5～180.5	M10HZ-140V(M3)				M369		

★Each Unit and Cartridge are supplied without Insert Tip.

ZMAC-VR Style	Boring Range	Unit	Triangular Insert (ISO code)	Insert Clamp Screw	Insert Clamp Handle
ZMAC 32-VR	31.8～ 42.2	M 4HZ- 32VR	CC06-C (CC□□0602□□)	M2560	T-8
ZMAC 42-VR	41.8～ 55.2	M 5HZ- 42VR		M2577	
ZMAC 55-VR	54.8～ 70.2	M 5HZ- 55VR			
ZMAC 70-VR	69.8～ 85.2	M 7HZ- 70VR	CC08-C (CC□□09T3□□)	M4090	T-15
ZMAC 85-VR	84.8～100.2	M10HZ- 85VR		M4012	
ZMAC 100-VR	99.5～140.5	M10HZ-100VR	CC12-C (CC□□1204□□)	M5012	T-15
ZMAC 140-VR	139.5～180.5	M10HZ-140VR			

★Each Unit and Cartridge are supplied without Insert Tip.
★Cartridge can not be supplied alone, please order ZMAC-V unit.



Special cartridge example for necking is available. Please contact us with the work piece drawing.

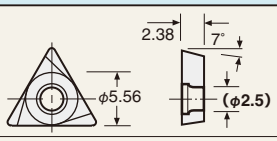
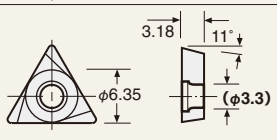
The cartridge head can be exchanged itself for the head bigger equal to ZMAC42-V.

Boring Range	Cartridge Head		Head Clamp Bolt
41.8～ 55.2	M 5HZ- 42 CH (M3)	M 5HZ- 42RCH	M512C
54.8～ 70.2			
69.8～ 85.2	M 7HZ- 70 CH (M3)	M 7HZ- 70RCH	M625
84.8～100.2	M10HZ- 85 CH (M3)	M10HZ- 85RCH	M825
99.5～140.5	M10HZ-100 CH (M3)	M10HZ-100RCH	M835
139.5～180.5			

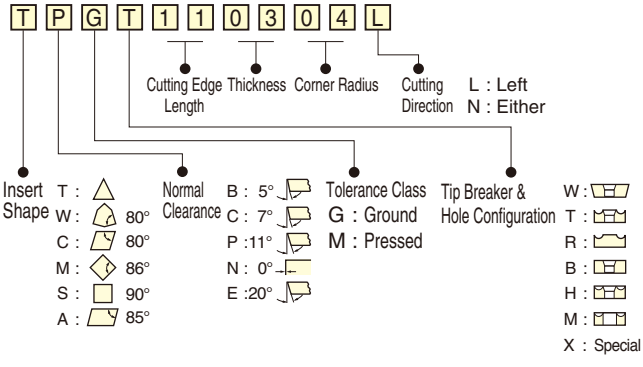
Detach
- **Loosen head clamp bolt after boring diameter is set to little larger than the MIN. boring diameter.**

Attach
- **Insert the head into cartridge, then tighten head clamp bolt temporary.**
- **Loosen side lock bolt.**
- **Rotate the dial ring 0.2～0.3mm to minus direction.**
- **Tighten head clamp bolt by pushing the head to the support portion of the main body.**

INSERT TIP (please refer to the ISO code below to purchase.)

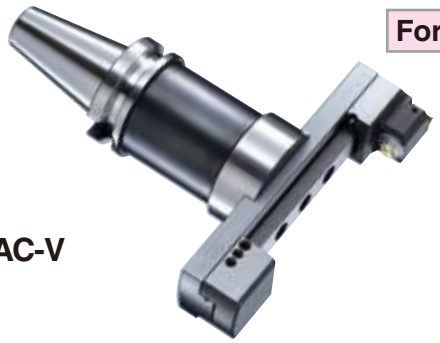
ZMAC-V-I Style	Dimension	ISO code
ZMAC32-V-I		TC□□0902□□L
ZMAC42-V-I ～ ZMAC140-V-I		TP□□1103□□L

Code No. of ISO standard Insert Tip



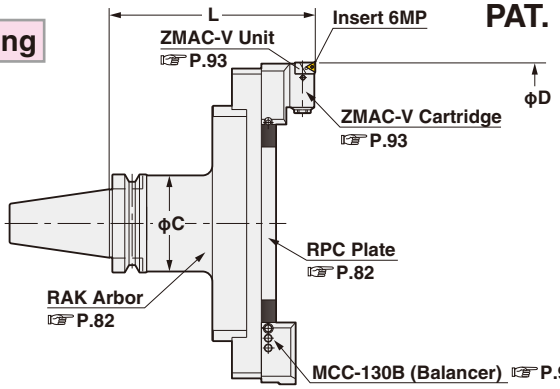
BALANCE-CUT BAC ADVANCED BORING ARBOR for LARGE DIA. NIKKEN

PAT.



BAC-V

For Finishing



Boring Dia:ϕ130～595mm

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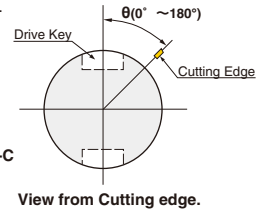
TAPER	Code.No	D MIN.～MAX.	L	C	RAK Arbor Code No.	PPC Plante No	Cartridge (Balancer)	Weight (Kg)
No.40	BT40-BAC130-205V	130～195	205	61	BT40-RAK-130A	RPC-130		7.0
	(IT40) -BAC180-205V	180～245				-180		8.0
No.50	BT50-BAC130-185V	130～195	185	90	BT50-RAK-110A	RPC-130		10.0
	(IT50) -235V		235		-160A			12.7
	-285V		285		-210A			15.4
	-335V		335		-260A			18.1
	-385V		385		-310A			20.8
	-435V		435		-360A			23.5
	-485V		485		-410A			26.2
	-BAC180-185V	180～245	185		-RAK-110A	RPC-180		10.6
	-235V		235		-160A			13.3
	-285V		285		-210A			16.0
	-335V		335		-260A			18.7
	-385V		385		-310A			21.4
	-435V		435		-360A			24.1
	-485V		485		-410A			26.8
	-BAC230-185V	230～295	185		-RAK-110A	RPC-230	MCCZ-130V (MCC-130B) Insert 6MP	11.3
	-235V		235		-160A			14.0
	-285V		285		-210A			16.7
	-335V		335		-260A			19.4
	-385V		385		-310A			22.1
	-435V		435		-360A			24.8
	-485V		485		-410A			27.5
	-BAC280-185V	280～345	185		-RAK-110A	RPC-280		11.9
	-235V		235		-160A			14.6
	-285V		285		-210A			17.3
	-335V		335		-260A			20.0
	-385V		385		-310A			22.7
	-435V		435		-360A			25.4
	-485V		485		-410A			28.1
	-BAC330-210V*	330～395	210 (220*)	98	BT50-RAK330-125 I T50-RAK330-135	RPC-330		16.7
	-BAC380-210V*	380～445				-380		17.0
	-BAC430-210V*	430～495				-430		18.0
	-BAC480-210V*	480～545				-480		19.0
	-BAC530-210V*	530～595				-530		20.0

★**"C" grade (Coated)** Inserts are supplied as standard. ☞**P.119** Please refer☞ **P.117** for cutting condition.
★Unit **"M5HZ-55V"** is provided as standard, please refer ☞**P.82** for Arbor (**RAK**) and Plate (**RPC**) .
★Arbor, Plate and Cartridge are delivered in separate packages.
★When ordering, please let us know machine maker and model no. to avoid the interfererce with tool magazine of **ATC**.
★The location of cutting edge is same as drive key in standard.
The different location is available, please specify **θ** in Code No. **e.g. BT50-BAC180-235V (90°)**
★The boring arbors marked * with **IT50**, L (gauge length) is 220. **e.g. IT50-BAC330-220V**
★**For centre through tool coolant type, please add "-C" at the end of Code No. e.g. BT50-BAC130-185V-C**



View from Cutting edge.



High Pressure Coolant Through Tool

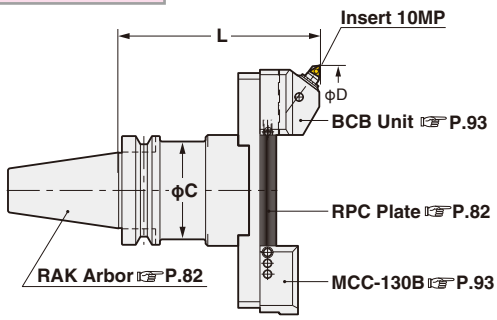
BALANCE-CUT BCB BORING ARBOR for LARGE DIA. NIKKEN

For Roughing / Finishing



BCB

Boring Dia:φ130～595mm



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TAPER	Code.No	D MIN.～MAX.	L	C	RAK Arbor Code No.	RPC Plante No	Cartridge (Balancer)	Weight (Kg)
No.40	BT40-BCB130-215	130～195	215	61	BT40-RAK-130A	RPC-130	BCB-130 (MCC-130B) Insert 10MP	7.5
	(IT40) -BCB180-215	180～245				-180		8.5
No.50	BT50-BCB130-195	130～195	195	90	BT50-RAK-110A	RPC-130		10.3
	(IT50) -245		245		-160A			13.0
	-295		295		-210A			15.7
	-345		345		-260A			18.4
	-395		395		-310A			21.1
	-445		445		-360A			23.8
	-495		495		-410A			26.5
	-BCB180-195	180～245	195		BT50-RAK-110A	RPC-180		10.9
	-245		245		-160A			13.6
	-295		295		-210A			16.3
	-345		345		-260A			19.0
	-395		395		-310A			21.7
	-445		445		-360A			24.4
	-495		495		-410A			27.1
	-BCB230-195	230～295	195		BT50-RAK-110A	RPC-230		11.6
	-245		245		-160A			14.3
	-295		295		-210A			17.0
	-345		345		-260A			19.7
	-395		395		-310A			22.4
	-445		445		-360A			25.1
	-495		495		-410A			27.8
	-BCB280-195	280～345	195		BT50-RAK-110A	RPC-280		12.2
	-245		245		-160A			14.9
	-295		295		-210A			17.6
	-345		345		-260A			20.3
	-395		395		-310A			23.0
	-445		445		-360A			25.7
	-495		495		-410A			28.4
	-BCB330-220*	330～395	220 (220*)	98	BT50-RAK330-125 I T50-RAK330-135	RPC-330		16.5
	-BCB380-220*	380～445				-380		17.5
	-BCB430-220*	430～495				-430		18.5
	-BCB480-220*	480～545				-480		19.5
	-BCB530-220*	530～595				-530		20.5

★**10MP-T** (Cermet) is supplied as standard. ☞**P.121** Please refer ☞**P.117** for cutting condition.
★MIN. dial readout on dia.: 0.02mm, Sub scale: 0.002mm
★The boring arbor marked * with **IT50**, L (gauge length) is 220. **e.g. IT50-BCB330-220**.

Up to φ800 is also available. Please contact with us.



Double Cut Style BCB Boring Bar

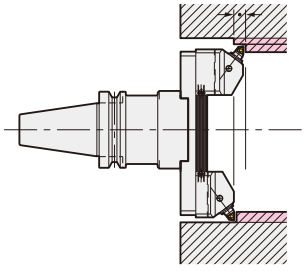


BCB-W

★Double cut style can be done with both side of **BCB-130** cartridges. Please add **"W"** at the end of Code No. **e.g. BT50-BCB130W-195**

- **True balance cut** can be done to adjust the height by micro adjustment first and then to adjust the diameter by adjust screw.
- **Stepped cut** can be done to change the height of the cartridges.

Stepped Cut



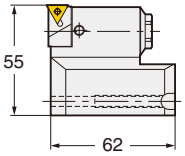
ACCESSORIES for BALANCE-CUT BORING ARBOR for LARGE DIA. NIKKEN

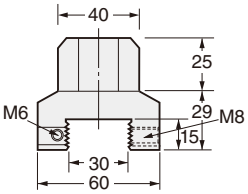
Accessories for Balance-Cut BAC-V

Balance-Cut MAC type cartridge for large dia.

MCCZ-130V







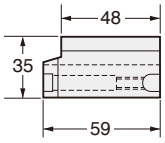
0.8Kg

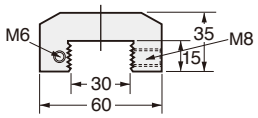
P.119

MAC type Balancer for Balance-Cut large dia.

MCC-130B



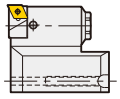




0.6Kg

Accessories	ZMAC-V Unit	Insert Tip	Clamp Bolt	Wrench for Insert	Lock Screw	Adjust Screw	Set Screw (M8)	L-Wrench for M815 Belt	Adjust Wrench	Adjustment Handle	Applicable RPC Plate
Code No.	M5HZ-55V	**6MP-C**	M2577	T-8	M366	M540	M815	M4	M3	M5HZL	RPC-130,180,230,280,330,380,430,480,530

★Please refer ☞**P.82** for **RPC** Plate. ★Set Code No. is **S.MCCZ-130V**.
★**M5HZ-55VR** with **CC06-C** insert tip is available. Please specify code No. **S.MCCZ-130VR**.
★**6MP-C** insert tip is supplied as standard. ☞**P.119** Please refer ☞**P.117** for cutting condition.

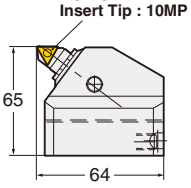


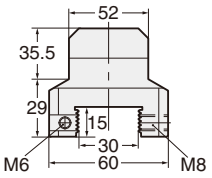
Accessories for Balance-Cut BCB

Balance-Cut BCB type cartridge for large dia.

BCB-130 M7-62 BCB Unit Insert Tip : 10MP







0.9Kg

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MAC type Balancer for Balance-Cut large dia.

MCC-130B



Accessories	BCB Unit	Insert Tip	Clamp Bolt	Wrench for Insert	Lock Screw	Adjust Screw	Set Screw (M8)	L-Wrench for M815 Belt	Adjust Wrench	Adjustment Handle	Applicable RPC Plate
Code No.	M7-62	**10MP-T**	M67	20S	B357, B367	M540	M815	M4	M3	M397	RPC-130,180,230,280,330,380,430,480,530

★Please refer ☞**P.82** for **RPC** Plate.
★Set Code No. is **S.BCB-130**.
★**10MP-T** insert tip is supplied as standard. ☞**P.121** Please refer ☞**P.117** for cutting condition.

SPECIAL DESIGNED BORING ARBOR

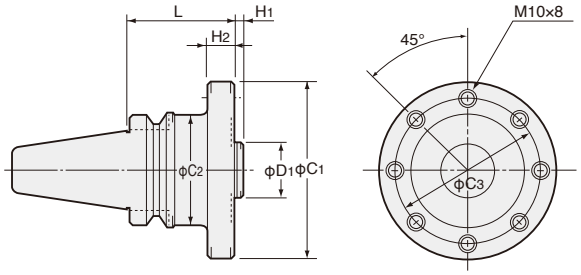
NIKKEN

There exist various kinds of boring applications which cannot be managed using standard boring arbors. NIKKEN has great experience of special boring applications, utilizing the double contact shoulder support **ZMAC-V** boring heads. NIKKEN can also design and manufacture special boring arbors to suit your special applications.

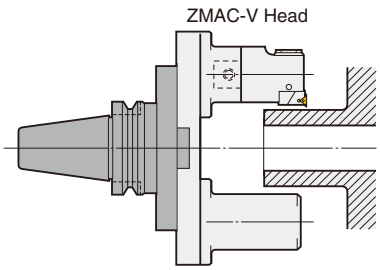


RAA

Base Arbor for Special Boring Head



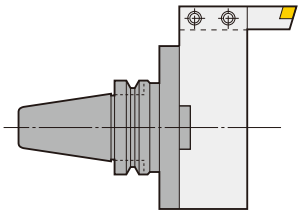
For Overturning



TAPER	Code No.	D_1	L	H_1	H_2	C_1	C_2	C_3	Weight (kg)
No.40	BT40-RAA32- 60 (IT40)	32 h7	60	7	15	102	61	82	2.5
No.50	BT50-RAA32- 60		60		12		98		5
	(IT50) -120		120		20				9
	-180		180						15.5

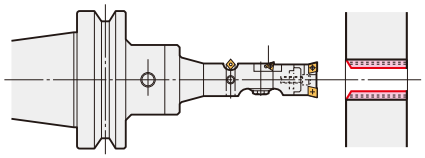
★The Base Holder with long gauge length is available on demand.
★High Pressure Centre Through Tool Coolant Type is available on demand.
★The dimension with ( ) is for **IT40** and **IT50**.
★For BT40, ϕD_1=22mm is also available.

For U Axis Boring Arbor



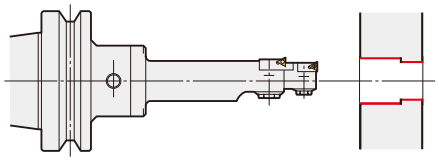
Multi Stage Boring Arbor

For Simultaneous machining for rough, finish and chamfer.



Please specify the boring dia., depth, and necessary length from the gauge line.

For stepped hole boring with restricted concentricity.



Please specify each boring dia., depth, and necessary length from the gauge line.

For decreasing the number of **A.T.C** with one arbor for two different size of the bores.

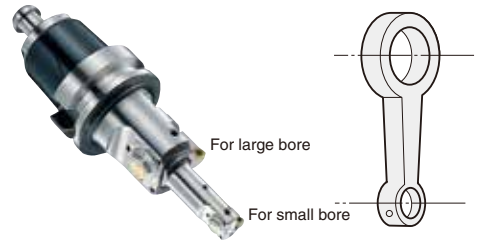


Photo shows with **NC5** Shank.

The above are just samples. Pre-Balanced type Boring Arbor for High Speed Application and Aluminium Body Head are also available. Please contact with us about your special boring applications.

DRILLING OPERATION by **COMBAT Z DRILL**



"Rationalization is Study of Drilling." which is our Slogan for developing NIKKEN **COMBAT Z DRILL**. ☞P.295 Please try it. Pilot Drill and 3-Phases Heat Treatment significantly improves Cutting Condition, Secure Drilling and Tool Life.

Ultra Long Size Boring Bar

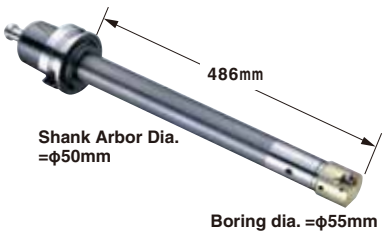
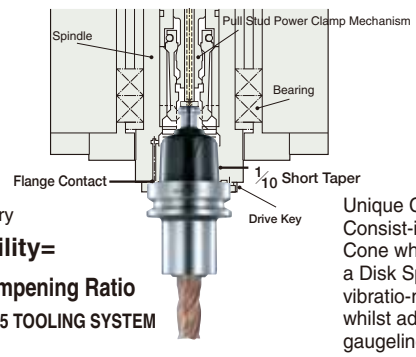


Photo shows with **NC5** Shank.

For Extreme Deep Hole Boring Operation, please study the Machine with **NC5 Spindle** ☞P.229 or **3LOCK Spindle** ☞P.169.
In case of **BT/IT** spindle, we recommend **ZMAC α-V** type Head for these applications.



E·H·MERRITT's Theory

Chattering Stability=

Static Stiffness×Dampening Ratio

Thus, the advantage of **NC5 TOOLING SYSTEM** is clearly demonstrated.

Unique Construction : Consist-ing of a Slotted Taper Cone which is Pre-Loaded by a Disk Spring to increase its vibratio-nal dampening effect whilst ad-justing minute gaugeline errors, completely.

BALANCE-CUT RACα BORING ARBOR for LARGE DIA. NIKKEN

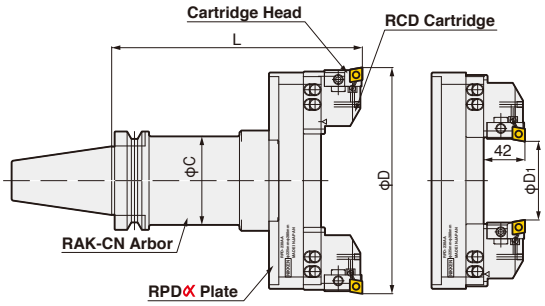
For Roughing

- With the screws for slight adjustment
- Boring Dia. : φ130～φ580mm



RACα

High Pressure Coolant Through Tool

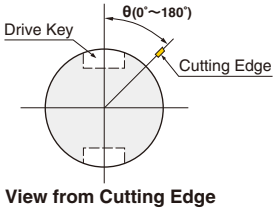


P.74

Boring Dia. : φ130～580mm / Over Turning Dia. : 10～430mm

TAPE	Code.No	D MIN.～MAX.	L	D1 MIN.～MAX.	C	RAK Arbor Code No.	RPD Plate No.	RCD Cartridge No.	Weight (Kg)
No.40	BT40-RAC130-225AA	130～180	225	10～30	61	BT40-RAK-130A-CN	RPD-130AA	For Heavy Duty Boring of Iron and Cast Iron RCD-130 ×2 Insert Tip CN08	7.2
	(IT40)-RAC180-225AA	180～230		30～80			-180AA		7.7
No.50	BT50-RAC130-205AA	130～180	205	10～30	90	BT50-RAK-110A-CN	RPD-130AA		9.5
	(IT50) -255AA		255			-160A-CN			12.2
	-305AA		305			-210A-CN			14.9
	-355AA		355			-260A-CN			17.6
	-405AA		405			-310A-CN			20.3
	-455AA		455			-360A-CN			23.0
	-505AA		505			-410A-CN			25.7
	-RAC180-205AA	180～230	205	30～80		-RAK-110A-CN	RPD-180AA		10.0
	-255AA		255			-160A-CN			12.7
	-305AA		305			-210A-CN			15.4
	-355AA		355			-260A-CN			18.1
	-405AA		405			-310A-CN			20.8
	-455AA		455			-360A-CN			23.5
	-505AA		505			-410A-CN			26.2
	-RAC230-205AA	230～280	205	80～130		-RAK-110A-CN	RPD-230AA		10.6
	-255AA		255			-160A-CN			13.3
	-305AA		305			-210A-CN			16.0
	-355AA		355			-260A-CN			18.7
	-405AA		405			-310A-CN			21.4
	-455AA		455			-360A-CN			24.1
	-505AA		505			-410A-CN			26.8
	-RAC280-205AA	280～330	205	130～180		-RAK-110A-CN	RPD-280AA		11.1
	-255AA		255			-160A-CN			13.8
	-305AA		305			-210A-CN			16.5
	-355AA		355			-260A-CN			19.2
	-405AA		405			-310A-CN			21.9
	-455AA		455			-360A-CN			24.6
	-505AA		505			-410A-CN			27.3
	-RAC330-220AA*	330～380	220 (230*)	180～230	98	BT50-RAK330-125-CN IT50-RAK330-135-CN	RPD-330AA		16.4
	-RAC380-220AA*	380～430		230～280			-380AA		16.9
	-RAC430-220AA*	430～480		280～330			-430AA		17.4
	-RAC480-220AA*	480～530		330～380			-480AA		17.9
	-RAC530-220AA*	530～580		380～430			-530AA		18.4

★The Code No. on above table are the boring arbors with **RCD-130** cartridge (Insert tip: **CN08**) the Heavy Duty Boring of Iron and Cast Iron. Please refer ☞ **P.116** for cutting condition.
★Boring arbor with cartridges & insert for Steel, Stainless Steel and Cast Iron (**E**) , for Aluminum (**A**) and for Through Hole & Multi Sheets (**K**) are available. Please refer ☞ **P.96** for cartridges. **e.g. BT50-RAC130-205AA-E**
★Please refer ☞ **P.96** for **RAK** arbor and **RPD** plate.
★Arbor, plate and cartridges are delivered in separate packages.
★Please check the interference of the arbor with your M/C not to occur the interference in the tool magazine.
★The location of the cutting edge is same as the drive key for standard. The different location is available, please specify θ. **e.g. BT50-RAC180-255AA (90°)**
★The boring arbors marked * with **IT50**, L (gauge length) is 220. **e.g. IT50-RAC330-230AA**
★**RAK arbor with "-C" at the end of Code is centre through coolant type which is without coolant nozzle.**



View from Cutting Edge

MODULAR TYPE ARBOR

NIKKEN

BALANCE CUT RAKα BORING ARBOR for LARGE DIA. <RAK-CN Arbor>



RAK-CN

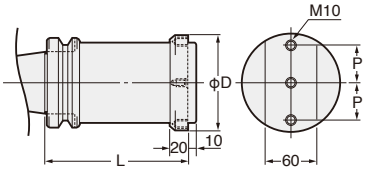


Fig.1

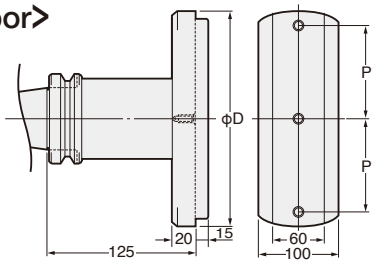
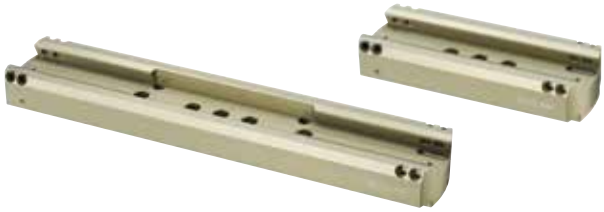


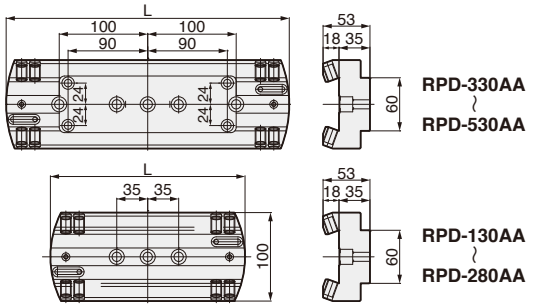
Fig.2

Code No.	Boring Range	L	D	P	Weight (Kg)	Applicable RPDα Plate	Hex. Socket bolt	Fig.
BT40 (IT40) -RAK-130A-CN	130～230	130	102	35	4.9	RPD-130AA, 180AA	M1035	1
BT50 -RAK-110A-CN	130～330	110			7.2	RPD-130AA, 180AA, 230AA, 280AA		
(IT50) -RAK-160A-CN		160			9.9			
-RAK-210A-CN		210			12.6			
-RAK-260A-CN		260			15.3			
-RAK-310A-CN		310			18.0			
-RAK-360A-CN		360			20.7			
-RAK-410A-CN		410			23.4			
-RAK330-125-CN*	330～580	125	240	100	12.0	RPD-330AA, 380AA, 430AA, 480AA, 530AA	M1045	2

★The location of the cutting edge is same as the drive key for standard. The different location is available, please specify θ. **e.g. BT50-RAK-160A-CN (90°)**
★**RAK avbor with "-C" at the end of Code is centre through coolant type which is without coolant nozzle.**
★* : In case of **IT50**, **IT50-RAK-CN-330-135** is standard gauge length.

BALANCE CUTα PLATE for LARGE DIA. <RPDα Plate>





Code No.	Boring Range	L	Weight (Kg)	Code No.	Boring Range	L	Weight (Kg)	Code No.	Boring Range	L	Weight (Kg)
RPD-130AA	φ130～180	124	1.1	**RPD-330AA**	φ330～380	320	3.2	**RPD-530AA**	φ530～580	520	5.2
-180AA	φ180～230	170	1.6	**-380AA**	φ380～430	370	3.7				
-230AA	φ230～280	220	2.2	**-430AA**	φ430～480	420	4.2				
-280AA	φ280～330	270	2.7	**-480AA**	φ480～530	470	4.7				

★Accessories : coupling sleeve (2pieces) code No. **RAK-CLS**.

Accessories for Balance-Cut RACα

Heavy Duty Boring of Iron and Cast Iron
RCD-130
(CN08)



Steel, Stainless Steel and Cast Iron
RCD-130E
(CC12)

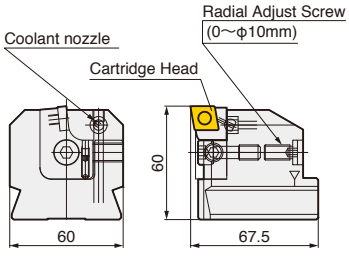


For aluminum
RCD-130A
(AEG16)



For Through Hole and Multi Sheets
RCD-130K
(SC12)





Weight : 0.6Kg

Accessories	Insert Tip	Clamp Bolt	Adjust Screw for Axial direction	Adjust Wrench for Axial direction	Wrench for Insert	Lock Screw (M10)	L-Wrench for M1010	Head Clamp Bolt	Coolant stop Screw	L-Wrench for M510	Applicable RPDα Plate
Code No.	*	CSM-70	M416	M2	20S	M1016	M5	M825-AJ	M510	M2.5	RPD-130AA, 180AA, 230AA, 280AA, 330AA, 380AA, 430AA, 480AA, 530AA

★* : The insert tip is **RCD-130: CN08 (☞P.74)** , **RCD-130E: CC12 (☞P.72)** , **RCD-130A: AEG16 (☞P.76)** , **RCD-130K: SC12 (☞P.78)** Please refer☞**P.116** for cutting condition.
★There are two different types clamping system. One is eccentric system, the other is screw on system. Above parts are for screw on system.
★Code No. **RCD-130** indicates a single cartridge. When ordering a pair cartridge, please appoint to us Code No. **S.RCD-130**.
★The cartridge head can be exchanged it self. **M10HZ-85CH-N, -E, -A, -K.**

BALANCE-CUT BACα ADVANCED BORING ARBOR for LARGE DIA. NIKKEN

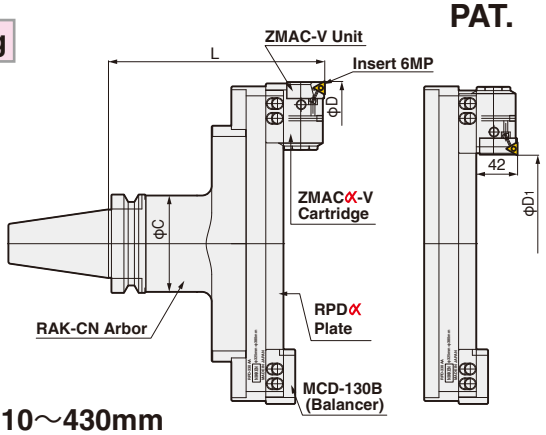
PAT.

For Finishing



BACα-V

High Pressure Coolant Through Tool

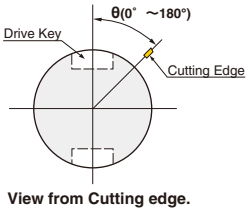


P.119

Boring Dia:φ130～595mm / Over Turning Dia. : 10～430mm

TAPE	Code.No	D MIN.～MAX.	L	D1 MIN.～MAX.	C	RAK Arbor Code No.	RPD Plate No.	Cartridge (Balancer)	Weight (Kg)
No.40	BT40-BAC130-225AAV	130～195	225	10～30	61	BT40-RAK-130A-CN	RPD-130AA		7.5
	(IT40)-BAC180-225AAV	180～245		30～80			-180AA		8.0
No.50	BT50-BAC130-205AAV	130～195	205	10～30	90	BT50-RAK-110A-CN	RPD-130AA	MCDZ-130AAV (MCD-130B) Insert 6MP	9.8
	(IT50) -255AAV		255			-160A-CN			12.5
	-305AAV		305			-210A-CN			15.2
	-355AAV		355			-260A-CN			17.9
	-405AAV		405			-310A-CN			20.6
	-455AAV		455			-360A-CN			23.3
	-505AAV		505			-410A-CN			26.0
	-BAC180-205AAV	180～245	205	30～80		-RAK-110A-CN	RPD-180AA		10.3
	-255AAV		255			-160A-CN			13.0
	-305AAV		305			-210A-CN			15.7
	-355AAV		355			-260A-CN			18.4
	-405AAV		405			-310A-CN			21.1
	-455AAV		455			-360A-CN			23.8
	-505AAV		505			-410A-CN			26.5
	-BAC230-205AAV	230～295	205	80～130		-RAK-110A-CN	RPD-230AA		10.9
	-255AAV		255			-160A-CN			13.6
	-305AAV		305			-210A-CN			16.3
	-355AAV		355			-260A-CN			19.0
	-405AAV		405			-310A-CN			21.7
	-455AAV		455			-360A-CN			24.4
	-505AAV		505			-410A-CN			27.2
	-BAC280-205AAV	280～345	205	130～180		-RAK-110A-CN	RPD-280AA		11.4
	-255AAV		255			-160A-CN			14.1
	-305AAV		305			-210A-CN			16.8
	-355AAV		355			-260A-CN			19.5
	-405AAV		405			-310A-CN			22.2
	-455AAV		455			-360A-CN			24.9
	-505AAV		505			-410A-CN			27.6
	-BAC330-220AAV*	330～395	220 (230*)	180～230	98	BT50-RAK330-125-CN I T50-RAK330-135-CN	RPD-330AA		16.7
	-BAC380-220AAV*	380～445		230～280			-380AA		17.2
	-BAC430-220AAV*	430～495		280～330			-430AA		17.7
	-BAC480-220AAV*	480～545		330～380			-480AA		18.2
	-BAC530-220AAV*	530～595		380～430			-530AA		18.7

★**"C" grade (Coated)** Inserts are supplied as standard. ☞**P.119** Please refer ☞**P.116** for cutting condition.
★Unit **"M10HZ-75V"** is provided as semi-standard, please refer **"M10HZ-85V"** ☞**P.98** for Arbor (**RAK**) and Plate (**RPD**) .
★Arbor, Plate and Cartridge are delivered in separate packages.
★When ordering, please let us know machine maker and model no. to avoid the interfererce with tool magazine of **ATC**.
★The location of cutting edge is same as drive key in standard.
The different location is available, please specify **θ** in Code No. **e.g. BT50-BAC180-255AAV (90°)**
★The boring arbors marked * with **IT50**, L (gauge length) is 220. **e.g. IT50-BAC330-230AAV**
★**RAK avbor with "-C" at the end of Code is centre through coolant type which is without coolant nozzle.**



View from Cutting edge.

MODULAR TYPE ARBOR

NIKKEN

BALANCE CUT RAKα BORING ARBOR for LARGE DIA. <RAK-CN Arbor>



RAK-CN

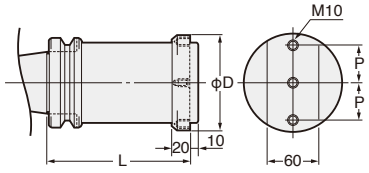


Fig.1

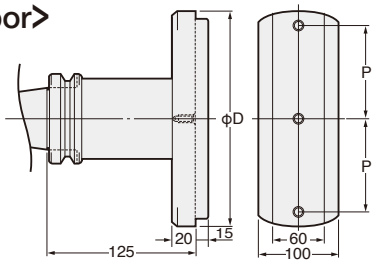
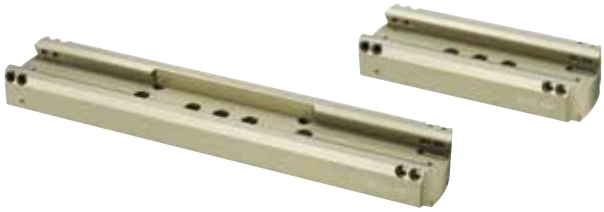


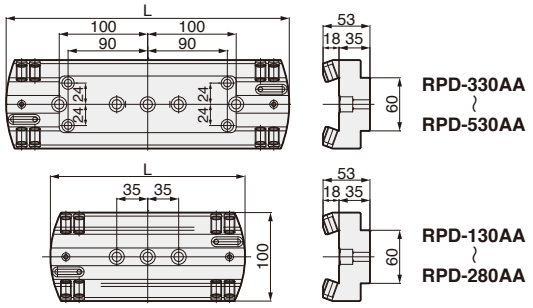
Fig.2

Code No.	Boring Range	L	D	P	Weight (Kg)	Applicable RPDα Plate	Hex. Socket bolt	Fig.
BT40 (IT40) -RAK-130A-CN	130～230	130	102	35	4.9	RPD-130AA, 180AA	M1035	1
BT50 -RAK-110A-CN	130～330	110			7.2	RPD-130AA, 180AA, 230AA, 280AA		
(IT50) -RAK-160A-CN		160			9.9			
-RAK-210A-CN		210			12.6			
-RAK-260A-CN		260			15.3			
-RAK-310A-CN		310			18.0			
-RAK-360A-CN		360			20.7			
-RAK-410A-CN		410			23.4			
-RAK330-125-CN*	330～580	125	240	100	12.0	RPD-330AA, 380AA, 430AA, 480AA, 530AA	M1045	2

★The location of the cutting edge is same as the drive key for standard. The different location is available, please specify θ. **e.g. BT50-RAK-160A-CN (90°)**
★**RAK avbor with "-C" at the end of Code is centre through coolant type which is without coolant nozzle.**
★* : In case of **IT50**, **IT50-RAK-CN-330-135** is standard gauge length.

BALANCE CUTα PLATE for LARGE DIA. <RPDα Plate>





Code No.	Boring Range	L	Weight (Kg)	Code No.	Boring Range	L	Weight (Kg)	Code No.	Boring Range	L	Weight (Kg)
RPD-130AA	φ130～180	124	1.1	**RPD-330AA**	φ330～380	320	3.2	**RPD-530AA**	φ530～580	520	5.2
-180AA	φ180～230	170	1.6	**-380AA**	φ380～430	370	3.7				
-230AA	φ230～280	220	2.2	**-430AA**	φ430～480	420	4.2				
-280AA	φ280～330	270	2.7	**-480AA**	φ480～530	470	4.7				

★Accessories : coupling sleeve (2pieces) code No. **RAK-CLS**.

ACCESSORIES for BALANCE-CUT BORING ARBOR for LARGE DIA.

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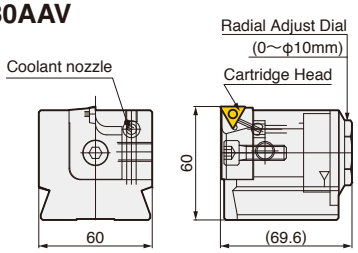
Accessories for Balance-Cut BACα-V

Balance-Cut BACα type cartridge for large dia.

MCDZ-130AAV



P.119

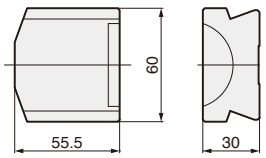


0.8Kg

BACα type Balancer for Balance-Cut large dia.

MCD-130B

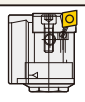




0.7Kg

Accessories	ZMAC-V Unit	Insert Tip	Clamp Bolt	Wrench for Insert	Coolant stop Screw	Lock Screw (M10)	L-Wrench for M1016	L-Wrench for M510	Adjustment Handle	Applicable RPDα Plate
Code No.	M10HZ-75V	**6MP-C**	M2577	T-8	M510	M1016	M5	M2.5	M10HZL	RPD-130AA,180AA,230AA,280AA,330AA,380AA,430AA,480AA,530AA

★Please refer ☞**P.98** for **RPDα** Plate. ★Set Code No. is **S.MCDZ-130AAV**.
★**M10HZ-75VR** with **CC08-C** insert tip is available. Please specify code No. **S.MCDZ-130AAVR**.
★**6MP-C** insert tip is supplied as standard. ☞**P.119** Please refer ☞**P.117** for cutting condition.



DJ BORING BAR

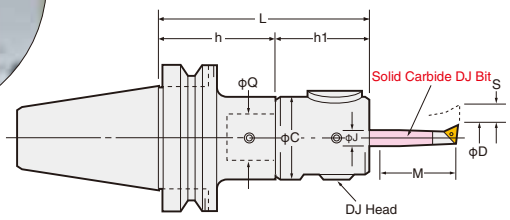
NIKKEN



BT-DJ

High Pressure Coolant Through Tool is available. Please contact us.





TAPER	Code No.	Boring Range D	Boring Depth M	L	C	Bit Hole Size J	Shank Code No. BTNo.Q-h	Head Code No. Q-MinD-h1	Bit Stroke S	DJ Bit Code No.	Weight (Kg)
No.30	BT30-DJ3- 80	3〜28	14〜 80	80	50	10	BT30-Q26- 40	Q26-DJ3-40A	5.2	J10	1.0
	-DJ8- 84AN	3〜50	14〜130	84	59	16		-DJ8-44AN	6.0	J16	1.2
No.40	BT40-DJ3- 90A	3〜28	14〜 80	90	50	10	BT40-Q26- 50	Q26-DJ3-40A	5.2	J10	1.6
	(IT40) -135A			135			- 95				2.2
	-DJ8- 94AN	3〜50	14〜130	94	59	16	BT40-Q26- 50	-DJ8-44AN	6.0	J16	1.9
	-139AN			139			- 95				2.5
No.50	BT50-DJ3-105A	3〜28	14〜 80	105	50	10	BT50-Q26- 65	Q26-DJ3-40A	5.2	J10	4.2
	(IT50) -210A			210			-170N				5.8
	-DJ8-109AN	3〜50	14〜130	109	59	16	BT50-Q26- 65	-DJ8-44AN	6.0	J16	4.5
	-214AN			214			-170N				6.0

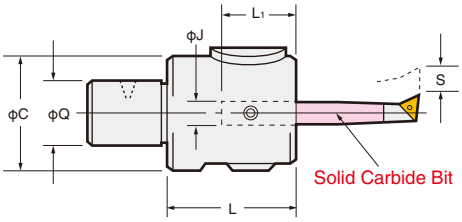
★**MIN. dial readout on dia.: 0.01mm, Sub scale: 0.005mm, 0.8mm/rev.**
★Each boxed set of **DJ3** and **DJ8** Boring Bars include 4 pcs of **DJ** Boring Bits as standard.
★Bits included for **BT40-DJ8-94A : J16-8-40, J16-18-80, J16-28-85, J16-38-85**
Bits included for **BT40-DJ8-94AN : J16-8-40, J16-18-60, J16-28-65, J16-38-65**
★**DJ** Boring Bar without Boring Bits is also available. Please add **"-BD"** at the end of Code No. **e.g. BT40-DJ3-90A-BD**
★Shank and **DJ** Head (including Boring Bits) are delivered in separate packages.
★Please refer ☞**P.100** for Boring Bits. Please refer ☞**P.118** for cutting condition.

DJ BORING HEAD with DJ BORING BIT

NIKKEN

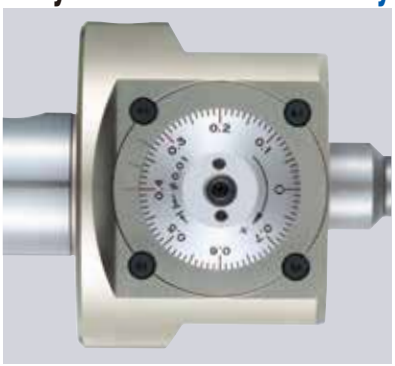


DJ



P.119

Easy to Set Micron Accuracy



▲1Graduation:0.01mm on dia.

DJ No.	Code No.	Boring Range D	Boring Depth M	Q	L	C	Bit Hole Size J	L1	Bit Stroke S	Weight (kg)	Bit Code No. (Standard Accessories)	Insert Tip Code No.
DJ3	Q26-DJ3-40A	3〜28	14〜80	26	40	50	10	27	5.2	0.5	J10- 3-14 J10- 5-35 J10- 8-40 J10-18-62A	— CC03-C 3MP-C 6MP-C
DJ8	Q26-DJ8-44AN	3〜50	14〜130	26	44	59	16	32	6.0	0.8	J16- 8-40 J16-18-60 J16-28-65 J16-38-65	3MP-C 6MP-C

★**MIN. dial readout on dia.: 0.01mm, Sub scale: 0.005mm, 0.8mm/rev.**
★Each boxed set of **DJ3** and **DJ8** Boring Bars include 4 pcs. of **DJ** Bits, Insert, Insert Clamp Handle, **(T6**, **T8**, **(10S for DJ3)**)Micro Adjusting Handle **(M2.5)** as standard.
★Bits included for **Q26-DJ8-44A : J16-8-40, J16-18-80, J16-28-85, J16-38-85**
Bits included for **Q26-DJ8-44AN : J16-8-40, J16-18-60, J16-28-65, J16-38-65**
★Please refer ☞**P.100** for Boring Bits. Please refer ☞**P.118** for cutting condition.
★**DJ** Boring Head without Bits is also available.Please add **"-BD"** at the end of Code No. **e.g. Q26-DJ3-40A-BD, Q26-DJ8-44A-BD**

★Weight of wooden box of **DJ** head with Boring Bits
Q26-DJ3-40A : 1.2kg
Q26-DJ8-44AN : 2.2kg
Q26-DJ8-44A : 2.5kg

DJ BORING BIT SOLID CARBIDE

NIKKEN



New Bit Series for DJ8

Explanation of the Code No.

J | 16 - 5 - 35

- 35: Boring Depth(mm)
- 5: Min. Boring Dia.
- 16: Dia. of Shank.
- J: Abbreviation of DJ Bit.

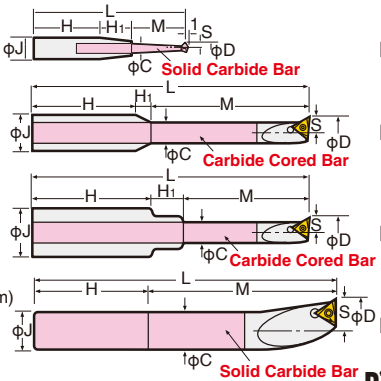


Fig.1 Fig.2 Fig.3 Fig.4

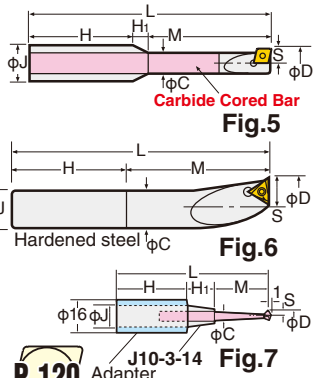


Fig.5 Fig.6 Fig.7

P.119 P.120

Style	Code No.	Boring Range D	Boring Depth M	J	L	H	H1	C	S	Insert No.	Insert Clamping Bolt No.	Insert Clamping Handle No.	Fig.	Weight (g)
DJ3	J10- 3- 14	3~ 8	14	10	62	30	18	2.2	1.5	–	–	–	1	30
	- 5- 30*	5~15	30		60		–	4.3	2.5	CC03-C	M611	10S	5	28
	- 5- 35		35		70		5.0							30
	- 8- 35*	8~18	35		65		–	7.2	4.0	3MP-C	M2040	T-6	2	43
	- 8- 40		40		75	32.5	2.5							50
	- 8- 55*		55		90									70
	-12- 40*2	12~22	40		70	30	–	10	6.0				4	80
	-12- 55*2		55		85	26								100
	-18- 65*1	18~28	65		91	26	–	12	9.0	6MP-C	M2577	T-8		130
	-18- 50A*2		50		79	29								110
	-18- 62A*2		62		91									130
	-18- 80*1		80		106	26								
	-18- 77A*2		77			29								
DJ8	J10- 3- 14*	3~ 8	14	10	62	30	18	2.2	1.5	–	–	–	7	30
	J16- 5- 25*	5~15	25	16	60	31.5	3.5	4.3	2.5	CC03-C	M611	10S	5	76
	- 5- 35*		35		78	33	10							80
	- 8- 35*	8~18	35		70	32.5	2.5	7.2	4.0	3MP-C	M2040	T-6	2	90
	- 8- 40		40		83	32	10						3	100
	- 8- 55*		55		98									110
	-12- 50*	12~22	50		90	35	–	11.2	6.0		M2045		2	140
	-12- 60*		60		103	40.5	2.5							170
	-18- 60	18~28	60		93	33	–	16	9.0	6MP-C	M2577	T-8	6	150
	-18- 80		80		113								4	300
	-18-100*		100		133									350
	-18-120*		120		153									400
	-28- 65	28~39	65		98				14.0				6	150
	-28- 85		85		118								4	300
	-28-100*		100		133									350
	-28-130*		130		163									450
	-38- 65	38~50	65		98				19.0				6	200
	-38- 85		85		118								4	350
	-38-100*		100		133			23						370
	-38-130*		130		163			16						470

★The Bits marked * are optional accessories. **Please refer ☞P.118 for cutting condition.**

★9DJ8-J10-ADP adapter option is necessary to use J10-3-14 for DJ8 head.

★The shorter bits are added for J10-5, J10-8, J10-12 and J10-18. **★The shorter bits are added for J16-5, J16-8 and J16-12.**

★"C" grade (Coated) insert tip is supplied. Please refer ☞P.118 for cutting condition.

★Coolant through tool is basically available for the boring bits with MIN. boring diameter is ϕ12mm. e.g. J16-12-60C Please contact us.

★*1 meaus bits for old type **DJ3**. ★*2 meaus bits for new type **DJ8**. It can be used for old type **DJ8,** but **M** will be 3mm longer than aboue figure. **e.g. J10-18-65A**

Oil Hole Bit

Style	Code No.	Boring Range D	Boring Depth M	J	L	H	H1	C	S	Insert No.	Insert Clamping Bolt No.	Insert Clamping Handle No.	Fig.	Weight (g)
DJ3	J10-12- 40C	12~22	40	10	70	30	–	10	6.0	3MP-C	M2040	T-6	4	80
	-12- 55C		55		85									100
	-18- 65C	18~28	65		91	26		12	9.0	6MP-C	M2577	T-8		130
	-18- 80C		80		106									
DJ8	J16-12- 50C	12~22	50	16	90	35	–	11.2	6.0	3MP-C	M2045	T-6	2	140
	-12- 60C		60		103	2.5	40.5							170
	-18- 60C	18~28	60		93	33	–	16	9.0	6MP-C	M2577	T-8	6	150
	-18- 80C		80		113								4	300
	-18-100C		100		133									350
	-18-120C		120		153									400
	-28- 65C	28~39	65		98				14.0				6	150
	-28- 85C		85		118								4	300
	-28-100C		100		133									350
	-28-130C		130		163									450
	-38- 65C	38~50	65		98				19.0				6	200
	-38- 85C		85		118								4	350
	-38-100C		100		133			23						370
	-38-130C		130		163			16						470

BASE HOLDER for MODULAR TYPE (BT Shank)

NIKKEN



Q

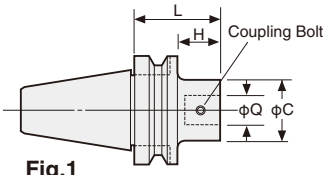


Fig.1

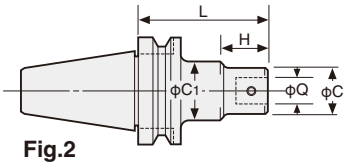


Fig.2

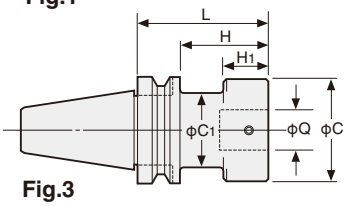


Fig.3

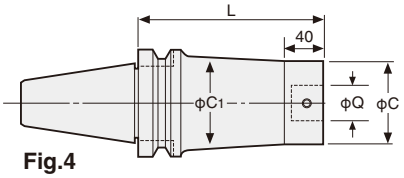
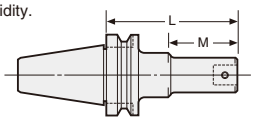


Fig.4

TAPER	Code No.	Coupling Dia Q	L	C	C1	H	H1	Coupling Bolt No.	Fig.	Weight (kg)
No.30	BT30-Q 9- 50	9	50	19	30	20	–	B19	2	0.5
	-Q12- 65	12	65	24	–	40		B12	1	0.5
	-Q16- 50	16	50	31		25		B16		0.5
	-Q20- 50	20	50	40		26		B20		0.5
	-Q26- 40	26	40	50	45	18	6	B26N	3	0.5
No.40	BT40-Q 9- 80	9	80	19	30	5	–	B19	2	1.2
	- 95N		95			27				1.2
	-Q12- 80	12	80	24	35	12		B12		1.2
	- 110		110			50				1.3
	-Q16- 95	16	95	31	42	22		B16		1.5
	- 125		125			55				1.6
	-Q20- 80	20	80	40	50	27		B20		1.5
	- 110		110			60				1.7
	-Q26- 50	26	50	50	-	20		B26N	1	1.1
	- 95		95			65				1.8
	- 140		140			110				2.4
	-Q34- 95	34	95	64	62	68	55	B34	3	2.2
	- 110		110			83	70			2.6
	-Q42- 95	42	95	83		68	55	B42		2.8
No.50	BT50-Q 9- 110	9	110	19	40	5	–	B19	2	4.1
	- 125N		125			27				4.1
	-Q12- 95	12	95	24	44	12		B12		4.0
	- 125		125			50				4.0
	-Q16- 125N	16	125	31	50	22		B16		4.5
	- 155		155			55				4.6
	-Q20- 110	20	110	40	60	27		B20		4.6
	- 125		125			60				4.5
	-Q26- 65	26	65	50	65	27		B26N	1	3.7
	- 140		140			47			2	5.3
	- 170N		170			112				5.4
	-Q34- 140	34	140	64	80	102		B34	1	5.6
	- 170		170			120			2	6.5
	- 200		200			150				7.1
	-Q42- 125	42	125	83	-	87		B42	1	6.5
	- 190		190			152				9.1
	-Q42- 225A	42	225	83	98	-			4	12.9
	- 275A		275							15.6
	- 325A		325							18.3
	- 375A		375							21.0

★ϕC of **Q26** base holder has been increased from 45mm to 50mm due to improvement of its rigidity.
★All base holders have a centre through-tool coolant hole.
★The Coupling screw & wrench are supplied as standard.
★**When L length is required longer than standard, please specify the boring depth M.**



Q No.

SPACER for MODULAR TYPE

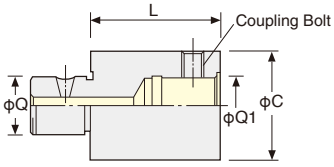
NIKKEN

BT

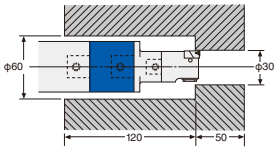
Extension Spacer



SP

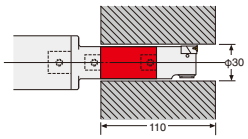


■ Example of small diameter boring in a deep recess using the largest diameter extension spacer in order to maintain rigidity.



BT40-Q26-95
SP26-26-60
SP26-12-30
12-ZMAC25-40V

■ Example of deep hole boring using the extension spacer with the same diameter as head.



BT40-Q26-95
SP26-12-30
SP12-12-60
12-ZMAC25-40V

Code No. Q-Q1-L	Coupling Dia Q	Coupling Dia Q1	C	Coupling Bolt No.	Weight (kg)
SP 9- 9-30, 45	9	9	19	B19	0.06, 0.1
SP 12-12-30, 45, 60	12	12	24	B12	0.1, 0.15, 0.2
SP 16-16-30, 45, 60	16	16	31	B16	0.15, 0.25, 0.35
SP 20-20-45, 60	20	20	40	B20	0.4, 0.5
SP 26-26-60, 90	26	26	50	B26N	0.8, 1.2
SP 34-34-60, 90	34	34	64	B34	1.4, 2.0
SP 42-42-60, 90	42	42	83	B42	2.4, 3.4

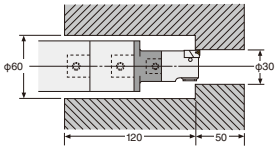
★ϕC of **SP26** Spacer has been increased from 45mm to 50mm due to improvement of its rigidity.
★All spacers have a centre through-tool coolant hole. ★The Coupling screw is included as standard.

Stepped Spacer

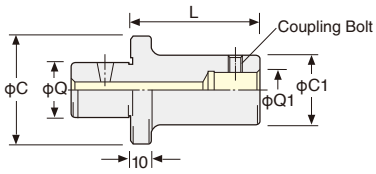


SP

■ Example of small diameter boring in deep recess using stepped spacer with the same diameter as head.



BT40-Q26-95
SP26-26-60
SP26-12-30
12-ZMAC25-40V



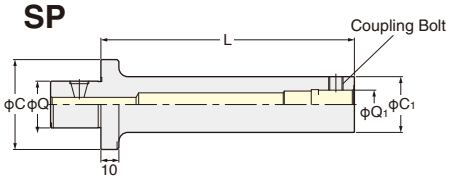
Code No. Q-Q1-L	Coupling Dia Q	Coupling Dia Q1	C	C1	Coupling Bolt No.	Weight (kg)
SP 12- 9-45	12	9	24	19	B19	0.1
SP 16- 9-45	16	9	31	19	B19	0.15
-12-60		12		24	B12	0.25
SP 20- 9-45	20	9	40	19	B19	0.2
-12-60		12		24	B12	0.3
-16-60, 90		16		31	B16	0.4, 0.6
SP 26- 9-30, 45	26	9	50	19	B19	0.3, 0.3
-12-30, 60		12		24	B12	0.3, 0.4
-16-30, 60, 90		16		31	B16	0.3, 0.5, 0.6
-20-30, 60, 100		20		40	B20	0.4, 0.6, 1.0
SP 34-16-60, 90	34	16	64	31	B16	0.7, 0.9
-20-60, 100		20		40	B20	1.0, 1.3
-26-60, 100		26		50	B26N	1.1, 1.5
SP 42-20-60, 100	42	20	83	40	B20	1.2, 1.6
-26-60, 100		26		50	B26N	1.4, 1.9
-34-60, 100		34		64	B34	1.8, 2.5

★ϕC of **SP26** Spacer has been increased from 45mm to 50mm due to improvement of its rigidity.
★All spacers have a centre through-tool coolant hole. ★Coupling bolt is supplied as standard.

A1 Spacer for Deep Hole



SP



L/D:MAX.6 times

Code No. Q-Q1-L	Coupling Dia Q	Coupling Dia Q1	C	C1	MAX. L	Weight (kg)
SP 26- 9- 85-A1	26	9	50	19	85	0.6
-12-115-A1		12		24	115	0.7
-16-140-A1		16		31	140	0.9
-20-180-A1		20		40	180	1.2
-26-190-A1		26		50	190	1.5

Please specify the "**L**" length when ordering. Code No. is
e.g SP26-9-85-A1 (Q1=9 and L-85)

Modular connection system is the face contact system drawing-in by the bolt, which top shape is gentle taper.
1. Insert a head by adjusting the hole positions.
2. Tighten the bolt temporary, then loosen slightly.
3. Tighten the bolt again by moving the head CW and CCW. (Centering each other)
4. Then tighten the bolt completely until face contact.

2LOCK MAJOR DREAM HOLDER BASE HOLDER for MODULAR TYPE NIKKEN



MDQ
Photo shows with **A1 spacer** and **ZMAC𝒵-V** head.

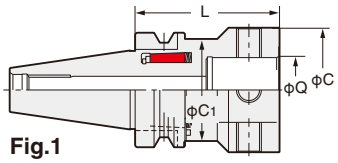


Fig.1

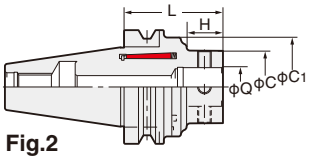
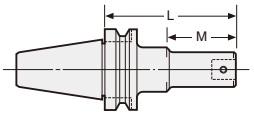


Fig.2

TAPER	Code No.	Q	L	C	C1	H	Weight (kg)	ZMAC-V Boring Range	Fig
No.30	NBT30-MDQ26- 60	26	60	50	50	37.5	-	16～70	1
No.40	NBT40-MDQ26- 65	26	65	50	54	30.0	1.3	16～70	2
No.50	NBT50-MDQ26- 80	26	80	50	87	22.0	4.6	16～70	2
	-MDQ34- 90	34	90	64	87	32.0	4.9	16～85	
	-MDQ42-100	42	100	83	87	45.0	5.7	16～180	

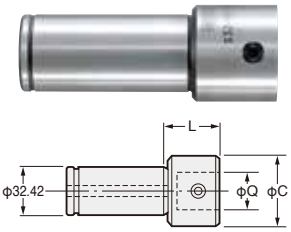
★All base holders are used for centre through tool coolant.
★Coupling bolt and wrench are supplied as standard.
★ZMAC𝒵-V head is recommended to use with the MAJOR DREAM base holder for anti-vibration.
★When L length is required longer than standard, please specify the boring depth M and Q No.



Q No.

MODULAR TYPE STRAIGHT SHANK NIKKEN

K-Q




ZMAC-V Head ☞ P.87


RAC Head ☞ P.79


DJ Head ☞ P.99

Code No.	Coupling Dia. Q	C	L	Coupling Bolt.	Weight (Kg)
K32-Q 9-20	9	19	20	B19	0.4
-40			40		0.5
-Q12-20	12	24	20	B12	0.4
-60			60		0.6
-Q16-20	16	31	20	B16	0.5
-55			55		0.7
-Q20-40	20	40	40	B20	0.7
-Q26-40	26	50		B26N	0.8
K42-Q26-40				B26N	1.2

★All straight shank base holders are used for centre through tool coolant.

CHANFERING CUTTER for Modular System

CAF



Code No.	Coupling Dia.	Chamfering Dia.	Code No.	Coupling Dia.	Chamfering Dia.
CAF 9- 32	9	20～32	CAF20- 60	20	42～60
CAF12- 38	12	25～38	CAF26- 85A	26	56～85
CAF16- 45	16	33～45	CAF34-110	34	70～110

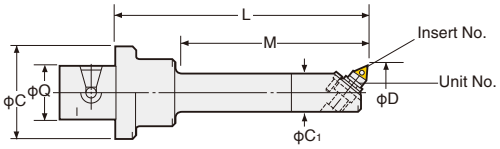
★Chanfering angle is 45°

MODULAR TYPE BORING HEAD

NIKKEN

BCB Micro-Cut Boring Head



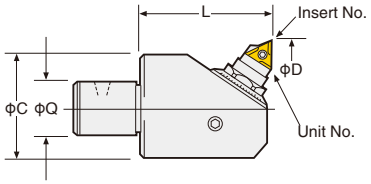


P.121

Code No.	Boring Range D	Boring Depth M	Coupling Dia Q	Total Length L	C	C_1	Unit No.	Insert No.
Q26-BCB12.7S- 95	12.7～14.5	60	26	95	50	12	M1-12.7	1MP-T
Q26-BCB14.5S-100	14.5～19.5	65		100		13	M1-14.5	
Q26-BCB19 S-125	19 ～22.5	90		125		18	M2-19	3MS-T

★"T" grade (Cermet) insert is supplied as standard. ☞P.121 Please refer ☞P.117 for cutting condition.

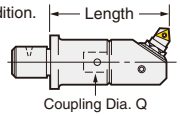




P.121

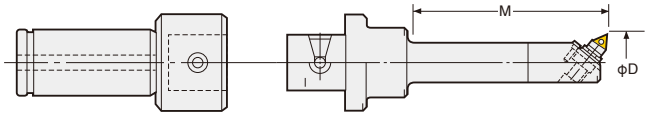
Set/Head Code No	Boring Range D	Boring Depth M	Coupling Dia Q	Remarks		
				C	Unit No.	Insert No.
9-BCB 22 - 40	22 ～29.5	40	9	20	M 2- 22	3MS-T
12-BCB 29 - 40	29 ～ 41		12	25	M 3- 29	
16-BCB 38 - 55	38 ～ 50	55	16	35	M 5- 38	6MP-C
20-BCB 48 - 70	48 ～ 65	70	20	41	M 5- 48	
26-BCB 62 - 70	62 ～ 90		26	54	M 7- 62	10MP-T
34-BCB 82 - 85	82 ～110	85	34	67		
42-BCB100 -100	100～140	100	42	85	M10-100	

★"6MP-C" (Coaterd) insert or "T" grade (Cermet) insert is supplied as standard. ☞P.121 Please refer ☞P.117 for cutting condition.
★Min. dial readout (on dia) : 0.02mm (Sub scale : 0.002mm)
★**Code No. of the set with SP26 stepped spacer is Q26-Coupling Dia.-BCB○-Length e.g. Q26-20-BCB48-100**



Straight Shank MICRO CUT BORING BAR

NIKKEN



The sales of micro cut boring bar will be finished, when the stock is sold out.

P.121

K-BCB

Style	Code. No.	Q Holder Code. No.	Head No.	Boring Range ϕD	Boring Depth	Insert No.
K32	K32-BCB12.7S-135	K32-Q26-40	Q26-BCB12.7S- 95	12.7～14.5	60	1MP-T
	-BCB14.5S-140		-BCB14.5S-100	14.5～19.5	65	

★Please refer ☞P.103 for straight shank base holder and ☞P.104 for micro cut head.
★"T" grade (Cermet) Insert is supplied as standard. ☞P.121 Please refer ☞P.117 for cutting condition.
★**Please use ZMAC-V Boring Bar for the bore dia. is larger equal to ϕ16mm.** ☞P.105

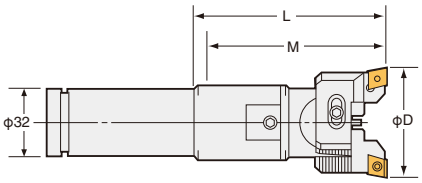
Straight Shank BALANCE CUT BORING BAR

NIKKEN









K-RAC

You can use following boring tools with C32 Milling Chuck. It is convenient for Various/Small Volume Productions.
Use with Straight Shank ZMAC-V Boring Bar. P.74

Code. No.	Boring Range D	Boring Depth M	Shank Code No.	Head No.	Insert No.	Weight (kg)
K32-RAC25- 75E	25～ 32	70	K32-Q12-20	**12-RAC 25- 55E**	**CCO7-C**	0.8
-115E		93	-Q12-60			0.9
-RAC32- 75E	32～ 45	70	-Q16-20	**16-RAC 32- 55E**	**CCO8-C**	1.1
-110E		105	-Q16-55			1.3
-RAC43-110E	43～ 55		-Q20-40	**20-RAC 43- 70E**	**CC12-C**	1.7
-RAC53-110E	53～ 70		-Q26-40	**26-RAC 53- 70E**		1.8
-RAC70-110E＊	70～100			**26-RAC 70- 70E**		1.9

★Balance cut boring bar on above table is the boring bar with the cartridges (**E**) for steel, stainless and cast iron. "**C**" grade (Coated) insert tip is supplied as standard. ☞**P.72**
★Boring bar with the cartridges for heavy duty boring of iron and cast iron ☞**P.74**, for aluminium (**A**) ☞**P.76** and for through hole and multi sheets (**K**) . ☞**P.78**
Please refer ☞**P.116** for cutting condition.
★Shank (**P.103**) and head (**P.79**) are delivered in separate packages.
★For centre through tool coolant type except **K32-RAC70-110E** marked ＊, please add "**-C**" at the end of Code No. **e.g. K32-RAC53-110E-C**

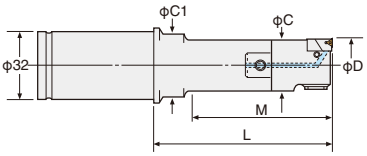
Straight Shank ZMAC ADVANCED BORING BAR

NIKKEN









K-ZMAC-V

You can use following boring tools with C32 Milling Chuck. It is convenient for Various/Small Volume Productions. **PAT.**

Code No.	Boring Range D	Boring Depth M	C	C_1	Shank Code No.	P.119		P.120		Weight (kg)
						Head No.	Insert No.	Head No.	Insert No.	
K32-ZMAC16- 65V	15.9～20.2	38	15	-	K32-Q12-20	**12-ZMAC16-45V**	**3MP-C,B**	-	-	0.5
- 75V		48				**12-ZMAC16-55V**				0.5
-ZMAC20- 60V	19.8～25.2	55	19	-	-Q 9-20	**9-ZMAC20-40V**				0.6
- 80V		63		30	-Q 9-40					0.7
-ZMAC25- 60V	24.8～32.2	55	24	-	-Q12-20	**12-ZMAC25-40V**				0.6
-100V		83		30	-Q12-60					0.7
-ZMAC32- 75V	31.8～42.2	70	31	-	-Q16-20	**16-ZMAC32-55V**	**4MP-C,B**	**16-ZMAC32R-55V**	**CC06-C**	0.9
-110V		105			-Q16-55					1.1
-ZMAC42-110V	41.8～55.2		40	-	-Q20-40	**20-ZMAC42-70V**	**6MP-C,B**	**20-ZMAC42R-70V**		1.5
-ZMAC55-110V	54.8～70.2		53	-	-Q26-40	**26-ZMAC55-70V**		**26-ZMAC55R-70V**		1.6

★All Codes shown are for Heads with Triangular Inserts.
For Heads with Rhomboid Inserts, please add "R" to the Code No. e.g.) K32-ZMAC32 R -75V

★MIN. dial read out: **ZMAC25-V** and smaller is 0.02mm on dia. **ZMAC32-V** and larger is 0.01mm on dia.
★**"C" grade (coated) Insert for Steel, Stainless and Cast Iron is supplied as standard with the Head. (Smooth Boring and Long tool-life)** Please refer ☞ **P.117** for cutting condition.
We would recommend "**B**" grade (**CBN**) Insert for Hardened Steel and High Speed Boring of Cast Iron.
★Centre Through Tool Coolant function is available as standard.

Straight Shank DEEP HOLE ZMACX ADVANCED BORING BAR NIKKEN

Axially Adjustable and Solid Carbide



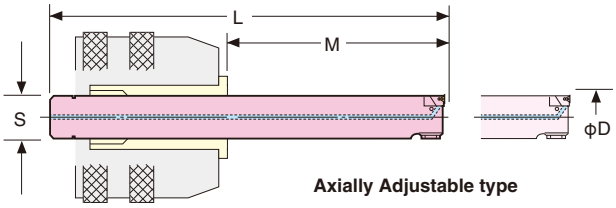
For Deep Hole Boring



For Deep Hole Boring with Extended Gauge Length







Axially Adjustable type

S-ZMACX-V

PAT. P.119

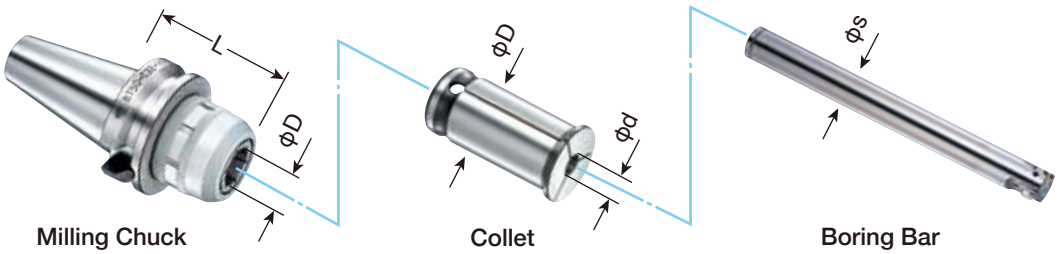
Code. No.	Boring Range D	Boring Depth M	L	S	Unit No.	Insert No.	Weight (kg)	Suitable Holder	
								Chuck	KM Collet
S12-BCBX12.7- 95	12.7～14.5	50～ 95	130	12	M1-12.7	1MP-T	0.2	BT40-C32 BT50-C32	KM32-12
S13-BCBX14.5-105	14.5～19.5	50～105	135	13	M1-14.5				-13
S15-ZMACX16-120V	15.9～20.2	65～120	150	15	M2HZ-16V	3MP-C, B	0.3		-15
S19-ZMACX20-150V	19.8～25.2	100～150	180	19	M2HZ-20V		0.6		-19
S24-ZMACX25-190V	24.8～32.2	140～190	220	24	M3HZ-25V		1.3		-24
S30-ZMACX32-260V	31.8～42.2	190～260	290	30	M4HZ-32V	4MP-C, B	2.6		-30
S32-ZMACX42-275V	41.8～55.2	205～275	305	32	M5HZ-42V	6MP-C, B	3.8		–

★**T** grade (Cermet) insert tip or "**C**" grade (Coated) insert tip is supplied as standard for **BCBX** or **S-ZMACX-V** respectively. ☞P.119 Please refer ☞P.117 for cutting condition.
★Centre Through Tool Coolant function of **ZMAC-V** is available as standard.

Deep Hole Boring Operation with combination of Milling Chuck, Collet and S-ZMACX-V Boring Bar.

Ultra Deep Hole Boring MAX.L/D=8 times with Carbide Solid Boring Bar

Axially Adjustable with Milling Chuck



Milling Chuck　　Collet　　Boring Bar

TAPER	Milling Chuck Code No.	Collet
No.40	BT40 -C20- 70, 90, 105, 120	KM20
	-C25- 70, 90, 120	KM25
	-C32- 85, 105, 120	KM32
No.50	BT50 -C20-105, 135, 165, 180	KM20
	-C25-105, 135, 165	KM25
	-C32- 90, 105, 120, 135, 165	KM32
	-C42- 95, 105, 120, 135, 165	KM42

KM Collet No.
KM20-12
-13
KM25-12
-13
-15
KM32-12
-13
-15
-19
-24
-30
–

★KM42-12, 13, 15, 19, 24, 30, 32 are also available.

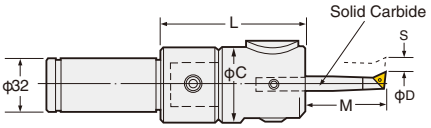
Deep Hole Boring Bar Code No.
S12-BCBX12.7- 95
S13-BCBX14.5-105
S12-BCBX12.7- 95
S13-BCBX14.5-105
S15-ZMACX16-120V
S12-BCBX12.7- 95
S13-BCBX14.5-105
S15-ZMACX16-120V
S19-ZMACX20-150V
S24-ZMACX25-190V
S30-ZMACX32-260V
S32-ZMACX42-275V

Straight Shank DJ BORING BAR

NIKKEN







K-DJ

You can use following boring tools with C32 Milling Chuck.
It is convenient for Various/Small Volume Productions.

P.119 P.120

Code No.	Boring Range D	Boring Depth M	L	C	Bit Hole Size L	Shank Code No.	Head No.	Bit Stroke S	Bit Code No.	Weight (kg)
K32-DJ3-80A	3～28	14～ 80	80	50	10	**K32-Q26-40**	**Q26-DJ3-40A**	5.2	**J10**	1.3
-DJ8-84AN	3～50	14～130	84	59	16		**-DJ8-44AN**	6.0	**J16**	1.6

★**MIN. dial readout on dia.: 0.01mm, Sub scale: 0.005mm, 0.8mm/rev.**
★Each box set of **DJ3** and **DJ8** Boring Bar includes 4 pcs of Boring Bits and insert tips.
Bits included to **K32-DJ8-84A : J16-8-40, J16-18-80, J16-28-85, J16-38-85**
Bits included to **K32-DJ8-84AN ; J16-8-40, J16-18-60, J16-28-65, J16-38-65**
★Please refer ☞**P.100** for Boring Bit. Please refer ☞**P.118** for cutting condition.
★**DJ** Boring Bar without Boring Bits is available. **Please add "-BD" at the end of Code No. e.g. K32-DJ8-84A-BD**

MULTI STAGE BORING BAR

NIKKEN

Please provide your material drawing, machining drawing and machine infomation for multi stage boring bars.

Multi-Boring



Rough Boring by ISO Cartrige



Boring, Over Turnning



Rough Boring by ISO Cartrige



Multi-Boring



Please supply ISO cartriges basically, even we can provide by ourselves.

eMAC BORING SET PARTS LIST

NIKKEN

eMAC Boring Set

＊Photo Shows S.EMAC6110



ϕ 6 ~ 110 eMAC Boring Set

Code. No.	Part name		Code No.	Q'ty	Weight(Kg)
S.EMAC6110	eMAC Boring Head		Q26-EMAC6110-61	1	0.85
	Boring Bit		EJ16-6-21	1	0.04
			EJ16-8-28	1	0.04
			EJ16-11-40	1	0.06
			EJ16-16-50	1	0.07
			EJ16-22-68	1	0.1
	Extension Bar for Cartridge(S/M)		ECCB-53	1	0.5
	Cartridge	S	ECC -28-10	1	0.01
		M	ECC -36-11.5	1	0.02
		L	ECC -54-19	1	0.08
	Bush		ECC -54-BM10	1	0.02
	Plate for Cartridge		ECCP-14	1	0.2
	Counter Weight for Large Dia.		ECC-92-CW	1	0.5
	Insert Tip		EM02-T2(NX)	2	—
			EM09-T2(NX)	5	—
			EM11-T2(NX)	1	—
	Tip Clamping Bolt / Spare		TS21	1	—
			TS211	1	—
			CS250T	1	—
			CS300890T	1	—
	Wrench Set			1	—
	Case			1	—

★Base Holder for eMAC Boring Head is available as an option. ★Please refer ☞P.111 for Insert Tip.
★Gross weight : 2.9kg Case Size : 330×290×120

eMAC-W Boring Set

ϕ 85 ~ 200 eMAC-W Boring Set Parts List

Code. No.	Part name	Code No.	Q'ty	Weight(Kg)
S.EMAC6200 -W85200	eMAC-W Boring Head	Q42-EMAC6200W-85	1	3.4
	Cartridge(L)	ECC-54-19	1	0.08
	Plate for Cartridge(L)	ECCP-23	1	0.4
		ECCP-23L	1	0.6
	Counter Weight for Large Dia.	ECC-92-CW	1	0.05
	Insert Tip	EM11-T2(NX)	1	—
	Tip Clamping Bolt / Spare	CS300890T	1	—
	Wrench Set		1	—
	Case		1	—

★Base Holder for eMAC Boring Head is available as an option. ★Please refer ☞P.111 for Insert Tip.
★Gross weight : 5.7kg Case Size : 330×290×120

eMAC Boring Head / Combination of Processing Each Dia.



ϕ 6 ~ 30



ϕ 54 ~ 86



ϕ 28 ~ 56



ϕ 80 ~ 110

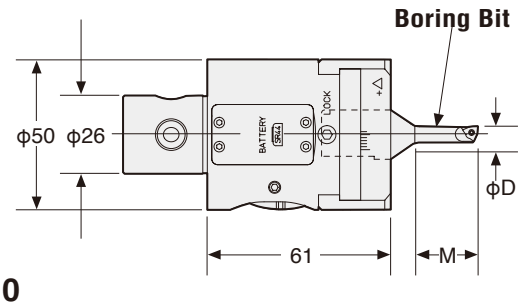
MODULAR TYPE eMAC BORING HEAD

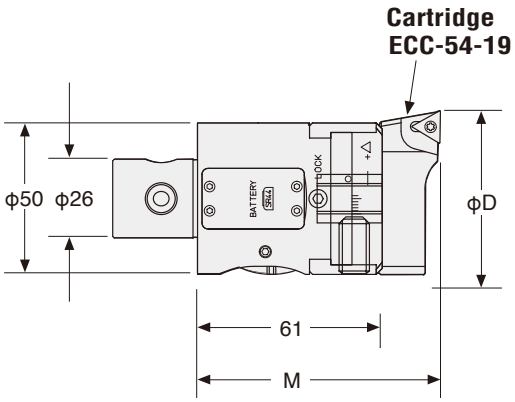
NIKKEN

NEW



eMAC　　ϕ6～ϕ110



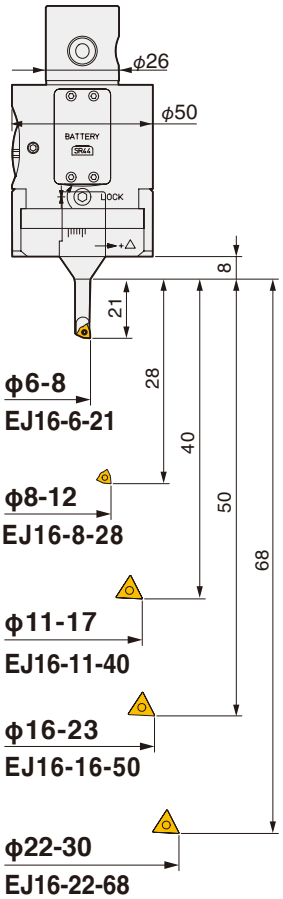


Q No.	Boring Head Code No.	Boring Range ϕD	Boring Depth M	Boring Bit	Solid Boring Bit	Cartridge
Q26	Q26-EMAC6110-61	ϕ6～ϕ110	21～(94) ＊Please refer to the layout below	EJ16- 6-21	EJX16- 6- 45	ECC-28- 10 -36-11.5 -54- 19
				- 8-28	- 8- 60	
				-10-35	-10- 75	
				-11-40	—	
				-12-42	-12- 90	
				-14-50	-14-105	
				-16-50	-16-120	
				-18-63	—	
				-22-68	—	

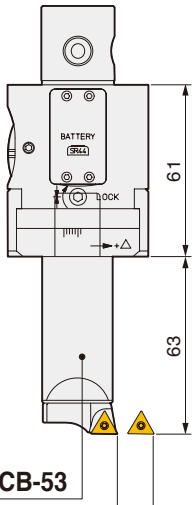
★Please refer ☞ P.102 for Spacer.
★Centre Through Tool Coolant function is available as standard.(MAX.4MPa)
★Please refer ☞ P.111 for Boring Bit, Cartridge and Insert Tip.

COMBINATION OF PROCESSING EACH DIAMETER

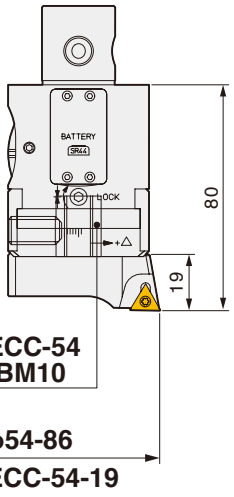
ϕ6-30



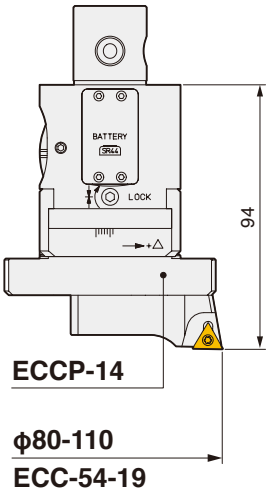
ϕ28-56



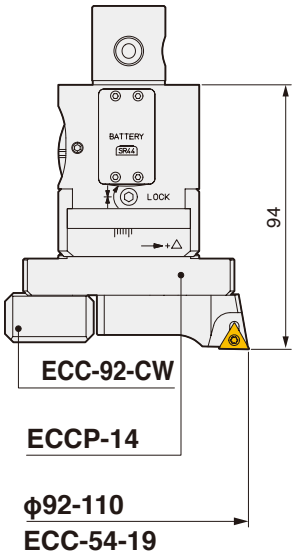
ϕ54-86

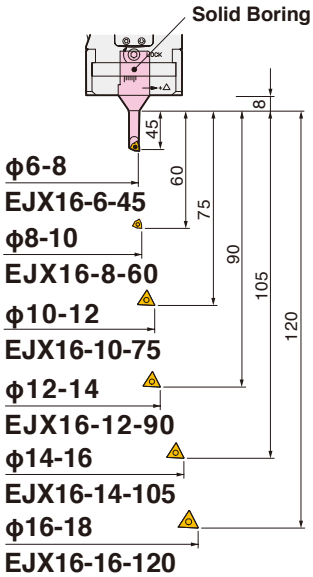


ϕ80-110



ϕ92-110





＊ϕ6 to ϕ30 bits are the minimum layout for set products.
The ideal bits are also available.
For details, please refer to the Boring Bit Cartridge table on ☞ P.111.

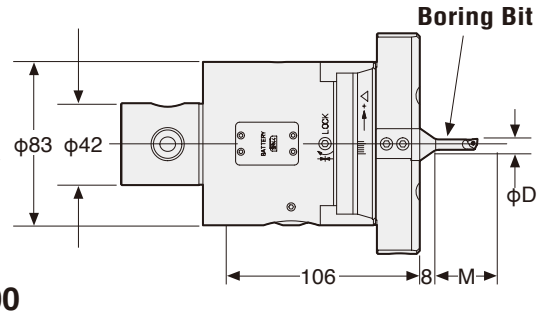
MODULAR TYPE eMAC-W BORING HEAD

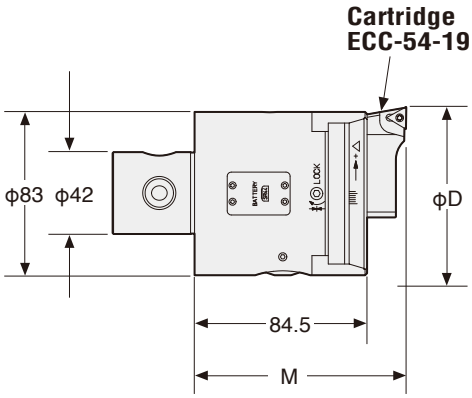
NIKKEN

NEW



eMAC-W　　ϕ6～ϕ200



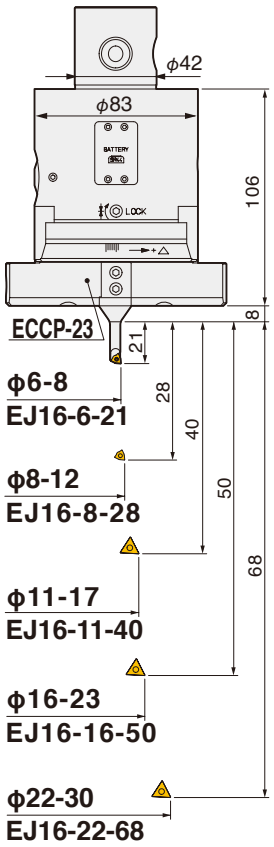


Q No.	Boring Head Code No.	Boring Range ϕD	Boring Depth M	Boring Bit		Cartridge
Q42	Q42-EMAC6200W-85	ϕ6 ～ ϕ200	21～(125.5) ＊ Please refer to the layout below	EJ16- 6-21 - 8-28 -10-35 -11-40 -12-42 -14-50 -16-50 -18-63 -22-68		ECC-28- 10 -36-11.5 -54- 19

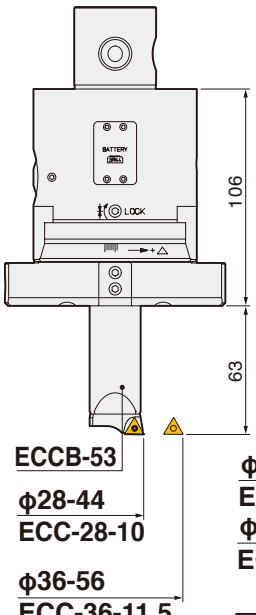
★Please refer ☞ P.102 for Spacer.
★Centre Through Tool Coolant function is available as standard.(MAX.4MPa)
★Please refer ☞ P.111 for Boring Bit, Cartridge and Insert Tip.

COMBINATION OF PROCESSING EACH DIAMETER

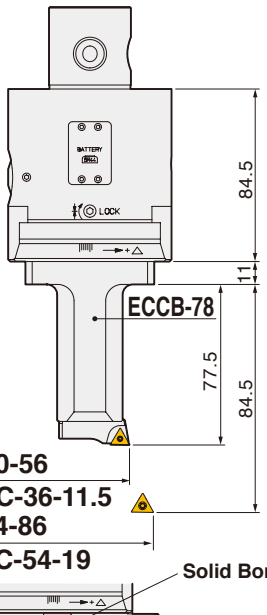
ϕ6-30



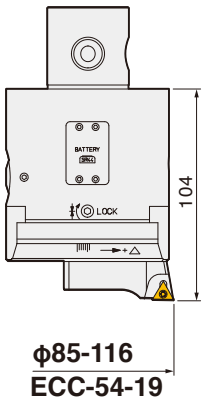
ϕ28-56



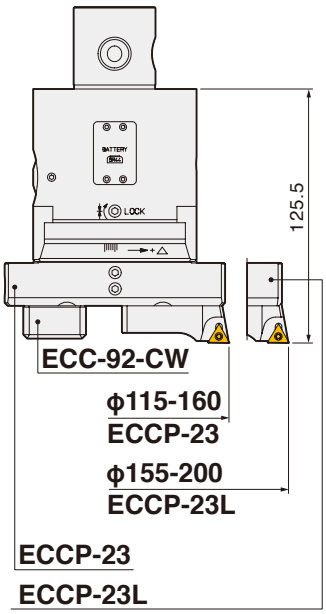
ϕ40-86

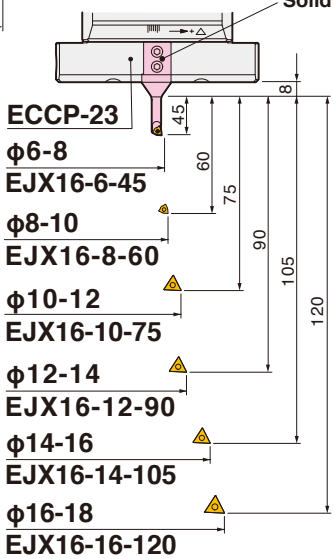


ϕ85-116



ϕ115-200





＊ ϕ6 to ϕ30 bits are the minimum layout for set products.
The ideal bits are also available.
For details, please refer to the Boring Bit Cartridge table on ☞ P.111.

BORING BIT & CARTRIDGE for eMAC BORING SYSTEM NIKKEN

eMAC Boring Head & eMAC-W Boring Head



Q26-EMAC6110-61



Q42-EMAC6200W-85

∗Select the ideal bit, cartridge, and insert tip based on the boring head and the equipment conditions

Boring Bit & Cartridge ∗Each Boring bit and Cartridge are supplied without insert tip.

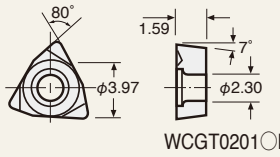
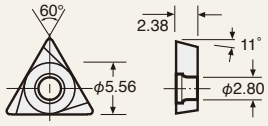
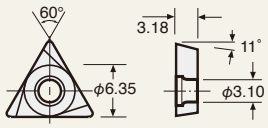
Boring Range Φ	Boring bit	Solid carbide bit	Cartridge	Insert tip		Clamp bolt		Torx Wrench
							Thread size	
6 - 8	EJ16- 6-21	EJX16- 6- 45	—	EM02	—	TS21	M2	T-6
8 - 10	EJ16- 8-28	EJX16- 8- 60				TS211		
10 - 12	EJ16-10-35	EJX16-10- 75		—	EM09	CS250T	M2.5	T-8
11 - 13	EJ16-11-40	—						
12 - 14	EJ16-12-42	EJX16-12- 90						
14 - 16	EJ16-14-50	EJX16-14-105						
16 - 18	EJ16-16-50	EJX16-16-120						
18 - 22	EJ16-18-63	—						
22 - 30	EJ16-22-68	—						
28 - 44	—	—	ECC-28-10	—	EM09	CS250T	M2.5	T-8
36 - 56			ECC-36-11.5					
54 - 200			ECC-54-19	—	EM11	CS300890T	M3	T-8

★The **EJ16-10-35, EJ16-12-42, EJ16-14-50, EJ16-18-63** bits, and the **EJX16** carbide bit series are not included in sets. These products should be purchased separately.

Inserts

Material			
	Steel	●	
	Stainless Steel	●	
	Cast Iron	●	●
	Aluminium		●
	Titanium Alloy, Heat Resistant Alloy		●

Insert with large nose radius have a stronger cutting edge,and are therefore ideal for large diameter boring of short holes. Small nose radius insert is ideal for smaller diameter boring or finishing.

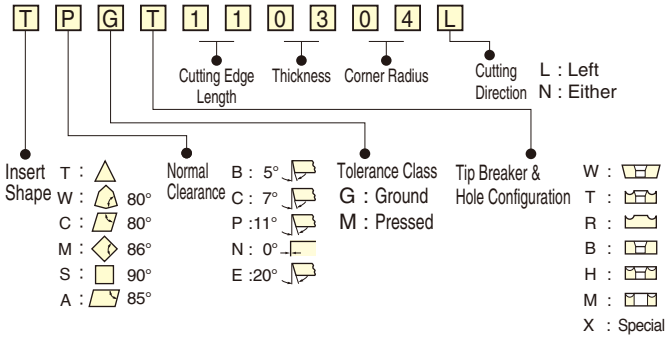
Boring head type	Dimension	Code No.	Material NOSE R	Grade: Cermet (w/o coating) T / Material: NX	Grade: Carbide K F / Material: HTI
EJ16-6-21 EJX16-6-45 -8-28 EJX16-8-60	 WCGT0201○L	EM02-○2	0.2	●	●
		EM02-○4	0.4	●	●
EJ16-10-35 ECC -28-10 -11-40 -36-11.5 -12-42 -14-50 EJX16-10-75 -16-50 -12-90 -18-63 -14-105 -22-68 -16-120	 TPGX0902○L	EM09-○2	0.2	●	●
		EM09-○4	0.4	●	●
ECC -54-19	 TPGX1103○L	EM11-○2	0.2	●	●
		EM11-○4	0.4	●	●

★Minimum order quantity : 10pcs
★When you use the other brand insert, use same brand Clamp bolt.

eMAC BORING SYSTEM CUTTING DATA

NIKKEN

Code No. of ISO standard Insert Tip



Please add the grade indication into ○, and add the insert tip material indication at the end of the Code No.

e.g. EM09-T4(NX)

Grade & Material

Grade	Grade Indication	Insert Tip Material Indication	Specification
Cermet (w/o coating)	T	NX	The general material for the steel and the cast iron with the heat resistence and the toughness.
Carbide K	F	HTI	Toughness and the excellent wear resistance. Applicable for the cast iron, non-ferrous metal and the non-metal.

Recommended Cutting Speed ◎…Best ○…Good —…Unsuitable

Insert			SS41	S55C	SCM	SKD	SC	FC,FCD	SUS	ALC	Ti
	Code No.	Material									
or	T	NX	◎ 100~300	◎ 100~300	◎ 100~300	◎ 80~150	◎ 80~150	○ 150~160	◎ 80~150	-	-
	F	HTI	-	-	-	-	-	◎ 60~130	-	○ 300~500	○ 30~40

★The cutting speed is recommended to be reduced to 50% for the interrupted cutting. ★Rapid speed : ~6000min-1.
★Please be sure to make a test run and confirm of no deflection, vibration and unusual sound.

Recommended Cutting Condition(removal,feed)

Boring Range	Boring head type			Best Condition		MAX. Condition	
	Boring bit	Solid carbide bit	Cartridge	Removal mm/φ	Feed mm/rev	Removal mm/φ	Feed mm/rev
φ 6~ 12	EJ16- 6-21 - 8-28	EJX16- 6- 45 - 8- 60		0.1~0.2	0.03~0.07	-	-
φ 10~ 30	EJ16-10-35 -11-40 -12-42 -14-50 -16-50 -18-63 -22-68	EJX16-10- 75 -12- 90 -14-105 -16-120		0.1~0.3	0.05~0.07	-	-
φ 28~ 56			ECC-28-10 -36-11.5	0.2~0.4	0.05~0.08	1.0	0.1
φ 54~200			ECC-54-19	0.2~0.5	0.05~0.08	2.0	0.15

$$\text{Speed } n(\text{min}^{-1}) = \frac{Vc \cdot 1000}{\pi D}$$

$$\text{Feed } Vf(\text{mm/min}^{-1}) = n \cdot f$$

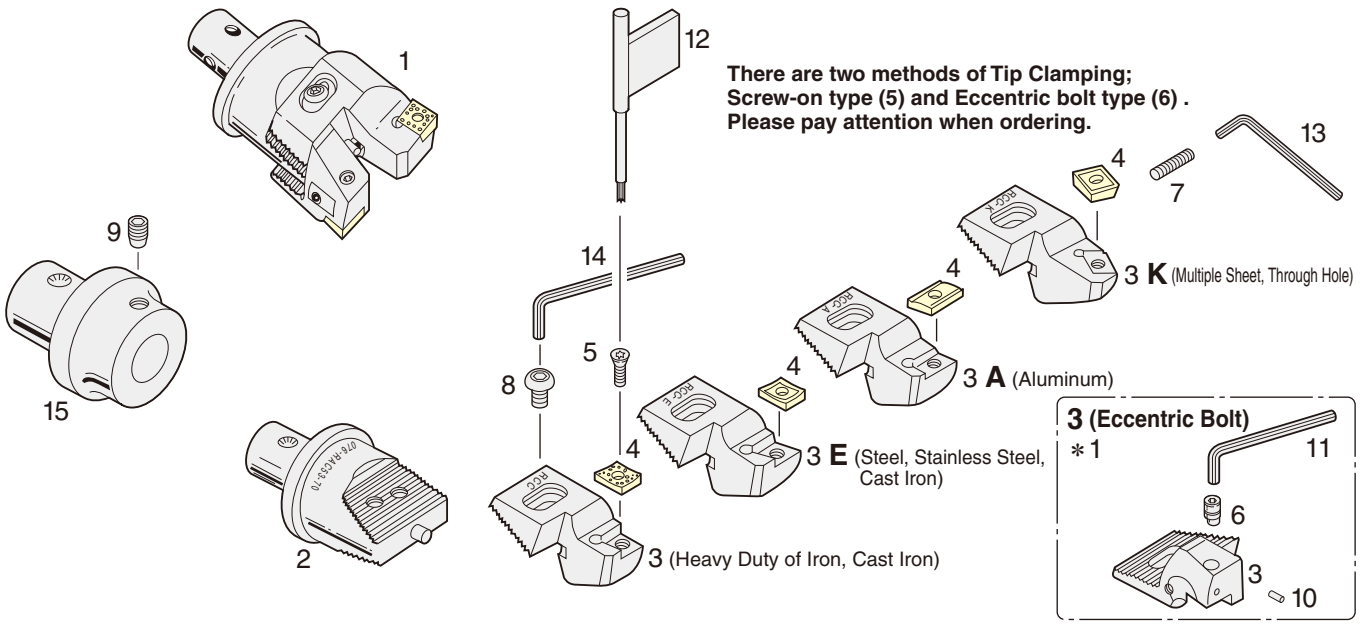
$$\text{Logical Surface Finish (min)} = \frac{(\text{Feed per rev.})^2}{8 \times \text{Nose/R}}$$

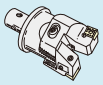
Vc: Cutting Speed(m/min^{-1})
π : 3.14
D : Borling dia(mm)
f : Feed(mm/rev)

Feed per rev. depends on Nose/R and accuracy required.

RAC BALANCE-CUT BORING UNIT PARTS LIST

NIKKEN



Boring Range	1 RAC Head	2 RAC Base	3 Cartridge	4 Tip	5 Tip Clamping Bolt	6 Eccentric Bolt	7 Adjusting Screw	8 Cartridge Clamping Bolt	9 Set Screw	10 Copper Pin	11 Tip Clamping L-Wrench	12 Tip Clamping Handle	13 L-Wrench for Adjustment	14 L-Wrench for Cartridge	15 Stepped Spacer
															
ϕ25~32	12-RAC 25- 55E	12-RAC025- 55B	RCC- 25E	CC07	M3070	—	M508	G025	B12	—	—	T-10		M3	SP26-12-30
	- 55A		- 25A	AEG12											
	- 55K		- 25K	SC09											
ϕ32~45	16-RAC 32- 55E	16-RAC 32- 55B	RCC- 32E	CC08	M4090	—	M512	G032	B16	—	—	T-15		M4	SP26-16-30
	- 55A		- 32A	AEG12	M3070							T-10			
	- 55K		- 32K	SC09											
ϕ43~55	20-RAC 43- 70	20-RAC 43- 70B	RCC- 43	CN08	CSM-70	CSM-43	M514	G043	B20	R12	M3	20S		M5	SP26-20-30
	- 70E		- 43E	CC12	M5012	—				—	—	T-15			
	- 70A		- 43A	AEG16	M4090										
	- 70K		- 43K	SC12	M5012										
ϕ53~70	26-RAC 53- 70	26-RAC 53- 70B	RCC- 53	CN08	CSM-70	CSM-43	M518	G053	—	R12	M3	20S	M2.5	M6	—
	- 70E		- 53E	CC12	M5012	—				—	—	T-15			
	- 70A		- 53A	AEG16	M4090										
	- 70K		- 53K	SC12	M5012										
ϕ70~100	26-RAC 70- 70	26-RAC 70- 70B	RCC- 70	CN08	CSM-70	CSM-43	M528	G070	—	R12	M3	20S			—
	- 70E		- 70E	CC12	M5012	—				—	—	T-15			
	- 70A		- 70A	AEG16	M4090										
	- 70K		- 70K	SC12	M5012										
	34-RAC 70- 85	34-RAC 70- 85B	RCC- 70	CN08	CSM-70	CSM-43	M528	G070	—	R12	M3	20S			—
	- 85E		- 70E	CC12	M5012	—				—	—	T-15			
	- 85A		- 70A	AEG16	M4090										
	- 85K		- 70K	SC12	M5012										
ϕ100~130	42-RAC100-100	42-RAC100-100B	RCC-100	CN08	CSM-70	CSM-43	M538	G070	—	R12	M3	20S			—
	-100E		-100E	CC12	M5012	—				—	—	T-15			
	-100A		-100A	AEG16	M4090										
	-100K		-100K	SC12	M5012										

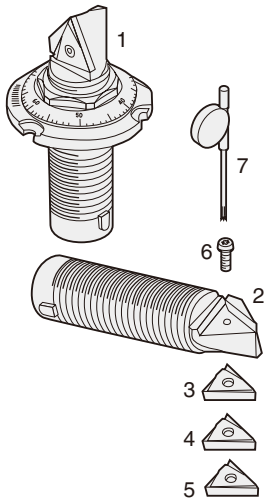
★You can use only one type **RAC** Base irrespective of material and work piece. Suitable Cartridge and Carbide Insert must be selected. ☞**P.79, P.80**
★Insert tip is available as an option.
★There are 2 methods of Tip Clamping; Screw-on type (5) and Eccentric Bolt type (6) . Please pay attention when ordering for spare parts.
★Code No. of Cartridge means for Cartridge only. When ordering for cartridge set, please use set Code No. **e.g. "S.RCC-25"**.
★The Code No. of Tip Clamping Handle is unified to **T10**, **T15** and **20S**.
★∗1 **Eccentric Bolt type Cartridge ; Code No. e.g. "RCC-43Q"**.

BCB MICRO-CUT BORING UNIT PARTS LIST

NIKKEN

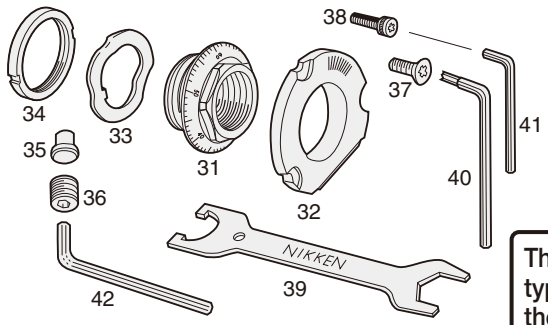
BT

BCB
Screw on type

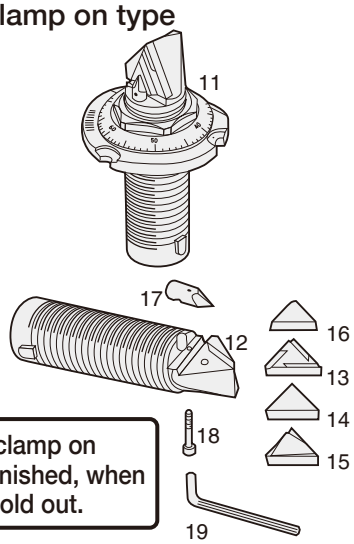


Relation between Micro-Cut Boring Arbor and Micro-Cut Boring Unit

NIKKEN Micro-Cut Boring Arbor is provided with Micro-Cut Boring Unit. When ordering each parts for spare, please place the order by Code No. of Insert, Cartridge and Unit of the following parts list.



BCB
Clamp on type



The sales of clamp on type will be finished, when the stock is sold out.

Boring Range	Screw on type							Clamp on type							
	1	2	3	4	5	6	7	11	12	13	14	15	16	17	18	19
	BCB Unit	Cartridge	Insert for Alloy Steel	Insert for Cast Iron	Insert for Steel, Stainless Steel	Insert Clamp Bolt	Insert Clamp Handle	BCB Unit	Cartridge	Insert for Alloy Steel	Insert for Cast Iron	Insert for Steel, Stainless Steel	Insert Breaker	Clamp Piece	Insert Clamp Bolt	Insert Clamp Handle
12.7～14.5	M 1-12.7	—	1MP-E	1MP-F	1MP-T	M61	10S	M 1S-2	M 1S-2C※	—	—	—	—	—	—	—
14.5～19.5	M 1-14.5	—						M 1L-2	M 1L-2C※	—	—	—	—	—	—	—
19 ～22.5	M 2-19	M 2-19 C	3MS-E	3MS-F	3MS-T	M68	13S	M 2S-2	M 2S-2C※	—	—	—	—	—	—	—
22 ～29.5	M 2-22	M 2-22 C						M 2L-2	M 2L-2C※	—	—	—	—	—	—	—
29 ～ 41	M 3-29	M 3-29 C				M63		M 3L-2S	M 3L-2SC	3P-E	3P-F	3P-T	—	CP- 3	B183	M1.5
38 ～ 50	M 5-38	M 5-38 C	6MP-E	6MP-F	6MP-C	M2577	T-8	M 5S-2S	M 5S-2SC	5P-E	5P-F	5P-T	5CB	CP- 5	B185	M2
48 ～ 65	M 5-48	M 5-48 C						M 5L-2S	M 5L-2SC							
62 ～ 90	M 7-62	M 7-62 C	10MP-E	10MP-T	10MP-T	M67	20S	M 7L-2S	M 7L-2SC	7P-E	7P-F	7P-T	7CB	CP- 7	B187	M2.5
82 ～110																
100～140	M10-100	M10-100 C				M60		M10L-2S	M10L-2SC	10P-E	10P-F	10P-T	10CB	CP-10	B180	M3

★Each Unit and Cartridge are supplied without Insert Tip.
★Codes for BCB boring bars that support micro units are indicated by red text.
e.g. M5-28: BCB38

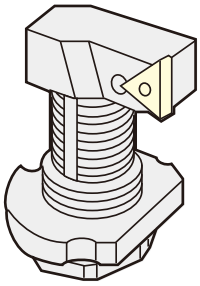
★All brazed types marked ※ were stopped production on 2007 JAN.
★Each unit and cartridge are supplied without insert tip.
★Brazed type is available for the diameter of φ29～φ200.

Boring Range	31	32	33	34	35	36	37	38	39	40	41	42
	Dial Ring	Lock Flange	Wave Spring	Pre-Load Nut	Lock Metal	Lock Screw	Unit Mounting Bolt A	Unit Mounting Bolt B	Adjustment Handle	Wrench for Unit Mounting Bolt A	Wrench for Unit Mounting Bolt B	Wrench for Lock Screw
12.7～14.5	—	B321	B331	B341	B351	B361	—	B381	M391	—	M1.27	M1.5
14.5～19.5												
19 ～22.5	B312	B322	9M216W	9M216P	B352	B362	—	B382	M392	—	T6	M2
22 ～29.5						M363						
29 ～ 41	B313	B323	M333	9M325P	B353	B363	—	B384	M393	—	13S	M2.5
38 ～ 50	B315	B325	M335	9M542P	B355	B365		B386	M395	—	20S	M3
48 ～ 65		B326			B356	B366	M375	—		M405	—	M4
62 ～ 90	B317	B327	M337	9M770P	B357	B367	M377	B387	M397	M407	M405	M5
82 ～110						B368						
100～140	B310	B320	M330	9M108P	B350	B360	M370		M390	M400		M6

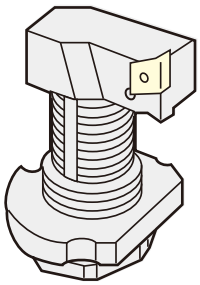
★31, 32, 33 and 34 are set for spare parts. When ordering, please add **"D."** at the beginning of Code No.
e.g. D.M2-22 for Boring Range: 22～29.5mm

ZMAC ADVANCED BORING UNIT PARTS LIST

NIKKEN



ZMAC-V



ZMAC-VR

* The **ZMAC** units and new **ZMAC-V, ZMAC-VR** units are interchangeable.

NIKKEN ZMAC-V Boring Heads come complete with the ZMAC-V Boring Unit. Specify the part No. in the table below when ordering spares.

Triangular Insert Heads and Rhomboid Insert Heads use different boring units, cartridges, insert tips, insert clamp bolts, and insert clamp handles, but all other parts are common to both.

Other manufacturers' ISO standard insert tips available on the market may have different insert clamp hole diameters, so please contact us regarding use.

＊Boring heads that use ISO standard insert tips available on the market are also available with us.

ZMAC Advanced (ISO) Boring Head

☞ **P.89**

ZMAC-V Style	Boring Range	Unit	Triangular Insert	Insert Clamp Screw	Insert Clamp Handle	Lock Screw	Adjustment Handle	Unit Clamp Bolt
ZMAC16 -V	**15.9～ 20.2**	M 2HZ- 16V	**3MP-C,B**	M2045	T-6	M361	M 2HZL-A	M2045
ZMAC20 -V	**19.8～ 25.2**	M 2HZ- 20V				M362	M 2HZL-B	
ZMAC25 -V	**24.8～ 32.2**	M 3HZ- 25V				M363	M 3HZL	M2577
ZMAC32 -V	**31.8～ 42.2**	M 4HZ- 32V	**4MP-C,B**	M2055		M365	M 4HZL	
ZMAC42 -V	**41.8～ 55.2**	M 5HZ- 42V	**6MP-C,B**	M2577 (M2562D※)	T-8	M364	M 5HZL	
ZMAC55 -V	**54.8～ 70.2**	M 5HZ- 55V				M366		
ZMAC70 -V	**69.8～ 85.2**	M 7HZ- 70V				M360	M 7HZL	M3090
ZMAC85 -V	**84.8～100.2**	M10HZ- 85V				M367	M10HZL	M4012
ZMAC100-V	**99.5～140.5**	M10HZ-100V				M368		
ZMAC140-V	**139.5～180.5**	M10HZ-140V				M369		

★Each Unit and Cartridge are supplied without Insert Tip.
★**Cartridge for base forming of bore is an option.**
Please specify the diameter and width of base forming.
★**For Diamond Insert Tip (6MP-D), M2562D* must be used.**
★Cartridge can not be supplied alone, please order **ZMAC-V** unit.



Special cartridge example for necking is available. Please contact us with the work piece drawing.

ZMAC-VR Style	Boring Range	Unit	Triangular Insert	Insert Clamp Screw	Insert Clamp Handle
ZMAC32 -VR	**31.8～ 42.2**	M 4HZ- 32VR	**CC06-C**	M2560	T-8
ZMAC42 -VR	**41.8～ 55.2**	M 5HZ- 42VR		M2577	
ZMAC55 -VR	**54.8～ 70.2**	M 5HZ- 55VR			
ZMAC70 -VR	**69.8～ 85.2**	M 7HZ- 70VR	**CC08-C**	M4090	T-15
ZMAC85 -VR	**84.8～100.2**	M10HZ- 85VR		M4012	
ZMAC100-VR	**99.5～140.5**	M10HZ-100VR	**CC12-C**	M5012	T-15
ZMAC140-VR	**139.5～180.5**	M10HZ-140VR			

★Each Unit and Cartridge are supplied without Insert Tip.
★Cartridge can not be supplied alone, please order ZMAC-V unit.

The cartridge head can be exchanged itself for the head bigger equal to ZMAC42-V.

Boring Range	Cartridge Head		Head Clamp Bolt
41.8～ 55.2	M 5HZ- 42 CH	M 5HZ- 42RCH	M512C
54.8～ 70.2			
69.8～ 85.2	M 7HZ- 70 CH	M 7HZ- 70RCH	M625
84.8～100.2	M10HZ- 85 CH	M10HZ- 85RCH	M825
99.5～140.5	M10HZ-100 CH	M10HZ-100RCH	M835
139.5～180.5			

Detach Attach
- **Loosen head clamp bolt after boring diameter is set to little larger than the MIN. boring diameter.**
- **Insert the head into cartridge, then tighten head clamp bolt temporary.**
- **Loosen side lock bolt.**
- **Rotate the dial ring 0.2～0.3mm to minus direction.**
- **Tighten head clamp bolt by pushing the head to the support portion of the main body.**

RAC BALANCE-CUT BORING ARBOR CUTTING DATA NIKKEN

CC (Positive type) RAC-E



CN (Negative type) RAC



RAC-A



RAC-K



Material

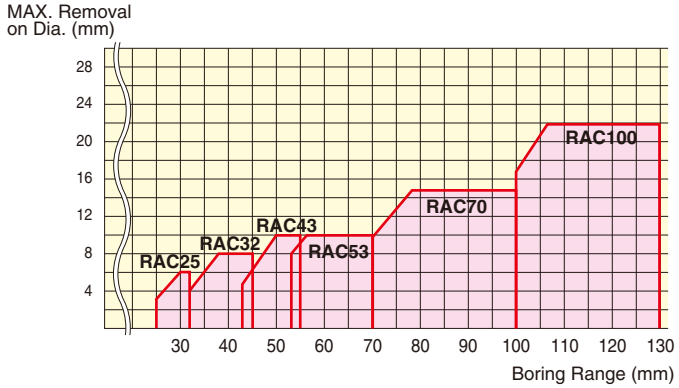
Steel	60～150m/mim. (Dry or Wet cutting)
Stainless Steel	40～80m/mim. (Wet cutting)
Cast Iron	60～150m/mim. (Dry or Wet cutting)
Aluminium, Non-ferrous metal	200～500m/mim. (Wet cutting)
Multiple Sheets, Through Hole	40～120m/mim. (Dry or Wet cutting)

Recommended cutting Speed ◎…Best ○…Good —…Unsuitable

Insert			SS41	S55C	SCM	SKD	SC	FC,FCD	SUS	AL,ALC	Interrupted Cutting
Code No.		Grade									
	CC	Coated Carbide M	◎ 60～120	◎ 60～150	◎ 60～150	◎ 50～80	○ 80～120	○ 60～150	◎ 40～80	—	○
		Coated Carbide K	—	—	—	—	◎ 80～120	◎ 60～150	—	—	—
	CN	Coated Carbide M	○ 60～120	○ 60～150	○ 60～150	○ 50～80	○ 50～80	○ 60～150	○ 40～80	—	○
	AEG	K10	—	—	—	—	—	—	—	◎ 400～800	○
	SC	Coated Carbide M	◎ 60～120	◎ 60～150	◎ 60～150	◎ 50～80	○ 80～120	○ 60～150	◎ 40～80	—	○
		Coated Carbide K	—	—	—	—	◎ 80～120	◎ 60～150	—	—	—

★The cutting speed is recommended to be reduced to 50% for the interrupted cutting.
★When L/D is longer, the insert tip with small Nose R is recommended.
★When L/D is longer, the feed rate at the entrance is recommended to be reduced to 60 to 70%.

Relation between Boring Dia. & MAX. Removal



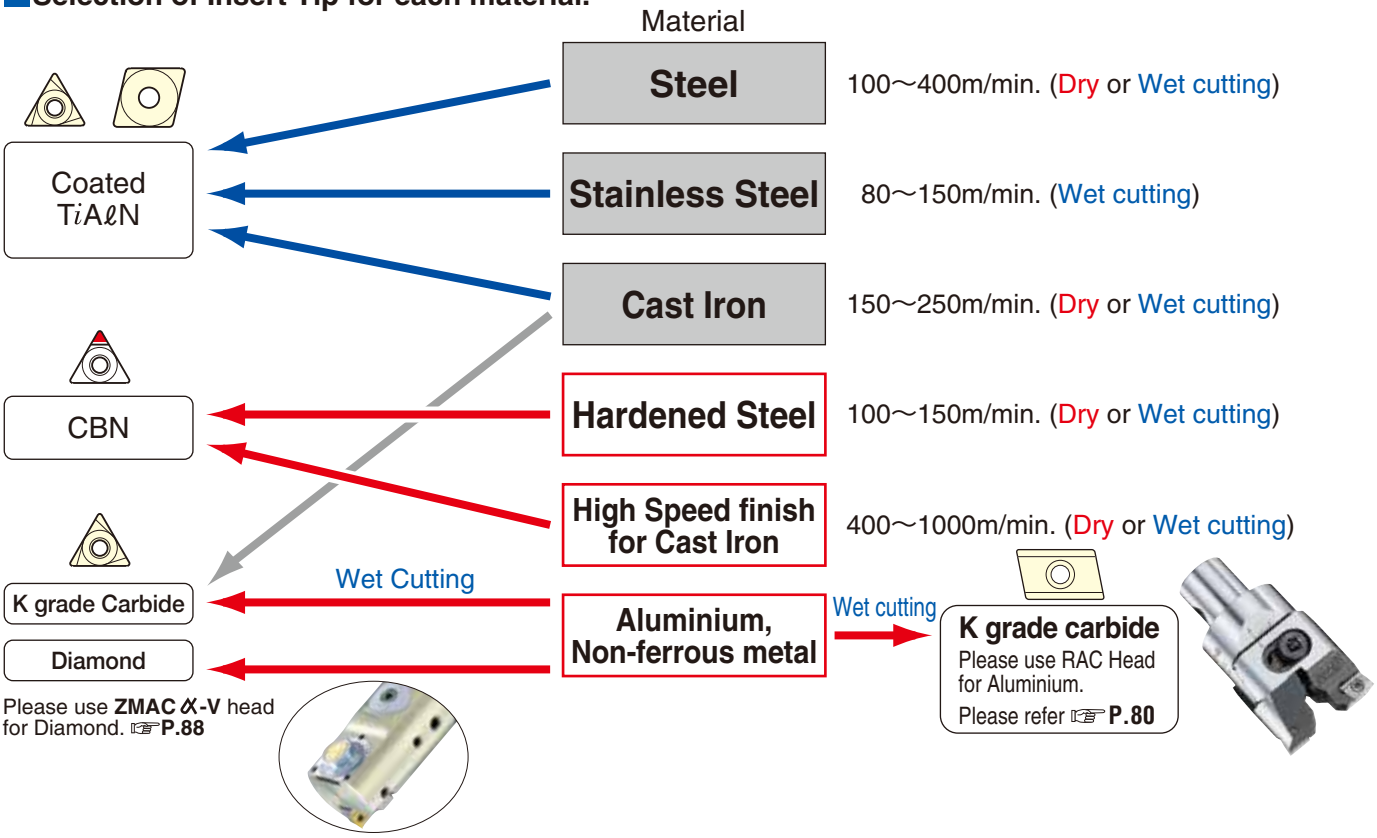
Recommended Cutting Condition (removal,feed)

These figures are based on the application of L/D=3～3.5 times on cast iron.

Boring Range	Type	Best Condition		MAX. Condition	
		Removal mm/φ	Feed mm/rev.	Removal mm/φ	Feed mm/rev.
φ25～ 32	RAC 25	2.0～ 4.0	0.2～0.3	0.5～ 6.0	0.1～0.4
32～ 43	RAC 32	3.0～ 5.0	0.2～0.3	1.0～ 8.0	0.1～0.4
43～ 53	RAC 43	4.0～ 7.0	0.2～0.3	1.0～10.0	0.1～0.5
53～ 70	RAC 53	4.0～ 7.0	0.2～0.3	1.0～10.0	0.1～0.5
70～100	RAC 70	5.0～10.0	0.3～0.4	1.0～15.0	0.1～0.5
100～130	RAC100	7.0～12.0	0.3～0.4	1.0～22.0	0.1～0.5

ZMAC ADVANCED BORING SYSTEM CUTTING DATA NIKKEN

Selection of Insert Tip for each material.



Recommended cutting Speed ◎···Best ○···Good —···Unsuitable

Insert			SS41	S55C	SCM	SKD	SC	FC,FCD	SUS	AL,ALC	Hardened Steel			Inter-rupted Cutting
	Code No.	Grade									SCM	SKD	SUJ	
	C	Coated	◎ 100～400	◎ 150～400	◎ 150～400	◎ 80～150	◎ 80～150	○ 150～250	◎ 80～150	–	–	–	–	◎
	E	P10	○ 60～100	○ 60～100	○ 80～120	○ 40～100	◎ 60～100	–	○ 40～ 80	–	–	–	–	◎
	F	K10	–	–	–	–	–	◎ 60～130	–	○ 400～1000	–	–	–	◎
	T	Cermet	◎ 200～400	◎ 200～400	◎ 200～400	◎ 80～150	◎ 80～150	–	◎ 120～180	–	–	–	–	○
	B	CBN	–	–	–	–	–	◎ 300～800	–	–	◎ 100～150	◎ 70～100	◎ 120～150	○
	D	Diamond	–	–	–	–	–	–	–	◎ 400～2000	–	–	–	–
	C	Coated Carbide M	◎ 100～400	◎ 150～400	◎ 150～400	◎ 80～150	○ 80～150	○ 150～250	◎ 80～150	–	–	–	–	◎
		Coated Carbide K	○ 100～400	○ 150～400	○ 150～400	○ 80～150	◎ 80～150	◎ 150～250	○ 80～150	–	–	–	–	○

★Existing Inserts (Cermet,P grade Carbide & K grade Carbide) are available.
★The cutting speed is recommended to be reduced to 50% for the interrupted cutting.
★When L/D is longer, the insert tip with small Nose R is recommended.
★When L/D is longer, the feed rate at the entrance is recommended to be reduced to 60 to 70%.

Recommended Cutting Condition (removal,feed)

Boring Range	Type	Best Condition		MAX. Condition		Best Condition		MAX. Condition	
		Removal mm/Φ	Feed mm/rev.	Removal mm/Φ	Feed mm/rev.	Removal mm/Φ	Feed mm/rev.	Removal mm/Φ	Feed mm/rev.
φ16～ 20	ZMAC16-V	0.2～0.4	0.05～0.07	1.0	0.1				
φ20～ 25	ZMAC20-V	0.2～0.4	0.05～0.07	1.5	0.1				
φ25～ 32	ZMAC25-V	0.2～0.4	0.05～0.07	2.0	0.1				
φ32～ 42	ZMAC32-V	0.2～0.4	0.05～0.08	2.0	0.2	1.0～3.0	0.1～0.15	5.0	0.2
φ42～ 55	ZMAC42-V	0.2～0.5	0.05～0.08	4.0	0.2	1.0～3.0	0.1～0.15	5.0	0.2
φ55～ 70	ZMAC55-V	0.2～0.5	0.05～0.08	4.0	0.2	1.0～3.0	0.1～0.15	5.0	0.2
φ70～ 85	ZMAC70-V	0.2～0.8	0.05～0.1	4.0	0.25	1.0～4.0	0.1～0.2	8.0	0.25
φ85～	ZMAC85-V~	0.2～0.8	0.05～0.1	4.0	0.25	1.0～4.0	0.1～0.2	8.0	0.25

In case of CBN insert, reduce L/D as small as possible : MAX. 3 times.
Stock removal on diameter.
D<32mm : less than 0.25mm
D>32mm : less than 0.3mm

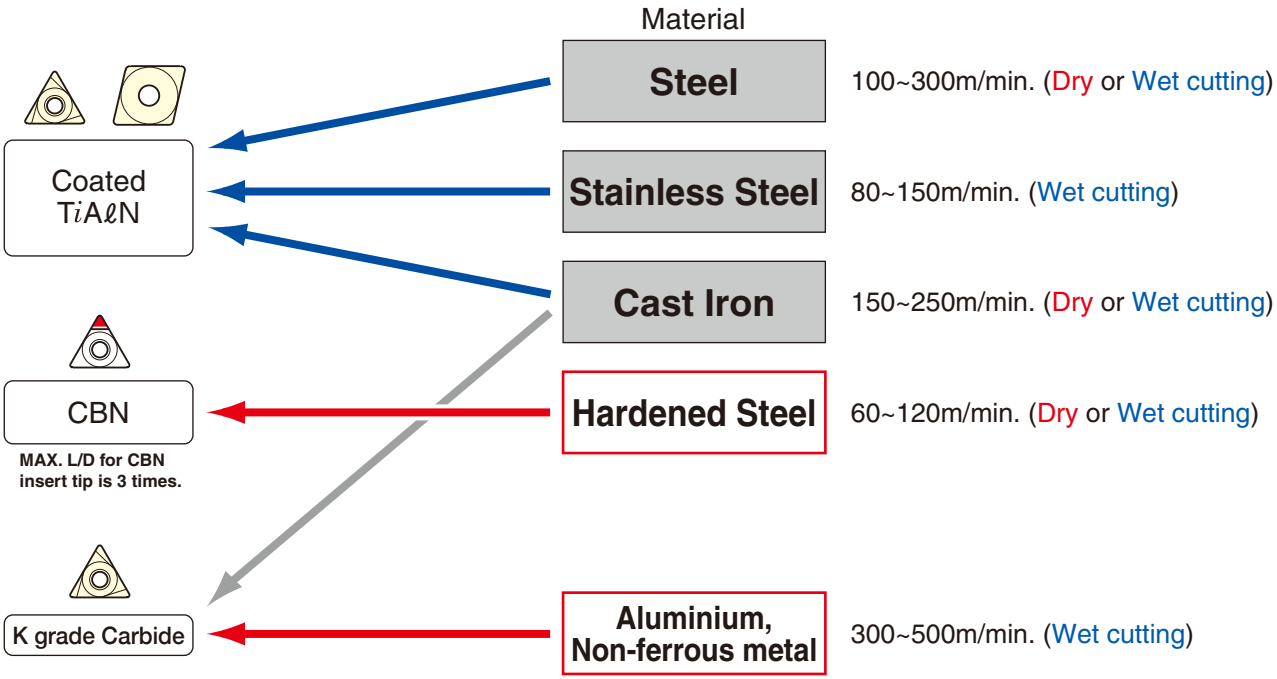
Feed per rev. depends on Nose/R and accuracy required.

Logical Surface Finish : $\frac{(\text{Feed per rev.})^2}{8\times\text{Nose/R}}$

DJ BORING ARBOR CUTTING DATA

NIKKEN

Selection of Insert Tip for each material.



Recommended cutting Speed ◎···Best ○···Good —···Unsuitable

Insert			SS41	S55C	SCM	SKD	SC	FC,FCD	SUS	AL,ALC	Hardened Steel			Inter-rupted Cutting
	Code No.	Grade									SCM	SKD	SUJ	
	C	Coated	◎ 100~300	◎ 100~300	◎ 100~300	◎ 80~150	◎ 80~150	○ 150~250	◎ 80~150	–	–	–	–	◎
	E	P10	○ 60~100	○ 60~100	○ 80~120	○ 40~100	◎ 60~100	–	○ 40~ 80	–	–	–	–	◎
	F	K10	–	–	–	–	–	◎ 60~130	–	○ 300~500	–	–	–	◎
	T	Cermet	◎ 100~300	◎ 100~300	◎ 100~300	◎ 80~150	◎ 80~150	–	◎ 80~150	–	–	–	–	○
	B	CBN	–	–	–	–	–	◎ 200~500	–	–	◎ 60~120	◎ 60~100	◎ 60~120	○
	C	Coated	◎ 100~300	◎ 100~300	◎ 100~300	◎ 80~150	◎ 80~150	◎ 150~250	◎ 80~150	–	–	–	–	◎

★Existing Inserts (Cermet,P grade Carbide & K grade Carbide) are available.
★The cutting speed is recommended to be reduced to 50% for the interrupted cutting.

Recommended Cutting Condition (removal,feed)

Boring Range	Type		Best Condition		MAX. Condition	
	DJ3	DJ8	mm/ϕ	mm/rev.	mm/ϕ	mm/rev.
ϕ 3~ 8	J10- 3		~0.1	0.03~0.07		
ϕ 5~ 15	J10- 5		0.1~0.2	0.05~0.07		
ϕ 8~ 18	J10- 8	J16- 8	0.1~0.2	0.05~0.08		
ϕ18~ 28	J10-18	J16-18	0.2~0.4	0.05~0.08	1.0	0.1
ϕ28~ 39		J16-28	0.2~0.4	0.05~0.08	1.5	0.15
ϕ38~ 50		J16-38	0.2~0.5	0.05~0.08	2.0	0.15

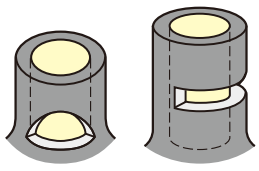
In case of CBN insert, reduce L/D as small as possible : MAX. 3 times.
Stock removal on diameter.
D<32mm : less than 0.25mm
D>32mm : less than 0.3mm

Feed per rev. depends on Nose/R and accuracy required.

Logical Surface Finish : $\frac{(\text{Feed per rev.})^2}{8\times\text{Nose/R}}$

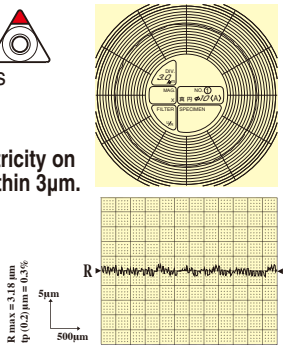
Example of hardened steel boring with CBN Insert

Reduce L/D as small as possible:MAX. 3times
For bits of L/D shorter than standard one are also available. Please contact with us.



Example of intermittent boring of hardened steel (HRC60) ϕ10mm

Results of concentricity on 24 pcs. were all within 3μm.

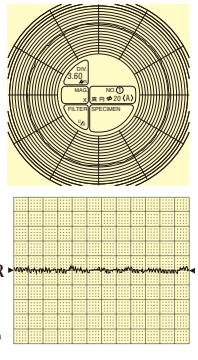


Results of surface finish on 24 pcs. were all within 3.3 microns. (R MAX.)

Results of concentricity on 24 pcs. were all within 3.6μm.



Example of intermittent boring of hardened steel (HRC60)ϕ20mm



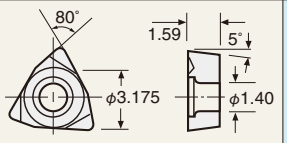
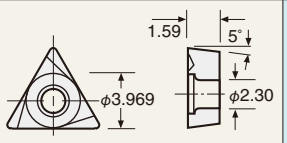
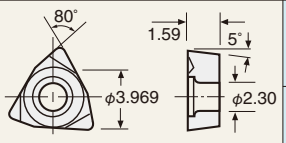
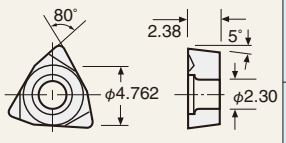
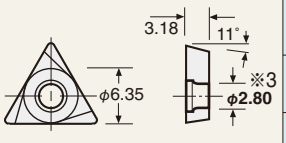
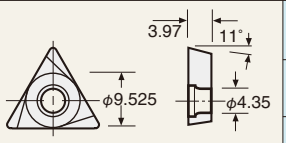
Results of surface finish on 24 pcs. were all within 2.8 microns. (R MAX.)

NIKKEN INSERT TIP (EXCLUSIVE FOR BORING ARBOR) (1)

NIKKEN

Material								
	Steel	●	●	●				
	Stainless Steel	●	●					
	Cast Iron	●			●	●		
	Aluminium					●		
	High Speed finish for Cast Iron						●	
	Hardened Steel						●	
	High Speed finish for Aluminium							●

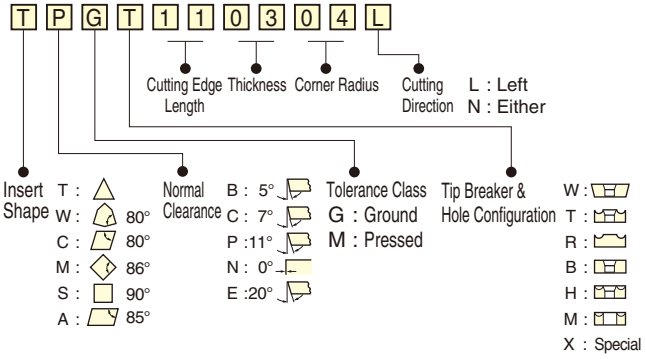
For the Boring of Large Diameter and Short Depth, the use of insert with large nose radius is recommended. The smaller nose radius inserts are ideal for smaller diameter boring or finishing operation.

			Coated Cermet	Cermet (w/o coating)		Carbide P	Carbide K		CBN	Diamond
		Grade	C	T		E	F-NB*2 w/o breaker	F	B	D
		Material	*7 PV720	T2000Z	*5 NS530	TN90	ST10P	H1	*6 KBN10B	KPD010
Applicable Arbor	Dimension	Code No.	NOSE R							
BCB12.7, BCB14.5	 (WBGT050102L)	1MP-○2	0.2	●			●	●		●		
BCB19, BCB22, BCB29	 TBGT0601○L	3MS-○2	0.2	●			●	●	●*2	●	●	
ZMAC16-V, ZMAC20-V, ZMAC25-V for DJ Bit	 WBGT0601○L	3MP-○2	0.2	●	●	●		●	●*2	●	●	●
		3MP-○4	0.4	●	●						●	●
ZMAC32-V	 WBGT0802○L	4MP-○2	0.2	●	●	●		●	●*2	●		●
		4MP-○4	0.4	●	●				●*2	●	●	●
ZMAC42-V-ZMAC140-V BCB38, BCB48 DJ Bit, MCCZ130-V BAC130-V - BAC530-V	 TPGT1103○L	6MP-○2	0.2	●	●	●		●	●*2	●		●*4
		6MP-○4	0.4	●	●	●		●	●*2	●	●	●*4
		6MP-○8	0.8	●	●	●		●	●*2	●	●	●*4
BCB62, BCB82, BCB100	 TPGT16T3○L	10MP-○2	0.2	●				●	●*2	●		
		10MP-○4	0.4	●				●	●*2	●	●	
		10MP-○8	0.8	●				●	●*2	●	●	

★Minimum quantity of CBN and Diamond: 1pcs, All other insert tip: 10pcs
★*2 **"-NB"** (w/o breaker) is recommended for cast iron.
★*3 **Hole diameter of 6MP is ϕ2.8mm. M2562D (Optional tip clamp bolt) is required for the ISO standard insert tip with the hole diameter of ϕ3.3~ϕ 3.5mm.**
★*4 **M2562D** is necessary for **6MP-D (Diamond)** , because of the hole diameter is different.
★The ISO code No. surrounded with ( ) is the Nikken original insert tip.
★*5 Changes it to **NS9530**, When the stock is sold out.
★*6 Changes it to **KBN510**, When the stock is sold out.
★*7 Changes it to **PV720**, When the stock is sold out.

Please add the grade indication into ○, and add the insert tip material indication at the end off the Code No.
e.g. 6MP-C4 (PV720) , 6MP-F4-NB (H1)

Code No. of ISO standard Insert Tip



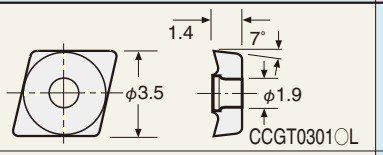
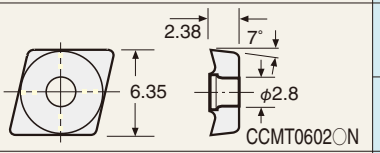
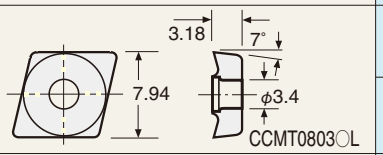
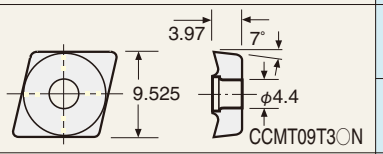
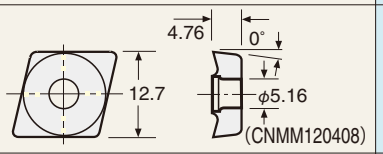
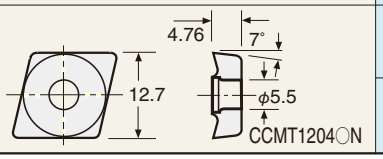
NIKKEN INSERT TIP (EXCLUSIVE FOR BORING ARBOR) (2)

NIKKEN

BT

Material				
	Steel	●	●	
	Stainless Steel	●	●	
	Cast Iron	●	●	●

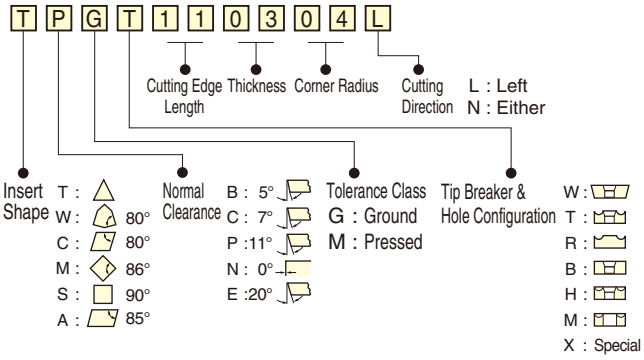
For the Boring of Large Diameter and Short Depth, the use of insert with large nose radius is recommended. The smaller nose radius inserts are ideal for smaller diameter boring or finishing operation.

				Coated Cermet	Coated Carbide M	Coated Carbide K
			Grade	C		
			Material	PV90	AC630M	AC410K
Applicable Arbor	Dimension	Code No.	NOSE R			
J10-5, J16-5		CC03-○2	0.2	●		
ZMAC32-VR, ZMAC42-VR ZMAC55-VR		CC06-○4	0.4		●	●
		CC06-○8	0.8		●	●
RAC25E		CC07-○4	0.4		●	●
		CC07-○8	0.8		●	●
ZMAC70-VR, ZMAC85-VR, RAC25E(CC08), RAC32E		CC08-○4	0.4		●	●
		CC08-○8	0.8		●	●
RAC43 - RAC530 (Eccentric Bolt Type)		CN08-○8	0.8		●	
ZMAC100-VR, ZMAC140-VR RAC43E - RAC100E		CC12-○4	0.4		●	●
		CC12-○8	0.8		●	●

★Minimum quantity of CBN and Diamond: 1pcs, All other insert tip: 10pcs
★The ISO code No. surrounded with ( ) is the Nikken original insert tip.

Please add the grade indication into ○, and add the insert tip material indication at the end off the Code No.
e.g. 6MP-C4 (PV90) , 6MP-F4-NB (H1)

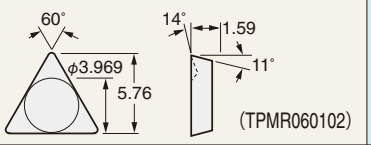
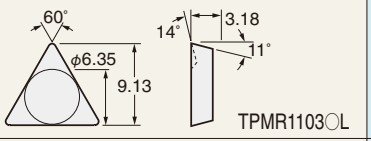
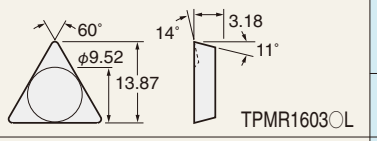
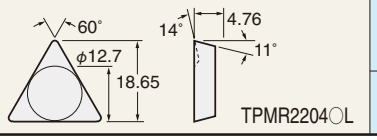
Code No. of ISO standard Insert Tip



NIKKEN INSERT TIP (EXCLUSIVE FOR BORING ARBOR) (3)

NIKKEN

Material					
	Steel	●	●		
	Stainless Steel	●			
	Cast Iron			●	
	Aluminium			●	
	High Speed finish for Cast Iron				●
	Hardened Steel				●

				Cermet (w/o coating)	Carbide P	Carbide K	CBN
			Grade	T	E	F	B
			Material	T12A	ST10P	HTi10	KBN10B*1
Applicable Arbor	Dimension	Code No.	NOSE R				
BCB29		3P-○2	0.2	●	●	●	
BCB38, BCB48		5P-○4	0.4	●	●	●	
BCB62, BCB82		7P-○4	0.4	●	●	●	●
		7P-○8	0.8		●	●	
BCB100		10P-○4	0.4	●	●	●	●
		10P-○8	0.8		●	●	

★Minimum quantity of CBN: 1pcs, All other insert tip: 10pcs ★*1 Changes it to **KBN510** seguentially as soon as stock disappears.
★The ISO code No. surrounded with ( ) is the Nikken original insert tip.

Please add the grade indication into ○, and add the insert tip material indication at the end off the Code No. e.g. 10P-T4 (T12A)

Grade & Material

Grade	Grade Indication	Insert Tip Material Indication	Specification
Coated Cermet	C	PV90	Applicable for the midium roughing and finishing on the steel. Very stable cutting with coolant to be improved the heat resistance and the impact resistance.
		T2000Z	ZX coaled suitable for the high speed finishing on the steel with long insert life. Very fine surface finish to be improved the impact resistance and the fracture resistance.
Coated Carbide M		AC630M	Very tough carbide M (base material) with the super FF coated. Excellent for the impact resistance and the fracture resistance for the stainless steel
Coated Carbide K		AC410K	Very tough carbide K (base material) with the super FF coated. Very stable cutting for the ductile cast iron and normal cast iron.
Cermet (w/o coating)	T	NS530	The general material for the steel and the cast iron with the heat resistence and the toughness.
		NS9530	New grade with tough and smooth top layer demonstrates amazing fracture resistance. Stable tool life due to incredible toughness. This is an upgraded version of NS530.
		T12A	Applicable for the roughing and finishing on the steel. Very stable cutting to be improved the heat resistance and the impact resistance.
Carbide P	E	ST10P	Applicable for the middle to high speed cutting on the steel and the steel casting.
Carbide K	F	H1	Excellent wear resistance and applicable for the cast iron, non-ferrous metal and the non-metal.
		HTi10	Toughness and the excellent wear resistance. Applicable for the cast iron, non-ferrous metal and the non-metal.
		KW10	Stable wear resistance and the fracture resistance. Applicable for the cast iron, non-ferrous metal and the non-metal.K10
CBN	B	KBN10B	Excellent for the fracture resistance and wear resistance. Suitable for the high performance and high accuracy cutting on the harden steel
		KBN510B	Excellent for the fracture resistance and wear resistance. This is an upgraded version of KBN10B. Suitable for the high performance and high accuracy cutting on the harden steel.
Diamond	D	KPD010	Suitable for the high speed cutting on the aluminium and the non-metal. Applicable for the cutting on the carbide, ceramics, glass fibere and the plastic also.

BORING BAR for SQUARE & CYLINDRICAL BORING TOOL NIKKEN



BSA BSB BOA

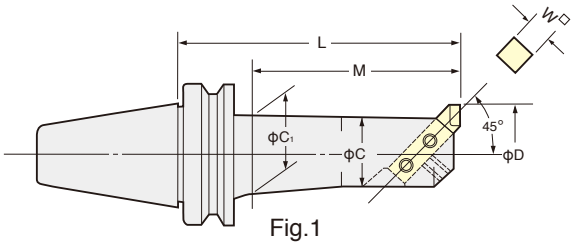


Fig.1 **BSA**

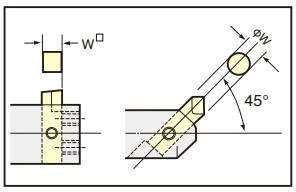
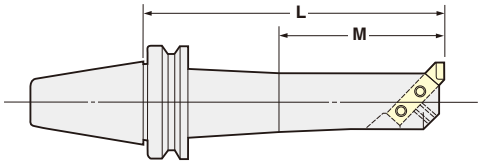


Fig.2 **BSB** Fig.3 **BOA**

TAPER	Code No.	Boring Range	Boring Depth	Dimension				
	BTNo.-Min D -L	D	M	W	C	C_1	Weight (kg)	Fig
No.40	**BT40-BSA 25-135**	25～ 38	108	8	20	22	1.3	Fig.1 BSA
	(IT40)-BSA 30-165	30～ 42	138		24	26	1.5	
	-BSA 38-180	38～ 52	153	10	30	33	1.8	
	-BSA 42-210	42～ 56	183		34	37	2.3	
	-BSA 50-180,225	50～ 65	153, 198	13	40	44	2.4, 2.9	
	-BSA 62-180,240	62～ 90	153, 218	16	50	56	3.2, 4.2	
	-BSA 72-180,240	72～110	153, 213	19	60	63	4.4, 5.7	
	-BSA 90-180	90～125	180		75		5.4	
No.50	**BT50-BSA 25-135**	25～ 38	95	8	20	22	4.4	
	(IT50)-BSA 30-165	30～ 42	125		24	26	4.6	
	-BSA 38-180	38～ 52	140	10	30	33	4.8	
	-BSA 42-210	42～ 56	170		34	37	5.0	
	-BSA 50-180,240	50～ 65	140, 200	13	40	44	5.4, 5.7	
	-BSA 62-195,270	62～ 90	155, 230	16	50	56	6.1, 7.5	
	-BSA 72-195,285	72～110	155, 245	19	60	66	6.9, 9.3	
	-BSA 90-210,300	90～125	170, 260		75	80	9.2,12.3	
	-BSA105-195,285	105～160	157, 247	25	90	90	10.5,15.0	
No.40	**BT40-BSB 25-135**	25～ 50	108	8	20	22	1.3	Fig.2 BSB
	(IT40)-BSB 38-180	38～ 70	153	10	30	33	1.9	
	-BSB 50-180,225	50～ 90	153, 198	13	40	44	2.6, 3.1	
	-BSB 62-180,225	62～115	153, 198	16	50	56	3.4, 4.1	
	-BSB 72-180,225	72～138	153, 198	19	60	63	4.7, 5.6	
	-BSB 90-180,225	90～150	180, 225		75		5.7, 6.6	
No.50	**BT50-BSB 25-135**	25～ 50	95	8	20	22	4.1	
	(IT50)-BSB 38-180	38～ 70	140	10	30	32	4.8	
	-BSB 50-180,240	50～ 90	140, 200	13	40	44	5.5, 5.7	
	-BSB 62-195,270	62～115	155, 230	16	50	56	6.4, 7.9	
	-BSB 72-195,285	72～138	155, 245	19	60	66	7.3, 9.6	
	-BSB 90-210,300	90～150	170, 260		75	80	9.6,12.6	
	-BSB105-195,285	105～190	155, 245	25	90	94	11.0,15.0	
No.40	**BT40-BOA 25-135**	25～ 31	107	8	20	22	1.3	Fig.3 BOA
	(IT40)-BOA 30-165	30～ 35	137		24	26	1.5	
	-BOA 34-165	34～ 42	137	10	28	30	1.7	
	-BOA 40-180	40～ 46	152		32	35	2.3	
	-BOA 44-210	44～ 54	182	12	36	39	2.4	
	-BOA 52-180,225	52～ 60	152, 197		42	46	2.5, 3.0	
No.50	**BT50-BOA 25-135**	25～ 31	97	8	20	22	4.2	
	(IT50)-BOA 30-165	30～ 35	127		24	26	4.4	
	-BOA 34-180	34～ 42	142	10	28	30	4.7	
	-BOA 40-210	40～ 46	172		32	35	5.0	
	-BOA 44-210	44～ 54	172	12	36	39	5.1	
	-BOA 52-180,240	52～ 60	142, 202		42	46	5.1, 6.0	

★Square or Cylindrical Boring Bit is not included.
★**When L length is required longer than standard, please specify the boring depth M.**



FACE MILL ARBOR

NIKKEN

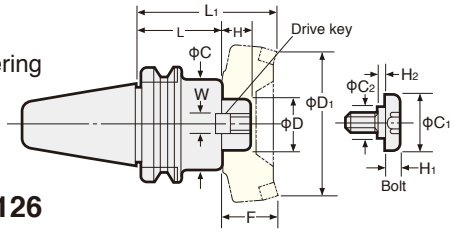


FMA

For JIS B4113 Face Mill

■Taper contact area of more than 80% ensures reliable milling with no chattering accompanied

FMH Arbor for High Feed with Coolant Through ☞P.125, P.126



TAPER	Code No. (ΦD -L)	Dimensions H	C	W	C1	C2	H1	H2	Weight (kg)	Demension of Arbor with cutter L1	D1	F	Drive Key	Bolt
No.30	BT30-FMA25.4 - 45	22	50	9.5	33	23	10	2	1.3	95	80	50	FW 5	FM12
No.40	BT40-FMA25.4 - 45	22	50	9.5	33	23	10	2	1.5	95	80	50	FW 5	FM12
	(IT40)-FMA25.4 - 90								3.1	140			FW 5	
	-FMA31.75 - 45	30	60	12.7	40	23	10	6	1.7	105	100	60	FW13*1	FM16
	-FMA31.75 - 75								3.1	135			FW13	
	-FMA38.1 - 60	34	80	15.9	50	27	14	6	2.9	120	125	60	FW18	FM20
No.50	BT50-FMA25.4 - 45	22	58	9.5	33	23	10	2	3.7	95	80	50	FW 5	FM12
	(IT50)-FMA25.4 - 90								4.6	140				
	-FMA25.4 -150								5.5	200				
	-FMA31.75 - 45	30	70	12.7	40	23	10	6	4.5	105	100	60	FW12	FM16
	-FMA31.75 - 75								5.3	135			FW13	
	-FMA31.75 -105								6.1	165				
	-FMA38.1 - 45	34	80	15.9	50	27	14	6	4.3	105	125	60	FW18	FM20
	-FMA38.1 - 75								5.6	135			FW19	
	-FMA50.8 - 45	36	100	19	65	37	14	10	4.9	105	160	60	FW23	FM24
	-FMA50.8 - 75								6.8	135			FW24	
	-FMA47.625- 75	38	128.57	25.4	—	—	—	—	7.7	135	200	60	FW26	*

★Drive keys, L-Wrench & Bolt are supplied as standard. ★The arbor marked * requires 4 fixing bolts. ★Above weight is for Arbor only. (Not include Face Mill Cutter)
★**FMA25.4** type Arbor is suitable for NIKKEN PRO-END MILL φ60 (**PE60HC**) and φ80 (**PE80HC**).
★**FMA31.75** type Arbor is suitable for NIKKEN PRO-END MILL φ100 (**PE100HC**). Please refer ☞P.127.
★Code No. of Centre Through Coolant type **FMA** Arbor for NIKKEN PRO-END MILL is : **e.g. BT40-FMA25.4C-45**
★Extended length Face Mill Arbors are available on request.
BT50-FMA25.4 -200,-250
-FMA31.75-150,-200
-FMA38.1 -150,-200
★Diameter φC of **BT50-FMA25.4** and **BT50-FMA31.75** are enlarged.
*1 **IT40**の場合、**FW12**となります。

★**In case of the special cutter, please specify the dimensions below.**

Fig.1

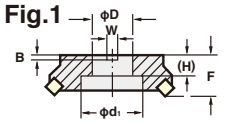
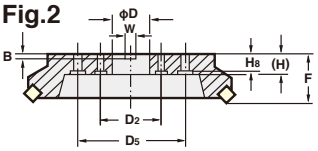


Fig.2



FACE MILL ARBOR

NIKKEN



FMB

■Taper contact area of more than 80% ensures reliable milling with no chattering accompanied

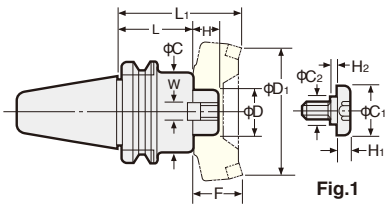


Fig.1

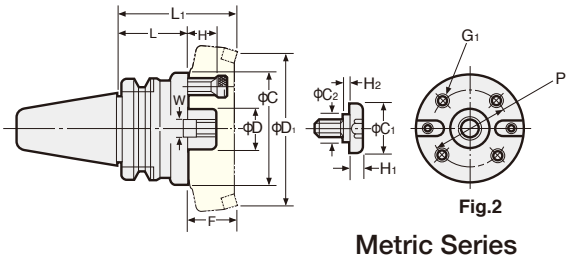


Fig.2

Inch Series ( )figures for Metric Series **Metric Series**

TAPER	Code No. (ΦD -L)	Dimensions H	C	W	C1	C2	H1	H2	G1	P	Weight (kg)	Demension of Arbor with cutter L1	D1	F	Fig.	Code No. (ΦD -L)
No.30	BT30-FMB25.4 - 45	26	80	9.5 (12)	33	23	10	2	—	—	1.7	95	80	50	1	BT30-FMB27 - 45
No.40	BT40-FMB25.4 - 60	26	80	9.5 (12)	33	23	10	2	—	—	2.5	110	80	50	1	BT40-FMB27 - 60
	(IT40)-FMB25.4 - 90										4.7	140				(IT40)-FMB27 - 90
	-FMB38.1 - 60		85	15.9 (16)	50	27	14	6	—	—	7.4	123	125	63		-FMB40 - 60
No.50	BT50-FMB25.4 - 45	26	80	9.5 (12)	33	23	10	2	—	—	4.0	95	80	50	1	BT50-FMB27 - 45
	(IT50)-FMB25.4 - 90										5.8	140				(IT50)-FMB27 - 90
	-FMB25.4 -150										8.2	200				-FMB27 -150
	-FMB38.1 - 45		85	15.9 (16)	50	27	14	6	—	—	4.7	108	125	63	1	-FMB40 - 45
	-FMB38.1 - 75										6.1	138				-FMB40 - 75
	-FMB38.1 -105										8.7	168				-FMB40 -105
	-FMB38.1F- 75		110						M12	66.7	6.6	138			2	-FMB40F- 75
	-FMB60 - 75	25	140	25.4	—	—	—	—	M16	101.6	7.9		200	63		-FMB60 - 75

★Drive keys, L-Wrench & Bolt are supplied as standard.
★Above weight is for Arbor only. (Not include Face Mill Cutter)

SHOULDER CUTTER ARBOR

NIKKEN

FMC

■Taper contact area of more than 80% ensures reliable Milling with no chattering accompanied.

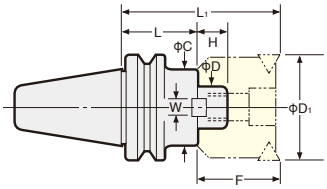


Fig.1

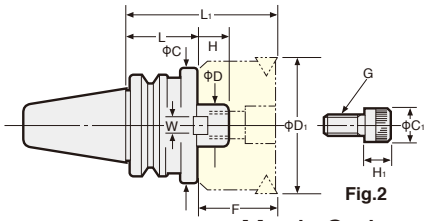


Fig.2

FMC Inch Series (●)figures for Metric Series Metric Series

Dimensions					Weight	Dimensions of Arbor with cutter				C1	H1	Fig	Code No.(ΦD -L)
TAPER	Code No.(ΦD -L)	H	C	W	(kg)	L1	D1	F	G CAP bolt				
No.30		18	45	10	1.4	80	50	40	M10×30	16	10	1	BT30-FMC22- 40
No.40		18	45	10	1.3	85	50	40	M10×30	16	10	1	BT40-FMC22- 45
					2.0	130							(IT40) FMC22- 90
	BT40-FMC25.4- 60	20	60	9.4(12)	1.5	110	80	50	M12×35	18	12	2	FMC27- 60
	(IT40)-FMC25.4- 90				2.2	140							FMC27- 90
	-FMC38.1- 60	22	85	15.5(14)	2.3	110	125	50	M16×35	30 (24)	15(16)		FMC32- 60
	-FMC38.1- 75				2.6	125							FMC32- 75
No.50		18	45	10	4.2	100	50	40	M10×30	16	10	1	BT50-FMC22- 60
					4.7	145							(IT50) FMC22-105
					5.3	190							FMC22-150
	BT50-FMC25.4- 45	20	70	9.4(12)	4.1	95	80	50	M12×35	18	12		FMC27- 45
	(IT50)-FMC25.4- 90				5.5	140							FMC27- 90
	-FMC25.4-150				7.3	200							FMC27-150
	-FMC38.1- 45	22	85	15.5(14)	4.2	95	125	50	M16×40 (35)	30 (24)	15(16)		FMC32- 45
	-FMC38.1- 75				5.5	125							FMC32- 75
	-FMC38.1-105				7.0	155							FMC32-105

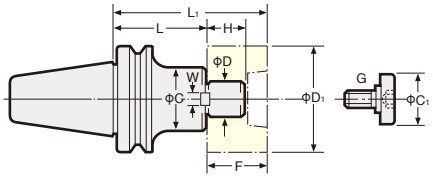
★Drive keys, L-Wrench & Bolt are supplied as standard.
★Above weight is for Arbor only. (Not include Face Mill Cutter)
★**FMC22** type Arbor is suitable for NIKKEN PRO-END MILL φ50(**PE50HC**). ☞P.127
★Code No. of Centre Through Coolant type **FMC** Arbor for NIKKEN PRO-END MILL is **e.g. BT40-FMC22C-45.**

SHELL END MILL ARBOR

NIKKEN

SMS

■Taper contact area of more than 80% ensures reliable Milling with no chattering accompanied.



Dimensions									Weight
TAPER	Code No.	D	L	H	C	C1	W	G	(kg)
No.30	BT30-SMS16- 30	16	30	14	34	20	8	M 8	0.9
	-SMS22- 30	22		16	42	28	10	M10	1.0
	-SMS27- 45	27	45	18	50	33	12	M12	1.3
No.40	BT40-SMS16- 60	16	60	14	34	20	8	M 8	1.3
	(IT40)-SMS16-120		120						1.7
	-SMS22- 60	22	60	16	42	28	10	M10	1.4
	-SMS22-120		120						2.1
	-SMS27- 45	27	45	18	50	33	12	M12	1.4
	-SMS27-105		105						2.3
	-SMS32- 45	32	45	20	60	40	14	M16	1.6
	-SMS32- 75		75						2.3
No.50	BT50-SMS16- 75	16	75	14	34	20	8	M 8	4.2
	(IT50)-SMS16-120		120						5.8
	-SMS22- 75	22	75	16	42	28	10	M10	4.3
	-SMS22-120		120						4.8
	-SMS27- 60	27	60	18	50	33	12	M12	4.3
	-SMS27-105		105						5.2
	-SMS32- 45	32	45	20	60	40	14	M16	4.2
	-SMS32- 75		75						5.2
	-SMS40- 45	40	45	23	80	50	16	M20	4.3
	-SMS40- 75		75		70				5.5
	-SMS50- 60	50	60	26	90	65	18	M24	6.3

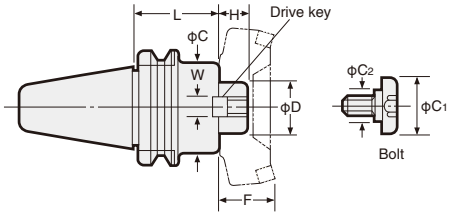
★Drive keys, L-Wrench & Bolt are supplied as standard.
★Above weight is for Arbor only. (Not include Face Mill Cutter)

BT FMH FACE MILL ARBOR

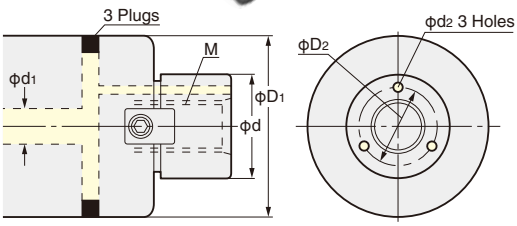
NIKKEN



■For Oil Hole Cutter
For High Feed Cutter



FMH



Code No.	Cutter Dia.	φd	φD1	M	Coolant Hole		
					φD2	φd1	φd2
FMH22(22.225)	φ50, φ52 φ63, φ66	22(22.225)	47 60	M10×1.5	16	6~8	3
FMH27(25.4)	φ80	27(25.4)	76(70)	M12×1.75	19.5(18.5)	8~10	3.5
FMH32(31.75)	φ100	32(31.75)	96	M16×2.0	24	10~13	4
FMH40(38.1)	φ125	40(38.1)	100	M20×2.5	30(29)	10~15	5
FMH50.8	φ160	50.8	100	M24×3.0	37.5	15~20	7

★Fixing dimension is basically based on **FMA/FMC.** ★The combination of the other cutter dia. are also available.

FMH Inch Series

TAPER	Code No.	Arbor D	L	H	C	C1	W	Drive Key	Lock Bolt	G Cap Bolt	Weight (kg)
No.40	BT40-FMH22.225- 47- 45	22.225	45	17	47	28	8	FW 3	FM10	—	1.3
	(IT40) - 60		60								1.5
	- 90		90								1.9
	-150		150								2.7
	-FMH22.225- 60- 45	22.225	45	17	60	28	8	FW 3	FM10	—	1.5
	- 60		60								1.8
	- 90		90								2.5
	-FMH25.4 - 70- 60	25.4	60	22	70	33	9.5	FW 5	FM12	—	2.0
	- 90		90								2.7
	-105		105								3.1
	-FMH31.75 - 76- 60	31.75	60	30	76	40	12.7	FW13	FM16	—	2.2
	- 90		90								2.9
	-FMH31.75 - 96- 60	31.75	60	30	96	40	12.7	FW13	FM16	—	2.5
No.50	BT50-FMH22.225- 47- 60	22.225	60	17	47	28	8	FW 3	FM10	—	4.1
	(IT50) -105		105								4.7
	-150		150								5.3
	-200		200								6.0
	-250		250								6.6
	-300		300								7.7
	-350		350								8.9
	-FMH22.225- 60- 60	22.225	60	17	60	28	8	FW 3	FM10	—	4.2
	-105		105								5.2
	-150		150								6.2
	-200		200								7.4
	-250		250								8.5
	-300		300								9.6
	-350		350								10.6
	-FMH25.4 - 70- 45	25.4	45	22	70	33	9.5	FW 5	FM12	—	4.0
	- 60		60								4.5
	- 90		90								5.4
	-150		150								7.2
	-200		200								8.7
	-250		250								10.3
	-300		300								11.8
	-FMH31.75 - 76- 45	31.75	45	30	76	40	12.7	FW12	FM16	—	4.1
	- 75		75					FW13			5.2
	-105		105								6.3
	-150		150								7.9
	-200		200								9.7
	-250		250								11.6
	-300		300								13.4
	-FMH31.75 - 96- 45	31.75	45	30	96	40	12.7	FW13	FM16	—	4.3
	- 75		75								6.0
	-105		105								7.7
	-150		150								10.3
	-200		200								13.1
	-250		250								16.4
	-300		300								19.2
	-FMH38.1 -100- 45	38.1	45	34	100	50	15.9	FW19	FM20	—	4.4
	- 75		75								6.3
	-105		105								8.1
	-150		150								10.9
	-200		200								14.5
	-250		250								17.5
	-300		300								20.5
	-FMH50.8 -100- 45(50)	50.8	45	36	100	65	19	FW23	FM24	—	4.4

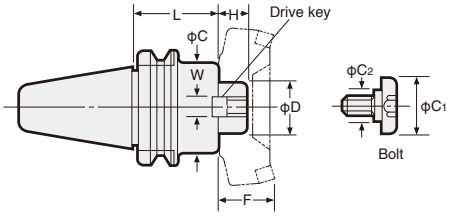
★Drive keys, L-Wrench & Bolt are supplied as standard.
★Above weight is for Arbor only. (Not include Face Mill Cutter)

BT FMH FACE MILL ARBOR

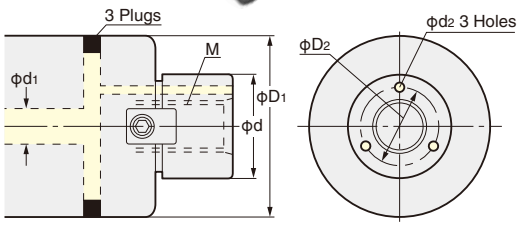
NIKKEN



■For Oil Hole Cutter
For High Feed Cutter



FMH



Code No.	Cutter Dia.	φd	φD1	M	Coolant Hole φD2	Coolant Hole φd1	Coolant Hole φd2
FMH22(22.225)	φ50, φ52 φ63, φ66	22(22.225)	47 60	M10×1.5	16	6~8	3
FMH27(25.4)	φ80	27(25.4)	76(70)	M12×1.75	19.5(18.5)	8~10	3.5
FMH32(31.75)	φ100	32(31.75)	96	M16×2.0	24	10~13	4
FMH40(38.1)	φ125	40(38.1)	100	M20×2.5	30(29)	10~15	5
FMH50.8	φ160	50.8	100	M24×3.0	37.5	15~20	7

★Fixing dimension is basically based on **FMA/FMC.** ★The combination of the other cutter dia. are also available.

FMH Metric Series

TAPER	Arbor Code No.	D	L	H	C	C1	W	Drive Key	Lock Bolt	G Cap Bolt	Weight (kg)
No.30	BT30-FMH16- 37 - 35	16	35	17	37	20	8	FW 3	FM 8	—	0.56
	-FMH22- 47 - 45	22	45	18	47	16	10	FW 8	—	M10 × 30	0.76
	-FMH27- 60 - 45	27	45	20	60	18	12	FW11	—	M12 × 35	0.91
No.40	BT40-FMH16- 37 - 40	16	40	17	37	20	8	FW 3	FM 8	—	1.1
	(IT40)-FMH22- 47 - 45	22	45	18	47	16	10	FW 8	—	M10 × 30	1.3
	- 60		60								1.5
	- 90		90								1.9
	-150		150								2.7
	-FMH22- 60 - 45*1	22	45	18	60	16	10	FW 8	—	M10 × 30	1.5
	- 60		60								1.8
	- 90		90								2.5
	-FMH27- 60 - 45	27	45	20	60	18	12	FW11	—	M12 × 35	1.5
	- 60		60								1.8
	- 90		90								2.5
	-FMH27- 76 - 60	27	60	20	76	18	12	FW11	—	M12 × 35	2.1
	- 90		90								2.8
	-FMH32- 96 - 60	32	60	22	96	24	14	FW16	—	M16 × 35	2.4
No.50	BT50-FMH16- 37 - 60	16	60	17	37	20	8	FW 3	FM 8	—	3.8
	(IT50) -105		105								4.1
	-150		150								4.5
	-200		200								4.9
	-FMH22- 47 - 60	22	60	18	47	16	10	FW 8	—	M10 × 30	4.1
	-105		105								4.7
	-150		150								5.3
	-200		200								6.0
	-250		250								6.7
	-300		300								7.8
	-350		350								8.9
	-FMH22- 60 - 60	22	60	18	60	16	10	FW 8	—	M10 × 30	4.2
	-105		105								5.2
	-150		150								6.3
	-200		200								7.4
	-250		250								8.5
	-300		300								9.6
	-350		350								10.7
	-FMH27- 60 - 45	27	45	20	60	18	12	9FWE27	—	M12 × 35	3.9
	- 90		90					FW11			5.0
	-150		150								6.3
	-200		200								7.4
	-250		250								8.5
	-300		300								9.6
	-FMH27- 76 - 45	27	45	20	76	18	12	FW10	—	M12 × 35	4.0
	- 90		90					FW11			5.6
	-150		150								7.8
	-200		200								9.7
	-250		250								11.4
	-300		300								13.2
	-FMH32- 96 - 45	32	45	22	96	24	14	FW15	—	M16 × 35	4.2
	- 90		90					FW16			6.8
	-150		150								10.2
	-200		200								13.3
	-250		250								16.1
	-300		300								19.0
	-FMH40-100 - 45	40	45	26	100	50	16	FW20	FM20	—	4.4
	- 75		75					FW22			6.2
	-105		105								8.1

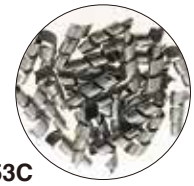
★Drive keys, L-Wrench & Bolt are supplied as standard.
★Above weight is for Arbor only. (Not include Face Mill Cutter)
★*1 **IT40-FMH27-60-45** is not available.

PRO-END MILL for Precision Face Milling, Right Angle Shoulder Mill & High Speed Grooving.

NIKKEN



PRO-END MILL



S53C

Suitable for NIKKEN FMA/FMC Arbor.

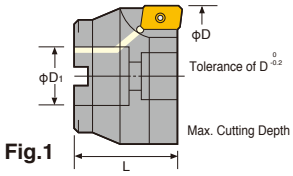


Fig.1

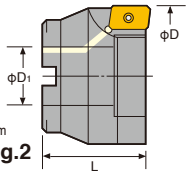


Fig.2

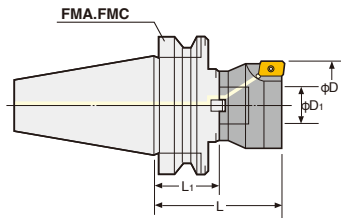
Code No.	D	D1	L	No. of Teeth	Insert Tip	Tip Clamp Bolt	Weight (kg)	Fig.
PE 50HC	50	22	45	5	Steel : 9DKT15 Aluminium, Cast Iron : 9DKR15	M 4090	0.4	1
PE 60HC	60	25.4	45	5			0.6	
PE 80HC	80	25.4	45	6		M 4012	0.8	2
PE100HC	100	31.75	50	6			1.6	

★Insert Clamp Bolt & Wrench are supplied as standard. ★Insert Tip is available as an option.
★Suitable for Face Mill Arbor **FMA & FMC**.
★Please add **"C"**after **FMA/FMC** for Centre Through Tool Coolant type. **e.g.BT40-FMC22C-45**
★The Lock Bolt is not supplied for **PE50HC**. Please use the bolt **(M10×30)** attached to **FMC22**.
★The Lock Bolt is supplied for **PE60HC～PE100HC** as standard.
PE60HC: M12×35 PE80HC: 9PEM12-50 PE100HC: 9PEM16-55



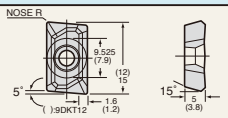
PE

BT (IT) Shank Arbor for PRO-END MILL



TAPER	PRO-END MILL	PRO-END MILL Arbor	L	L1	D	D1
No.40	PE50HC	BT40-FMC22 -45,-90	90,135	45, 90	50	22
	PE60HC, PE80HC	(IT40)-FMA25.4 -45,-90			60,80	25.4
	PE100HC	-FMA31.75-45,-75	95,125	45, 75	100	31.75
No.50	PE50HC	BT50-FMC22 -60,-105	105,150	60,105	50	22
	PE60HC, PE80HC	(IT50)-FMA25.4 -45,-90	90,135	45, 90	60,80	25.4
	PE100HC	-FMA31.75-45,-75	95,125	45, 75	100	31.75

★Please add **"C"** after **FMA/FMC** for Centre Through Coolant type. **e.g. BT40-FMC22C-45**
★Please refer ☞ **P.123** for **FMC** Arbor, **FMA** Arbor.

Code No.	Dimension	Grade	Material	Pro-END MILL	ISO Code No.	Tip Clamp Bolt	Tip Clamp Wrench
9DKT12		IC50M	Steel, Cast Iron	S20-PE22	APKT1203	M 3070	T-10
9DKT15			Steel	Except S20-PE22	ADKT1505	M 4090*1	PE-T15
9DKR15		IC28	Aluminum, Cast Iron		ADKR1505	M 4012	

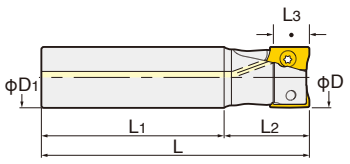
★Please ask us if you require any other type of insert grade e.g. Coated, Cermet etc. For Heavy Cutting on Cast Iron, insert grade of **IC520M** is suitable.
★Purchase of Insert : box each (10 pcs.) ★＊1 Please note there are two different kinds of Tip Clamp Bolts.

Straight Shank PRO-END MILL

NIKKEN



S-MDPE



Code No.	φD	D1	L	L1	L2	MAX. Cutting Depth L3	No. of Teeth	Insert Code No.	Tip Clamp Bolt	Tip Clamp Wrench	Weight (Kg)
S16-MDPE16- 90	16	16	90	60	30	10	2	AOMT123608PEER-M	TPS-25	TIP07F	0.2
S20-MDPE20-100	20	20	100	70			3				0.2
S25-MDPE25-110	25	25	110	75	35	15	2	AOMT184808PEER-M	TPS-4	TIP15W	0.4
S32-MDPE32-120	32	32	120	80	40		3				0.7

★2 tip clamp bolts and tip clamp wrench are supplied as standard. ★Please refer ☞ **P.258** for cutting condition.
★Insert tip is available as an option. ☞ **P.202**
★Coolant through tool is available as an standard for all series.

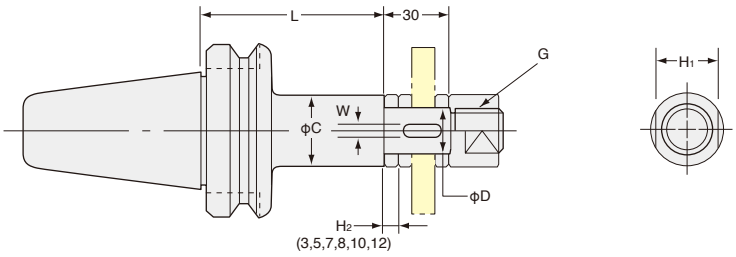
STUB ARBOR

NIKKEN

■Taper contact area of more than 80% ensures reliable milling with no chattering accompanied.



SCA



Inch Series							Metric Series
TAPER	Code No.(ϕD-L)	H_1	C	W	G	Weight (kg)	Code No.(ϕD-L)
No.30	BT30-SCA12.7 -60	17	20	—	M12	1.0	BT30-SCA13-60
	-SCA15.875-60	23	26	3.18 (4)	M14	1.1	-SCA16-60
	-SCA22.225-60	29	34	3.18 (6)	M20	1.2	-SCA22-60
	-SCA25.4 -60	32	40	6.35 (7)	M24	1.3	-SCA27-60
No.40	BT40-SCA12.7 -75,105	17	20	—	M12	1.2 , 1.3	BT40-SCA13-75,105
	(IT40)-SCA15.875-75,105	23	26	3.18 (4)	M14	1.4 , 1.5	(IT40)-SCA16-75,105
	-SCA22.225-75,120	29	34	3.18 (6)	M20	1.7 , 2.0	-SCA22-75,120
	-SCA25.4 -75,120	32	40	6.35 (7)	M24	2.0 , 2.4	-SCA27-75,120
	-SCA31.75 -90	41	46	7.92 (8)	M30	2.6	-SCA32-90
No.50	BT50-SCA12.7 -75,105	17	20	—	M12	4.0 , 4.3	BT50-SCA13-75,105
	(IT50)-SCA15.875-90,120	23	26	3.18 (4)	M14	4.2 , 4.4	(IT50)-SCA16-90,120
	-SCA22.225-90,135	29	34	3.18 (6)	M20	4.4 , 4.7	-SCA22-90,135
	-SCA25.4 -90,135	32	40	6.35 (7)	M24	4.5 , 4.9	-SCA27-90,135
	-SCA31.75 -90,135	41	46	7.92 (8)	M30	4.7 , 5.2	-SCA32-90,135
	-SCA38.1 -90,135	46	55	9.52 (10)	M36	4.9 , 5.9	-SCA40-90,135

( ) figures for Metric Series

★JIS B4206, JIS B4107, JIS B4219, JIS B4109 cutters can be attached.
★Key and Collars (H_2=3, 5, 7, 8, 10, 12) are supplied as standard.
★The Code No. of Nut is unified from **"GN"** to **"GNT"**.

Inch Series			Metric Series		
Arbor	Collar	Nut	Arbor	Collar	Nut
SCA12.7	G ½	GNT ½	SCA13	G13	GNT ½
15.875	G ⅝	GNT ⅝	16	G16	GNT ⅝
22.225	G ⅞	GNT ⅞	22	G22	GNT ⅞
25.4	G1	GNT1	27	G27	GNT1
31.75	G1 ¼	GNT1 ¼	32	G32	GNT1 ¼
38.1	G1 ½	GNT1 ½	40	G40	GNT1 ½

★Please add the H_2 thickness at the end of Code No. for the collar. **e.g. G1-8.**

Straight Shank **STUB ARBOR**

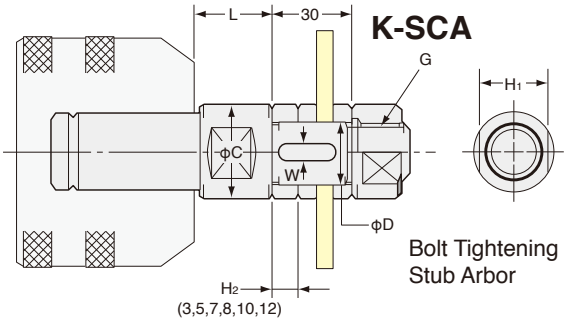
■For Multi-Lock Milling Chuck



K-SCA



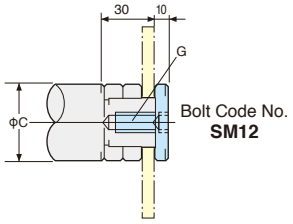
K-SCC



Bolt Tightening Stub Arbor

Style	K No. ϕD -L	H_1	C	W	G	Weight (kg)
32	K32-SCA25.4-30	32	40	6.35	M24	1.2
	-SCC25.4-30				M12	1.2
42	K42-SCA25.4-30				M24	1.3
	-SCC25.4-30				M12	1.3

K-SCC



Thinner Bolt Head type is also available.

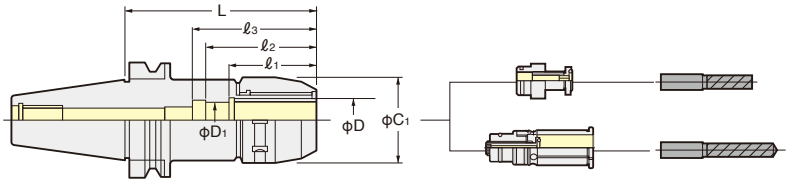
CENTRE THROUGH COOLANT TYPE HOLDER
MAX.7MPa

NIKKEN

MILLING CHUCK for Centre Through



Centre Through
MAX. 7MPa

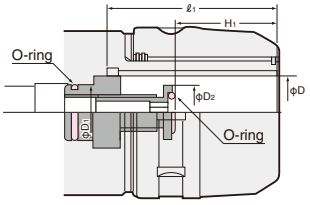


TAPER	Code No.	C1	D	D1	ℓ1	ℓ2	ℓ3	Stopper(Option)	Collet	Weight (kg)
No.40	BT40 -C20C- 70, 90,105	52	20	20	58	66	80	9MC20H	CCK20 CCNK20	1.6, 1.8, 2.0
	(IT40) -C25C- 70, 90	60	25	25	61	72		9MC25H	CCK25 CCNK25	1.8, 2.1
	-C32C- 85,105,120	69	32		64,70,70	77,81,81	107	9MC32HS, 9MC32H, 9MC32H	CCK32 CCNK32	2.1, 2.5, 2.8
No.50	BT50 -C20C-105,135	52	20	20	58	66	80	9MC20H	CCK20 CCNK20	4.5, 4.9
	(IT50) -C25C-105,135	60	25	25	61	72		9MC25H	CCK25 CCNK25	4.8, 5.2
	-C32C- 90,105,135,165	69	32		70	81	107	9MC32H	CCK32 CCNK32	4.3, 4.6, 5.5, 6.4
	-C42*- 95,105,135	86	42	42	74	115	125	9MC42H	CCK42 CCNK42	5.5, 5.8, 7.1

Stopper for Direct Chucking

Direct Chucking means that chucking ϕ32mm shank tool by ϕ32mm ID Holder. If Tool's shank length longer than ℓ1, Stopper is not necessary.

Chuck	Stopper	H1	C2
C20C	9MC20H	42～47	17
C25C	9MC25H	50～55	22
C32C	9MC32H	49～59	24
	9MC32HS	55～60	
C42	9MC42H	57～67	24



★Spanner is available as an option. **C20 : 9HC22, C25 : 9HC25**
C32 : 9HC32, C42 : 9HC42



★Shank of High Speed Milling Chuck (G) is **2LOCK**. (Centre through tool coolant is standard.) ☞**P.190 e.g. NBT40-C32-105G GH handle** ☞**P.48** is necessary for High Speed Milling Chuck.
★Please note the acceptable shank tolerance is h7.
★Please refer ☞**P.34**. for **CCK** Collet and **CCNK** Collet.
★Please add **"RP"** at the end of Code No. for Rust Proof Treatmeant Milling Chuck. **e.g. BT40-C32C-85-RP**.
★***C42 Milling Chuck is Centre Coolant Through type as standard.**
★Stopper for Direct Chucking is available as an option.
★**In case of Heavy End Milling operation, please chuck the End Mill longer than ℓ1 without using Stopper.**

★GH Handle

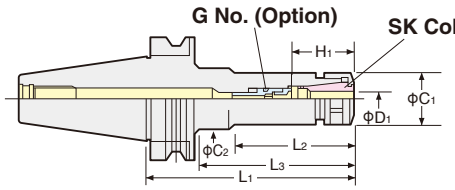


SLIM CHUCK for Centre Through

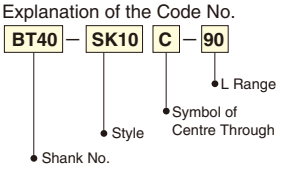
PAT.



Centre Through
MAX. 7MPa



Explanation of the Code No.



TAPER	Code No.	D1	H1	L2	L3	C1	C2	G No. (Option)	Weight (kg)	SK Collet
No.40	BT40-SK 6C- 90,120	4～6	26～31	51,60	60,90	19.5	32,32	SKG6-6HG	1.1,1.4	SK 6
	(IT40)-SK10C- 90,120,150,180	5～10	33～41	48,73,73,73	60,90,118,148	27.5	40,40,34.5,39	SKG10-10HG	1.2,1.4,1.6,1.6	SK10
	-SK13C- 90,120,150,180	5～13	39～51	58,88,88,88	-,-,118,148	33	-,-,40,40	SKG13-10HG	1.4,1.6,1.8,1.8	SK13
	-SK16C- 90,120,150,180	10～16	45～57	58,88,118,148		40		SKG16-12HG	1.5,1.7,1.9,2.0	SK16
	-SK20C- 75, 90,120	10～20	47～63	45,60,90	-	48.5	-	SKG20-18HG	1.4,1.6,2.0	SK20
	-SK25C- 90,120	16～25	60～65,60～70	61,91		55		SKG25-18HGD,SKG25-24HG	1.8,2.0	SK25
No.50	BT50-SK 6C-105,165	4～6	26～31	55,60	64,114	19.5	32,32	SKG6-6HG	3.8,4.0	SK 6
	(IT50)-SK10C-105,135,165,200	5～10	33～41	57,70,75,75	-,92,114,151	27.5	-,32,32,36	SKG10-10HG	4.2,4.4,4.6,4.8	SK10
	-SK13C-105,135,165,200	5～13	39～51	62,92,92,92	-,-,122,157	33	-,-,45,45	SKG13-10HG	4.5,4.7,4.9,5.2	SK13
	-SK16C-105,135,165,200	10～16	45～57	62,92,90,90	-,-,122,157	40	-,-,50,52	SKG16-12HG	4.7,4.9,5.1,5.5	SK16
	-SK20C-105,135,165	10～20	47～63	62,92,122	-	48.5	-	SKG20-18HG	4.3,4.6,5.0	SK20
	-SK25C-105,165	16～25	60～70	62,122		55		SKG25-24HG	5.2,5.6	SK25

★Collet, adjust screw (G No.) and spanner are available as an option.
The Code No. of the spanner is **SK6C (C=ϕ18) : SKL-6, SK6C (C=ϕ19.5) : SKL-6W, SK10C: SKL-10, SK13C: 9HC12A, SK16C: 9HC16, SK20C: 9HC22, SK25C: 9HC25**



★Shank of High Speed Slim Chuck (P) is **2LOCK**. ☞**P.196 e.g. NBT40-SK10C-90P. GH handle** ☞**P.48** is necessary for High Speed Slim Chuck.
★Please add **"RP"** at the end of Code No. for Rust Proof Treatmeant Slim Chuck. **e.g. BT40-SK10C-90-RP**. ★Please refer ☞**P.43** for **SK** Collet.
★When cutter shank dia. is smaller than MIN. of D1, special adjust screw (G No.) is required. ☞**P.52**

★GH Handle



CENTRE TROUGH COOLANT TYPE HOLDER

MAX.7MPa

NIKKEN

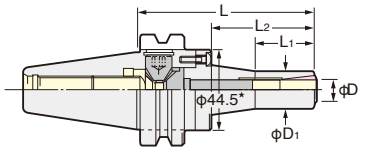


MINI-MINI CHUCK ADVANCED ALPHA for Centre Through PAT.

30,000min-1 & G2.5
Gripping from Front Nose
Run-out Accuracy : Within 3μm

Centre Through MAX. 7MPa

Extra-long sizes are added.



★ : MMC12 :φ52

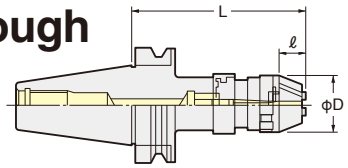
TAPER	Code No.	φD	φD1	L1	L2	Collet	MAX. (min-1)	Weight (kg)
No.40	BT40-MMC 8C- 90-AA,120-AA,150-AA,180-AA	2～ 8	20	30, 40, 40, 70	42, 72, 102, 132	VMK 8J	30,000	1.2, 1.3, 1.4, 1.5
	(IT40)-MMC12C- 90-AA,120-AA,150-AA,180-AA	4～12	30	35, 60, 70, 100	44, 74, 104, 134	VMK12J		1.4, 1.5, 1.6, 1.7
No.50	BT50-MMC 8C-105-AA,135-AA,165-AA,195-AA	2～ 8	20	30, 40, 40, 70	42, 72, 102, 132	VMK 8J	20,000	3.8, 3.9, 4.0, 4.1
	(IT50)-MMC12C-105-AA,135-AA,165-AA,195-AA	4～12	30	35, 60, 70, 100	44, 74, 104, 134	VMK12J		4.0, 4.1, 4.2, 4.3

★Wrench is supplied as standard. Collet is available as an option ☞P.36.
★Please use **VMK** Collet for the cutter with oil hole, and use **VMK-J** Collet for the cutter without oil hole. ☞P.36
★Photo shows **MINI-MINI** Chuck & **VMK** Collet chucking with φ2.7mm oil hole drill.



NPU DRILL CHUCK for Centre Through

(MAX. 1MPa)



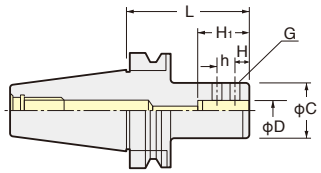
TAPER	Code No.	φDmm	φD	ℓ	L	Weight (kg)
No. 40	BT40-NPU13C- 80	6～13	48.5	26.5	92.1～103.1	1.5
	(IT40) 130				137.1～148.1	2.2
	175				182.1～193.1	2.7
No. 50	BT50-NPU13C- 90				97.1～108.1	4.1
	(IT50) 130				137.1～148.1	4.6
	190				197.1～208.1	5.2

★Wrench is available as an option. **NPU8: NPUL-8, NPU13: NPUL-13**.
★MIN. Chucking Dia. for center through coolant is φ6mm. ★**Please use Slim Chuck for high pressure coolant 7MPa.** ☞P.129



SIDE LOCK HOLDER (for DRILL) for CentreThrough

Centre Through MAX. 7MPa



TAPER	Code No.	D	L	C	h	H	H1	G	Collet	Weight (kg)
No. 40	BT40-SL20C- 90	20	90	50	16	12	44.5	M10	—	1.8
	(IT40)-SL25C- 90	25		55	17	14	54.5	M12 P1.25	OK25	1.7
	-SL32C- 90	32		60	16	15	59.5	M12 P1.25	OK32	1.9
No. 50	BT50-SL20C-105	20	105	50	16	12	44.5	M10	—	4.8
	(IT50)-SL25C-105	25		55	17	14	54.5	M12 P1.25	OK25	4.7
	-SL32C-105	32		60	16	15	59.5	M12 P1.25	OK32	4.9
	-SL40C-105	40		88	19	18	70	M12 P1.25	OK40	5.2

★For OK 25, OK 32 and OK 40 Collet, please refer ☞ P.135.

RP (RUST PROOF TREATMENT)

NIKKEN

Rust Proof Treatment (Option)

The RP treatment creates a fine film of the contents (Fe3O4) and (Fe2O3) , and penetrates into the tool holder material 1～2 micron deep. This fine film inhibits the rust and corrosion of your tool holder taper and stops it from being transmitted to your machine spindle. The RP treatment will not effect the accuracy and the hardness of your NIKKEN tool holders.

Standard 8 years used **RPT 18 years used**



⚠ Caution

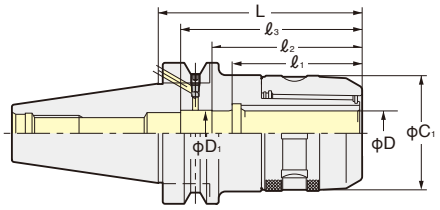
- **If the detection of tool existing at tool magazine by optical method on your M/C, the tool with RP treatment may be judged "no tool existing". Please check your M/C specification.**
- **The taper connection of the tool shank with RP treatment is more stuck than the taper connection of the tool shank without RP treatment. Then, the unclamping force for the tool with RPT is required 20% stronger than the unclamping force for the tool without RPT. Please be careful to check the unclamping force of your M/C, when the tool with RPT treatment is chosen.**
- **Therefore, the taper cone of 3LOCK tool and NC5 tool is changed to without RP treatment as standard. And the special anti-rust treatment is applied to the taper cone of the 3LOCK tool and NC5 tool.**

FLANGE THROUGH COOLANT TYPE HOLDER

NIKKEN



MILLING CHUCK for Flange Through



TAPER	Code No.	C1	D	D1	ℓ1	ℓ2	ℓ3	Stopper (Option)	Collet	Weight (kg)
No.40	BT40-C20F- 90,105	52	20	20	58	66	80	9MC20H	CCK20 CCNK20	1.9, 2.0
	(IT40)-C25F- 90,105	60	25	25	61	70		9MC25H	CCK25 CCNK25	2.0, 2.2
	-C32F-105,120	69	32		70	81	107	9MC32H	CCK32 CCNK32	2.5, 2.8
No.50	BT50-C20F-105,135,165	52	20	20	58	66	80	9MC20H	CCK20 CCNK20	4.2, 4.4, 4.8
	(IT50)-C25F-105,135,165	60	25	25	61	72		9MC25H	CCK25 CCNK25	4.5, 5.1, 5.7
	-C32F-105,120,135,165	69	32		70	81	107	9MC32H	CCK32 CCNK32	4.6, 5.1, 5.5, 6.4
	-C42F-120,135,165	86	42	42		105, 115, 115	125	9MC42H	CCK42 CCNK42	5.8, 6.1, 6.8

★Spanner is available as an option. **C20 : 9HC22, C25 : 9HC25**
C32 : 9HC32, C42 : 9HC42

★Shank of High Speed Milling Chuck (G) is **2LOCK**. **e.g. NBT40-C20F-105G**
GH Handle ☞**P.48** is necessary for High Speed Milling Chuck.

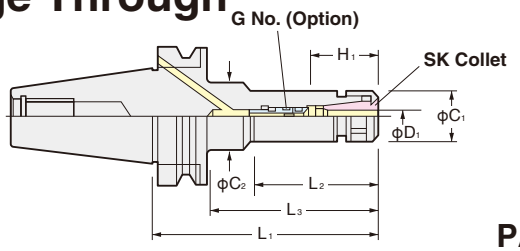
★Please refer ☞**P.34** for **CCK** Collet and **CCNK** Collet. ★In case of Heavy End Milling operation, please chuck the End Mill longer than ℓ1 without using stopper. ☞**P.129**
★Please add **"RP"** at the end of Code No. for Rust Proof Treatment Milling Chuck. **e.g. BT40-C20F-75-RP**. ★Please note the acceptable shank tolerance is h7.

★GH Handle





SLIM CHUCK for Flange Through



PAT.

TAPER	Code No.	D1	H1	L2	L3	C1	C2	G No. (Option)	Weight (kg)	Collet
No.40	BT40-SK 6F- 90,120	4~6	26~31	51,60	60,90	19.5	32,32	SKG6-6HG	1.1,1.4	SK 6
	(IT40)-SK10F- 90,120,150,180	5~10	33~41	48,73,73,73	60,90,118,148	27.5	40,40,34.5,39	SKG10-10HG	1.2,1.4,1.6,1.6	SK10
	-SK13F- 90,120,150,180	5~13	39~51	58,88,88,88	-,-,118,148	33	-,-,40,40	SKG13-10HG	1.4,1.7,1.8,1.8	SK13
	-SK16F- 90	10~16	45~50	58	-	40	-	SKG16-12HGB	1.5	SK16
	-120,150,180		45~57	88,118,148				SKG16-12HG	1.7,1.9,2.0	
	-SK20F- 90,120	10~20	57~63,47~63	60,90		48.5		SKG20-18HGB,SKG20-18HG	1.4,2.0	SK20
	-SK25F- 90,120	16~25	50~58,55~65	61,91		55		SKG25-18HGC,SKG25-24HGA	1.8,2.0	SK25
No.50	BT50-SK 6F-105,165	4~6	26~31	55,60	64,114	19.5	32,32	SKG6-6HG	3.8,4.0	SK 6
	(IT50)-SK10F-105,165,200,225	5~10	33~41	57,75,75,75	-,114,151,178	27.5	-,32,36,40	SKG10-10HG	4.2,4.6,4.8,5.1	SK10
	-SK13F-105,165,200	5~13	39~51	62,92,92	-,122,157	33	-,45,45	SKG13-10HG	4.5,4.9,5.2	SK13
	-SK16F-105,165,200	10~16	45~57	62,90,90	-,122,157	40	-,50,52	SKG16-12HG	4.7,5.1,5.5	SK16
	-SK20F-105,165	10~20	47~63	62,122	-	48.5	-	SKG20-18HG	4.3,5.0	SK20
	-SK25F-105,165	16~25	55~65,55~70	62,122		55		SKG25-24HGA,SKG25-24HG	5.2,5.6	SK25

★Collet, adjust screw (G No.) and spanner are available as an option.
The Code No. of the spanner is **SK6F (C=φ18) : SKL-6, SK6F (C=φ19.5) : SKL-6W, SK10F: SKL-10, SK13F: 9HC12A, SK16F: 9HC16, SK20F: 9HC22, SK25F: 9HC25**



★Shank of High Speed Slim Chuck (P) is **2LOCK** . **e.g. NBT40-SK10F-90P GH Handle** ☞**P.30** is necessary for High Speed Slim Chuck.
★Please add **"RP"** at the end of Code No. for Rust Proof Treatmeant Slim Chuck. **e.g. BT40-SK10F-90-RP**.
★Please refer ☞**P.43** for **SK** Collet.
★When cutter shank dia. is smaller than MIN. of D1, special adjust screw (G No.) is required. ☞**P.52**

★GH Handle



⚠
- **The special pull stud with Oring is required for the M/C with flange through coolant capability.**
- **When the stroke of the coolant nozzles at the spindle flange on the M/C with flange through coolant capability is shorter, it may be a collision between flange of 2LOCK tool and the nozzles. Please check the specification on your M/C.**

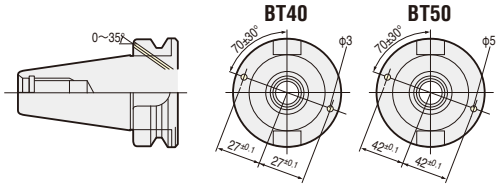
FLANGE THROUGH COOLANT TYPE HOLDER

NIKKEN



High Pressure Coolant Through Flange

The Flange Through Coolant System is a solution against the spindle rust and the dust problems of Centre Through Coolant System. These Tool Holder are used for Machine has Flange Through Holes and standard as **DIN69871/B**.



NISHIDA **BT40** Machine's Flange Through Hole alignment is unique. Option**(T)** is available. Specify as **BT40-C20T-90**

RPT (Rust Proof Treatment) ☞ P.130

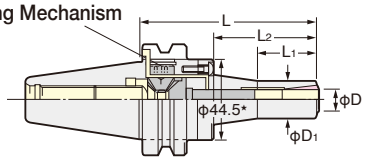
Pull Stud (with O-ring) for Flange Through type is also available.



MINI-MINI CHUCK ADVANCED ALPHA for Flange Through

30,000min-1 & G2.5
Gripping from Front Nose
Run-out Accuracy: Within 3μm

New Locking Mechanism



High Speed

PAT.

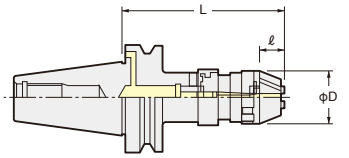
★ : MMC12 :φ52.4

TAPER	Code No.	φD	φD1	L1	L2	Collet	MAX. min-1	Weight (kg)
No.40	BT40-MMC 8F- 90-AA, 120-AA	2～ 8	20	33, 40	42, 72	VMK 8J	30,000	1.4, 1.5
	(IT40)-MMC12F- 90-AA, 120-AA	4～12	30	36, 60	44, 74	VMK12J		1.7, 1.8
No.50	BT50-MMC 8F-105-AA, 135-AA, 165-AA	2～ 8	20	33, 40, 40	42, 72, 102	VMK 8J	20,000	4.4, 4.5, 4.6
	(IT50)-MMC12F-105-AA, 135-AA, 165-AA	4～12	30	36, 60, 70	44, 74, 104	VMK12J		4.6, 4.7, 4.8

★Wrench is supplied as standard. Collet is available as an option ☞ P.36.
★Please use VMK Collet for the cutter with oil hole, and use VMK-J Collet for the cutter without oil hole.
★Photo shows **MINI-MINI Chuck** & **VMK Collet** chucking with φ2.7mm oil hole drill.



NPU DRILL CHUCK for Flange Through

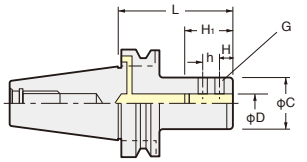


TAPER	Code No.	φDmm	φD1	ℓ	L	Weight (kg)
No.40	BT40-NPU13F-105	6～13	48.5	26.5	112.1～123.1	1.9
	(IT40) 150				157.1～168.1	2.4
No.50	BT50-NPU13F-110				117.1～128.1	4.4
	(IT50) 150				157.1～168.1	4.8

★Wrench is available as an option. **NPU8: NPUL-8, NPU13: NPUL-13**.
★MIN. Chucking Dia. for center through coolant is φ6mm.
★Please use Slim Chuck ☞ P.129 for high pressure coolant (MAX. 7Mpa).



SIDE LOCK HOLDER (for DRILL) for Flange Through



TAPER	Code No.	D	L	C	h	H	H1	G	Collet	Weight (kg)
No. 40	BT40-SL20F- 90	20	90	50	16	12	44.5	M10	—	1.8
	(IT40)-SL25F- 90	25	90	55	17	14	54.5	M12 P1.25	OK25	1.7
	-SL32F- 90	32	90	60	16	15	59.5	M12 P1.25	OK32	1.9
No. 50	BT50-SL20F-105	20	105	50	16	12	44.5	M10	—	4.8
	(IT50)-SL25F-105	25	105	55	17	14	54.5	M12 P1.25	OK25	4.7
	-SL32F-105	32	105	60	16	15	59.5	M12 P1.25	OK32	4.9
	-SL40F-105	40	105	88	19	18	70	M12 P1.25	OK40	5.2

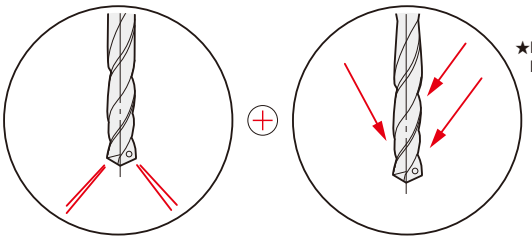
★For OK25, OK32 and OK40 Collet, please refer ☞ P.135.

MULTI OIL HOLE HOLDER (1)

NIKKEN

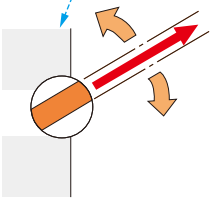
Internal and External Coolant Feeding Switchable

Internal Coolant Feeding is done with Oil Holder Drill and External Coolant Feeding from Multi Nozzles exactly hit the cutting point in jet streams, when drill, end mill, tap, and reamer without oil hole are used switching of Internal and External Feeding can be done in one touch.



Oil Holder Drill　　Jet Coolant from Multi Nozzles

★For High Precision Machining, **MOC** or **MOK** is recommended.



JET Coolant direction adjustable

Varieties of Attachment ☞ **P.111**



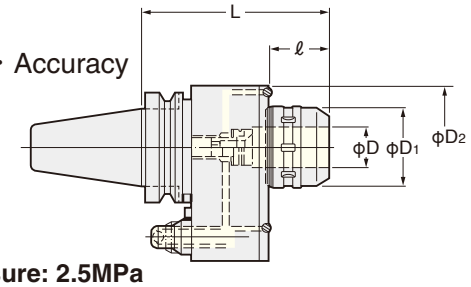
■Conventional Oil Hole Holder (Internal Coolant Feeding) **SLO**, **SKO** are also available. ☞**P.135**

Milling Chuck type Multi Oil Hole Holder

■Rigidity・Gripping Power・Accuracy



MOC



D2 :
BT40 : 85
BT50 : 110

MAX. Coolant Pressure: 2.5MPa

TAPER	Code No. -L	D	ℓ	D1	MAX.min-1	Weight (kg)	Applicable Collet
No.40	BT40-MOC20-145	20	49	52	4,000	3.6	CCK20 CCNK20
	(IT40)-MOC32-160	32	69	69	3,500	4.4	CCK32 CCNK32 OK32-MT K32-Q
No.50	BT50-MOC20-160	20	44	52	4,000	7.0	CCK20 CCNK20
	(IT50)-MOC32-170	32	54	69	3,500	7.1	CCK32 CCNK32 OK32-MT K32-Q

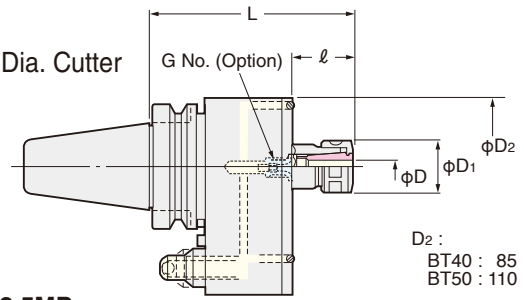
★For Collet and Adapter, please refer ☞**P.135**.　★**K32-Q** : Straight Shank for Modular type. ☞**P.103**　★**IT40-MOC20-155** and **IT40-MOC32-170** are also available.
★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension. ☞**P.308**

Slim Chuck type Multi Oil Hole Holder

■For High Speed Rotation of Small Dia. Cutter
MAX.6,000min-1



MOK



D2 :
BT40 : 85
BT50 : 110

MAX. Coolant Pressure: 2.5MPa

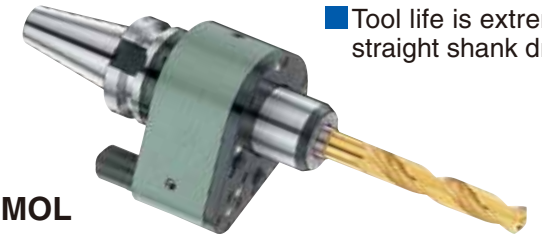
TAPER	Code No. -L	D	ℓ	D1	MAX.min-1	Weight (kg)	Collet	G No. (Option)
No.40	BT40-MOK10-135	5～10	39	27.5	6,000	3.2	SK10	SKG10-10HGF
	(IT40)-MOK16-150	10～16	54	40	5,500	3.5	SK16	SKG16-12HGF
No.50	BT50-MOK10-150	5～10	34	27.5	6,000	6.8	SK10	SKG10-10HGF
	(IT50)-MOK16-165	10～16	49	40	5,500	7.1	SK16	SKG16-12HGF

★Nut is supplied as standard.　★Adjust Screw (G No.) ☞**P.52** and spanner are available as an option. **MOK10: SKL-10**, **MOK16: 9HC16** ☞**P.308**
★For Slim Collet, please refer ☞**P.43**.　★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension.

MULTI OIL HOLE HOLDER (2)

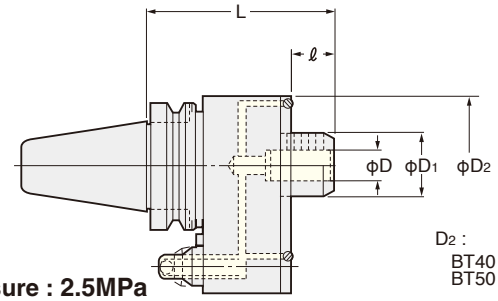
NIKKEN

Side Lock type Multi Oil Hole Holder



- Tool life is extremely extended in straight shank drill.

MOL



D2 :
BT40 : 85
BT50 : 110

MAX. Coolant Pressure : 2.5MPa

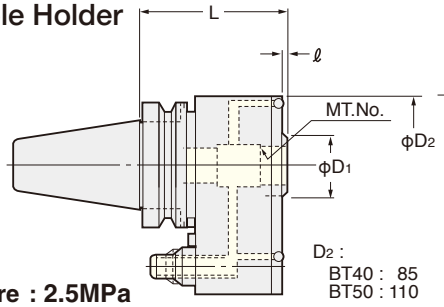
TAPER	Code No. -L	D	ℓ	D1	MAX.min-1	Weight (kg)	Collet
No.40	BT40-MOL16-130	16	34	34.5	5,500	3.1	—
	(IT40)-MOL20-130	20		44	4,000	3.5	—
	MOL25-130	25					OK25-16, 20
	-MOL32-135	32	39	49	3,500	3.8	OK32-16, 20, 25
No.50	BT50-MOL16-150	16	34	34.5	5,500	7.0	—
	(IT50)-MOL20-150	20		44	4,000	7.5	—
	-MOL25-150	25					OK25-16, 20
	-MOL32-150	32		49	3,500	7.8	OK32-16, 20, 25
	-MOL40-160	40	44	59	3,000	8.0	OK40-32

★For Collet, please refer ☞P.135. ★IT40-MOL16-140, IT40-MOL20-140, IT40-MOL25-140 and IT40-MOL32-145 are also available.
★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension. ☞P.308

Morse Taper type Multi Oil Hole Holder



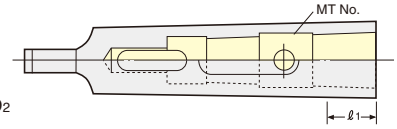
MOM



D2 :
BT40 : 85
BT50 : 110

MAX. Coolant Pressure : 2.5MPa

MTO MT Shank MT Sleeve



Explanation of the Code No.

MTO 3 - 1
- 1 : Internal Taper
- 3 : External Taper
- MTO : Symbol of Oil Hole MT Sleeve

TAPER	Code No. -L	MT	ℓ	D1	MAX.min-1	Weight (kg)	Sleeve
No.40	BT40-MOM3- 95	3	0	—	5,500	2.6	MTO3-1, 2
	(IT40)-MOM4-105	4	17	44	4,000	2.6	MTO4-1, 2, 3
No.50	BT50-MOM3-113	3	0	—	5,500	6.3	MTO3-1, 2
	(IT50)-MOM4-120	4	4	44	4,000	6.8	MTO4-1, 2, 3
	-MOM5-120	5	4	59	3,000	6.8	—

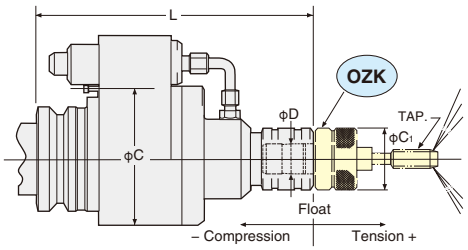
★For Socket, please refer ☞P.133. ★IT40-MOM3-105 and IT40-MOM4-115 are also available. ★( ) in sleeve shows ℓ1.
★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension. ☞P.308

Auto Depth Control Tapper Chuck for Oil Hole Tap

- To be used with Oil Hole Tap.
- Tapping depth is precisely controlled.
- **MAX. 2,000min-1, MAX. Coolant Pressure : 1.5MPa**



OZL



OZK Tap Collet for OZL



TAPER	Code No. -L	Tapping Capability M	Tapping Capability U	Tapping Capability P	D	Float Compression	Float Tension	C	C1	Weight (kg)	Tap Collet
No.40	BT40-OZL12-170	M 2～12	1/8～1/2	P1/16～1/4	19	5	4	82	38.5	4.8	OZK12
	(IT40)-OZL24-205	M 8～24	1/2～1	P1/4～5/8	30	6	7	98	56	5.3	OZK24
No.50	BT50-OZL12-185	M 2～12	1/8～1/2	P1/16～1/4	19	5	4	98	38.5	8.5	OZK12
	(IT50)-OZL24-210	M 8～24	1/2～1	P1/4～5/8	30	6	7	98	56	9.0	OZK24
	-OZL38-240	M18～38	3/4～1 3/8	P3/8～1	45	8	10	115	78	10.0	OZK38

★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension. ☞P.308

OIL HOLE HOLDER

NIKKEN

SLO Side Lock type
SKO Slim Chuck type



Slim Chuck type for BT40/50 is Multi Oil Hole type (**MOK**), please refer ☞ **P.133**.



SLO

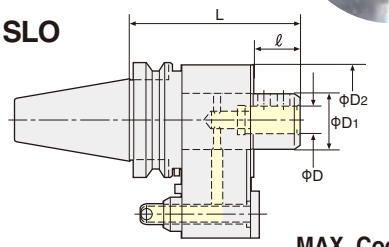


Fig.2

MAX. Coolant Pressure : 2.5MPa

SKO

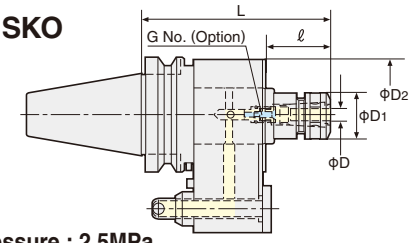


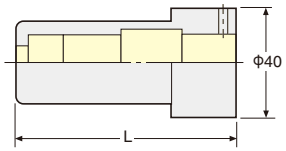
Fig.1

Oil Mist type holder which is not necessary to use coolant is also available for health and safety environment regulation. Please contact with us. **e.g. BT40-SLO25M-130**

TAPER	Code No. L	D	ℓ	D1	D2	MAX.min-1	Weight (kg)	Collet	Fig.
No.30	BT30-SKO10-135B,135,125KA	5～10	18,41,43	27.5	63	6,000	1.8	SK10	1
	-SKO16-140B,145,130KA	10～16	23,51,48	40		5,500	2.1	SK16	
	-SKO25-145B,145,130KA	16～25	28,48,48	55	80	3,000	2.8	SK25	
No.40	BT40-SLO16-130	16	39.5	49	82	3,000	3.5	—	2
	(IT40)-SLO20-130	20							
	-SLO25-130	25						OK25	
	-SLO32-140	32	41.5	54			3.8	OK32	
No.50	BT50-SLO16-150	16	40	49	98	3,000	7.5	—	2
	(IT50)-SLO20-150	20							
	-SLO25-150	25						OK25	
	-SLO32-150	32		54				OK32	
	-SLO40-160	40	50	64			8.0	OK40	
	-SLO50-160	50		79	118		10.0	—	

★**BT-30-SKO added "B" (e.g. BT-30-SKO10-135B) is for BROTHER. BT30-SKO added "KA" (e.g. BT30-SKO10-125KA) is for KIRA.**
★**IT40-SLO16-140, IT40-SLO20-140, IT40-SLO25-140 and IT40-SLO32-140 are also available.**
★For **SKO** Slim Chuck, Adjust Screw (G No.) is available as an option. ☞**P.52**
SKO10-135B, 135, 125KA : SKG10-10HGG
SKO16-140B : SKG16-12HGH, SKO16-145 : SKG16-12HGG SKO16-130KA : SKG16-10HGB
SKO25-145B, 145, 130KA : SKG25-16HG
★**For Heavy Duty Model with strong oil seals, please add the letter "HD" to the Code No. e.g.BT40-SLO25-130HD Ideal for ceramic material component.**
★Please refer ☞**P.135** for **OK25** and **OK32** Collet for **SLO** type. ★Nut, Adjust Screw and Collet Extractor are included for **SKO** type as standard. Please refer ☞**P.43** for Slim Chuck Collet.
★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension. ☞**P.308**

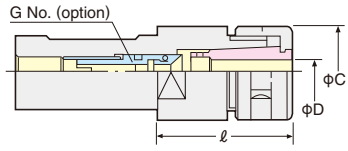
OK Shank MT Sleeve for MOL and SLO



OK-MT Sleeve Code No.
OK32-MT1-85, MT2-85, MT3-100

Explanation of the Code No.
OK 32 - MT1 - L
- L: Length
- MT1: Internal Taper
- 32: OD of Collet
- OK: Symbol of OK Shank

OK Shank Slim Chuck for MOL and SLO

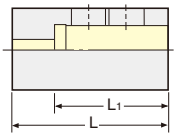


Explanation of the Code No.
OK 25 - SK 10
- 10: MAX. Chucking Dia.
- SK: Slim Chuck
- 25: OD of Shank
- OK: Symbol of OK Shank

Code No.	D	C	ℓ	G No. (Option)	Collet
OK25-SK10	5～10	27.5	23	SKG10-10HG	SK10
-SK16	10～16	40	65	SKG16-12HG	SK16
OK32-SK10	5～10	27.5	23	SKG10-10HG	SK10
-SK16	10～16	40	65	SKG16-12HG	SK16
OK40-SK10	5～10	27.5	25	SKG10-10HG	SK10
-SK16	10～16	40	51	SKG16-12HG	SK16

★Adjust Screw (G No.) is available as an option. ☞ **P.52**
★Please refer ☞ **P.52** for Adjust Screw (G No.) .
★Please refer ☞ **P.43** for Slim collet.

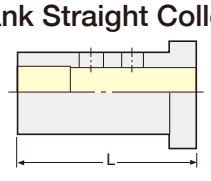
OK Shank Straight Collet for MOL and SLO (for drill)



Code No.	L	L1
OK25-16, 20	56	45
OK32-16, 20, 25	61	45, 45, 55
OK40-32	71	60

Explanation of the Code No.
OK 25 - 16
- 16: ID of Collet
- 25: OD of Collet
- OK: Symbol of OK Shank

OK Shank Straight Collet for MOL and SLO (for end mill)



Code No.	L
OKE32-16, 20, 25	63
OKE40-20, 25, 32	73

Explanation of the Code No.
OK E 32 - 16
- 16: ID of Collet
- 32: OD of Collet
- E: for End Mill
- OK: Symbol of OK Shank

ZERO FIT TYPE OIL HOLE HOLDER

NIKKEN

ZERO FIT TYPE OIL HOLE HOLDER SLIM CHUCK



SZFO

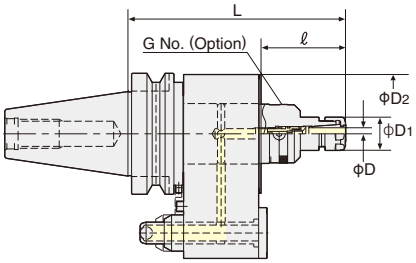


Fig.1

MAX. run-out at 100mm	
SZFO 10	0.050mm/dia.
SZFO 16	0.040mm/dia.
SZFO 25	0.025mm/dia.

ZERO FIT TYPE OIL HOLE HOLDER MILLING CHUCK



CZFO

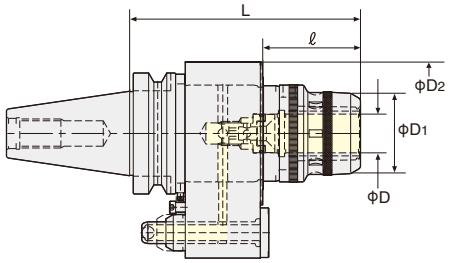


Fig.2

MAX. run-out at 100mm	
CZFO 20	0.050mm/dia.
CZFO 32	0.030mm/dia.

The milling surface finish and quality can be improved.

- The milling surface finish and quality can be improved.
- For better and stable finish tolerance for machining holes.
- The tool life can be extended.
- **Zero Fit Holder has** wide adjustment range compared with competitors equivalent, and its mechanism performs simple, quick and secured operation.
- The choice of the Slim Chuck style **"SZF"** & the Anniversary type Milling Chuck style **"CZF"** can be selected depending on your cutter.
- The side through coolant type does not hurt the machine tool spindle inside.

MAX. Coolant Pressure : 2.5MPa

TAPER	Code No. L	D	ℓ	D_1	D_2	MAX.min^{-1}	Weight(kg)	Collet	G No. (Option)	Fig.
No.40	BT40-SZFO10-160	6～10	69.5	49	82	3,000	4.0	SK10	SKG10-10HG	1
	-CZFO20-180(65)	20	65	66.5	98		4.5	KM20 CCK20	—	2
No.50	BT50-SZFO10-180	6～10	70	49	98	3,000	8.0	SK10	SKG10-10HG	1
	-SZFO16-190	2.75～16	80	64			9.0	SK16	SKG16-12HG	
	-SZFO25-175	16～25.4	65	66.5			9.0	SK25	SKG25-16HG	
	-CZFO20-175	20					9.0	KM20 CCK20	—	2
	-CZFO32-190	32	80	80.5	118		12.0	KM32 CCK32		

★For SZFO Slim Chuck, Nut is available as a standard.
★For SZFO Slim Chuck, Adjust Screw (G No.) is available as an option.
★For SZFO Slim Chuck, Collet is available as an option. .Please refer ☞**P.43** for Slim Chuck Collet.
★For SZFO Slim Chuck, Adjust screw for small cutter shank dia. (Φ4) is available. Please contact with us.
★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension.☞**P.308**

HIGH SPEED SPINDLE SPEEDER

NIKKEN





10,000～40,000min^{-1}

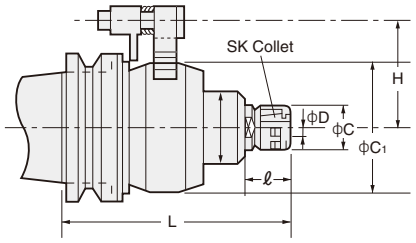
- **NIKKEN NX increases the spindle speed by 4 or 5 times, so economically convert your standard M/C to high speed M/C.**
- Inside gears are mirror-finish ground by NIKKEN original Fluid-Dynamic Grinding Process.
- **Run-out accuracy is more stable due to TiN Bearing Nut (standard accessory).**

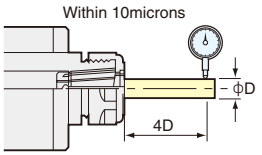
NX

Explanation of the Code No.

BT40 - NX 5 160

- 160 : Length
- 5 : Ratio
- NX : 4times, 5 times / PX : 6times, 10 times
- BT40 : Shank





TAPER	Code No.	D	L	C	C_1	ℓ	H	Ratio	MAX. min^{-1}	Weight (kg)	Collet
No.30	BT30-NX 5-153	1.75～10	153	27.5	85	32	55	5	20,000	2.9	SK10A
No.40	BT40-NX 5-153		153				60			5.0	
	(IT40)-PX 6-150GX	0.5～8.0	149	22	76	14.5		6	30,000	4.1	ETS14
	-PX10-160GX		162.5		98			10	40,000	4.5	
No.50	BT50-NX 4-192	1.75～16	192	40	118	46	82	4	10,000	11.0	SK16A
	(IT50)-NX 5-151	1.75～10	151	27.5	85			5	20,000	7.0	SK10A
	-PX 6-140GX	0.5～8.0	142	22	76	14.5		6	30,000	6.8	ETS14
	-PX10-155GX		155.5		98			10	40,000	7.2	

NX type

★For End Mill, please use **SK A type collet**. For Drill, please use **SK-P** class collet. ☞P.43
★Wrench, Collet Extractor and **A type SK Collets** are supplied as standard.
NX5: SK10-6A, 8A, 10A NX4: SK16-8A, 10A, 12A, 16A
★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension. ☞P.308
★Air Clyinder for Cooling (NXE-COOL) is highly recommended to use for the stable milling.



Air Cylinder for Cooling with ON/OFF Magnet NXE-COOL

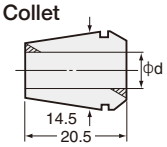
The best cooling is to cool the speeder body directly.



PX type

★Grease lubrication is standard.
★Please add **"MX"** instead of **"GX"** at the end of Code No. for the oil mist lubrication.
e.g. BT40-PX6-130MX
★**ETS** collet is supplies as an option.

ETS Collet



Explanation of the Code No.

ETS 14 - 0.5

- 0.5 : MAX. Chucking Dia.
- 14 : Style No.
- ETS : Symbol of ETS Collet

★ d=0.5～1.0: Each 0.1mm (Gripping range : 0.1mm)
e.g. ETS14-0.5 : 0.4～0.5mm
★ d=1.25～2.5: Each 0.25mm (Gripping range : 0.25mm)
★ d=3.0 ～8.0: Each 0.5mm (Gripping range : 0.5mm)

AIR TURBINE SPINDLE TOOL

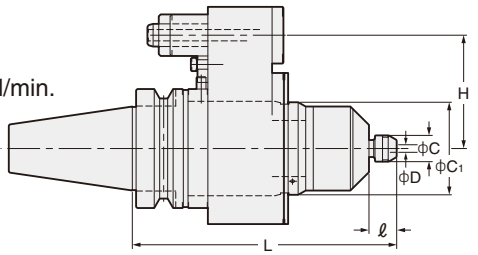
NIKKEN



150,000min^{-1}

Run-out Accuracy of the Spindle: Within 1μm

Air Pressure, Comsumption:0.5MPa, 90Nl/min.
Collet Size : MAX 4.0mm



HTS

Explanation of the Code No.

BT40 - HTS 1500 - 140

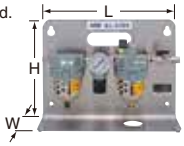
- 140 : Nominal Gauge Length
- 1500 : 150,000min^{-1}
- HTS : Symbol of Air Turbine Spindle
- BT40 : Shank No.

HSK shank is also available.
HSK 50A-HTS1500-158
HSK 63A-HTS1500-160
HSK100A-HTS1500-167

Please do not rotate the machine spindle.

TAPER	Code No.	D	L	C	C_1	ℓ	H	Fixed min^{-1}	Weight (kg)	Collet
No.30	BT30-HTS1500-148	0.5～4	148	13.9	49	15	55	150,000	2.7	CHA-□ (Internal dia.)
	-HTS1500-152B		152				40		2.7	
No.40	BT40 (IT40)-HTS1500-140		140				60		3.2	
No.50	BT50 (IT50)-HTS1500-146		146				82		6.0	

★Collet **CHA-4.0** and spanner are suplied as standard.
★Air line kit(**AL-M1202/AL-M1203BS2**), the lubrication oil(**K-211**)and the stopper block are available as an option.
★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension. ☞P.308



AL-M1202
L×W×H
300×120×220



AL-M1203BS2 (DC24V ON/OFF)
L×H
490×320

★The collet which internal dia. excepts ϕ4.0mm is available as an option.
CHA-2.35, 3.0, 3.175
The internal dia. range is each 0.1mm incremental from ϕ0.5 to ϕ4.0mm.

AIR MOTOR SPINDLE TOOL

NIKKEN

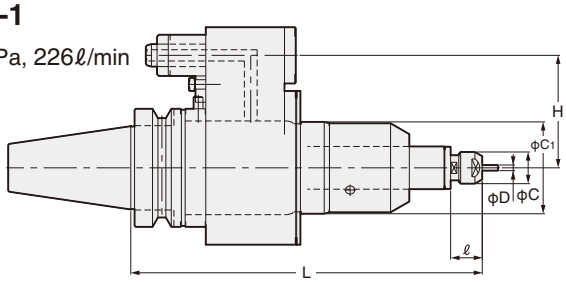


NBT-NR Photo shows **NR601**.

NR2351:25,000min-1

Air Pressure, Comsumption : 0.5MPa, 226ℓ/min
Collet Size : MAX φ6.0mm

Tools for NR2351
- ·Square End Mill : MAX.φ3.0mm
- ·Ball End Mill : MAX.R0.5mm
- ·Grinding Wheel : MAX.φ20mm



NR601:50,000min-1

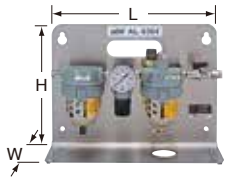
Air Pressure, Comsumption : 0.6MPa, 160ℓ/min
Collet Size : MAX φ3.0mm

Tools for NR601
- ·Square End Mill : MAX.φ1.0mm
- ·Ball End Mill : MAX.R0.5mm
- ·Grinding Wheel : MAX.φ10mm

⚠ **Please do not rotate the machine spindle.**

TAPER	Code No.	D	L	C	C_1	ℓ	H	Fixed min-1	Weight (kg)	Collet
No.30	NBT30-NR2351-208	0.5～6.35	208	16.9	49	16.9	55	30,000	3	CHK-□
	-NR2351-208B						40			
	-NR601 -210	0.3～3.175	210	8.2		8	55	58,000		CHM-□
	-NR601 -210B						40			
No.40	NBT40-NR2351-188	0.5～6.35	188	16.9		16.9	60	30,000	3.7	CHK-□
	(NIT40)-NR601 -190	0.3～3.175	190	8.2		8		58,000		CHM-□
No.50	NBT50-NR2351-208	0.5～6.35	208	16.9		16.9	82	30,000	6.7	CHK-□
	(NIT50)-NR601 -210	0.3～3.175	210	8.2		8		58,000		CHM-□

Air Line Kit AL-M1202/AL-M1203BS2



AL-M1202 (Manual ON/OFF)
LxWxH 300x120x220



AL-M1203BS2(DC24V ON/OFF)
LxH 490x320

- ·The pressure can be adjusted.
- ·It can be mount on the wall.
- ·Lubrication oil is supplied as standard.
- ·Tool life can be extended.
- ·Eliminate the impurities from the air.

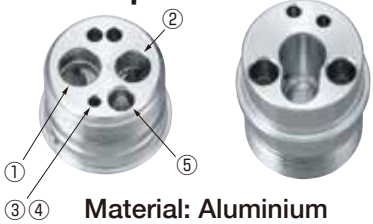
Preparation for automatic tool change

1. Compressor 0.5～0.6MPa
2. Installation of the air circuit including the air line kit (**AL-M1203BS2**)and the stopper bock.
3. Modal M signals to activate the solenoid valve ON/OFF
4. Warning alarm or machine stop at the shortage of the oil. Further discussion is required.

⚠ The filter at the air line kit is not sufficient for the high humidity. Please install the air dryer near the filter at the air line kid.

NR2351 (25,000min-1) Work Sample





Material: Aluminium

No.	Shape	Cutting condition	Time
① ②	φ3, 2t End mill Drill hole: 11.5mm deep	S25,000min-1 F125mm/min 11.5mm Deep	6sec.
③	φ1 Drill: 15mm deep	S25,000min-1 F100mm/min 15mm Deep	9sec.
④	φ1.32 Drill: 6mm deep	S25,000min-1 F208mm/min 6mm Deep	2sec.
⑤	φ1.32 Drill: 15mm deep	S25,000min-1 F100mm/min 15mm Deep	9sec.

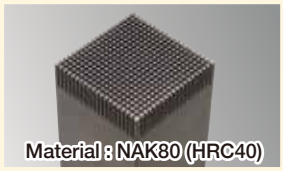
HTS1500 (150,000min-1) Work Sample

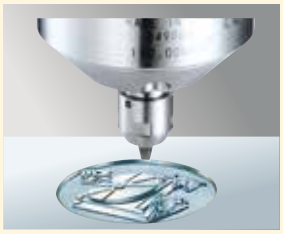


Material NAK80 (HRC40)

No.	Shape	Cutting Condition	Cutting Length	Time
①	Pilamid (1.5mm deep)	Rough Ad 0.04 X Rd 0.04 F 3,000	82m	59min.46sec.
		Finish Ad 0.01 X Rd 0.01 F 2,000		
②	Pocket (1.0mm deep)	Rough Ad 0.04 X Rd 0.04 F 3,000	50m	1hour5min.22sec.
		Finish Ad 0.01 X Rd 0.01 F 2,000		
③	Pocket (2.0mm deep)	Rough Ad 0.04 X Rd 0.04 F 3,000	47m	1hour3min.17sec.
		Finish Ad 0.01 X Rd 0.01 F 2,000		

End Mill : Nissin MRB230 (R0.25×6)
S : 150,000min-1
F : 2,500mm/min
Z : 0.01mm incremental
The gloove of R0.25 × 5mm is machined in 19 lines and 19 lows at the □20mm × 20mm.



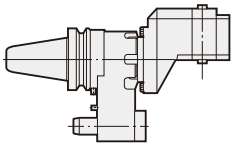


The die mould profiling by the φ0.2mm end mill at the 150,000min-1 can be done continuously and stably.

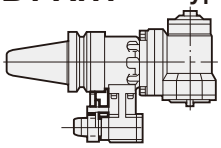
ANGULAR HEAD SYSTEM (Free Positioning in 360°) NIKKEN

Quick type Angular Head ☞P. 119

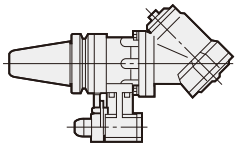
BT-AFT Off-Set type



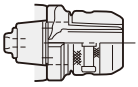
BT-AHT 90°type



BT-AHT 45°type



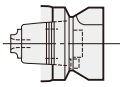
AHK-C



AHK-SK



AHK-PC



AHK-Z



AHK-SCA



☞P.142

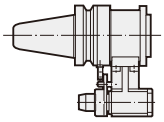
Various machining such as end milling, drilling, face milling, tapping etc. can be conveniently done by just changing adapter. Very suitable for production of many kinds of small quantity.

BT50-AFT35-90 Cutting Data
Material of Work: S55C Carbon Steel

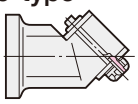
Adaptor	Tool	Cutting Width×Depth	min^{-1}	Feed (mm/min)
SK10	HSS 2 Flutes End Mill	10×5.0	800	80
PC60	φ60 Face Mill	45×3.0	600	300
SCA	φ100×4 Side Cutter	4.0×6.0	70	70
C20	φ18.5 Drill	18.5×40	400	80

Modular type Angular Head ☞P.143

BT-AHM Modular type Main Body

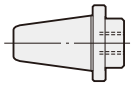


AHM-SK 45°type

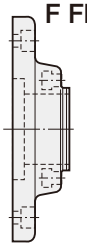


Direct Mount Flange type Angular Head ☞P.146

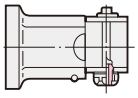
NT-F
Direct Mount Flange type Shank



F Flange



AHM-SK 90°type



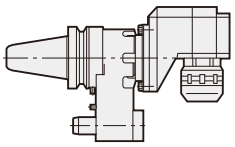
Head can be changed according to the application. Small Dia. Head, 45° or 90° Head, Long Head etc. are available in standard series. For Heavy Cutting, Direct Mount Flange type is recommended.



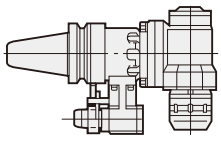
Solid Type Angular Head ☞P.144

Most popular Slim Chuck SK10, 16, 25 and Milling Chuck C20, 32 are combined as solid. High Precision and High Rigidity are ensured.

AFK AFC Off-Set type



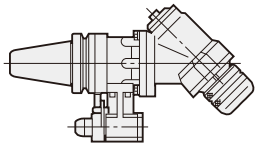
AHK AHC 90°type



Spindle Speeder type Angular Head
MAX.18,000min^{-1}



AHK AHC 30°,45°,60°types



Angular Head with Oil Hole System



- ●Free Radius Positioning in 360°.
- ●Taper Connection System is applied to Stopper Block. (Different from the one of another FA tooling)
- ●Oil Hole type is available. Please contact with us.
- ●Special Degree Angular Head is available on demand.
- ●**Spindle Speeder type Angular Head (X5 times, MAX. 18,000min^{-1}) is available.**
  BT40-AHPX10-215, BT50-AHPX10-206
  IT40-AHPX10-215, IT50-AHPX10-206

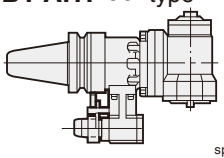
ANGULAR HEAD Torque - power

NIKKEN

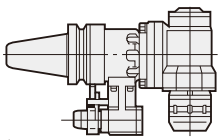
Please decide a cutting condition for the cause in 70% of following torque and power.

BT-AH

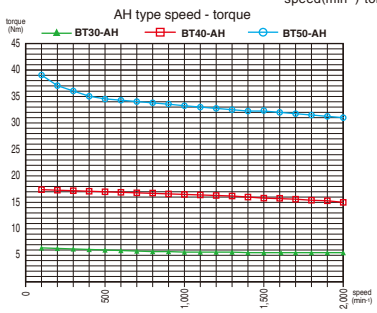
BT-AHT 90° type

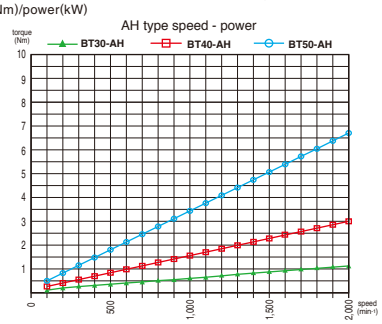


AHK AHC 90° type



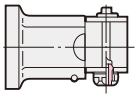
ANGULAR HEAD(AH)
speed(min-1)-torque(Nm)/power(kW)



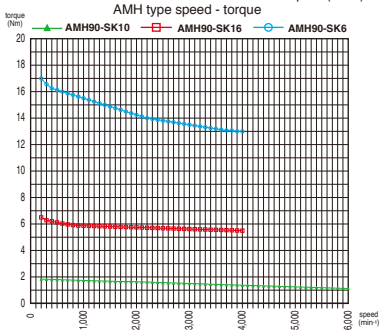


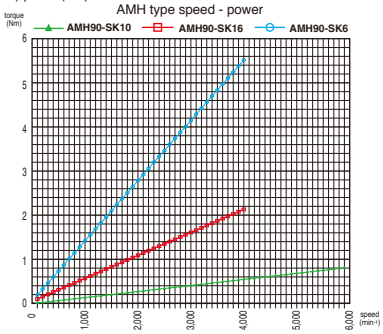
AHM-SK

AHM-SK 90° type



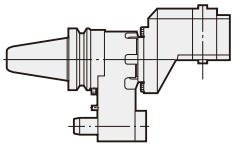
ANGULAR HEAD(AMH)
speed(min-1)-torque(Nm)/power(kW)



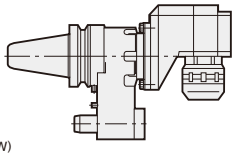


BT-AF

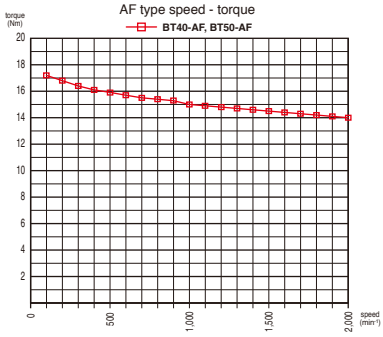
BT-AFT OFF SET type

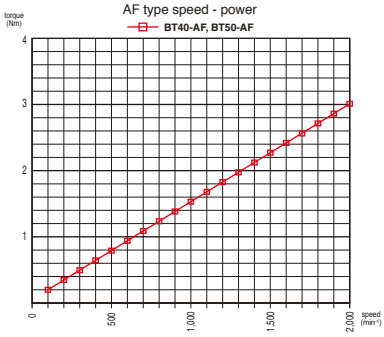


AFK AFC OFF SET type



ANGULAR HEAD(AF)
speed(min-1)-torque(Nm)/power(kW)





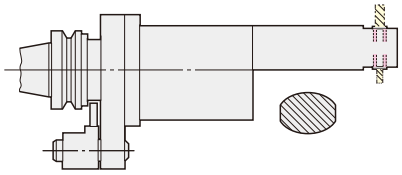
Cutting Power : Pc (kW) and Cutting Torque : Mc (Nm) for Milling

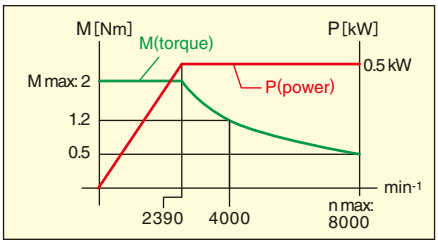
$$Pc(kW) = \frac{ap \cdot ae \cdot vf \cdot kc}{60 \times 10^6} \qquad Mc(Nm) = \frac{9550 \times Pc}{n}$$

ap(mm) : Depth of Cut
ae(mm) : Cutting Width
Vf(mm/min) : Table Feed per Min
Kc(MPa) : Specific Cutting Force
Pc(kW) : Cutting Power

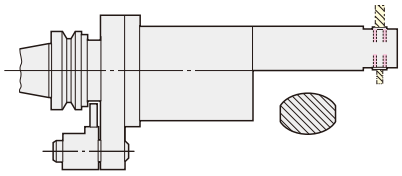
n(min-1) : Spindle Speed
Mc(Nm) : Cutting Torque
■Kc(MPa) :Reference level of the specific cutting Force.
It is found by materials and feed per tooth (fz (mm/t)).
Specifically, please refer to a cutting tool maker catalogue.
□S50C(fz=0.1mm/tooth)≒2000MPa
□FC250(fz=0.1mm/tooth)≒1800MPa

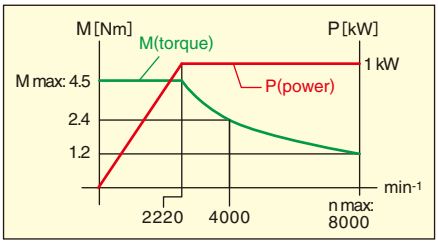
BT-AHPL4



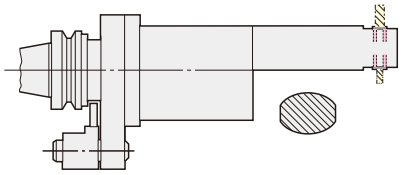


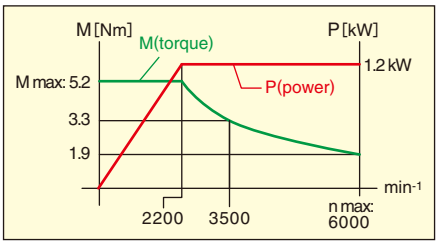
BT-AHPL6



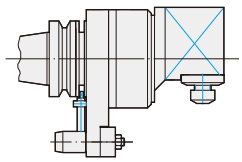


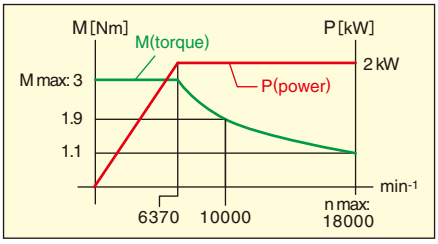
BT-AHPL8





BT-AHPX10

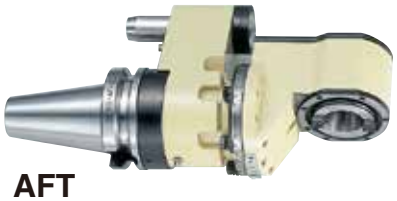




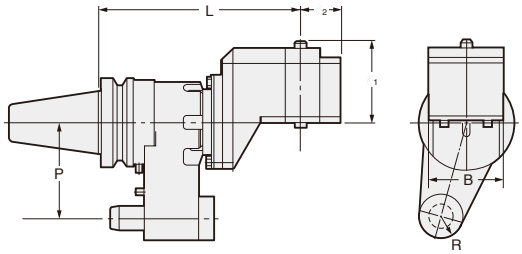
QUICK TYPE ANGULAR HEAD (Free Positioning in 360°)

NIKKEN

Quick type Off-Set Angular Head



AFT



Explanation of the Code No.

BT40 - AF T 30 - 200

- 200: Length from Gauge Line
- 30: Taper No. of Adapter
- T: Quick type
- AF: Off-Set type Angular Head
- BT40: Shank

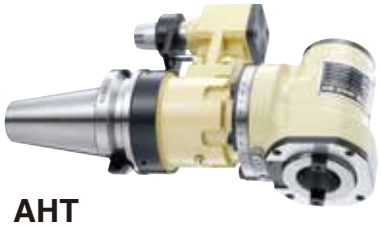
MAX2,000min-1

TAPER	Code No.	Shank	L	P	ℓ1	ℓ2	B	R	Adapter	Weight (kg)
No.40	BT40 (IT40)-AFT30-200	BT40	200	65	85	35	70	17.5	AHK30	7.5
No.50	BT50 (IT50)-AFT35-230	BT50	230	110	85	45	84	25	AHK35	16.0

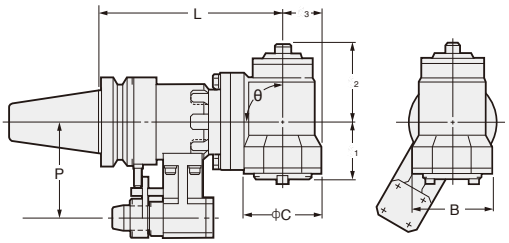
★Taper Connection System is applied to Stopper Block. (Different from the another FA Tooling) ★All types are available with Oil Hole System. ★Test bar is attached as standard.
★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension.
★IT40-AFT30-200 and IT50-AFT35-230 are also available. ★**When M/C spindle rotates CW, the cutter rotates CW.**



Quick type 90° Angular Head



AHT



Explanation of the Code No.

BT40 - AH T 30 - 160 - 90

- 90: Angle
- 160: Length from Gauge Line
- 30: Taper No. of Adapter
- T: Quick type
- AH: Symbol of Angular Head
- BT40: Shank

MAX2,000min-1

TAPER	Code No. L -θ	Shank	L	P	ℓ1	ℓ2	ℓ3	C	B	θ	Adapter	Weight (kg)
No.40	BT40-AHT30-160 -90	BT40	160	65	58	61	37	86	80	90	AHK30	6.5
	(IT40) -250*-90	BT40	250									10.5
No.50	BT50-AHT35-210 -90	BT50	210	110	65	88	45	100	90	90	AHK35	17.0
	(IT50) -300*-90	BT50	300									22.0

★Taper Connection System is applied to Stopper Block. (Different from the another FA tooling) ★All types are available with Oil Hole System. ★Test bar is attached as standard.
★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension.
★Models with ✻ mark : Detailed discussion is needed. ★**When M/C spindle rotates CCW, the cutter rotates CW.**

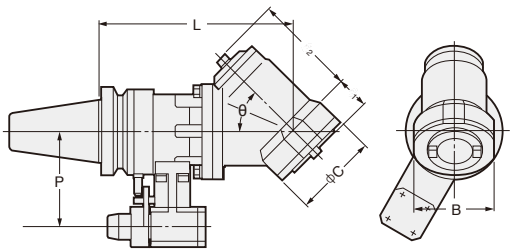


Quick type 30°, 45°, 60°Angular Head



AHT

Photo shows 30° type.



Explanation of the Code No.

BT40 - AH T 30 - 170 - 45

- 45: Angle
- 170: Length from Gauge Line
- 30: Taper No. of Adapter
- T: Quick type
- AH: Symbol of Angular Head
- BT40: Shank

MAX2,000min-1

TAPER	Code No. L -θ	Shank	L	P	ℓ1	ℓ2	C	B	θ	Adapter	Weight (kg)
No.40	BT40-AHT30-205 -30	BT40	205	65	1.5	122	86	80	30	AHK30	6.5
	(IT40) -170 -45		170		35	88			45		6.5
	-160 -60		160		35	88			60		6.5
	-250*-30	BT40	250	65	1.5	122	86	80	30	AHK30	10.5
	-45				35	88			45		10.5
	-60				35	88			60		10.5
No.50	BT50-AHT35-258 -30	BT50	258	110	0	140	100	90	30	AHK35	17.0
	(IT50) -225 -45		225		26	110			45		17.0
	-210 -60		210		40	105			60		17.0
	-300*-30	BT50	300	110	0	140	100	90	30	AHK35	22.0
	-45				26	110			45		22.0
	-60				40	105			60		22.0

★Taper Connection System is applied to Stopper Block. (Different from the another FA tooling) ★All types are available with Oil Hole System. ★Test bar is attached as standard.
★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension.
★Models with ✻ mark : Detailed discussion is needed. ★**When M/C spindle rotates CCW, the cutter rotates CW.**



ADAPTER FOR QUICK TYPE ANGULAR HEAD

NIKKEN

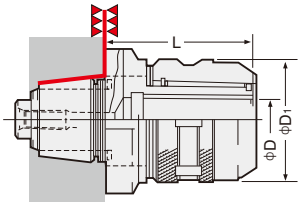


Quick type Angular Head
☞ P.141



Quick type Milling Chuck (Double Face Contact)



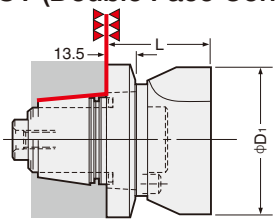


Code No. D	L	D1	Weight(kg)	KM Collet
AHK30-C16	60	44	1.0	KM16
AHK35-C16,C20	60, 65	44, 52	1.1, 1.2	KM16 KM20

★For **KM** COLLET, please refer ☞ **P.34**.

Quick type NIKKEN PRO-CUT (Double Face Contact)



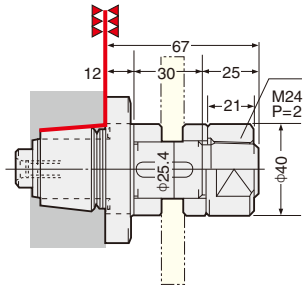


Code No. PC.No.	L	D1	Weight(kg)
AHK30-PC50	45	50	0.7
AHK35-PC60,PC80	45, 57	60, 80	0.9, 1.3

★Inserts are standard accessory.

Quick type Side Cutter Arbor (Double Face Contact)



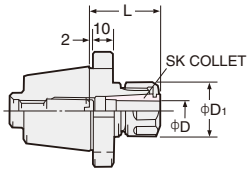


Code No.	L	D	D1	Weight(kg)
AHK35-SCA25.4	12	25.4	40	1.1

★The key and set of distance collars are standard accessory.

Quick type Slim Chuck



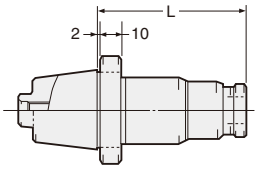


Code No. SK.No.	D	L	D1	Weight(kg)	SK Collet
AHK30-SK10	1.75～10	35	27.5	0.4	SK10
-SK16	2.75～16	50	40	0.6	SK16
AHK35-SK10	1.75～10	35	27.5	0.5	SK10
-SK16	2.75～16	50	40	0.7	SK16

★**SK** Collet is not included, please refer ☞ **P.43**.

Quick type Tapper Chuck

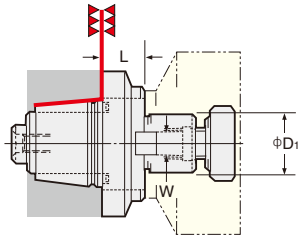




Code No. Z.No.	L	Weight(kg)	Tap Collet
AHK30-Z8, Z12	85,100	0.6, 0.9	ZKN 8 ZKG12
AHK35-Z8, Z12, Z16	75,85,100	0.7,1.0,1.5	ZKN 8 ZKG12 ZKG16

★Tapping Capability **Z8 : M2～8 Z12 : M2～12 Z16 : M3～20**
★Tap Collet is not included, please refer ☞ **P.61**.

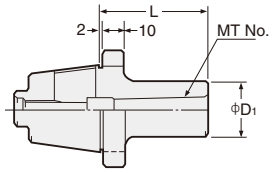
Quick type Face Mill Arbor (Double Face Contact)



Code No.	L	D1	W	Weight(kg)
AHK35-FMA25.4	18.5	25.4	9.5	0.7
-FMA31.75		31.75	12.7	0.8

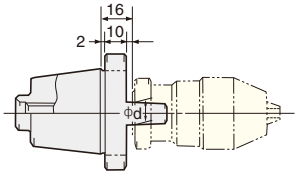
★The Keys and a Bolt are standard accessory.

Quick type Morse Taper Sleeve



Code No. MT.No.	L	D1	Weight(kg)
AHK30-MT1,MT2	50, 65	25, 32	0.4, 0.5
AHK35-MT1,MT2,MT3	50, 60, 85	25, 32, 40	0.5, 0.6, 0.9

Quick type Drill Chuck Adapter



Code No. J.No.	L	J.No.	Weight(kg)
AHK30-J6	16	J6	0.4
AHK35-J6			0.5

★This adapter is supplied without drill chuck.

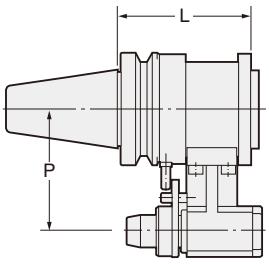
MODULAR TYPE ANGULAR HEAD

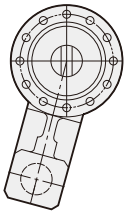
NIKKEN

Modular type Angular Head AHM

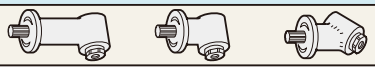


AHM





MAX**6,000**min-1

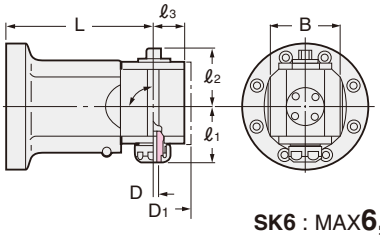
TAPER	Code No. -L	L	P	Weight (kg)	Suitable Modular Head
No.40	BT40 (IT40)-AHM-100	100	65	4.5	
No.50	BT50 (IT50)-AHM-120	120	110	11.5	

★Taper Connection System is applied to Stopper Block. (Different from the another FA Tooling) ★All types are available with Oil Hole System.
★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension.

90°type Modular Head AHM90



AHM



Explanation of the Code No.

AHM90 - SK6 - 80

- 80: Length from Gauge Line
- SK6: Symbol of Slim Chuck
- AHM90: Symbol of Modular Head 90°type

SK6 : MAX**6,000**min-1 **SK10,16** : MAX**4,000**min-1

Code No. -L	D	ℓ1	ℓ2	ℓ3	D1	B		Weight (kg)	SK Collet
AHM90-SK 6-80, 120, 150*	0.7～6	42	35	22	50	48	90	3.0, 4.0, 4.5	SK 6
-SK10-80, 120, 150*	1.75～10	63	57	32	64	60		3.5, 4.5, 5.0	SK 10
-SK16-80, 120, 150*	2.75～16	66	58	35	74	70		4.2, 5.2, 5.7	SK 16

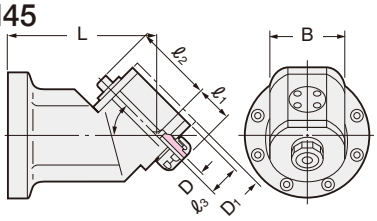
★*Mark is for light machining. ★For **SK** Collet, please refer ☞**P.43**. ★**When M/C spindle rotates CCW, the cutter rotates CW.** ★Test bar is attached as standard.



30°, 45°, 60°,type Modular Head AHM45



AHM



Explanation of the Code No.

AHM45 - SK6 - 120

- 120: Length from Gauge Line
- SK6: Symbol of Slim Chuck
- AHM45: Symbol of Modular Head 45°type

SK6 : MAX**6,000**min-1 **SK10,16** : MAX**4,000**min-1

Code No. -L	D	ℓ1	ℓ2	ℓ3	D1	B		Weight (kg)	SK Collet
AHM45-SK 6-120, 150*	0.7～6	27	67	22	50	52	45	3.0, 4.0, 4.5	SK 6
-SK10-120, 150*	1.75～10	39	80	30	64	60		3.5, 4.5, 5.0	SK 10
-SK16-120, 150*	2.75～16	38	90	35	74	70		4.2, 5.2, 5.7	SK 16

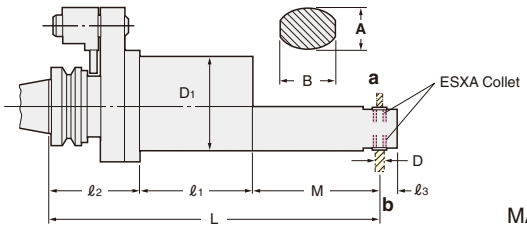
★*Mark is for light machining. ★For **SK** Collet, please refer ☞**P.43**. ★Angle 30°, 60° are also available as an option. ★**When M/C spindle rotates CCW, the cutter rotates CW.**
★Test bar is attached as standard.



Angular head for deep hole



AHPL



MAX**3,500**min-1

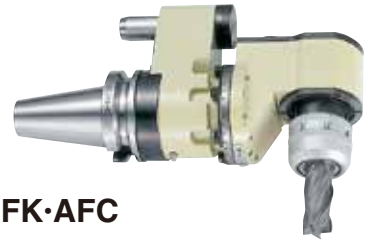
TAPER	Code No. -L	D	D1	A	B	L	M	ℓ1	ℓ2	ℓ3	min-1	Weight (kg)	Applicable Collet
No.40	**BT40-AHPL4-199**	1.0～4.0	80	25	31	199	32	67.5	99.5	14.5	6,450	5.0	ESXA4
	-223					223	56					5.5	
	-247					247	80					6.0	
	-271					271	104					7.5	
	-AHPL6-208	1.0～6.0	80	36	45	207.5	46.5	61.5	99.5	15	8,000	5.0	ESXA6
	-236					235.5	74.5					6.0	
	-264					263.5	102.5					8.0	
No.50	**BT50-AHPL6-221**	1.0～6.0	80	36	45	220.5	46.5	83.5	90.5	15	8,000	7.0	ESXA6
	-249					248.5	74.5					8.0	
	-277					276.5	102.5					10.0	
	-AHPL8-248	1.0～8.0	110	43	47.5	247.5	73	78	96.5	20	6,000	9.0	ESXA8
	-280					279.5	105					10.0	
	-300					299.5	125					11.0	

★**ESXA** Collet is supplied as an option. ★**Different shape is possible, please contact with us for more detail.**
★**When M/C spindle rotates cw, the cutter at a rotates CW and the cutter at b rotates CCW.** ★**IT40-AHPL6-270** and **IT50-AHPL8-288** are also available.

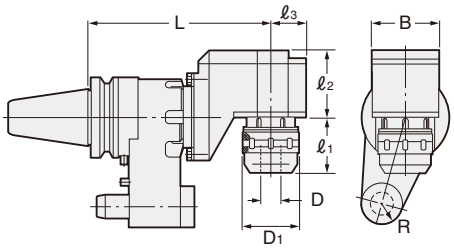
SOLID TYPE ANGULAR HEAD (Free Positioning in 360°)

NIKKEN

Solid OFF SET type Angular head



AFK·AFC



Explanation of the Code No.

BT40 - AF K 16 - 200

- 200: Length from Gauge Line
- 16: MAX. Chucking Dia.
- K: Kind of chuck — K : Slim Chuck, C : Milling Chuck
- AF: OFF SET type Symbol of Angular Head
- BT40: Shank

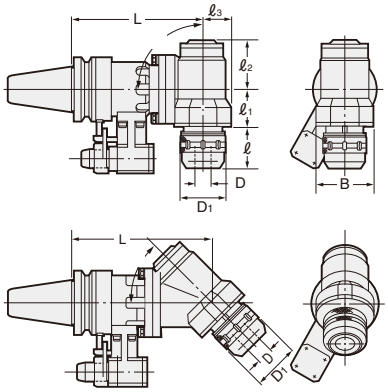
TAPER	Code No. -L	D	D_1	ℓ_1	ℓ_2	ℓ_3	B	R	min^{-1}	Weight (kg)	Collet
No.40	BT40-AFK16-200	2.75～16	40	50	85	35	70	17.5	2,000	8.5	SK 16
	(IT40)-AFC20-200	2～20	52	56						8.7	KM 20
No.50	BT50-AFC20-230	2～20	52	58	85	45	84	25	2,000	17.0	KM 20
	(IT50)-AFC32-230	3～32	69	65						17.2	KM 32

★Taper Connection System is applied to Stopper Block. (Different from the another FA Tooling) ★Test bar is attached as standard.
★All types are available with Oil Hole System.
★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension.
★For SK16, please refer ☞ P.43. For KM20 and KM32, please refer ☞ P.33.
★Please advise name of M/C builder and model No. etc. **★When M/C spindle rotates CW, the cutter rotates CW.**

Solid - 90°, 45°type Angular head



AHK·AHC



Explanation of the Code No.

BT40 - AH K 10 - 195 - 90

- 90: angle 30°, 45°, 60°, 90°
- 195: Length from Gauge Line
- 10: MAX chucking Dia
- K: Kind of chuck — K : Slim Chuck, C : Milling Chuck
- AH: Symbol of Angular Head
- BT40: Shank

TAPER	Code No. -L -	D	D_1	ℓ	ℓ_1	ℓ_2	ℓ_3	B	min^{-1}	Weight (kg)	Collet
No.30	BT30-AHK10-120-90	1.75～10	27.5	20	49	50	27.5	55	2,000	3.0	SK 10
No.40	BT40-AHK10-180,220*-90	1.75～10	27.5	18	45	57	32	60	4,000	8.0, 9.0	SK 10
	(IT40)-AHK16-180,220*-90	2.75～16	40	25	41	58	35	70		8.7, 9.7	SK 16
	-AHC20-160,250*-90	2～20	52	57	58	61	37	80	2,000	7.1, 11.1	KM20
No.50	BT50-AHK10-200,240*-90	1.75～10	27.5	18	45	57	32	60	4,000	15.0, 16.0	SK 10
	(IT50)-AHK16-200,240*-90	2.75～16	40	25	41	58	35	70		15.7, 16.7	SK 16
	-AHK25-210,300*-90	7.5～25.4	55	57	60	82	45	90	2,000	17.2, 22.2	SK 25
	-AHC32-210,300*-90	3～32	69							17.5, 22.5	KM32

★Taper Connection System is applied to Stopper Block. (Different from the another FA Tooling) ★Test bar is attached as standard.
★All types are available with Oil Hole System.
★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension.
★For SK10 SK16 SK25, please refer ☞ P.43. For KM20 KM25 and KM32, please refer ☞ P.33.
★Angle 30°, 45°, 60° are also available as an option. ★ ✻Mark is for light cutting.
★When M/C spindle rotates CCW, the cutter rotates CW.
★Please contact with us for the dimension of 30°, 45°, 60° type.

AIR DRIVE ANGULAR HEAD

NIKKEN



HSK40A-IC300

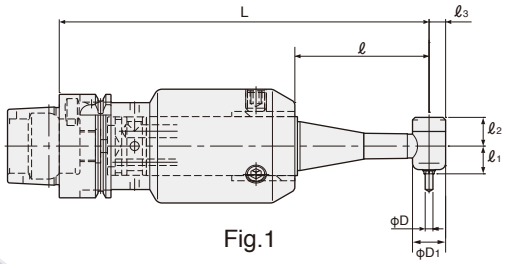


Fig.1

- For small-diameter drilling such as of aircraft parts and aluminum.
- With a spindle indexing function, curved surfaces can be machined directly.
- Turns offline processes into online process. Cuts down on processes and human error
- Air motor drive eliminates the need for spindle rotation.
- Gripping diameter: φ1.6 / φ2.35 / φ3.0 / φ3.175 Comes with a collet for φ3.0.
- IC-300 interchangeable 90° angle attachment (included).



BT40-IC300

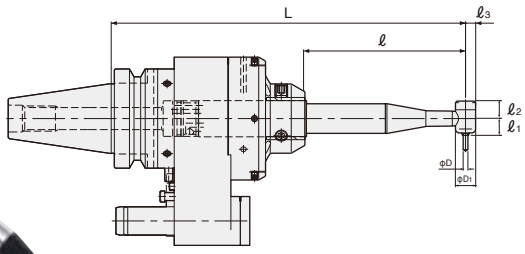


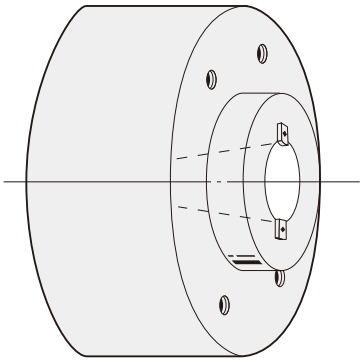
Fig.2

TAPER	Code No. -L	D	D_1	ℓ	$ℓ_1$	$ℓ_2$	$ℓ_3$	min^{-1}	Power (W)	Weight (Kg)	Collet	Fig.	for MAKINO
HSK40A	HSK40A-IC300-143A	1.6～3.175	12.8	51.9	10.7	11.1	6.4	22,500/0.4MPa	57	1.0	CHC-□（内径）	1	N2
BT40	BT40 -IC300-225A			102				22,500/0.5MPa	108	3.4		2	a51nx
HSK63A	HSK63A-IC300-240A									3.4			
HSK80F/LPM	HSK80F/LPM-IC300-240A									4.0			MAG1

★**The BT40, HSK63A, and HSK80F/LPM** require a stop block.
★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension.
★Center-through oil mist and spindle indexing are required as preparatory functions on the machine side.
★The above-mentioned preparatory functions must be provided by the machine manufacturer.
★Please consult us regarding other models.

DIRECT MOUNT FLANGE TYPE ANGULAR HEAD

NIKKEN

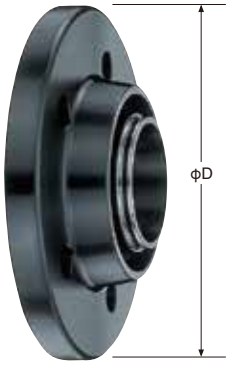


Spindle



Direct Mount
Flange type Shank

Code. No.
NT 50 - F 235 - 14
- Shank No.
- ϕD
- L



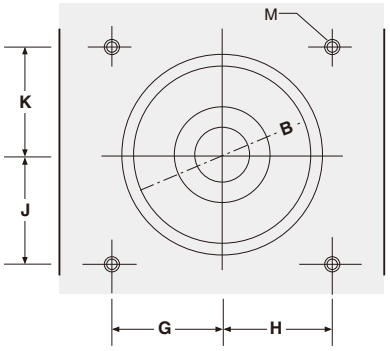
Flange

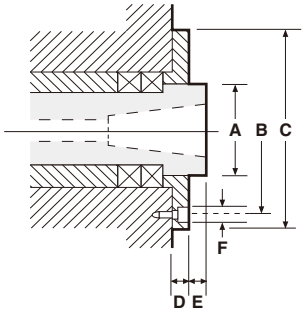
Code. No.
F 235 - AHM
- ϕD
- Symbol of Flange type
- Symbol of Modular type Angular Head



Modular Head

☞ P.139





We have a lot of experience of Special Angular Heads such as Flange Mount type, Both Sides Spindles type Heads and Angular Head for High Speed Rotation. Please contact with us.

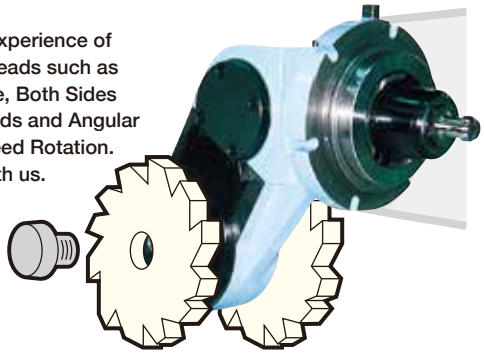


Photo shows **NC5** Shank.

★When ordering, please let us know above A, B, C, D, E, F, G, H, J, K, M and Work Drawing.

MULTI SPINDLE HEAD SERIES

NIKKEN



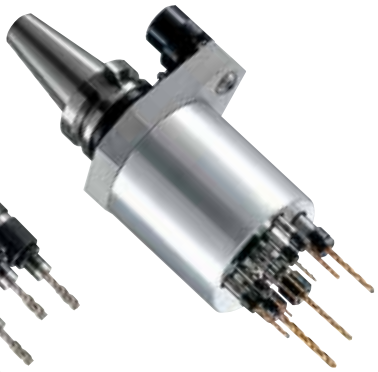
MHS ①Multi Drill Head
(for Straight Shank Drill)



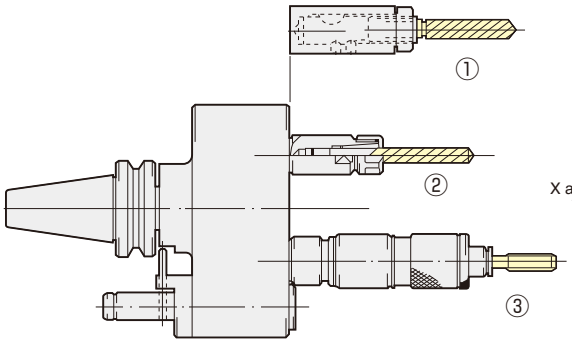
MHD ②Multi Drill Head
(for MT Shank Drill)

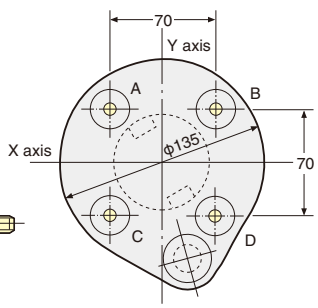


MHT ③Multi Drill Head
(for Tapper Chuck)



MHV High Speed Multi Drill Head
MAX.8,000min^{-1}





Please specify the below when ordering.
- M/C Maker, Model No. Drawing of Spindle Flange. Stopper Block is provided or not.
- Coordinates of each hole A(X= -35, Y= 35)
  B(X= 35, Y= 35)
  C(X= -35, Y=-35)
  D(X= 35, Y=-35)
  or pitch and number of holes.
- A diameter of drill or tap
- Material

ZERO FIT TYPE MILLING CHUCK

NIKKEN



CZF

Fig.1

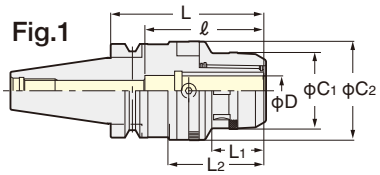
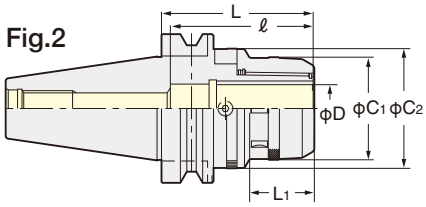


Fig.2



Explanation of the Code No.

BT40 CZF32 – 120

- 120: Nominal Gauge Length
- CZF32: Chucking Capacity / Zero Fit Type Milling Chuck
- BT40: Shank No.

MAX. run-out at 100mm	
CZF20	0.050mm/dia.
CZF25	0.050mm/dia.
CZF32	0.030mm/dia.

PAT.

TAPER	Code No.	C1	C2	L	L1	L2	ℓ	Weight (Kg)	Fig.	Collet
No.30	BT30-CZF20-100	51.5	66.5	100	35	68	80	1.5	1	KM20 CCK20
	-CZF25-100	59.5	74.5					1.6		KM25 CCK25
No.40	BT40-CZF20-105	51.5	66.5	105	35	64.5	80	2.1		KM20 CCK20
	-120			120				2.5		
	-CZF25-105	59.5	74.5	105		68		2.4		KM25 CCK25
	-120			120				2.9		
	-CZF32-120	69	80.5	120	42	78	105	2.8		KM32 CCK32
No.50	BT50-CZF20-105	51.5	66.5	105	35	-	80	4.6	2	KM20 CCK20
	-165			165				6.0		
	-CZF25-105	59.5	74.5	105				5.0		KM25 CCK25
	-165			165				6.8		
	-CZF32-105	69	80.5	105	42		105	5.3		KM32 CCK32
	-165			165				7.4		

★Spanner is available as an option. **CZF20 type : 9HC22, CZF25 type : 9HC25, CZF32 type : 9HC32**
★Wrench to adjust run-out (**9ZFL**) is available as an option.
★Please refer ☞**P.33**, **P.34** for **KM**, **CCK** collet.
★When direct chucking of centre through tool coolant, please use **CKFN-D** nut.
When using collet, please use **CCK collet** and **CKFN nut**. ☞**P.34**
★Please note the acceptable shank tolerance is h7.
★Multi-Cam style is available. **e.g. BT40-CZF32-120-C3.** (3 Cams) Please contact us for more detail.



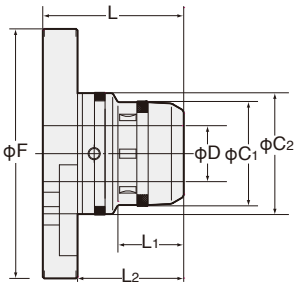
Wrench to adjust
9ZFL

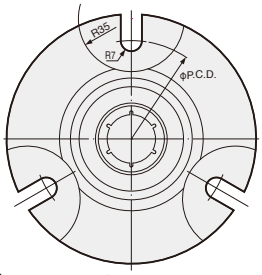
FLANGE STYLE ZERO FIT TYPE MILLING CHUCK

NIKKEN



F-CZF





Explanation of the Code No.

F – CZF32

- CZF32: Chucking Capacity / Zero Fit Type Milling Chuck
- F: Symbol of Flange Style

A holder for gripping the cutter on a tool-grinding machine and adjusting run-out.

PAT.

Style	Code No.	φF	φD	φC1	φC2	L	L1	L2	Width of groove for fixing bolts	φP,C,D
32	F-CZF32	165	32	69	80.5	93.2	43.5	70.2	14mm (three places)	130
42	F-CZF42	175	42	86	98.2	95	46	72		140

★Sanner is available as Standard **CZF20 type : 9HC22, CZF25 type : 9HC25, CZF32 type : 9HC32**
★Wrench to adjust run-out (**9ZFL**) is available as an option.
★Please refer ☞**P.33**, **P.34** for **KM**, **CCK** collet.
★When direct chucking of centre through tool coolant, please use **CKFN-D** nut.
When using collet, please use **CCK collet** and **CKFN nut**. ☞**P.34**
★Please note the acceptable shank tolerance is h7.



Wrench to adjust
9ZFL

- Ideal for adjusting cutter run-out on an NC grinding machine or universal grinding machine.
- 3-point cam as a standard feature makes it easy to adjust run-out on a grinding machine.



⚠
- **In case of CZF (Milling Chuck) style, please rotate the Adjust Cam to the free position. Then, tighten the nose ring until face contact.**
If the face contact is not completed, the Adjust Cam can not function. (Free run)
If the Adjust Cam is not at the free position before tightening, you can not tighten the nose ring until face contact correctly.
- **For the safety reason, the Cam Ring Lock Screws can not be loosen to remove to the outside. Please loose the Cam Ring Lock Screws slightly to rotate the Cam Ring.**

ZERO FIT TYPE SLIM CHUCK

NIKKEN



SZF

Fig.1

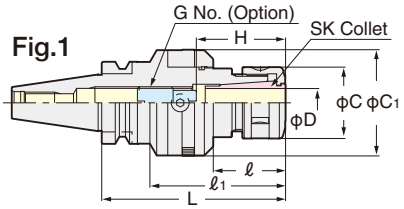
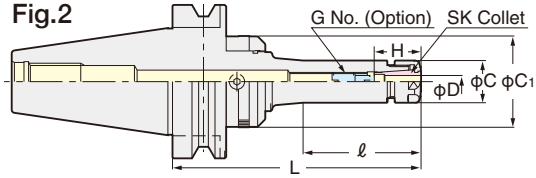


Fig.2



Explanation of the Code No.

BT40 SZF10 – 90

- 90: Nominal Gauge Length
- SZF10: Chucking Capacity
- SZF: Zero Fit Type Slim Chuck
- BT40: Shank No.

MAX. run-out at 100mm		
SZF 6	L<150	0.050mm/dia.
	L≧150	0.040mm/dia.
SZF10		0.050mm/dia.
SZF16		0.040mm/dia.
SZF25		0.025mm/dia.

PAT.

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	H	G No. (Option)	Weight (Kg)	Fig.	Collet
No.30	BT30-SZF 6- 90	0.7～6.0	90	42	-	19.5	40.5	21～35	SKG- 8	0.9	2	SK 6
	-SZF10- 90	1.75～10.0		35	61	27.5	48.5	30～50	SKG-12L	1.3	1	SK10
	-SZF16-105	2.75～16.0	105	40	76	40	59.5	45～65	SKG-18L	1.6		SK16
No.40	BT40-SZF 6- 90	0.7～6.0	90	37	-	19.5	40.5	21～35	SKG- 8	1.3	2	SK 6
	-150		150	60			48.5			1.7		
	BT40-SZF10- 90	1.75～10.0	90	37		27.5	48.5	30～50	SKG-12L	1.5		SK10
	-150		150	97						1.9		
	BT40-SZF16- 90	2.75～16.0	90	37		40	59.5	40～70	SKG-18L	1.8		SK16
	-150		150	97						2.2		
	-SZF25-120	7.5～25.4	120	55	84	55	66.5	55～85	SKG-28	2.4	1	SK25
	-150		150	86	114					2.9		
No.50	BT50-SZF 6-105	0.7～6.0	105	41	-	19.5	40.5	21～35	SKG- 8	4.0	2	SK 6
	-165		165	63			59.5			4.2		
	-SZF10-105	1.75～10.0	105	41		27.5	48.5	30～50	SKG-12L	4.5		SK10
	-165		165	101						4.9		
	-SZF16-105	2.75～16.0	105	41		40	59.5	40～70	SKG-18L	5.0		SK16
	-165		165	101						5.4		
	-SZF25-135	7.5～25.4	135	71		55	66.5	55～85	SKG-28	5.8		SK25
	-165		165	101						6.0		

★Adjust screw (G No.), wrench to adjust run-out (**9ZFL**) and **SKL** spanner are available as an option. **SZF6: SKL-6W, SZF10: SKL-10, SZF16: 9HC16, SZF25: 9HC25**

★**Please use "P" class or "A" type SK collet.** ☞ **P.43**

★For centre through coolant application please use **SK J** type nut and cap for your preference. Please note that the length of **J** type nut is 6mm longer than the standard **SK** nut. ☞ **P.49**

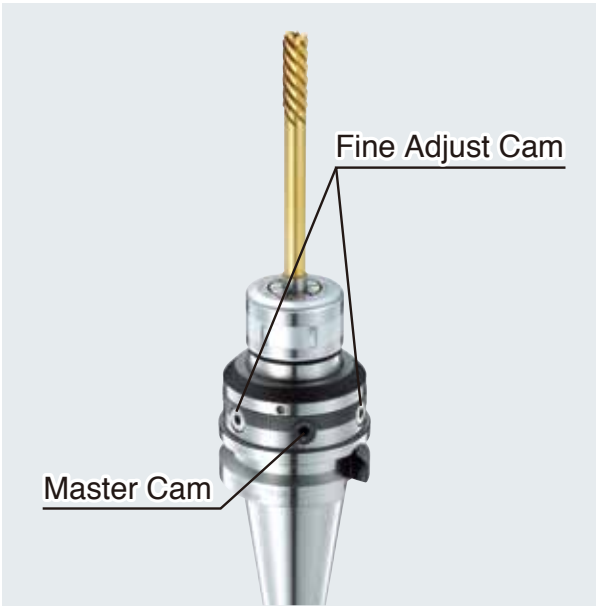
★For High Speed type, Code No. is **"SZF-P"**. **e.g. BT40-SZF10-90P** **GH handle** ☞ **P.48** is necessary for High Speed Milling Chuck.

★Multi-Cam style is available. **e.g. BT40-SZF16-90-C3**. (3 Cams) Please contact us for more detail.





Wrench to adjust
9ZFL



Multi-Cam Style

The minute run-out after adjusting by a master cam can be adjusted by fine adjust cams at the same position.
e.g. BT40-SZF16-90-C3 (3 Cams)
The multi-cam style can not be made for all zero fit holders.

AUTOMATIC BACK SPOT FACING ARBOR

NIKKEN

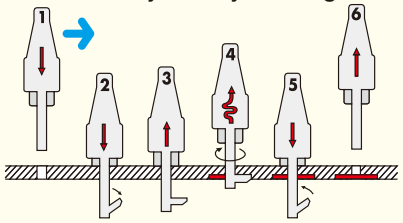
No Swarf Adhesion. Mechanical Automatic Blade In/Out System.
No Need of Stopper Block.

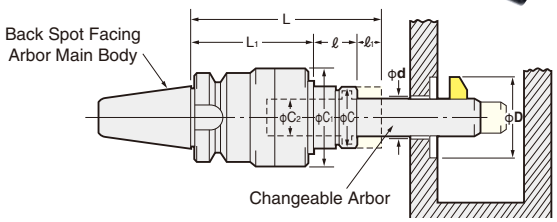


Coolant Through is standard.

AF-OH

Operational Procedure of Back Spot Facing Arbor (Full Automatic System by NC Programming)





The front end arbor is changeable to suit different facing diameter.
Byte can be selected as follows;

- **HSS : Powdered HSS + Ion Nitrided + TiAℓN Coated (Min. order : 3pcs)**
- **Carbide : Grade P, K or M can be selected. (Min. oder : 5pcs)**
- **Insert Tip**

Explanation of the Code No.

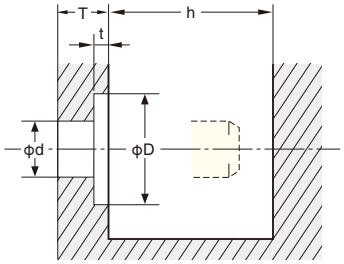
9BF | 120-16-31-30 | –

- Byte
- Arbor Code No.
- I : Insert Tip, H : HSS, W : Carbide

d MIN. and D MAX. are the figures only for the selection of the main body.

TAPER	Code No.	d MIN.	D MAX.	L	L1	ℓ	ℓ1	C	C1	C2	Weight (kg)	Arbor Code No.
No.40	BT40-AF1-20-OH	16	32	185	143	7	35	60	90	32	4.5	BF120-d-D-T
	(IT40) -30-OH	29	58	205	153		45				4.8	BF130-d-D-T
	-40-OH	40	80	225	163		55				5.0	BF140-d-D-T
No.50	BT50-AF1-20-OH	16	32	160	118	7	35	60	90	32	6.0	BF120-d-D-T
	(IT50) -30-OH	29	58	180	128		45				6.5	BF130-d-D-T
	-40-OH	40	80	200	138		55				7.0	BF140-d-D-T
	BT50-AF2-50-OH	50	90	230	158	7	65	73	112	40	9.0	BF250-d-D-T
	(IT50) -60-OH	60	100	250	168		75				9.5	BF260-d-D-T
	-70-OH	70	130	270	178		85				10.0	BF270-d-D-T
	-80-OH	80	160	290	188		95				10.5	BF280-d-D-T
	-90-OH	90	180	310	198		105				11.0	BF290-d-D-T

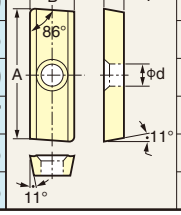
Please specify φd, φD, t, T, h and material, when ordering.



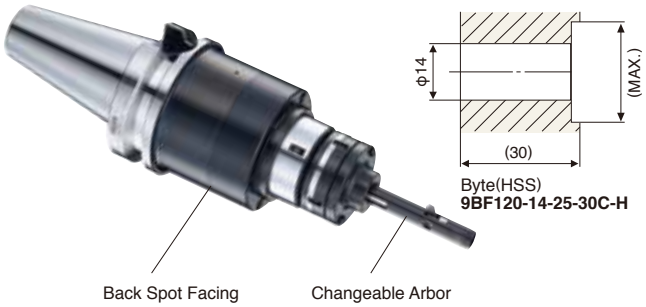


Material	Hole Dia. φd	Facing Dia. φD	Facing Depth t	Thickness T	Space h

Grade : Coated Material : Steel, Cast Iron

Code No.	Dimension	A	B	T	φd	Nose R	Tip Clamp Bolt	Tip Clamp Handle
AFC- 9		9.5	6.4	2.4	2.8	0.4	M2545S	T8
-15		15	7	3.2	3.5	0.8	M3065S	8IP
-20		20.5						
-27		27.4						
-35		35	9.4	5.4	3.5 2 pcs		M3090 2 pcs	T8
-45		45						

■Processing example of minimum hole diameter φ14



Specification of hole diameter φ14.

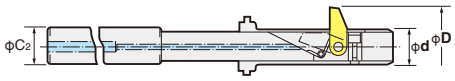
■Maximum facing diameter : φ25 (for M12 bolt head)
■Material of byte : Powdered HSS + Ion Nitrided + TIAlN Coated
■With coolant hole.
■Reference Cutting Speed
Material : S50C(JIS) / Hole dia. "d" : φ14
Facing dia. "D" : φ25 / Thickness "T" : 30mm
V=20~30m/min. f=0.05~0.1mm/rev.

CHANGEABLE ARBOR for Automatic Back Spot Facing Arbor

NIKKEN



BF



Explanation of the Code No.

BF | 1 | 20 - 16 - 31 - 30 | C | -

- BF: Symbol of Changeable Arbor
- 1: 1:AF1 type 2:AF2 type
- 20: Stroke
- 16: Hole Dia. Φd (mm)
- 31: Facing Dia. ΦD (mm)
- 30: Thickness of the Material (mm)
- C: :Side Lock C:Modular
- (blank): :Oil Hole N:No Oil Hole

★ The following list shows the concepts for the chaneable arbor.Please order your own arbor to suit your application.

Changeable Arbor Code No.	Facing Dia. D	Facing Depth d	Thick T	h_1	h_2	C_2	Byte $W_1 \times W_2$	Main Body Code No.
BF120-d-D-TC	18~ 32	14.0~17.7	30	32	63	32	8× 4	**BT40,50-AF1-20-OH**
BF120-d-D-TC	20~ 36	17.8~19.9		30	65		10× 6	
BF120-d-D-TC	23~ 40	20.0~22.4					10× 8	
BF120-d-D-TC	26~ 45	22.5~25.9						
BF120-d-D-TC	29~ 50	26.0~28.9		35	68		12× 8	
BF120-d-D-TC	32~ 50	29.0~31.9		36	73		15×10	
BF130-d-D-TC	51~ 58				83			**BT40,50-AF1-30-OH**
BF120-d-D-TC	36~ 55	32.0~35.9			73			**-AF1-20-OH**
BF130-d-D-TC	56~ 63				83			**-AF1-30-OH**
BF120-d-D-TC	40~ 55	36.0~39.9			73		15×12	**-AF1-20-OH**
BF130-d-D-TC	56~ 73				83			**-AF1-30-OH**
BF120-d-D-TC	45~ 60	40.0~44.9		39	79		18×15	**-AF1-20-OH**
BF130-d-D-TC	61~ 75				89			**-AF1-30-OH**
BF140-d-D-TC	76~ 80				99			**-AF1-40-OH**
BF120-d-D-TC	50~ 60	45.0~49.9			79			**-AF1-20-OH**
BF130-d-D-TC	61~ 75				89			**-AF1-30-OH**
BF140-d-D-TC	76~ 90				99			**-AF1-40-OH**
BF250-d-D-TC	65~ 75	45.0~49.9		65	109	40	18×15	**-AF2-50-OH**
BF260-d-D-TC	75~ 85			70	119			**-AF2-60-OH**
BF270-d-D-TC	80~ 90			75	129			**-AF2-70-OH**
BF250-d-D-TC	75~ 85	50.0~54.9		65	111		20×15	**-AF2-50-OH**
BF260-d-D-TC	85~ 95			70	121			**-AF2-60-OH**
BF270-d-D-TC	90~100			75	131			**-AF2-70-OH**
BF250-d-D-TC	85~ 95	55.0~61.9		65	111			**-AF2-50-OH**
BF260-d-D-TC	95~105			70	121			**-AF2-60-OH**
BF270-d-D-TC	100~110			75	131			**-AF2-70-OH**
BF250-d-D-TC	95~105	62.0~69.9		65	118		22×18	**-AF2-50-OH**
BF260-d-D-TC	105~115			70	121			**-AF2-60-OH**
BF270-d-D-TC	110~120			75	138			**-AF2-70-OH**
BF250-d-D-TC	105~115	70.0~74.9		65	118			**-AF2-50-OH**
BF260-d-D-TC	115~125			70	121			**-AF2-60-OH**
BF270-d-D-TC	120~130			75	138			**-AF2-70-OH**

MANUAL BACK SPOT FACING ARBOR

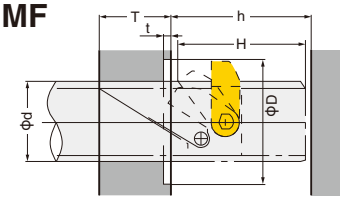
NIKKEN

PAT.P

e.g. ST32-MF53-84-300

Arbor shank is straight shank. Please use side lock holder (BT50-SL32C-105☞P.108).

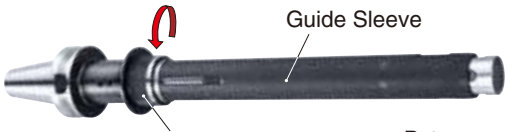
MF



★Please specify Φd, ΦD, t, T, h and material, when ordering. H (Dimension for byte in/out) is depended on Φd and ΦD.



Byte IN

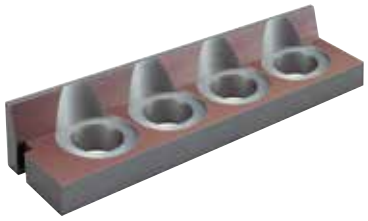


Byte OUT



Operation

1. X, Y Positioning
2. Z down (Insert the arbor into the hole.)
3. Rotate clamp ring causes guide sleeve forward to push the byte out.
4. Z up (Back spot facing)
5. Z Down
6. Rotate clamping in reverse direction causes guide sleeve backward to store the byte in.
7. X, Y Moving



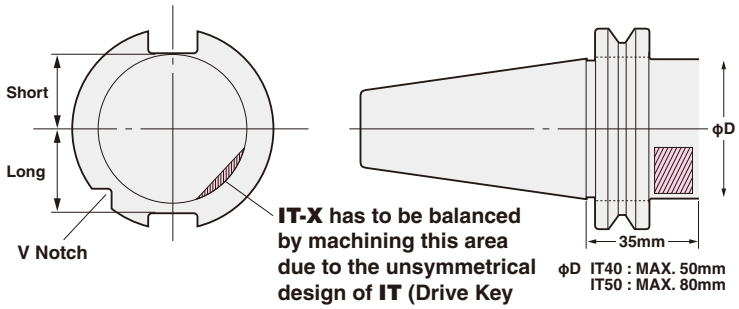
Sample

Material : FCD200 V=30m/min.
Hole : Φ53 f=0.1mm/rev.
Facing Dia. : Φ84

IT TOOLING SYSTEM

NIKKEN

What is IT Shank Tooling?



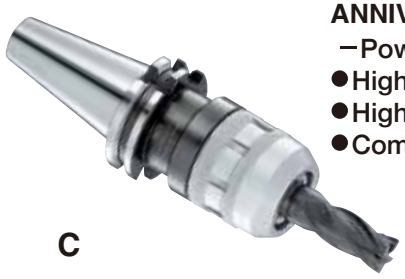
IT-X has to be balanced by machining this area due to the unsymmetrical design of IT (Drive Key Slot and V Notch).

ϕD IT40 : MAX. 50mm
IT50 : MAX. 80mm

IT shank is based on ISO 7388/1-'83 (DIN69871-'90) and its flange has an unsymmetrical shape.
-Depth of Drive Key Slots are different.
-V Notch on one side.
Therefore, NIKKEN IT_X shank has a groove at bottom of V groove for mass balancing.
Diameter **"D"** below the flange is restricted under the above standard. Normally the holder for large diameter cutter has a large body, therefore, large diameter at **"D"** is expected. However, in case of IT Shank large diameter tool holder, **"D"** is smaller than the front end part due to the standard, and the length from gauge line is also different from BT Shank tool holders.

IT MULTI LOCK MILLING CHUCK

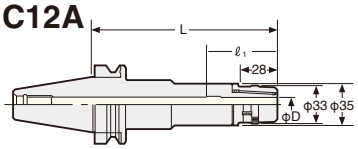
NIKKEN



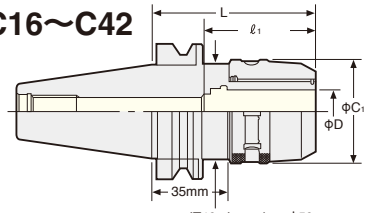
C

ANNIVERSARY Type
－Powerful gripping torque－
- **High rigidity**
- **High precision**
- **Compact design**

C12A



C16～C42



IT40 : Less than Φ50mm
IT50 : Less than Φ80mm

TAPER	Code No. ITNo. -D -L	C1	L	ℓ1	Collet	Weight (kg)
No.40	IT40-C12- 65, 90*1, 120*1	33	65, 90, 120	58	KM12 CCK12	1.3, 1.6, 1.8
	-C16- 60, 90*1, 120*1	44	60, 90, 120	65	KM16 CCK16	1.4, 1.7, 2.0
	-C20- 80, 90, 105, 120*2	52	80, 90, 105, 120	80	KM20 CCK20 CCNK20	1.6, 1.8, 2.0, 2.2
	-C25- 85, 105, 120	60	85, 105, 120	80	KM25 CCK25 CCNK25	2.1, 2.3, 2.5
	-C32- 95, 105, 120	64	95, 105, 120	82, 95, 105	KM32 CCK32 CCNK32	2.1, 2.5, 2.8
No.50	IT50-C12-105, 135, 165*1	33	105, 135, 165	58	KM12 CCK12	4.0, 4.3, 4.6
	-C16-105, 135, 165*1	44	105, 135, 165	65	KM16 CCK16	4.2, 4.6, 5.1
	-C20-105, 135, 165, 180*1	52	105, 135, 165, 180	80	KM20 CCK20 CCNK20	4.5, 5.1, 5.7, 6.0
	-C25-105, 135, 165	60	105, 135, 165	80	KM25 CCK25 CCNK25	4.8, 5.2, 5.6
	-C32- 85, 105, 120, 135, 165	69	85, 105, 120, 135, 165	105	KM32 CCK32 CCNK32	4.1, 4.6, 5.1, 5.6, 6.4
	-C42- 95*2, 105, 135*1, 165*1	86	95, 105, 135, 165	125	KM42 CCK42 CCNK42	5.2, 5.5, 7.2, 8.6

★Spanner is available as an option.
C12(ϕ30):9HC12, C12A(ϕ33):9HC12A, C16:9HC16, C20: 9HC20, C25: 9HC25, C32&ϕC1=64:9HC25, C32:9HC32, C42:9HC42
★Please note the acceptable shank tolerance is h7.
★For **KM**, **CCK** and **CCNK** Collet, please refer ☞ **P.33, P.34.**
★**For heavy duty milling, please grip the end mill shank longer than ℓ1.**
★**For Milling Chucks marked ＊2, NK Collet, CCNK Collet, ONK Collet and OJK Collet can not be used.**
★**Milling chucks marked ＊1 are available as an option.**
★**IT50-C32-200, 250** and **IT50-C42-200,250** are also available as an option.
★C22 style is also available.
★Please add "**C**" for the centre through tool coolant type.
IT40-C20C-80, 90, 105, 120 **IT50-C20C-105, 135, 165*1**
-C25C-85, 105 **-C25C-105, 135, 165*1**
-C32C-95, 105, 120 **-C32C- 85, 105, 135, 165**
-C42C-105
★Please add "**F**" for the flange through tool coolant type.
IT40-C20F- 90, 120*1 **IT50-C20F-105, 135, 165*1**
-C25F- 90, 120*1 **-C25F-105, 135, 165*1**
-C32F-105 **-C32F-105, 135, 165**
-C42F-120



High Speed Milling Chuck



GH Handle ☞ **P.48**

Code No.	MAX. (min-1)	Code No.	MAX. (min-1)
IT40X-C12- 65G, 90G	30,000	IT50X-C12-105G, 135G*1	20,000
-C16- 60G, 90G	25,000	-C16-105G, 135G*1	
-C20- 80G, 90G		-C20-105G, 135G*1	
-C25- 85G	20,000	-C25-105G, 135G*1	
-C32- 95G, 105G		-C32- 85G, 105G, 120G	15,000
		-C42- 95P*2, 105P	

★For Milling Chucks except ＊2, Stopper for Direct Chucking, **ONK** Collet and **OJK** Collet can be used.
★The extended gauge length (**L**) is available. Please contact with us.
★The end mill shank tolerance is recommended to be h6.

IT SLIM CHUCK PAT.

NIKKEN



SK

High precision
High speed
Powerful gripping

Fig. 1

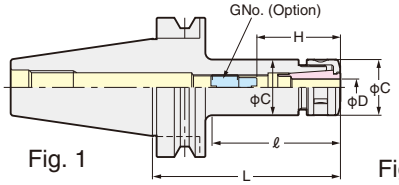


Fig. 2

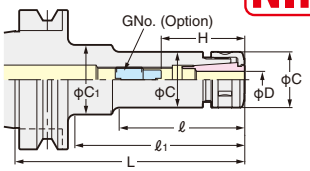
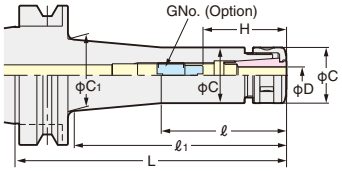


Fig. 3



When SK J type nut is used, the total chuck length will be extended by 6mm.

TAPER	Code No.	D	ℓ	ℓ1	C	C1	H	G No. (Option)	Weight (kg)	Fig.	SK Collet
No.40	IT40-SK 6- 60	0.7～6.0	38	–	19.5	–	21～35	SKG-8	1.0	1	SK 6
	- 90		48	–		–			1.1	1	
	-120		62	82		32			1.2	2	
	-150		60	112		25			1.4	3	
	-SK10- 60	1.75～10.0	40	–	27.5	–	30～50	SKG-12L	1.1	1	SK10
	- 90		50	–		–			1.2	1	
	-120		60	82		32			1.4	2	
	-150		73	112		33.5			1.6	3	
	-180		73	144		39			1.7	3	
	-SK13- 60	2.75～13.0	40	–	33	–	31～65	SKG-15	1.3	1	SK13
	- 90		50	–		–			1.4	1	
	-120		80	–		–			1.6	1	
	-150		88	114		40			1.8	3	
	-180		88	144		40			1.9	3	
	-SK16- 60	2.75～16.0	40	–	40	–	40～70	SKG-18S	1.4	1	SK16
	- 90		54					SKG-18L	1.5	1	
	-120		84						1.7	1	
	-150		114						1.9	1	
	-180		144						2.0	1	
	-SK20- 90	3.5～20.0	70	–	48.5	–	47～80	SKG-22	1.7	1	SK20
	-120		100						1.9	1	
	-SK25- 90	7.5～25.4	70	–	55	–	55～75	SKG-28	1.8	1	SK25
	-120		100						2.0	1	
No.50	IT50-SK 6-105	0.7～6.0	60	–	19.5	–	21～35	SKG-8	3.7	1	SK 6
	-135		62	93		32			3.9	2	
	-165		62	117		32			4.1	2	
	-200		60	154		30			4.3	3	
	-SK10-105	1.75～10.0	65	–	27.5	–	30～50	SKG-12L	4.2	1	SK10
	-135		70	95		32			4.4	2	
	-165		75	125		32			4.6	2	
	-200		75	154		36			5.0	3	
	-SK13-105	2.75～13.0	65	–	33	–	31～65	SKG-15	4.5	1	SK13
	-135		95	–		–			4.7	1	
	-165		92	125		45			4.8	2	
	-200		92	160		45			5.3	3	
	-SK16-105	2.75～16.0	65	–	40	–	40～70	SKG-18L	4.7	1	SK16
	-135		95	–		–			4.9	1	
	-165		90	125		50			5.1	2	
	-200		90	160		50			5.5	2	
	-SK20-105	3.5～20.0	65	–	48.5	–	47～80	SKG-22	4.8	1	SK20
	-135		95						5.1	1	
	-165		125						5.4	1	
	-200		160						5.8	1	
	-SK25-105	7.5～25.4	65	–	55	–	50～85	SKG-28	4.8	1	SK25
	-135		95						5.2	1	
	-165		125						5.6	1	
	-200		160						6.0	1	

★Collet, adjust screw (G No.) and spanner are available as an option.
The Code No. of the spanner is **SK6 (C=φ18) : SKL-6, SK6 (C=φ19.5) : SKL-6W, SK10: SKL-10, SK13: 9HC12A, SK16: 9HC16, SK20: 9HC22, SK25: 9HC25**



★Please refer ☞ **P.43** for **SK** collet and please refer ☞ **P.49** for **J** type nut,.
★Please refer ☞ **P.153** for the center through coolant type and flange through coolant type.



High Speed SLIM CHUCK



GH Handle ☞ **P.48**

Code No.	MAX. (min-1)	Code No.	MAX. (min-1)
IT40X-SK 6- 60P, 90P, 120P	30,000	IT50X-SK 6-105P, 165P	20,000
-SK10- 60P, 90P, 120P		-SK10-105P, 165P	
-SK13- 60P, 90P, 120P		-SK13-105P, 165P	
-SK16- 60P, 90P, 120P	25,000	-SK16-105P, 165P	
-SK20- 90P, 120P		-SK20-105P, 165P	
-SK25- 90P, 120P	20,000	-SK25-105P, 165P	15,000

★The extended gauge length **(L)** is available. Please contact with us.

IT SLIM CHUCK CENTRE THROUGH TYPE

PAT. NIKKEN



High precision
High speed
Powerful gripping

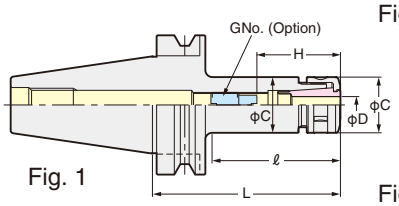


Fig. 1

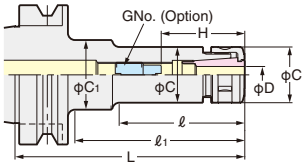


Fig. 2

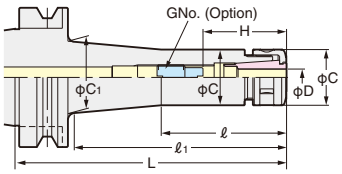


Fig. 3

SK-C

When SK J type nut is used, the total chuck length will be extended by 6mm.

TAPER	Code No.	D_1	H_1	L_2	L_3	C_1	C_2	G No. (Option)	Weight (kg)	SK Collet
No.40	IT40-SK 6C- 90	4~6	26~31	48	–	19.5	–	SKG6-6HG	1.1	SK 6
	-120			62	82		32		1.2	
	-SK10C- 90	5~10	33~41	50	–	27.5	–	SKG10-10HG	1.2	SK10
	-120			60	82		32		1.4	
	-SK13C- 90	5~13	39~51	50	–	33	–	SKG13-10HG	1.4	SK13
	-120			80					1.6	
	-SK16C- 90	10~16	45~57	54	–	40	–	SKG16-12HG	1.5	SK16
	-120			84					1.7	
	-SK20C- 90	10~20	47~63	70	–	48.5	–	SKG20-18HG	1.7	SK20
	-120			100					1.9	
	-SK25C- 90	16~25	60~65	70	–	55	–	SKG25-18HGD	1.8	SK25
	-120		60~70	100				SKG25-24HG	2.0	
No.50	IT50-SK 6C-105	4~6	26~31	60	–	19.5	–	SKG6-6HG	3.7	SK 6
	-165			62	117		32		4.1	
	-SK10C-105	5~10	33~41	65	–	27.5	–	SKG10-10HG	4.2	SK10
	-165			75	125		32		4.6	
	-SK13C-105	5~13	39~51	65	–	33	–	SKG13-10HG	4.5	SK13
	-165			92	125		45		4.8	
	-SK16C-105	10~16	45~57	65	–	40	–	SKG16-12HG	4.7	SK16
	-165			90	125		50		5.1	
	-SK20C-105	10~20	47~63	65	–	48.5	–	SKG20-18HG	4.8	SK20
	-165			125					5.4	
	-SK25C-105	16~25	60~70	65	–	55	–	SKG25-24HG	4.8	SK25
	-165			125					5.6	

IT SLIM CHUCK FIANGE THROUGH TYPE

SK-F

TAPER	Code No.	D	H	ℓ	ℓ_1	C	C_1	G No. (Option)	Weight (kg)	SK Collet
No.40	IT40-SK 6F- 90	4~6	26~31	48	–	19.5	–	SKG6-6HG	1.1	SK 6
	-120			62	82		32		1.2	
	-SK10F- 90	5~10	33~41	50	–	27.5	–	SKG10-10HG	1.2	SK10
	-120			60	82		32		1.4	
	-SK13F- 90	5~13	39~51	50	–	33	–	SKG13-10HG	1.4	SK13
	-120			80					1.6	
	-SK16F- 90	10~16	45~50	54	–	40	–	SKG16-12HGB	1.5	SK16
	-120		45~57	84				SKG16-12HG	1.7	
	-SK20F- 90	10~20	57~63	70	–	48.5	–	SKG20-18HGB	1.7	SK20
	-120		47~63	100				SKG20-18HG	1.9	
	-SK25F-120	16~25	55~65	100	–	55	–	SKG25-24HGA	2.0	SK25
No.50	IT50-SK 6F-105	4~6	26~31	60	–	19.5	–	SKG6-6HG	3.7	SK 6
	-165			62	117		32		4.1	
	-SK10F-105	5~10	33~41	65	–	27.5	–	SKG10-10HG	4.2	SK10
	-165			75	125		32		4.6	
	-SK13F-105	5~13	39~51	65	–	33	–	SKG13-10HG	4.5	SK13
	-165			92	125		45		4.8	
	-SK16F-105	10~16	45~57	65	–	40	–	SKG16-12HG	4.7	SK16
	-165			90	125		50		5.1	
	-SK20F-105	10~20	47~63	65	–	48.5	–	SKG20-18HG	4.8	SK20
	-165			125					5.4	
	-SK25F-105	16~25	55~62	65	–	55	–	SKG25-24HGA	4.8	SK25
	-165		55~70	125				SKG25-24HG	5.6	

★Collet, adjust screw (G No.) and spanner are available as an option.
The Code No. of the spanner is **SK6 (C=φ19.5) : SKL-6W, SK10: SKL-10, SK13: 9HC12A, SK16: 9HC16, SK20: 9HC22, SK25: 9HC25**



★Please refer ☞ **P.43** for **SK** collet and please refer ☞ **P.49** for **J** type nut,.



High Speed SLIM CHUCK



GH Handle ☞ **P.48**

Code No.	MAX. (min^{-1})	Code No.	MAX. (min^{-1})
IT40X-SK 6- 60P, 90P, 120P	30,000	IT50X-SK 6-105P, 165P	20,000
-SK10- 60P, 90P, 120P		-SK10-105P, 165P	
-SK13- 60P, 90P, 120P		-SK13-105P, 165P	
-SK16- 60P, 90P, 120P	25,000	-SK16-105P, 165P	
-SK20- 90P, 120P		-SK20-105P, 165P	
-SK25- 90P, 120P	20,000	-SK25-105P, 165P	15,000

★The extended gauge length **(L)** is available. Please contact with us.

NIT MAJOR DREAM HOLDER PAT.

NIKKEN

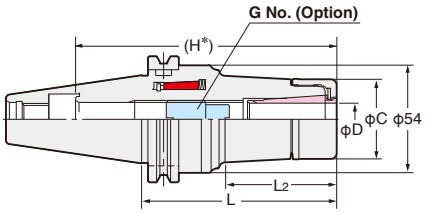


Difference of the swarfs





Please use Jet Coolant Splash for better swarf generation. ☞P. 34, P.43



(H*) : MAX. H without adjust screw.

MDSK

TAPER	Code No.	D	L_2	C	H	H_1	G No. (Option)	Weight (kg)	SK Collet
No.40	NIT40N-MDSK 6- 60	3.0～6.0	18	19.5	86	21～35	SKG-8	0.8	SK 6-A
	- 75		33		101			0.9	
	- 90		48		116			1.1	
	-105		63		131			1.2	
	-120		78		146			1.4	
	-MDSK10- 60	3.0～10.0	19	27.5	86	30～50	SKG-12L	1.1	SK10-A
	- 75		33		101			1.3	
	- 90		48		116			1.5	
	-105		63		131			1.6	
	-120		78		146			1.8	
	-150		110		176			2.2	
	-180		141.2		206			2.4	
	-MDSK13- 65	3.0～13.0	24	33	86	31～60	SKG-15	1.2	SK13-A
	- 75		33		101			1.4	
	- 90		48		116			1.7	
	-105		63		131			1.8	
	-120		78		146			2.0	
	-150		110		176			2.4	
	-180		144		206			2.6	
	-MDSK16- 65	3.0～16.0	24	40	86	45～60	SKG-18L	1.2	SK16-A
	- 75		33		101	45～70		1.5	
	- 90		48		116			1.9	
	-105		64		131			2.0	
	-120		80		146			2.2	
	-150		113		176			2.5	
	-180		144.6		206			2.8	
	-MDSK20- 75	4.0～20.0	41.2	48	80	50～73	SKG-12	1.9	SK20-A
	- 90		55		95		SKG-12-55L	2.1	
	-105		70		110		SKG12-70L	2.3	
	-120		85		125		SKG-12-85L	2.6	
No.50	NIT50N-MDSK 6-105	3.0～6.0	48	19.5	116	21～35	SKG-8	3.6	SK 6-A
	-120		63		131			3.7	
	-135		78		146			3.9	
	-MDSK10-105	3.0～10.0	48	27.5	116	30～50	SKG-12L	4.3	SK10-A
	-120		63.2		131			4.4	
	-135		78.2		146			4.7	
	-165		110.2		176			5.0	
	-195		141.2		206			5.3	
	-MDSK13-105	3.0～13.0	48	33	116	31～60	SKG-15	4.2	SK13-A
	-120		63		131			4.7	
	-135		78		146			5.0	
	-165		110		176			5.3	
	-195		144		206			5.6	
	-MDSK16-105	3.0～16.0	48	40	116	45～70	SKG-18L	4.1	SK16-A
	-120		64		131			4.9	
	-135		80.1		146			5.2	
	-165		114.7		176			5.5	
	-195		144.6		206			5.8	
	-MDSK20-105	4.0～20.0	42	48	159	47～80	SKG-22	4.9	SK20-A
	-135		72		175			5.3	
	-165		102		205			5.9	
	-195		132		235			6.7	
	-MDSK25-105	8.0～25.4	42	55	159	55～85	SKG-28	4.9	SK25-A
	-135		74		175			5.7	
	-165		105		205			6.5	
	-195		135		235			7.5	

★Please use A type SK collet that is available as an option for end milling operation. ☞P.43
★Please refer ☞P.49 for Jet coolant J type nut and cap.
★GH Handle is available as an option. ☞P.48 Please order with the Code No. GH10 : MDSK10, GH12 : MDSK13, GH16 : MDSK16, GH20 : MDSK20, GH25 : MDSK25.
★Please add "P" at the end of Code No. for high speed holder, e.g. NIT40N-MDSK10-60P.
★φC2 of NIT40N is larger than the dimension of the IT40 standard.



IT/CAT

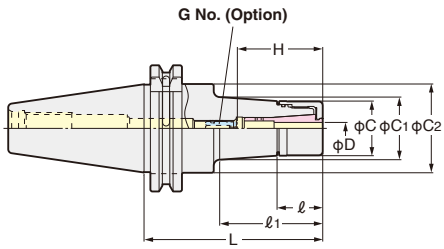
IT ANNIVERSARY TYPE VC HOLDER PAT.

NIKKEN



VC

With TiN Bearing Nut
MAX.30,000min^{-1} & G2.5
Run-Out Accuracy : 3μm at 4D



TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	C2	H	G No. (Option)	Weight (kg)	MAX. (min^{-1})	Collet
No.40	IT40X-VC 6- 60	2.0～6.0	60	23	23	27.5	27.5	44.7	35～45	VCG 6- 8A	1.1	30,000	VCK 6
	- 90		90		51.9		31.5				1.3		
	-120		120		81.9		35.7				1.5		
	-VC13- 60	3.0～12.0	60	29	29	40	40.0		50～60	VCG13-15A	1.2		VCK13
	- 90		90		70		44.7				1.5		
	-120		120		100						1.9		
No.50	IT50X-VC 6-105	2.0～6.0	105	23	64.9	27.5	33.4	70.1	35～45	VCG 6- 8A	3.9	20,000	VCK 6
	-135		135		94.9		37.6				4.1		
	-165		165		124.9		41.8				4.4		
	-VC13-105	3.0～12.0	105	29	64.9	40	45.0		50～60	VCG13-15A	4.1		VCK13
	-135		135		94.9		49.2				4.5		
	-165		165		124.9		53.4				4.9		

★TiN Bearing Nut is supplied as standard.
★When the axial stopper is required, please use Adjust Screw (G No.)
★Please add "**-RP**" at the end of Code No. for Rust Proof Treatment **VC** Holder.
e.g. IT40X-VC13-60-RP
★Please use **VC J** type Nut & Cap for Centre Through Coolant.
When **VC J** type Nut is used, the total holder length will be extended to 6mm.
★Please refer ☞**P.36** for **VCK Collet.**

★IT40X-VC6-150, IT40X-VC13-150, IT50X-VC13-90, -120 are available as semi-standard.
★Collet, adjust screw (G No.) and **GH Handle** are available as an option. ☞**P.48**
★All series are for High Speed Rotation.



IT MINI-MINI CHUCK PAT.

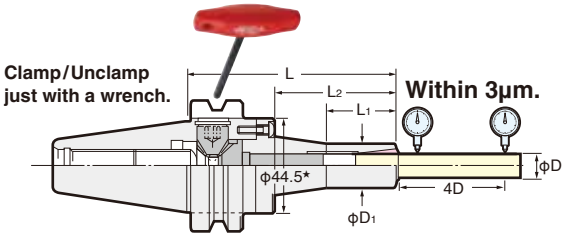
The best chuck for the small dia.cutting tool

NIKKEN



MMC

MAX. 30,000min^{-1} & G2.5
Gripping from Front Nose
Run-Out Accuracy : 3μm at 4D



★ : MMC12 = φ52.4

TAPER	Code No.	Chucking Range φD	L	φD1	L1	Collet	MAX.(min^{-1})	Weight(kg)
No.40	IT40X-MMC 4 - 90-AA	1～4	90	15	30	MPK 4	30,000	1.2
	-MMC 8C- 90-AA	2～8	90	20	33	PMK 8	30,000	1.4
	-120-AA		120		40	VMK 8		1.5
	-MMC12C- 90-AA	4～12	90	30	35	PMK12	30,000	1.7
	-120-AA		120		60	VMK12		1.8
No.50	IT50X-MMC 4 -105-AA	1～4	105	15	30	MPK 4	20,000	3.8
	-MMC 8C-105-AA	2～8	105	20	33	PMK 8	20,000	4.4
	-135-AA		135		40	VMK 8		4.5
	-165-AA		165					4.6
	-MMC12C-105-AA	4～12	105	30	35	PMK12	20,000	4.6
	-135-AA		135		60	VMK12		4.7
	-165-AA		165		70			4.8

★Wrench is supplied as standard.
★**MPK**, **PMK**, **VMK** collet is not included with MINI-MINI Chuck. Please refer ☞**P.38**
★**MMC8C, MMC12C** : Centre through type.
★Please add "**F**" for the flange through tool coolant type; IT40X-MMC 8F- 90-AA,120-AA IT50X-MMC 8F-105-AA,120-AA
-MMC12F- 90-AA,120-AA -MMC12F-105-AA,120-AA

IT ZERO FIT TYPE MILLING CHUCK PAT.

NIKKEN



CZF
Photo. shows **BT** shank.

Fig.1

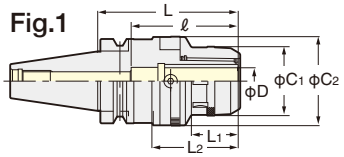
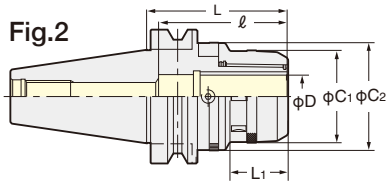


Fig.2



Explanation of the Code No.

IT40 | CZF | 32 – 120

- 120 : Nominal Gauge Length
- 32 : Chucking Capacity
- CZF : Zero Fit Type Milling Chuck
- IT40 : Shank No.

TAPER	Code No.	C1	C2	L	L1	L2	ℓ	Weight (Kg)	Fig.	Collet
No.40	IT40-CZF20-105	51.5	66.5	105	35	70	80	2.1	1	KM20 CCK20
	-CZF25-105	59.5	74.5	105	35	70	80	2.4		KM25 CCK25
	-CZF32-120	69	80.5	120	42	85	105	2.8		KM32 CCK32
No.50	IT50-CZF20-105	51.5	66.5	105	35	–	80	4.7	2	KM20 CCK20
	-CZF25-105	59.5	74.5	105	35	–	80	5		KM25 CCK25
	-CZF32-120	69	80.5	120	42	–	105	5.3		KM32 CCK32

★Spanner is available as an option.
CZF20 type : 9HC22, CZF25 type : 9HC25, CZF32 type : 9HC32



★Please note that the acceptable shank tolerance is h6~h7.
★Please add "**P**" at the end of Code No. for the high speed type. **e.g.** IT40-CZF25-105P
★Wrench to adjust run-out (**9ZFL**) is available as an option.
★Multi-Cam style is available. **e.g.** IT40-CZF32-120-C3. (3 Cams) Please contact us for more detail.

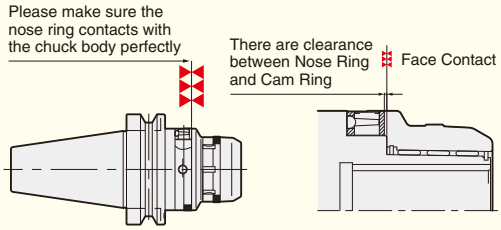
★Please refer ☞ **P.33, P.34** for **KM**, **CCK** collet.

Wrench to adjust
9ZFL



⚠

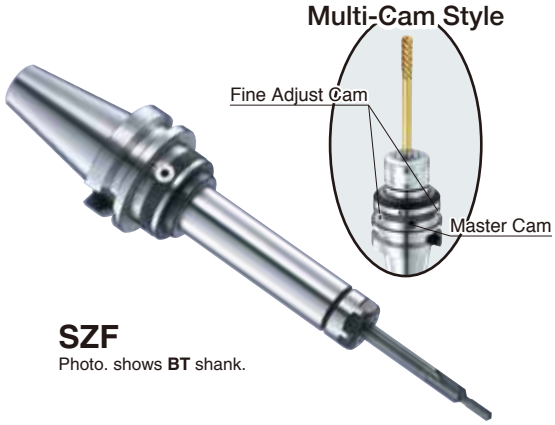
- **In case of CZF (Milling Chuck) style, please rotate the Adjust Cam to the free position. Then, tighten the nose ring until face contact.**
  If the face contact is not completed, the Adjust Cam can not function. (Free run)
  If the Adjust Cam is not at the free position before tightening, you can not tighten the nose ring until face contact correctly.
- **For the safety reason, the Cam Ring Lock Screws can not be loosen to remove to the outside.**
  Please loose the Cam Ring Lock Screws slightly to rotate the Cam Ring.



IT ZERO FIT TYPE SLIM CHUCK PAT.

NIKKEN

Multi-Cam Style



SZF
Photo. shows **BT** shank.

Fig.1

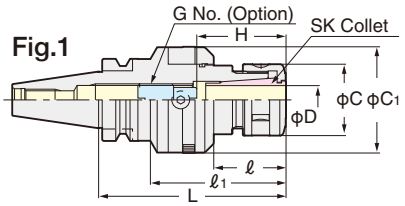
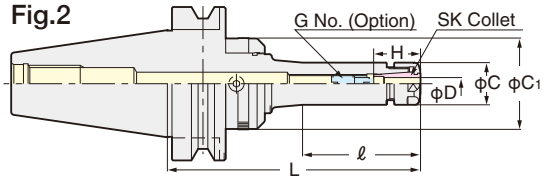


Fig.2



Explanation of the Code No.

IT40 | SZF | 10 – 120

- 120 : Nominal Gauge Length
- 10 : Chucking Capacity
- SZF : Zero Fit Type Slim Chuck
- IT40 : Shank No.

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	H	G No. (Option)	Weight (Kg)	Fig.	Collet
No.40	IT40-SZF 6- 90, 150	0.7~6.0	90, 150	45, 89	–	19.5	40.5	21~35	SKG- 8	1.3, 1.7	2	SK 6
	-SZF10-120, 150	1.75~10.0	120, 150	57, 87	–	27.5	48.5	30~50	SKG-12L	1.6, 1.9	2	SK10
	-SZF16-120, 150	2.75~16.0	120, 150	51, 81	–	40	59.5	40~70	SKG-18L	1.9, 2.2	2	SK16
	-SZF25-120, 150	16.0~25.4	120, 150	49 ,79	85, 115	55	66.5	55~85	SKG-28	2.4, 2.9	1	SK25
No.50	IT50-SZF 6-105, 165	0.7~6.0	105, 165	60, 67	–	19.5	40.5, 59.5	21~35	SKG- 8	4.0, 4.2	2	SK 6
	-SZF10-105, 165	1.75~10.0	105, 165	60, 65	–	27.5	48.5, 59.5	30~50	SKG-12L	4.5, 4.9	2	SK10
	-SZF16-105, 165	2.75~16.0	105, 165	60, 120	–	40	59.5	40~70	SKG-18L	5.0, 5.4	2	SK16
	-SZF25-120, 165	7.5~25.4	120, 165	75, 120	–	55	66.5	55~85	SKG-28	5.7, 6.0	2	SK25

★Adjust screw (G No.) , wrench to adjust run-out (**9ZFL**) and **SKL** spanner are available as an option. **SZF6: SKL-6W, SZF10: SKL-10, SZF16: 9HC16, SZF25: 9HC25**



★**Please use "P" class or "A" type SK collet.** ☞**P.43**
★For centre through coolant application please use **SK J** type nut and cap for your preference. Please note that the length of **J** type nut is 6mm longer than the standard **SK** nut.
★For High Speed type, Code No. is "**SZF-P**" . **e.g.** IT40-SZF10-120P
★Multi-Cam style is available. **e.g.** IT40-SZF16-120-C3. (3 Cams) Please contact us for more detail.

UNIVERSAL MICRO TOUCH

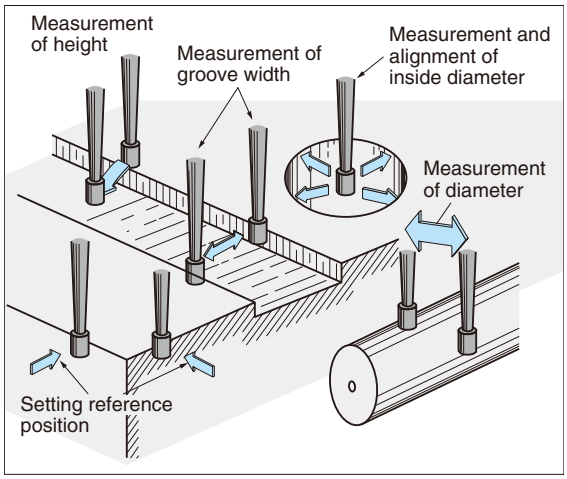
NIKKEN

3D Electronic Edge Detector of Basic Point

- Precision Touch Sensor
  Repeatability ±2 micron.
- Long Safety Over-Travel Distance protects from damage. X , Y= ±7mm Z= 3mm
- Red lamp and electronic beep sound notice the touching position. When touching to the work piece, red lamp immediately lights up all around. The one with BT shank gives the electric beep sound also to make double notices.

How to obtain touching position

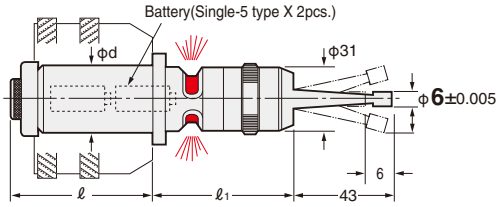
Make the stylus slowly get near to the measuring surface of work piece and the red lamp will light at the moment when the former touches the latter. A position where 3mm is compensated from that position (because of 6mm stylus diameter), is the touching position to be obtained.



Straight Shank UMT MICRO TOUCH



UMT



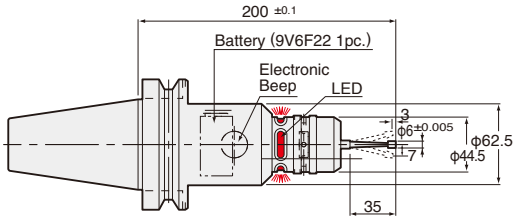
Code No.	φd	ℓ	ℓ1	Weight (Kg)
S20-UMT	20	68	61	0.4
S32-UMT	32	65	65	0.7
MT2-UMT	MT2	66.5	75	0.4

★Ball type φ6mm stylus is also available : **S32-UMTB**

BT-UMT-W MICRO TOUCH







TAPER	Code No.	Weight (Kg)
No.30	**BT30-UMT200W**	2.1
No.40	**BT40-UMT200W**	2.7
No.50	**BT50-UMT200W**	5.0

★Ball type φ6mm stylus is also available : **BT40-UMTB200**
★**IT40-UMT200W** and **IT50-UMT200W** are also available.

BT-UMTH
MICRO TOUCH for ring sensor

For Machining Centre with ring sensor, the electric circuits are different from standard, please purchase this through M/C Builder.





Universal Micro Sensor



UMS

- Repeatability ±1 micron
- Perfect water/dust proof
- Inductive signal transmission type (No need for battery)
- The sensor signal can be managed with ultra high speed.
- Because of its internal circuit contact type, this sensor can be used for any materials of components.
- Interchangeable stylus. 50mm (standard) , 100mm (Option)

BT30-UMS200
BT40-UMS200
BT50-UMS200

Please contact with us for more details.

Specification	
X·Y Over-Travel	10mm
Z Over-Travel	6mm
Stylas	φ6 Ball
Transmission	Inductive

MEASUREMENT

UNIVERSAL MICRO TOUCH with INTERNAL CONTACT SYSTEM NIKKEN

Internal Contact System - can be used for not conductive work piece.

- Precision Touch Sensor
  Repeatability ±2 micron.
- Long Safety Over-Travel Distance protects from damage. X , Y= ±7mm Z= 3mm
- Not conductive work piece can be measured. Internal contact system is built-in.
  Blue lamp and electronic beep sound notice the touching position. After touching to the work piece, blue lamp lights up all around. The one with BT shank gives the electric beep sound also to make double notices.

How to obtain touching position

Make the stylus slowly get near to the measuring surface of work piece and the blue lamp will light at the moment when the former touches the latter. A position where 2mm is compensated from that position (because of 4mm stylus diameter) , is the touching position to be obtained.



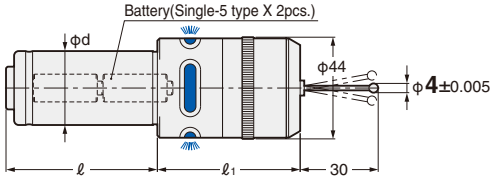
Photo shows with ruby stylus (option).

Straight Shank UMTX MICRO TOUCH



UMTX

Ruby stylus is available as an option.



Code No.	φd	ℓ	ℓ1	Weight (Kg)
S20-UMTX	20	68	64	0.5
S32-UMTX	32	65	64	0.8
MT2-UMTX	MT2	66.5	64	0.5

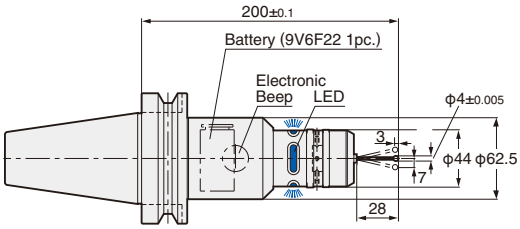
★Battery is supplied as standard.
★The delay of the system is within 0.01mm, because of the internal contact system.

BT-UMTX MICRO TOUCH



BT-UMTX

Ruby stylus is available as an option.



TAPER	Code No.	Weight (Kg)
No.30	**BT30-UMTX200W**	2.3
No.40	**BT40-UMTX200W**	2.9
No.50	**BT50-UMTX200W**	5.2

★Battery is supplied as standard.
★The delay of the system is within 0.01mm, because of the internal contact system.

Specification

Measuring Pressure	X, Y = 0.35N Z = 0.8N	
Battery	Straight Shank	An alkali dry cell Model 5 1.5V 2pcs
	BT Shank	Manganese dry cell 6F33 X 9V 1pcs
	36 Hours	
Stylus	Standard : φ4mm steel stylus Option : φ4, φ3, φ2 and φ1 mm ruby stylus The ruby stylus can not be ordered alone. Please order the Micro Touch with the ruby stylus. When ordering, please add (RB○) at the end of the Micro Touch Code No. **e.g. BT30-UMTX200W (RB2)** └With φ2mm ruby stylus **S32-UMTX (RB4)** └With φ4mm ruby stylus	

MEASUREMENT

NIKKEN

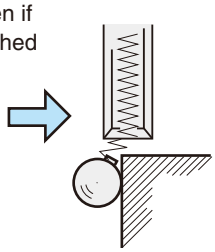




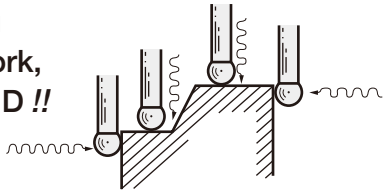
High Sensitive Position Sensor

- Instant Indication of red LED Lamp.
- Instant Indication by red LED lamp at very light contact of Sensor Ball with Workpiece.
- Ideal for Centre Detecting with Milling Machine, Boring Mill, Drilling Machine and Machining Centre.
- Repeatability:within 2 micron.
- Safety Mechanism against Overrun *!!*

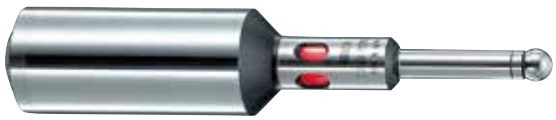
  The ball is pulled up by spring. Even if overrun happens, ball will be detached from the ball seat.



Easy Checking Location of Work, Face, OD and ID *!!*

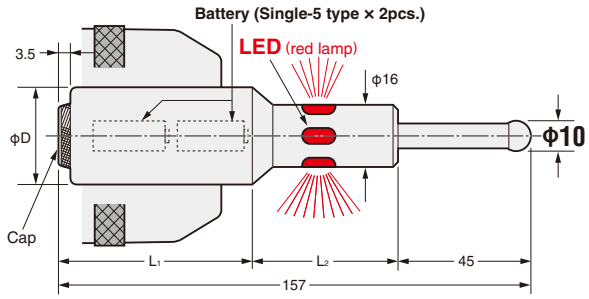


Straight Shank TOUCH POINT



TP

- Can be connected to NIKKEN Milling Chuck **C20, C32**



Code No.	φD	L_1	L_2	Weight (Kg)
TP-20	20	77	35	0.2
TP-32	32	71	41	0.5

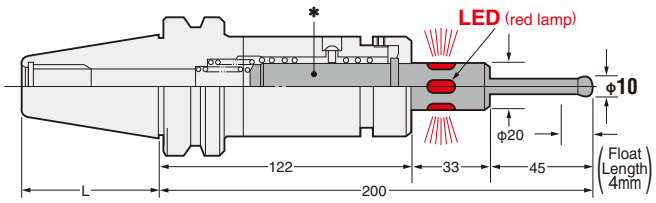
★No Z-axis float in straight shank type TOUCH POINT.
If float is needed, please order **UMT** series (**S20,S32-UMT**). ☞**P.157**

TOUCH POINT for machining centre
(with Z-axis Float Mechanism)



BT-TP

- The Ball End is located 200mm distant from Gauge Line, and can be used as Gauge Line Reference of Z-axis. Ultra precision Float Mechanism in the Thrust Direction enables Soft Touch Detection.



TAPER	Code No.	L	Float Length	Weight (Kg)
No.40	**BT40-TP200**	65.4	4	1.9
No.50	**BT50-TP200**	101.8	4	4.5

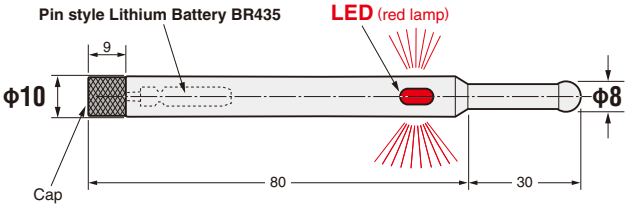
★No applicable to Non-conductive work piece (Plastic, Bakelite and so on).
★Included Battery (Single-5 type × 2pcs.)
★**IT40-TP200** and **IT50-TP200** are also available.
★The Code No. of Touch Point marked * for the spare part is **9TP200S**.

φ10 Shank TOUCH POINT



S10-TP8

- Compact and slim type.
- It can be used for the narrow space and deep groove.
- It's suitable for **HSK25A, 32A, 40A** and **50A**.
- No Z-axis froat.

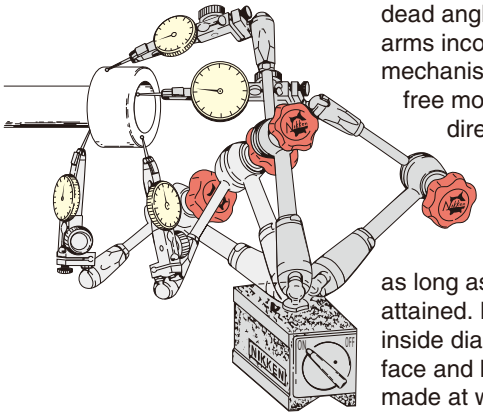


UNIVERSAL MICRO STAND

NIKKEN



Long Reach 300mm



Free flexing with single knob, no dead angle and long reach, two arms incorporating ball joint mechanism at both ends provide free movement in any direction such as vertical, lateral, longitudinal or rotational etc. If stretched horizontally, a reach as long as **300mm** can be attained. Measurements of inside dia., outside dia., end face and back face etc, can be made at will.



Remote Adjusting Knob

Remote Fine Adjusting Knob (UDS-2)

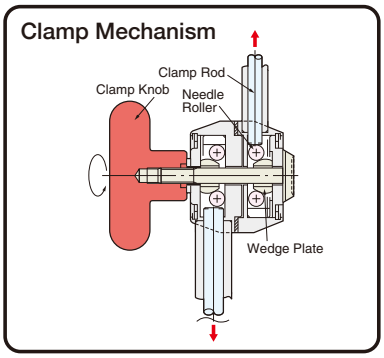
The base is made by heavy and precision casting and arms are clamped by a remote knob with fine adjustment. Measurement position of dial gauge can be easily adjusted without losing setup of Universal Micro Stand.

Code No.	Style
UDS-1	With magnet base
UDS-2	With precision casting base

★Dial gauge is supplied as an option.

New mechanism permitting no looseness due to vibration

By only tightening the single red clamp knob, all articulated joints are locked firmly and no fine (micron) movement will occur even after being left as they are for 100 hours.



Strong magnet base makes it possible to adapt to vertical, angular, uneven surface, etc.

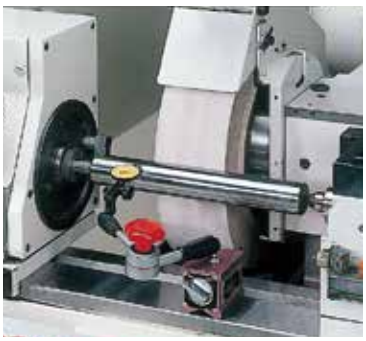




On M/C

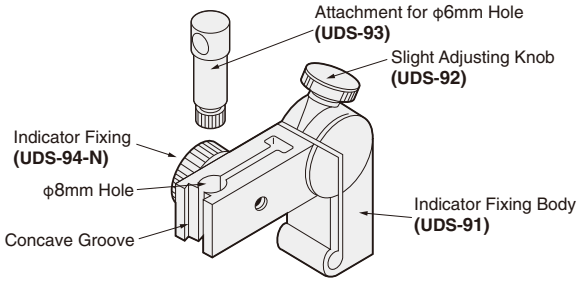


On NC Lathe



On Grinding Machine

Any dial gauge, pick tester can be connected with this attachment.



HEIGHT PRESETTER

NIKKEN

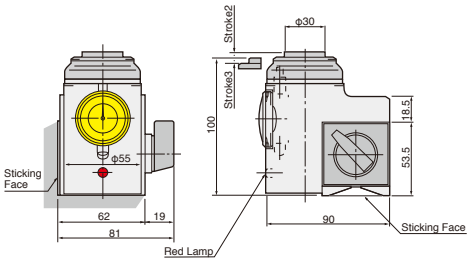


Reference point of work piece can be measured very quickly and accurately without damage of tool teeth.

- **High Precision Measurement**
- **Easy to measure tooling off-set values on the machine accurately.**
- **Hard wearing powerful magnetic Base.**
- **Powerful magnetic base (700N) makes it suitable for use on manual machine as well as Vertical/Horizontal Machining Centres and NC Lathes.**
- **Swarf Removal**
  The Magnetic Base can be switched on and off allowing the reference face to keep clean.
- **Plunger Head is given a Anti-Rust Rubber Seal.**
- **Proximity Lamp**
  The red lamp is activated when the plunger comes within the measuring range of the reference height.

HP-100

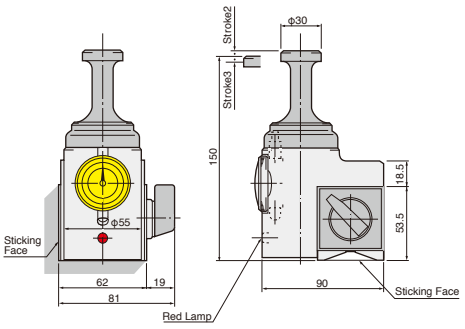




★2 of Batteries LR44(HC) are supplied as standard with both of **HP-100** and **HP-150**.

HP-150







HP-50K
HEIGHT PRESETTER



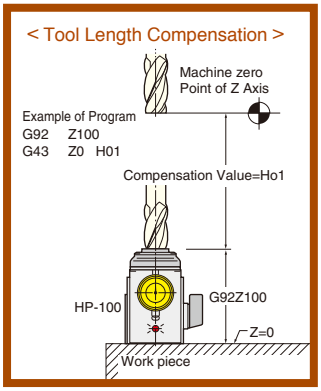
HP-50X
INTERNAL CONTACT TYPE
HEIGHT PRESETTER

- φ0.2mm drill can be measured. (Feed rate must be lower than 5mm/min.)
- It can be used for not conductive machine and work piece.

Adjustment of Reference Point

No setting gauge plate is required to adjust Zero Point. Push Plunger down by hand, and adjust the large hand to the Zero Scale of Dial Gauge. The small hand indicates "-3" at this time.)







Example of usage at Vertical Machining Centre.



Example of usage at NC Lathe.



Also suitable for use of Micron Adjustment of Boring Arbor.

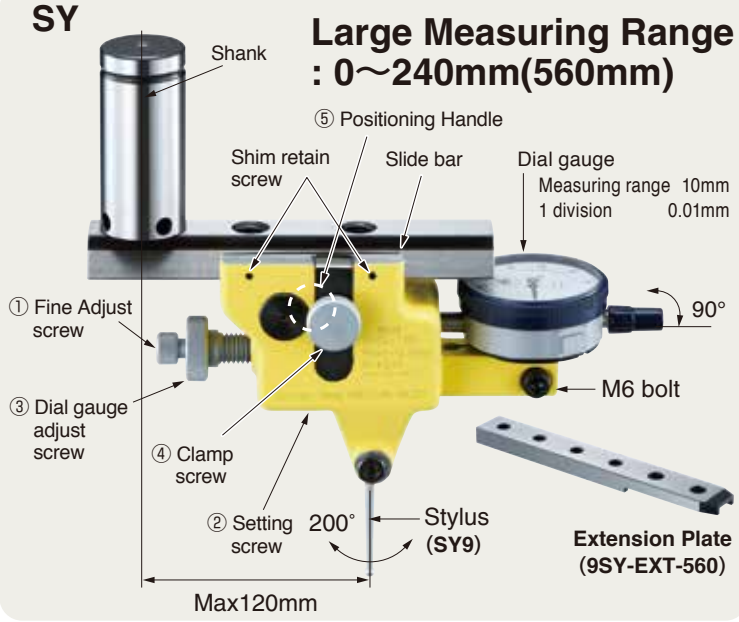
MEASUREMENT

CENTERING HOLDER

NIKKEN

SY

Large Measuring Range : 0～240mm(560mm)



- No need of changing the setting of dial Gauge. Only by turning Knob, ID, OD and Parallelism can be easily measured.
- Large measuring range. Cross moving distance of stylus is 120mm in radius.
- **Up to ϕ560mm can be measured by the extension plate. It can be user on your existing centering holder.**

Centering Holder Code No.	ID of Milling Chuck	Measuring Range
SY20-120	ϕ20	0～ϕ240
SY32-120	ϕ32	
SY42-120	ϕ42	

★0.01mm Dial Gauge is supplied as standard accessory.
★MT Shank (MT2～6) , and IT Shank (#40/#50) are available.

Explanation of the Code No.

SY 32 - 120

- 120: MAX. Measuring Radius
- 32: OD of Shank :ϕ22, 32, 42
- SY: Symbol of Centering Holder

- Wide Range Measuring is possible both for ID and OD.



Centering Holder with Extension Plate



Parallelism Measuring



ID Centering



OD Centering

BALL CENTRALIZER

NIKKEN

BAL

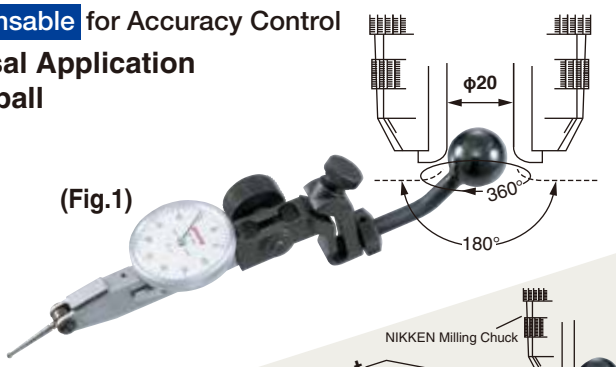


Centering of ID and OD can be done by the Ball Centralizer gripping into Nikken Milling Chuck.

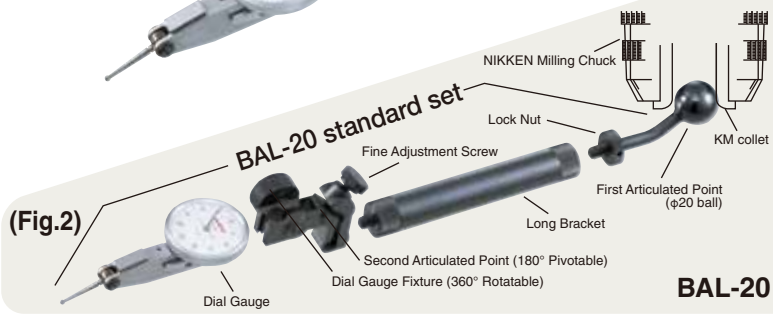
Indispensable for Accuracy Control

Universal Application of ϕ20 ball

(Fig.1)



(Fig.2)



BAL-20

- 0.01mm dial Gauge is supplied as standard accessory.

Code No.	Measuring Range	
	Using Fig.1	Using Fig.2
BAL-20	I D : ϕ3.5～ϕ320	I D : ϕ3.5～ϕ520
	OD : MAX. ϕ300	OD : MAX. ϕ500

MEASUREMENT

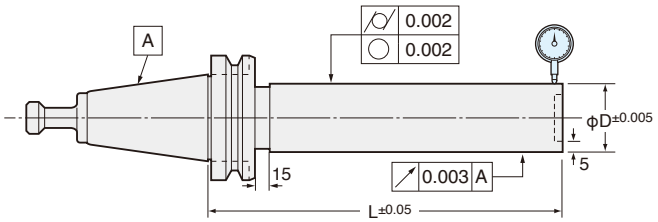
TEST BAR

NIKKEN

Indispensable for checking your machine spindle.
Sub-zero treatment keeps accuracy to prevent from the deformation.
Each test bar is provided in a safety wooden box.



TB



Exact size of φD and L are marked on each test bar.

TAPER	Code No.	φD	L	Weight (Kg)	Run-out at total length	Circularity, Cylindricality
No.15	**BT15BR-TB15-110**	15	110	0.25	Within 0.003mm	Within 0.002mm
No.30	**BT30-TB40-150**	40	150	1.7		
No.40	**BT40-TB40-200**	40	200	2.7		
No.50	**BT50-TB50-300**	50	300	7.7		

★The code No. for Test Bar without flange is **AST** instead of **BT**. **e.g. Test Bar for #40=AST40-TB40-200**
★It comes with Pull Stud, please specify Pull Stud Code No. Please refer ☞**P.303** for Pull Stud.
★**The different dimension of φD and L are available. e.g. BT50-TB50-40**
But, the accuracy standard will be different. Please contact us.

The inspection certificate traceable to the national standard is available with charge.

Tool Wagon

NIKKEN



TW

Photo shows wagon with **E236N**.
E236N must be used on.

TAPER	Code No.	Wagon Storage	With **E236N**
BT30	**TW30**	60piece	40piece
BT40	**TW40**	48piece	32piece
BT50	**TW50**	40piece	28piece
NC5-46,HSK40A	**TW-NC5- 46**	48piece	32piece
NC5-63,HSK63A	**TW-NC5- 63**	48piece	32piece
NC5-85	**TW-NC5- 85**	40piece	28piece
NC5-100,HSK100A	**TW-NC5-100**	40piece	28piece

★**TW40** can be used for the Tool Wagon of **NC5-46** and **NC5-63** Tools with Reduction Bush **TWP-NC5-46** and **TWP-NC5-63**.
TW50 can be used for the Tool Wagon of **NC5-85** and **NC5-100** Tools with Reduction Bush **TWP-NC5-85** and **TWP-NC5-100**.
★For the Code No. of Taper Cleaner, please add **"-Taper No."** at the end of **"NTP-CLE"**.
e.g. NTP-CLE50

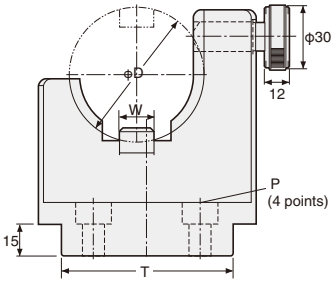


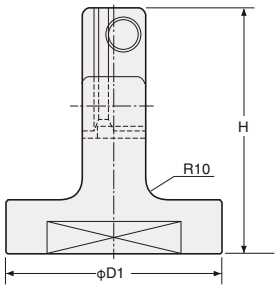
TOOL CLAMPER

NIKKEN



NCL



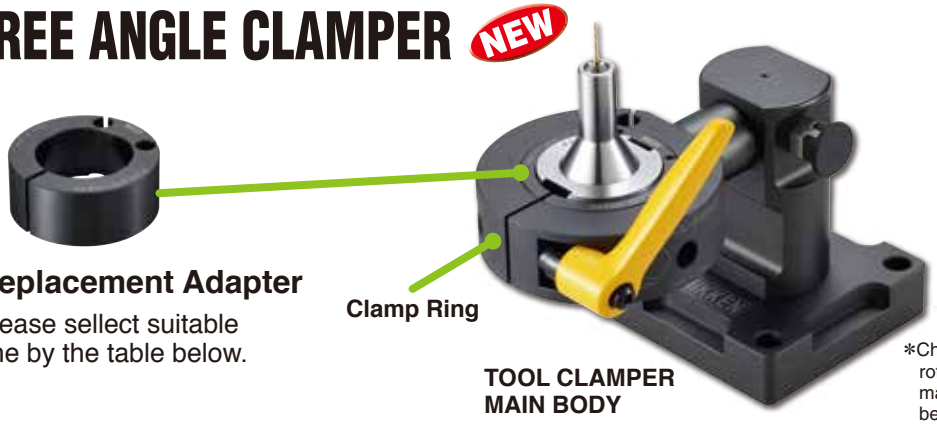


Code No.	φD	W	φD1	H	T	P	Pitch	Remark
NCL-BT30	46	15.9	102	110	80	φ10.3 (M10)	50 × 60	
-BT40	63	15.9	102	115	80		50 × 60	NC5− 63 can be used
-BT45	85	19.2	115	124	90		60 × 70	NC5− 85 can be used
-BT50	100	25.6	130	133	100		70 × 80	NC5−100 can be used
NCL-NC5-46	46	12	102	110	80		50 × 60	
-IT50	97.5	25.6	130	133	100		70 × 80	
-ICAT40	63.55	15.9	102	115	80		50 × 60	IT40, CAT40
-CAT50	98.45	25.6	130	133	100		70 × 80	

★Please refer ☞**P.164** for the TCL-GH Tool Clamper.

THREE ANGLE CLAMPER NEW

NIKKEN



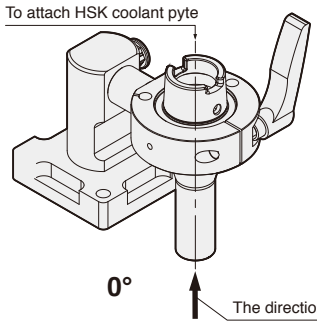
Replacement Adapter

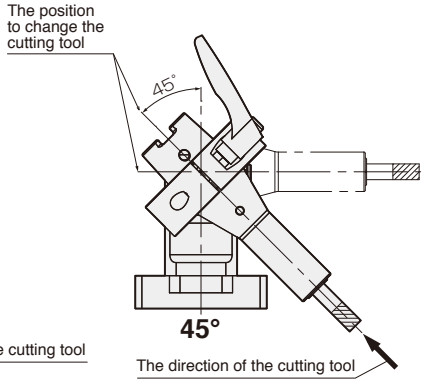
Please sellect suitable one by the table below.

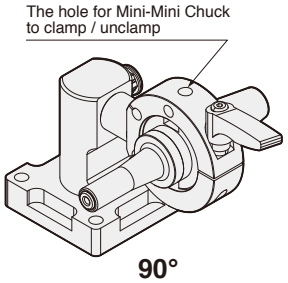
Clamp Ring

TOOL CLAMPER MAIN BODY

*Check the direction of rotation of clamp ring to make sure that there will be no interference between the position of the clamper and the cutter or pull stud.







Clamper Code No.	BT40	BT50	IT40	CAT40	NC5-63	NC5-100	HSK63	HSK100	C6
TACL-B40H63	○	–	–	–	○	–	○	–	○
TACL-B50H100	–	○	–	–	–	○	–	○	–
TACL-ICAT40	–	–	○	○	–	–	–	–	–

Replacement adapter

TACL-B40H63 Suitabele Clamper	Adaptation shank
9TACL63D-B30N46	BT30 NC5-46
9TACL63D-HSK50	HSK50 C5*1
9TACL63D-HSK40	HSK40 C4
9TACL63D-HSK32	HSK32
9TACL63D-HSK25	HSK25

TACL-B50H100 Suitabele Clamper	Adaptation shank
9TACL100D-B40H63	BT40 NC5-63 HSK63 C6
9TACL100D-CAT50	CAT50
9TACL100D-IT50	IT50
9TACL100D-HSK80	HSK80 C8

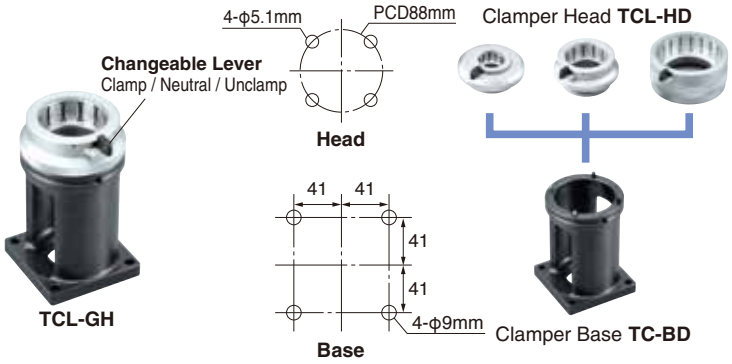
Replacement adapter for Straight Shank

TACL-B40H63 Suitabele Clamper	Adaptation shank
9TACL63D-S5/8	K5/8CM
9TACL63D-S3/4	K3/4CM ST3/4
9TACL63D-S20	K20CM ST20
9TACL63D-S25	K25CM ST25
9TACL63D-S1	K1CM ST1

*1 Length at ϕ50 must be over 25.4mm.

TOOL CLAMPER for HSK TOOLING

NIKKEN



TCL-GH clamper is designed for symmetrical holders without drive key slots or U-grove. The TCL-GH clamper is also suitable for the other shank tooling with same flange diameter as E & F type.
e.g. TCL-GH63 is suitable for HSK63A, 63E, 63F, BT40 and NC5-63.
By changing the clamper heads to the suitable sizes, the same TCL-BD base can be used for the other sizes of shank.

Clamper Code No.	Base Code No.	Head Code No.	Applicable Shank
TCL- 25GH	TCL-BD	TCL- 25HD	HSK 25E
TCL- 32GH		TCL- 32HD	HSK 32E
TCL- 40GH		TCL- 40HD	HSK 40A, 40E
TCL- 46GH		TCL- 46HD	BT30, NC5-46
TCL- 50GH		TCL- 50HD	HSK 50A, 50E
TCL- 63GH		TCL- 63HD	HSK 63A, 63E, 63F, BT40, NC5-63
TCL-100GH		TCL-100HD	HSK100A, BT50, NC5-100

TOOL PRESETTER E236N

NIKKEN



Economy Type

Rapid & Accurate Measurement Non-Contact Type

C MOS Sensor
Autocollimation
(The cutting edge is detected automatically and displayed.)
Rapid Positioning & Fine Adjustment



Spindle (Option)

Rapid Positioning & Fine Adjustment

Granite Column and Base

Spindle can be exchanged.

(BT, HSK, CAPTO TOOLING)

Fine and Easy Screen

5.7" LCD Monitor (80 X 60mm)
Magnification: 20

Various Functions for Measurement



Printer WASP-PT



Measuring of the cutting edge



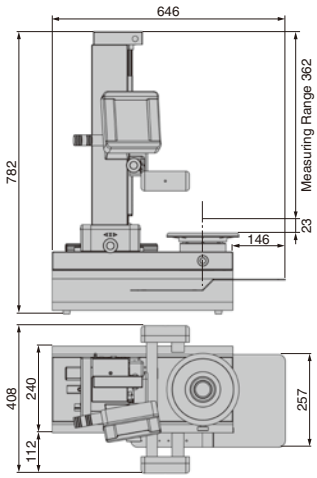
Angle of the cutting edge (Each 1 deg.)



Nose R of the cutting edge (Concentric circle by each 0.2mm)

E236N

Item	Contents		E236N-40	E236N-50
Measuring Range	X Axis: Dia. of Tool		0～φ260mm	0～φ260mm
	Z Axis: Length of Tool		30～360mm	30～360mm
MIN. Reading	Reading Method MIN. Reading	X Axis	Scale Counter 0.001mm (Radius)	
		Z Axis	Scale Counter 0.001mm	
Monitor			Magnification: 20 5.7" LCD Monitor	
Tool Clamp			Not installed	
Spindle			NT40	NT50
Master Gauge*1			GN40K	GN50K
Spindle (Option)			The spindle can be exchanged. NT40, 50, HSK32, 40, 50, 63, 80, CAPTO TOOLING C4, 5, 6 Z stroke will be shortened for HSK and CAPTO TOOLING.	
Reduction Sleeve (Option)			TN430 : NT40-NT30	TN540 : NT50-NT40
Power			AC100～230V	



★The spindle for **HSK100A**, **CAPTO TOOLING C8, 3LOCK, NC5-100** can not be supplied, please select **E346I** presetter ☞**P.166**
★Box size : W × H × D = 900 × 550 × 600mm, Box weight : 53Kg
★Printer (**WASP-PT**) and 10 pcs of the roll papers with seal (**WASP-PTP**) are available as an option.
★＊1 Master gauge for **BT40, BT50** are only standard accessory. Master gauge for **HSK** or **CAPTO TOOLING** is available as an option.
★Spindle for **HSK32, 40, 50, 80** and **CAPTO TOOLING C4, C5, C6** are order made spindles.

Working Desk E450N-STD (Option)

Working desk and the tool pot case (**E450N-STD-MGH**) can be supplied as an option. The tool pot case has 3 pots and the shank can be specified.
e.g NT30-NT40-NT50



Spindle (Option)

No clamping mechanism for NT spindle of E236N

Manual clamping mechanism for HSK, Polygon taper and NC5 spindles



E236N-SP-30,40,50
E236N-SP-HSK, C, NC5



E450N-SP-30,40,50
Vacuum Clamping

Code No.	Shank No.	Presetter	Z Stroke (mm)	Master gauge
E236N-SP-30	NT30	E236N,E346I	0～360,460	GN30K
E450N-SP-30		E460N	0～600	
E236N-SP-40	NT40	E236N,E346I	0～360,460	GN40K
E450N-SP-40		E460N	0～600	
E236N-SP-50	NT50	E236N,E346I	0～360,460	GN50K
E450N-SP-50		E460N	0～600	
E236N-SP-HSK32	HSK32	E236N E346I E460N	0～358,433,573*1	GN-HSK32
-HSK40	HSK40		0～351,425,565	GN-HSK40
-HSK50	HSK50		0～343,418,558	GN-HSK50
-HSK63	HSK63		0～335,410,550	GN-HSK63
-HSK80	HSK80		0～333,408,548	GN-HSK80
E450N-SP-HSK100	HSK100		0～-,368,508	GN-HSK100
E236N-SP-C4	C4		0～324,399,539	GN-C4
-C5	C5		0～315,390,530	GN-C5
-C6	C6		0～293,368,508	GN-C6
E450N-SP-C8	C8		0～-,348,488	GN-C8
E236N-SP-NC5-46N	NC5-46		0～320,420,560	GNC5-46-150
-NC5-63	NC5-63		0～300,400,540	GNC5-63-150
-NC5-100	NC5-100		0～260,310,410	GNC5-100-150

★Spindles for HSK,C and NC5 can be exchanged only by a wrench.
★＊1 The Z measurement rangeis **E236N, E346I, E460N** from the left. ★Master gauge is available as an option.

MEASUREMENT

TOOL PRESETTER E346I

NIKKEN



E346I

Rapid & Accurate Measurement Non-Contact Type

C MOS Sensor
Autocollimation
(The cutting edge is detected automatically and displayed.)
Rapid Positioning & Fine Adjustment



Spindle (Option)

Rapid Positioning & Fine Adjustment

Granite Column and Base

Spindle can be exchanged.

(BT, HSK, CAPTO TOOLING)

Fine and Easy Screen

9" LCD Monitor (110 X 200mm)
Magnification: 25

Various Functions for Measurement



Printer WASP-PT



Fixed Feticule Mode



Circular Reticule Mode



Angle and Radius Mode



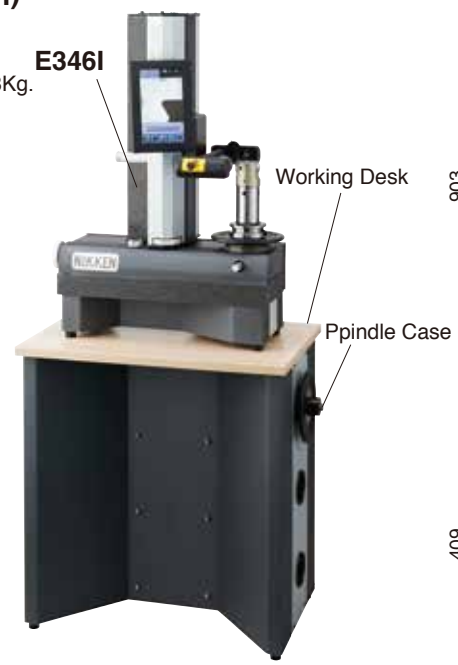
Inspection Tool Mode

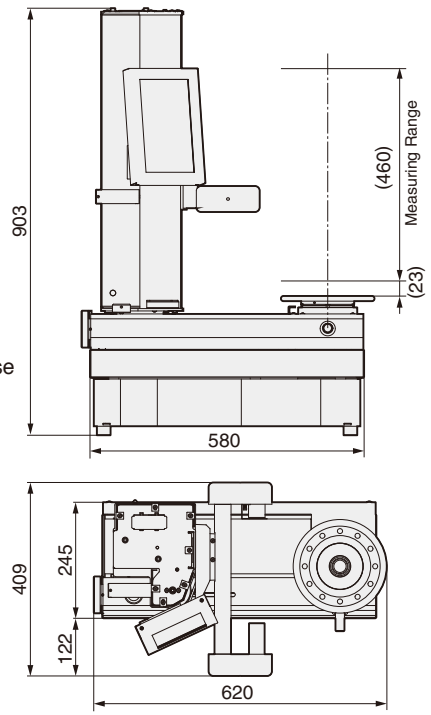
Item	Contents		E346I-40	E346I-50
Measuring Range	X Axis: Dia. of Tool		0～φ360mm	0～φ360mm
	Z Axis: Length of Tool		30～460mm	30～460mm
MIN. Reading	Reading Method MIN. Reading	X Axis	Scale Counter 0.001mm (Radius)	
		Z Axis	Scale Counter 0.001mm	
Monitor			Magnification: 25 9" LCD Monitor (110×200mm)	
Tool Clamp			Not installed	
Spindle			NT40	NT50
Master Gauge			GN40K(option)	GN50K(option)
Spindle (Option)			The spindle can be exchanged. NT30,40, 50,HSK32,40,50,63,80, CAPTO TOOLING C4, 5,6,8 Z stroke will be shortened for HSK and CAPTO TOOLING.	
Reduction Sleeve (Option)			TN430 : NT40-NT30	TN540 : NT50-NT40
Power			AC100～230V	

★Box size : W × H × D = 1200 × 820 × 800mm, Box weight : 105Kg, Presetter weight : 77Kg.
★Printer (WASP-PT) and 10 pcs of the roll papers with seal (WASP-PTP) are available as an option.
★Spindle for HSK32, 40, 50, 80, 100 and CAPTO TOOLING C4, C5, C6, C8 are order made spindles.

Working Desk E346I-STD (Option)

Working desk for **E346I** and **E236N**.
(No fixing mechanism for E346I and E236N.)
Size : W x H x D = 730 x 800 x 500, Weight : 58Kg.
The spindle case has 3 pots.

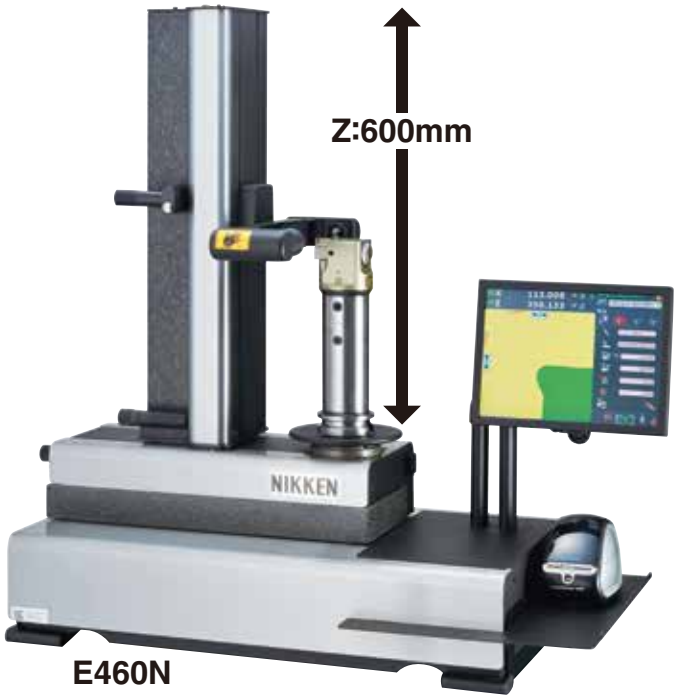




MEASUREMENT

TOOL PRESETTER E460N

NIKKEN



E460N

Super Precision & High Accuracy Granite Column and Base

Touch Panel Display with Quick & Easy Operation

Non-Contact Type Fine Screen -15" LCD Monitor
Magnification: X30
Changeable of C MOS Sensor/ Micro Scope

Micro Scope



Rapid & Accurate Measurement Changeable Clutch of Rapid/Fine Feed

Vacuum Clamp System Independent from the pull stud type.

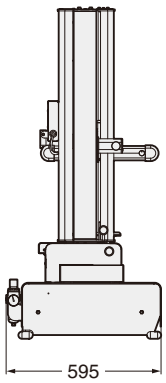
The mechanical tool clamp system is installed on **E236N** for the double face contact tool such as **3LOCK** tool, **NC5** tool or **HSK** tool.

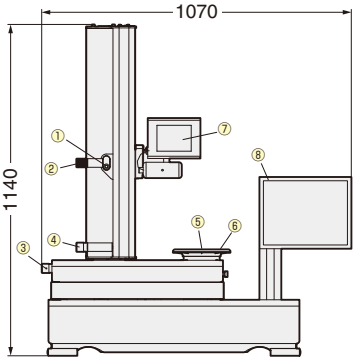
Tool Management System "TD-SIX"

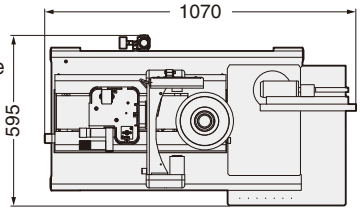
M/C data: MAX.1000
The management of the difference of the gauge line of M/C can be done.
Tool Set (Layout) Data: MAX.1000
Tool Data: MAX.1000

Item	Contents		E460N-40	E460N-50
Measuring range	X Axis : Diameter of Tool		0～φ400mm	0～φ400mm
	Z Axis : Length of Tool		35～600mm	35～600mm
Min. reading increment	Reading Method Min. reading	X Axis	Scale Counter 0.001mm (Radius) Changable of Radius/Diameter	
		Y Axis	Scale Counter 0.001mm	
Monitor			Magnification: X30 Changable of C MOS Sensor/ Micro Scope 10.4" LCD Monitor	
Tool Clamp			Vacuum Clamp (Air: 0.5MPa) The mechanical tool clamp system ＊1 is available as an option.	
Spindle			NT40	NT50
Master Gauge			GN40K(option)	GN50K(option)
Inter-changeable spindle (Option)			**Vacuum clamping for NT30, 40 and 50. Manual clamping for HSK, C and NC5 ☞ P.134**	
Reduction Sleeve (Option)			TN430V : NT40-NT30	TN540V : NT50-NT40
External Output			USB (3 ports) Tool management software (Option)	
Power			AC100～230V	

★＊1 Master gauge is available as an option.







①Z/X Axis Rapid Positioning SW
②Z/X Axis Rapid Positioning Handle
③X Axis Fine Adjustment Knob
④Z Axis Fine Adjustment Knob
⑤Spindle
⑥Handle for Spindle Rotation
⑦15" LCD Monitor
⑧Operation Panel

Box size: W X H X D: 1,070 X 1,140 X 595mm
Presetter Weight: 135Kg, Box Weight: 160Kg

Exclusively designed for multiple function tool measuring system rather than just measuring the length and diameter.

- Automatic measurement (Automatic scanning of the tool edge)
- Display of angular grid (1 degree incremental) for checking the tool edge.
- Display of reference circle for checking Nose R.
- Multiple calculation functions
  e.g. calculation for radius from 5 points, angle from 2 lines, or distance of 2 points



MEASUREMENT

TOOL PRESETTER E4060L NEW

NIKKEN



E4060L

Super Precision & High Accuracy
Granite Column and Base

Touch Panel Display with Quick & Easy Operation
Non-Contact Type Fine Screen -22" FULL HD
Monitor Magnification: X26
Changeable of C MOS Sensor/ Micro Scope

Micro Scope

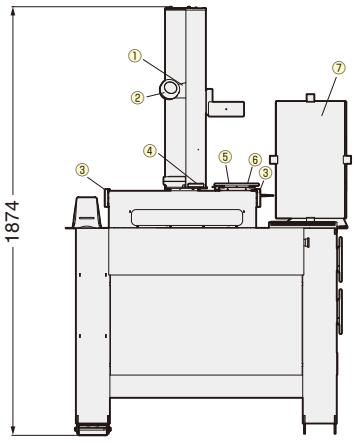


Rapid & Accurate Measurement
Changeable Clutch of Rapid/Fine Feed

Universal Mechanical Tool Clamping System.
Servo controlled clamping system provides a strong clamping force of **250-300kg.**

Tool Management System "TD-SIX Pro"
M/C data: MAX.1000
The management of the difference of the gauge line of M/C can be done.
Tool Set (Layout) Data: MAX.1000
Tool Data: MAX.1000

Item	Contents		E4060L-40	E4060L-50
Measuring range	X Axis : Diameter of Tool		0～φ400mm	0～φ400mm
	Z Axis : Length of Tool		35～600mm	35～600mm
Min. reading increment	Reading Method Min. reading	X Axis	Scale Counter 0.001mm (Radius) Changable of Radius/Diameter	
		Y Axis	Scale Counter 0.001mm	
Monitor			Magnification: X26 Changable of C MOS Sensor/ Micro Scope 22" FULL HD Monitor	
Tool Clamp			Universal Mechanical Tool Clamping System.	
Spindle			NT40	NT50
Master Gauge			GN40K(option)	GN50K(option)
Inter-changeable spindle (Option)			**E4060L-SP-40**	**E4060L-SP-50**
			Manual clamping for HSK, C and NC5	
External Output			USB (4 ports) LAN (1 ports),TD-SIX PRO (TONE UP)	
Power			AC100～230V	



①Z/X Axis Rapid Positioning SW
②Z/X Axis Rapid Positioning Handle
③X Axis Fine Adjustment Knob
④Z Axis Fine Adjustment Knob
⑤Spindle
⑥Handle for Spindle Rotation
⑦22" FULL HD Monitor

Box size: W X H X D: 1,282 X 1,874 X 672mm
Presetter Weight: 255Kg, Box Weight: 280Kg

Exclusively designed for multiple function tool measuring system rather than just measuring the length and diameter.

- Automatic measurement (Automatic scanning of the tool edge)
- Display of angular grid (1 degree incremental) for checking the tool edge.
- Display of reference circle for checking Nose R.
- Multiple calculation functions

e.g. calculation for radius from 5 points, angle from 2 lines, or distance of 2 points
SP-ID(Spindle Identification system)
Mnlti-Edge Report (creating, saring, and printing)





MEASUREMENT

3LOCK TOOLING SYSTEM

NIKKEN

JAPAN, USA, UK, GERMANY, KOREA PAT.

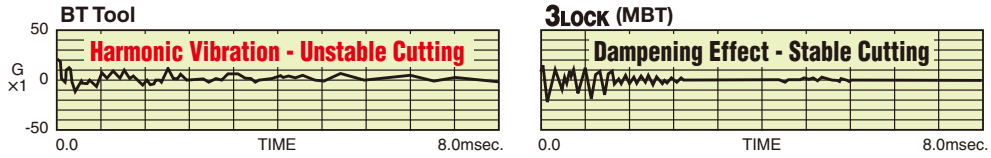
3LOCK (triple contact) can be done on the BT double face contact spindle.



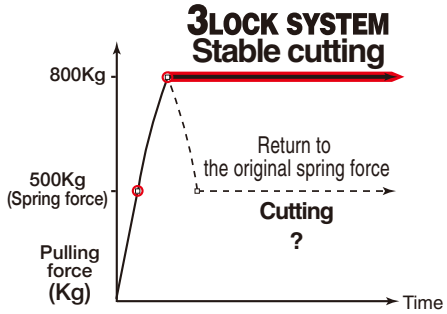
1. Power of Dampening Effect.

Tool Life 3 to 5 times

Performance enhancement due to the dampening effect are already universally recognized when using Nikken's DREAM-CUT Holder.
- Extended tool life of 3 to 5 times.

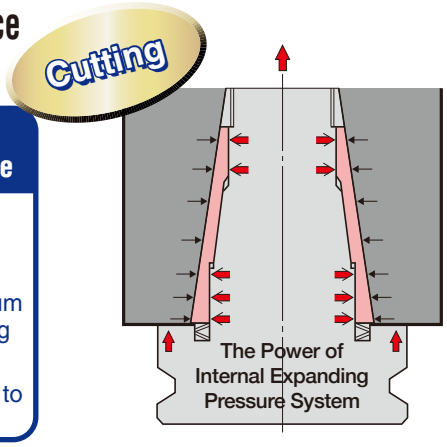


2. The mechanism which generates the excellent cutting performance -Internal Expanding Pressure System



Internal Expanding Mechanism System for instantly locking the maximum pulling force

- Tool clamping mechanism that use a disc springs experience lower clamping force during continuous use.
- 3LOCK is a system for locking the maximum pulling force that is instantly produced during tool pulling.
- Cutting torque is greatly reduced compared to BT tooling for more comfortable cutting.



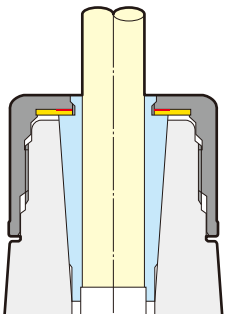
Machine spindle expansion due to the centrifugal force at the high speed rotation or heat expansion

3. The taper sleeve follows the expansion and maintains perfect contact with the taper and flange.

Taper Contact : Flange Contact = 90% : 10%



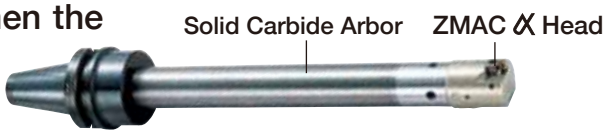
4. 2LOCK / 3LOCK ⊕ Power of TiN Bearing Nut



5. Excellent Rigidity

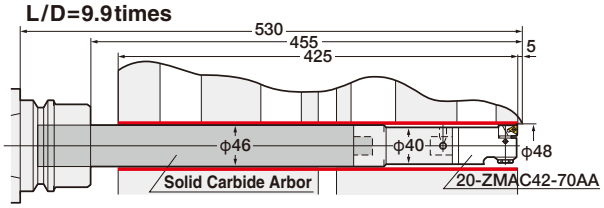
Rigidity

3LOCK tool performs the excellent rigidity, when the extended tool is used on the horizontal M/C.



Deep Hole Boring

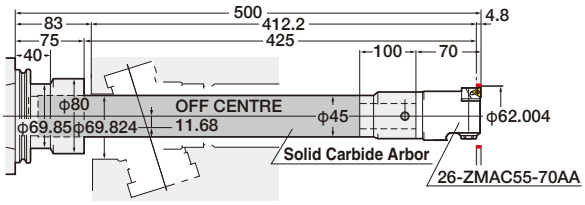
L/D=9.9times



Material: Aluminum
Stock Removal: 0.23~0.27mm/dia.

V : 450m/min.
S : 3,000min-1
F : 180mm/min.

L/D=9.4times



Material: Aluminum
Stock Removal: 0.5mm/dia.

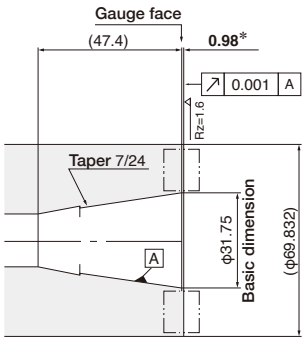
V : 545m/min.
S : 3,000min-1
F : 210mm/min.

BT DOUBLE FACE CONTACT SPINDLE

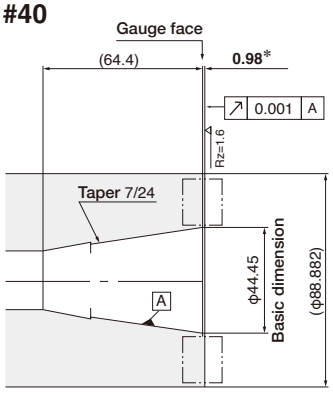
NIKKEN

The NIKKEN 3LOCK tooling can be used as the triple face contact (taper, flange and internal taper expansion) on the M/C with BT double face contact spindle. The NIKKEN 2LOCK tooling can be used as the double face contact on the M/C with BT double face contact spindle.

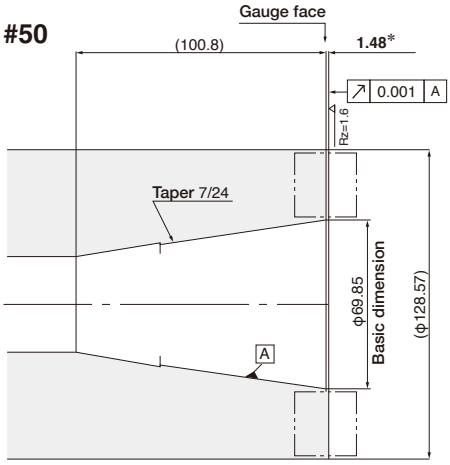
#30



#40



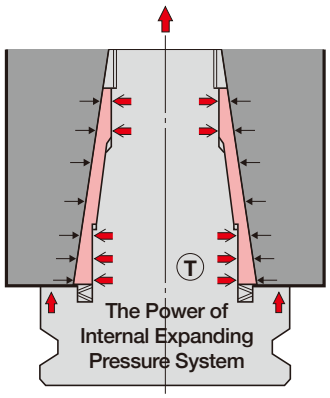
#50



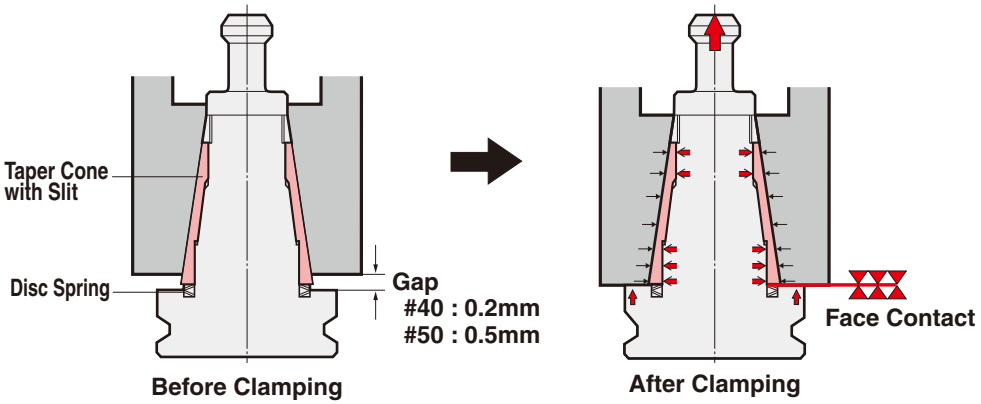
* **mark**: The tolerances of the extension of the spindle flange from gauge face depend on the M/C.

3LOCK TECHNICAL INFORMATION

NIKKEN



1. When 3LOCK tool is inserted into 3LOCK spindle (before clamping) , the gap between the spindle flange and the tool flange is ; #40 : 0.2mm, #50 : 0.5mm
2. When the tool is clamped, the taper cone pre-loaded by the disc springs deforms radially and slides to reach the face contact between the spindle flange and the tool flange.



Deep Profiling Tool for Die Mould

Strong track record even for plunge cutting cutters with a long expanded length



3LOCK MBT MULTI LOCK MILLING CHUCK

NIKKEN



C

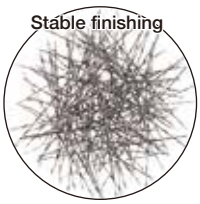
Centre Through
MAX. 7MPa

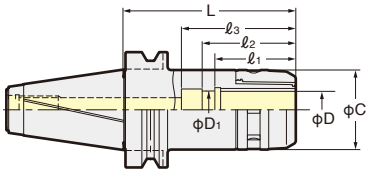
The cutting chips show us the actual machining capability.

Quiet, high speed heavy milling



Stable finishing





Standard

3LOCK tooling (MBT) can be used as the triple contact tooling on the M/C where spindle is BT double face contact system.

TAPER	Code No.	D	D1	C	L	ℓ1	ℓ2	ℓ3	Weight (kg)	Collet
No.40	MBT40 -C12- 90,120	12	12	33	90, 120	48	53	58	1.6 , 1.9	KM12 CCK12
	-C16- 60, 90,120	16	16	44	63, 90, 120	50	58	65	1.4 , 1.7 , 2.0	KM16 CCK16
	-C20- 70, 90,120	20	20	52	71, 90, 120	57	66	80	1.6 , 1.8 , 2.2	KM20 CCK20 CCNK20
	-C25- 70, 90,120	25	25	60	70, 90, 120	60	72		1.8 , 2.1 , 2.5	KM25 CCK25 CCNK25
	-C32- 85*,105,120	32	32,25,25	69	85, 105, 120	64,70,70	71,81,81	75 ,81 ,81	2.1 , 2.5 , 2.8	KM32 CCK32 CCNK32
No.50	MBT50 -C12-105,165	12	12	33	105, 165	48	53	58	4.0 , 4.6	KM12 CCK12
	-C16-105,165,200	16	16	44	105, 165, 200	50	58	65	4.2 , 4.8 , 5.1	KM16 CCK16
	-C20-105,165,200	20	20	52		57	66	80	4.5 , 5.1 , 5.7	KM20 CCK20 CCNK20
	-C25-105,135,165	25	25	60	105, 135, 165	60	72		4.8 , 5.2 , 5.6	KM25 CCK25 CCNK25
	-C32- 90,105,120,135,165 -200,250,300	32	25	69	90,105,120,135,165 200,250,300	70	81	81	4.3,4.6,5.1,5.6, 6.4,7.8,9.2,10.6	KM32 CCK32 CCNK32
	-C42- 95*,120,135,165 -200,250,300	42	42	86	95,120,135,165 200,250,300	73	80,105, 115	85,110,125,125 125,125,125	5.5,6.6,7.2,8.6 9.5,11.7,14.0	KM42 CCK42 CCNK42

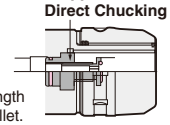
★Spanner is available as an option.
C12 : 9HC12A C16 : 9HC16 C20 : 9HC22
C25 : 9HC25 C32 : 9HC32 C42 : 9HC42



★Please note the acceptable shank tolerance is h6~7.
★**For heavy duty milling, please grip the cutter shank longer than ℓ1.**
★**NK and CCNK collet can not be used for the chucks marked ＊.**
★For **C32**,ℓ2 dimension longer than standard is available.
MBT40-C32D- 105 MBT50-C32D- 105
★Centre through tool coolant is available for all models. When the cutter shank length is shorter than ℓ1, please use **the stooper for direct chucking** or **CCK/CCNK** collet.
The Code No. of **the Stopper for direct chucking** is : **C20 : 9MC20, C25 : 9MC25, C32 : 9MC32, C42 : 9MC42**

★Please refer ☞**P.172** for **KM** and **CCK** collet.
★Please add "**F**" for the flange through tool coolant type.

Stopper for Direct Chucking



Explanation of the Code No.

MBT40 - C20 - 70

- 70 : Nominal Gauge Length
- C20 : Chucking Capacity
- Symbol of Milling Chuck
- MBT40 : Shank No.

3LOCK MBT HIGH SPEED MILLING CHUCK

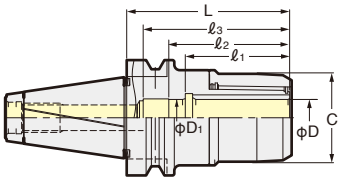
NIKKEN



C-G

Centre Through
MAX. 7MPa

ANNIVERSARY Type
－Powerful gripping torque－
- **High rigidity**
- **High precision**
- **Compact design**



High Speed

3LOCK tooling (MBT) can be used as the triple contact tooling on the M/C where spindle is BT double face contact system.

TAPER	Code No.	D	D1	C	L	ℓ1	ℓ2	ℓ3	Weight (kg)	MAX. (min-1)	Collet
No.40	MBT40-C12- 90G	12	12	33	90	48	53	58	1.6	25,000	KM12 CCK12
	-C16- 60G, 90G	16	16	40	63 , 90	50	58	65	1.4 , 1.7		KM16 CCK16
	-C20- 70G, 90G	20	20	48	71 , 90	57	66	80	1.6 , 1.8		KM20 CCK20 CCNK20
	-C25- 70G, 90G,120G	25	25	55	70,90,120	60	72		1.8 , 2.1 , 2.5	20,000	KM25 CCK25 CCNK25
	-C32- 85G*,105G	32	32,25	68	85 , 105	64,70	71,81	75,81	2.1 , 2.5		KM32 CCK32 CCNK32
No.50	MBT50-C12-105G	12	12	33	105	48	53	58	4.0	20,000	KM12 CCK12
	-C16-105G	16	16	40		50	58	65	4.2		KM16 CCK16
	-C20-105G	20	20	48		57	66	80	4.5		KM20 CCK20 CCNK20
	-C25-105G	25	25	55		60	72		4.8	15,000	KM25 CCK25 CCNK25
	-C32- 90G,105G,120G	32	25	68	90,105,120	70	81	81	4.3,4.6,5.1		KM32 CCK32 CCNK32
	-C42- 95P*,120P	42	42	86	95,120	73	80,105	85,110	5.5,6.6	12,000	KM42 CCK42 CCNK42

★Please note the acceptable shank tolerance is h6.
★Please refer ☞**P.172** for **KM** and **CCK** collet.
★**GH Handle** is available as an option. ☞**P.48**
C12G : GH12, C16G : GH16, C20G : GH20, C25G : GH25, C32G : GH32
★Spanner for **C42P** is **9HC42**.
★**NK and CCNK collet can not be used for the chucks marked ＊.**
★Centre through tool coolant is available for all models. When the cutter shank length is shorter than ℓ1, please use **the stooper for direct chucking** or **CCK/CCNK** collet.
The Code No. of the Stopper for direct chucking is : **C20 : 9MC20, C25 : 9MC25, C32 : 9MC32, C42 : 9MC42**

Explanation of the Code No.

MBT40 - C20 - 70 G

- G : Symbol of High Speed
- 70 : Nominal Gauge Length
- C20 : Chucking Capacity
- Symbol of Milling Chuck
- MBT40 : Shank No.

CENTRE COOLANT STRAIGHT COLLET

NIKKEN

PAT.

Suitable for all models of the NIKKEN MILLING CHUCK

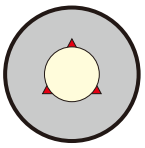




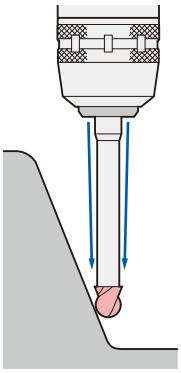
CCK Collet



Front Nut



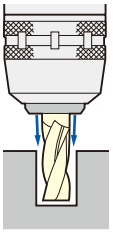
Jet Coolant ⊕ Prevention of Swarf entering the collet through the slots



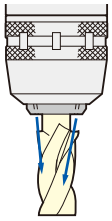
Explanation of the Code No.

CCK 32 – 10
- 10: ID of Collet
- 32: OD of Collet
- CCK: Symbol of CCK Collet

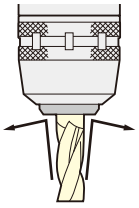
CCK : Centre Coolant
CCNK : Centre Coolant, Adjustable
KM : Standard
NK : Adjustable
ONK : Oil Hole Drill
OJK-A : Jet Coolant
OJK-S : Multiple Nozzles



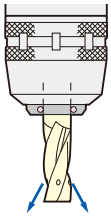
For grooving.



For cutters with cutting diameter which is larger than the shank diameter.



Prevention of the swarf contamination.



A front nut with an O-ring seal, for use with oil hole cutter, is also available as option.



CKFN-MN



CKFN-C

CCK Collet

CKFN front nut and **CCKL** spanner are available as an option.



Photo shows with front nut.

CCK

Style	CCK Collet Code No. (OD-ID)	Front Nut Code No.
CCK12	**CCK12**-3, 4, 5, 6, **8**, **10**	**CKFN12**
CCK16	**CCK16**-3, 4, 5, 6, **8**, **10**, **12**	**CKFN16**
CCK20	**CCK20**-6, 8, **10**, **12**, **16**	**CKFN20**
CCK25	**CCK25**-6, 8, **10**, **12**, **16**, **20**	**CKFN25**
CCK32	**CCK32**-6, 8, 10, 12, **16**, **20**, **25**	**CKFN32, CKFN32T**
CCK42	**CCK42**-6, 8, 10, 12, 16, **20**, **25**, **32**	**CKFN42**

★Above bold figures indicate **"ANNIVERSARY" type ⓃⒹ CCK Collet**.
★Please note the acceptable shank tolerance is h6~h7.
★Other metric sizes and imperial sizes, 1/8, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 13/16, 7/8, 1, 1・1/8, 1・1/4, 1・1/2" are also available.

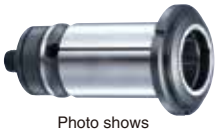


Photo shows with front nut.

Cutter length adjustment on the collet is possible from front and back.

CCNK

Style	CCK Collet Code No. (OD-ID)	Front Nut Code No.
CCNK20	**CCNK20**-6, 8, 10, 12, 16	**CKFN20**
CCNK25	**CCNK25**-6, 8, 10, 12, 16, 20	**CKFN25**
CCNK32	**CCNK32**-6, 8, 10, 12, 16, 20, 25	**CKFN32, CKFN32T**
CCNK42	**CCNK42**-6, 8, 10, 12, 16, 20, 25, 32	**CKFN42**

★Please note the acceptable shank tolerance is h6~h7.
★Other metric sizes and imperial sizes, 1/8, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 13/16, 7/8, 1, 1・1/8, 1・1/4, 1・1/2" are also available.

Front Nut CKFN



Explanation of the Code No.

CKFN 32 – 10
- 10: ID of Collet
- 32: OD of Collet
- CKFN: Symbol of Front Nut

Style	φD2	L2	Front Nut Code No.
CKFN12	19.5	7	**CKFN12** -3, 4, 5, 6, 8, 10
CKFN16	28.5	8	**CKFN16** -3, 4, 5, 6, 8, 10, 12
CKFN20	33	8	**CKFN20** -6, 8, 10, 12, 16
CKFN25	39	8.5	**CKFN25** -6, 8, 10, 12, 16, 20
CKFN32	46.5	9	**CKFN32** -6, 8, 10, 12, 16, 20, 25
CKFN32T	43	9	**CKFN32T**-6, 8, 10, 12, 16, 20, 25
CKFN42	59.5	9	**CKFN42** -6, 8, 10, 12, 16, 20, 25, 32



★The front nut for direct chucking is also available.
e.g. CKFN20-20D, CKFN25-25D, CKFN32-32D

★The Code No. fitted with O-ring is ; **e.g. CKFN20-20DC, CKFN25-25DC, CKFN32-32DC**

★**For C32 there are 2 sizes, CKFN32 = for nose ring diameter of φ69mm, CKFN32T = for nose ring diameter of φ64mm.**
★Jet Coolant type for the cutter with a cutter dia. larger than shank dia. is also available. **CKFN25-20MN, CKFN32-25MN, CKFN42-32M**
★Front Nut fitted with an O-ring is also available. **e.g.** The Code No. is **CKFN32-10C**
★The spanner is available as an option. **CKFN12 : CCKL12, CKFN16 : CCKL16 CKFN20 : CCKL20 CKFN25, CKFN32T : CCKL25 CKFN32 : CCKL32, CKFN42 : CCKL42**



KM Photo shows **ANNIVERSARY type KM Collet**.

Style	KM Collet Code No. (OD-ID)
KM12	**KM12**-2, 3, 4, 5, 6, **7**, **8**, **9**, **10**
KM16	**KM16**-2, 3, 4, 5, 6, 7, **8**, **9**, **10**, **11**, **12**
KM20	**KM20**-2, 3, 4, 5, 6, 7, 8, 9, **10**, **11**, **12**, 13, **14**, **15**, **16**
KM25	**KM25**-3, 4, 5, 6, 7, 8, 9, **10**, **11**, **12**, 13, **14**, **15**, **16**, 17, **18**, **19**, **20**, 21, **22**
KM32	**KM32**-3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, **15**, **16**, 17, **18**, **19**, **20**, 21, **22**, 23, **24**, **25**, 26, **30**
KM42	**KM42**-3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, **19**, **20**, 21, **22**, 23, **24**, **25**, 26, 27, 28, 29, 30, 31, **32**, **40**

★For Synchronous Tapping Program : Special ID Collets for Tap Shank are also available.
★Other metric sizes and imperial sizes, 1/8, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 13/16, 7/8, 1, 1・1/8, 1・1/4, 1・1/2" are also available.
★The collets with bold character are the **"ANNIVERSARY" type ⓃⒹ KM Collet**.
Ordinary **KM** Collet can be used with **"ANNIVERSARY" type ⓃⒹ Milling Chuck**, but better performance can be found with the **"ANNIVERSARY" type ⓃⒹ KM Collet**.
★Please note the acceptable shank tolerance is h6~h7.

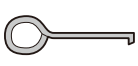
Cutter length adjustment on the collet is possible from front and back.



NK

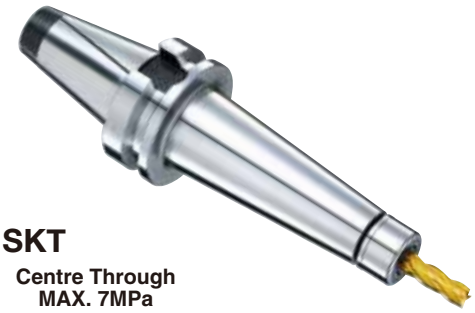
Style	NK Collet Code No. (OD-ID)
NK20	**NK20**-3, 4, 5, **6**, 7, **8**, 9, **10**, 11, **12**, 13, 14, 15, **16**
NK22	**NK22**-3, 4, 5, **6**, 7, **8**, 9, **10**, 11, **12**, 13, 14, 15, **16**, 17, 18
NK25	**NK25**-3, 4, 5, **6**, 7, **8**, 9, **10**, 11, **12**, 13, 14, 15, **16**, 17, 18, 19, **20**, 21, 22
NK32	**NK32**-3, 4, 5, **6**, 7, **8**, 9, **10**, 11, **12**, 13, 14, 15, **16**, 17, 18, 19, **20**, 21, 22, 23, 24, **25**, 26
NK42	**NK42**-3, 4, 5, **6**, 7, **8**, 9, **10**, 11, **12**, 13, 14, 15, **16**, 17, 18, 19, **20**, 21, 22, 23, 24, **25**, 26, 27, 28, 29, 30, 31, **32**

★For Synchronous Tapping Program : Special ID Collets for Tap Shank are also available.
★Other metric sizes and imperial sizes, 1/8, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 13/16, 7/8, 1, 1・1/8, 1・1/4, 1・1/2" are also available.
★The collets with bold character are standard.
★Please note the acceptable shank tolerance is h6~h7.
★Collet removal (**9CKR**) is available as an option.
★Please refer ☞**P.33, P.34** for more detail of the straight collet.



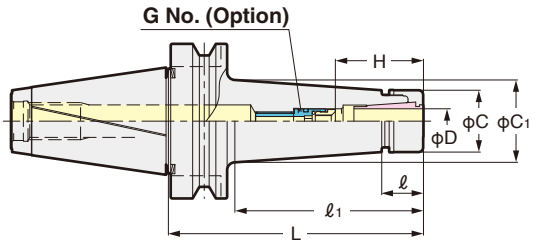
3LOCK MBT SLIM CHUCK

NIKKEN



SKT

Centre Through
MAX. 7MPa



Standard

3LOCK tooling (MBT) can be used as the triple contact tooling on the M/C where spindle is BT double face contact system.

When SK J type nut is used, the total chuck length will be extended by 6mm.

PAT.

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	H	G No. (Option)	Weight (kg)	SK Collet
No.40	MBT40-SKT 6C- 90	0.7～6.0	90	19.8	60	19.5	25.2	26～31	SKG 6- 6HG	1.1	SK 6
	-120		120		90		29.4			1.4	
	-SKT10C- 90	1.75～10.0	90	22	60	27.5	32.9	35～41	SKG10-10HG	1.2	SK10
	-120		120		90		37.1			1.4	
	-150		150		120		41.3			1.6	
	-SKT13C- 90	2.75～13.0	90	26	60	33	37.8	39～51	SKG13-10HG	1.4	SK13
	-120		120		90		42.0			1.6	
	-150		150		120		46.2			1.8	
	-SKT16C- 90	2.75～16.0	90	27	60	40	44.7	45～57	SKG16-12HG	1.5	SK16
	-120		120		90		48.9			1.7	
	-150		150		120		53.1			1.9	
	-SKT20C- 90	3.5～20.0	90	28.5	60	48.5	53.0	47～63	SKG20-18HG	1.6	SK20
	-120		120		92		57.4			2.0	
	-SKT25C- 90	7.5～25.4	90	31	62.6	55	59.5	60～65	SKG25-18HGD	1.8	SK25
	-120		120		92.2		59.3			2.4	
No.50	MBT50-SKT 6C-105	0.7～6.0	105	19.8	62	19.5	25.5	26～31	SKG 6- 6HG	3.8	SK 6
	-165		165		122		33.8			4.0	
	-SKT10C-105	1.75～10.0	105	22	62	27.5	33.1	35～41	SKG10-10HG	4.2	SK10
	-165		165		122		41.5			4.6	
	-SKT13C-105	2.75～13.0	105	26	62	33	38.1	39～51	SKG13-10HG	4.5	SK13
	-165		165		122		46.5			4.9	
	-SKT16C-105	2.75～16.0	105	27	62	40	44.9	45～57	SKG16-12HG	4.7	SK16
	-165		165		122		53.3			5.1	
	-SKT20C-105	3.5～20.0	105	28.5	62	48.5	53.2	47～63	SKG20-18HG	4.3	SK20
	-165		165		122		61.6			5.0	
	-SKT25C-105	7.5～25.4	105	31	62	55	59.4	60～70	SKG25-24HG	5.2	SK25
	-165		165		122		67.8			5.6	

★Collet, adjust screw (G No.) and **GH Handle** are available as an option.
★**Please refer ☞P.43, P.44 for SK Collet and SK-AC Collet.**
The Code No. of the **GH Handle** is **SKT6C-P: GH6, SKT10C-P: GH10, SKT13C-P: GH12, SKT16C-P: GH16, SKT20C-P: GH20, SKT25C-P: GH25**
★**Please use P class collet or A type collet. ☞P.175**
★All models are high pressure centre through tool coolant type.
SKT6: ϕ4～ϕ6, SKT10: ϕ6～ϕ10,SKT16: ϕ10～ϕ16,SKT20: ϕ6～ϕ20,SKT25: ϕ16～ϕ25
★Please add "**F**" for the flange through tool coolant type ;
e.g. MBT40-SK10F-90
★**Please refer ☞P.52 for the adjust screw (G No.)**



Explanation of the Code No.

MBT40 - SKT10 C - 90

- 90 : Nominal Gauge Length
- C : Centre Through Tool Coolant
- SKT10 : Chucking Capacity
- SKT : Symbol of New Slim Chuck
- MBT40 : Shank No.

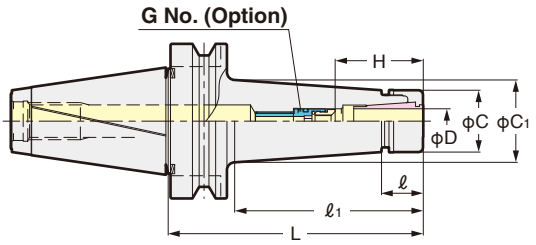
3LOCK MBT HIGH SPEED SLIM CHUCK

NIKKEN



SKT-P

Centre Through
MAX. 7MPa



High Speed 3LOCK tooling (MBT) can be used as the triple contact tooling on the M/C where spindle is BT double face contact system.

When SK J type nut is used, the total chuck length will be extended by 6mm.

PAT.

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	H	G No. (Option)	Weight (kg)	SK Collet
No.40	MBT40-SKT 6C- 90P	0.7～6.0	90	19.8	60	19.5	25.2	26～31	SKG 6- 6HG	1.1	SK 6
	-120P		120		90		29.4			1.4	
	-SKT10C- 90P	1.75～10.0	90	22	60	27.5	32.9	35～41	SKG10-10HG	1.2	SK10
	-120P		120		90		37.1			1.4	
	-150P		150		120		41.3			1.6	
	-SKT13C- 90P	2.75～13.0	90	26	60	33	37.8	39～51	SKG13-10HG	1.4	SK13
	-120P		120		90		42.0			1.6	
	-150P		150		120		46.2			1.8	
	-SKT16C- 90P	2.75～16.0	90	27	60	40	44.7	45～57	SKG16-12HG	1.5	SK16
	-120P		120		90		48.9			1.7	
	-150P		150		120		53.1			1.9	
	-SKT20C- 90P	3.5～20.0	90	28.5	60	48.5	53.0	47～63	SKG20-18HG	1.6	SK20
	-120P		120		92		57.4			2.0	
	-SKT25C- 90P	7.5～25.4	90	31	62.6	55	59.5	60～65	SKG25-18HGD	1.8	SK25
	-120P		120		92.2		59.3			2.4	
No.50	MBT50-SKT 6C-105P	0.7～6.0	105	19.8	62	19.5	25.5	26～31	SKG 6- 6HG	3.8	SK 6
	-165P		165		122		33.8			4.0	
	-SKT10C-105P	1.75～10.0	105	22	62	27.5	33.1	35～41	SKG10-10HG	4.2	SK10
	-165P		165		122		41.5			4.6	
	-SKT13C-105P	2.75～13.0	105	26	62	33	38.1	39～51	SKG13-10HG	4.5	SK13
	-165P		165		122		46.5			4.9	
	-SKT16C-105P	2.75～16.0	105	27	62	40	44.9	45～57	SKG16-12HG	4.7	SK16
	-165P		165		122		53.3			5.1	
	-SKT20C-105P	3.5～20.0	105	28.5	62	48.5	53.2	47～63	SKG20-18HG	4.3	SK20
	-165P		165		122		61.6			5.0	
	-SKT25C-105P	7.5～25.4	105	31	62	55	59.4	60～70	SKG25-24HG	5.2	SK25
	-165P		165		122		67.8			5.6	

★Collet, adjust screw (G No.) and **GH Handle** are available as an option.
★**Please refer** ☞**P.43, P.44 for SK Collet and SK-AC Collet.**
The Code No. of the **GH Handle** is **SKT6C-P: GH6, SKT10C-P: GH10, SKT13C-P: GH12, SKT16C-P: GH16, SKT20C-P: GH20, SKT25C-P: GH25**
★**Please use P class collet or A type collet.** ☞**P.175**
★All models are high pressure centre through tool coolant type.
SKT6: ϕ4～ϕ6, SKT10: ϕ6～ϕ10,SKT16: ϕ10～ϕ16,SKT20: ϕ6～ϕ20,SKT25: ϕ16～ϕ25
★**Please refer** ☞**P.52 for the adjust screw (G No.)**



Explanation of the Code No.

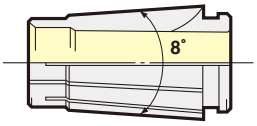
MBT40 - SKT10 C - 90 P

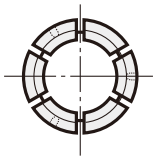
- P: High Speed Rotation
- 90: Nominal Gauge Length
- C: Centre Through Tool Coolant
- 10: Chucking Capacity
- SKT: Symbol of New Slim Chuck
- MBT40: Shank No.

SLIM CHUCK COLLET

NIKKEN







Explanation of the Code No.

SK 10 - 6 P

- P: Non: Standard; P:P class (Run-out Accuracy=3μm); A:A type (for End Mill Shank)
- 6: MAX. Chucking Dia.
- 10: Style No.
- SK: Symbol of SK Collet

SK **"A" type SK collet (for End Mill Shank) are marked ● . The acceptable shank tolerance is h8.Code No. is e.g. SK10-10A**
"P" class SK collet (for drill) are available for all series. e.g. SK10-10P

Code No.	Chucking D
SK 6- 0.8	0.7 ~ 0.8
- 1	0.9 ~ 1.0
- 1.25	1.15~ 1.25
- 1.5	1.3 ~ 1.5
- 1.75	1.55~ 1.75
- 2	1.8 ~ 2.0
- 2.25	2.05~ 2.25
- 2.5	2.3 ~ 2.5
- 2.75	2.55~ 2.75
- 3	2.8 ~ 3.0
- 3.5	3.0 ~ 3.5
- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
SK10- 2	1.75~ 2.0
- 2.25	2.0 ~ 2.25
- 2.5	2.25~ 2.5
- 2.75	2.5 ~ 2.75
- 3	2.75~ 3.0
- 3.5	3.0 ~ 3.5
- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
- 6.5	6.0 ~ 6.5
- 7	6.5 ~ 7.0
- 7.5	7.0 ~ 7.5
- 8	7.5 ~ 8.0
- 8.5	8.0 ~ 8.5
- 9	8.5 ~ 9.0
- 9.5	9.0 ~ 9.5
-10	9.5 ~10.0

Code No.	Chucking D
SK13- 3	2.75~ 3.0
- 3.5	3.0 ~ 3.5
- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
- 6.5	6.0 ~ 6.5
- 7	6.5 ~ 7.0
- 7.5	7.0 ~ 7.5
- 8	7.5 ~ 8.0
- 8.5	8.0 ~ 8.5
- 9	8.5 ~ 9.0
- 9.5	9.0 ~ 9.5
- 10	9.5 ~10.0
- 10.5	10.0~10.5
- 11	10.5~11.0
- 11.5	11.0~11.5
- 12	11.5~12.0
- 12.5	12.0~12.5
- 13	12.5~13.0

Code No.	Chucking D
SK16- 3	2.75~ 3.0
- 3.5	3.0 ~ 3.5
- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
- 6.5	6.0 ~ 6.5
- 7	6.5 ~ 7.0
- 7.5	7.0 ~ 7.5
- 8	7.5 ~ 8.0
- 8.5	8.0 ~ 8.5
- 9	8.5 ~ 9.0
- 9.5	9.0 ~ 9.5
- 10	9.5 ~10.0
- 10.5	10.0~10.5
- 11	10.5~11.0
- 11.5	11.0~11.5
- 12	11.5~12.0
- 12.5	12.0~12.5
- 13	12.5~13.0
- 13.5	13.0~13.5
- 14	13.5~14.0
- 14.5	14.0~14.5
- 15	14.5~15.0
- 15.5	15.0~15.5
- 16	15.5~16.0

Code No.	Chucking D
SK20- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
- 6.5	6.0 ~ 6.5
- 7	6.5 ~ 7.0
- 7.5	7.0 ~ 7.5
- 8	7.5 ~ 8.0
- 8.5	8.0 ~ 8.5
- 9	8.5 ~ 9.0
- 9.5	9.0 ~ 9.5
- 10	9.5 ~ 10.0
- 10.5	10.0~ 10.5
- 11	10.5~ 11.0
- 11.5	11.0~ 11.5
- 12	11.5~ 12.0
- 12.5	12.0~ 12.5
- 13	12.5~ 13.0
- 13.5	13.0~ 13.5
- 14	13.5~ 14.0
- 14.5	14.0~ 14.5
- 15	14.5~ 15.0
- 15.5	15.0~ 15.5
- 16	15.5~ 16.0
- 16.5	16.0~ 16.5
- 17	16.5~ 17.0
- 17.5	17.0~ 17.5
- 18	17.5~ 18.0
- 18.5	18.0~ 18.5
- 19	18.5~ 19.0
- 19.5	19.0~ 19.5
- 20	19.5~ 20.0

Code No.	Chucking D
SK25- 8	7.5~8.0
- 10	9.5~10.0
- 12	11.5~12.0
- 16	15.5~16.0
- 16.5	16.0~16.5
- 17	16.5~17.0
- 17.5	17.0~17.5
- 18	17.5~18.0
- 18.5	18.0~18.5
- 19	18.5~19.0
- 19.5	19.0~19.5
- 20	19.5~20.0
- 20.5	20.0~20.5
- 21	20.5~21.0
- 21.5	21.0~21.5
- 22	21.5~22.0
- 22.5	22.0~22.5
- 23	22.5~23.0
- 23.5	23.0~23.5
- 24	23.5~24.0
- 24.5	24.0~24.5
- 25	24.5~25.0
- 25.4	25.0~25.4

★**SK6** collet with the special internal dia. is also available.

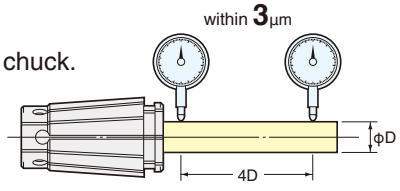


Collet removal **(SKR-6)** is supplied as standard only for **SK6**. **SKR-10**, **SKR-16** and **SKR-25** are available as an option. Collet removal is not necessary for **the new types of collet (SK10 to SK25 collet including SK13 and SK20)** .

★**Please refer ☞P.44 for SK Coolant Collet (AC).**

■"P" class SK collet for drill

It guarantees the Run-out accuracy within 3 micron at the nose (4D) from the chuck.
Additionally Collet Set is also available.



■"A" type SK collet for endmill

The acceptable shank tolerance ids h8.

SK Collet A Type
SK 6-3A, 4A, 5A, 6A
SK10-3A, 4A, 5A, 6A, 8A, 10A
SK13-3A, 4A, 5A, 6A, 8A, 10A, 12A, 13A
SK16-3A, 4A, 5A, 6A, 8A, 10A, 12A, 16A
SK20-4A, 5A, 6A, 8A, 10A, 12A, 16A, 20A
SK25-8A, 10A, 12A, 16A, 20A, 25A

SK Collet A Type (Inch)
SK 6 -1/8A, 3/16A
SK10 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A
SK13 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A
SK16 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A, 9/16A, 5/8A
SK20 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A, 9/16A, 5/8A, 3/4A
SK25 -3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A, 5/8A, 3/4A, 25.4A

3LOCK MBT MINI-MINI CHUCK ADVANCED ALPHA NEW NIKKEN

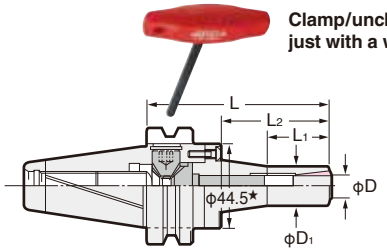
JAPAN PAT.



MMC

The best chuck for the small dia.cutting tool

30,000min^{-1} & G2.5
Gripping from Front Nose
Run-Out Accuracy : 3μm at 4D



★ MMC12 : φ52.4

High Speed 3LOCK tooling (MBT) can be used as the triple contact tooling on the M/C where spindle is BT double face contact system. **PAT.**

TAPER	Code No.	Chucking Range φD	φD1	L	L1	L2	Collet	MAX. (min^{-1})	Weight (kg)
No.40	MBT40-MMC 4- 90-AA	1～ 4	15	90	30	43	MPK 4	30,000	1.2
	-MMC 8- 90-AA	2～ 8	20		36	42	PMK 8 VMK 8		1.4
	-120-AA			120	43	72			1.5
	-MMC12- 90-AA	4～12	30	90	35	44	PMK12 VMK12		1.7
	-120-AA			120	60	74			1.8
No.50	MBT50-MMC 4-105-AA	1～ 4	15	105	30	43	MPK 4	20,000	3.8
	-MMC 8-105-AA	2～ 8	20		36	42			4.4
	-135-AA			135	43	72	PMK 8 VMK 8		4.5
	-165-AA			165		102			4.6
	-MMC12-105-AA	4～12	30	105	35	44			4.6
	-135-AA			135	60	74	PMK12 VMK12		4.7
	-165-AA			165	70	104			4.8

★Wrench is supplied as standard.
★**MPK, PMK, VMK** collet is available as an option. Please refer ☞ **P.38**
★Please add "**C**" for the centre through tool coolant type. **e.g. MBT40-MMC8C-90-AA**
★Please add "**F**" for the flange through tool coolant type ; **MBT40-MMC 8F- 90-AA,120-AA MBT50-MMC 8F-105-AA,135-AA,165-AA**
-MMC12F- 90-AA,120-AA -MMC12F-105-AA,135-AA,165-AA

Explanation of the Code No.
MBT40 - MMC8 - 90
- 90 : Nominal Gauge Length
- MMC8 : Chucking Capacity
- MMC : Symbol of Mini Mini Chuck
- MBT40 : Shank No.

3LOCK MBT VC HOLDER

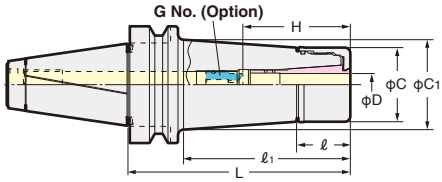
NIKKEN



VC

Centre Through
MAX. 7MPa





High Speed 3LOCK tooling (MBT) can be used as the triple contact tooling on the M/C where spindle is BT double face contact system. **PAT.**

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	H	G No. (Option)	Weight (kg)	MAX. (min^{-1})	Collet
No.40	MBT40-VC 6- 60	2.0～6.0	60	23	30	27.5	30.0	35～45	VCG 6- 8A	1.1	30,000	VCK 6
	- 90		90		60		32.7			1.3		
	-120		120		90		36.9			1.5		
	-VC13- 60	3.0～12.0	60	29	31	40	40.3	50～60	VCG13-15A	1.2		VCK13
	- 90		90		60		44.3			1.5		
	-120		120		90		48.5			1.9		
No.50	MBT50-VC 6-105	2.0～6.0	105	23	62	27.5	33.0	35～45	VCG 6- 8A	3.9	20,000	VCK 6
	-135		135		92		37.1			4.1		
	-165		165		122		41.3			4.4		
	-VC13-105	3.0～12.0	105	29	62	40	44.6	50～60	VCG13-15A	4.1		VCK13
	-135		135		92		48.8			4.5		
	-165		165		122		53.0			4.9		

★Collet, adjust screw (G No.) and **GH Handle** are available as an option. The Code No. of the **GH Handle** is **VC6: GH10, VC13: GH16**
★When the axial stopper is required, please use Adjust Screw (G No.)
★**MBT40-VC 6-150, MBT40-VC13-150, MBT50-VC13- 90, -120** are available as semi-standard.
★TiN Bearing Nut is supplied as standard.
★Please add "**-RP**" at the end of Code No. for Rust Proof Treatment **VC** Holder. **e.g.MBT40-VC13-60-RP**
★**Please use VC J type Nut & Cap for Centre Through Coolant.**
When VC J type Nut is used, the total holder length will be extended to 6mm.
★Please refer ☞ **P.36** for **VCK** collet.



Please refer ☞ **P.48**

Explanation of the Code No.
MBT40 - VC6 - 90
- 90 : Nominal Gauge Length
- VC6 : Chucking Capacity
- VC : Symbol of VC Holder
- MBT40 : Shank No.

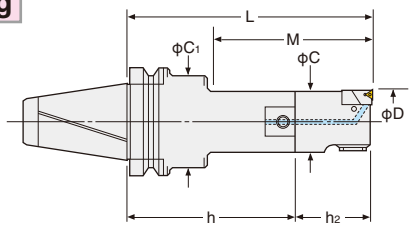
3LOCK ZMAC ADVANCED BORING ARBOR (ZMAC-V) NIKKEN

PAT.

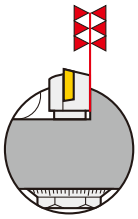
Boring for Finishing

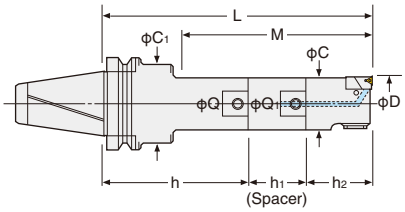


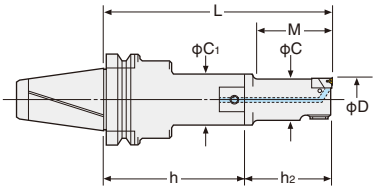
ZMAC-V
Photo shows **ZMAC𝒜-V**.



No Micro Vibration due to Double-Contact Support of Cartridge. Long Tool-Life & High Accuracy.





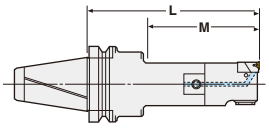


Only for ZMAC16-V

All codes shown are for heads with triangular inserts  For heads with rhomboid inserts  please add the letter "R" to the code No. **e.g. MBT40-ZMAC32 R -150V**

TAPER	Code No. MBTNo.- Min.D - L	Boring Range D	Boring Depth M	Cupling Dia M	C	C1	P.119 Head No. Q- Min.D -h2	Insert No.	Weight (kg)
No.40	MBT40-ZMAC 16-125V, 135V	15.9～20.2	38, 48	12	15	24	12-ZMAC16-45V, 55V		1.9, 1.9
	-ZMAC 20-120V, 135V, 150V	19.8～25.2	45, 67, 75	9	19	30	9-ZMAC20-40V	3MP-C,B	1.9, 1.9, 2.0
	-ZMAC 25-120V, 150V, 165V	24.8～32.2	52, 90, 97	12	24	35	12-ZMAC25-40V		2.0, 2.1, 2.1
	-ZMAC 32-150V, 180V, 195V	31.8～42.2	77, 110, 122	16	31	42	16-ZMAC32-55V	4MP-C,B	2.5, 2.7, 2.7
	-ZMAC 42-150V, 180V, 210V	41.8～55.2	97, 130, 157	20	40	50	20-ZMAC42-70V		3.0, 3.2, 3.5
	-ZMAC 55-165V, 210V, 225V	54.8～70.2	135, 180, 195	26	53	50	26-ZMAC55-70V	6MP-C,B	3.9, 4.6, 4.6
	-ZMAC 70-165V, 180V, 225V	69.8～85.2	165, 180, 225	34	67	64	34-ZMAC70-70V		5.4, 5.8, 6.8
	-ZMAC 85-195V	84.8～100.2	195	42	83	62	42-ZMAC85-100V		9.0
No.50	MBT50-ZMAC 16-140V, 150V	15.9～20.2	38, 48	12	15	24	12-ZMAC16-45, 55V		4.7, 4.7
	-ZMAC 20-150V, 165V, 180V	19.8～25.2	45, 67, 75	9	19	40	9-ZMAC20-40V	3MP-C,B	4.8, 4.8, 4.9
	-ZMAC 25-135V, 165V, 180V	24.8～32.2	52, 90, 97	12	24	44	12-ZMAC25-40V		4.8, 4.8, 4.9
	-ZMAC 32-180V, 210V, 225V	31.8～42.2	77, 110, 122	16	31	50	16-ZMAC32-55V	4MP-C,B	5.5, 5.6, 5.7
	-ZMAC 42-180V, 195V, 225V, 240V	41.8～55.2	97, 130, 142, 157	20	40	60	20-ZMAC42-70V		6.0, 6.0, 6.4, 6.5
	-ZMAC 55-210V, 240V, 270V	54.8～70.2	117, 182, 177	26	53	65	26-ZMAC55-70V		7.5, 7.6, 8.1
	-ZMAC 70-240V, 270V, 300V	69.8～85.2	190, 220, 250	34	67	80	34-ZMAC70-70V		10.0, 10.6, 11.5
	-ZMAC 85-225V, 290V, 315V	84.8～100.2	182, 247, 272	42	83	83	42-ZMAC85-100V	6MP-C,B	12.5, 15.0, 16.0
	-ZMAC100-225V, 290V*	99.5～140.5	225, 290				42-ZMAC100-100V		13.8, 16.5
	-ZMAC140-225V, 290V*	139.5～180.5					42-ZMAC140-100V		14.6, 17.3

★MIN. dial readout : **ZMAC25-V** & smaller is 0.02mm on diameter. **ZMAC32-V** and larger are 0.01mm on diameter.
★**"C" grade (Coated) insert for Steel, Stainless & Cast Iron is supplied as Standard with the head (Smooth boring & Long tool-life).**
We would recommend "**B**" grade (**CBN**) insert for Hardened Steel & High Speed boring of Cast Iron. Please refer ☞**P.117** for cutting condition.
★Please refer ☞**P.179** for Shank, and ☞**P.102** for Spacer, and ☞**P.87** for Head.
★Centre Through Tool Coolant function is available as standard.
★**When L length is required longer than standard, please specify boring depth M.**
★* **: MBT50-ZMAC100-325V, 375V, 425V, 475V are also available.**
MBT50-ZMAC140-325V, 375V, 425V, 475V

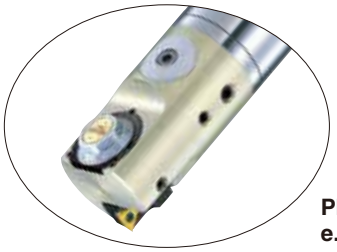




High Pressure Coolant Through Tool

High Speed Boring ZMAC𝒜-V

Special Hardened Light Alloy Metal Head with Balancing for Anti-Vibration. MAX12,000min-1



ZMAC-V for Multi-Stage Boring Bar

Please contact us for the special boring bar.



Photo. shows **NC5** shank.

Please add "AA" at the end of Code No. for the boring arbor with ZMAC𝒜-V head. ☞P.88
e.g. MBT40-ZMAC42-150AAV

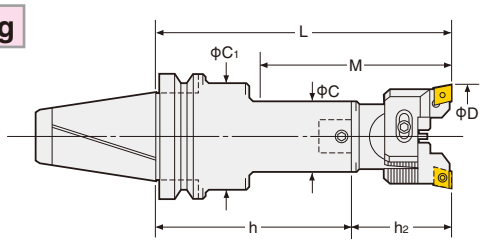
3LOCK BALANCE-CUT BORING ARBOR

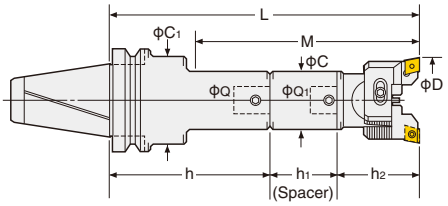
NIKKEN

Boring for Roughing

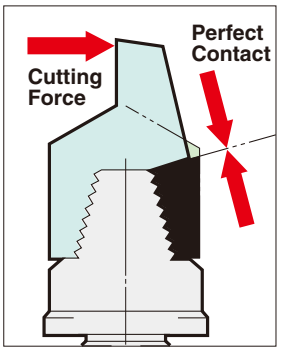


RAC





Power of Shoulder Support

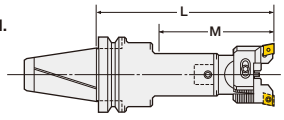


3Lock

TAPER	Code No. MBTNo.- Min.D -L	Boring Range D	Boring Depth M	Cupling Dia Q	C	C1	P.74 Head No. Q- Min.D -h2	Insert No.	Weight (kg)
No.40	MBT40-RAC 25-135E, 165E, 180E	25～32	67, 105, 112	12	24	35	12-RAC 25- 55E	CC07-C	2.0, 2.1, 2.1
	-RAC 32-150E, 180E, 195E	32～45	77, 110, 122	16	31	42	16-RAC 32- 55E	CC08-C	2.4, 2.6, 2.6
	-RAC 43-150E, 180E, 210E	43～55	97, 130, 157	20	40	50	20-RAC 43- 70E	CC12-C	2.7, 2.9, 3.2
	-RAC 53-165E, 210E, 225E	53～70	135, 180, 195	26	50	50	26-RAC 53- 70E		2.5, 3.3, 3.2
	-RAC 70-180E, 195E, 240E	70～100	180, 195, 240	34	64	64	34-RAC 70- 85E		4.8, 5.2, 6.2
	-RAC100-195E	100～130	195	42	83	62	42-RAC100-100E		6.8
No.50	MBT50-RAC 25-150E, 180E, 195E	25～32	67, 105, 112	12	24	44	12-RAC 25- 55E	CC07-C	4.7, 4.9, 4.8
	-RAC 32-180E, 210E, 225E	32～45	77, 110, 122	16	31	50	16-RAC 32- 55E	CC08-C	5.4, 5.6, 5.6
	-RAC 43-180E, 195E, 225E, 240E	43～55	97, 130, 142, 157	20	40	60	20-RAC 43- 70E	CC12-C	5.7, 5.8, 6.1, 6.2
	-RAC 53-210E, 240E, 270E	53～70	117, 182, 177	26	50	65	26-RAC 53- 70E		6.9, 7.0, 7.6
	-RAC 70-255E, 285E, 315E	70～100	205, 235,265	34	64	80	34-RAC 70- 85E		9.5, 9.9, 10.9
	-RAC100-225E, 290E, 325E*	100～130	225, 290, 325	42	83	83	42-RAC100-100E		12.5, 12.5, 16.5

★**"C" grade (Coated)** inserts are supplied as standard with the head. ☞**P.74** Please refer ☞**P.116** for cutting condition.
★Please refer ☞**P.179** for base holder, ☞**P.102** for spacer and ☞**P.79** for head.
★**For centre through tool coolant type, please add "-C" at the end of Code No. e.g. MBT40-RAC53-165E-C**
★Cartridges & Insert tips for the Heavy Duty Boring of Iron and Cast Iron (No letter) , for Aluminum **(A)** , and for Through Hole & Multiple Sheets **(K)** are available. Please refer ☞**P.80** for cartridges. Please add the letter "No letter" , **"A"** or **"K"** at the end of Code No. **e.g. MBT40-RAC53-165A**
★**When L length is required longer than standard, please specify the boring depth M.**
★**Cartridge & Insert for Alloy Steel (E) is recommended for boring on steel and stainless steel.**
★* **: MBT50-RAC100-375E, 425E and 475E are also available.**

Code No. of **RAC25** and **RAC32** with **CC** inserts are changed to **RAC25E** and **RAC32E**.
Please refer ☞**P.71, P.72**





High Pressure Coolant Through Tool

3LOCK MODULAR TYPE BORING BASE HOLDER

NIKKEN



Q

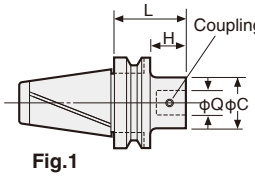


Fig.1

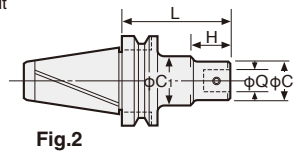


Fig.2

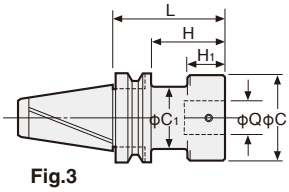


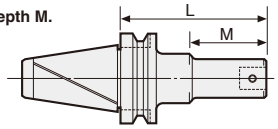
Fig.3

3LOCK tooling (MBT) can be used as the triple contact tooling on the M/C where spindle is BT double face contact system.

TAPER	Code No.	Coupling φQ	L	C	C1	H	H1	Coupling Bolt No.	Fig.	Weight (kg)
No.40	MBT40-Q26- 50,95,140	26	50, 95,140	50	-	20,65,110	-	B26N	1	1.1 , 1.7 , 2.5
	(MIT40) -Q34- 95,110	34	95,110	64	62	68,83	55,70	B34	3	2.2 , 2.6
	-Q42- 95	42	95	83	62	68	55	B42		2.8
No.50	MBT50-Q26- 65,140,170N	26	65,140,170	50	65	27,47,112	-	B26N	1,2,2	3.7 , 5.3 , 5.4
	(MIT50) -Q34-140,170,200	34	140,170,200	64	80	102,120,150		B34		5.6 , 6.5 , 7.1
	-Q42-125,190	42	125,190	83	-	87,152		B42	1	6.5 , 9.1

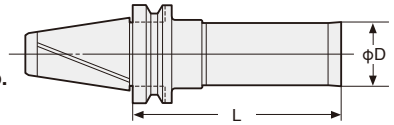
★φC of **Q**26 base holder has been increased from 45mm to 50mm due to improvement of its rigidity.
★All base holders have a centre through-tool coolant hole.
★The Coupling screw & wrench are supplied as standard.
★When L length is required longer than standard, please specify the boring depth M.

★MBT50-Q42-225A, 275A, 325A and 375A are the arbor with tapered shape.



Q No.

★Blank arbor with 3LOCK shank is available.
MIN. order quantity of blank arbor is 5 off.



Please specify ;
・Hardness of arbor : Raw or HRC40±2
・φDxL
e.g. φD=50mm, L=200mm MBT50-BLK50-200

3LOCK DJ BORING HEAD with DJ BORING BIT

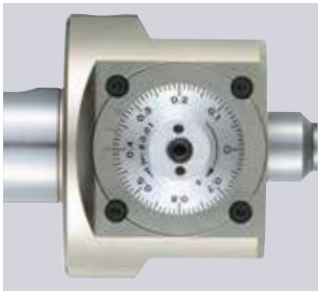
NIKKEN

High Pressure Coolant Through type is available Please contact with us.

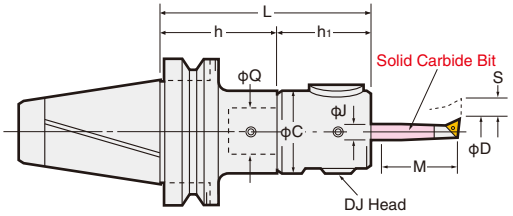
Easy to Set Micron Accuracy



DJ



▲1Graduation:0.01mm on dia.



TAPER	Code No.	Boring Range	Boring Depth	L	C	Bit Hole Size	Shank Code No.	Head Code No.	Bit Stroke	Insert Tip Code No.
	MBTNo.-MinD-L	D	M			J	MBTNo.Q-h	Q-MinD-h1	S	
No.40	MBT40-DJ3- 90A	3～28	14～ 80	90	50	10	MBT40-Q26- 50	Q26-DJ3-40A	5.2	J10
	(MIT40) -135A			135			- 95			
	-DJ8- 94AN	3～50	14～130	94	59	16	MBT40-Q26- 50	-DJ8-44AN	6.0	J16
	-139AN			139			- 95			
No.50	MBT50-DJ3-105A	3～28	14～ 80	105	50	10	MBT50-Q26- 65	Q26-DJ3-40A	5.2	J10
	(MIT50) -210A			210			-170N			
	-DJ8-109AN	3～50	14～130	109	59	16	MBT50-Q26- 65	-DJ8-44AN	6.0	J16
	-214AN			214			-170N			

★MIN. dial readout on dia.: 0.01mm, Sub scale: 0.005mm, 0.8mm/rev.
★Each boxed set of **DJ3** and **DJ8** Boring Bars include 4 pcs of **DJ** Boring Bits as standard.
Bits included for **MBT40-DJ8-94A : J16-8-40, J16-18-80, J16-28-85, J16-38-85**
Bits included for **MBT40-DJ8-94AN : J16-8-40, J16-18-60, J16-28-65, J16-38-65**
★**DJ** Boring Bar without Boring Bits is also available. Please add **"-BD"** at the end of Code No. **e.g. MBT40-DJ3-90A-BD**
★Shank and **DJ** Head (including Boring Bits) are delivered in separate packages.
★Please refer ☞**P.106** for Boring Bits. Please refer ☞**P.118** for cutting condition.

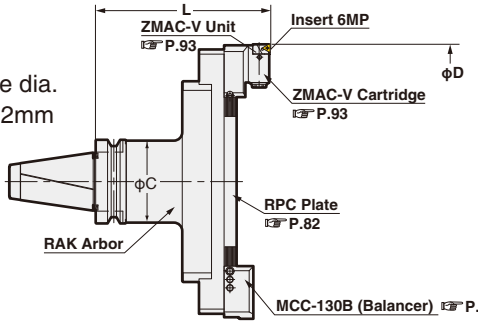
3LOCK BALANCE-CUT BAC ADVANCED BORING ARBOR for LARGE DIA. NIKKEN



BAC-V

For Finishing

- Min. dial read out:main scale dia. 0.02mm, sub scale dia.0.002mm
- Boring Dia:ϕ130～595mm

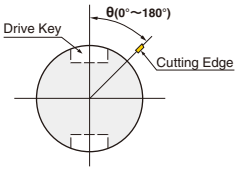


P.119

Boring Dia:ϕ130～595mm **for Finishing.**

TAPER	Code.No	D MIN.～MAX.	L	C	Arbor No.	RPC Plante No	Cartridge (Balancer)	Weight (kg)
No.40	MBT40 -BAC130-205V	130～195	205	61	MBT40-RAK-130A	RPC-130	MCCZ-130V (MCC-130B) Insert Tip 6MP	6.8
	(MIT40)-BAC180-205V	180～245				-180		7.8
No.50	MBT50 -BAC130-185V, 235V, 285V	130～195	185, 235, 285	90	MBT50-RAK-110A, -160A, -210A	RPC-130		13.0, 14.5, 17.5
	(MIT50)-BAC180-185V, 235V, 285V	180～245				-180		13.5, 15.0, 18.0
	-BAC230-185V, 235V, 285V	230～295				-230		14.0, 15.5, 18.5
	-BAC280-185V, 235V, 285V	280～345				-280		14.5, 16.0, 19.0
	-BAC330-210V*	330～395	210 (220*)	98	MBT50-RAK330-125 MIT50-RAK330-135	RPC-330		16.2
	-BAC380-210V*	380～445				-380		16.5
	-BAC430-210V*	430～495				-430		17.5
	-BAC480-210V*	480～545				-480		18.5
	-BAC530-210V*	530～595				-530		19.5

★**"C" grade (Coated)** Inserts are supplied as standard. Please refer ☞ **P.117** for cutting condition.
★Unit **"M5HZ-55V"** is provided as standard, please refer ☞**P.82** for Arbor (**RAK**) and Plate (**RPC**).
★Arbor, Plate and Cartridge are delivered in separate packages.
★When ordering, please let us know machine maker and model no. to avoid the interfererce with tool magazine of **ATC**.
★The location of cutting edge is same as drive key in standard.
The different location is available, please specify **θ** in Code No. **e.g. MBT50-BAC180-235V (90°)**
★The boring arbors marked*with **MIT50**, L (gauge length) is 220. **e.g. MIT50-BAC330-220V**



View from Cutting edge.

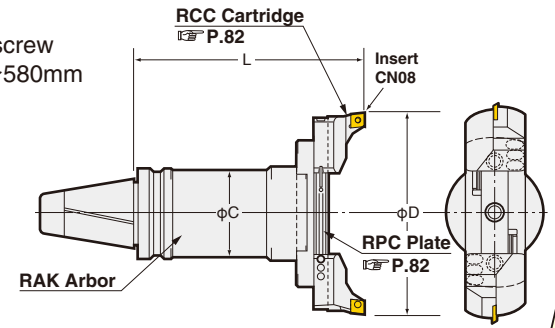
3LOCK BALANCE-CUT RAC BORING ARBOR for LARGE DIA. NIKKEN



RAC

For Roughing

- With slight adjust screw
- Boring Dia:ϕ130～580mm



P.74

Boring Dia:ϕ130～580㎜ **for Roughing.**

TAPER	Code.No	D MIN.～MAX.	L	C	Arbor No.	RPC Plate No.	Cartridge No. for Large dia.	Weight (kg)
No.40	MBT40 -RAC130-205	130～180	205	61	MBT40-RAK-130A	RPC-130	For Heavy Duty Boring of Iron and Cast Iron RCC-130 ×2 Insert Tip CN08	6.8
	(MIT40)-RAC180-205	180～230				-180		7.8
No.50	MBT50 -RAC130-185, 235, 285	130～180	185, 235, 285	90	MBT50-RAK-110A, -160A, -210A	RPC-130		11.3, 12.8, 15.8
	(MIT50)-RAC180-185, 235, 285	180～230				-180		11.8, 13.3, 16.3
	-RAC230-185, 235, 285	230～280				-230		12.3, 13.8, 16.8
	-RAC280-185, 235, 285	280～330				-280		12.8, 14.3, 17.3
	-RAC330-210*	330～380	210 (220*)	98	MBT50-RAK330-125 MIT50-RAK330-135	RPC-330		15.5
	-RAC380-210*	380～430				-380		16.5
	-RAC430-210*	430～480				-430		17.5
	-RAC480-210*	480～530				-480		18.5
	-RAC530-210*	530～580				-530		19.5

★The Code No. on above table are the boring arbors with **RCC-130** cartridge (Inset tip: **CN08**) the Heavy Duty Boring of Iron and Cast Iron . Please refer ☞**P.116** for cutting condition.
★Boring arbor with cartridges & insert for Steel, Stainless Steel and Cast Iron **(E)** , for Aluminum **(A)** and for Through Hole & Multi Sheets **(K)** are available. Please refer ☞**P.82** for cartridges. **e.g. MBT50-RAC130-185E**
★Please refer ☞ **P.82** for Arbor (**RAK**) and Plate (**RPC**).
★Arbor, Plate and Cartridge are delivered in separate packages.
★When ordering, please let us know machine maker and model no. to avoid the interference with tool magazine of **ATC**.
★The location of cutting edge is same as drive key in standard.
The different location is available, please specify **θ** in Code No. **e.g. MBT50-RAC180-235 (90°)**
★The boring arbors marked ＊with **MIT50**, L (gauge length) is 220. **e.g. MIT50-RAC330-220**

3LOCK MBT FACE MILL ARBOR / SHOULDER CUTTER ARBOR NIKKEN



FMA
Photo. shows with face mill cutter.

JIS B4113 Face Mill Cutter

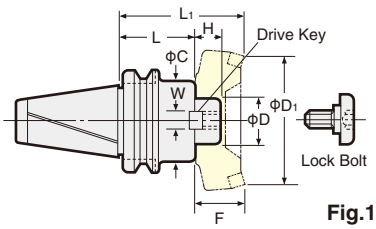


Fig.1

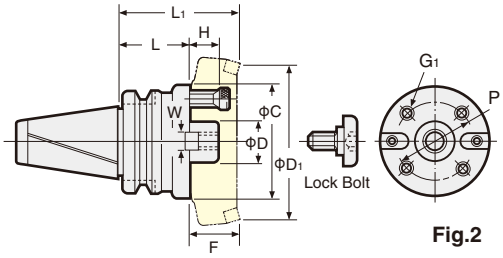


Fig.2

3LOCK tooling (MBT) can be used as the triple contact tooling on the M/C where spindle is BT double face contact system.

TAPER	Code No. (φD -L)	Arbor H	Arbor C	Arbor W	Weight (kg)	With Cutter L1	With Cutter D1	With Cutter F	Drive Key	Lock Bolt	Fig.
No.40	MBT40-FMA25.4 - 45, 90	22	50	9.5	1.5 , 3.1	95,140	80	50	FW 5	FM12	1
	-FMA31.75 - 45, 75	30	60	12.7	1.7 , 3.1	105,135	100	60	FW13	FM16	
	-FMA38.1 - 60	34	80	15.9	2.9	120	125		FW18	FM20	
No.50	MBT50-FMA25.4 - 45, 90,150	22	58	9.5	3.7 , 4.6 , 5.5	95,140,200	80	50	FW 5	FM12	1
	-FMA31.75 - 45, 75,105	30	70	12.7	4.5 , 5.3 , 6.1	105,135,165	100	60	FW12,13	FM16	
	-FMA38.1 - 45, 75	34	80	15.9	4.3 , 5.6	105,135	125		FW18,19	FM20	
	-FMA50.8 - 45, 75	36	100	19	4.9 , 6.8		160		FW23,24	FM24	
	-FMA47.625- 75*	38	128.57	25.4	7.7	135	200		FW26	*	2

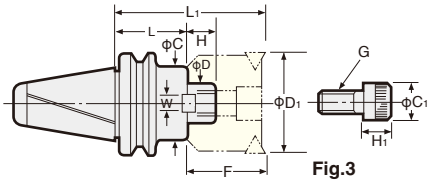


Fig.3

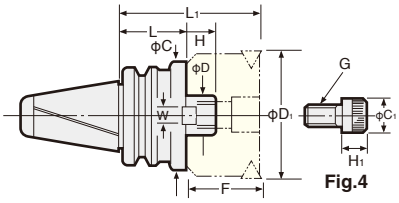


Fig.4

3LOCK tooling (MBT) can be used as the triple contact tooling on the M/C where spindle is BT double face contact system.

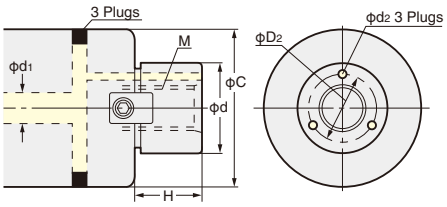
FMC

TAPER	Code No. (φD -L)	Arbor H	Arbor C	Arbor W	Weight (kg)	With Cutter L1	With Cutter D1	With Cutter F	With Cutter G Cap Bolt	C1	H1	Fig.
No.40	MBT40-FMC22-45, 90	18	45	10	1.3 , 2.0	85 , 130	50	40	M10×30	16	10	3
	-FMC27-60, 90	20	60	12	1.5 , 2.2	110 , 140	80	50	M12×35	18	12	4
	-FMC32-60, 75	22	85	14	2.3 , 2.6	110 , 125	125		M16×35	24	16	
No.50	MBT50-FMC22-60,105,150	18	45	10	4.2 , 4.7 , 5.3	100,145,190	50	40	M10×30	16	10	3
	-FMC27-45, 90,150	20	70	12	4.1 , 5.5 , 7.3	95,140,200	80	50	M12×35	18	12	
	-FMC32-45, 75,105	22	85	14	4.2 , 5.5 , 7.0	95,125,155	125		M16×35	24	16	

★Drive keys, L wrench and bolt are supplied as standard.
★The arbor weight is only for the arbor.
★The different type of the cap bolt may be used for the recent cutter. Please check the specification.
★The arbor marked * requires 4 fixing bolts **(FMA47.625 : M16, P=101.6)**
★Extended length is available as an option. **MBT50-FMA25.4 -200, 250,···500**
-FMA31.75-150, 200,···500
-FMA38.1 -150, 200,···500



High Feed Cutter Arbor with Coolant Hole



Code No.	Cutter Dia.	φd	φC	M	H	Coolant Hole φD2	Coolant Hole φd1	Coolant Hole φd2
FMH22 (22.225)	φ50, φ52 φ63, φ66	22 (22.225)	47 60	M10×1.5	18 (17)	16	6~8	3
FMH27 (25.4)	φ80	27 (25.4)	76 (70)	M12×1.75	20 (22)	19.5 (18.5)	8~10	3.5
FMH32 (31.75)	φ100	32 (31.75)	96	M16×2.0	22 (30)	24	10~13	4
FMH40 (38.1)	φ125	40 (38.1)	100	M20×2.5	26 (34)	30 (29)	10~15	5
FMH50.8	φ160	50.8		M24×3.0	36	37.5	15~20	7

★Fixing dimension is basically based on **FMA/FMC**. ★The combination of the other cutter dia. are also available.

3LOCK tooling (MBT) can be used as the triple contact tooling on the M/C where spindle is BT double face contact system.

FMH High Feed Cutter Arbor with Coolant Hole

TAPER	Code No. (φD-φC-L)	Arbor H	Arbor C	Arbor W	Arbor C1	Arbor C2	Arbor H1	Arbor H2	Weight (kg)	Drive Key	Lock Bolt	G Cap Bolt
No.40	MBT40-FMH22 - 47 (60)-45	18	47 (60)	10	16		10		1.3 (1.4)	FW 8		M10×30
	-FMH27 - 60 (76)-60	20	60 (76)	12	18	—	12	—	1.8 (2.2)	FW11	—	M12×35
	-FMH32 - 96-60	22	96	14	24		16		2.9	FW16		M16×35
	-FMH40 -100-60	26	100	16	50	27	14	6	3.1	FW22	FM20	—
No.50	MBT50-FMH22 - 47 (60)-60	18	47 (60)	10	16		10		4.2 (4.5)	FW 8		M10×30
	-FMH27 - 60 (76)-45	20	60 (76)	12	18	—	12	—	3.9 (4.1)	FW10	—	M12×35
	-FMH32 - 96-45	22	96	14	24		16		4.2	FW15		M16×35
	-FMH40 -100-45	26	100	16	50	27	14	6	5.1	FW20	FM20	—
	-FMH50.8 -100-45	36		19	65	37		10	4.4	FW23	FM24	

★**FMH22.225, FMH25.4, FMH31.75, FMH38.1** are also available.
★**For FMH22, there are two types of φC, φ47 and φ60.**
For FMH27, there are two types of φC, φ60 and φ76.

3LOCK MBT ZERO FIT TYPE MILLING CHUCK

NIKKEN



CZF

Fig.1

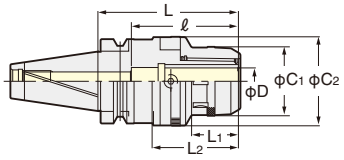
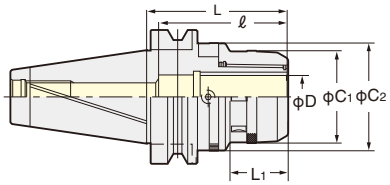


Fig.2



Explanation of the Code No.

MBT40 – CZF20 – 105

- 105: Nominal Gauge Length
- CZF20: Chucking Capacity ΦD / Zero Fit Type Milling Chuck
- MBT40: Shank No.

3LOCK tooling (MBT) can be used as the triple contact tooling on the M/C where spindle is BT double face contact system.

PAT.

TAPER	Code No.	C1	C2	L	L1	L2	ℓ	Weight(kg)	Fig.	Collet
No.40	MBT40-CZF20-105, 120	51.5	66.5	105, 120	35	64.5	80	2.1, 2.5	1	KM20 CCK20
	-CZF25-105, 120	59.5	74.5			68		2.4, 2.9		KM25 CCK25
	-CZF32-120	69	80.5	120	42	81	105	2.8		KM32 CCK32
No.50	MBT50-CZF20-105, 165	51.5	66.5	105, 165	35	–	80	4.6, 6.0	2	KM20 CCK20
	-CZF25-105, 165	59.5	74.5					5.0, 6.8		KM25 CCK25
	-CZF32-105, 165	69	80.5		42		105	5.3, 7.4		KM32 CCK32

★Spanner is available as an option.
CZF20 type : 9HC22, CZF25 type : 9HC25, CZF32 type : 9HC32



★Wrench to adjust run-out (**9ZFL**) is available as an option.

Wrench to adjust
9ZFL



★Multi-Cam style is available. **e.g. MBT40-CZF32-120-C3**. (3 Cams) Please contact us for more detail.

★Please note that the acceptable shank tolerance is h6~h7.
★Please add "**P**" at the end of Code No. for the high speed type. **e.g. MBT40-CZF25-105P**
★Please refer ☞ **P.33, P.34** for **KM**, **CCK** collet.

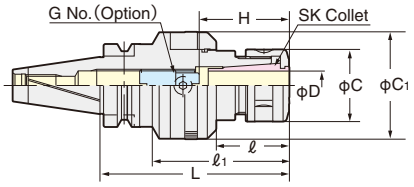
3LOCK MBT ZERO FIT TYPE SLIM CHUCK

NIKKEN



SZF

Fig.1

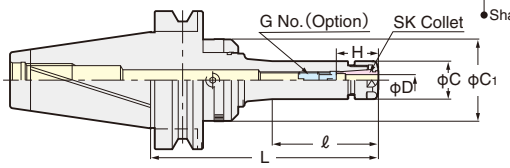


Explanation of the Code No.

MBT40 – SZF10 C – 90

- 90: Nominal Gauge Length
- C: High Pressure Centre Through
- SZF10: Chucking Capacity / Zero Fit Type Slim Chuck
- MBT40: Shank No.

Fig.2



3LOCK tooling (MBT) can be used as the triple contact tooling on the M/C where spindle is BT double face contact system.

PAT.

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	H	G No.(Option)	Weight(Kg)	Fig.	Collet
No.40	MBT40-SZF 6C- 90,150	0.7~6.0	90, 150	37, 60	–	19.5	40.5,48.5	26~31	SKG 6- 6HG	1.3, 1.7	2	SK 6
	-SZF10C- 90,150	1.75~10.0		37, 97		27.5	48.5	35~41	SKG10-10HG	1.5, 1.9		SK10
	-SZF16C- 90,150	2.75~16.0				40	59.5	45~57	SKG16-12HG	1.8, 2.2		SK16
	-SZF25C-120,150	7.5~25.4	120, 150	55, 86	84, 114	55	66.5	60~65	SKG25-18HGD	2.4, 2.9	1	SK25
No.50	MBT50-SZF 6C-105,165	0.7~6.0	105, 165	41, 63	–	19.5	40.5,59.5	26~31	SKG 6- 6HG	4.0, 4.2	2	SK 6
	-SZF10C-105,165	1.75~10.0		41, 101		27.5	48.5	35~41	SKG10-10HG	4.5, 4.9		SK10
	-SZF16C-105,165	2.75~16.0				40	59.5	45~57	SKG16-12HG	5.0, 5.4		SK16
	-SZF25C-135,165	7.5~25.4	135, 165	71, 101		55	66.5	60~70	SKG25-24HG	5.8, 6.0		SK25

★Adjust screw (G No.), wrench to adjust run-out (**9ZFL**) and **SKL** spanner are available as an option. **SZF6C: SKL-6W, SZF10C: SKL-10, SZF16C: 9HC16, SZF25C: 9HC25**



★**Please use "P" class or "A" type SK collet.** ☞ **P.175**
★For centre through coolant application please use **SK J** type nut and cap for your preference. Please note that the length of **J** type nut is 6mm longer than the standard **SK** Nut. ☞ **P.49**
★For High Speed type, Code No. is "**SZF-P**". **e.g. MBT40-SZF10C-90P**
In this case, **GH Handle** is required. ☞ **P.48**
★Multi-Cam style is available. **e.g. MBT40-SZF16C-90-C3**. (3 Cams) Please contact us for more detail.

・Drill chuck, side lock holder or morse taper sleeve are not supplied with **3LOCK** shank. To prevent the swarf contamination to the gap between spindle flange and tool flange, these kinds of chucks with **2LOCK** shank is available.

3LOCK SPINDLE FLANGE CLEANER

NIKKEN

JAPAN PAT.P

Spindle Flange Cleaner for 3LOCK Tooling and NC5 Tooling.



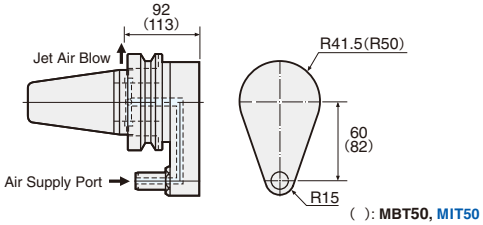
CLEF

Let's clean your spindle flange just before the fine machining to keep ATC repeatability accuracy higher.

Do not rotate your spindle, just supply the 0.5MPa dry air from the stopper block in approx. 30sec., then the intermittent jet air blow from the spindle flange cleaner will clean your spindle flange surface.

MBT40-CLEF- 92
MBT50-CLEF-113

MIT40-CLEF- 92
MIT50-CLEF-113



( ): **MBT50**, **MIT50**

★Stopper Block is not included. When ordering, please specify the name of M/C builder, model No. and the drawing of the spindle flange☞ **P.282**

SPINDLE TAPER CLEANER

NIKKEN



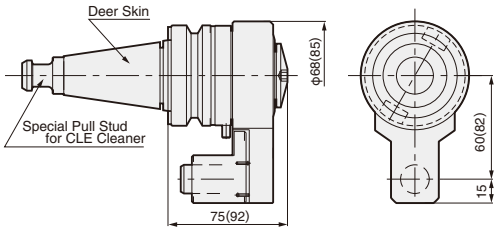
CLE

Let's clean your spindle taper just before the fine machining.

Rotate your spindle at 50～150min^{-1}, then the spindle cleaner will rotate to clean your spindle taper.
Please be careful, MAX. rotation speed of your spindle is 150min^{-1}.

BT40-CLE-100
BT50-CLE-120

IT40-CLE-100
IT50-CLE-120



★Special Pull Stud for CLE Cleaner is supplied as standard. Please specify the Pull Stud Code No.
★Stopper Block is not included. When ordering, please specify the name of M/C builder, model No. and the drawing of the spindle flange. ☞**P.308**

AUTOMATIC OIL SUPPLY HOLDER

NIKKEN



ZP

For Improvement of Tap run-out accuracy and extended tap life.

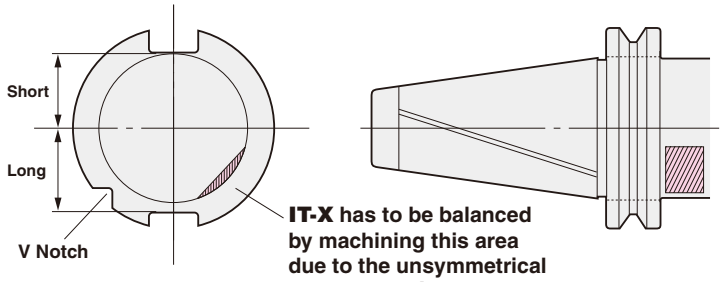
Automatic oil or grease supply of a required amount can be done with this holder before your tapping operation.

TAPER	Code No.	ϕD1	ϕD2	L	Capacity of tank	Discharge /Stroke	Weight (Kg)	Nozzle (Standard Accessories)
No.30	BT30-ZP60-200	60	64	200	100cm^3	0～3.0cm^3	1.2	ZP-10, ZP-10G, ZP-20
No.40	BT40-ZP80-279	80	84	279	300cm^3	0～3.5cm^3	3.3	ZP-10, ZP-10G, ZP-20, ZP-30
No.50	BT50-ZP95-312	96	100	312	500cm^3	0～3.5cm^3	6.0	

MIT TOOLING SYSTEM

NIKKEN

What is MIT Shank Tooling?



IT-X has to be balanced by machining this area due to the unsymmetrical design of **IT** (Drive Key Slot and V Notch).

MIT Shank is **3LOCK SYSTEM** for IT shank.
IT shank is based on ISO 7388/1-'83 (DIN69871-'90) and its flange has an unsymmetrical shape.
-Depth of Drive Key Slots are different.
-V Notch on one side.
Therefore, MIT shank Multi-Lock Milling Chuck, MINI-MINI Chuck, Slim Chuck and VC Holder have a flat cut just under the V flange for mass balancing as standard.

3LOCK MIT MULTI LOCK MILLING CHUCK

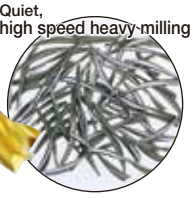
NIKKEN



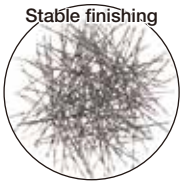
C
Centre Through
MAX. 7MPa

The cutting chips show us the actual machining capability.

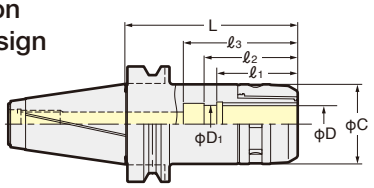
Quiet, high speed heavy-milling



Stable finishing



ANNIVERSARY Type
—Powerful gripping torque—
- High rigidity
- High precision
- Compact design



TAPER	Code No.	C1	D	D1	L	ℓ1	ℓ2	ℓ3	Collet	Weight (kg)
No.40	MIT40-C12- 90	33	12	12	90	48	53	58	KM12 CCK12	1.6
	-120*1				120					1.9
	-C16- 60	44	16	16	60	51	58	65	KM16 CCK16	1.4
	- 90*1				90					1.7
	-120				120					2.0
	-C20- 80	52	20	20	80	59	66	80	KM20 CCK20 CCNK20	1.6
	- 90				90					1.8
	-120				120					2.2
	-C25- 85	60	25	25	85	61	70	75	KM25 CCK25 CCNK25	2.1
	-120				120		72	80		2.5
	-C32- 95*	64	32	25	95	67	82	-	KM32 CCK32 CCNK32	2.1
	-105				105		81	95		2.5
	-120				120		77	107		2.8
No.50	MIT50-C12-105	33	12	12	105	48	53	58	KM12 CCK12	4.0
	-165*1				165					4.6
	-C16-105	44	16	16	105	51	58	65	KM16 CCK16	4.2
	-165*1				165					4.8
	-200*1				200					5.1
	-C20-105	52	20	20	105	59	66	80	KM20 CCK20 CCNK20	4.5
	-165*1				165					5.1
	-200*1				200					5.7
	-C25-105	60	25	25	105	61	72	80	KM25 CCK25 CCNK25	4.8
	-135*1				135					5.2
	-165*1				165					5.6
	-C32- 90	69	32	25	90	70	81	107	KM32 CCK32 CCNK32	4.3
	-105				105					4.6
	-120				120					5.1
	-135				135					5.6
	-165				165					6.4
	-C42- 95*	86	42	42	95	74	80	85	KM42 CCK42 CCNK42	5.5
	-120*1				120		100	110		6.6
	-135*1				135		115	125		7.2
	-165*1				165		115	125		8.6

★Spanner is available as an option. **C12(φ30) : 9HC12, C12A(φ33) : 9HC12A, C16:9HC16, C20:9HC20, C25:9HC25, C32&φC1=64:9HC25, C32:9HC32, C42:9HC42**
★Please note the acceptable shank tolerance is h7.
★Please refer ☞ P.172 for **KM**, **CCK** and **CCNK** collets.
★**For heavy duty milling, please grip the end mill shank longer than ℓ1.**
★Stopper for direct chucking can not beused for **MIT40-C32- 95*** and **MIT50-C42- 95*** **The Code No. of the stopper C20:9MC20, C25:9MC25, C32:9MC32, C42:9MC42**
★**NK** and **CCNK** Collet can not be used for **MIT50-C42- 95***.
★**MIT Milling Chucks marked *1 are available as an option.**
★**MIT50-C32-200, 250** and **MIT50-C42-200, 250** are available as an option.
★**C22** style is available.
★Please add"**F**"for the flange through tool coolant type;
MIT40-C20F- 90, MIT50-C20F-105
-C25F- 90, -C25F-105
-C32F-105, -C32F-105
-C42F-120

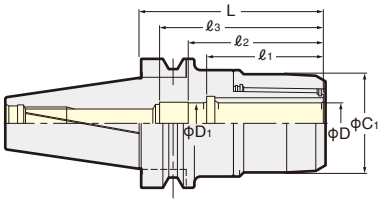
3LOCK MIT HIGH SPEED MILLING CHUCK NIKKEN



C-G

Centre Through
MAX. 7MPa

ANNIVERSARY Type
—Powerful gripping torque—
- High rigidity
- High precision
- Compact design



High Speed 3LOCK tooling (MIT) can be used as the triple contact tooling on the M/C where spindle is IT double face contact system. **PAT.**

TAPER	Code No.	C1	D	D1	L	ℓ1	ℓ2	ℓ3	MAX. (min-1)	Collet	Weight (kg)
No.40	MBT40-C12- 90G	33	12	12	90	48	53	58	30,000	KM12 CCK12	1.6
	-C16- 60G	44	16	16	60	50	57	65	25,000	KM16 CCK16	1.4
	-C20- 80G	52	20	20	80	59	66	80	25,000	KM20 CCK20 CCNK20	1.6
	-C25- 85G	60	25	25	85	61	70	75	20,000	KM25 CCK25 CCNK25	2.1
	-C32- 95G*	64	32	25	95	67	82	-	20,000	KM32 CCK32 CCNK32	2.1
	-105G				105		81	95			2.5
No.50	MBT50-C12-105G	33	12	12	105	48	53	58	20,000	KM12 CCK12	4.0
	-C16-105G	44	16	16		51	58	65	20,000	KM16 CCK16	4.2
	-C20-105G	52	20	20		59	66	80	20,000	KM20 CCK20 CCNK20	4.5
	-C25-105G	60	25	25		61	72	80	20,000	KM25 CCK25 CCNK25	4.8
	-C32- 90G*	69	32	25	90	70	81	107	15,000	KM32 CCK32 CCNK32	4.3
	-105G				105						4.6
	-120G				120						5.1
	-C42- 95P*	86	42	42	95	74	80	85	15,000	KM42 CCK42 CCNK42	5.5

★Please note the acceptable shank tolerance is h6.
★Please refer ☞ P.172 for **KM** and **CCK** collet.
★**GH Handle** is available as an option. ☞ P.48
C12G : GH12, C16G : GH16, C20G : GH20, C25G : GH25, C32G : GH32
★Spanner for **C42P** is **9HC42**.
★Please note the acceptable shank tolerance is h7.
★Please refer ☞ P.172 for **KM**, **CCK** and **CCNK** collets.
★**For heavy duty milling, please grip the end mill shank longer than ℓ1.**
★Stopper for direct chucking cannotbeused for MIT40-C32- 95* and MIT50-C42- 95*
The Code No. of the stopper C20:9MC20, C25:9MC25, C32:9MC32, C42:9MC42
★**NK** and **CCNK** Collet can not be used for MIT50-C42- 95*.



Explanation of the Code No.
MIT40 - C20 - 70 G
- Symbol of High Speed
- Nominal Gauge Length
- Chucking Capacity
- Symbol of Milling Chuck
- Shank No.

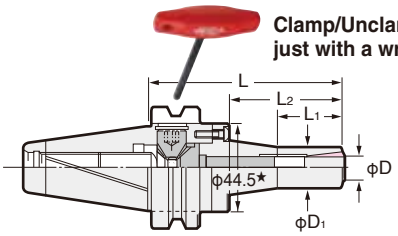
3LOCK MIT MINI-MINI CHUCK ADVANCED ALPHA NEW NIKKEN



Centre Through
MAX. 7MPa

The best chuck for the small dia.cutting tool

MAX. 30,000min-1 & G2.5
Gripping from Front Nose
Run-Out Accuracy:3μm at 4D



MMC **PAT.** ★ : MMC12=φ52.4

TAPER	Code No.	Chucking Range φD	L	φD1	L1	Collet	MAX.(min-1)	Weight (kg)
No.40	MIT40-MMC 8C- 90-AA	2～ 8	90	20	33	PMK 8	30,000	1.4
	-120-AA		120		40	PMK 8		1.5
	-MMC12C- 90-AA	4～12	90	30	35	PMK12 VMK12	30,000	1.7
	-120-AA		120		60			1.8
No.50	MIT50-MMC 8C-105-AA	2～ 8	105	20	33	PMK 8	20,000	4.4
	-135-AA		135		40	PMK 8		4.5
	-165-AA		165					4.6
	-MMC12C-105-AA	4～12	105	30	35	PMK12 VMK12	20,000	4.6
	-135-AA		135		60			4.7
	-165-AA		165		70			4.8

★Wrench is supplied as standard. ★**MPK, PMK, VMK** collet is available as an option. Please refer ☞ P.38
★Please add "**F**" for the flange through tool coolant type; MIT40-MMC 8F- 90-AA,120-AA -MIT50-MMC 8F-105-AA,120-AA
-MMC12F- 90-AA,120-AA -MMC12F-105-AA,120-AA

3LOCK MIT SLIM CHUCK

NIKKEN

High precision
High speed
Powerful gripping



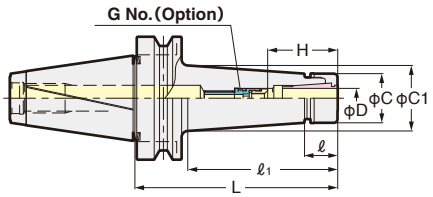
SK

Centre Through
MAX. 7MPa



Dampening effect
⊕
Jet Spray Coolant Supply
=
Over 3 times of extended Tool life
(for HSS & Carbide Drills)

Perfect Sealing



When SK J type nut is used, the total chuck length will be extended by 6mm. **PAT.**

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	H	G No.(Option)	Weight(kg)	SK Collet
No.40	MIT40-SKT 6C- 90	0.7～6.0	90	19.8	60	19.5	25.2	26～31	SKG 6- 6HG	1.1	SK 6
	-120		120		90		29.4			1.4	
	-SKT10C- 90	1.75～10.0	90	22	60	27.5	32.9	35～41	SKG10-10HG	1.2	SK10
	-120		120		90		37.1			1.4	
	-150		150		120		41.3			1.6	
	-SKT13C- 90	2.75～13.0	90	26	52	33.0	36.6	39～51	SKG13-10HG	1.4	SK13
	-120		120		85		41.2			1.6	
	-150		150		110		44.7			1.8	
	-SKT16C- 90	2.75～16.0	90	27	60	40.0	44.7	45～57	SKG16-12HG	1.5	SK16
	-120		120		90		48.9			1.7	
	-150		150		120		53.1			1.9	
	-SKT20C- 90	3.5～20.0	90	28.5	60	48.5	53.0	47～63	SKG20-18HG	1.6	SK20
	-120		120		92		57.4			2.0	
	-SKT25C- 90	7.5～25.4	90	31	62.6	55.0	59.5	60～65	SKG25-18HGD	1.8	SK25
	-120		120		92.2		59.3			2.4	
No.50	MIT50-SKT 6C-105	0.7～6.0	105	19.8	62	19.5	25.5	26～31	SKG 6- 6HG	3.8	SK 6
	-165		165		122		33.8			4.0	
	-SKT10C-105	1.75～10.0	105	22	62	27.5	33.1	35～41	SKG10-10HG	4.2	SK10
	-165		165		122		41.5			4.6	
	-SKT13C-105	2.75～13.0	105	26	65	33.0	38.4	39～51	SKG13-10HG	4.0	SK13
	-165		165		125		46.8			4.3	
	-SKT16C-105	2.75～16.0	105	27	62	40.0	44.9	45～57	SKG16-12HG	4.7	SK16
	-165		165		122		53.3			5.1	
	-SKT20C-105	3.5～20.0	105	28.5	62	48.5	53.2	47～63	SKG20-18HG	4.3	SK20
	-165		165		122		61.6			5.0	
	-SKT25C-105	7.5～25.4	105	31	62	55.0	59.4	60～70	SKG25-24HG	5.2	SK25
	-165		165		122		67.8			5.6	

★Collet, adjust screw(G No.)and **GH Handle** are available as an option.
The Code No. of the **GH Handle** is **SKT6C-P: GH6, SKT10C-P: GH10, SKT13C-P: GH12, SKT16C-P: GH16, SKT20C-P: GH20, SKT25C-P: GH25**



★Please refer ☞ **P.175** for **SK** collet and please refer ☞ **P.49** for **J** type nut, .
★All chucks are high pressure centre through tool coolant type.
SK6C:φ4～φ6, SK10C:φ6～φ10, SK16C:φ10～φ16, SK25C:φ16～φ25
★Please add"**F**"for the flange through tool coolant type;

MIT40-SK 6F- 90,120	MIT50-SK 6F-105,165
-SK10F- 90,120	-SK10F-105,165
-SK13F- 90,120	-SK13F-105,165
-SK16F- 90,120	-SK16F-105,165
-SK25F-120	-SK25F-105,165



High Speed SLIM CHUCK



GH Handle ☞ **P.48**

Code No.	MAX.(min-1)	Code No.	MAX.(min-1)
MIT40-SKT 6C- 90P, 120P	30,000	MIT50-SKT 6C-105P, 165P	20,000
-SKT10C- 90P, 120P		-SKT10C-105P, 165P	
-SKT13C- 90P, 120P		-SKT13C-105P, 165P	
-SKT16C- 90P, 120P	25,000	-SKT16C-105P, 165P	
-SKT20C- 90P, 120P		-SKT20C-105P, 165P	
-SKT25C- 90P, 120P	20,000	-SKT25C-105P, 165P	15,000

★The extended gauge length **(L)** is available. Please contact with us.

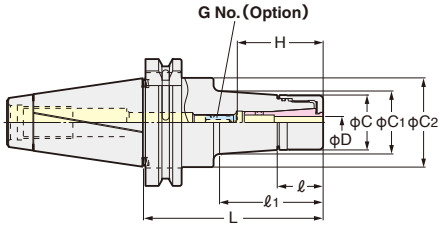
3LOCK MIT VC HOLDER

NIKKEN



VC
Centre Through
MAX. 7MPa

With TiN Bearing Nut
MAX.40,000min^{-1} & G2.5
Run-Out Accuracy:3μm at 4D



PAT.

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	C2	H	G No. (Option)	Weight (kg)	MAX. (min^{-1})	Collet
No.40	MIT40-VC 6- 60	2.0~6.0	60	23	23	27.5	27.5	44.7	35~45	VCG 6- 8A	1.1	30,000	VCK 6
	- 90		90		51.9		31.5				1.3		
	-120		120		81.9		35.7				1.5		
	-VC13- 60	3.0~12.0	60	29	29	40	40.0		50~60	VCG13-15A	1.2		VCK13
	- 90		90		70		44.7				1.5		
	-120		120		100						1.9		
No.50	MIT50-VC 6-105	2.0~6.0	105	23	64.9	27.5	33.4	70.1	35~45	VCG 6- 8A	3.9	20,000	VCK 6
	-135		135		94.9		37.6				4.1		
	-165		165		124.9		41.8				4.4		
	-VC13-105	3.0~12.0	105	29	64.9	40	45.0		50~60	VCG13-15A	4.1		VCK13
	-135		135		94.9		49.2				4.5		
	-165		165		124.9		53.4				4.9		

★TiN Bearing Nut is supplied as standard.
★When the axial stopper is required, please use Adjust Screw(**G No.**)
★Please add**"-RP"**at the end of Code No. for Rust Proof Treatment **VC** Holder. **e.g.** MIT40-VC13-60-RP
★Please use **VC J** type Nut & Cap for Centre Through Coolant.
When **VC J** type Nut is used, the total holder length will be extended to 6mm.
★MIT40-VC 6-150, MIT40-VC13-150, MIT50-VC13- 90, -120 are available as semi-standard.
★Please refer ☞ **P.36** for **VCK** collet.
★Collet, Adjust Screw(G No.)and **GH Handle** are available an option.
★All series are for High Speed Rotation.



GH Handle ☞ **P.48**

3LOCK MIT FACE MILL ARBOR

NIKKEN



Photo. shows with face mill cutter.

JIS B4113 Face Mill Cutter

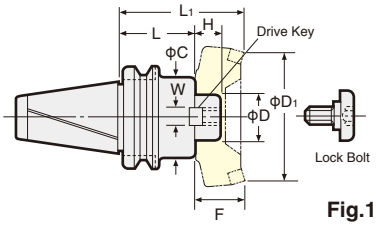


Fig.1

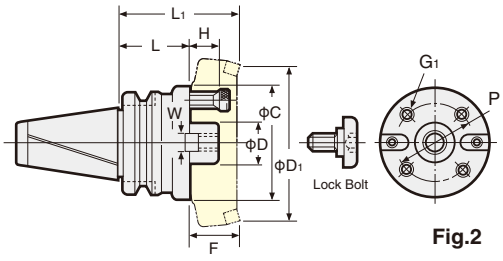


Fig.2

3LOCK tooling(MIT)can be used as the triple contact tooling on the M/C where spindle is IT double face contact system.

FMA

TAPER	Code No. (φD-L)	Arbor H	Arbor C	Arbor W	Weight (kg)	With Cutter L1	With Cutter D1	With Cutter F	Drive Key	Lock Bolt	Fig.
No.40	MIT40-FMA25.4 - 45	22	50	9.5	1.5	95	80	50	FW 5	FM12	1
	- 90				3.1	140					
	-FMA31.75 - 45	30	60	12.7	1.7	105	100	60	FW12	FM16	
	- 75				3.1	135			FW13		
	-FMA38.1 - 60	34	80	15.9	2.9	120	125	60	FW18	FM20	
No.50	MIT50-FMA25.4 - 45	22	58	9.5	3.7	95	80	50	FW 5	FM12	1
	- 90				4.6	140					
	-150				5.5	200					
	-FMA31.75 - 45	30	70	12.7	4.5	105	100	60	FW12	FM16	
	- 75				5.3	135			FW13		
	-105				6.1	165					
	-FMA38.1 - 45	34	80	15.9	4.3	105	125	60	FW18	FM20	
	- 75				5.6	135			FW19		
	-FMA50.8 - 45	36	100	19	4.9	105	160	60	FW23	FM24	
	- 75				6.8	135			FW24		
	-FMA47.625- 75	38	128.57	25.4	7.7	135	200	60	FW26	*	2

3LOCK MIT SHOULDER CUTTER ARBOR

NIKKEN

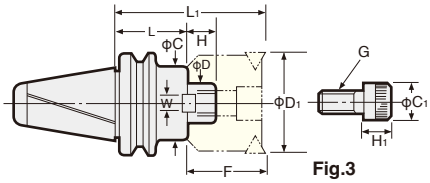


Fig.3

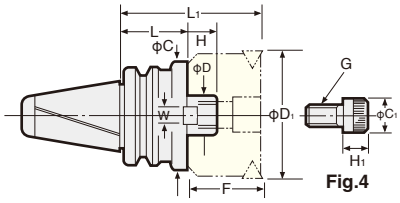


Fig.4

3LOCK tooling (MIT) can be used as the triple contact tooling on the M/C where spindle is IT double face contact system.

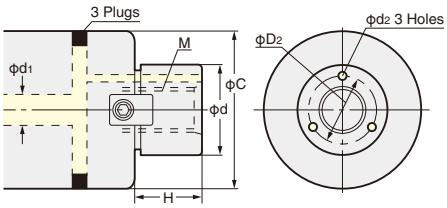
FMC FMA For SANDVIK T-MAX Shoulder Face Mill/SUMITOMO CHE5,000 Series

TAPER	Code No. (φD-L)	Arbor H	Arbor C	Arbor W	Weight (kg)	With Cutter L1	With Cutter D1	With Cutter F	With Cutter G Cap Bolt	C1	H1	Fig.
No.40	MIT40-FMC22- 45	18	45	10	1.3	85	50	40	M10 × 30	16	10	3
	- 90				2.0	130						
	-FMC27- 60	20	60	12	1.5	110	80	50	M12 × 35	18	12	4
	- 90				2.2	140						
	-FMC32- 60	22	85	14	2.3	110	125	50	M16 × 35	24	16	
	- 75				2.6	125						
No.50	MIT50-FMC22- 60	18	45	10	4.2	100	50	40	M10 × 30	16	10	3
	-105				4.7	145						
	-150				5.3	190						
	-FMC27- 45	20	70	12	4.1	95	80	50	M12 × 35	18	12	
	- 90				5.5	140						
	-150				7.3	200						
	-FMC32- 45	22	85	14	4.2	95	125	50	M16 × 35	24	16	
	- 75				5.5	125						
	-105				7.0	155						

★Drive keys, L wrench and bolt are supplied as standard.
★The arbor weight is only for the arbor.
★The different type of the cap bolt may be used for the recent cutter. Please check the specification.
★The arbor marked ＊ requires 4 fixing bolts **(FMA47.625 : M16, P=101.6)**
★Extended length is available as an option. MIT50-FMA25.4 -200, 250,···500
-FMA31.75-150, 200,···500
-FMA38.1 -150, 200,···500



High Feed Cutter Arbor with Coolant Hole



Code No.	Cutter Dia.	φd	φC	M	H	Coolant Hole φD2	Coolant Hole φd1	Coolant Hole φd2
FMH22(22.225)	φ50, φ52 φ63, φ66	22(22.225)	47 60	M10×1.5	18(17)	16	6~8	3
FMH27(25.4)	φ80	27(25.4)	76(70)	M12×1.75	20(22)	19.5(18.5)	8~10	3.5
FMH32(31.75)	φ100	32(31.75)	96	M16×2.0	22(30)	24	10~13	4
FMH40(38.1)	φ125	40(38.1)	100	M20×2.5	26(34)	30(29)	10~15	5
FMH50.8	φ160	50.8	100	M24×3.0	36	37.5	15~20	7

★Fixing dimension is basically based on **FMA/FMC**. ★The combination of the other cutter dia. are also available.

3LOCK tooling (MIT) can be used as the triple contact tooling on the M/C where spindle is IT double face contact system.

FMH High Feed Cutter Arbor with Coolant Hole

TAPER	Code No. (φD-L)	Arbor H	Arbor C	Arbor W	Arbor C1	Arbor C2	Arbor H1	Arbor H2	Weight (kg)	Drive Key	Lock Bolt	G Cap Bolt
No.40	MIT40-FMH22 - 47- 45	18	47	10	16	–	10	–	1.3	FW 8	–	M10 × 30
	- 60- 45		60						1.4			
	-FMH27 - 60- 60	20	60	12	18	–	12	–	1.8	FW11	–	M12 × 35
	- 76- 60		76						2.2			
	-FMH32 - 96- 60	22	96	14	24	–	16	–	2.9	FW16	–	M16 × 35
	-FMH40 -100- 60	26	100	16	50	27	14	6	3.1	FW22	FM20	–
No.50	MIT50-FMH22 - 47- 60	18	47	10	16	–	10	–	4.2	FW 8	–	M10 × 30
	- 60- 60		60						4.5			
	-FMH27 - 60- 45	20	60	12	18	–	12	–	3.9	FW10	–	M12 × 35
	- 76- 45		76						4.1			
	-FMH32 - 96- 45	22	96	14	24	–	16	–	4.2	FW15	–	M16 × 35
	-FMH40 -100- 45	26	100	16	50	27	14	6	5.1	FW20	FM20	–
	-FMH50.8 -100- 45	36	100	19	65	37	14	10	4.4	FW23	FM24	–

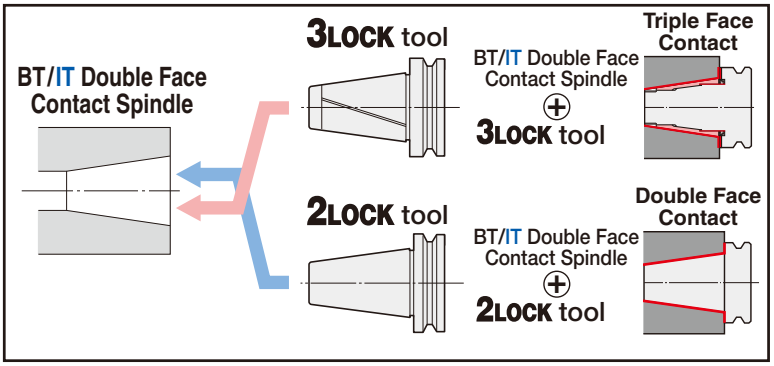
★**FMH22.225, FMH25.4, FMH31.75, FMH38.1** are also available.
★**For FMH22, there are two types of φC, φ47 and φ60.**
For FMH27, there are two types of φC, φ60 and φ76.

2LOCK TOOLING SYSTEM

NIKKEN

2LOCK tool(NBT)is created from the technology of the **3LOCK** tool(MBT)with its acclaimed cutting and safe and reliable triple contact type. A series of MAJOR DREAM Holders and high speed tooling were created using the **2LOCK** tool system.

- MIN. Z-axis displacement at high speed rotation
- Improved run-out accuracy of ATC repeatability

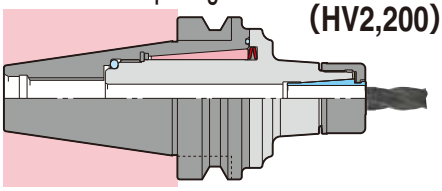


2LOCK tool can also be used on the machine with BT/IT standard spindle.

The Nikken 2LOCK tooling system is not a simple taper/flange double face contact tool. The built-in dampening mechanism and front chucking mechanism have a variety of features.

MAJOR DREAM Holder ☞P199 ····Dampening Mechanism⊕TiN Bearing Nut (HV2,200)

The dampening effect generates the excellent cutting.

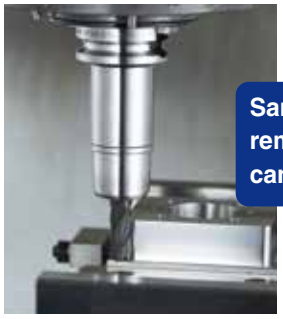


Run-Out Accuracy



High Speed Milling Chuck ☞P191



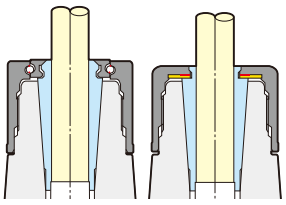


Same Appearance, but a remarkable improvement can be found when cutting.

High Speed Slim Chuck ☞P196, Anniversary type VC Holder ☞P201

Unstable accuracy caused by tightening torque and the possibility of rust.

The Tin coated bearing plate reduced friction. This is the best for the thrust load.



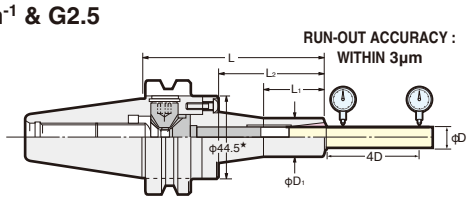
Simple external design without the notches to be tightened with GH handle Ultra high speed rotation

8 deg. internal taper proven with the Slim Chuck for the accuracy and gripping torque.

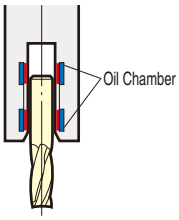


Mini-Mini Chuck ☞P193···Expert for Small Dia. End Milling

30,000min^{-1} & G2.5



× HYDRAULIC CHUCK
No Gripping at Front Nose
Gripping Torque?



○ MINI-MINI CHUCK
Gripping from Front Nose Powerful Gripping Torque/3times



⚠ Caution Please read.

If chattering instability occurs during processing with the BT/IT double face contact tool(eg, if the M/C pulling force is reduced), be sure to select the **3LOCK** tool of the internal expanding mechanism. This enables stable cutting by the taper, flange and the internal expanding mechanism.

MBT40, MIT40: Pulling force of 500 kg or greater
MBT50, MIT50: Pulling force of 1,500 kg or greater

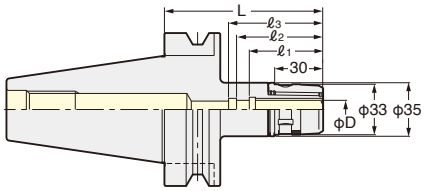
2LOCK MILLING CHUCK

NIKKEN

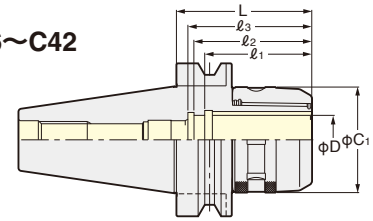


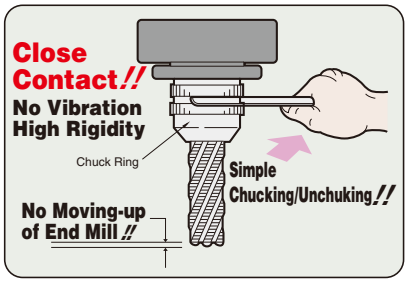
C

C12



C16～C42





Centre Through
MAX. 7MPa

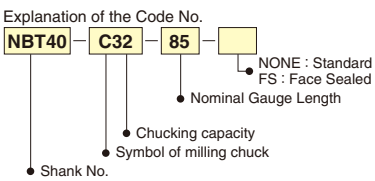
2LOCK tooling (NBT) can be used as the double face contact tooling on the M／C where spindle is BT double face contact system.
2LOCK tooling can also be used on the M／C with BT standard spindle.

TAPER	Code No.	C1	L	ℓ1	ℓ2	ℓ3	Collet	Weight (kg)
No.30	NBT30-C12- 55	33	58	48	53	58	CCK12 KM12	0.6
	-C16- 55, 70	44	57, 70	50	58	65	CCK16 KM16	0.7, 0.8
	-C20- 65*1, 75	52	67, 75	57	66	80	CCK20 CCNK20 KM20 NK20	1.0, 1.1
	-C25- 75*2, 80, 90	55*4	75, 82, 90	56,56,60	65,65,72	68,68,80	CCK25 CCNK25 KM25 NK25	1.2, 1.3, 1.4
	-C32- 90*3,100	64*4	90, 100	67	66,77	68,76	CCK32 CCNK32*5 KM32 NK32*5	1.4, 1.5
No.40	NBT40-C12- 65, 90,120	33	65,90,120	48	53	58	CCK12 KM12	1.3, 1.6, 1.9
	-C16- 60, 75, 90,105,120	44	63,75,90,105,120	50	58	65	CCK16 KM16	1.4, 1.6, 1.7, 1.9, 2.0
	-C20- 70, 90,105,120	52	71,90,105,120	57	66	80	CCK20 CCNK20 KM20 NK20	1.6, 1.8, 2.0, 2.2
	-C25- 70, 90,105,120	60	70,90,105,120	60	72		CCK25 CCNK25 KM25 NK25	1.8,2.1,2.3,2.5
	-C32- 85,105,120,135	69	85,105,120,135	64,70 70,70	77,81 81,81	77,81 81,81	CCK32 CCNK32 KM32 NK32	2.1,2.5,2.8,3.1
No.50	NBT50-C12-105,135,165	33	105,135,165	48	53	58	CCK12 KM12	4.0, 4.3, 4.6
	-C16-105,135,165,200	44	105,135,165,200	50	58	65	CCK16 KM16	4.2, 4.5, 4.8,5.2
	-C20-105,135,165,180,200	52	105,135,165,180,200	57	66	80	CCK20 CCNK20 KM20 NK20	4.5, 4.8, 5.1, 5.4,5.6
	-C25-105,135,165,200	60	105,135,165,200	60	72		CCK25 CCNK25 KM25 NK25	4.8, 5.2, 5.6,6.1
	-C32- 90,105,120,135,165 -200,250,300,400,500	69	90,105,120,135,165 200,250,300,400,500	70	81	81	CCK32 CCNK32 KM32 NK32	4.3, 4.6, 5.1, 5.6, 6.4 7.8, 9.2, 10.6, 13.4, 16.2
	-C42- 95,105,120,135,165 -200,250,300,400,500	86	95,105,120,135,165 200,250,300,400,500	73	115	125	CCK42 CCNK42 KM42 NK42	5.5, 5.8, 6.6, 7.2, 8.6 9.5, 11.7, 14.0, 18.4, 22.8

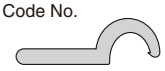
★**MULTI LOCK Milling Chuck is a Base Holder for machining centre.**
The following straight shank tooling to suit Milling Chucks are available.

[**S-C**] Milling Chuck (Extension Type) ☞ **P.33**
[**K-MMP**] MINI-MINI Chuck ☞ **P.37**
[**K-MMC**] MINI-MINI Chuck ☞ **P.37**
[**K-SK**] Slim Chuck ☞ **P.47**
[**S-SK**] Long Size Slim Chuck ☞ **P.47**
[**D-NPU**] NC Drill Chuck ☞ **P.53**
[**NZ**] Tapper Chuck ☞ **P.64**
[**K-MT**] Morse Taper Socket ☞ **P.55**
[**K-ZMAC-V**] ZMAC-V Boring Bar ☞ **P.105**
[**K-RAC**] RAC Boring Bar ☞ **P.105**
[**S-ZMACX-V**] ZMAC-V Boring Bar for Deep Hole ☞ **P.106**
[**K-DJ**] DJ Boring Bar ☞ **P.107**
[**K-SCA**] Stub Arbor ☞ **P.90**
[**S-MDPE**] PRO-END MILL ☞ **P.127**
[**MS○-A○-○**] Straight shank shrink fit holder ☞ **P.203**

Explanation of the Code No.



★Please refer ☞ **P.190** for heavy duty type milling chuck with larger arbor diameter.
★*5 **NK32** and **CCNK32** collet can not be used on **NBT30-C32-90.**
★Please refer ☞ **P.192** for **KM**, **NK**, **CCK**, **CCNK** collet.
★**CKFN-D** and **CKFN-DC**(With O-ring)can be used for the direct chucking application, when centre through tool coolant. **CCK** collet and **CKFN** nut can be used for collet application.
★For **"L"** dimension of centre through coolant type milling chuck is same as the above standard, however , refer ☞ **P.129** for Code No.
★For **"L"** dimension of flange through coolant type milling chuck is same as the above standard, however , refer ☞ **P.131** for Code No.
★Spanner is available as an option. **C12 : 9HC12A, C16: 9HC16, C20: 9HC22, C25 (φC1=55mm) : 9HC22, C25 (φC1=60mm) , C32 (φC1=64mm) : 9HC25, C32 (φC1=69mm) : 9HC32, C42: 9HC42**
＊4 C25(φC1=55mm): 9HC22, ＊4 C32(φC1=64mm): 9HC25.





FS type
For machining of aluminum
PAT.

★Please note the acceptable shank tolerance is h7.
★The milling chucks marked ＊1, ＊2 and ＊3 may not be used by the restriction of the diameter under V flange of your M/C.
★FS(Face Seal)types are available for **C25～C42** of **BT40/BT50**. There are 2 types; **FSJ**: With J groove, **FS**: Without J groove
★**Heavy duty type milling chucks with larger arbor diameter are available. Please add"R"at the end of Code No.**
NBT50-C32-200R, 250R, 300R
-C42-200R, 250R, 300R



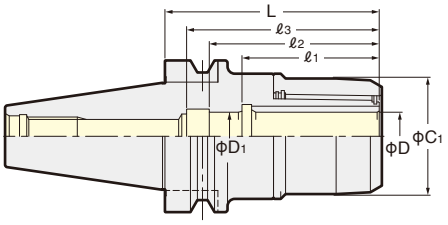
2LOCK HIGH SPEED MILLING CHUCK

NIKKEN

Anniversary type & High Speed
Applicable for High Pressure
Centre Through Coolant by CCK Collet



C-G





GFS type
For machining of aluminum
PAT.

Centre Through MAX. 7MPa

2LOCK tooling (NBT) can be used as the double face contact tooling on the M／C where spindle is BT double face contact system.
2LOCK tooling can also be used on the M／C with BT standard spindle.

High Speed

TAPER	Code No.	D	D1	C1	L	ℓ1	ℓ2	ℓ3	MAX. (min-1)	Collet	Weight (kg)
No.30	NBT30-C12- 55G	12	12	33	58	48	53	58	40,000	CCK12 KM12	0.5
	-C16- 55G, 70G	16	16	40	57, 70	50	58	65		CCK16 KM16	0.6, 07
	-C20- 65G*1, 75G	20	20	48	67, 75	57	66	80	30,000	CCK20 CCNK20 KM20 NK20	0.9, 1.0
	-C25- 75G*2, 80G,90G	25	25	55	75, 82, 90	56,56,60	65	68,68,80	25,000	CCK25 CCNK25 KM25 NK25	1.2, 1.3
	-C32- 90G*3,100G	32	32,25	62	90, 100	67	66, 77	68, 76	10,000	CCK32 CCNK32*5 KM32 NK32*5	1.4, 1.5
No.40	NBT40-C12- 65G, 90G	12	12	33	65, 90	48	53	58	30,000	CCK12 KM12	1.1, 1.3
	-C16- 60G, 75G, 90G -105G,120G	16	16	40	63,75,90 105,120	50	58	65	25,000	CCK16 KM16	1.2, 1.4,1.5, 1.7 1.9
	-C20- 70G, 90G -105G, 120G	20	20	48	71, 90 105,120	57	66	80		CCK20 CCNK20 KM20 NK20	1.4, 1.7, 1.9 2.1
	-C25- 70G, 90G,105G -120G	25	25	55	70,90 105,120	60	72		20,000	CCK25 CCNK25 KM25 NK25	1.6,2.0, 2.3 2.6
	-C32- 85G,105G,120G -135G	32	25	68	85,105 120,135	64,70 70,70	77,81 81,81	107		CCK32 CCNK32 KM32 NK32	1.9, 2.3, 2.9 3.2
No.50	NBT50-C12-105G,135G,165G	12	12	33	105,135,165	48	53	58	20,000	CCK12 KM12	3.9, 4.2, 4.5
	-C16-105G,135G,165G -200G	16	16	40	105,135 165, 200	50	58	65		CCK16 KM16	4.1, 4.4, 4.7 5.1
	-C20-105G,135G,165G -180G,200G	20	20	48	105,135 165,180,200	57	66	80		CCK20 CCNK20 KM20 NK20	4.4, 4.8, 5.2 5.4, 5.7
	-C25-105G,135G,165G -200G	25	25	55	105,135 165,200	60	72		15,000	CCK25 CCNK25 KM25 NK25	4.6, 5.2, 5.8 6.3
	-C32- 90G,105G,120G -135G,165G,200G	32	25	68	90,105,120 135,165,200	70	81	107		CCK32 CCNK32 KM32 NK32	4.3, 4.7,5.2, 5.7 6.5, 7.6
	-C42-*4 95P,105P,120P	42	42	86	95,105,120	73	115	125	12,000	CCK42 CCNK42 KM42 NK42	5.5, 5.8, 6.6

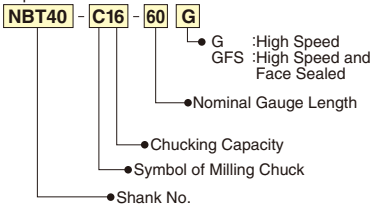
★**GH Handle** is available as an option. Please refer ☞ **P.48**
C12-G:GH12, C16-G:GH16, C20-G:GH20, C25-G:GH25, C32-G (φC1=68mm):GH32, C32-G (φC1=62mm):GH32S,
★Please note the acceptable shank tolerance is h6.
★Please add **"RP"** at the end of Code No. for **Rust Proof Treatment Milling Chuck**.
e.g. NBT40-C32-85G-RP
★Centre Through Coolant application;
For direct chucking, **CKFN-D nut** is recommended.
With a collet, **CCK collet** and **CKFN nut** are recommended.
★**NBT30-C20-65G** marked *1 may not be used by the M/C restriction. In this case, please use **NBT30-C20-75G**.
★**NBT50-C42-110P** is also available.
★Please refer ☞ **P.192** for **KM, NK, CCK** and **CCNK** collet.
★The milling chucks marked *1, *2 and *3 may not be used by the restriction of the diameter under V flange of your M/C.
★*5 **NK32** and **CCNK32** collet can not be used on **NBT30-C32-90.**





CCK collet & CKFN nut
The Jet Coolant Pressure creates a tornado effect, ensuring efficient swarf dispersal.

Explanation of the Code No.



CENTRE COOLANT STRAIGHT COLLET

PAT.

NIKKEN



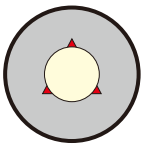
Suitable for all models of the NIKKEN MILLING CHUCK



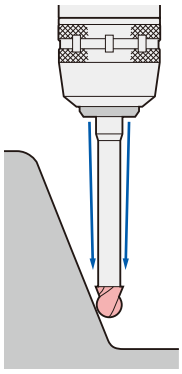
CCK Collet



Front Nut



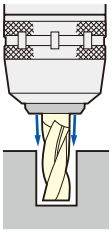
Jet Coolant ⊕ Prevention of Swarf entering the collet through the slots



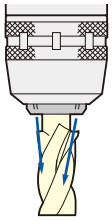
Explanation of the Code No.

CCK 32 – 10
- 10: ID of Collet
- 32: OD of Collet
- CCK: Symbol of CCK Collet

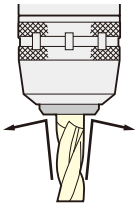
CCK :Centre Coolant
CCNK :Centre Coolant, Adjustable
KM :Standard
NK :Adjustable
ONK :Oil Hole Drill
OJK-A :Jet Coolant
OJK-S :Multiple Nozzles



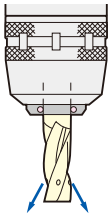
For grooving.



For cutters with cutting diameter which is larger than the shank diameter.



Prevention of the swarf contamination.



A front nut with an O-ring seal, for use with oil hole cutter, is also available as option.



CKFN-MN



CKFN-C

CCK Collet

CKFN front nut and **CCKL** spanner are available as an option.



Photo shows with front nut.

CCK

Style	CCK Collet Code No.(OD-ID)	Front Nut Code No.
CCK12	**CCK12**-3, 4, 5, 6, **8**, **10**	**CKFN12**
CCK16	**CCK16**-3, 4, 5, 6, **8**, **10**, **12**	**CKFN16**
CCK20	**CCK20**-6, 8, **10**, **12**, **16**	**CKFN20**
CCK25	**CCK25**-6, 8, **10**, **12**, **16**, **20**	**CKFN25**
CCK32	**CCK32**-6, 8, 10, 12, **16**, **20**, **25**	**CKFN32, CKFN32T**
CCK42	**CCK42**-6, 8, 10, 12, 16, **20**, **25**, **32**	**CKFN42**

★Above bold figures indicate "**ANNIVERSARY**" **type** Ⓝ **CCK Collet**.
★Please note the acceptable shank tolerance is h6~h7.
★Other metric sizes and imperial sizes, 1/8, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 13/16, 7/8, 1, 1·1/8, 1·1/4, 1·1/2"are also available.

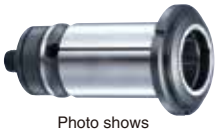


Photo shows with front nut.

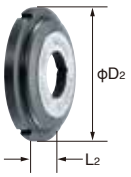
Cutter length adjustment on the collet is possible from front and back.

CCNK

Style	CCNK Collet Code No.(OD-ID)	Front Nut Code No.
CCNK20	**CCNK20**-6, 8, 10, 12, 16	**CKFN20**
CCNK25	**CCNK25**-6, 8, 10, 12, 16, 20	**CKFN25**
CCNK32	**CCNK32**-6, 8, 10, 12, 16, 20, 25	**CKFN32, CKFN32T**
CCNK42	**CCNK42**-6, 8, 10, 12, 16, 20, 25, 32	**CKFN42**

★Please note the acceptable shank tolerance is h6~h7.
★Other metric sizes and imperial sizes, 1/8, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 13/16, 7/8, 1, 1·1/8, 1·1/4, 1·1/2"are also available.

Front Nut CKFN



Explanation of the Code No.

CKFN 32 – 10
- 10: ID of Collet
- 32: OD of Collet
- CKFN: Symbol of Front Nut

Style	φD2	L2	Front Nut Code No.
CKFN12	19.5	7	**CKFN12** -3, 4, 5, 6, 8,10
CKFN16	28.5	8	**CKFN16** -3, 4, 5, 6, 8,10,12
CKFN20	33	8	**CKFN20** -6, 8,10,12,16
CKFN25	39	8.5	**CKFN25** -6, 8,10,12,16, 20
CKFN32	46.5	9	**CKFN32** -6, 8,10,12,16, 20, 25
CKFN32T	43	9	**CKFN32T**-6, 8,10,12,16, 20, 25
CKFN42	59.5	9	**CKFN42** -6, 8,10,12,16, 20, 25, 32



★The front nut for direct chucking is also available.
e.g. CKFN20-20D, CKFN25-25D, CKFN32-32D

★The Code No. fitted with O-ring is:
e.g. CKFN20-20DC, CKFN25-25DC, CKFN32-32DC

★**For C32 there are 2 sizes, CKFN32 = for nose ring diameter of φ69mm, CKFN32T = for nose ring diameter of φ64mm.**
★Jet Coolant type for the cutter with a cutter dia. larger than shank dia. is also available.
CKFN25-20MN, CKFN32-25MN, CKFN42-32M
★Front Nut fitted with an O-ring is also available.
e.g. The Code No. is **CKFN32-10C**
★The spanner is available as an option.
CKFN12:CCKL12, CKFN16:CCKL16
CKFN20:CCKL20
CKFN25, CKFN32T:CCKL25
CKFN32:CCKL32, CKFN42:CCKL42



KM

Photo shows **ANNIVERSARY type KM Collet**.

Style	KM Collet Code No.(OD-ID)
KM12	**KM12**-2, 3, 4, 5, 6, **7**, **8**, **9**,**10**
KM16	**KM16**-2, 3, 4, 5, 6, 7, **8**, **9**,**10**,**11**,**12**
KM20	**KM20**-2, 3, 4, 5, 6, 7, 8, 9,**10**,**11**,**12**,13,**14**,**15**,**16**
KM25	**KM25**-3, 4, 5, 6, 7, 8, 9,**10**,**11**,**12**,13,**14**,**15**,**16**,17,**18**,**19**, **20**, 21, **22**
KM32	**KM32**-3, 4, 5, 6, 7, 8, 9,10,11,12,13,14,**15**,**16**,17,**18**,**19**, **20**, 21, **22**, 23, **24**, **25**, 26, **30**
KM42	**KM42**-3, 4, 5, 6, 7, 8, 9,10,11,12,13,14,15,16,17,18,**19**, **20**, 21, **22**, 23, **24**, **25**, 26, 27, 28, 29, 30, 31, **32**, **40**

★For Synchronous Tapping Program : Special ID Collets for Tap Shank are also available.
★Other metric sizes and imperial sizes, 1/8, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 13/16, 7/8, 1, 1·1/8, 1·1/4, 1·1/2" are also available.
★The collets with bold character are the **"ANNIVERSARY" type** Ⓝ **KM Collet**.
Ordinary **KM** Collet can be used with **"ANNIVERSARY" type** Ⓝ **Milling Chuck**, but better performance can be found with the **"ANNIVERSARY" type** Ⓝ **KM Collet**.
★Please note the acceptable shank tolerance is h6~h7.

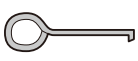
Cutter length adjustment on the collet is possible from front and back.



NK

Style	NK Collet Code No.(OD-ID)
NK20	**NK20**-3, 4, 5, **6**, 7, **8**, 9,**10**,11,**12**,13,14,15,**16**
NK22	**NK22**-3, 4, 5, **6**, 7, **8**, 9,**10**,11,**12**,13,14,15,**16**,17,18
NK25	**NK25**-3, 4, 5, **6**, 7, **8**, 9,**10**,11,**12**,13,14,15,**16**,17,18,19, **20**, 21, 22
NK32	**NK32**-3, 4, 5, **6**, 7, **8**, 9,**10**,11,**12**,13,14,15,**16**,17,18,19, **20**, 21, 22, 23, 24, **25**, 26
NK42	**NK42**-3, 4, 5, **6**, 7, **8**, 9,**10**,11,**12**,13,14,15,**16**,17,18,19, **20**, 21, 22, 23, 24, **25**, 26, 27, 28, 29, 30, 31, **32**

★For Synchronous Tapping Program : Special ID Collets for Tap Shank are also available.
★Other metric sizes and imperial sizes, 1/8, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 13/16, 7/8, 1, 1·1/8, 1·1/4, 1·1/2"are also available.
★The collets with bold character are standard.
★Please note the acceptable shank tolerance is h6~h7.
★Collet removal (**9CKR**) is available as an option.
★Please refer ☞ **P.33, P.34** for more detail of the straight collet.



2LOCK MINI-MINI CHUCK ADVANCED ALPHA NEW NIKKEN

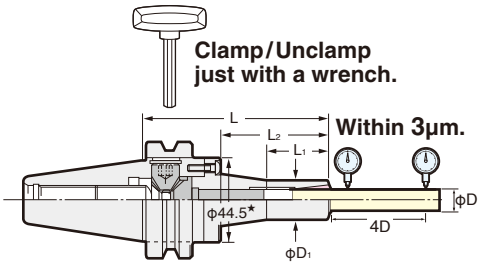


MMC

Extra-long sizes are added

EXPERT for SMALL DIA. END MILLING

30,000min^{-1} & G2.5 Gripping from Front Nose Run-Out Accuracy : 3μm at 4D



Dimension marked ★ is 52.4 for **MMC12**.

2LOCK tooling (NBT) can be used as the double face contact tooling on the M／C where spindle is BT double face contact system.
2LOCK tooling can also be used on the M／C with BT standard spindle.

High Speed

PAT.

TAPER	Code No.	D	L	D_1	L_1	L_2	Collet	MAX.min^{-1}	Weight(kg)
No.30	NBT30-MMC 4 -105 -AA	1～4	105	15	30	43	MPK 4	30,000	0.9
	MMC 8C-105 -AA	2～8		20	33	42	PMK 8 VMK 8		0.9
	MMC12C-105 -AA	4～12		30	35	44	PMK12 VMK12		1.1
No.40	NBT40-MMC 4 - 90 -AA	1～4	90	15	30	43	MPK 4	30,000	1.2
	8C- 90 -AA	2～8		20	33	42	PMK 8 VMK 8		1.2
	-120 -AA		120		40	72			1.3
	-150 -AA		150			102			1.4
	-180 -AA		180		70	132			1.5
	12C- 90 -AA	4～12	90	30	35	44	PMK 8 VMK 8		1.4
	-120 -AA		120		60	74			1.5
	-150 -AA		150		70	104			1.6
	-180 -AA		180		100	134			1.7
No.50	NBT50-MMC 4 -105 -AA	1～4	105	15	30	43	MPK 4	20,000	3.8
	8C-105 -AA	2～8		20	33	42	PMK 8 VMK 8		3.8
	-135 -AA		135		40	72			3.9
	-165 -AA		165			102			4.0
	-195 -AA		195		70	132			4.1
	12C-105 -AA	4～12	105	30	35	44	PMK12 VMK12		4.0
	-135 -AA		135		60	74			4.1
	-165 -AA		165		70	104			4.2
	-195 -AA		195		100	134			4.3

★Wrench **EA573KL-6 : MMC4, MMC8C MMCL12-M6T62 : MMC12** is attached as standard.
★**Extra-long sizes are added ＊Extra-long sizes : longer +30～90㎜ than conventional.**
★Collet is available as an option. Please refer ☞**P.38**
★Center through tool coolant type MINI-MINI Chuck is available for **MMC8** and **MMC12** type only.
Please add the letter **"C"** to the Code No. **e.g. BT40-MMC8C-90**
Please refer ☞**P.37**



EA573KL-6

Explanation of the Code No.

NBT40 - MMC4 - 90 - AA

- AA: Advanced alpha Direct Screw Type
- 90: Nominal Gauge Length
- MMC4: Chucking Capacity
- MMC: Symbol of Minimini chuck
- NBT40: Shank No.

2LOCK SLIM CHUCK

NIKKEN



SK
Photo shows **SK10** type.

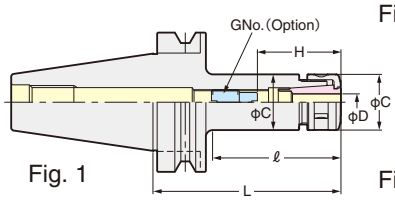


Fig. 1

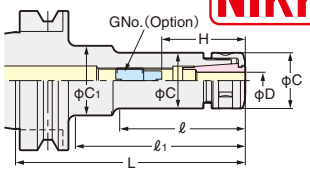


Fig. 2

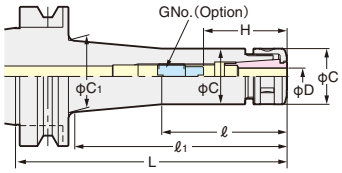


Fig. 3

Centre Through
MAX. 7MPa

2LOCK tooling (NBT) can be used as the double face contact tooling on the M／C where spindle is BT double face contact system.
2LOCK tooling can also be used on the M／C with BT standard spindle.

When SK J type nut is used, the total chuck length will be extended by 6mm.

PAT.

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	H	G No. (Option)	Weight (kg)	Fig	Collet
No.30	NBT30-SK 6C- 60	0.7 ～ 6.0	60	33	33	19.5	19.5	26～31	SKG 6- 6HG	0.7	1	SK 6
	- 90		90	56	65		32			0.7	2	
	-120		120	62	95					0.8		
	-SK10C- 45	1.75～10.0	45	22	22	27.5	27.5	33～41	SKG10-10HG	0.8	1	SK10
	- 60		60	35	35					0.9		
	- 75		75	50	50					1.0		
	- 90		90	65	65					1.0		
	-120		120	95	95					1.1		
	-SK13C- 60	2.75～13.0	60	35	35	33	33	39～51	SKG13-10HG	1.0		SK13
	- 75		75	50	50					1.1		
	- 90		90	65	65					1.1		
	-120		120	95	95					1.2		
	-SK16C- 60	2.75～16.0	60	37	37	40	40	47～52	SKG16-12HGE	1.1		SK16
	- 75		75	52	52			45～52	SKG16-10HG	1.2		
	- 90		90	67	67			45～57	SKG16-12HG	1.2		
	-120		120	97	97					1.3		
	-SK20 - 60 *	3.5～20.0	60	37	37	48.5	48.5	65～70	SKG-12S	0.7		SK20
	-SK20C- 75		75	52	52			50～55	SKG20-12HGE	0.9		
	- 90		90	67	67			47～63	SKG20-12HG	1.2		
	-SK25 - 90 *	7.5～25.4	90	67	67	55	55	55～75	SKG-12	1.5		SK25
No.40	NBT40-SK 6C- 60	0.7 ～ 6.0	60	30	30	19.5	19.5	26～31	SKG 6- 6HG	1.0	1	SK 6
	- 90		90	51	60		32			1.1	2	
	-120		120	60	90					1.4		
	-150		150		120		25			1.5	3	
	-SK10C- 60	1.75～10.0	60	32	32	27.5	27.5	33～41	SKG10-10HG	1.1	1	SK10
	- 75		75	45	45					1.2		
	- 90		90	48	60		40			1.2	2	
	-120		120	73	90					1.4		
	-150		150		118		34.5			1.6	3	
	-180		180		148		39			1.6		
	-200		200		168					2.0		
	-250		250		218					2.3		
	-SK13C- 60	2.75～13.0	60	28	28	33	33	39～51	SKG13-10HG	1.2	1	SK13
	- 75		75	43	43					1.3		
	- 90		90	58	58					1.4		
	-120		120	88	88		40			1.6	3	
	-150		150		118					1.8		
	-180		180	88	148					1.8		
	-200		200		168					2.2		
	-250		250		218					2.6		
	-SK16C- 60	2.75～16.0	60	32	32	40	40	45～52	SKG16-10HG	1.3	1	SK16
	- 75		75	43	43			45～57	SKG16-12HG	1.5		
	- 90		90	58	58					1.5		
	-120		120	88	88					1.7		
	-150		150	118	118					1.9		
	-180		180	148	148					2.0		
	-200		200	168	168					2.3		
	-250		250	218	218					2.8		
	-SK20C- 60	3.5～20.0	60	32	32	48.5	48.5	57～63	SKG20-16HG	1.3		SK20
	- 75		75	45	45			47～63	SKG20-18HG	1.4		
	- 90		90	60	60					1.6		
	-120		120	90	90					2.0		
	-SK25C- 75	7.5～25.4	75	47	47	55	55	60～65	SKG25-18HGE	1.7		SK25
	- 90		90	61	61				SKG25-18HGD	1.8		
	-120		120	91	91			60～70	SKG25-24HG	2.0		

2LOCK SLIM CHUCK

NIKKEN



SK
Photo shows **SK16** type.

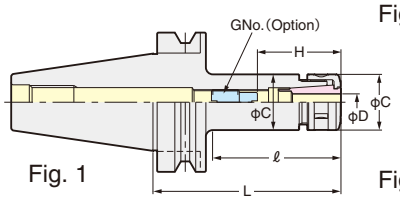


Fig. 1

Fig. 2

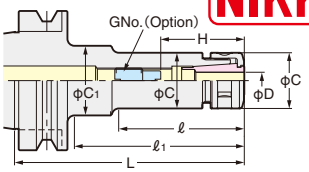
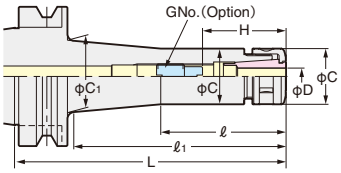


Fig. 3



Centre Through
MAX. 7MPa

2LOCK tooling (NBT) can be used as the double face contact tooling on the M／C where spindle is BT double face contact system.
2LOCK tooling can also be used on the M／C with BT standard spindle.

When SK J type nut is used, the total chuck length will be extended by 6mm.

PAT.

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	H	G No. (Option)	Weight (kg)	Fig	Collet
No.50	NBT50-SK 6C-105	0.7 ～ 6.0	105	55	64	19.5	32	26～31	SKG 6- 6HG	3.8	2	SK 6
	-135		135	60	92					3.9		
	-165		165		114					4.0		
	-200		200		151		30			4.2	3	
	-SK10C-105	1.75～10.0	105	57	57	27.5	27.5	33～41	SKG10-10HG	4.2	1	SK10
	-135		135	70	92		32			4.4	2	
	-165		165	75	114					4.6		
	-200		200		151		36			4.8	3	
	-225		225		178		40			5.0		
	-250		250		207					5.2		
	-300		300		257		60			5.5		
	-SK13C-105	2.75～13.0	105	62	62	33	33	39～51	SKG13-10HG	4.5	1	SK13
	-135		135	92	92					4.7		
	-165		165		122		45			4.9	2	
	-200		200		157					5.2	3	
	-250		250		207					5.7		
	-300		300		257					6.7		
	-SK16C-105	2.75～16.0	105	62	62	40	40	45～57	SKG16-12HG	4.7	1	SK16
	-135		135	92	92					4.9		
	-165		165	90	122		50			5.1	2	
	-200		200		157		52			5.5	3	
	-250		250		207					6.2		
	-300		300		257		60			6.7		
	-SK20C-105	3.5～20.0	105	62	62	48.5	48.5	47～63	SKG20-18HG	4.3	1	SK20
	-135		135	92	92					4.6		
	-165		165	122	122					5.0		
	-200		200	157	157					5.4		
	-250		250	207	207					6.2		
	-300		300	257	257					7.0		
	-SK25C-105	7.5～25.4	105	62	62	55	55	60～70	SKG25-24HG	5.2		SK25
	-135		135	92	92					5.4		
	-165		165	122	122					5.6		
	200		200	157	157					6.0		
	-250		250	207	207					6.8		
	-300		300	257	257					7.5		

★Please refer ☞**P.65** for use as Tap Holder for Synchronized Tapping.
★Please refer ☞**P.198** for **SK** collet.
★Collet, adjust screw (G No.) and spanner are available as an option.
The Code No. of the spanner is **SK6(C=φ18): SKL-6, SK6(C=φ19.5): SKL-6W, SK10: SKL-10, SK13: 9HC12A, SK16: 9HC16, SK20: 9HC22, SK25: 9HC25**
★**Please refer ☞P.196, P.197 for High Speed Slim Chuck(40,000min^{-1})**
★All Slim Chucks can be used for Centre Through Coolant type. Please refer ☞**P.52** for Centre Through Coolant Adjust Screw and ☞**P.304** for Centre Through Pull Stud.
★Please refer ☞**P.131** for Flange Through Coolant type.
★**NBT40-SK10-200, 250 NBT50-SK10-250, 300** are also available as semi-standard.
-SK16-200, 250 -SK16-250, 300
★Please add **"-RP"** at the end of Code No. for Rust Proof Treatment Slim Chuck. **e.g. NBT40-SK10-90-RP**
★Extended gauge length slim chucks with the straight arbor like as **Fig.1** are available.
NBT50-SK10C-200ST, -250ST. -300ST
-SK13C-200ST, -250ST, -300ST
-SK16C-200ST, -250ST, -300ST

2LOCK HIGH SPEED SLIM CHUCK (TAPER TYPE)

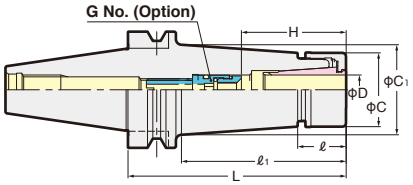
NIKKEN

MAX.40,000min^{-1} & G2.5



SKT-P

Centre Through
MAX. 7MPa



Explanation of the Code No.

NBT40 - SKT 10 C - 90 P

- P: Symbol of High Speed
- 90: Nominal Gauge Length mm
- C: Centre Through Tool Coolant
- 10: Chucking Capacity
- SKT: Symbol of New Slim Chuck
- NBT40: Shank No.

2LOCK tooling (NBT) can be used as the double face contact tooling on the M／C where spindle is BT double face contact system.
2LOCK tooling can also be used on the M／C with BT standard spindle.

When SK J type nut is used, the total chuck length will be extended by 6mm.

PAT.

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	H	G No. (Option)	MAX. min-1	Collet	Weight (kg)
No.30	NBT30-SKT 6C- 60P	0.7～6.0	60	19.8	35	19.5	21.7	26～31	SKG6-6HG	40,000	SK 6	0.7
	- 75P		75		50		23.8					0.7
	- 90P		90		65		25.9					0.7
	-SKT10C- 60P	1.75～10.0	60	22	35	27.5	29.4	35～41	SKG10-10HG		SK10	0.9
	- 75P		75		50		31.5					1.0
	- 90P		90		65		33.6					1.0
	-SKT13C- 60P	2.75～13.0	60	26	35	33	34.3	39～51	SKG13-10HG		SK13	1.0
	- 75P		75		50		36.4					1.1
	- 90P		90		65		38.5					1.1
	-SKT16C- 60P	2.75～16.0	60	27	37	40	41.4	47～52	SKG16-12HGE	30,000	SK16	1.1
	- 75P		75		52.6		43.6	45～52	SKG16-10HG			1.2
	- 90P		90		62.8		45	45～57	SKG16-12HG			1.2
No.40	NBT40-SKT 6C- 60P	0.7～6.0	60	19.8	30	19.5	21.0	26～31	SKG6-6HG	30,000	SK 6	1.0
	- 75P		75		45		23.1					1.1
	- 90P		90		60		25.2					1.1
	-120P		120		90		29.4					1.4
	-SKT10C- 60P	1.75～10.0	60	22	30	27.5	28.7	35～41	SKG10-10HG		SK10	1.1
	- 75P		75		45		30.8					1.2
	- 90P		90		60		32.9					1.2
	-120P		120		90		37.1					1.4
	-150P		150		120		41.3					1.6
	-SKT13C- 60P	2.75～13.0	60	26	30	33	33	39～51	SKG13-10HG		SK13	1.1
	- 75P		75		45		35.7					1.3
	- 90P		90		60		37.8					1.3
	-120P		120		90		42					1.6
	-150P		150		120		46.2					1.8
	-SKT16C- 60P	2.75～16.0	60	27	30	40	40	45～52	SKG16-10HG	25,000	SK16	1.3
	- 75P		75		45		42.6	45～57	SKG16-12HG			1.5
	- 90P		90		60		44.7					1.5
	-120P		120		90		48.9					1.7
	-150P		150		120		53.1					1.9
	-SKT20C- 60P	3.5～20.0	60	28.5	30	48.5	48.5	57～63	SKG20-16HG		SK20	1.3
	- 75P		75		45		50.9	47～63	SKG20-18HG			1.4
	- 90P		90		60		53.0					1.6
	-120P		120		92		57.4					2.0
	-SKT25C- 75P	7.5～25.4	75	31	47	55	57.3	60～65	SKG25-18HGE	20,000	SK25	1.7
	- 90P		90		62.6		59.5		SKG25-18HGD			1.8
No.50	NBT50-SKT 6C-105P	0.7～6.0	105	19.8	62	19.5	25.5	26～31	SKG6-6HG	20,000	SK 6	3.8
	-135P		135		92		29.6					3.9
	-165P		165		122		33.8					4.0
	-SKT10C-105P	1.75～10.0	105	22	62	27.5	33.1	35～41	SKG10-10HG		SK10	4.2
	-135P		135		92		37.3					4.4
	-165P		165		122		41.5					4.6
	-SKT13C-105P	2.75～13.0	105	26	62	33	38.1	39～51	SKG13-10HG		SK13	4.5
	-135P		135		92		42.3					4.7
	-165P		165		122		46.5					4.9
	-SKT16C-105P	2.75～16.0	105	27	62	40	44.9	45～57	SKG16-12HG		SK16	4.7
	-135P		135		92		49.1					4.9
	-165P		165		122		53.3					5.1
	-SKT20C-105P	3.5～20.0	105	28.5	62	48.5	53.2	47～63	SKG20-18HG		SK20	4.3
	-135P		135		92		57.4					4.6
	-165P		165		122		61.6					5.0
	-SKT25C-105P	7.5～25.4	105	31	62	55	59.4	60～70	SKG25-24HG	15,000	SK25	5.2
	-135P		135		92		63.6					5.4
	-165P		165		122		67.8					5.6

★Please refer ☞ P.49 for TiN Bearing Nut.
★Please add **"RP"** at the end of the Code No. for **Rust Proof Treatment Slim Chuck. e.g. NBT40-SKT10C-90P-RP**
★Collet, adjust screw (G No.) and **GH Handle** are available as an option.
★Please use **MDSK J type nut & cap for the Centre through tool coolant.** ☞ P.49
The Code No. of the **GH Handle** is **SKT6C-P: GH6, SKT10C-P: GH10, SKT13C-P: GH12, SKT16C-P: GH16, SKT20C-P: GH20, SKT25C-P: GH25**
★P class or A type SK collet is highly recommended to use. ☞ P.198



GH Handle
☞ P.48

2LOCK HIGH SPEED SLIM CHUCK (STRAIGHT TYPE) NIKKEN

MAX.40,000min^{-1} & G2.5



SK-P

Centre Through
MAX. 7MPa

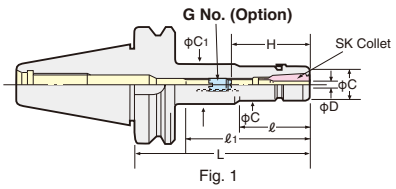


Fig. 1

Explanation of the Code No.
NBT40 - GSK 10 - 90 P
- P: Symbol of High Speed
- 90: Nominal Gauge Length mm
- 10: Chucking Capacity
- GSK: Symbol of New Slim Chuck
- NBT40: Shank No.

2LOCK tooling (NBT) can be used as the double face contact tooling on the M／C where spindle is BT double face contact system.
2LOCK tooling can also be used on the M／C with BT standard spindle.

When SK J type nut is used, the total chuck length will be extended by 6mm. **PAT.**

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	H	G No. (Option)	MAX. min^{-1}	Collet	Weight (kg)
No.30	NBT30-SK 6C- 60P	0.7 ～ 6.0	60	33	33	19.5	19.5	26～31	SKG 6- 6HG	40,000	SK 6	0.7
	- 90P		90	56	65		32					0.7
	-SK10C- 45P	1.75～10.0	45	22	22	27.5	27.5	33～41	SKG10-10HG		SK10	0.8
	- 60P		60	35	35							0.9
	- 75P		75	50	50							1.0
	- 90P		90	65	65							1.0
	-SK13C- 60P	2.75～13.0	60	35	35	33	33	39～51	SKG13-10HG		SK13	1.0
	- 75P		75	50	50							1.1
	- 90P		90	65	65							1.1
	-SK16C- 60P	2.75～16.0	60	37	37	40	40	47～52	SKG16-12HGE	30,000	SK16	1.1
	- 75P		75	52	52			45～52	SKG16-10HG			1.2
	- 90P		90	67	67			45～57	SKG16-12HG			1.2
	-SK20 - 60P*	3.5～20.0	60	37	37	48.5	48.5	65～70	SKG-12S		SK20	0.7
	-SK20C- 75P		75	52	52			50～55	SKG20-12HGE			0.9
	- 90P		90	67	67			47～63	SKG20-12HG			1.2
	-SK25 - 90P*	7.5～25.4	90	67	67	55	55	55～75	SKG-12		SK25	1.5
No.40	NBT40-SK 6C- 60P	0.7 ～ 6.0	60	30	30	19.5	19.5	26～31	SKG 6- 6HG	30,000	SK 6	1.0
	- 90P		90	51	60		32					1.1
	-120P		120	60	90							1.4
	-SK10C- 60P	1.75～10.0	60	32	32	27.5	27.5	33～41	SKG10-10HG		SK10	1.1
	- 75P		75	45	45							1.2
	- 90P		90	48	60		40					1.2
	-120P		120	73	90							1.4
	-150P		150		118		34.5					1.6
	-SK13C- 60P	2.75～13.0	60	28	28	33	33	39～51	SKG13-10HG		SK13	1.2
	- 75P		75	43	43							1.3
	- 90P		90	58	58							1.4
	-120P		120	88	88							1.6
	-150P		150		118		40					1.8
	-SK16C- 60P	2.75～16.0	60	32	32	40	40	45～52	SKG16-10HG	25,000	SK16	1.3
	- 75P		75	43	43			45～57	SKG16-12HG			1.5
	- 90P		90	58	58							1.5
	-120P		120	88	88							1.7
	-150P		150	118	118							1.9
	-SK20C- 60P	3.5～20.0	60	32	32	48.5	48.5	57～63	SKG20-16HG		SK20	1.3
	- 75P		75	45	45			47～63	SKG20-18HG			1.4
	- 90P		90	60	60							1.6
	-120P		120	90	90							2.0
	-SK25C- 75P	7.5～25.4	75	47	47	55	55	60～65	SKG25-18HGE	20,000	SK25	1.7
	- 90P		90	61	61				SKG25-18HGD			1.8
	-120P		120	91	91			60～70	SKG25-24HG			2.0
No.50	NBT50-SK 6C-105P	0.7 ～ 6.0	105	55	64	19.5	32	26～31	SKG 6- 6HG	20,000	SK 6	3.8
	-135P		135	60	92							3.9
	-165P		165		114							4.0
	-SK10C-105P	1.75～10.0	105	57	57	27.5	27.5	33～41	SKG10-10HG		SK10	4.2
	-135P		135	70	92		32					4.4
	-165P		165	75	114							4.6
	-SK13C-105P	2.75～13.0	105	62	62	33	33	39～51	SKG13-10HG		SK13	4.5
	-135P		135	92	92							4.7
	-165P		165		122		45					4.9
	-SK16C-105P	2.75～16.0	105	62	62	40	40	45～57	SKG16-12HG		SK16	4.7
	-135P		135	92	92							4.9
	-165P		165	90	122		50					5.1
	-SK20C-105P	3.5～20.0	105	62	62	48.5	48.5	47～63	SKG20-18HG		SK20	4.3
	-135P		135	92	92							4.6
	-165P		165	122	122							5.0
	-SK25C-105P	7.5～25.4	105	62	62	55	55	60～70	SKG25-24HG	15,000	SK25	5.2
	-135P		135	92	92							5.4
	-165P		165	122	122							5.6

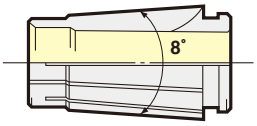
★Please refer ☞ P.49 for TiN Bearing Nut.
★Collet, adjust screw (G No.) and **GH Handle** are available as an option.
The Code No. of the **GH Handle** is **SK6C-P: GH6, SK10C-P: GH10, SK13C-P: GH12, SK16C-P: GH16, SK20C-P: GH20, SK25C-P: GH25**
★Please add **"RP"** at the end of the Code No. for **Rust Proof Treatment Slim Chuck. e.g. NBT40-SKT10C-90P-RP**
★Please use **MDSK J type nut & cap for the Centre through tool coolant.** ☞ P.49
★P class or A type SK collet is highly recommended to use. ☞ P.198
★Code No. marked * are not centre coolant tool coolant type.

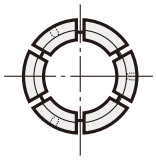

GH Handle
☞ P.48

SLIM CHUCK COLLET

NIKKEN







Explanation of the Code No.

SK 10 - 6 P

- P: Non: Standard; P:P class (Run-out Accuracy=3μm); A:A type (for End Mill Shank)
- 6: MAX. Chucking Dia.
- 10: Style No.
- SK: Symbol of SK Collet

SK **"A" type SK collet (for End Mill Shank) are marked ● . The acceptable shank tolerance is h8.Code No. is e.g. SK10-10A**
"P" class SK collet (for drill) are available for all series. e.g. SK10-10P

Code No.	Chucking D
SK 6- 0.8	0.7 ~ 0.8
- 1	0.9 ~ 1.0
- 1.25	1.15~ 1.25
- 1.5	1.3 ~ 1.5
- 1.75	1.55~ 1.75
- 2	1.8 ~ 2.0
- 2.25	2.05~ 2.25
- 2.5	2.3 ~ 2.5
- 2.75	2.55~ 2.75
- 3	2.8 ~ 3.0
- 3.5	3.0 ~ 3.5
- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
SK10- 2	1.75~ 2.0
- 2.25	2.0 ~ 2.25
- 2.5	2.25~ 2.5
- 2.75	2.5 ~ 2.75
- 3	2.75~ 3.0
- 3.5	3.0 ~ 3.5
- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
- 6.5	6.0 ~ 6.5
- 7	6.5 ~ 7.0
- 7.5	7.0 ~ 7.5
- 8	7.5 ~ 8.0
- 8.5	8.0 ~ 8.5
- 9	8.5 ~ 9.0
- 9.5	9.0 ~ 9.5
-10	9.5 ~10.0

Code No.	Chucking D
SK13- 3	2.75~ 3.0
- 3.5	3.0 ~ 3.5
- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
- 6.5	6.0 ~ 6.5
- 7	6.5 ~ 7.0
- 7.5	7.0 ~ 7.5
- 8	7.5 ~ 8.0
- 8.5	8.0 ~ 8.5
- 9	8.5 ~ 9.0
- 9.5	9.0 ~ 9.5
- 10	9.5 ~10.0
- 10.5	10.0~10.5
- 11	10.5~11.0
- 11.5	11.0~11.5
- 12	11.5~12.0
- 12.5	12.0~12.5
- 13	12.5~13.0

Code No.	Chucking D
SK16- 3	2.75~ 3.0
- 3.5	3.0 ~ 3.5
- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
- 6.5	6.0 ~ 6.5
- 7	6.5 ~ 7.0
- 7.5	7.0 ~ 7.5
- 8	7.5 ~ 8.0
- 8.5	8.0 ~ 8.5
- 9	8.5 ~ 9.0
- 9.5	9.0 ~ 9.5
- 10	9.5 ~10.0
- 10.5	10.0~10.5
- 11	10.5~11.0
- 11.5	11.0~11.5
- 12	11.5~12.0
- 12.5	12.0~12.5
- 13	12.5~13.0
- 13.5	13.0~13.5
- 14	13.5~14.0
- 14.5	14.0~14.5
- 15	14.5~15.0
- 15.5	15.0~15.5
- 16	15.5~16.0

Code No.	Chucking D
SK20- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
- 6.5	6.0 ~ 6.5
- 7	6.5 ~ 7.0
- 7.5	7.0 ~ 7.5
- 8	7.5 ~ 8.0
- 8.5	8.0 ~ 8.5
- 9	8.5 ~ 9.0
- 9.5	9.0 ~ 9.5
- 10	9.5 ~ 10.0
- 10.5	10.0~ 10.5
- 11	10.5~ 11.0
- 11.5	11.0~ 11.5
- 12	11.5~ 12.0
- 12.5	12.0~ 12.5
- 13	12.5~ 13.0
- 13.5	13.0~ 13.5
- 14	13.5~ 14.0
- 14.5	14.0~ 14.5
- 15	14.5~ 15.0
- 15.5	15.0~ 15.5
- 16	15.5~ 16.0
- 16.5	16.0~ 16.5
- 17	16.5~ 17.0
- 17.5	17.0~ 17.5
- 18	17.5~ 18.0
- 18.5	18.0~ 18.5
- 19	18.5~ 19.0
- 19.5	19.0~ 19.5
- 20	19.5~ 20.0

Code No.	Chucking D
SK25- 8	7.5~8.0
- 10	9.5~10.0
- 12	11.5~12.0
- 16	15.5~16.0
- 16.5	16.0~16.5
- 17	16.5~17.0
- 17.5	17.0~17.5
- 18	17.5~18.0
- 18.5	18.0~18.5
- 19	18.5~19.0
- 19.5	19.0~19.5
- 20	19.5~20.0
- 20.5	20.0~20.5
- 21	20.5~21.0
- 21.5	21.0~21.5
- 22	21.5~22.0
- 22.5	22.0~22.5
- 23	22.5~23.0
- 23.5	23.0~23.5
- 24	23.5~24.0
- 24.5	24.0~24.5
- 25	24.5~25.0
- 25.4	25.0~25.4

★**SK6** collet with the special internal dia. is also available.

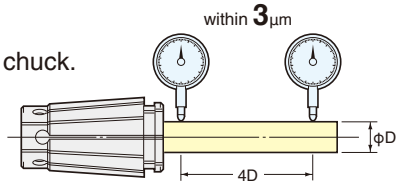


Collet removal **(SKR-6)** is supplied as standard only for **SK6**. **SKR-10**, **SKR-16** and **SKR-25** are available as an option. Collet removal is not necessary for **the new types of collet (SK10 to SK25 collet including SK13 and SK20)**.

★**Please refer ☞P.44 for SK Coolant Collet (AC).**

"P" class SK collet for drill

It guarantees the Run-out accuracy within 3 micron at the nose (4D) from the chuck.
Additionally Collet Set is also available.



"A" type SK collet for endmill

The acceptable shank tolerance ids h8.

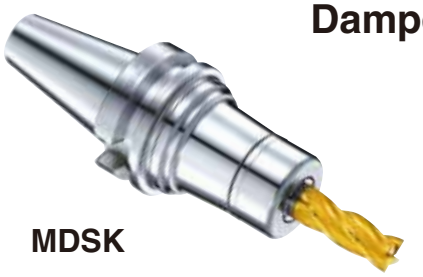
SK Collet A Type
SK 6-3A, 4A, 5A, 6A
SK10-3A, 4A, 5A, 6A, 8A, 10A
SK13-3A, 4A, 5A, 6A, 8A, 10A, 12A, 13A
SK16-3A, 4A, 5A, 6A, 8A, 10A, 12A, 16A
SK20-4A, 5A, 6A, 8A, 10A, 12A, 16A, 20A
SK25-8A, 10A, 12A, 16A, 20A, 25A

SK Collet A Type (Inch)
SK 6 -1/8A, 3/16A
SK10 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A
SK13 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A
SK16 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A, 9/16A, 5/8A
SK20 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A, 9/16A, 5/8A, 3/4A
SK25 -3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A, 5/8A, 3/4A, 25.4A

2LOCK MAJOR DREAM HOLDER

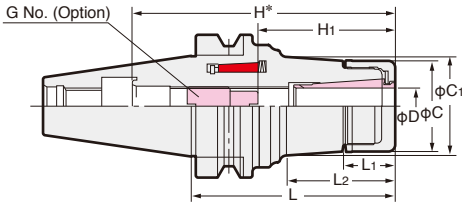
NIKKEN

Dampening Effect
TiN Bearing Effect



MDSK

Holder with an adjust screw for axial adjustment is supplied as an option. Please contact us.



H : MAX. Cutter Shank Length to be inserted

2LOCK tool can be used on the M/C with BT standard spindle.

PAT.

TAPER	Code No.	D	L	L1	L2	C	C1	H*	H1	G No. (Option)	Weight (kg)	Collet
No.30	NBT30-MDSK 6- 50	3.0～6.0	50	16.2	19.5	19.5	20.0	73	21～35	SKG- 8	0.5	SK 6 A
	- 60		60		25.5		20.8	83			0.6	
	- 75		75		40.5		22.9	98			0.7	
	- 90		90		55.5		25.0	113			0.8	
	-MDSK10- 50	3.0～10.0	50	18.0	19.0	27.5	27.5	72	30～50	SKG-12L	0.5	SK10 A
	- 60		60		25.7		28.6	82			0.6	
	- 75		75		42.9		31.0	97			0.8	
	- 90		90		58.7		33.2	112			0.8	
	-MDSK13- 60	3.0～13.0	60	22.0	29.0	33.0	34.0	83	31～43	SKG-15	0.8	SK13 A
	- 75		75		45.0		36.2	98	31～60		0.8	
	- 90		90		60.0		38.3	113			0.8	
	-MDSK16- 75	3.0～16.0	75	23.0	47.5	40.0	40.0	60	45～60	SKG-12L	1.1	SK16 A
	- 90		90		62.5			75	45～70	SKG-12	1.3	
No.40	NBT40-MDSK 6- 60	3.0～6.0	60	16.2	18.0	19.5	19.5	86	21～35	SKG- 8	0.8	SK 6 A
	- 75		75		33.0		21.9	101			0.9	
	- 90		90		48.0		24.0	116			1.1	
	-105		105		63.0		26.1	131			1.2	
	-120		120		78.0		28.2	146			1.4	
	-MDSK10- 60	3.0～10.0	60	18.0	19.0	27.5	27.5	86	30～50	SKG-12L	1.1	SK10 A
	- 75		75		33.0		29.6	101			1.3	
	- 90		90		48.0		31.7	116			1.5	
	-105		105		63.0		33.8	131			1.6	
	-120		120		78.0		35.9	146			1.8	
	-150		150		110.0		40.4	176			2.2	
	-MDSK13- 65	3.0～13.0	65	22.0	24.0	33.0	33.0	91	31～60	SKG-15	1.2	SK13 A
	- 75		75		33.0		34.6	101			1.4	
	- 90		90		48.0		36.7	116			1.7	
	-105		105		63.0		38.8	131			1.8	
	-120		120		78.0		40.9	146			2.0	
	-150		150		110.0		45.4	176			2.4	
	-180		180		144.0		50.1	206			2.6	
	-MDSK16- 65	3.0～16.0	65	23.0	24.0	40.0	40.0	91	45～60	SKG-18L	1.2	SK16 A
	- 75		75		33.0		41.4	101	45～70		1.5	
	- 90		90		48.0		43.5	116			1.9	
	-105		105		64.0		45.8	131			2.0	
	-120		120		80.0		48.0	146			2.2	
	-150		150		113.0		52.6	176			2.5	
	-MDSK20- 75	4.0～20.0	75	25.2	41.2	48.0	51.3	80	50～73	SKG-12	1.9	SK20 A
	- 90		90		55.0		53.2	95		SKG-12-55L	2.1	
	-105		105		70.0		52.2	110		SKG-12-70L	2.3	
	-120		120		85.0		53.2	125		SKG-12-85L	2.6	

★**Please use A type SK collet for the end milling operation.** ☞ **P.200**
★Please refer ☞ **P.49** for the Jet coolant system, **J** type nut and cap.
★**GH handle** is available as an option. ☞ **P.48** Please order with the Code No. **GH6 : MDSK6 &, GH10 : MDSK10, GH12 : MDSK13, GH16 : MDSK16, GH20 : MDSK20, GH25 : MDSK25**
★**Please add "P" at the end of Code No. for high speed specification, e.g NBT40-MDSK10-60P**
★**Holder with an adjust screw for axial adjustment is supplied as an option. Please contact us.**



Explanation of the Code No.
NBT40 - MDSK10 - 90
- 90 : Nominal Gauge Length
- MDSK10 : Chucking Capacity
- MDSK : MAJOR DREAM HOLDER
- NBT40 : Shank No.

MAX. min^{-1}

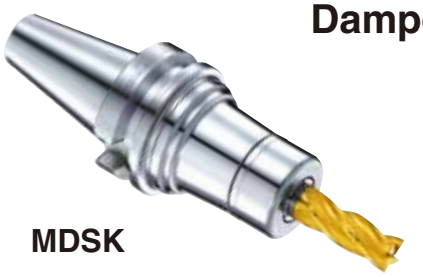
Code No.	MAX. min^{-1}	Code No.	MAX. min^{-1}	Code No.	MAX. min^{-1}
NBT30-MDSK 6-P	30,000	NBT40-MDSK 6-P	25,000	NBT50-MDSK 6-P	20,000
-MDSK10-P		-MDSK10-P		-MDSK10-P	
-MDSK13-P		-MDSK13-P		-MDSK13-P	
-MDSK16-P	25,000	-MDSK16-P	20,000	-MDSK16-P	
		-MDSK20-P		-MDSK20-P	
				-MDSK25-P	15,000

2LOCK MAJOR DREAM HOLDER

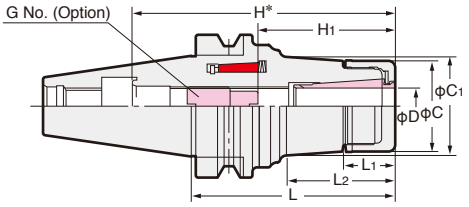
NIKKEN

Holder with an adjust screw for axial adjustment is supplied as an option. Please contact us.

Dampening Effect
TiN Bearing Effect



MDSK



H : MAX. Cutter Shank Length to be inserted

2LOCK tool can be used on the M/C with BT standard spindle.

PAT.

TAPER	Code No.	D	L	L1	L2	C	C1	H*	H1	G No. (Option)	Weight (kg)	Collet
No.50	NBT50-MDSK 6-105	3.0～6.0	105	16.2	48.0	19.5	24.0	116	21～35	SKG- 8	3.6	SK 6 A
	-120		120		63.0		26.1	131			3.7	
	-MDSK10-105	3.0～10.0	105	18.2	48.0	27.5	31.7	116	30～50	SKG-12L	4.3	SK10 A
	-120		120		63.2		33.8	131			4.4	
	-135		135		78.2		35.9	146			4.7	
	-165		165		110.2		40.4	176			5.0	
	-195		195		141.2		44.8	206			5.3	
	-MDSK13-105	3.0～13.0	105	22.0	48.0	33.0	36.7	116	31～60	SKG-15	4.2	SK13 A
	-120		120		63.0		38.8	131			4.7	
	-135		135		78.0		40.9	146			5.0	
	-165		165		110.0		45.4	176			5.3	
	-195		195		144.0		50.1	206			5.6	
	-MDSK16-105	3.0～16.0	105	23.0	48.0	40.0	43.5	116	45～70	SKG-18L	4.1	SK16 A
	-120		120		64.0		45.8	131			4.9	
	-135		135		80.1		48.0	146			5.2	
	-165		165		114.7		52.6	176			5.5	
	-195		195		144.6		52.8	206			5.8	
	-MDSK20-105	4.0～20.0	105	25.2	42.3	48.0	51.4	159	47～80	SKG-22	4.9	SK20 A
	-135		135		72.0		55.6	175			5.3	
	-165		165		102.0		59.8	205			5.9	
	-195		195		132.0		64.0	235			6.7	
	-MDSK25-105	8.0～25.4	105	27.0	42.3	55.0	57.2	159	55～85	SKG-28	4.9	SK25 A
	-135		135		74.0		61.6	175			5.7	
	-165		165		105.0		66.0	205			6.5	
	-195		195		135.0		70.2	235			7.5	

★**Please use A type SK collet for the end milling operation.**
★Please refer ☞ **P.49** for the Jet coolant system, **J** type nut and cap.
★**GH handle** is available as an option. ☞ **P.48** Please order with the Code No. **GH6 : MDSK6 &, GH10 : MDSK10, GH12 : MDSK13, GH16 : MDSK16, GH20 : MDSK20, GH25 : MDSK25**
★**Please add "P" at the end of Code No. for high speed specification, e.g NBT40-MDSK10-60P**
★**Holder with an adjust screw for axial adjustment is supplied as an option. Please contact us.**



Explanation of the Code No.

NBT40 - MDSK10 - 90

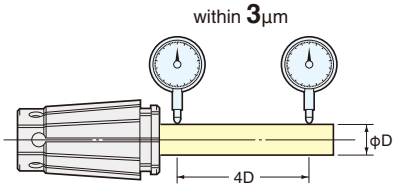
- 90 : Nominal Gauge Length
- MDSK10 : Chucking Capacity
- MAJOR DREAM HOLDER
- NBT40 : Shank No.

A TYPE SLIM COLLET

NIKKEN



SK



SK Collet A Type
SK 6-3A, 4A, 5A, 6A
SK10-3A, 4A, 5A, 6A, 8A, 10A
SK13-3A, 4A, 5A, 6A, 8A, 10A, 12A, 13A
SK16-3A, 4A, 5A, 6A, 8A, 10A, 12A, 16A
SK20-4A, 5A, 6A, 8A, 10A, 12A, 16A, 20A
SK25-8A, 10A, 12A, 16A, 20A, 25A

★**The acceptable shank tolerance of A Type collet is h_8.**

Inch	mm	Collet	Inch	mm	Collet
1/8	3.175	3.5	7/16	11.113	11.5
3/16	4.763	5	1/2	12.7	13
1/4	6.35	6.5	5/8	15.875	16
5/16	7.938	8.0	3/4	19.05	19.5
3/8	9.525	10	1	25.4	25.4

SK Collet A Type (Inch)
SK 6 -1/8A, 3/16A
SK10 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A
SK13 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A
SK16 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A, 9/16A, 5/8A
SK20 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A, 9/16A, 5/8A, 3/4A
SK25 -3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A, 5/8A, 3/4A, 25.4A

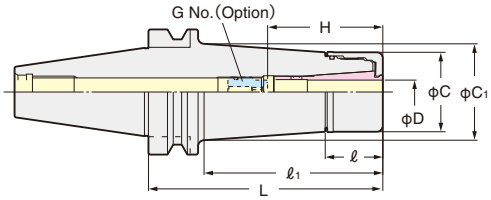
2LOCK ANNIVERSARY TYPE VC HOLDER

NIKKEN



VC

With TiN Bearing Nut
MAX. 40,000min^{-1} & G2.5
Run-Out Accuracy : Within 3μm at 4D



Centre Through
MAX. 7MPa

2LOCK tooling (NBT) can be used as the double face contact tooling on the M／C where spindle is BT double face contact system.
2LOCK tooling can also be used on the M／C with BT standard spindle.

High Speed

PAT.

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	H	G No. (Option)	Weight (kg)	MAX. min^{-1}	Collet
No.30	NBT30-VC 6- 45	2.0～ 6.0	45	23	23	27.5	27.5	35～45	VCG 6- 8A	0.5	40,000	VCK 6
	- 60		60		35		31.7			0.6		
	- 90		90		65		33.4			0.8		
	-VC13- 60	3.0～12.0	60	29	37	40	41.1	50～60	VCG13-15A	0.7		VCK13
	- 90		90		67		41.3			0.9		
	-120		120		97		42.4			1.2		
No.40	NBT40-VC 6- 60	2.0～ 6.0	60	23	30	27.5	30.0	35～45	VCG 6- 8A	1.1	30,000	VCK 6
	- 90		90		60		32.7			1.3		
	-120		120		90		36.9			1.5		
	-VC13- 60	3.0～12.0	60	29	31	40	40.3	50～60	VCG13-15A	1.2		VCK13
	- 90		90		60		44.3			1.5		
	-120		120		90		48.5			1.9		
No.50	NBT50-VC 6-105	2.0～ 6.0	105	23	62	27.5	33.0	35～45	VCG 6- 8A	3.9	20,000	VCK 6
	-135		135		92		37.1			4.1		
	-165		165		122		41.3			4.4		
	-VC13-105	3.0～12.0	105	29	62	40	44.6	50～60	VCG13-15A	4.1		VCK13
	-135		135		92		48.8			4.5		
	-165		165		122		53.0			4.9		

★TiN Bearing Nut is supplied as standard.
★Collet, Adjust Screw (G No.) and **GH Handle** are available as an option.
★Please add "**-RP**" at the end of Code No. for Rust Proof Treatment **VC** Holder. **e.g:NBT40-VC13-60-RP**
★Please use **VC J** type Nut & Cap for Centre Through Coolant. When **VC J** type Nut is used, the total holder length will be extended to 6mm.
★**NBT40-VC 6-150, NBT40-VC13-150, NBT50-VC13- 90, -120** are available as semi-standard.
★When the axial stopper is required, please use Adjust Screw (G No.)
★All series are for High Speed Rotation.



GH Handle ☞P.48

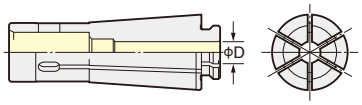
Explanation of the Code No.

NBT40 - VC6 - 90

- 90 : Nominal Gauge Length mm
- VC6 : Chucking Capacity
- VC : Symbol of VC Holder
- NBT40 : Shank No.

VCK Collet





■ Jet coolant splash with **J** type Nut.





Cap with triangular grooves
The jet coolant pressure creates a tornado effect.



Cap with O-ring
For oil hole cutting tool





VCK Collet Code No.
VCK 6-2, 3, (3.175), 4, 5, 6
VCK13-3, (3.175), 4, 5, 6, 7, 8, 9, 10, 11, 12

VCK Collet (Inch) Code No.
VCK 6 -1/8, 3/16, 1/4
VCK13 -1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2

★The acceptable shank tolerance of **VCK** collet is h6.
★**VCK6-3.175** is same as **VCK6-1/8** : **VCK13-3.175** is same as **VCK13-1/8**.

J type NUT Code.

Style	J-type NUT	GH Handle	Cap	Wenche
VC 6	VCN- 6BJ	GH10	Cap With triangular grooves **SKJ10-○.○**	SKJL-10
			Cap With O-rong **SKJ10-○.○C**	
VC13	VCN-13BJ	GH16	Cap With triangular grooves **SKJ16-○.○**	SKJL-16
			Cap With O-rong **SKJ16-○.○C**	

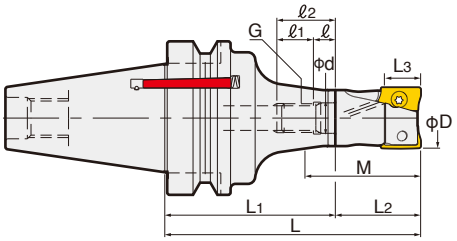
■ **Easy, safe and reliable handling with GH Handle** ☞P. 48



MAJOR DREAM HOLDER 2LOCK MAJOR DREAM PRO-ENDMILL

NIKKEN





NBT-MDPE (Arbor+Head)

TAPER	Code No.	φD	L	L1	L2	MAX. Depth L3	M	Arbor Code No.	Head Code No.
No.30	NBT30-MDPE16- 75	16	75	45	30	10	37.5	NBT30-MDPE-M 8- 45	M 8-MDPE16-30
	-MDPE20- 75	20						-MDPE-M10- 45	M10-MDPE20-30
	-MDPE25- 80	25	80		35	15	43.4	-MDPE-M12- 45	M12-MDPE25-35
	-MDPE32- 95	32	95	55	40		52.5	-MDPE-M16- 55	M16-MDPE32-40
No.40	NBT40-MDPE16- 85,105,120	16	85,105,120	55, 75, 90	30	10	37.4	NBT40-MDPE-M 8- 55, 75, 90	M 8-MDPE16-30
	(NIT40)-MDPE20- 90,105,120	20	90,105,120	60, 75, 90			40.0	-MDPE-M10- 60, 75, 90	M10-MDPE20-30
	-MDPE25- 90,105,120	25		55, 70, 85	35	15	45.3,47.5,47.5	-MDPE-M12- 55, 70, 85	M12-MDPE25-35
	-MDPE32-105,120,135	32	105,120,135	65, 80, 95	40		52.5	-MDPE-M16- 65, 80, 95	M16-MDPE32-40
No.50	NBT50-MDPE16-100,120,135	16	100,120,135	70, 90,105	30	10	37.4	NBT50-MDPE-M 8- 70, 90,105	M 8-MDPE16-30
	(NIT50)-MDPE20-105,120,135	20	105,120,135	75, 90,105			40.0	-MDPE-M10- 75, 90,105	M10-MDPE20-30
	-MDPE25-105,120,135	25		70, 85,100	35	15	45.3,47.5,47.5	-MDPE-M12- 70, 85,100	M12-MDPE25-35
	-MDPE32-120,135,150	32	120,135,150	80, 95,110	40		52.5	-MDPE-M16- 80, 95,110	M16-MDPE32-40

★2pcs of tip clamp bolt and tip clamp wrench are supplied as standard. ★Please refer ☞ **P.258** for cutting condition.
★Insert tip is available as an option .
★Centre through tool coolant is available for all series.

NBT-MDPE-M (Arbor)

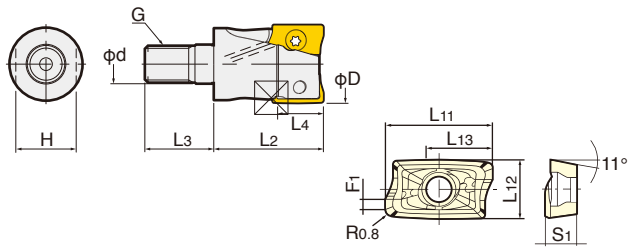
TAPER	Code No.	φD	L1	ID φd	Arbor Front Dia.	ℓ	ℓ1	ℓ2	Screw G
No.30	NBT30-MDPE-M 8- 45	16	45	8.5	14.7	9	11	20	M 8
	-MDPE-M10- 45	20		10.5	18.7		12	21	M10
	-MDPE-M12- 45	25		12.5	23.0		15	24	M12
	-MDPE-M16- 55	32	55	17.0	30.0		16	25	M16
No.40	NBT40-MDPE-M 8- 55, 75, 90	16	55, 75, 90	8.5	14.7		11	20	M 8
	(NIT40)-MDPE-M10- 60, 75, 90	20	60, 75, 90	10.5	18.7		12	21	M10
	-MDPE-M12- 55, 70, 85	25	55, 70, 85	12.5	23.0		15	24	M12
	-MDPE-M16- 65, 80, 95	32	65, 80, 95	17.0	30.0		16	25	M16
No.50	NBT50-MDPE-M 8- 70, 90,105	16	70, 90,105	8.5	14.7		11	20	M 8
	(NIT50)-MDPE-M10- 75, 90,105	20	75, 90,105	10.5	18.7		12	21	M10
	-MDPE-M12- 70, 85,100	25	70, 85,100	12.5	23.0		15	24	M12
	-MDPE-M16- 80, 95,110	32	80, 95,110	17.0	30.0		16	25	M16

★Head is available as an option. ★Centre through tool coolant is available for all series.
★This is interchangeable with DEPO. When the connection interface (Screw G and ID φd) is same, the cutter head of other carbide makers can be used.

INTERCHANGABLE PRO-ENDMILL HEAD

NIKKEN





AOMT (Insert Tip)

Insert Tip Code No.	L11	L12	L13	S1	F1
AOMT123608PEER-M	12	6.6	10	3.6	1.2
AOMT184808PEER-M	18	9	15	4.8	1.4

★Only Nose R = 0.8 is available. Please contact Mitsubishi for the rigid type insert tip and the insert tip with other Nose R.
★Only grade of **VP15TF** (for steel, cast iron, hardened steel) is available. Please contact Mitsubishi for **VP20RT** (for stainless steel) and **TF15** (for aluminum).
★Minimum order quantity: 10pcs.

M-MDPE (Head)

φD	Code No.	L2	L3	MAX. Depth L4	φd	G	No. of Teeth	Insert Tip	Tip Clamp Bolt	Tip Clamp wrench	Spanner Width H
16	M 8-MDPE16-30	30	18	10	8.5	M 8	2	AOMT123608PEER-M	TPS-25	TIP07F	10
20	M10-MDPE20-30		19		10.5	M10	3				14
25	M12-MDPE25-35	35	22	15	12.5	M12	2	AOMT184808PEER-M	TPS-4	TIP15W	19
32	M16-MDPE32-40	40	23		17.0	M16	3				24

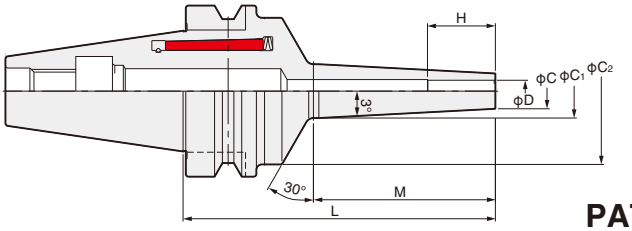
★2pcs of tip clamp bolt and tip clamp wrench are supplied as standard. ★Please refer ☞ **P.258** for cutting condition.
★Insert tip is available as an option .
★Centre through tool coolant is available for all series.

MAJOR DREAM HOLDER

MASAMUNE SHRINK FIT HOLDER

NIKKEN





S Slim Style

PAT.

TAPER	Code No.	ϕD	ϕC	ϕC1	ϕC2	L	M	H
No.30	NBT30-MDMS 3S- 80, -105	3	6	10.2, 12.8	41	80, 105	42, 67	10
	-MDMS 4S- 80, -105	4	7	11.2, 13.8				13
	-MDMS 6S- 80, -105	6	9	13.2, 15.8				19
	-MDMS 8S- 80, -105	8	13	17.2, 19.8				25
	-MDMS10S- 80	10	16	20.2		80	42	31
No.40	NBT40-MDMS 3S- 90, -115	3	6	10.2, 12.8	54	90, 115	42, 67	10
	(NIT40) -MDMS 4S- 90, -115	4	7	11.2, 13.8				13
	-MDMS 6S- 90, -115	6	9	13.2, 15.8				19
	-MDMS 8S- 90, -115	8	13	17.2, 19.8				25
	-MDMS10S- 90, -115	10	16	20.2, 22.8				31
	-MDMS12S- 90, -115	12	19	23.2, 25.8				31
No.50	NBT50-MDMS 3S-130	3	6	12.8	54	130	67	10
	(NIT50) -MDMS 4S-105, -130	4	7	11.2, 13.8		105, 130	42, 67	13
	-MDMS 6S-105, -130	6	9	13.2, 15.8				19
	-MDMS 8S-105, -130	8	13	17.2, 19.8				25
	-MDMS10S-105, -130	10	16	20.2, 22.8				31
	-MDMS12S-105, -130	12	19	23.2, 25.8				31

R Standard

TAPER	Code No.	ϕD	ϕC	ϕC1	ϕC2	L	M	H
No.30	NBT30-MDMS 4R- 80, -105	4	10	14.2, 16.8	41	80, 105	42, 67	13
	-MDMS 6R- 80, -105	6	12	16.2, 18.8				19
	-MDMS 8R- 80, -105	8	18	22.2, 24.8				25
	-MDMS10R- 80, -105	10	22	26.2, 28.8				31
No.40	NBT40-MDMS 4R- 90	4	10	14.2	54	90	42	13
	(NIT40) -MDMS 6R- 90, -115	6	12	16.2, 18.8		90, 115	42, 67	19
	-MDMS 8R- 90, -115	8	18	22.2, 24.8				25
	-MDMS10R- 90, -115	10	22	26.2, 28.8				31
	-MDMS12R- 90, -115	12	26	30.2, 32.8				31
No.50	NBT50-MDMS 6R-105, -130	6	12	16.2, 18.8	54	105, 130	42, 67	19
	(NIT50) -MDMS 8R-105, -130	8	18	22.2, 24.8				25
	-MDMS10R-105, -130	10	22	26.2, 28.8				31
	-MDMS12R-105, -130	12	26	30.2, 32.8				31

★Please note the acceptable shank tolerance is h6.
★Carbide tool can be used and **HSS** tool can not be used.
★The tool will became very hot during heat shrinking. Please use glove for safety.
★**HSK** shank masamune shrink fit holder are **available. Please contact with us.**
★ID=ϕ16, ϕ20 and ϕ25mm are available.
★The capacity of the drier is approx. 3kW.
★Inductive style of the heat shrinking unit is recommended.

STRAIGHT SHANK MASAMUNE SHRINK FIT HOLDER

NIKKEN



MS-A

Fig.1

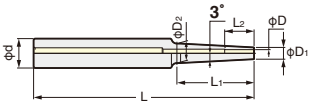


Fig.2

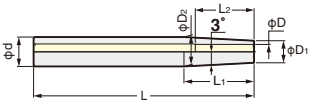
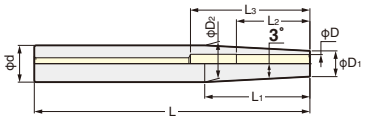


Fig.3



Style d	Code No.	L	ϕD	L1	L2	L3	D1	D2	Fig
10	MS10-A 3- 90	90	3	27	10	—	6	8.7	1
	-A 4- 90		4		13		7	9.7	
16	MS16-A 4-120	120	4	42	13	—	7	11.2	1
	-A 6-120		6		19		10	14.2	
	-A 8-120		8	38	25		12	16.0	2
20	MS20-A 6-150	150	6	72	19	—	10	17.4	1
	-A 8-150		8		25		12	19.4	
	-A10-150		10	57	31	63	14	20.0	3
	-A12-150		12	38	37	78	16	20.0	

★Please note the acceptable shank tolerance is h6.
★Carbide tool can be used and **HSS** tool can not be used.
★Minimum insertion length is L2.
★Maximum insertion length is L3. If cutting tool is inserted longer than L3, the cutting tool bottom will be contacted to holder. Then, the run-out accuracy will be worse.
★The tool will become very hot during heat shrinking. Please use glove for safety.
★ID=ϕ16, ϕ20 and ϕ25mm are available.
★The capacity of the drier is approx. 3kW.
★Inductive style of the heat shrinking unit is recommended.

2LOCK NBT ZERO FIT TYPE MILLING CHUCK

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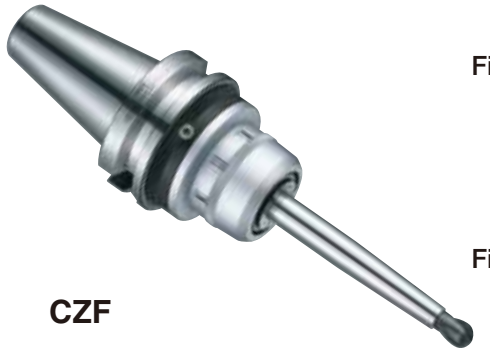


CZF

Fig.1

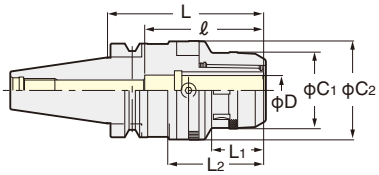
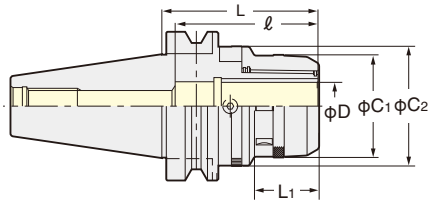


Fig.2



Explanation of the Code No.

NBT40 CZF32 – 120

- 120: Nominal Gauge Length
- CZF32: Chucking Capacity φD / Zero Fit Type Milling Chuck
- NBT40: Shank No.

MAX. run-out at 100mm	
CZF20	0.050mm/dia.
CZF25	0.050mm/dia.
CZF32	0.030mm/dia.

PAT.

TAPER	Code No.	C1	C2	L	L1	L2	ℓ	Weight(Kg)	Fig.	Collet
No.30	NBT30-CZF20-100	51.5	66.5	100	35	68	80	1.5	1	KM20 CCK20
	-CZF25-100	59.5	74.5					1.6		KM25 CCK25
No.40	NBT40-CZF20-105, 120	51.5	66.5	105, 120	35	64.5	80	2.1, 2.5		KM20 CCK20
	(NIT40)-CZF25-105, 120	59.5	74.5			68		2.4, 2.9		KM25 CCK25
	-CZF32-120	69	80.5	120	42	78	105	2.8		KM32 CCK32
No.50	NBT50-CZF20-105, 165	51.5	66.5	105, 165	35	–	80	4.6, 6.0	2	KM20 CCK20
	(NIT50)-CZF25-105, 165	59.5	74.5					5.0, 6.8		KM25 CCK25
	-CZF32-105, 165	69	80.5		42		105	5.3, 7.4		KM32 CCK32

★Please refer ☞P.33, P.34 for **KM**, **CCK** collet.
★Spanner is available as an option.
CZF20 type : 9HC22, CZF25 type : 9HC25, CZF32 type : 9HC32



★Wrench to adjust run-out(**9ZFL**)is available as an option.



Wrench to adjust
9ZFL

★Please note that the acceptable shank tolerance is h6~h7.
★Please add"**P**"at the end of Code No. for the high speed type. **e.g. NBT40-CZF25-105P**

★Multi-Cam style is available. **e.g. NBT40-CZF32-120-C3**. (3 Cams) Please contact us for more detail.

2LOCK NBT ZERO FIT TYPE SLIM CHUCK

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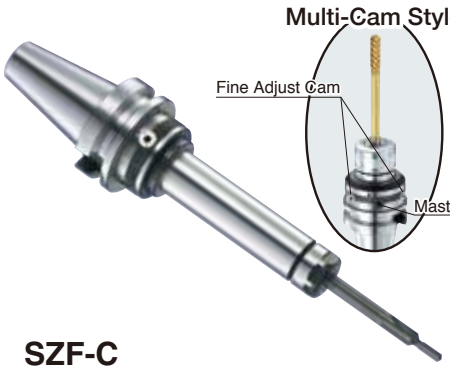


SZF-C
High Pressure Centre Through Coolant type

Fig.1

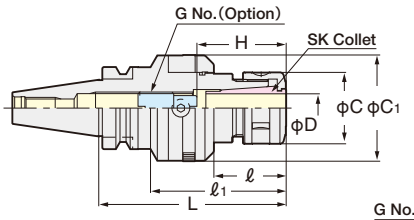
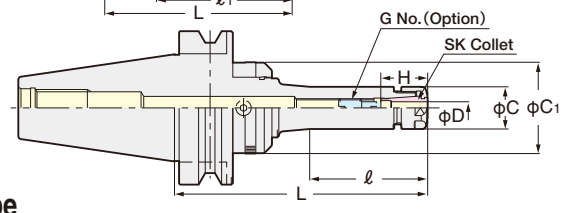


Fig.2



Explanation of the Code No.

NBT40 SZF10 – 90

- 90: Nominal Gauge Length
- SZF10: Chucking Capacity / Zero Fit Type Slim Chuck
- NBT40: Shank No.

MAX. run-out at 100mm		
SZF 6	L<150	0.050mm/dia.
	L≧150	0.040mm/dia.
SZF10		0.050mm/dia.
SZF16		0.040mm/dia.
SZF25		0.025mm/dia.

PAT.

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	H	G No. (Option)	Weight (Kg)	Fig.	Collet
No.30	NBT30-SZF 6C- 90	0.7~6.0	90	42	–	19.5	40.5	26~31	SKG 6- 6HG	0.9	2	SK 6
	-SZF10C- 90	1.75~10.0		35	61	27.5	48.5	35~41	SKG10-10HG	1.3	1	SK10
	-SZF16C-105	2.75~16.0	105	40	76	40	59.5	45~57	SKG16-12HG	1.6		SK16
No.40	NBT40-SZF 6C- 90,150	0.7~6.0	90, 150	37, 60	–	19.5	40.5,48.5	26~31	SKG 6- 6HG	1.3, 1.7	2	SK 6
	(NIT40)-SZF10C- 90,150	1.75~10.0		37, 97		27.5	48.5	35~41	SKG10-10HG	1.5, 1.9		SK10
	-SZF16C- 90,150	2.75~16.0				40	59.5	45~57	SKG16-12HG	1.8, 2.2		SK16
	-SZF25C-120,150	7.5~25.4	120, 150	55, 86	84, 114	55	66.5	60~65	SKG25-18HGD	2.4, 2.9	1	SK25
No.50	NBT50-SZF 6C-105,165	0.7~6.0	105, 165	41, 63	–	19.5	40.5,59.5	26~31	SKG 6- 6HG	4.0, 4.2	2	SK 6
	(NIT50)-SZF10C-105,165	1.75~10.0		41, 101		27.5	48.5	35~41	SKG10-10HG	4.5, 4.9		SK10
	-SZF16C-105,165	2.75~16.0				40	59.5	45~57	SKG16-12HG	5.0, 5.4		SK16
	-SZF25C-135,165	7.5~25.4	135, 165	71, 101		55	66.5	60~70	SKG25-24HG	5.8, 6.0		SK25

★Adjust screw(G No.), wrench to adjust run-out(**9ZFL**)and **SKL** spanner are available as an option. **SZF6C: SKL-6W, SZF10C: SKL-10, SZF16C: 9HC16, SZF25C: 9HC25**



★**Please use "P" class or"A"type SK collet.** ☞P.198
★For centre through coolant application please use **SK J** type nut and cap for your preference. Please note that the length of **J** type nut is 6mm longer than the standard **SK** Nut. ☞P.49
★For High Speed type, Code No. is **"SZF-P". e.g. NBT40-SZF10C-90P**
In this case, **GH Handle** is required. ☞P.48
★Multi-Cam style is available. **e.g. NBT40-SZF16C-90-C3**. (3 Cams) Please contact us for more detail.

2LOCK NC DRILL CHUCK

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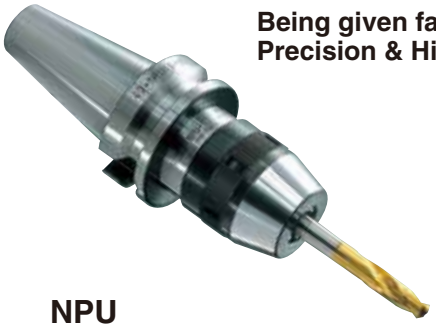
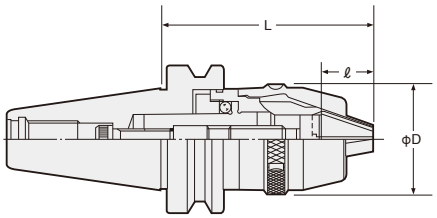


NPU

Being given favorable reception its Compactness, High Precision & High Rigidity.



Explanation of the Code No.

NBT40 - NPU10 - 90

- 90 : Nominal Gauge Length
- NPU10 : Chucking Capacity
- NPU : Symbol of Drill Chuck
- NBT40 : Shank No.

ℓ : Chucking Length
NPU 8 : 18.8mm
NPU13 : 26.5

TAPER	Code No.	Chucking Dia	D	L MIN.	L MAX.	Weight(kg)
No.30	NBT30-NPU 8- 70	0.3～8	38	76.5	83.5	0.7
	-NPU13- 95	1～13	48.5	102.1	113.1	1.2
No.40	NBT40-NPU 8- 70	0.3～8	38	76.5	83.5	1.2
	(NIT40) -110			115.5	122.5	1.5
	-155			160.5	167.5	1.7
	-NPU13- 80	1～13	48.5	86.1	97.1	1.5
	-130			137.1	148.1	2.2
	-175			182.1	193.1	2.7
No.50	NBT50-NPU 8- 85	0.3～8	38	87.5	94.5	3.8
	(NIT50) -110			115.5	122.5	3.9
	-170			175.5	182.5	4.3
	-NPU13- 90	1～13	48.5	97.1	108.1	4.1
	-130			137.1	148.1	4.6
	-190			197.1	208.1	5.2

★Wrench is available as an option. **NPU 8: NPUL- 8**
NPU13: NPUL-13



2LOCK SIDE LOCK HOLDER

NIKKEN



SLA

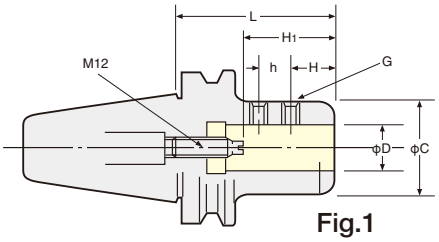


Fig.1

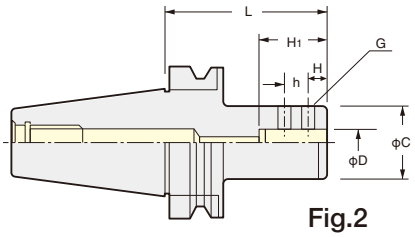


Fig.2

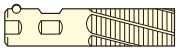
A TYPE (for END MILL)

Fig.1

TAPER	Code No.	D	L	C	h	H	H1 MIN.～MAX.	G	Weight(kg)
No.30	NBT30-SLA20- 75	20	75	50	21	15	55～ 70	M14 P=1.5	1.3
No.40	NBT40-SLA20- 90	20	90	50	21	24	55～ 70	M14 P=1.5	1.8
	(NIT40) -SLA25- 90	25							1.7
	-SLA32- 90,135*	32	90,135	60	25	25		M16 P=1.5	1.9,2.3
No.50	NBT50-SLA20-105,135*	20	105,135	50	21	24	55～ 70	M14 P=1.5	4.8,5.2
	(NIT50) -SLA25-105,135*,165*	25	105,135,165						4.7,5.2,5.7
	-SLA32-105,135*,165*	32		60	25	25	65～ 80	M16 P=1.5	4.0,4.9,5.5
	-SLA42-115*,150*	42	115,150	90	32	30	85～100	M20 P=2.0	6.6,7.5

★**Code No. of Side Lock Holder for Combination Shank is DM.**
★The Code No.of Centre Through Coolant type is "SLOC". ☞P.130

NBT50-DM32-120
-DM50.8-120



★* marked is available semi-atandard.

B TYPE (for DRILL)

Fig.2

TAPER	Code No.	D	L	C	h	H	H1	G	Weight(kg)	Collet
No. 40	NBT40-SL20C- 90	20	90	50	16	12	44.5	M10	1.8	—
	-SL25C- 90	25		55	17	14	54.5	M12 P1.25	1.7	OK25
	-SL32C- 90	32		60	16	15	59.5	M12 P1.25	1.9	OK32
No. 50	NBT50-SL20C-105	20	105	50	16	12	44.5	M10	4.8	—
	-SL25C-105	25		55	17	14	54.5	M12 P1.25	4.7	OK25
	-SL32C-105	32		60	16	15	59.5	M12 P1.25	4.9	OK32
	-SL40C-105	40		88	19	18	70	M12 P1.25	5.2	OK40

★Please refer ☞**P.135** for Collet and Sleeve.

2LOCK MORSE TAPER ADAPTER A TYPE

NIKKEN

■Taper contact area of more than 80% ensures high repeatability run-out accuracy.



MTA

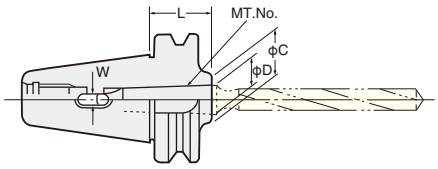


Fig. 1

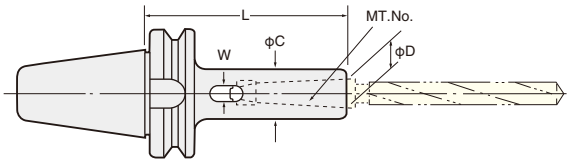


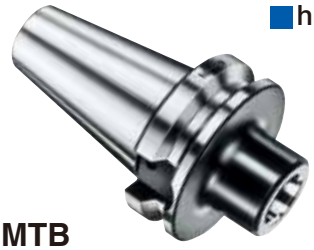
Fig. 2

TAPER	Code No. -L	MT. No.	D	L	C	W	Fig	Weight(kg)
No.30	NBT30-MTA1- 45, 105	1	12.065	45, 105	20, 25	5.6	1, 2	0.8, 0.9
	-MTA2- 60, 120	2	17.780	60, 120	30	6.6		0.9, 1.2
	-MTA3- 80	3	23.825	80	40	8.4	1	1.0
No.40	NBT40-MTA1- 45, 120	1	12.065	45, 120	25	5.6	1, 2	1.0, 1.3
	(NIT40)-MTA2- 60, 120	2	17.780	60, 120	32	6.6		1.1, 1.4
	-MTA3- 75, 135	3	23.825	75, 135	40	8.4		1.2, 1.8
	-MTA4- 95, 165	4	31.267	95, 165	50	12.4		1.4, 2.4
No.50	NBT50-MTA1- 45, 120, 180	1	12.065	45, 120, 180	25	5.6	1, 2, 2	4.0, 4.3, 4.3
	(NIT50)-MTA2- 45, 135, 180	2	17.780	45, 135, 180	32	6.6		4.0, 4.4, 4.6
	-MTA3- 45, 150, 180	3	23.825	45, 150, 180	40	8.4		3.9, 4.7, 4.9
	-MTA4- 75, 180	4	31.267	75, 180	50	12.4	1, 2	4.0, 5.4
	-MTA5-105	5	44.399	105	65	16.5	1	4.6

2LOCK MORSE TAPER ADAPTER B TYPE with DRAW BOLT

NIKKEN

Taper contact area of more than 80% ensures
■high repeatability run-out accuracy.



MTB

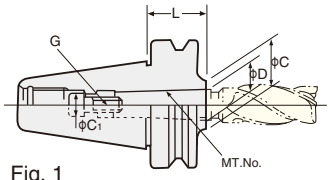


Fig. 1

Draw bolt type

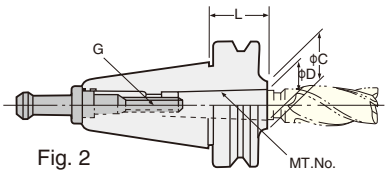


Fig. 2

Pull stud draw bolt type.

TAPER	Code No.	MT.No.	D	L	C	C_1	G	Fig	Weight(Kg)
No.30	NBT30-MTB1- 45	1	12.065	45	25	10	M 6×1	1	0.8
	-MTB2- 25	2	17.780	25	32	—	M10×1.5	2	0.8
	-MTB3- 80	3	23.825	80	40		M12×1.75		1.0
No.40	NBT40-MTB1- 45	1	12.065	45	25	10	M 6×1	1	1.0
	-MTB2- 60	2	17.780	60	32	13.5	M10×1.5		1.1
	-MTB3- 45	3	23.825	45	40	—	M12×1.75	2	1.1
	-MTB4- 85	4	31.267	85	50		M16×2		1.3
No.50	NBT50-MTB1- 45	1	12.065	45	25	10	M 6×1	1	3.9
	-MTB2- 45	2	17.780		32	16	M10×1.5		3.9
	-MTB3- 60	3	23.825	60	40	18	M12×1.75		3.9
	-MTB4- 75	4	31.267	75	50	20.5	M16×2		3.9
	-MTB5-105-M16	5	44.399	105	70	—			4.2
	-MTB5-120-M20			120			M20×2.5		4.6
	-MTB5-105			105				2	4.0

★Adapter in Fig.1 is supplied with a special draw bolt.
★Morse Taper Adapters B type as illustrated in Fig.2 need the special pull stud. The pull stud is optional accessory. When ordering, please specify the pull stud code number.

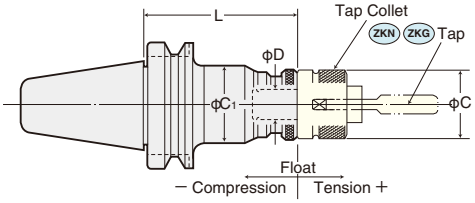
2LOCK TAPPER CHUCK

NIKKEN



AUTO. DEPTH CONTROL　　FLOATING

- Most suitable for tapping gas threads, blind-end threads and light alloys.
- When normal rotation of machine is stopped at specified position, the Tapper Chuck runs idle after progressing by its elongation (4mm for ZL12 type). Simply rotate the machine in the reverse direction, and the tap depth will be made uniform within a high-precision.



ZL AUTO. DEPTH CONTROL

TAPER	Code No.	Tapping Capability M	Tapping Capability U	Tapping Capability P	D	L	C	Float F1	Float F2	Tap Collet	Weight (kg)
No.40	NBT40-ZL 8-120*1	M 2～ 8	1/8～1/4	—	13	120	34	3	3	ZKN 8 *1	1.6
	(NIT40)-ZL12-100	M 2～12	1/8～1/2	P1/16～1/4	19	100	58	5	4	ZKG12	1.9
	-ZL12-130					130					2.3
	-ZL16-150	M 3～16	1/8～5/8	P1/8～3/8	25	150	60			ZKG16	2.9
	-ZL24-160	M 8～24	1/2～ 1	P1/4～5/8	30	160	73	6	7	ZKG24	3.3
	-ZL38-190	M18～38	3/4～13/8	P3/8～ 1	45	190	92	8	10	ZKN38	6.0
No.50	NBT50-ZL 8-130*1	M 2～ 8	1/8～1/4	—	13	130	34	3	3	ZKN 8 *1	4.2
	(NIT50)-ZL12- 85	M 2～12	1/8～1/2	P1/16～1/4	19	85	58	5	4	ZKG12	3.4
	-ZL12-130					130					4.3
	-ZL16-135	M 3～16	1/8～5/8	P1/8～3/8	25	135	60			ZKG16	4.6
	-ZL24-100	M 8～24	1/2～ 1	P1/4～5/8	30	100	73	6	7	ZKG24	4.5
	-ZL24-142					142					5.8
	-ZL38-150	M18～38	3/4～13/8	P3/8～ 1	45	150	92	8	10	ZKN38	6.9

★In case of **NIT40, NIT40-ZL16-160** and **NIT40-ZL24-175** are standard.
★In case of **NIT50, NIT50-ZL12-130, NIT50-ZL24-142** and **NIT50-ZL38-180** are standard.
★Marked *1 **ZL8** Tapper Chuck and **ZK8** Tap Collet are available as semi-standard.
★Please refer ☞ **P.59 (ZKG)～P.60 (ZK) for ISO, IMPERIAL, DIN Tap Collet,** ☞ **P.61 (ZKG)～P.62 (ZKN) for JIS Tap Collet**, and ☞ **P.63** for **Long Size Tap Collet.**

Z FLOATING

TAPER	Code No.	Tapping Capability M	Tapping Capability U	Tapping Capability P	D	L	C	C1	Float F1	Float F2	Tap Collet	Weight (kg)
No.40	NBT40-Z 8- 90*1	M 2～ 8	1/8～1/4	—	13	90	23	33	5	15	ZKN 8 *1	1.4
	(NIT40)-Z12- 90	M 2～ 12	1/8～1/2	P1/16～1/4	19	90	32	45	5	15	ZKG12	1.5
	-Z12-130					130			15			1.6
	-Z16-109	M 3～ 16	1/8～5/8	P1/8～3/8	25	109	39	55	8	20	ZKG16	2.0
	-Z24-100	M 8～ 24	1/2～ 1	P1/4～5/8	30	100	46	68	10	20	ZKG24	2.1
	-Z24-187					187		63	20			3.5
	-Z38-140	M18～ 38	3/4～13/8	P3/8～ 1	45	140	78	85	8	22	ZKN38	6.7
No.50	NBT50-Z 8-105*1	M 2～ 8	1/8～1/4	—	13	105	23	33	5	15	ZKN 8 *1	4.2
	(NIT50)-Z12-130	M 2～ 12	1/8～1/2	P1/16～1/4	19	130	32	45	15	15	ZKG12	4.3
	-Z12-175					175						4.8
	-Z12-220					220						5.0
	-Z16-135	M 3～ 16	1/8～5/8	P1/8～3/8	25	135	39	55	8	20	ZKG16	5.2
	-Z24-142	M 8～ 24	1/2～ 1	P1/4～5/8	30	142	46	63	20	20	ZKG24	5.8
	-Z24-187					187						6.2
	-Z38-175	M18～ 38	3/4～13/8	P3/8～ 1	45	175	78	98	10	25	ZKN38	8.3
	-Z65-160	M36～100	1 ～33/4	P1 ～ 3	68	160	110*2 (125)	110	10	25	ZKN65	9.0

★In case of **NIT40, IT40-ZL8-95***1 and **NIT40-ZL24-1255** are standard.
★In case of **NIT50, IT50-ZL8-105***1, **NIT50-ZL38-187** and **NIT50-ZL65-165** are standard.
★Marked *1 **Z8** Tapper Chuck and **ZK8** Tap Collet are available as semi-standard.
★Please refer ☞ **P.59 (ZKG)～P.60 (ZK) for ISO, IMPERIAL, DIN Tap Collet,** ☞ **P.61 (ZKG)～P.62 (ZKN) for JIS Tap Collet**, and ☞ **P.63** for **Long Size Tap Collet.**
★Marked *2 ( ) dimension is for M65 or more size of **ZK** Tap Collet.

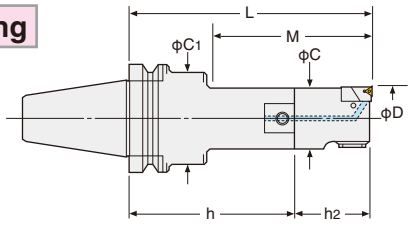
2LOCK ZMAC ADVANCED BORING ARBOR (ZMAC-V) NIKKEN

PAT.

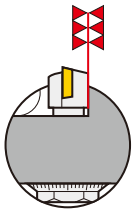
Boring for Finishing

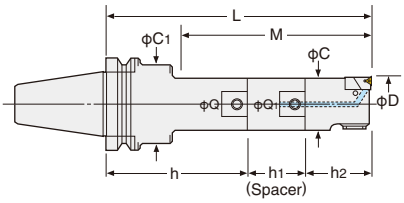


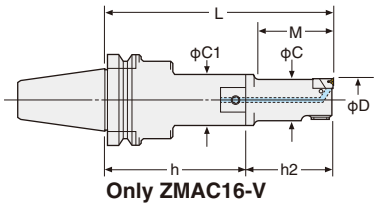
ZMAC-V



No Micro Vibration due to Double-Contact Support of Cartridge.Long Tool-Life & High Accuracy.





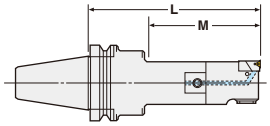


Only ZMAC16-V

All codes shown are for heads with triangular inserts  For heads with rhomboid inserts  please add the letter "R" to the code No. e.g. NBT40-ZMAC32 R -150V

TAPER	Code No. NBTNo.- Min.D - L	Boring Range D	Boring Depth M	Cupling Dia Q	C	C1	P.119 Head No. Q- Min.D -h2	Insert No.	Weight (kg)
No.40	NBT40-ZMAC 16-125V, 135V	15.9～20.2	38, 48	12	15	24	12-ZMAC16-45V, 55V	3MP-C,B	1.9, 1.9
	(NIT40)-ZMAC 20-120V, 135V, 150V	19.8～25.2	45, 67, 75	9	19	30	9-ZMAC20-40V		1.9, 1.9, 2.0
	-ZMAC 25-120V, 150V, 165V	24.8～32.2	52, 90, 97	12	24	35	12-ZMAC25-40V		2.0, 2.1, 2.1
	-ZMAC 32-150V, 180V, 195V	31.8～42.2	77, 110, 122	16	31	42	16-ZMAC32-55V	4MP-C,B	2.5, 2.7, 2.7
	-ZMAC 42-150V, 180V, 210V	41.8～55.2	97, 130, 157	20	40	50	20-ZMAC42-70V	6MP-C,B	3.0, 3.2, 3.5
	-ZMAC 55-165V, 210V, 225V	54.8～70.2	135, 180, 195	26	53		26-ZMAC55-70V		3.9, 4.6, 4.6
	-ZMAC 70-165V, 180V, 225V	69.8～85.2	165, 180, 225	34	67	64	34-ZMAC70-70V		5.4, 5.8, 6.8
	-ZMAC 85-195V	84.8～100.2	195	42	83	62	42-ZMAC85-100V		9.0
No.50	NBT50-ZMAC 16-140V, 150V	15.9～20.2	38, 48	12	15	24	12-ZMAC16-45V, 55V	3MP-C,B	4.7, 4.7
	(NIT50)-ZMAC 20-150V, 165V, 180V	19.8～25.2	45, 67, 75	9	19	40	9-ZMAC20-40V		4.8, 4.8, 4.9
	-ZMAC 25-135V, 165V, 180V	24.8～32.2	52, 90, 97	12	24	44	12-ZMAC25-40V		4.8, 4.8, 4.9
	-ZMAC 32-180V, 210V, 225V	31.8～42.2	77, 110, 122	16	31	50	16-ZMAC32-55V	4MP-C,B	5.5, 5.6, 5.7
	-ZMAC 42-180V, 195V, 225V, 240V	41.8～55.2	97, 130, 142, 157	20	40	60	20-ZMAC42-70V	6MP-C,B	6.0, 6.0, 6.4, 6.5
	-ZMAC 55-210V, 240V, 270V	54.8～70.2	117, 182, 177	26	53	65	26-ZMAC55-70V		7.5, 7.6, 8.1
	-ZMAC 70-240V, 270V, 300V	69.8～85.2	190, 220, 250	34	67	80	34-ZMAC70-70V		10.0, 10.6, 11.5
	-ZMAC 85-225V, 290V, 315V	84.8～100.2	182, 247, 272	42	83	83	42-ZMAC85-100V		12.5, 15.0, 16.0
	-ZMAC100-225V, 290V*	99.5～140.5	225, 290				42-ZMAC100-100V		13.8, 16.5
	-ZMAC140-225V, 290V*	139.5～180.5					42-ZMAC140-100V		14.6, 17.3

★MIN. dial readout : **ZMAC25-V** & smaller is 0.02mm on diameter. **ZMAC32-V** and larger are 0.01mm on diameter.
★**"C" grade (Coated) insert for Steel, Stainless & Cast Iron is supplied as Standard with the head (Smooth boring & Long tool-life).** ☞ **P.119** Please refer ☞ **P.117** for cutting condition.
We would recommend **"B"** grade **(CBN)** insert for Hardened Steel & High Speed boring of Cast Iron.
★Please refer ☞ **P.210, P.102** for Shank&Spacer, and ☞ **P.87, P.88** for Head.
★Centre Through Tool Coolant function is available as standard.
★For **NBT30**, modular connection system is applied. Please refer ☞ **P.210** for Base Holder.
★**When L length is required longer than standard, please specify boring depth M.**
★* : **NBT50-ZMAC100-325V, 375V, 425V, 475V are also available.**
NBT50-ZMAC140-325V, 375V, 425V, 475V

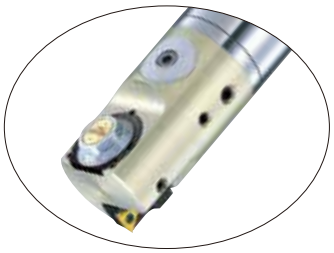




High Pressure Coolant Through Tool

High Speed Boring ZMAC-V

Special Hardened light alloy metal head with balancing for preventing from high frequency vibration.
Ultra high speed boring:MAX.12,000min^{-1}



ZMAC-V for Multi-Stage Boring Bar

Please contact us for the special boring bar.



Photo. shows **NC5** shank.

Please contact us for your application with the boring diameter. ☞ **P.88**
e.g. NBT40-ZMAC42-150AAV
Boring dia.:φ43.5mm

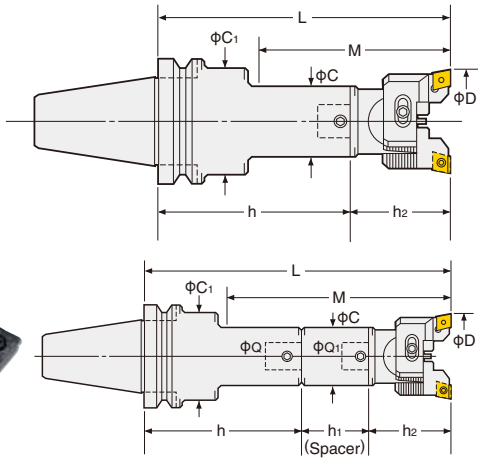
2LOCK BALANCE-CUT BORING ARBOR

NIKKEN

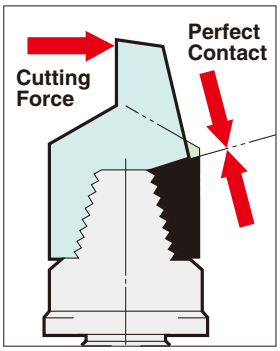
Boring for Roughing



RAC

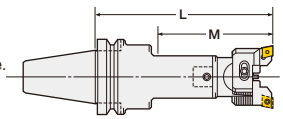


Power of Shoulder Support



TAPER	Code No.	Boring Range D	Boring Depth M	Cupling Dia Q	C	C1	P.74 Head No.	Tip No.	Weight (kg)
	NBTNo.- Min.D -L						Q- Min.D -h2		
No.40	NBT40-RAC 25-135E, 165E, 180E	25～32	67, 105, 112	12	24	35	12-RAC 25- 55E	CC07-C	2.0, 2.1, 2.1
	(NIT40)-RAC 32-150E, 180E, 195E	32～45	77, 110, 122	16	31	42	16-RAC 32- 55E	CC08-C	2.4, 2.6, 2.6
	-RAC 43-150E, 180E, 210E	43～55	97, 130, 157	20	40	50	20-RAC 43- 70E	CC12-C	2.7, 2.9, 3.2
	-RAC 53-165E, 210E, 225E	53～70	135, 180, 195	26	50		26-RAC 53- 70E		2.5, 3.3, 3.2
	-RAC 70-180E, 195E, 240E	70～100	180, 195, 240	34	64	64	34-RAC 70- 85E		4.8, 5.2, 6.2
	-RAC100-195E	100～130	195	42	83	62	42-RAC100-100E		6.8
No.50	NBT50-RAC 25-150E, 180E, 195E	25～32	67, 105, 112	12	24	44	12-RAC 25- 55E	CC07-C	4.7, 4.9, 4.8
	(NIT50)-RAC 32-180E, 210E, 225E	32～45	77, 110, 122	16	31	50	16-RAC 32- 55E	CC08-C	5.4, 5.6, 5.6
	-RAC 43-180E, 195E, 225E, 240E	43～55	97, 130, 142, 157	20	40	60	20-RAC 43- 70E	CC12-C	5.7, 5.8, 6.1, 6.2
	-RAC 53-210E, 240E, 270E	53～70	117, 182, 177	26	50	65	26-RAC 53- 70E		6.9, 7.0, 7.6
	-RAC 70-255E, 285E, 315E	70～100	205, 235,265	34	64	80	34-RAC 70- 85E		9.5, 9.9, 10.9
	-RAC100-225E, 290E, 325E*	100～130	225, 290, 325	42	83	83	42-RAC100-100E		12.5, 15.2, 16.5

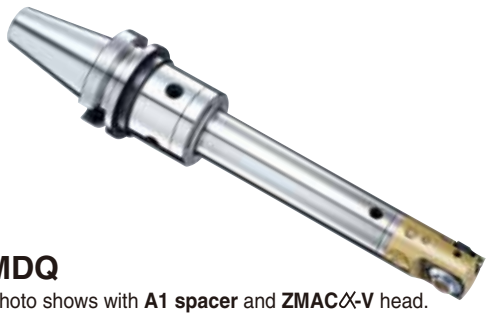
★**"C" grade (Coated)** inserts are supplied as standard with the head. ☞**P.74** Please refer ☞**P.116** for cutting condition.
★Please refer ☞**P.210** for base holder, ☞**P.102** for spacer and ☞**P.79** for head.
★**For centre through tool coolant type, please add"-C"at the end of Code No. e.g. NBT40-RAC53-165-C**
★Cartridges & Insert tips for the Heavy Duty Boring of Iron and Cast Iron (No letter), for Aluminum **(A)**, and for Through Hole & Multiple Sheets **(K)** are available. Please refer ☞**P.80** for cartridges. Please add the letter"No letter", **"A"** or **"K"** at the end of Code No. **e.g. NBT40-RAC53-165A**
★*** : NBT50-RAC100-375E, 425E and 475E are also available.**



Code No. of **RAC25** and **RAC32** with **CC** inserts are changed to **RAC25E** and **RAC32E**. Please refer ☞**P.71, P.72**

2LOCK MAJOR DREAM HOLDER BASE HOLDER for MODULAR TYPE

NIKKEN



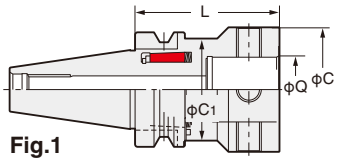


Fig.1

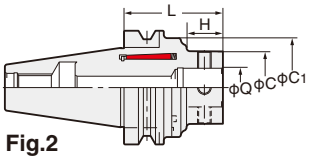


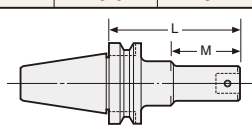
Fig.2

MDQ

Photo shows with **A1 spacer** and **ZMAC𝒳-V** head.

TAPER	Code No.	Q	L	C	C1	H	Weight (kg)	ZMAC-V Boring Range	Fig
No.30	NBT30-MDQ26- 60	26	60	50	50	37.5	-	16～70	1
No.40	NBT40 (NIT40)-MDQ26- 65	26	65	50	54	30.0	1.3	16～70	2
No.50	NBT50-MDQ26- 80	26	80	50	87	22.0	4.6	16～70	2
	(NIT50)-MDQ34- 90	34	90	64	87	32.0	4.9	16～85	
	-MDQ42-100	42	100	83	87	45.0	5.7	16～180	

★All base holders are used for centre through tool coolant.
★Coupling bolt and wrench are supplied as standard.
★**ZMAC𝒳-V** head is recommended to use with the **MAJOR DREAM** base holder for anti-vibration.
★**When L length is required longer than standard, please specify the boring depth M and Q No.**



Q No.

2LOCK BASE HOLDER for MODULAR TYPE

NIKKEN



Q

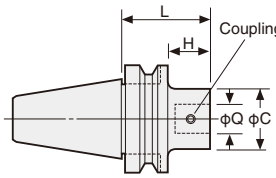


Fig.1

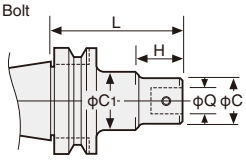


Fig.2

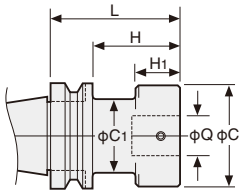


Fig.3

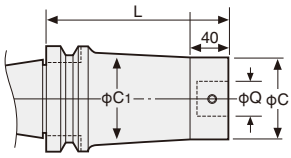
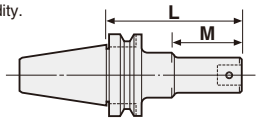


Fig.4

TAPER	Code No.	Coupling Dia Q	L	C	C1	H	H1	Coupling Bolt No.	Fig.	Weight(kg)
No.30	NBT30-Q 9- 50	9	50	19	30	20	-	B19	2	0.5
	-Q12- 65	12	65	24	-	40		B12	1	
	-Q16- 50	16	50	31		25		B16		
	-Q20- 50	20		40		26		B20		
	-Q26- 40	26	40	50	45	18	6	B26N	3	
No.40	NBT40-Q 9- 80, 95N	9	80,95	19	30	5,27	-	B19	2	1.2, 1.2
	(NIT40)-Q12- 80,110	12	80,110	24	35	12,50		B12		1.2, 1.3
	-Q16- 95,125	16	95,125	31	42	22,55		B16		1.5, 1.6
	-Q20- 80,110	20	80,110	40	50	27,60		B20		1.5, 1.7
	-Q26- 50, 95,140	26	50,95,140	50	-	20,65,110		B26N	1	1.1, 1.8, 2.4
	-Q34- 95,110	34	95,110	64	62	68,83	55,70	B34	3	2.2, 2.6
	-Q42- 95	42	95	83	62	68	55	B42		2.8
No.50	NBT50-Q 9-110,125N	9	110,125	19	40	5,27	-	B19	2	4.1, 4.1
	(NIT50)-Q12- 95,125	12	95,125	24	44	12,50		B12		4.0, 4.0
	-Q16-125N,155	16	125,155	31	50	22,55		B16		4.5, 4.6
	-Q20-110,125	20	110,125	40	60	27,60		B20		4.6, 4.5
	-Q26- 65,140,170N	26	65,140,170	50	65	27,47,112		B26N	1,2,2	3.7, 5.3, 5.4
	-Q34-140,170,200	34	140,170,200	64	80	102,120,150		B34	1,2,2	5.6, 6.5, 7.1
	-Q42-125,190	42	125,190	83	-	87,152		B42	1	6.5, 9.1
	-Q42-225A,275A 325A,375A		225,275 325,375	83	98	-			4	12.9, 15.6 18.3, 21.0

★ϕC of **Q**26 base holder has been increased from 45mm to 50mm due to improvement of its rigidity.
★All base holders have a centre through-tool coolant hole.
★The Coupling screw & wrench are supplied as standard.
★**When L length is required longer than standard, please specify the boring depth M.**



Q No.

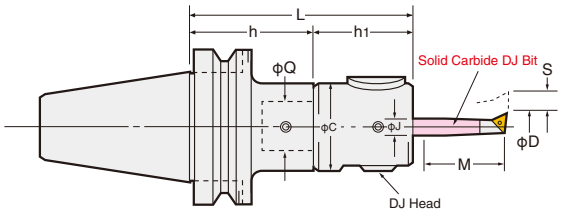
2LOCK DJ BORING BAR

NIKKEN

For both wide range small quantity production and mass production
Boring Head with **Power of Solid Carbide DJ Bit**



DJ



TAPER	Code No.	Boring Range	Boring Depth	L	C	Bit Hole Size	Shank Code No.	Head Code No.	Bit Stroke	DJ Bit Code No.
	NBTNo.-MinD-L	D	M			J	NBTNo.Q-h	Q-MinD-h1	S	
No.30	NBT30-DJ3- 80A	3～28	14～ 80	80	50	10	NBT30-Q26- 40	Q26-DJ3-40A	5.2	J10
	-DJ8- 84AN	3～50	14～130	84	59	16		-DJ8-44AN	6.0	J16
No.40	NBT40-DJ3- 90A	3～28	14～ 80	90	50	10	NBT40-Q26- 50	Q26-DJ3-40A	5.2	J10
	(NIT40) -135A			135			- 95			
	-DJ8- 94AN	3～50	14～130	94	59	16	NBT40-Q26- 50	-DJ8-44AN	6.0	J16
	-139AN			139			- 95			
No.50	NBT50-DJ3-105A	3～28	14～ 80	105	50	10	NBT50-Q26- 65	Q26-DJ3-40A	5.2	J10
	(NIT50) -210A			210			-170N			
	-DJ8-109AN	3～50	14～130	109	59	16	NBT50-Q26- 65	-DJ8-44AN	6.0	J16
	-214AN			214			-170N			

★MIN. dial readout on dia.: 0.01mm, Sub scale: 0.005mm, 0.8mm/rev.
★Each boxed set of **DJ3** and **DJ8** Boring Bars include 4 pcs of **DJ** Boring Bits as standard.
Bits included for **NBT40-DJ8-94A : J16-8-40, J16-18-80, J16-28-85, J16-38-85**
Bits included for **NBT40-DJ8-94AN : J16-8-40, J16-18-60, J16-28-65, J16-38-65**
★**DJ** Boring Bar without Boring Bits is also available. Please add"**-BD**"at the end of Code No. **e.g. NBT40-DJ3-90A-BD**
★Shank and **DJ** Head(including Boring Bits)are delivered in separate packages.
★Please refer ☞**P.100** for Boring Bits. Please refer ☞**P.118** for cutting condition.

2LOCK BALANCE-CUT BAC ADVANCED BORING ARBOR for LARGE DIA. NIKKEN

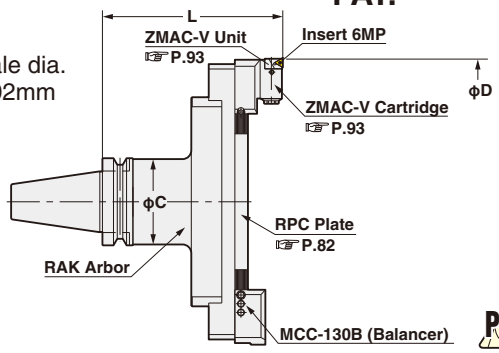
PAT.



BAC-V

For Finishing

- Min. dial read out:main scale dia. 0.02mm,sub scale dia.0.002mm
- Boring Dia:ϕ130～595mm

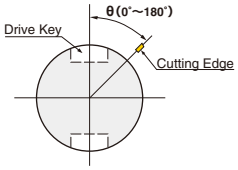


P.119

Boring Dia:ϕ130～595mm **for Finishing.**

TAPER	Code.No	D MIN.～MAX.	L	C	RAK Arbor Code No.	PPC Plante No	Cartridge (Balancer)	Weight (kg)
No.40	NBT40 -BAC130-205V	130～195	205	61	NBT40-RAK-130A	RPC-130	MCCZ-130V (MCC-130B) Insert Tip 6MP	6.8
	(NIT40) -BAC180-205V	180～245				-180		7.8
No.50	NBT50 -BAC130-185V, 235V, 285V	130～195	185, 235, 285	90	NBT50-RAK-110A, 160A, 210A	RPC-130		13.0, 14.5, 17.5
	(NIT50) -BAC180-185V, 235V, 285V	180～245				-180		13.5, 15.0, 18.0
	-BAC230-185V, 235V, 285V	230～295				-230		14.0, 15.5, 18.5
	-BAC280-185V, 235V, 285V	280～345				-280		14.5, 16.0, 19.0
	-BAC330-210V*	330～395	210 (220*)	98	NBT50-RAK330-125 NIT50-RAK330-135*	RPC-330		16.2
	-BAC380-210V*	380～445				-380		16.5
	-BAC430-210V*	430～495				-430		17.5
	-BAC480-210V*	480～545				-480		18.5
	-BAC530-210V*	530～595				-530		19.5

★**"C" grade (Coated)** Inserts are supplied as standard. ★Please refer ☞ **P.117** for cutting condition.
★Unit **"M5HZ-55V"** is provided as standard, please refer ☞ **P.82** for Arbor (**RAK**) and Plate (**RPC**).
★Arbor, Plate and Cartridge are delivered in separate packages.
★When ordering, please let us know machine maker and model no. to avoid the interfererce with tool magazine of **ATC**.
★The location of cutting edge is same as drive key in standard.
The different location is available, please specify **θ** in Code No. **e.g. NBT50-BAC180-235V (90°)**
★The boring arbors marked*with **NIT50**, L (gauge length) is 220. **e.g. NIT50-BAC330-220V**



View from Cutting edge.

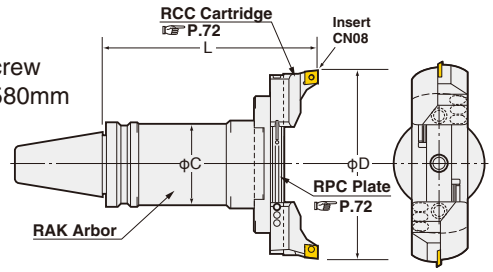
2LOCK BALANCE-CUT RAC BORING ARBOR for LARGE DIA. NIKKEN



RAC

For Roughing

- With slight adjust screw
- Boring Dia:ϕ130～580mm



P.74

Boring Dia:ϕ130～580㎜ **for Roughing.**

TAPER	Code.No	D MIN.～MAX.	L	C	RAK Arbor Code No.	PPC Plante No	Cartridge No. for Large dia.	Weight (kg)
No.40	NBT40 -RAC130-205	130～180	205	61	NBT40-RAK-130A	RPC-130	For Heavy Duty Boring of Iron and Cast Iron RCC-130 ×2 Insert Tip CN08	6.8
	(NIT40) -RAC180-205	180～230				-180		7.8
No.50	NBT50 -RAC130-185, 235, 285	130～180	185, 235, 285	90	NBT50-RAK-110A, 160A, 210A	RPC-130		11.3, 12.8, 15.8
	(NIT50) -RAC180-185, 235, 285	180～230				-180		11.8, 13.3, 16.3
	-RAC230-185, 235, 285	230～280				-230		12.3, 13.8, 16.8
	-RAC280-185, 235, 285	280～330				-280		12.8, 14.3, 17.3
	-RAC330-210*	330～380	210 (220*)	98	NBT50-RAK330-125 NIT50-RAK330-135*	RPC-330		15.5
	-RAC380-210*	380～430				-380		16.5
	-RAC430-210*	430～480				-430		17.5
	-RAC480-210*	480～530				-480		18.5
	-RAC530-210*	530～580				-530		19.5

★The Code No. on above table are the boring arbors with **RCC-130** cartridge (Inset tip: **CN08**) the Heavy Duty Boring of Iron and Cast Iron . Please refer ☞ **P.116** for cutting condition.
★Boring arbor with cartridges & insert for Steel, Stainless Steel and Cast Iron **(E)**, for Aluminum **(A)** and for Through Hole & Multi Sheets **(K)** are available.
Please refer ☞ **P.82** for cartridges. **e.g. NBT50-RAC130-185E**
★Arbor, Plate and Cartridge are delivered in separate packages. ★When ordering, please let us know machine maker and model no. to avoid the interference with tool magazine of **ATC**.
★The location of cutting edge is same as drive key in standard. The different location is available, please specify **θ** in Code No. **e.g. NBT50-RAC180-235 (90°)**
★The boring arbors marked*with **NIT50**, L (gauge length) is 220. **e.g. NIT50-RAC330-220**

2LOCK FACE MILL ARBOR

NIKKEN

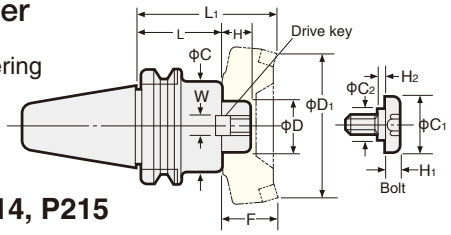


FMA

For JIS B4113 Face Mill Cutter

■Taper contact area of more than 80% ensures reliable milling with no chattering accompanied

FMH Arbor for High Feed with Coolant Through ☞ **P.214, P215**



TAPER	Code No. (ΦD -L)	H	C	W	C1	C2	H1	H2	Weight (kg)	L1	D1	F	Drive Key	Bolt
		Dimensions								Demension of Arbor with cutter				
No.30	NBT30-FMA25.4 - 45	22	50	9.5	33	23	10	2	1.3	95	80	50	FW 5	FM12
No.40	NBT40-FMA25.4 - 45	22	50	9.5	33	23	10	2	1.5	95	80	50	FW 5	FM12
	-FMA25.4 - 90								3.1	140			FW 5	
	-FMA31.75 - 45	30	60	12.7	40	23	10	6	1.7	105	100	60	FW13	FM16
	-FMA31.75 - 75								3.1	135				
	-FMA38.1 - 60	34	80	15.9	50	27	14	6	2.9	120	125	60	FW18	FM20
No.50	NBT50-FMA25.4 - 45	22	58	9.5	33	23	10	2	3.7	95	80	50	FW 5	FM12
	-FMA25.4 - 90								4.6	140				
	-FMA25.4 -150								5.5	200				
	-FMA31.75 - 45	30	70	12.7	40	23	10	6	4.5	105	100	60	FW12	FM16
	-FMA31.75 - 75								5.3	135			FW13	
	-FMA31.75 -105								6.1	165				
	-FMA38.1 - 45	34	80	15.9	50	27	14	6	4.3	105	125	60	FW18	FM20
	-FMA38.1 - 75								5.6	135			FW19	
	-FMA50.8 - 45	36	100	19	65	37	14	10	4.9	105	160	60	FW23	FM24
	-FMA50.8 - 75								6.8	135			FW24	
	-FMA47.625- 75	38	128.57	25.4	—	—	—	—	7.7	135	200	60	FW26	✻

★Drive keys, L-Wrench & Bolt are supplied as standard. ★The arbor marked ✻requires 4 fixing bolts. ★Above weight is for Arbor only. (Not include Face Mill Cutter)

★**FMA25.4** type Arbor is suitable for NIKKEN PRO-END MILL φ60 (**PE60HC**) and φ80 (**PE80HC**).

★**FMA31.75** type Arbor is suitable for NIKKEN PRO-END MILL φ100 (**PE100HC**). Please refer ☞ **P.127**.

★Code No. of Centre Through Coolant type **FMA** Arbor for NIKKEN PRO-END MILL is : **e.g. NBT40-FMA25.4C-45**

★Extended length Face Mill Arbors are available on request.

NBT50-FMA25.4 -200,-250
-FMA31.75-150,-200
-FMA38.1 -150,-200

★Diameter φC of **NBT50-FMA25.4** and **NBT50-FMA31.75** are enlarged.

★**In case of the special cutter, please specify the dimensions below.**

Fig.1

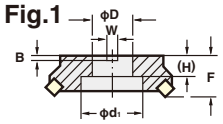
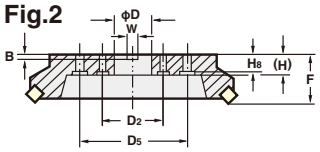


Fig.2



2LOCK FACE MILL ARBOR

NIKKEN



FMB

■Taper contact area of more than 80% ensures reliable milling with no chattering accompanied

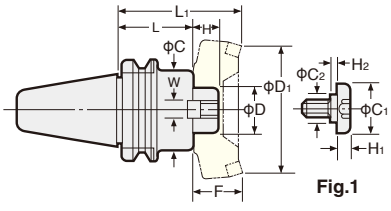


Fig.1

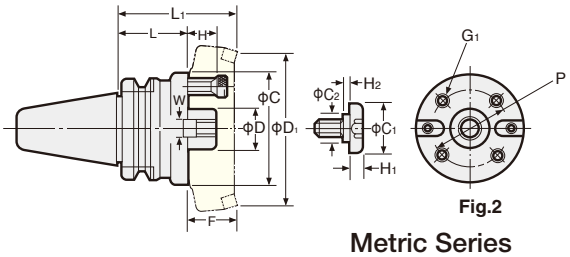


Fig.2

Inch Series

(●)figures for Metric Series

Metric Series

TAPER	Code No. (ΦD -L)	H	C	W	C1	C2	H1	H2	G1	P	Weight (kg)	L1	D1	F	Fig.	Code No. (ΦD -L)
		Dimensions										Demension of Arbor with cutter				
No.30	NBT30-FMB25.4 - 45	26	80	9.5(12)	33	23	10	2	—	—	1.7	95	80	50	1	NBT30-FMB27 - 45
No.40	NBT40-FMB25.4 - 60	26	80	9.5(12)	33	23	10	2	—	—	2.5	110	80	50	1	NBT40-FMB27 - 60
	-FMB25.4 - 90										4.7	140				-FMB27 - 90
	-FMB38.1 - 60		85	15.9(16)	50	27	14	6	—	—	7.4	123	125	63		-FMB40 - 60
No.50	NBT50-FMB25.4 - 45	26	80	9.5(12)	33	23	10	2	—	—	4.0	95	80	50	1	NBT50-FMB27 - 45
	-FMB25.4 - 90										5.8	140				-FMB27 - 90
	-FMB25.4 -150										8.2	200				-FMB27 -150
	-FMB38.1 - 45		85	15.9(16)	50	27	14	6	—	—	4.7	108	125	63	1	-FMB40 - 45
	-FMB38.1 - 75										6.1	138				-FMB40 - 75
	-FMB38.1 -105										8.7	168				-FMB40 -105
	-FMB38.1F- 75		110						M12	66.7	6.6	138			2	-FMB40F- 75
	-FMB60 - 75	25	140	25.4	—	—	—	—	M16	101.6	7.9		200	63		-FMB60 - 75

★Drive keys, L-Wrench & Bolt are supplied as standard.

★Above weight is for Arbor only. (Not include Face Mill Cutter)

2LOCK SHOULDER CUTTER ARBOR

NIKKEN

■Taper contact area of more than 80% ensures reliable Milling with no chattering accompanied.

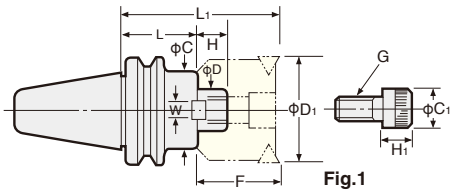


Fig.1

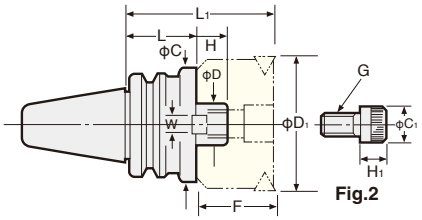


Fig.2

FMC

Inch Series　　(●)figures for Metric Series　　Metric Series

Dimensions					Weight	Dimensions of Arbor with cutter				C1	H1	Fig	Code No.(ΦD -L)
TAPER	Code No.(ΦD -L)	H	C	W	(kg)	L1	D1	F	G CAP bolt				
No.30		18	45	10	1.4	80	50	40	M10×30	16	10	1	NBT30-FMC22- 40
No.40		18	45	10	1.3	85	50	40	M10×30	16	10	1	NBT40-FMC22- 45
					2.0	130							FMC22- 90
	NBT40-FMC25.4- 60	20	60	9.4(12)	1.5	110	80	50	M12×35	18	12	2	FMC27- 60
	-FMC25.4- 90				2.2	140							FMC27- 90
	-FMC38.1- 60	22	85	15.5(14)	2.3	110	125	50	M16×35	30 (24)	15(16)		FMC32- 60
	-FMC38.1- 75				2.6	125							FMC32- 75
No.50		18	45	10	4.2	100	50	40	M10×30	16	10	1	NBT50-FMC22- 60
					4.7	145							FMC22-105
					5.3	190							FMC22-150
	NBT50-FMC25.4- 45	20	70	9.4(12)	4.1	95	80	50	M12×35	18	12		FMC27- 45
	-FMC25.4- 90				5.5	140							FMC27- 90
	-FMC25.4-150				7.3	200							FMC27-150
	-FMC38.1- 45	22	85	15.5(14)	4.2	95	125	50	M16×40 (35)	30 (24)	15(16)		FMC32- 45
	-FMC38.1- 75				5.5	125							FMC32- 75
	-FMC38.1-105				7.0	155							FMC32-105

★Drive keys, L-Wrench & Bolt are supplied as standard.
★Above weight is for Arbor only. (Not include Face Mill Cutter)
★**FMC22** type Arbor is suitable for NIKKEN PRO-END MILL φ50(**PE50HC**). ☞**P.127**
★Code No. of Centre Through Coolant type **FMC** Arbor for NIKKEN PRO-END MILL is **e.g. NBT40-FMC22C-45.**

2LOCK SHELL END MILL ARBOR

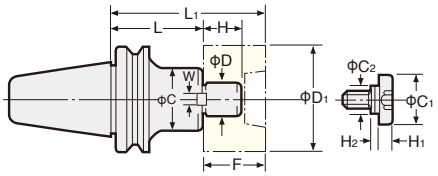
NIKKEN



SMA

JIS B4214 for SHELL END MILL

■Taper contact area of more than 80% ensures reliable Milling with no chattering accompanied.



Inch Series　　(●)figures for Metric Series　　Metric Series

Dimensions									Weight	Dimensions of Arbor with cutter			Code No.(ΦD -L)
TAPER	Code No.(ΦD -L)	H	C	W	C1	C2	H1	H2	(kg)	L1	D1	F	
No.30	NBT30-SMA15.875-30	17	34	8	20	15	7	2	0.9	60	35	30	NBT30-SMA16-30
	-SMA22.225-30	27	42		28	18	9		1.0	75	45(50)	45	-SMA22-30
No.40	NBT40-SMA15.875-60,120	17	34	8	20	15	7	2	1.3•1.7	90•150	35(40)	30	NBT40-SMA16-60,120
	-SMA22.225-60,120	27	42		28	18	9		1.4•2.1	105•165	45(50)	45	-SMA22-60,120
	-SMA25.4 -45,105	36	50	10	33	23	10		1.4•2.3	105•165	60(75)	60	-SMA27-45,105
	-SMA31.75 -45,75	38	60		40			6	1.6•2.3	106•135	100		-SMA32-45,75
	-SMA38.1 -60		80	12	50	27	14		3.0	120	125		-SMA40-60
No.50	NBT50-SMA15.875-75,120	17	34	8	20	15	7	2	4.2•5.8	105•150	35(40)	30	NBT50-SMA16-75,120
	-SMA22.225-75,120,180	27	42		28	18	9		4.3•4.8•5.5	120•165•225	45(50)	45	-SMA22-75,120,180
	-SMA25.4 -60,105,150	36	50	10	33	23	10		4.3•5.2•5.8	120•165•210	60(75)	60	-SMA27-60,105,150
	-SMA31.75 -45,75,105	38	60		40			6	4.2•5.2•6.2	105•135•165	100		-SMA32-45,75,105
	-SMA38.1 -45,75		80	12	50	27	14		4.3•5.5	105•135	125		-SMA40-45,75

SMB

Inch Series

Dimensions									Weight	Dimensions of Arbor with cutter		
TAPER	Code No.(ΦD -L)	H	C	W	C1	C2	H1	H2	(kg)	L1	D1	F
No.30	NBT30-SMB22.225-50	17	40	8	28	18	9	2	1.0	65	50	35
No.40	NBT40-SMB22.225-45,120	17	45	8	28	18	9	2	1.3•2.2	80•155	50	35
	-SMB31.75 -45,75	30	60	12.7	40	23	10	6	1.6•2.3	95•125	75	50
	-SMB38.1 -60	36	80	15.9	50	27	14		2.8	120	100	60
No.50	NBT50-SMB22.225-60,120,180	17	45	8	28	18	9	2	4.3•5.0•5.7	95•155•215	50	35
	-SMB31.75 -45,75,105	30	60	12.7	40	23	10	6	4.2•5.2•6.2	95•125•155	75	50
	-SMB38.1 -45,75,	36	80	15.9	50	27	14		4.3•5.5	105•135	100	60

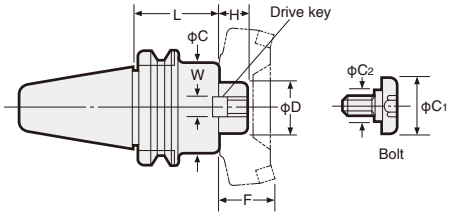
★Above weight is for Arbor only. (Not include Face Mill Cutter)

2LOCK FMH FACE MILL ARBOR

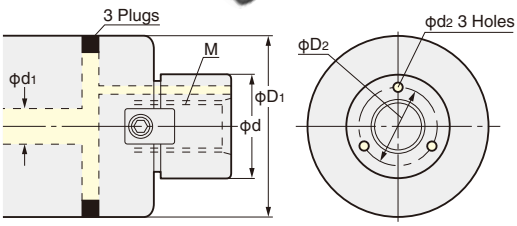
NIKKEN



■For Oil Hole Cutter
For High Feed Cutter



FMH



Code No.	Cutter Dia.	φd	φD1	M	Coolant Hole		
					φD2	φd1	φd2
FMH22(22.225)	φ50, φ52 φ63, φ66	22(22.225)	47 60	M10×1.5	16	6~8	3
FMH27(25.4)	φ80	27(25.4)	76(70)	M12×1.75	19.5(18.5)	8~10	3.5
FMH32(31.75)	φ100	32(31.75)	96	M16×2.0	24	10~13	4
FMH40(38.1)	φ125	40(38.1)	100	M20×2.5	30(29)	10~15	5
FMH50.8	φ160	50.8	100	M24×3.0	37.5	15~20	7

★Fixing dimension is basically based on **FMA/FMC.** ★The combination of the other cutter dia. are also available.

FMH Inch Series

TAPER	Code No.	Arbor D	L	H	C	C1	W	Drive Key	Lock Bolt	G Cap Bolt	Weight (kg)
No.40	NBT40-FMH22.225- 47 - 45	22.225	45	17	47	28	8	FW 3	FM10	—	1.3
	(NIT40) - 60		60								1.5
	- 90		90								1.9
	-150		150								2.7
	-FMH22.225- 60 - 45	22.225	45	17	60	28	8	FW 3	FM10	—	1.5
	- 60		60								1.8
	- 90		90								2.5
	-FMH25.4 - 70 - 60	25.4	60	22	70	33	9.5	FW 5	FM12	—	2.0
	- 90		90								2.7
	-105		105								3.1
	-FMH31.75 - 76 - 60	31.75	60	30	76	40	12.7	FW13	FM16	—	2.2
	- 90		90								2.9
	-FMH31.75 - 96 - 60	31.75	60	30	96	40	12.7	FW13	FM16	—	2.5
No.50	NBT50-FMH22.225- 47 - 60	22.225	60	17	47	28	8	FW 3	FM10	—	4.1
	(NIT50) -105		105								4.7
	-150		150								5.3
	-200		200								6.0
	-250		250								6.6
	-300		300								7.7
	-350		350								8.9
	-FMH22.225- 60 - 60	22.225	60	17	60	28	8	FW 3	FM10	—	4.2
	-105		105								5.2
	-150		150								6.2
	-200		200								7.4
	-250		250								8.5
	-300		300								9.6
	-350		350								10.6
	-FMH25.4 - 70 - 45	25.4	45	22	70	33	9.5	FW 5	FM12	—	4.0
	- 60		60								4.5
	- 90		90								5.4
	-150		150								7.2
	-200		200								8.7
	-250		250								10.3
	-300		300								11.8
	-FMH31.75 - 76 - 45	31.75	45	30	76	40	12.7	FW12	FM16	—	4.1
	- 75		75					FW13			5.2
	-105		105								6.3
	-150		150								7.9
	-200		200								9.7
	-250		250								11.6
	-300		300								13.4
	-FMH31.75 - 96 - 45	31.75	45	30	96	40	12.7	FW13	FM16	—	4.3
	- 75		75								6.0
	-105		105								7.7
	-150		150								10.3
	-200		200								13.1
	-250		250								16.4
	-300		300								19.2
	-FMH38.1 -100 - 45	38.1	45	34	100	50	15.9	FW19	FM20	—	4.4
	- 75		75								6.3
	-105		105								8.1
	-150		150								10.9
	-200		200								14.5
	-250		250								17.5
	-300		300								20.5
	-FMH50.8 -100 - 45	50.8	45	36	100	65	19	FW23	FM24	—	4.4

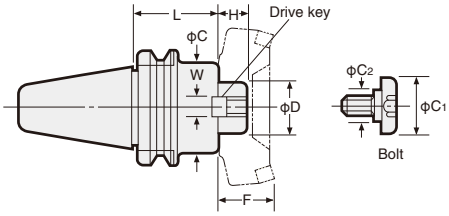
★Drive keys, L-Wrench & Bolt are supplied as standard.
★Above weight is for Arbor only. (Not include Face Mill Cutter)

2LOCK FMH FACE MILL ARBOR

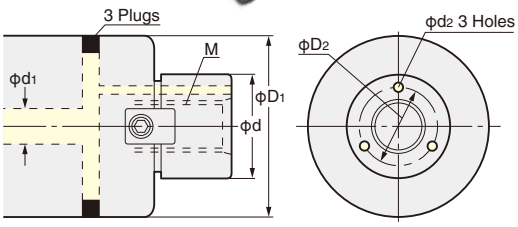
NIKKEN



■For Oil Hole Cutter
For High Feed Cutter



FMH



Code No.	Cutter Dia.	φd	φD1	M	Coolant Hole φD2	Coolant Hole φd1	Coolant Hole φd2
FMH22(22.225)	φ50, φ52 φ63, φ66	22(22.225)	47 60	M10×1.5	16	6~8	3
FMH27(25.4)	φ80	27(25.4)	76(70)	M12×1.75	19.5(18.5)	8~10	3.5
FMH32(31.75)	φ100	32(31.75)	96	M16×2.0	24	10~13	4
FMH40(38.1)	φ125	40(38.1)	100	M20×2.5	30(29)	10~15	5
FMH50.8	φ160	50.8	100	M24×3.0	37.5	15~20	7

★Fixing dimension is basically based on **FMA/FMC.** ★The combination of the other cutter dia. are also available.

FMH Metric Series

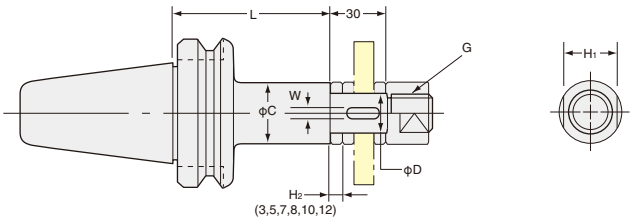
TAPER	Arbor Code No.	D	L	H	C	C1	W	Drive Key	Lock Bolt	G Cap Bolt	Weight (kg)
No.30	NBT30-FMH16- 37 - 35	16	35	17	37	20	8	FW 3	FM 8	—	0.6
	-FMH22- 47 - 45	22	45	18	47	16	10	FW 8	—	M10 × 30	0.8
	-FMH27- 60 - 45	27	45	20	60	18	12	FW11	—	M12 × 35	1.0
No.40	NBT40-FMH16- 37 - 40	16	40	17	37	20	8	FW 3	FM 8	—	1.1
	(NIT40)-FMH22- 47 - 45	22	45	18	47	16	10	FW 8	—	M10 × 30	1.3
	- 60		60								1.5
	- 90		90								1.9
	-150		150								2.7
	-FMH22- 60 - 45	22	45	18	60	16	10	FW 8	—	M10 × 30	1.5
	- 60		60								1.8
	- 90		90								2.5
	-FMH27- 60 - 45	27	45	20	60	18	12	FW11	—	M12 × 35	1.5
	- 60		60								1.8
	- 90		90								2.5
	-FMH27- 76 - 60	27	60	20	76	18	12	FW11	—	M12 × 35	2.1
	- 90		90								2.8
	-FMH32- 96 - 60	32	60	22	96	24	14	FW16	—	M16 × 35	2.4
No.50	NBT50-FMH16- 37 - 60	16	60	17	37	20	8	FW 3	FM 8	—	3.8
	(NIT50) -105		105								4.1
	-150		150								4.5
	-200		200								4.9
	-FMH22- 47 - 60	22	60	18	47	16	10	FW 8	—	M10 × 30	4.1
	-105		105								4.7
	-150		150								5.3
	-200		200								6.0
	-250		250								6.7
	-300		300								7.8
	-350		350								8.9
	-FMH22- 60 - 60	22	60	18	60	16	10	FW 8	—	M10 × 30	4.2
	-105		105								5.2
	-150		150								6.3
	-200		200								7.4
	-250		250								8.5
	-300		300								9.6
	-350		350								10.7
	-FMH27- 60 - 45	27	45	20	60	18	12	FW11	—	M12 × 35	3.9
	- 90		90								5.0
	-150		150								6.3
	-200		200								7.4
	-250		250								8.5
	-300		300								9.6
	-FMH27- 76 - 45	27	45	20	76	18	12	FW11	—	M12 × 35	4.0
	- 90		90								5.6
	-150		150								7.8
	-200		200								9.7
	-250		250								11.4
	-300		300								13.2
	-FMH32- 96 - 45	32	60	22	96	24	14	FW16	—	M16 × 35	4.2
	- 90		90								6.8
	-150		150								10.2
	-200		200								13.3
	-250		250								16.1
	-300		300								19.0
	-FMH40-100 - 45	40	45	26	100	50	16	FW22	FM20	—	4.4
	- 75		75								6.2
	-105		105								8.1

★Drive keys, L-Wrench & Bolt are supplied as standard.
★Above weight is for Arbor only. (Not include Face Mill Cutter)



SCA

■Taper contact area of more than 80% ensures reliable milling with no chattering accompanied.



	Inch Series	(●)figures for Metric Series					Metric Series
TAPER	Code No.(ΦD-L)	H_1	C	W	G	Weight(kg)	Code No.(ΦD-L)
No.30	NBT30-SCA12.7 -60	17	20	—	M12	1.0	NBT30-SCA13-60
	-SCA15.875-60	23	26	3.18 (4)	M14	1.1	-SCA16-60
	-SCA22.225-60	29	34	3.18 (6)	M20	1.2	-SCA22-60
	-SCA25.4 -60	32	40	6.35 (7)	M24	1.3	-SCA27-60
No.40	NBT40-SCA12.7 -75	17	20	—	M12	1.2	NBT40-SCA13-75
	-105					1.3	-105
	(NIT40) -SCA15.875-75	23	26	3.18 (4)	M14	1.4	-SCA16-75
	-105					1.5	-105
	-SCA22.225-75	29	34	3.18 (6)	M20	1.7	-SCA22-75
	-120					2.0	-120
	-SCA25.4 -75	32	40	6.35 (7)	M24	2.0	-SCA27-75
	-120					2.4	-120
	-SCA31.75 -90	41	46	7.92 (8)	M30	2.6	-SCA32-90
No.50	NBT50-SCA12.7 -75	17	20	—	M12	4.0	NBT50-SCA13-75
	-105					4.3	-105
	(NIT50) -SCA15.875-90	23	26	3.18 (4)	M14	4.2	-SCA16-90
	-120					4.4	-120
	-SCA22.225-90	29	34	3.18 (6)	M20	4.4	-SCA22-90
	-135					4.7	-135
	-SCA25.4 -90	32	40	6.35 (7)	M24	4.5	-SCA27-90
	-135					4.9	-135
	-SCA31.75 -90	41	46	7.92 (8)	M30	4.7	-SCA32-90
	-135					5.2	-135
	-SCA38.1 -90	46	55	9.52 (10)	M36	4.9	-SCA40-90
	-135					5.9	-135

★JIS B4206, JIS B4107, JIS B4219, JIS B4109 cutters can be attached.
★Key and Collars(H_2=3, 5, 7, 8, 10, 12) are supplied as standard. ☞ P.128
★The Code No. of Nut is unified from **"GN"** to **"GNT"**.

2LOCK HIGH SPEED SPINDLE SPEEDER

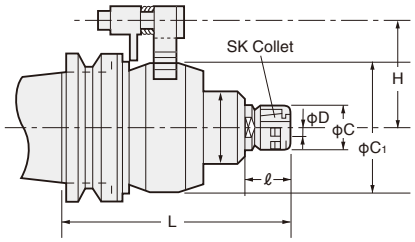
NIKKEN

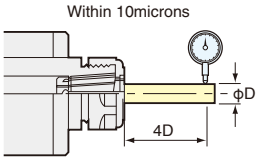




10,000～40,000min-1

- **NIKKEN NX increases the spindle speed by 4 or 5 times, so economically convert your standard M/C to high speed M/C.**
- Inside gears are mirror-finish ground by NIKKEN original Fluid-Dynamic Grinding Process.
- **Run-out accuracy is more stable due to TiN Bearing Nut (standard accessory).**





NX, PX

Explanation of the Code No.

NBT40 - NX 5 160
- 160: Length
- 5: Ratio
- NX: 4times, 5 times / PX: 6times, 10 times
- NBT40: Shank

TAPER	Code No.	D	L	C	C1	ℓ	H	Ratio	MAX. min-1	Weight(kg)	Collet
No.30	NBT30-NX 5-153	1.75～10	153	27.5	85	32	55	5	20,000	2.9	SK 10A
No.40	NBT40-NX 5-153		153				60			5.0	
	(NIT40)-PX 6-150GX	0.5～8.0	149	22	76	14.5		6	30,000	4.1	ETS14
	-PX10-160GX		162.5		98			10	40,000	4.5	
No.50	NBT50-NX 4-192	2.75～16	192	40	118	46	82	4	10,000	11.0	SK 16A
	(NIT50)-NX 5-151	1.75～10	151	27.5	85			5	20,000	7.0	SK 10A
	-PX 6-140GX	0.5～8.0	142	22	76	14.5		6	30,000	6.8	ETS14
	-PX10-155GX		155.5		98			10	40,000	7.2	

NX type

★For End Mill, please use **SK A type collet**. For Drill, please use **SK-P** class collet. ☞ P.198
★Wrench, Collet Extractor and **A type SK Collets** are supplied as standard.
NX5: SK10-6A, 8A, 10A NX4: SK16-8A, 10A, 12A, 16A
★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension.
★**Air Clyinder for Cooling (NXE-COOL) is highly recommended to use for the stable milling.**



Air Cylinder for Cooling with ON/OFF Magnet NXE-COOL

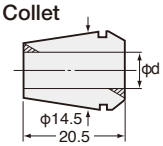
The best cooling is to cool the speeder body directly.



PX type

★Grease lubrication is standard.
★Please add **"MX"** instead of **"GX"** at the end of Code No. for the oil mist lubrication.
e.g. NBT40-PX6-130MX
★**ETS** collet is supplies as an option.

ETS Collet



Explanation of the Code No.

ETS 14 - 0.5
- 0.5: MAX. Chucking Dia.
- 14: Style No.
- ETS: Symbol of ETS Collet

★φd=0.5 ～1.0: Each 0.1mm(Gripping range:0.1mm)
e.g. ETS14-0.5:0.4～0.5mm
★φd=1.25～2.5: Each 0.25mm(Gripping range:0.25mm)
★φd=3.0 ～8.0: Each 0.5mm(Gripping range:0.5mm)

2LOCK AIR TURBINE SPINDLE TOOL

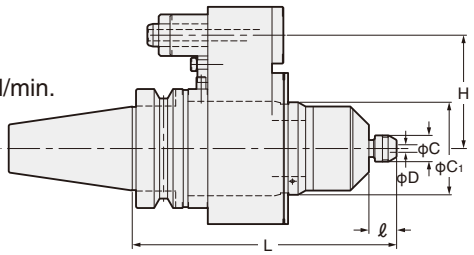
NIKKEN



150,000min-1

Run-out Accuracy of the Spindle: Within 1μm

Air Pressure, Comsumption:0.5MPa, 90Nl/min.
Collet Size:MAX φ4.0mm



HSK shank is also available.
HSK 50A-HTS1500-158
HSK 63A-HTS1500-160
HSK100A-HTS1500-167

Please do not rotate the machine spindle.

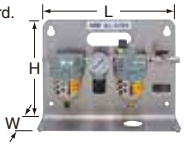
HTS

Explanation of the Code No.

NBT40 - HTS 1500 - 140
- 140: Nominal Gauge Length
- 1500: 150,000min-1
- HTS: Symbol of Air Turbine Spindle
- NBT40: Shank No.

TAPER	Code No.	D	L	C	C1	ℓ	H	MAX. min-1	Weight(kg)	Collet
No.30	NBT30-HTS1500-148	0.5～4	148	13.9	49	15	55	150,000	2.7	CHA-□ (Internal dia.)
	-HTS1500-152B		152				40		2.7	
No.40	NBT40 (NIT40)-HTS1500-140		140				60		3.2	
No.50	NBT50 (NIT50)-HTS1500-146		146				82		6.0	

★Collet **CHA-4.0** and spanner are suplied as standard.
★Air line kit(**AL-M1202/AL-M1203BS2**), the lubrication oil(**K-211**)and the stopper block are available as an option.



AL-M1202
LXWXH
300X120X220



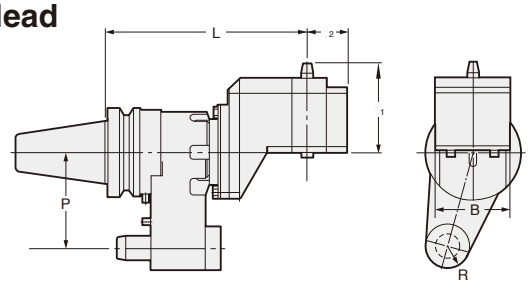
AL-M1203BS2(DC24V ON/OFF)
LXH
490X320

★The collet which internal dia. excepts φ4.0mm is available as an option.
CHA-2.35, 3.0, 3.175
The internal dia. range is each 0.1mm incremental from φ0.5 to φ4.0mm.

Quick type Off-Set Angular Head



AFT



Explanation of the Code No.

NBT40 - AF T 30 - 200

- 200: Length from Gauge Line
- 30: Taper No. of Adapter
- T: Quick type
- AF: Off-Set type Angular Head
- NBT40: Shank

MAX2,000min-1

TAPER	Code No.	Shank	L	P	ℓ1	ℓ2	B	R	Adapter	Weight(kg)
No.40	NBT40 (NIT40)-AFT30-200	NBT40	200	65	85	35	70	17.5	AHK30	7.5
No.50	NBT50 (NIT50)-AFT35-230	NBT50	230	110	85	45	84	25	AHK35	16.0

★Taper Connection System is applied to Stopper Block. (Different from the another FA Tooling)
★All types are available with Oil Hole System. ★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension.
★NIT40-AFT30-200 and NIT50-AFT35-230 are also available. ★When M/C spindle rotates CW, the cutter rotates CW.

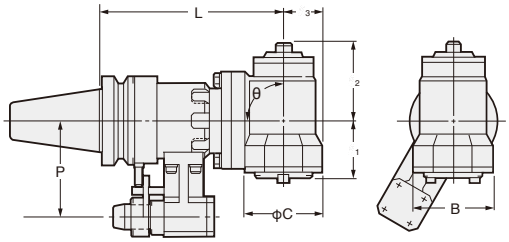
★For adapter, please refer ☞ P.142.
★Test bar is attached as standard.



Quick type 90° Angular Head



AHT



Explanation of the Code No.

NBT40 - AH T 30 - 160 - 90

- 90: Angle
- 160: Length from Gauge Line
- 30: Taper No. of Adapter
- T: Quick type
- AH: Symbol of Angular Head
- NBT40: Shank

MAX2,000min-1

TAPER	Code No. L -θ	Shank	L	P	ℓ1	ℓ2	ℓ3	C	B	θ	Adapter	Weight(kg)
No.40	NBT40-AHT30-160 -90	NBT40	160	65	58	61	37	86	80	90	AHK30	6.5
	(NIT40) -250*-90	NBT40	250									10.5
No.50	NBT50-AHT35-210 -90	NBT50	210	110	65	88	45	100	90	90	AHK35	17.0
	(NIT50) -300*-90	NBT50	300									22.0

★Taper Connection System is applied to Stopper Block. (Different from the another FA tooling)
★All types are available with Oil Hole System.
★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension.
★Models with ✻ mark : Detailed discussion is needed. ★When M/C spindle rotates CCW, the cutter rotates CW.

★For adapter, please refer ☞ P.142.
★Test bar is attached as standard.

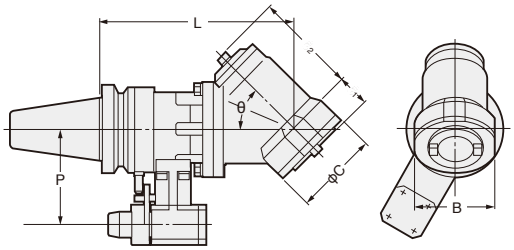


Quick type 30°,45°, 60°Angular Head



AHT

Photo shows 30° type.



Explanation of the Code No.

NBT40 - AH T 30 - 170 - 45

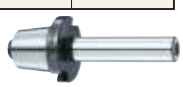
- 45: Angle
- 170: Length from Gauge Line
- 30: Taper No. of Adapter
- T: Quick type
- AH: Symbol of Angular Head
- NBT40: Shank

MAX2,000min-1

TAPER	Code No. L -θ	Shank	L	P	ℓ1	ℓ2	C	B	θ	Adapter	Weight(kg)
No.40	NBT40-AHT30-205 -30	NBT40	205	65	1.5	122	86	80	30	AHK30	6.5
	(NIT40) -170 -45		170		35	88			45		6.5
	-160 -60		160		35	88			60		6.5
	-250*-30	NBT40	250	65	1.5	122	86	80	30	AHK30	10.5
	-45				35	88			45		10.5
	-60				35	88			60		10.5
No.50	NBT50-AHT35-258 -30	NBT50	258	110	0	140	100	90	30	AHK35	17.0
	(NIT50) -225 -45		225		26	110			45		17.0
	-210 -60		210		40	105			60		17.0
	-300*-30	NBT50	300	110	0	140	100	90	30	AHK35	22.0
	-45				26	110			45		22.0
	-60				40	105			60		22.0

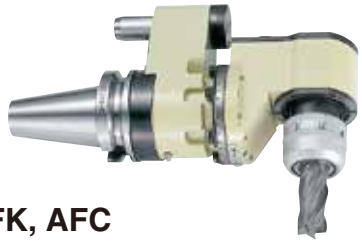
★Taper Connection System is applied to Stopper Block.(Different from the another FA tooling)
★All types are available with Oil Hole System.
★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension.
★Models with ✻ mark : Detailed discussion is needed. ★When M/C spindle rotates CCW, the cutter rotates CW.

★For adapter, please refer ☞ P.142.
★Test bar is attached as standard.

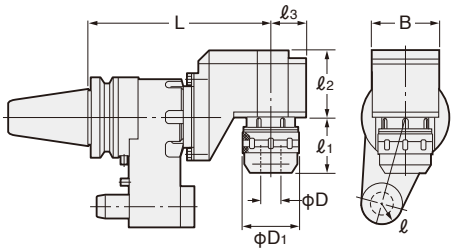


2LOCK SOLID TYPE ANGULAR HEAD (Free Positioning in 360°) NIKKEN

Solid OFF SET type Angular head



AFK, AFC



Explanation of the Code No.

NBT40 - AF K 16 - 200

- 200: Length from Gauge Line
- 16: MAX. Chucking Dia.
- K: Kind of chuck (K:Slim Chuck, C:Milling Chuck)
- AF: OFF SET type Symbol of Angular Head
- NBT40: Shank

TAPER	Code No. -L	D	D1	ℓ1	ℓ2	ℓ3	B	R	min-1	Weight(kg)	Collet
No.40	NBT40-AFK16-200	2.75～16	40	50	85	35	70	17.5	2,000	8.5	SK 16
	(NIT40)-AFC20-200	2～20	52	56						8.7	KM 20
No.50	NBT50-AFC20-230	2～20	52	58	85	45	84	25	2,000	17.0	KM 20
	(NIT50)-AFC32-230	3～32	69	65						17.2	KM 32

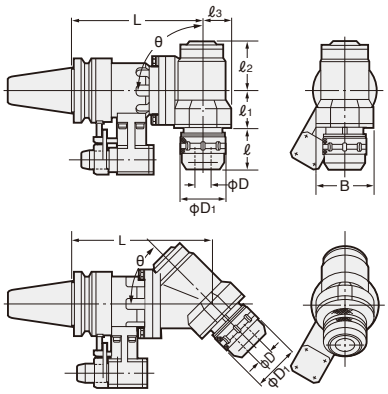
★When M/C spindle rotates CW, the cutter rotates CW.

★Test bar is attached as standard.

Solid - 90°, 45° type Angular head



AHK, AHC



Explanation of the Code No.

NBT40 - AH K 10 - 195 - 90

- 90: angle 30°, 45°, 60°, 90°
- 195: Length from Gauge Line
- 10: MAX chucking Dia
- K: Kind of chuck (K:Slim Chuck, C:Milling Chuck)
- AH: Symbol of Angular Head
- NBT40: Shank

TAPER	Code No. -L -	D	D1	ℓ	ℓ1	ℓ2	ℓ3	B	min-1	Weight(kg)	Collet
No.30	NBT30-AHK10-120-90	1.75～10	27.5	20	49	50	27.5	55	2,000	3.0	SK 10
No.40	NBT40-AHK10-180,220*-90	1.75～10	27.5	18	45	57	32	60	4,000	8.0, 9.0	SK 10
	(NIT40)-AHK16-180,220*-90	2.75～16	40	25	41	58	35	70		8.7, 9.7	SK 16
	-AHC20-160,250*-90	2～20	52	57	58	61	37	80	2,000	7.1, 11.1	KM20
No.50	NBT50-AHK10-200,240*-90	1.75～10	27.5	18	45	57	32	60	4,000	15.0, 16.0	SK 10
	(NIT50)-AHK16-200,240*-90	2.75～16	40	25	41	58	35	70		15.7, 16.7	SK 16
	-AHK25-210,300*-90	7.5～25.4	55	57	60	82	45	90	2,000	17.2, 22.2	SK 25
	-AHC32-210,300*-90	3～32	69							17.5, 22.5	KM32

★Taper Connection System is applied to Stopper Block. (Different from the another FA Tooling) ★All types are available with Oil Hole System.

★Test bar is attached as standard.

★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension.

★For SK10 SK16 SK25, please refer ☞ P.198. For KM20 KM25 and KM32, please refer ☞ P.192.

★Angle 30°, 45°, 60°are also available as an option. ★*Mark is for light cutting.

★When M/C spindle rotates CCW, the cutter rotates CW.

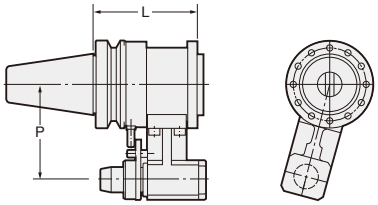
★Please contact with us for the dimension of 30°, 45°, 60° type.

2LOCK MODULAR TYPE ANGULAR HEAD NIKKEN

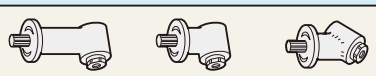
Modular type Angular Head AHM



AHM



MAX6,000min-1

TAPER	Code No. -L	L	P	Weight(kg)	Suitable Modular Head
No.40	NBT40 (NIT40)-AHM-100	100	65	4.5	
No.50	NBT50 (NIT50)-AHM-120	120	110	11.5	

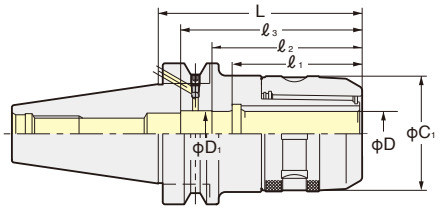
★Taper Connection System is applied to Stopper Block.(Different from the another FA Tooling) ★All types are available with Oil Hole System.

★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension.



MILLING CHUCK for Flange Through PAT.

C-F



TAPER	Code No.	C1	D1	ℓ1	ℓ2	ℓ3	Stopper (Option)	Collet	Weight(kg)
No.40	NBT40-C20F- 90,105	52	20	58	66	80	9MC20H	CCK20 CCNK20	1.9 , 2.0
	-C25F- 90,105	60	25	61	70		9MC25H	CCK25 CCNK25	2.0 , 2.2
	-C32F-105,120	69		70	81	107	9MC32H	CCK32 CCNK32	2.5 , 2.8
No.50	NBT50-C20F-105,135,165	52	20	58	66	80	9MC20H	CCK20 CCNK20	4.2 , 4.4 , 4.8
	-C25F-105,135,165	60	25	61	72		9MC25H	CCK25 CCNK25	4.5 , 5.1 , 5.7
	-C32F-120,135,165	69		70	81	107	9MC32H	CCK32 CCNK32	5.1 , 5.5 , 6.4
	-C42F-120,135,165	86	42		105, 115, 115	125	9MC42H	CCK42 CCNK42	5.8 , 6.1 , 6.8

★Spanner is available as an option. **C20 : 9HC22, C25 : 9HC25**
C32 : 9HC32, C42 : 9HC42

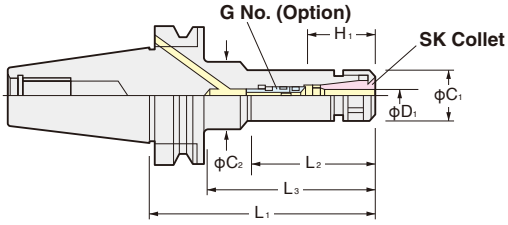
★Shank of High Speed Milling Chuck (G) is **2LOCK** . **e.g. NBT40-C20F-105G**
GH Handle ☞**P.48** is necessary for High Speed Milling Chuck.

★Please refer ☞**P.192** for **CCK** Collet and **CCNK** Collet. ★In case of Heavy End Milling operation, please chuck the End Mill longer than ℓ1 without using stopper. ☞**P.129**
★Please add **"RP"** at the end of Code No. for Rust Proof Treatment Milling Chuck. **e.g. NBT40-C20F-75-RP**. ★Please note the acceptable shank tolerance is h7.



SLIM CHUCK for Flange Through

SK-F



TAPER	Code No.	D1	H1	L2	L3	C1	C2	G No. (Option)	Weight (kg)	Collet
No.40	NBT40-SK 6F- 90,120	4~6	26~31	51,60	60,90	19.5	32,32	SKG6-6HG	1.1,1.4	SK 6
	-SK10F- 90,120,150,180	5~10	33~41	48,73,73,73	60,90,118,148	27.5	40,40,34.5,39	SKG10-10HG	1.2,1.4,1.6,1.6	SK10
	-SK13F- 90,120,150,180	5~13	39~51	58,88,88,88	-,-,118,148	33	-,-,40,40	SKG13-10HG	1.4,1.7,1.8,1.8	SK13
	-SK16F- 90	10~16	45~50	58	-	40	-	SKG16-12HGB	1.5	SK16
	-SK16F-120,150,180		45~57	88,118,148				SKG16-12HG	1.7,1.9,2.0	
	-SK20F- 90,120	10~20	57~63,47~63	60,90		48.5		SKG20-18HGB,SKG20-18HG	1.4,2.0	SK20
	-SK25F- 90,120	16~25	50~58,55~65	61,91		55		SKG25-18HGC,SKG25-24HGA	1.8,2.0	SK25
No.50	NBT50-SK 6F-105,165	4~6	26~31	55,60	64,114	19.5	32,32	SKG6-6HG	3.8,4.0	SK 6
	-SK10F-105,165,200,225	5~10	33~41	57,75,75,75	-,114,151,178	27.5	-,32,36,40	SKG10-10HG	4.2,4.6,4.8,5.1	SK10
	-SK13F-105,165,200	5~13	39~51	62,92,92	-,122,157	33	-,45,45	SKG13-10HG	4.5,4.9,5.2	SK13
	-SK16F-105,165,200	10~16	45~57	62,90,90	-,122,157	40	-,50,52	SKG16-12HG	4.7,5.1,5.5	SK16
	-SK20F-105,165	10~20	47~63	62,122	-	48.5	-	SKG20-18HG	4.3,5.0	SK20
	-SK25F-105,165	16~25	55~65,55~70	62,122		55		SKG25-24HGA,SKG25-24HG	5.2,5.6	SK25

★Collet, adjust screw (G No.) and spanner are available as an option.
The Code No. of the spanner is **SK6F (C=φ18) : SKL-6, SK6F (C=φ19.5) : SKL-6W, SK10F: SKL-10, SK13F: 9HC12A, SK16F: 9HC16, SK20F: 9HC22, SK25F: 9HC25**
★Shank of High Speed Slim Chuck (P) is **2LOCK** . **e.g. NBT40-SK10F-90P GH Handle** ☞**P.48** is necessary for High Speed Slim Chuck.
★Please add **"RP"** at the end of Code No. for Rust Proof Treatmeant Slim Chuck. **e.g. BT40-SK10F-90-RP**.
★Please refer ☞**P.198** for **SK** Collet.
★When cutter shank dia. is smaller than MIN. of D1, special adjust screw (G No.) is required. ☞**P.49**

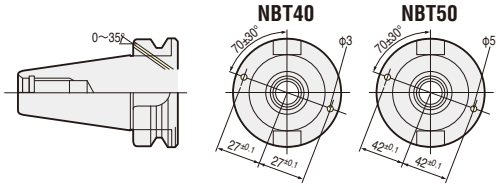
⚠
- **The special pull stud with Oring is required for the M/C with flange through coolant capability.**
- **When the stroke of the coolant nozzles at the spindle flange on the M/C with flange through coolant capability is shorter, it may be a collision between flange of 2LOCK tool and the nozzles. Please check the specification on your M/C.**

2LOCK FLANGE THROUGH COOLANT TYPE HOLDER NIKKEN



High Pressure Coolant Through Flange

The Flange Through Coolant System is a solution against the spindle rust and the dust problems of Centre Through Coolant System. These Tool Holder are used for Machine has Flange Through Holes and standard as **DIN69871/B**.



RPT (Rust Proof Treatment) ☞ P.130

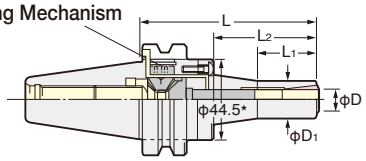
Pull Stud (with O-ring) for Flange Through type is also available.



MINI-MINI CHUCK for Flange Through PAT.

30,000min-1 & G2.5
Gripping from Front Nose
Run-out Accuracy: Within 3μm

New Locking Mechanism



High Speed

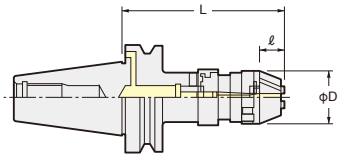
★ : MMC12 :φ52.4

TAPER	Code No.	φD	φD1	L1	L2	Collet	MAX. min-1	Weight (kg)
No.40	NBT40-MMC 8F- 90, 120	2～ 8	20	33, 40	42, 72	VMK 8J	30,000	1.4, 1.5
	-MMC12F- 90, 120	4～12	30	36, 60	44, 74	VMK12J		1.7, 1.8
No.50	NBT50-MMC 8F-105, 135, 165	2～ 8	20	33, 40, 40	42, 72, 102	VMK 8J	20,000	4.4, 4.5, 4.6
	-MMC12F-105, 135, 165	4～12	30	36, 60, 70	44, 74, 104	VMK12J		4.6, 4.7, 4.8

★Wrench is supplied as standard. Collet is available as an option ☞ P.192.
★Please use VMK Collet for the cutter with oil hole, and use VMK-J Collet for the cutter without oil hole.
★Photo shows **MINI-MINI Chuck** & **VMK Collet** chucking with φ2.7mm oil hole drill.



NPU DRILL CHUCK for Flange Through

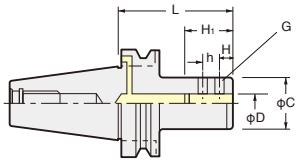


TAPER	Code No.	φDmm	φD1	ℓ	L	Weight (kg)
No.40	NBT40-NPU13F-105	6～13	48.5	26.5	112.1～123.1	1.9
	150				157.1～168.1	2.4
No.50	NBT50-NPU13F-110				117.1～128.1	4.4
	150				157.1～168.1	4.8

★Wrench is available as an option. **NPU8: NPUL-8, NPU13: NPUL-13**.
★MIN. Chucking Dia. for center through coolant is φ6mm.
★Please use Slim Chuck ☞ P.131 for high pressure coolant (MAX. 7Mpa).



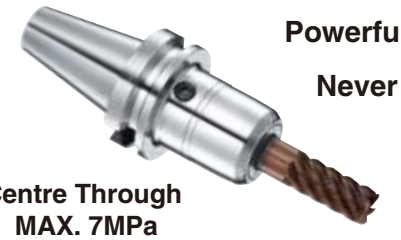
SIDE LOCK HOLDER (for DRILL) for Flange Through



TAPER	Code No.	D	L	C	h	H	H1	G	Collet	Weight (kg)
No. 40	NBT40-SL20F- 90	20	90	50	16	12	44.5	M10	—	1.8
	-SL25F- 90	25	90	55	17	14	54.5	M12 P1.25	OK25	1.7
	-SL32F- 90	32	90	60	16	15	59.5	M12 P1.25	OK32	1.9
No. 50	NBT50-SL20F-105	20	105	50	16	12	44.5	M10	—	4.8
	-SL25F-105	25	105	55	17	14	54.5	M12 P1.25	OK25	4.7
	-SL32F-105	32	105	60	16	15	59.5	M12 P1.25	OK32	4.9
	-SL40F-105	40	105	88	19	18	70	M12 P1.25	OK40	5.2

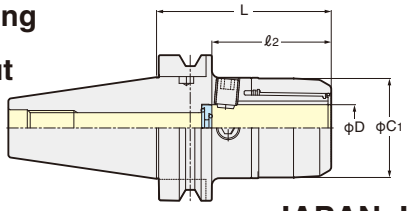
★For OK25, OK32 and OK40 Collet, please refer ☞ P.135.

X-Treme Shank 2LOCK NBT X-Treme Chuck NEW NIKKEN



Powerful Gripping & Never Pull-out

Centre Through MAX. 7MPa



Explanation of the Code No.

NBT50 – C32EX – 121 – J

- J: J-Type (Jet Groove)
- Nominal Gauge Length
- X-Treme Chuck
- Chucking Capacity
- Symbol of Milling Chuck
- Shank No.

JAPAN, USA, EU PAT. CHINA PAT.P

TAPER	Code No. (φD - L)	C1	L	ℓ2	End mill with oil hole		Handle (Option)	Weight (kg)
					Stopper*	Face cap*		
No.40	NBT40-C12EX- 86	40	86	58	9MC12HEX- 6L	9C12SL-FS-EX-A1	GH16	1.6
	-C16EX- 96	48	96	68	9MC16HEX-6.5L	9C16SL-FS-EX-A1	GH20	1.7
	-C20EX- 96	55	96	71	9MC20HEX- 7L	9C20 -FS-EX-A1	GH25	1.8
No.50	NBT50-C12EX- 96	40	96	58	9MC12HEX- 6L	9C12SL-FS-EX-A1	GH16	4.0
	-C16EX-106	48	106	68	9MC16HEX-6.5L	9C16SL-FS-EX-A1	GH20	4.4
	-C20EX-116	55	116	71	9MC20HEX- 12L	9C20 -FS-EX-A1	GH25	5.0
	-C25EX-116	55	116.3	77.3	9MC25HEX-6.2L	9C25SL-FS-EX-A1	GH25	4.8
	-C32EX-121	68	121.3	83.3	9MC32HEX- 7L	9C32SL-FS-EX-A1	GH32	5.3
	-C42EX-126	86	126	86	9MC42HEX- 9L	9C42SL-FS-EX-A1	9HC42	6.3

Please use direct chucking without KM collet.

★MAX. 7MPa of center through coolant is available with the stopper.
★Please use **J**-type **X-Treme** chuck, when end mill without oil hole is used. **eg)** **NBT50-C32EX-121-J**
In case of **J**-type **X-Treme** chuck, **J**-type stopper and **J**-type face cap (with Jet grooves) are attached. **9MC32HEX-7L-J, 9C32L-FS-EX-J**
J-type **X-Treme** chuck is used for the pocket milling and side milling.
★Extended length **X-Treme** chuck is also available. **NBT50-C20EX-135, NBT50-C25EX-135, NBT50-C32EX-135**



GH Handle ☞P. 48

2LOCK tooling (NBT) can be used as the double face contact tooling on the M/C where spindle is BT double face contact system.
2LOCK tooling can also be used on the M/C with BT standard spindle.

X-Treme Shank 2LOCK NIT/NCAT X-Treme Chuck NEW NIKKEN

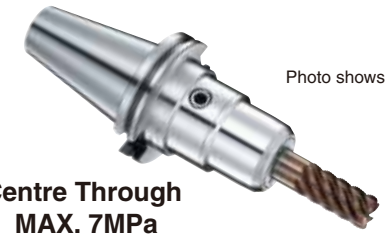
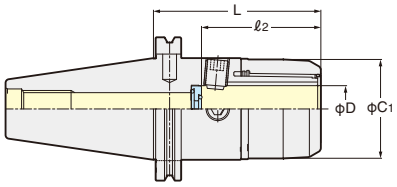


Photo shows **NIT** Shank.

Centre Through MAX. 7MPa



Explanation of the Code No.

NIT50 – C32EX – 116 – J

- J: J-Type (Jet Groove)
- Nominal Gauge Length
- X-Treme Chuck
- Chucking Capacity
- Symbol of Milling Chuck
- Shank No.

JAPAN, USA, EU PAT. CHINA PAT.P

TAPER	Code No. (φD - L)	C1	L	ℓ2	End mill with oil hole		Handle (Option)	Weight (kg)
					Stopper*	Face cap*		
NIT50	NIT50 -C12EX- 96	40	96	58	9MC12HEX- 6L	9C12SL-FS-EX-A1	GH16	3.4
	-C16EX-106	48	106	68	9MC16HEX-6.5L	9C16SL-FS-EX-A1	GH20	3.8
	-C20EX-106	55	106	71	9MC20HEX- 12L	9C20 -FS-EX-A1	GH25	4.3
	-C25EX-111	55	111.3	77.3	9MC25HEX-6.2L	9C25SL-FS-EX-A1	GH25	4.2
	-C32EX-116	68	116.3	83.3	9MC32HEX- 7L	9C32SL-FS-EX-A1	GH32	4.7
	-C42EX-126	86	136	86	9MC42HEX- 9L	9C42SL-FS-EX-A1	9HC42	6.0
NCAT50	NCAT50-C12EX- 96U	40	96	58	9MC12HEX- 6L	9C12SL-FS-EX-A1	GH16	3.4
	-C16EX-106U	48	106	68	9MC16HEX-6.5L	9C16SL-FS-EX-A1	GH20	3.8
	-C20EX-106U	55	106	71	9MC20HEX- 12L	9C20 -FS-EX-A1	GH25	4.3
	-C25EX-111U	55	111.3	77.3	9MC25HEX-6.2L	9C25SL-FS-EX-A1	GH25	4.2
	-C32EX-116U	68	116.3	83.3	9MC32HEX- 7L	9C32SL-FS-EX-A1	GH32	4.7
	-C42EX-126U	86	126	86	9MC42HEX- 9L	9C42SL-FS-EX-A1	9HC42	6.0

Please use direct chucking without KM collet.

★MAX. 7MPa of center through coolant is available with the stopper.
★Please use **J**-type **X-Treme** chuck, when end mill without oil hole is used. **eg)** **NCAT50-C32EX-116U-J**
In case of **J**-type **X-Treme** chuck, **J**-type stopper and **J**-type face cap (with Jet grooves) are attached. **9MC32HEX-7L-J, 9C32L-FS-EX-J**
J-type **X-Treme** chuck is used for the pocket milling and side milling.



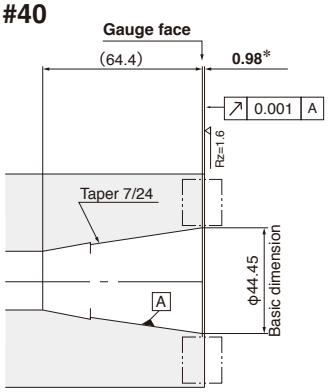
GH Handle ☞P. 48

2LOCK NIT DOUBLE FACE CONTACT SPINDLE

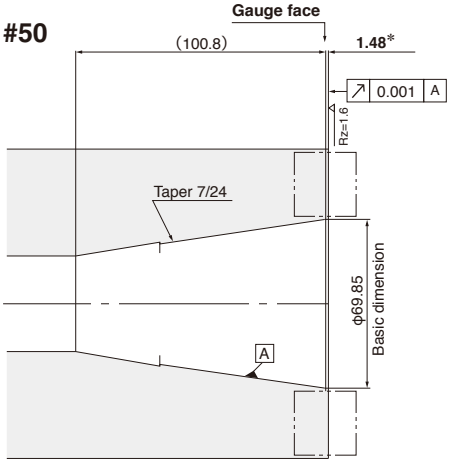
NIKKEN

The NIKKEN **3LOCK** tooling can be used as the triple face contact(taper, flange and internal taper expansion)on the M/C with NIT double face contact spindle. The NIKKEN **2LOCK** tooling can be used as the double face contact on the M/C with NIT double face contact spindle.

#40



#50



*** mark**: The tolerances of the extension of the spindle flange from gauge face depend on the M/C.

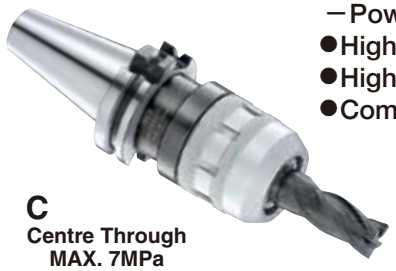
⚠ **Please be careful to check your M/C specification especially for ATC arm and magazine, when NIT tooling is going to use on the M/C with IT standard spindle. Because, the flange thickness of NIT tooling is 1.7mm(NIT50) or 2.2mm(NIT40)larger than the thickness of the IT standard tooling.**

2LOCK NIT MULTI LOCK MILLING CHUCK

NIKKEN

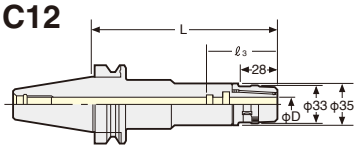
ANNIVERSARY Type
—Powerful gripping torque—

- **High rigidity**
- **High precision**
- **Compact design**

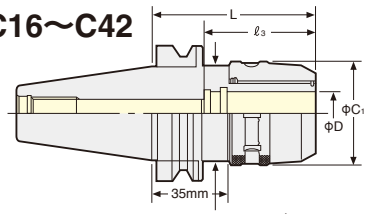


C
Centre Through
MAX. 7MPa

C12



C16~C42



IT40:Less than Φ50mm
IT50:Less than Φ80mm

TAPER	Code No. ITNo. -D -L	C_1	L	ℓ_3	Collet	Weight (kg)
No.40	NIT40-C12- 65, 90*1, 120*1	33	65, 90, 120	58	KM12 CCK12	1.3, 1.6, 1.8
	-C16- 60, 90*1, 120*1	44	60, 90, 120	65	KM16 CCK16	1.4, 1.7, 2.0
	-C20- 80, 90, 105, 120*2	52	80, 90, 105, 120	80	KM20 CCK20 CCNK20	1.6, 1.8, 2.0, 2.2
	-C25- 85, 105, 120	60	85, 105, 120	80	KM25 CCK25 CCNK25	2.1, 2.3, 2.5
	-C32- 95, 105, 120	64	95, 105, 120	77, 81, 81	KM32 CCK32 CCNK32	2.1, 2.5, 2.8
No.50	NIT50-C12-105, 135, 165*1	33	105, 135, 165	58	KM12 CCK12	4.0, 4.3, 4.6
	-C16-105, 135, 165*1	44	105, 135, 165	65	KM16 CCK16	4.2, 4.6, 5.1
	-C20-105, 135, 165, 180*1	52	105, 135, 165, 180	80	KM20 CCK20 CCNK20	4.5, 5.1, 5.7, 6.0
	-C25-105, 135, 165	60	105, 135, 165	80	KM25 CCK25 CCNK25	4.8, 5.2, 5.6
	-C32- 85, 105, 120, 135, 165	69	85, 105, 120, 135, 165	81	KM32 CCK32 CCNK32	4.1, 4.6, 5.1, 5.6, 6.4
	-C42- 95*2, 105, 135*1, 165*1	86	95, 105, 135, 165	125	KM42 CCK42 CCNK42	5.2, 5.5, 7.2, 8.6

★Spanner is available as an option.
C12 : 9HC12A, C16:9HC16, C20: 9HC20, C25: 9HC25, C32&ϕC1=64:9HC25, C32:9HC32, C42:9HC42
★Please note the acceptable shank tolerance is h7.
★Please refer ☞**P.192** for **KM, CCK, CCNK** Collet.
★**For heavy duty milling, please grip the end mill shank longer than ℓ_1.**
★**For Milling Chucks marked *2, NK Collet, CCNK Collet, ONK Collet and OJK Collet can not be used.**
★**Milling chucks marked *1 are available as an option.**
★**NIT50-C32-200, 250** and **NIT50-C42-200,250** are also available as an option.
★Please add "**F**" for the flange through tool coolant type.

NIT40-C20F- 90, 120*1
-C25F- 90, 120*1
-C32F-105
NIT50-C20F-105, 135, 165*1
-C25F-105, 135, 165*1
-C32F-105, 135, 165
-C42F-120



High Speed Milling Chuck



GH Handle ☞**P.48**

Code No.	MAX. (min^{-1})	Code No.	MAX. (min^{-1})
NIT40-C12- 65G, 90G	30,000	NIT50-C12-105G, 135G*1	20,000
-C16- 60G, 90G	25,000	-C16-105G, 135G*1	
-C20- 80G, 90G		-C20-105G, 135G*1	
-C25- 85G	20,000	-C25-105G, 135G*1	
-C32- 95G, 105G		-C32- 85G, 105G, 120G	15,000
		-C42- 95P*2, 105P	

★For Milling Chucks except *2, Stopper for Direct Chucking, **ONK** Collet and **OJK** Collet can be used.
★The extended gauge length (**L**) is available. Please contact with us.
★The end mill shank tolerance is recommended to be h6.

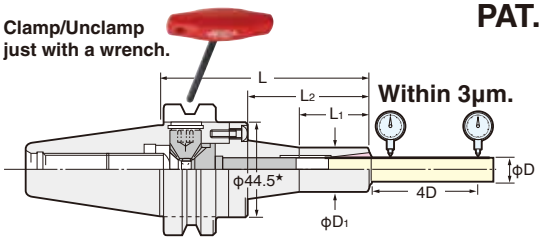
2LOCK NIT MINI-MINI CHUCK ADVANCED ALPHA NEW NIKKEN

PAT.



The best chuck for the small dia.cutting tool

MAX. 30,000min^{-1} & G2.5
Gripping from Front Nose
Run-Out Accuracy:3μm at 4D



★:MMC12=φ52.4

MMC

TAPER	Code No.	Chucking Range φD	L	φD1	L1	Collet	MAX.(min-1)	Weight(kg)
No.40	NIT40-MMC 4- 90-AA	1～ 4	90	15	30	MPK 4	30,000	1.2
	-MMC 8- 90-AA,120-AA	2～ 8	90,120	20	33,40	PMK 8 VMK 8	30,000	1.4 , 1.5
	-MMC12- 90-AA,120-AA	4～12	90,120	30	35,60	PMK12 VMK12	30,000	1.7 , 1.8
No.50	NIT50-MMC 4-105-AA	1～ 4	105	15	30	MPK 4	20,000	3.8
	-MMC 8-105-AA,135-AA,165-AA	2～ 8	105,135,165	20	33,40,40	PMK 8 VMK 8	20,000	4.4,4.5,4.6
	-MMC12-105-AA,135-AA,165-AA	4～12	105,135,165	30	35,60,70	PMK12 VMK12	20,000	4.6,4.7,4.8

★Wrench is supplied as standard. ★**MPK, PMK, VMK** collet is available as an option. Please refer ☞**P.193**
★Please add "**C**" for the centre through tool coolant type. **e.g.** NIT40-MMC8C-90-AA
★Please add "**F**" for the flange through tool coolant type; NIT40-MMC 8F- 90-AA,120-AA NIT50-MMC 8F-105-AA,120-AA
-MMC12F- 90-AA,120-AA -MMC12F-105-AA,120-AA

2LOCK NIT SLIM CHUCK

NIKKEN

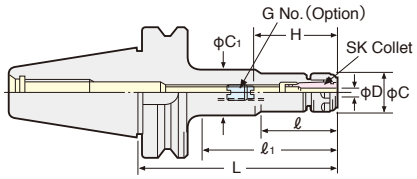
Dampening effect
⊕
Jet Spray Coolant Supply
II
Over 3 times of extended Tool life
(for HSS & Carbide Drills)

High precision
High speed
Powerful gripping



SK
Centre Through
MAX. 7MPa





When SK J type nut is used, the total chuck length will be extended by 6mm. PAT.

TAPER	Code No.	D	H	ℓ	ℓ1	C	C1	G No. (Option)	Weight (kg)	SK Collet
No.40	NIT40-SK 6C- 60, 90,120,150	0.7～6.0	26～31	38,48,62,60	-,-,82,112	19.5	-,-,32,25	SKG 6- 6HG	1.0, 1.1, 1.2, 1.4	SK 6
	-SK10C- 60, 90,120,150,180	1.75～10.0	33～41	40,50,60,73,73	-,-,82,112,144	27.5	-,-,32,33.5,39	SKG10-10HG	1.1, 1.2, 1.4, 1.6, 1.6	SK10
	-SK13C- 60, 90,120,150,180	2.75～13.0	39～51	40,50,80,88,88	-,-,-,114,144	33	-,-,-,40,40	SKG13-10HG	1.3, 1.4, 1.6, 1.8, 1.8	SK13
	-SK16C- 60,*1 90,120,150,180	2.75～16.0	45～57*1	40,54,84,114,144	-	40	-	SKG16-12HG*1	1.4, 1.5, 1.7, 2.0, 2.0	SK16
	-SK20C- 90, 120	3.5～20.0	47～63	70,100	-	48.5	-	SKG20-18HG	1.7, 1.9	SK20
	-SK25C- 90,*2 120	7.5～25.4	60～70*2	70,100	-	55	-	SKG25-24HG*2	1.8, 2.0	SK25
No.50	NIT50-SK 6C-105,135,165,200	0.7～6.0	26～31	60,62,62,60	-,93,117,154	19.5	-,32,32,30	SKG 6- 6HG	3.7,3.9,4.1,4.3	SK 6
	-SK10C-105,135,165,200	1.75～10.0	33～41	65,70,75,75	-,95,125,154	27.5	-,32,32,36	SKG10-10HG	4.2, 4.4,4.6, 5.0	SK10
	-SK13C-105,135,165,200	2.75～13.0	39～51	60,100,92,102	-,-,125,160	33	-,-,45,45	SKG13-10HG	4.5, 4.7,4.8, 5.3	SK13
	-SK16C-105,135,165,200	2.75～16.0	45～57	65,95,90,90	-,-,125,160	40	-,-,50,50	SKG16-12HG	4.7,4.9, 5.1, 5.5	SK16
	-SK20C-105,135,165	3.5～20.0	47～63	65,95,125	86,116,146	48.5	70.9	SKG20-18HG	4.8,5.1, 5.4	SK20
	-SK25C-105,135,165,200	7.5～25.4	60～70	65,95,125,160	-	55	-	SKG25-24HG	4.8,5.2, 5.6, 6.0	SK25

★Dimension for NIT40-SK16C-60 marked*1, H=45～52 **SKG16-10HG**
NIT40-SK25C-90 marked*2, H=60～65 **SKG25-18HG**
★Collet, adjust screw(G No.)and **SKL** spanner are available as an option.
SK6(C=φ18):SKL-6, SK6(C=φ19.5):SKL-6W, SK10:SKL-10, SK13:9HC12A, SK16:9HC16, SK20:9HC22, SK25:9HC22.
★Please refer ☞**P.198** for **SK** collet and please refer ☞**P.49** for **J** type nut.
★Please add "**F**" for the flange through tool coolant type.

NIT40-SK 6F- 90,120	NIT50-SK 6F-105,165
-SK10F- 90,120	-SK10F-105,165
-SK13F- 90,120	-SK13F-105,165
-SK16F- 90,120	-SK16F-105,165
-SK20F- 90,120	-SK20F-105,165
-SK25F-120	-SK25F-105,165





High Speed SLIM CHUCK



GH Handle ☞**P.48**

Code No.	MAX. (min-1)	Code No.	MAX. (min-1)
NIT40-SK 6C- 60P, 90P, 120P	30,000	NIT50-SK 6C-105P, 165P	20,000
-SK10C- 60P, 90P, 120P		-SK10C-105P, 165P	
-SK13C- 60P, 90P, 120P		-SK13C-105P, 165P	
-SK16C- 60P, 90P, 120P	25,000	-SK16C-105P, 165P	
-SK20C- 90P, 120P		-SK20C-105P, 165P	
-SK25C- 90P, 120P	20,000	-SK25C-105P, 165P	15,000

★The extended gauge length **(L)** is available. Please contact with us.

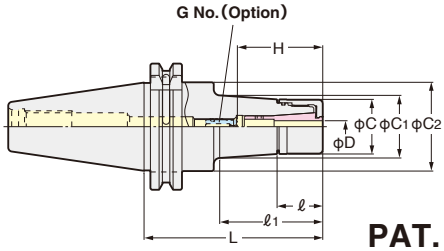
2LOCK NIT ANNIVERSARY TYPE VC HOLDER

NIKKEN



VC

With TiN Bearing Nut
MAX.30,000min^{-1} & G2.5
Run-Out Accuracy:3μm at 4D



PAT.

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	C2	H	G No. (Option)	Weight (kg)	MAX. (min^{-1})	Collet
No.40	NIT40X-VC 6- 60	2.0~6.0	60	23	23	27.5	27.5	44.7	35~45	VCG 6- 8A	1.1	30,000	VCK 6
	- 90		90		51.9		31.5				1.3		
	-120		120		81.9		35.7				1.5		
	-VC13- 60	3.0~12.0	60	29	29	40	40.0		50~60	VCG13-15A	1.2		VCK13
	- 90		90		70		44.7				1.5		
	-120		120		100						1.9		
No.50	NIT50X-VC 6-105	2.0~6.0	105	23	64.9	27.5	33.4	70.1	35~45	VCG 6- 8A	3.9	20,000	VCK 6
	-135		135		94.9		37.6				4.1		
	-165		165		124.9		41.8				4.4		
	-VC13-105	3.0~12.0	105	29	64.9	40	45.0		50~60	VCG13-15A	4.1		VCK13
	-135		135		94.9		49.2				4.5		
	-165		165		124.9		53.4				4.9		

★TiN Bearing Nut is supplied as standard.
★When the axial stopper is required, please use Adjust Screw(G No.)
★Please add **"-RP"** at the end of Code No. for Rust Proof Treatment **VC** Holder.
e.g. NIT40X-VC13-60-RP
★Please use **VC J** type Nut & Cap for Centre Through Coolant.
When **VC J** type Nut is used, the total holder length will be extended to 6mm.
★Please refer ☞**P.201** for **VCK Collet.**

★NIT40X-VC6-150, NIT40X-VC13-150, NIT50X-VC13-90, -120 are available as semi-standard.
★Collet, adjust screw (G No.) and **GH Handle** are available as an option. ☞**P.48**
The Code No. of the **GH Handle** is **VC6: GH10, VC13: GH16**
★All series are for High Speed Rotation.



2LOCK NIT MAJOR DREAM HOLDER

NIKKEN



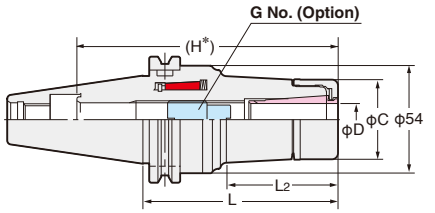
MDSK

Difference of the swarfs


With Jet Coolant Splash


With Air Blow

Please use Jet Coolant Splash for better swarf generation. ☞**P. 34, P.43**



(H*) : MAX. H without adjust screw.

PAT.

TAPER	Code No.	D	L2	C	H*	H1	G No. (Option)	Weight (kg)	Collet
No.40	NIT40N-MDSK 6- 60, 75, 90	3.0~ 6.0	18,33,48	19.5	86,101,116	21~35	SKG- 8	0.8,0.9,1.1	SK 6-A
	-105,120		63,78		131,146			1.2,1.4	
	-MDSK10- 60, 75, 90,105	3.0~10.0	19,33,48,63	27.5	86,101,116,131	30~50	SKG-12L	1.1,1.3,1.5,1.6	SK10-A
	-120,150,180		78,110,141.2		146,176,206			1.8,2.2,2.4	
	-MDSK13- 65, 75, 90,105	3.0~13.0	24,33,48,63		86,101,116,131	31~60	SKG-15	1.2,1.4,1.7,1.8	SK13-A
	-120,150,180		78,110,144		146,176,206			2.0,2.4,2.6	
	-MDSK16- 65	3.0~16.0	24	40	86	45~60	SKG-18L	1.2	SK16-A
	- 75, 90,105		33,48,64		101,116,131	45~70		1.5,1.9,2.0	
	-120,150,180		80,113,144.6		146,176,206			2.2,2.5,2.8	
	-MDSK20- 75, 90	4.0~20.0	41.2,55	48	80,95	50~73	SKG-12,SKG-12-55L	1.9,2.1	SK20-A
	-105,120		70,85		110,125		SKG-12-70L,SKG-12-85L	2.3,2.6	
No.50	NIT50 -MDSK 6-105,120,135	3.0~ 6.0	48,63,78	19.5	116,131,146	21~35	SKG- 8	3.6,3.7,3.9	SK 6-A
	-MDSK10-105,120,135	3.0~10.0	48,63.2,78.2	27.5	116,131,146	30~50	SKG-12L	4.3,4.4,4.7	SK10-A
	-165,195		110.2,141.2		176,206			5.0,5.3	
	-MDSK13-105,120,135	3.0~13.0	48,63,78	33	116,131,146	31~60	SKG-15	4.2,4.7,5.0	SK13-A
	-165,195		110,144		176,206			5.3,5.6	
	-MDSK16-105,120,135	3.0~16.0	48,64,80.1	40	116,131,146	45~70	SKG-18L	4.1,4.9,5.2	SK16-A
	-165,195		114.7,144.6		176,206			5.5,5.8	
	-MDSK20-105,135	4.0~20.0	42,72	48	159,175	47~80	SKG-22	4.9,5.3	SK20-A
	-165,195		102,132		205,235			5.9,6.7	
	-MDSK25-105,135	8.0~25.4	42,74	55	159,175	55~85	SKG-28	4.9,5.7	SK25-A
	-165,195		105,135		205,235			6.5,7.5	

★**Please use A type SK collet that is available as an option for end milling operation.** ☞**P.198**
★Please refer ☞**P.49** for Jet coolant **J** type nut and cap.
★**GH Handle** is available as an option. ☞**P.48** Please order with the Code No. **GH10:MDSK10, GH12:MDSK13, GH16:MDSK16, GH20:MDSK20, GH25:MDSK25.**
★**Please add "P" at the end of Code No. for high speed holder, e.g.** NIT40N-MDSK10-60P.
★**φC2 of** NIT40N **is larger than the dimension of the** IT40 **standard.**



2LOCK NIT FACE MILL ARBOR TYPE A/SHOULDER CUTTER ARBOR

NIKKEN



Photo. shows with face mill cutter.

JIS B4113 Face Mill Cutter

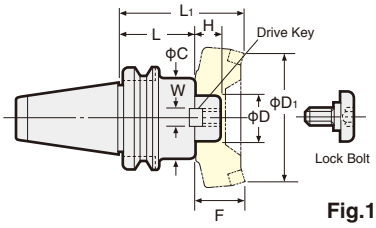


Fig.1

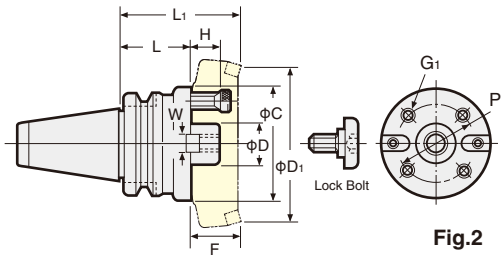


Fig.2

FMA

TAPER	Code No. (ΦD-L)	Arbor H	Arbor C	Arbor W	Weight (kg)	With Cutter L1	With Cutter D1	With Cutter F	Drive Key	Lock Bolt	Fig.
No.40	NIT40-FMA25.4 - 45, 90	22	50	9.5	1.5 , 3.1	95,140	80	50	FW 5	FM12	1
	-FMA31.75 - 45, 75	30	60	12.7	1.7 , 3.1	105,135	100	60	FW13	FM16	
	-FMA38.1 - 60	34	80	15.9	2.9	120	125	60	FW18	FM20	
No.50	NIT50-FMA25.4 - 45, 90,150	22	58	9.5	3.7,4.6,5.5	95,140,200	80	50	FW 5	FM12	1
	-FMA31.75 - 45, 75,105	30	70	12.7	4.5,5.3,6.1	105,135,165	100	60	FW12,13	FM16	
	-FMA38.1 - 45, 75	34	80	15.9	4.3 , 5.6	105,135	125	60	FW18,19	FM20	
	-FMA50.8 - 45, 75	36	100	19	4.9 , 6.8	105,135	160	60	FW23,24	FM24	
	-FMA47.625- 75*	38	128.57	25.4	7.7	135	200	60	FW26	*	2

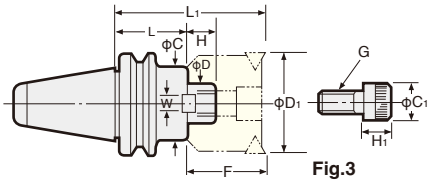


Fig.3

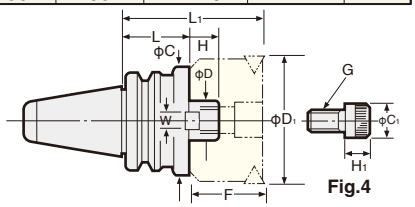


Fig.4

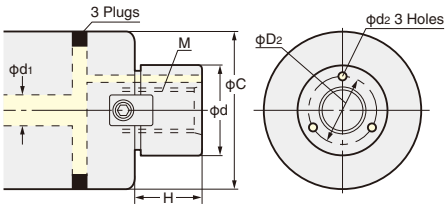
FMC FMA For SANDVIK T-MAX Shoulder Face Mill/SUMITOMO CHE5,000 Series

TAPER	Code No. (ΦD-L)	Arbor H	Arbor C	Arbor W	Weight (kg)	With Cutter L1	With Cutter D1	With Cutter F	With Cutter G Cap Bolt	C1	H1	Fig.
No.40	NIT40-FMC22-45, 90	18	45	10	1.3 , 2.0	85 , 130	50	40	M10×30	16	10	3
	-FMC27-60, 90	20	60	12	1.5 , 2.2	110 , 140	80	50	M12×35	18	12	4
	-FMC32-60, 75	22	85	14	2.3 , 2.6	110 , 125	125	50	M16×35	24	16	
No.50	NIT50-FMC22-60,105,150	18	45	10	4.2,4.7,5.3	100,145,190	50	40	M10×30	16	10	3
	-FMC27-45, 90,150	20	70	12	4.1,5.5,7.3	95,140,200	80	50	M12×35	18	12	
	-FMC32-45, 75,105	22	85	14	4.2,5.5,7.0	95,125,155	125	50	M16×35	24	16	

★Drive keys, L wrench and bolt are supplied as standard.
★The arbor weight is only for the arbor.
★The different type of the cap bolt may be used for the recent cutter. Please check the specification.
★The arbor marked * requires 4 fixing bolts **(FMA47.625 : M16, P=101.6)**
★Extended length is available as an option. NIT50-FMA25.4 -200, 250,···500
-FMA31.75-150, 200,···500
-FMA38.1 -150, 200,···500



FMH High Feed Cutter Arbor with Coolant Hole



Code No.	Cutter Dia.	Φd	ΦC	M	H	Coolant Hole ΦD2	Coolant Hole Φd1	Coolant Hole Φd2
FMH22(22.225)	Φ50, Φ52 Φ63, Φ66	22(22.225)	47 60	M10×1.5	18(17)	16	6~8	3
FMH27(25.4)	Φ80	27(25.4)	76(70)	M12×1.75	20(22)	19.5(18.5)	8~10	3.5
FMH32(31.75)	Φ100	32(31.75)	96	M16×2.0	22(30)	24	10~13	4
FMH40(38.1)	Φ125	40(38.1)	100	M20×2.5	26(34)	30(29)	10~15	5
FMH50.8	Φ160	50.8	100	M24×3.0	36	37.5	15~20	7

★Fixing dimension is basically based on **FMA/FMC**. ★The combination of the other cutter dia. are also available.

FMH

TAPER	Code No. (ΦD-L)	Arbor H	Arbor C	Arbor W	Arbor C1	Arbor C2	Arbor H1	Arbor H2	Weight (kg)	Drive Key	Lock Bolt	G Cap Bolt
No.40	NIT40-FMH22 - 47(60)-45	18	47(60)	10	16		10		1.3(1.4)	FW 8		M10×30
	-FMH27 - 60(76)-60	20	60(76)	12	18	—	12	—	1.8(2.2)	FW11	—	M12×35
	-FMH32 - 96-60	22	96	14	24		16		2.9	FW16		M16×35
	-FMH40 -100-60	26	100	16	50	27	14	6	3.1	FW22	FM20	—
No.50	NIT50-FMH22 - 47(60)-60	18	47(60)	10	16		10		4.2(4.5)	FW 8		M10×30
	-FMH27 - 60(76)-45	20	60(76)	12	18	—	12	—	3.9(4.1)	FW10	—	M12×35
	-FMH32 - 96-45	22	96	14	24		16		4.2	FW15		M16×35
	-FMH40 -100-45	26	100	16	50	27	14	6	5.1	FW20	FM20	—
	-FMH50.8 -100-45	36		19	65	37		10	4.4	FW23	FM24	

★**FMH22.225, FMH25.4, FMH31.75, FMH38.1** are also available.
★**For FMH22, there are two types of ΦC, Φ47 and Φ60.**
For FMH27, there are two types of ΦC, Φ60 and Φ76.

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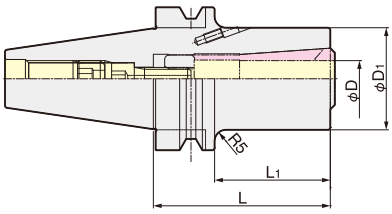
MINI-MINI MASTER CHUCK



MMC-ATB



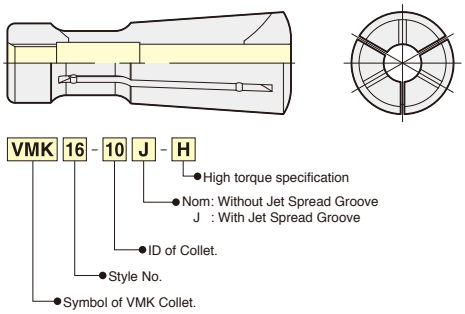
TAPER	Code No.	φD	L	φD1	L1	Collet	Weight (kg)
NBT40	NBT40-MMC16C-80-ATB	10～16	80	45	51	VMK16-SF VMK16-H	1.4
	-MMC20C-85-ATB	12～20	85	50	56	VMK20-SF VMK20-H	1.5
NBT50	NBT50-MMC16C-80-ATB	10～16	80	45	40	VMK16-SF VMK16-H	3.9
	-MMC20C-85-ATB	12～20	85	50	45	VMK20-SF VMK20-H	4.0

★**VMK-H** collet for high torque is recommended.
★Wrench is attached as standard.
★Balance adjustment screw is available as an option. The Code No. of the screw is **9SFB-ASC-M4-3, 4, 6**
★Mounting handle is available as an option. The Code No. of the handle is **9SFB-AL-M2**
★Set Code for handle and all screws are **S.9SFB-ASC-M4**

High torque specification VMK-H Collet



VMK-H



VMK-H Collet Code No.	Min.Gripping Length
VMK16-10, 12, 16-**H**	40, 42, 42
VMK20-12, 16, 20-**H**	47, 47, 47

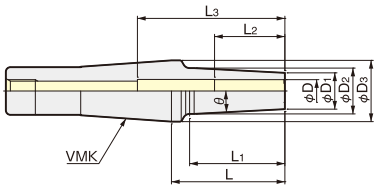
VMK-H Collet Code No.	Min.Gripping Length
VMK16-10J, 12J, 16J-**H**	40, 42, 42
VMK20-12J, 16J, 20J-**H**	47, 47, 47

★Please note the acceptable shank tolerance ius h6～h8.

VMK-SF Shrink Fit Holder



VMK-SF



Standard Type

TAPER	Code No.	φD	φD1	φD2	φD3	θ	L	L1	L2	L3	Weight (kg)
VMK16	VMK16-SF 3S- 50	3	6	10.2	27	3°	50	42	10	-	0.3
	-SF 4S- 50	4	7	11.2					13		
	-SF 6S- 50	6	9	13.2					19		
	-SF 8S- 50	8	13	17.2					25		
	-SF10S- 50,80,110	10	16	20.2, 23.4, 27			50, 80, 110	42, 72, 105	31	65	0.3, 0.4, 0.5
	-SF12S- 50,80,110	12	19	23.2, 27, 27			50, 80, 110	42, 76.4, 76.4		50	0.3, 0.4, 0.5
	-SF16S- 50,80,110	16	24	27			50, 80, 110	28.7	33		0.4, 0.5, 0.6

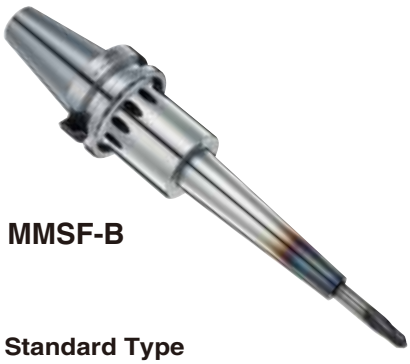
High Rigidity Type

TAPER	Code No.	φD	φD1	φD2	φD3	θ	L	L1	L2	L3	Weight (kg)
VMK20	VMK20-SF10R- 50,80,110	10	22	26.2, 29.4, 32	32	3°	50, 80, 110	42, 72, 95.4	31	65	0.5, 0.6, 0.8
	-SF12R- 50,80,110	12	26	30.2, 32, 32			50, 80, 110	42, 57.3, 57.3		80	0.5, 0.7, 0.9
	-SF16R- 50,80,110	16	32	32		-	50, 80, 110	50, 80, 110	33	50	0.6, 0.7, 0.9

★Hibride Shrink Fit Holder can be built by Mini-Mini Chuck Master and **VMK-SF** Shrink Fit Holder.

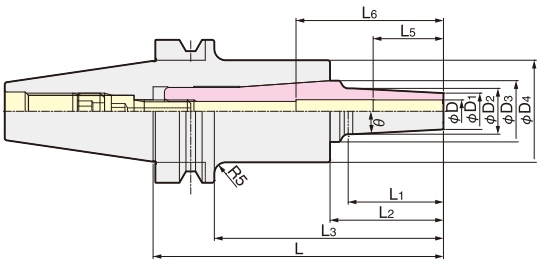
2LOCK HIBRID SHRINK-FIT HOLDER

NIKKEN



MMSF-B

MMSF-B holder is pre-balanced by the balance adjusting screws.
G2.5 30,000min^{-1}



Standard Type

TAPER	Code No.	φD	φD1	φD2	φD3	φD4	φD5	θ	L	L1	L2	L3	L4	L5	L6	Weight (kg)
NBT40	NBT40-MMSF 3S-128B	3	6	10.2	27	45	-	3°	128	42	50	101	-	10	-	1.7
	-MMSF 4S-128B	4	7	11.2										13		
	-MMSF 6S-128B	6	9	13.2										19		
	-MMSF 8S-128B	8	13	17.2										25		
	-MMSF10S-128B	10	16	20.2										31	65	
	-158B			23.4					158	72	80	131				1.8
	-188B			27					188	105	110	161				1.9
	-MMSF12S-128B	12	19	23.2					128	42	50	101			50	1.7
	-158B			27					158	76.4	80	131				1.8
	-188B								188		110	161				1.9
	-MMSF16S-128B	16	24						128	28.7	50	101		33		1.8
	-158B								158		80	131				1.9
	-188B								188		110	161				2.0
NBT50	NBT50-MMSF 3S-128B	3	6	10.2	27	45	-	3°	128	42	50	90	-	10	-	4,2
	-MMSF 4S-128B	4	7	11.2										13		
	-MMSF 6S-128B	6	9	13.2										19		
	-MMSF 8S-128B	8	13	17.2										25		
	-MMSF10S-128B	10	16	20.2										31	65	
	-158B			23.4					158	72	80	120				4.3
	-188B			27					188	105	110	150				4.4
	-MMSF12S-128B	12	19	23.2					128	42	50	90			50	4.2
	-158B			27					158	76.4	80	120				4.3
	-188B								188		110	150				4.4
	-MMSF16S-128B	16	24						128	28.7	50	90		33		4.3
	-158B								158		80	120				4.4
	-188B								188		110	150				4.5

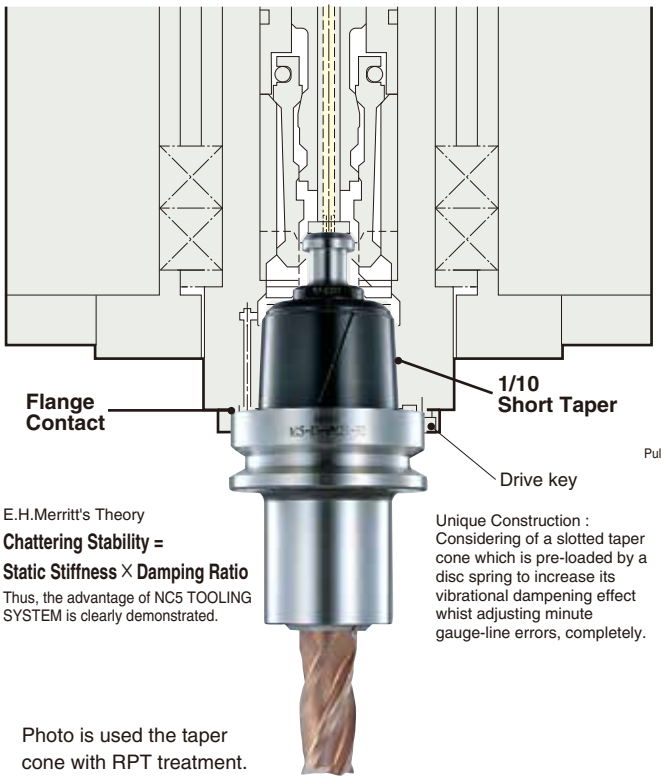
High Rigidity Type

TAPER	Code No.	φD	φD1	φD2	φD3	φD4	φD5	θ	L	L1	L2	L3	L4	L5	L6	Weight (kg)
NBT40	NBT40-MMSF10R-133B	10	22	26.2	32	50	-	3°	133	42	50	106	-	31	65	2.0
	-163B			29.4					163	72	80	136				2.1
	-193B			32					193	95.4	110	166				2.3
	-MMSF12R-133B	12	26	30.2					133	42	50	106			80	2.0
	-163B			32					163	57.3	80	136				2.2
	-193B								193		110	166				2.4
	-MMSF16R-133B	16	32					-	133	50	50	106		33	50	2.1
	-163B								163	80	80	136				2.2
	-193B								193	110	110	166				2.4
NBT50	NBT50-MMSF10R-133B	10	22	26.2	32	50	-	3°	133	42	50	95	-	31	65	4.5
	-163B			29.4					163	72	80	125				4.6
	-193B			32					193	95.4	110	155				4.8
	-MMSF12R-133B	12	26	30.2					133	42	50	95			80	4.5
	-163B			32					163	57.3	80	125				4.7
	-193B								193		110	155				4.9
	-MMSF16R-133B	16	32					-	133	50	50	95		33	50	4.6
	-163B								163	80	80	125				4.7
	-193B								193	110	110	155				4.9

★Hibride Shrink Fit Holder can be built by Mini-Mini Chuck Master and **VMK-SF** Shrink Fit Holder. ☞P.227

Innovational Design! Double Contact・1/10 Short Taper

Since the launch of the NC5 TOOLING SYSTEM at JIMTOF'94, OSAKA the system has proven its outstanding ability is a wide cross-sector of Japanese Industry, with ever-increasing expectation of its being adapted as the Next Generation Tooling Interface.
Please take a moment to look at the NC5 TOOLING SYSTEM before you purchase your next machine. ☞P.279~281



E.H.Merritt's Theory
Chattering Stability = Static Stiffness X Damping Ratio
Thus, the advantage of NC5 TOOLING SYSTEM is clearly demonstrated.

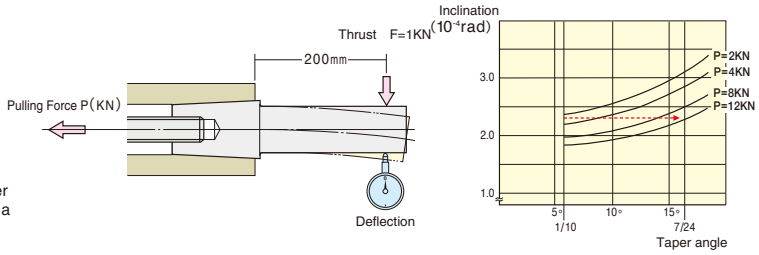
Unique Construction : Considering of a slotted taper cone which is pre-loaded by a disc spring to increase its vibrational dampening effect whist adjusting minute gauge-line errors, completely.

Photo is used the taper cone with RPT treatment.

NC5 is an abbreviation of New Century arbor with 1/10 taper(5°43' 29").

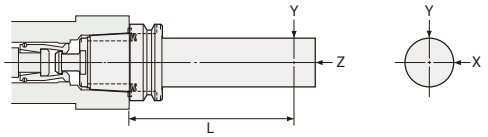
1/10 and 7/24 Taper

The following diagrams show the correlation between Pulling Force/ Taper Angle and their Static Stiffness. As can be seen, using the same Pulling Force, the smaller the Taper Angle, the greater the Static Stiffness. Therefore, the larger the Taper Angle, the greater the Pulling Force is required. For example, 12KN of Pulling Force is required for a 7/24 taper to obtain the same value of Static Stiffness as a 1/10 taper using a 4KN Pulling Force.



Repeatability

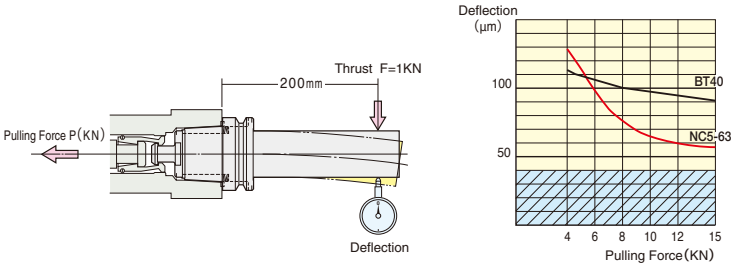
Higher Repeatability is accomplished due to run-out accuracy of contact flange for taper is within 0.002mm.



TAPER	Equivalent	L	Repeatability		
			X	Y	Z
NC5- 46	BT30	70	0.003	0.003	0.002
- 63	BT40	120	0.003	0.003	0.002
- 85	BT45	150	0.003	0.003	0.002
-100	BT50	180	0.003	0.003	0.002

Pulling Force and Static Stiffness

The NC5-63 takes advantage of the taper/Pulling Force to increase its Static Stiffness such that under a force of 5.5 KN the Static Stiffness of an NC5-63 and BT40 are almost the same. But at 12KN the Static Stiffness of an NC5-63 is three times that of a BT40.

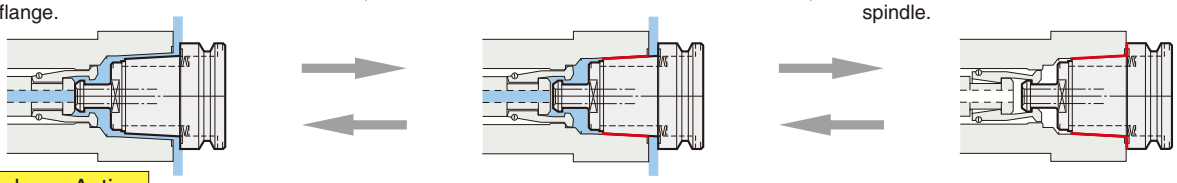


means Deflection of Test Bar itself.

ATC

Clamp Action ··· Cleaning Air is same as Unclamp Action.

① When tool is inserted into a spindle, there is no contact between the taper or flange. → ② Taper makes contact and centres. → ③ Further retraction causes simultaneous contact of the taper and the flange with spindle.



Unclamp Action

⑥ Taper is detached and air blast cleans the taper. ← ⑤ Flange is detached slightly and high pressure air blast cleans the flange. ← ④ As the pull stud is released, an air blast is activated inside the spindle.

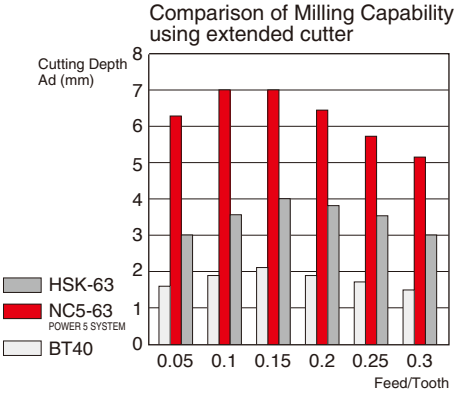
Innovational Design! Double Contact · 1/10 Short Taper

Face Milling

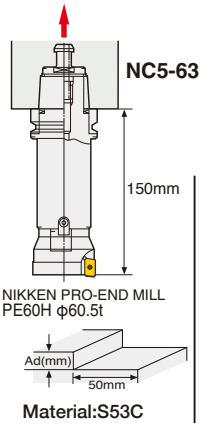




S53C



Comparison between HSK-63, NC5-63 & BT40



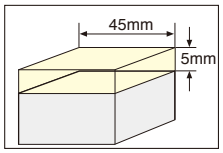
Material:S53C
V=180m/min. Constant

End Milling

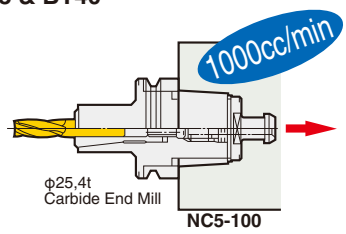




1 to 1 Scale
Swarf of SCM415



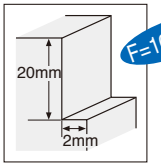
Material:SCM415
V=300m/min. f=0.3mm/tooth
S=3800min⁻¹ F=4560mm/min.



Stiffness & Dampening Effect



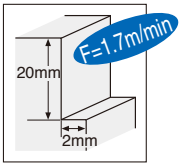
S53C



NC5-63
Material:S53C
V=500m/min. f=0.25mm/tooth
S=10000min⁻¹ F=10000mm/min.



TITAN



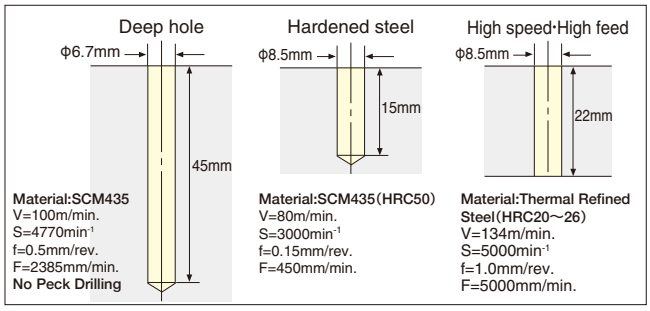
NC5-63
Material:TITAN
V=75m/min. f=0.18mm/tooth
S=1500min⁻¹ F=1700mm/min.

Drilling





SCM435



Boring



Current developments in inserts (coated TiAlN & CBN) and their improved capability for high speed cutting is remarkable. However, the results are based on using these inserts with high-speed cutting conditions (their performance is reduced when used for medium or low cutting speeds). The ZMAC Boring Head has been designed to optimise this new high-speed cutting technology.

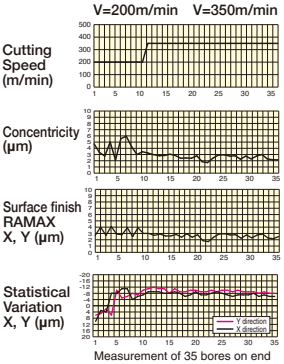
■Cutting data
M/C : VC8
Holder : NC5–63–Q26–50
SP26–12–30
12–ZMAC16–45
External coolant
Insert : 3MP–C Nose/R=0.2
Coating (Coated TiAlN)
Material:S53C Thermal refined carbon steel.

Cutting Speed: V=200m/min.,350m/min.
f=0.05mm/rev. for both
Feed : 0.5mm on dia.

V=350m/min. gave better finish & accuracy

Material:S53C
Thermal refined carbon steel





Measurement of 35 bores on end

NC5 MILLING CHUCK

NIKKEN



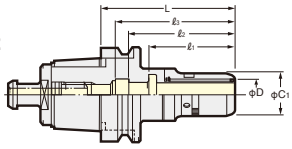
C Centre Through MAX. 7MPa

Anniversary Type
- Powerful Gripping Torque -

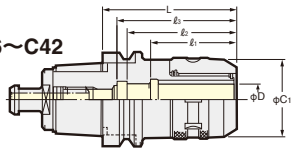
- **High Rigidity**
- **High Precision**
- **Compact Design**



C12



C16～C42



TAPER	Code No.	D	C1	ℓ1	ℓ2	ℓ3	L	Collet	Stopper	Weight(kg)
NC5- 46	NC5- 46-C12- 55	33	12	49	53	58	58	KM12 CCK12	—	0.6
	-C16- 70, 120	44	16	50, 51	58	63,65	70, 120	KM16 CCK16		0.8, 1.2
	-C20- 80	52	20	58	57	72	80	KM20 CCK20 CCNK20	9MC20HS	1.0
	-C25- 90	60	25	61	66	80	90	KM25 CCK25 CCNK25	9MC25H	1.3
	-C32-100*	64	32	67	72	75	100	KM32	—	1.6
NC5- 63	NC5- 63-C12- 65	33	12	49	53	58	65	KM12 CCK12	—	1.2
	-C16- 60, 70,120,150	44	16	51	58,61,58,58	65,76,65,65	63,70,120,150	KM16 CCK16		1.4, 1.5, 2.0, 2.3
	-C20- 70, 80,120,150	52	20	58	66	79,80,80,80	71,80,120,150	KM20 CCK20 CCNK20	9MC20H	1.6, 1.7, 2.3, 2.6
	-C25- 70, 90,120,150	60	25	61	71,72,72,72	79,80,80,80		KM25 CCK25 CCNK25	9MC25H	1.9, 2.1, 2.7, 3.0
	-C32- 80*, 90,120,150	69	32	66,68,71,71	68,77,81,81	71,96,107,107	82,90,120,150	KM32 CCK32 CCNK32	—, 9MC32HS, 9MC32H, 9MC32H	2.1, 2.3, 2.9, 3.2
NC5- 85	NC5- 85-C12- 80	33	12	49	53	58	80	KM12 CCK12	—	2.2
	-C16- 80, 120,160	44	16	51	58	65	80,120,160	KM16 CCK16		2.6, 3.0, 3.3
	-C20- 80, 120,160	52	20	58	66	80		KM20 CCK20 CCNK20	9MC20HL, 9MC20H, 9MC20H	2.8, 3.3, 3.6
	-C25- 80, 120,160	60	25	61	72	80		KM25 CCK25 CCNK25	9MC25H	2.9, 3.7, 4.0
	-C32- 85, 100,160,200	69	32	68,71,71,71	77,77,81,81	96,81,107,107	87,100,160,200	KM32 CCK32 CCNK32	9MC32HS, 9MC32H, 9MC32H, 9MC32H	3.2, 3.6, 5.3, 5.8
	-C42-105*, 125,160,200	86	42	74	89,109,115,115	93,113,125,125	105,125,160,200	KM42 CCK42 CCNK42	—, 9MC42HS, 9MC42H, 9MC42H	4.8, 5.3, 6.6, 7.0
NC5-100	NC5-100-C12-105	33	12	49	53	58	105	KM12 CCK12	—	4.1
	-C16-105, 135,165,200	44	16	51	58	65	105,135,165,200	KM16 CCK16		4.4, 4.7, 5.0, 5.3
	-C20-105, 165,200	52	20	58	66	80	105,165,200	KM20 CCK20 CCNK20	9MC20H	4.6, 5.5, 5.8
	-C25-105, 165,200	60	25	61	72	80		KM25 CCK25 CCNK25	9MC25H	5.0, 6.1, 6.4
	-C32- 90, 105,165,200	69	32	71	81	102,107,107,107	90,105,165,200	KM32 CCK32 CCNK32	9MC32HS, 9MC32H, 9MC32H, 9MC32H	4.8, 5.4, 7.1, 7.5
	-C42- 95*, 115,165,200	86	42	74	101,115,115,115	105,125,125,125	95,115,165,200	KM42 CCK42 CCNK42	—, 9MC42HS, 9MC42H, 9MC42H	5.5, 6.1, 8.6, 9.0

★For High Speed type, please add"**G**"at the end of Code No. **e.g.NC5-63-C16-60G**
★Spanner is available as an option. **C12**：**9HC12A, C16**:**9HC16, C20**:**HC20, C25**:**9HC25, C32(φ64)**:**9HC25, C32(φ69)**:**9HC32, C42**:**9HC42**

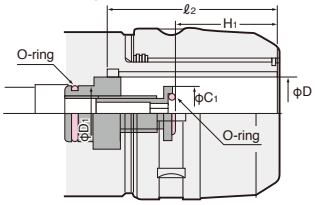


★**NC5-63-C32-80** may not be used by the M/C restriction. ★**Milling Chuck for Oil Mist is also available.** Please contact with us.
★**CCNK** collet and the stopper can not be used for the chucks marked ✻. The cutter shank length must be longer than ℓ2 in case of the direct chucking and centre through coolant application.
★**CCNK** collet can be used for the all chucks except marked ✻. The stopper (optional accessory) is required, if the cutter shank length is shorter than ℓ2 and direct chucking,
★The"**D**"in the Code No. shows ID of the chuck. ★Please note the acceptable shank tolerance is h7. ★Please refer☞**P.232** for **KM, CCK, CCNK** Collet.

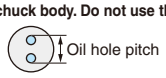
Stopper for Direct Chucking

Direct chucking means that chucking φ32mm shank tool into φ32mm ID chuck.
If tool shank length is longer thanR_1, the stopper is not required.

Chuck	Stopper	H1	C1
C20C	9MC20H	42～47	17
	9MC20HS		
C25C	9MC25H	50～55	22
C32C	9MC32H	49～59	24
	9MC32HS	55～60	
C42	9MC42H	57～67	24

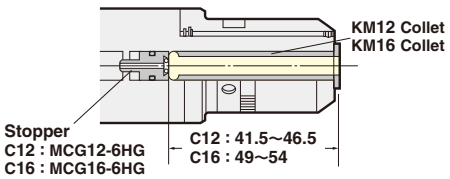


★**For heavy milling, please insert the cutter shank longer than ℓ1 into the chuck body. Do not use the stopper.**
★**When the oil hole pitch of the back end is larger than the dia. of O-ring, please contact with us.**



C12 and C16 Milling Chuck with Special Stopper

C12 and **C16** Milling Chucks with the stopper to use with **KM** Collets are available as special option. **e.g. NC5-63-C12-65S, NC5-63-C16-70S**



For the types with O-ring on the end flange
add the O-ring type at end of the Code No. **e.g. MCG16-6HG-S6**
For the steel type, add "**-FE**" at the end of Code No. **e.g. MCG16-6HG-FE**

High Speed milling Chuck

Please add"**G**"at the end of Code No. for High Speed Milling Chuck.





GH Handle ☞P.48

TAPER	Code No.	MAX. (min-1)	TAPER	Code No.	MAX. (min-1)
NC5-46	NC5- 46-C12- 55G	40,000	NC5-85	NC5- 85-C12- 80G	15,000
	-C16- 70G			-C16- 80G	
	-C20- 80G	30,000		-C20- 80G	
	-C25- 90G	20,000		-C25- 80G	
	-C32-100G*	10,000		-C32- 85G	12,000
				-C42-105P*	
NC5-63	NC5- 63-C12- 65G	20,000	NC5-100	NC5-100-C12-105G	15,000
	-C16- 60G, 70G			-C16-105G	
	-C20- 70G, 80G			-C20-105G	
	-C25- 70G, 90G	15,000		-C25-105G	
	-C32- 80G*, 90G			-C32- 90G	12,000
				-C42- 95P*	

★The extended tool length is available as an option. Please contact with us.
★The stopper can not be used for the chucks marked ✻. The cutter shank length must be longer than ℓ2 in case of the direct chucking and centre through coolant application.
★All chucks except marked ✻ can be used for high pressure centre through coolant application. The stopper (optional accessory) is required, if the cutter shank length is shorter than ℓ2 and direct chucking.

★**GFS** type ☞**P.32** is available for **C25** and **C32** except **NC5-46** shank.

CENTRE COOLANT STRAIGHT COLLET

NIKKEN

PAT.

Suitable for all models of the NIKKEN MILLING CHUCK

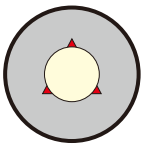




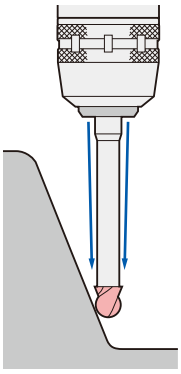
CCK Collet



Front Nut



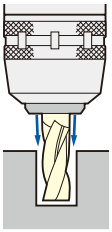
Jet Coolant
⊕
Prevention of Swarf entering the collet through the slots



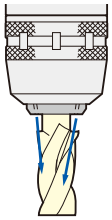
Explanation of the Code No.

CCK 32 – 10
- 10: ID of Collet
- 32: OD of Collet
- CCK: Symbol of CCK Collet

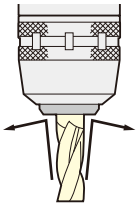
CCK :Centre Coolant
CCNK :Centre Coolant, Adjustable
KM :Standard
NK :Adjustable
ONK :Oil Hole Drill
OJK-A:Jet Coolant
OJK-S:Multiple Nozzles



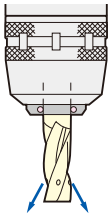
For grooving.



For cutters with cutting diameter which is larger than the shank diameter.



Prevention of the swarf contamination.



A front nut with an O-ring seal, for use with oil hole cutter, is also available as option.



CKFN-MN



CKFN-C

CCK Collet

CKFN front nut and **CCKL** spanner are available as an option.



Photo shows with front nut.

CCK

Style	CCK Collet Code No.(OD-ID)	Front Nut Code No.
CCK12	**CCK12**-3, 4, 5, 6, **8**, **10**	**CKFN12**
CCK16	**CCK16**-3, 4, 5, 6, **8**, **10**, **12**	**CKFN16**
CCK20	**CCK20**-6, 8,**10**, **12**, **16**	**CKFN20**
CCK25	**CCK25**-6, 8,**10**, **12**, **16**, **20**	**CKFN25**
CCK32	**CCK32**-6, 8,10,12,**16**, **20**, **25**	**CKFN32**, **CKFN32T**
CCK42	**CCK42**-6, 8,10,12,16, **20**, **25**, **32**	**CKFN42**

★Above bold figures indicate "**ANNIVERSARY**" **type** Ⓝ **CCK Collet**.
★Please note the acceptable shank tolerance is h6～h7.
★Other metric sizes and imperial sizes, 1/8, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 13/16, 7/8, 1, 1･1/8, 1･1/4, 1･1/2"are also available.

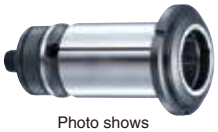


Photo shows with front nut.

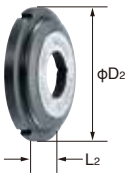
Cutter length adjustment on the collet is possible from front and back.

CCNK

Style	CCNK Collet Code No.(OD-ID)	Front Nut Code No.
CCNK20	**CCNK20**-6, 8, 10, 12, 16	**CKFN20**
CCNK25	**CCNK25**-6, 8, 10, 12, 16, 20	**CKFN25**
CCNK32	**CCNK32**-6, 8, 10, 12, 16, 20, 25	**CKFN32**, **CKFN32T**
CCNK42	**CCNK42**-6, 8, 10, 12, 16, 20, 25, 32	**CKFN42**

★Please note the acceptable shank tolerance is h6～h7.
★Other metric sizes and imperial sizes, 1/8, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 13/16, 7/8, 1, 1･1/8, 1･1/4, 1･1/2"are also available.

Front Nut CKFN



Explanation of the Code No.

CKFN 32 – 10
- 10: ID of Collet
- 32: OD of Collet
- CKFN: Symbol of Front Nut

Style	φD2	L2	Front Nut Code No.
CKFN12	19.5	7	**CKFN12** -3, 4, 5, 6, 8,10
CKFN16	28.5	8	**CKFN16** -3, 4, 5, 6, 8,10,12
CKFN20	33	8	**CKFN20** -6, 8,10,12,16
CKFN25	39	8.5	**CKFN25** -6, 8,10,12,16, 20
CKFN32	46.5	9	**CKFN32** -6, 8,10,12,16, 20, 25
CKFN32T	43	9	**CKFN32T**-6, 8,10,12,16, 20, 25
CKFN42	59.5	9	**CKFN42** -6, 8,10,12,16, 20, 25, 32



★The front nut for direct chucking is also available.
e.g. CKFN20-20D, CKFN25-25D, CKFN32-32D

★The Code No. fitted with O-ring is:
e.g. CKFN20-20DC, CKFN25-25DC, CKFN32-32DC

★**For C32 there are 2 sizes, CKFN32 = for nose ring diameter of φ69mm, CKFN32T = for nose ring diameter of φ64mm.**
★Jet Coolant type for the cutter with a cutter dia. larger than shank dia. is also available.
CKFN25-20MN, CKFN32-25MN, CKFN42-32M
★Front Nut fitted with an O-ring is also available.
e.g. The Code No. is **CKFN32-10C**
★The spanner is available as an option.
CKFN12:CCKL12, CKFN16:CCKL16
CKFN20:CCKL20
CKFN25, CKFN32T:CCKL25
CKFN32:CCKL32, CKFN42:CCKL42



KM Photo shows **ANNIVERSARY type KM Collet**.

Style	KM Collet Code No.(OD-ID)
KM12	**KM12**-2, 3, 4, 5, 6, **7**, **8**, **9**,**10**
KM16	**KM16**-2, 3, 4, 5, 6, 7, **8**, **9**,**10**,**11**,**12**
KM20	**KM20**-2, 3, 4, 5, 6, 7, 8, 9,**10**,**11**,**12**,13,**14**,**15**,**16**
KM25	**KM25**-3, 4, 5, 6, 7, 8, 9,**10**,**11**,**12**,13,**14**,**15**,**16**,17,**18**,**19**, **20**, 21, **22**
KM32	**KM32**-3, 4, 5, 6, 7, 8, 9,10,11,12,13,14,**15**,**16**,17,**18**,**19**, **20**, 21, **22**, 23, **24**, **25**, 26, **30**
KM42	**KM42**-3, 4, 5, 6, 7, 8, 9,10,11,12,13,14,15,16,17,18,**19**, **20**, 21, **22**, 23, **24**, **25**, 26, 27, 28, 29, 30, 31, **32**, **40**

★For Synchronous Tapping Program : Special ID Collets for Tap Shank are also available.
★Other metric sizes and imperial sizes, 1/8, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 13/16, 7/8, 1, 1･1/8, 1･1/4, 1･1/2"are also available.
★The collets with bold character are the **"ANNIVERSARY" type** Ⓝ **KM Collet**.
Ordinary **KM** Collet can be used with **"ANNIVERSARY" type** Ⓝ **Milling Chuck**, but better performance can be found with the **"ANNIVERSARY" type** Ⓝ **KM Collet**.
★Please note the acceptable shank tolerance is h6～h7.

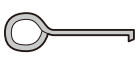
Cutter length adjustment on the collet is possible from front and back.



NK

Style	NK Collet Code No.(OD-ID)
NK20	**NK20**-3, 4, 5, **6**, 7, **8**, 9,**10**,11,**12**,13,14,15,**16**
NK22	**NK22**-3, 4, 5, **6**, 7, **8**, 9,**10**,11,**12**,13,14,15,**16**,17,18
NK25	**NK25**-3, 4, 5, **6**, 7, **8**, 9,**10**,11,**12**,13,14,15,**16**,17,18,19, **20**, 21, 22
NK32	**NK32**-3, 4, 5, **6**, 7, **8**, 9,**10**,11,**12**,13,14,15,**16**,17,18,19, **20**, 21, 22, 23, 24, **25**, 26
NK42	**NK42**-3, 4, 5, **6**, 7, **8**, 9,**10**,11,**12**,13,14,15,**16**,17,18,19, **20**, 21, 22, 23, 24, **25**, 26, 27, 28, 29, 30, 31, **32**

★For Synchronous Tapping Program : Special ID Collets for Tap Shank are also available.
★Other metric sizes and imperial sizes, 1/8, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 13/16, 7/8, 1, 1･1/8, 1･1/4, 1･1/2"are also available.
★The collets with bold character are standard.
★Please note the acceptable shank tolerance is h6～h7.
★Collet removal(**9CKR**)is available as an option.
★Please refer ☞ **P.33, P.34** for more detail of the straight collet.



NC5 SLIM CHUCK

NIKKEN



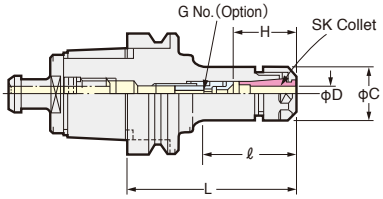
SK

Centre Through
MAX. 7MPa

Wide Variation of the Tool Length



Photo. shows with **J** type Nut.



When SK J type nut is used, the total chuck length will be extended by 6mm.

PAT.

TAPER	Code No.	Chucking Range φD	ℓ	C	H	G No.(Option)	Weight (kg)	SK Collet
NC5- 46	NC5- 46-SK 6C- 75, 90, 120	0.7 ～ 6.0	48, 56, 72	19.5	26 ～ 31	SKG6-6HG	0.4, 0.5, 0.7	SK 6
	-SK10C- 75, 90, 120	1.75 ～ 10.0	50, 65, 95	27.5	35 ～ 41	SKG10-10HG	0.5, 0.6, 0.8	SK 10
	-SK13C- 90, 120	2.75～ 13.0	65, 95	33	39 ～ 51	SKG13-10HG	0.7, 0.9	SK 13
	-SK16C- 90, 120	2.75 ～ 16.0	67, 97	40	50	SKG16-10HG	0.8, 1.0	SK 16
	-SK20C- 90, 120	3.5 ～ 20.0		48.5	50～55, 47～63	SKG20-12MFHG, -12HG	1.2, 1.6	SK 20
	-SK25 - 90*1	7.5 ～ 25.4	67	55	55 ～ 60	SKG-12MF	1.2	SK 25
NC5- 63	NC5- 63-SK 6C- 90, 150	0.7 ～ 6.0	51, 60	19.5	26 ～ 31	SKG6-6HG	1.2, 1.4	SK 6
	-SK10C- 90, 105, 120 135, 150, 200	1.75 ～ 10.0	48, 73, 73 73, 73, 73	27.5	35 ～ 41	SKG10-10HG	1.4, 1.5, 1.6 1.6, 1.7, 1.9	SK 10
	-SK13C- 90, 150, 200	2.75 ～ 13.0	58, 88, 88	33	39 ～ 51	SKG13-10HG	1.5, 1.7, 1.9	SK 13
	-SK16C- 90, 105, 120 135, 150, 200	2.75 ～ 16.0	58, 73, 88 103, 118, 168	40	45 ～ 57	SKG16-12HG	1.5, 1.6, 1.7 1.8, 2.0, 2.2	SK 16
	-SK20C-105, 150, 200	3.5 ～ 20.0	75, 120, 170	48.5	47 ～ 63	SKG20-18HG	2.0, 2.6, 3.3	SK 20
	-SK25C-135, 180	7.5 ～ 25.4	106, 151	55	60～65, 60～70	SKG25-18HGD, 24HG	2.5, 2.8	SK 25
NC5- 85	NC5- 85-SK 6C-105, 150	0.7 ～ 6.0	55, 60	19.5	26 ～ 31	SKG6-6HG	2.3, 2.7	SK 6
	-SK10C-105, 150, 200	1.75 ～ 10.0	70, 73, 75	27.5	35 ～ 41	SKG10-10HG	2.4, 2.8, 3.2	SK 10
	-SK13C-105, 150, 200	2.75 ～ 13.0	67, 92, 92	33	39 ～ 51	SKG13-10HG	2.6, 3.0, 3.4	SK 13
	-SK16C-105, 150, 200	2.75 ～ 16.0	65, 90, 90	40	45 ～ 57	SKG16-12HG	2.7, 3.2, 3.6	SK 16
	-SK20C-135, 165, 200	3.5 ～ 20.0	97, 127, 162	48.5	47 ～ 63	SKG20-18HG	3.5, 3.9, 4.3	SK 20
	-SK25C-135, 165, 200	7.5 ～ 25.4		55	60～65, 60～70, 60～70	SKG25-18HGD, -24HG, -24HG	3.5, 4.0, 4.4	SK 25
NC5-100	NC5-100-SK 6C-105, 165	0.7 ～ 6.0	55, 60	19.5	26 ～ 31	SKG6-6HG	3.9, 4.3	SK 6
	-SK10C-105, 165, 200	1.75 ～ 10.0	57, 75, 75	27.5	35 ～ 41	SKG10-10HG	4.0, 4.4, 4.8	SK 10
	-SK13C-105, 165, 200	2.75 ～ 13.0	62, 92, 92	33	39 ～ 51	SKG13-10HG	4.2, 4.7, 5.1	SK 13
	-SK16C-105, 165, 200	2.75 ～ 16.0	62, 90, 90	40	45 ～ 57	SKG16-12HG	4.3, 5.0, 5.4	SK 16
	-SK20C-135, 165, 200	3.5 ～ 20.0	92, 122, 157	48.5	47 ～ 63	SKG20-18HG	5.1, 5.5, 6.0	SK 20
	-SK25C-135, 165, 200	7.5 ～ 25.4		55	60 ～ 70	SKG25-24HG	5.1, 5.5, 5.9	SK 25

★The **"D"** of Code No. shows MAX. gripping diameter. ★The **"H"** dimension is a figure in case of the MAX.gripping diameter.
★All slim chucks except **NC5-46-SK25-90** marked *1 are High Pressure Centre Through Coolant type (MAX.7MPa).
★For **NC5-46-SK25-90**, the adjust screw **SKG-12MFH** is used for centre through coolant application (1MPa).
The Code No. of the adjust screw for **J** type nut is **SKG-12MF-J**.
★**For the adjust screws for oil hole taps or smaller dia. cutters, please refer** ☞**P.52.**
★Collet, adjust screw (G No.) and spanner are available as an option.
The Code No. of the spanner is **SK6C(C=φ18): SKL-6, SK6C(C=φ19.5): SKL-6W, SK10C: SKL-10, SK13C: 9HC12A, SK16C: 9HC16, SK20C: 9HC22, SK25C: 9HC25**
★Please refer ☞**P.234** for **SK** collet and please refer ☞**P.49** for **J** type nut.
SK6C:φ4～φ6, SK10C:φ6～φ10, SK16C:φ10～φ16, SK25C:φ16～φ25
★**Slim Chuck for Oil Mist is also available.** Please contact with us.

High Speed Slim Chuck

"**SK-P**" is the Code No. of High Speed Slim Chuck.





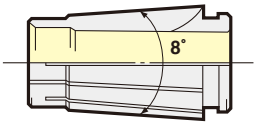
GH Handle ☞ P.48

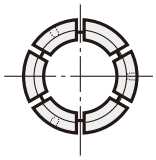
TAPER	Code No.	MAX. (min-1)	TAPER	Code No.	MAX. (min-1)
NC5-46	NC5- 46-SK 6C- 75P, 90P, 120P	40,000	NC5-85	NC5- 85-SK 6C-105P, 150P	20,000
	-SK10C- 75P, 90P, 120P			-SK10C-105P, 150P, 200P	
	-SK13C- 90P, 120P	30,000		-SK13C-105P, 150P, 200P	
	-SK16C- 90P, 120P			-SK16C-105P, 150P, 200P	
	-SK20C- 90P, 120P			-SK20C-135P, 165P, 200P	
	-SK25 - 90P			-SK25C-135P, 165P, 200P	15,000
NC5-63	NC5- 63-SK 6C- 90P, 150P	30,000	NC5-100	NC5-100-SK 6C-105P, 165P	20,000
	-SK10C- 90P, 150P, 200P			-SK10C-105P, 165P, 200P	
	-SK13C- 90P, 150P, 200P	25,000		-SK13C-105P, 165P, 200P	
	-SK16C-105P, 150P, 200P			-SK16C-105P, 165P, 200P	
	-SK20C-105P, 150P, 200P			-SK20C-135P, 165P, 200P	
	-SK25C-135P, 180P	20,000		-SK25C-135P, 165P, 200P	15,000

SLIM CHUCK COLLET

NIKKEN







Explanation of the Code No.

SK 10 - 6 P

- P: Non: Standard; P:P class (Run-out Accuracy=3μm); A:A type (for End Mill Shank)
- 6: MAX. Chucking Dia.
- 10: Style No.
- SK: Symbol of SK Collet

SK **"A" type SK collet (for End Mill Shank) are marked ● . The acceptable shank tolerance is h8.Code No. is e.g. SK10-10A**
"P" class SK collet (for drill) are available for all series. e.g. SK10-10P

Code No.	Chucking D
SK 6- 0.8	0.7 ~ 0.8
- 1	0.9 ~ 1.0
- 1.25	1.15~ 1.25
- 1.5	1.3 ~ 1.5
- 1.75	1.55~ 1.75
- 2	1.8 ~ 2.0
- 2.25	2.05~ 2.25
- 2.5	2.3 ~ 2.5
- 2.75	2.55~ 2.75
- 3	2.8 ~ 3.0
- 3.5	3.0 ~ 3.5
- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
SK10- 2	1.75~ 2.0
- 2.25	2.0 ~ 2.25
- 2.5	2.25~ 2.5
- 2.75	2.5 ~ 2.75
- 3	2.75~ 3.0
- 3.5	3.0 ~ 3.5
- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
- 6.5	6.0 ~ 6.5
- 7	6.5 ~ 7.0
- 7.5	7.0 ~ 7.5
- 8	7.5 ~ 8.0
- 8.5	8.0 ~ 8.5
- 9	8.5 ~ 9.0
- 9.5	9.0 ~ 9.5
-10	9.5 ~10.0

Code No.	Chucking D
SK13- 3	2.75~ 3.0
- 3.5	3.0 ~ 3.5
- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
- 6.5	6.0 ~ 6.5
- 7	6.5 ~ 7.0
- 7.5	7.0 ~ 7.5
- 8	7.5 ~ 8.0
- 8.5	8.0 ~ 8.5
- 9	8.5 ~ 9.0
- 9.5	9.0 ~ 9.5
- 10	9.5 ~10.0
- 10.5	10.0~10.5
- 11	10.5~11.0
- 11.5	11.0~11.5
- 12	11.5~12.0
- 12.5	12.0~12.5
- 13	12.5~13.0

Code No.	Chucking D
SK16- 3	2.75~ 3.0
- 3.5	3.0 ~ 3.5
- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
- 6.5	6.0 ~ 6.5
- 7	6.5 ~ 7.0
- 7.5	7.0 ~ 7.5
- 8	7.5 ~ 8.0
- 8.5	8.0 ~ 8.5
- 9	8.5 ~ 9.0
- 9.5	9.0 ~ 9.5
- 10	9.5 ~10.0
- 10.5	10.0~10.5
- 11	10.5~11.0
- 11.5	11.0~11.5
- 12	11.5~12.0
- 12.5	12.0~12.5
- 13	12.5~13.0
- 13.5	13.0~13.5
- 14	13.5~14.0
- 14.5	14.0~14.5
- 15	14.5~15.0
- 15.5	15.0~15.5
- 16	15.5~16.0

Code No.	Chucking D
SK20- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
- 6.5	6.0 ~ 6.5
- 7	6.5 ~ 7.0
- 7.5	7.0 ~ 7.5
- 8	7.5 ~ 8.0
- 8.5	8.0 ~ 8.5
- 9	8.5 ~ 9.0
- 9.5	9.0 ~ 9.5
- 10	9.5 ~ 10.0
- 10.5	10.0~ 10.5
- 11	10.5~ 11.0
- 11.5	11.0~ 11.5
- 12	11.5~ 12.0
- 12.5	12.0~ 12.5
- 13	12.5~ 13.0
- 13.5	13.0~ 13.5
- 14	13.5~ 14.0
- 14.5	14.0~ 14.5
- 15	14.5~ 15.0
- 15.5	15.0~ 15.5
- 16	15.5~ 16.0
- 16.5	16.0~ 16.5
- 17	16.5~ 17.0
- 17.5	17.0~ 17.5
- 18	17.5~ 18.0
- 18.5	18.0~ 18.5
- 19	18.5~ 19.0
- 19.5	19.0~ 19.5
- 20	19.5~ 20.0

Code No.	Chucking D
SK25- 8	7.5~8.0
- 10	9.5~10.0
- 12	11.5~12.0
- 16	15.5~16.0
- 16.5	16.0~16.5
- 17	16.5~17.0
- 17.5	17.0~17.5
- 18	17.5~18.0
- 18.5	18.0~18.5
- 19	18.5~19.0
- 19.5	19.0~19.5
- 20	19.5~20.0
- 20.5	20.0~20.5
- 21	20.5~21.0
- 21.5	21.0~21.5
- 22	21.5~22.0
- 22.5	22.0~22.5
- 23	22.5~23.0
- 23.5	23.0~23.5
- 24	23.5~24.0
- 24.5	24.0~24.5
- 25	24.5~25.0
- 25.4	25.0~25.4

★**SK6** collet with the special internal dia. is also available.

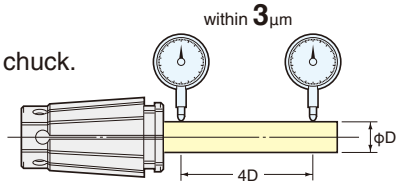


Collet removal **(SKR-6)** is supplied as standard only for **SK6**. **SKR-10**, **SKR-16** and **SKR-25** are available as an option. Collet removal is not necessary for **the new types of collet (SK10 to SK25 collet including SK13 and SK20)**.

★**Please refer ☞P.44 for SK Coolant Collet (AC).**

■"P" class SK collet for drill

It guarantees the Run-out accuracy within 3 micron at the nose (4D) from the chuck.
Additionally Collet Set is also available.



■"A" type SK collet for endmill

The acceptable shank tolerance ids h8.

SK Collet A Type
SK 6-3A, 4A, 5A, 6A
SK10-3A, 4A, 5A, 6A, 8A, 10A
SK13-3A, 4A, 5A, 6A, 8A, 10A, 12A, 13A
SK16-3A, 4A, 5A, 6A, 8A, 10A, 12A, 16A
SK20-4A, 5A, 6A, 8A, 10A, 12A, 16A, 20A
SK25-8A, 10A, 12A, 16A, 20A, 25A

SK Collet A Type (Inch)
SK 6 -1/8A, 3/16A
SK10 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A
SK13 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A
SK16 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A, 9/16A, 5/8A
SK20 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A, 9/16A, 5/8A, 3/4A
SK25 -3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A, 5/8A, 3/4A, 25.4A

NC5 VEGA CHUCK

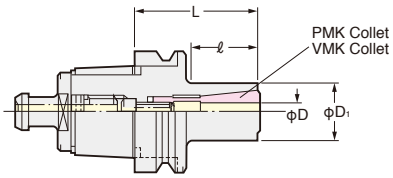
NIKKEN



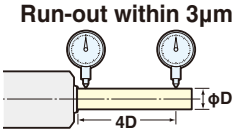
VMC

New Innovation for High Speed Milling

The setting of cutter can be done through the centre hole of the pull stud with wrench.



Run-out within 3μm



TAPER	Code No.	Chucking Range φD	D1	ℓ	Collet	MAX. (min-1)	Collet Removal Jig	Weight (kg)
NC5- 63	NC5- 63-VMC 8- 60, 120N	2~8	22	30, 30	PMK 8, VMK 8J	40,000	VML-63	1.1,1.4
	-VMC12- 65, 120	4~12	30	35, 47	PMK12, VMK12J			1.2,1.7
	-VMC16- 85, 120	4~16	40	53, 88	VMK16, VMK16J			1.4,1.8
	-VMC20- 85, 120	6~20	47	53, 88	VMK20, VMK20J			1.5,2.0
	-VMC25- 90, 120	8~25	55	60, 90	VMK25, VMK25J			1.7,2.3
NC5- 85	NC5- 85-VMC 8- 75N, 135	2~8	22	30, 30	PMK 8, VMK 8J	20,000	VML-85	2.3,2.7
	-VMC12- 75, 135	4~12	30	39, 42	PMK12, VMK12J			2.4,2.9
	-VMC16- 85, 135	4~16	40	47, 57	VMK16, VMK16J			2.5,3.3
	-VMC20- 85, 135	6~20	47	47, 97	VMK20, VMK20J			2.6,3.3
	-VMC25- 90, 135	8~25	55	52, 97	VMK25, VMK25J			2.8,3.6
	-VMC32-110	12~32	70	72	VMK32, VMK32J			3.6
NC5-100	NC5-100-VMC 8- 90N, 150N	2~8	22	30, 30	PMK 8, VMK 8J	20,000	VML-100	4.0,4.5
	-VMC12- 90, 150	4~12	30	49, 60	PMK12, VMK12J			4.1,4.6
	-VMC16- 90, 150	4~16	40	49, 80	VMK16, VMK16J			4.2,4.9
	-VMC20- 85, 150	6~20	47	42, 95	VMK20, VMK20J			4.2,5.3
	-VMC25- 90, 150	8~25	55	47, 107	VMK25, VMK25J			4.3,5.4
	-VMC32-105	12~32	70	57	VMK32, VMK32J			4.9

★The "D" of the Code No. shows MAX. gripping diameter.
★Please add "P" at the end of Code No. for High Speed Chuck.
e.g. NC5-63-VMC16-85P.

★Collet and collet removal jig are available as an option.

VMK Collet Code No.
VMK 8-2J, 3J, 4J, 5J, 6J, 8J
VMK12-4J, 5J, 6J, 8J, 10J, 12J
VMK16-4J, 5J, 6J, 8J, 10J, 12J, 16J
VMK20-6J, 8J, 10J, 12J, 16J, 20J
VMK25-8J, 10J, 12J, 16J, 20J, 25J
VMK32-12J, 16J, 20J, 25J, 32J

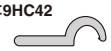
★Please note the acceptable shank tolerance is h8.
★**VMK8**-2J is Jet Spread Hole type.

Collet Removal Jig

VML



Push back the Pull Stud onto the VEGA Chuck and rotate the Chuck to tighten and release. Spanner is available as an option.
NC5-53, NC5-63:9HC22,
NC5-85:9HC32, NC5-100:9HC42



⚠ **PROTECTION MUST BE USED.**



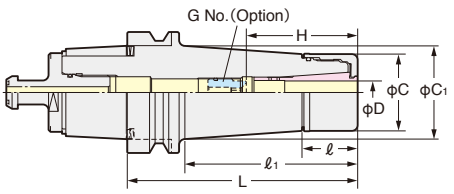
NC5 ANNIVERSARY TYPE VC HOLDER

NIKKEN



VC

With TiN Bearing Nut
MAX.40,000min-1 & G2.5
Run-Out Accuracy:3μm at 4D



PAT.

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	H	G No. (Option)	Weight (kg)	MAX. (min-1)	Collet
NC5- 46	NC5- 46-VC 6- 45, 60, 90	2.0~6.0	45,60,90	23	23,35,65	28	27.5,31.7,33.4	-,-,35~45	-,-,VCG 6- 8A	0.5,0.6,0.8	40,000	VCK 6
	-VC13- 65, 90, 120	3.0~12.0	65,90,120	29	42,67,97	40	41.8,41.3,42.4	-,-,50~60	-,-,VCG13-15A	0.8,0.9,1.2		VCK13
NC5- 63	NC5- 63-VC 6- 60, 90, 120	2.0~6.0	60,90,120	23	30,60,90	28	30.0,32.7,36.9	35~45	VCG 6- 8A	1.3,1.5,1.7	30,000	VCK 6
	-VC13- 60, 90, 120	3.0~12.0		29	31,60,90	40	40.3,44.3,48.5	-,50~60,50~60	-,VCG13-15A,VCG13-15A	1.4,1.7,2.1		VCK13
NC5- 85	NC5- 85-VC 6-105, 135, 165	2.0~6.0	105,135,165	23	67,97,127	28	33.7,37.8,42.0	35~45	VCG 6- 8A	2.6,2.8,3.1	20,000	VCK 6
	-VC13-105, 135, 165	3.0~12.0		29		40	45.3,49.5,53.7	50~60	VCG13-15A	2.8,3.2,3.6		VCK13
NC5-100	NC5-100-VC 6-105, 135, 165	2.0~6.0	105,135,165	23	62,92,122	28	33.0,37.1,41.3	35~45	VCG 6- 8A	4.3,4.5,4.9	20,000	VCK 6
	-VC13-105, 135, 165	3.0~12.0		29		40	44.6,48.8,53.0	50~60	VCG13-15A	4.5,4.9,5.3		VCK13

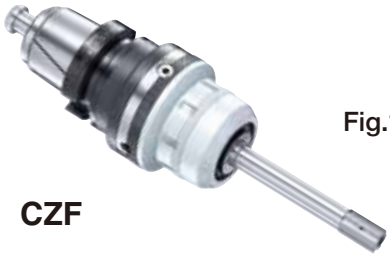
★Collet, adjust screw (G No.) and **GH Handle** are available as an option.
★Please refer ☞**P.49** for JET Coolant Splash with **J** type Nut.
The Code No. of the **GH Handle** is **VC6: GH10, VC13: GH16**
★When the axial stopper is required, please use Adjust Screw (G No.)
★Please add **"-RP"** at the end of Code No. for Rust Proof Treatment **VC** Holder. **e.g : NC5-63-VC13-60-RP**
★Please use **VC J** type Nut & Cap for Centre Through Coolant.
When **VC J** type Nut is used, the total holder length will be extended to 6mm.
★**NC5-63-VC 6-150, NC5-63-VC13-150, NC5-100-VC13- 90, -120** are available as semi-standard.
★All series are for High Speed Rotation.

VCK Collet Code No.
VCK 6-2, 3,(3.175), 4, 5, 6
VCK13-3,(3.175), 4, 5, 6, 7, 8, 9, 10, 11, 12

★Please note the acceptable shank tolerance is h8.
★Inch size is also available. **VCK6-1/8, 3/16, 1/4 VCK13-1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2**
★**VCK6-3.175** and **VCK13-3.175** are same as **VCK6-1/8** and **VCK13-1/8** respectively.
Please order **VCK6-1/8** or **VCK13-1/8**

NC5 ZERO FIT TYPE MILLING CHUCK

NIKKEN



CZF

Fig.1

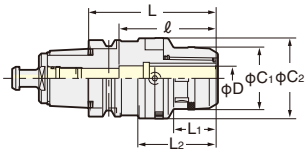
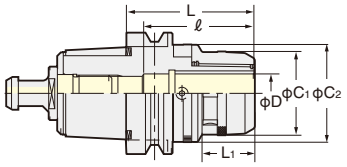


Fig.2



PAT.

TAPER	Code No.	C1	C2	L	L1	L2	ℓ	Weight(Kg)	Fig.	Collet
NC5- 46	NC5- 46-CZF20-100	51.5	66.5	100	35	68	80	1.4	1	KM20 CCK20
	-CZF25-100	59.5	74.5					1.5		KM25 CCK25
NC5- 63	NC5- 63-CZF20-105	51.5	66.5	105	35	65	80	2.1		KM20 CCK20
	-CZF25-105	59.5	74.5			68		2.4		KM25 CCK25
	-CZF32-120	69	80.5	120	42	81	105	2.9		KM32 CCK32
NC5-100	NC5-100-CZF20-105	51.5	66.5	105	35	–	80	4.9	2	KM20 CCK20
	-CZF25-105	59.5	74.5					5.3		KM25 CCK25
	-CZF32-105	69	80.5		42		105	5.7		KM32 CCK32

★Spanner is available as an option. **CZF20 type**:**9HC22, CZF25 type**:**9HC25, CZF32 type**:**9HC32**
★Wrench to adjust run-out (**9ZFL**) is available as an option. ★Please note that the acceptable shank tolerance is h6～h7.
★Please refer ☞**P.232** for **KM**, **CCK** collet.
★Please add "**P**" at the end of Code No. for High Speed Zero Fit Milling Chuck. **e.g. NC5-63-CZF25-105P**
★For center through coolant application:Please use **CKFN-D** Nut for the direct chucking. Please use **CCK** collet and **CKFN** nut for chucking with collet.☞**P.232**
★Multi-Cam style is available. **e.g. NC5-63-CZF32-120-C3**. (3 Cams) Please contact us for more detail.

Wrench to adjust
9ZFL



NC5 ZERO FIT TYPE SLIM CHUCK

NIKKEN



SZF

Fig.1

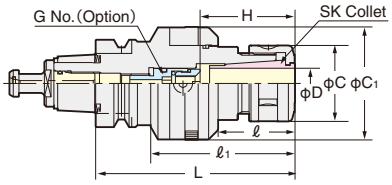
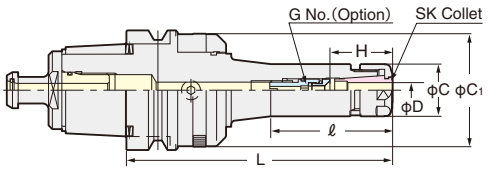


Fig.2



PAT.

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	H	G No.(Option)	Weight(kg)	Fig.	Collet
NC5- 46	NC5- 46-SZF 6C- 90	0.7～6.0	90	42	–	19.5	40.5	26～31	SKG6-6HG	0.8	2	SK 6
	-SZF10C- 90	1.75～10.0		27	61	27.5	48.5	35～41	SKG10-10HG	1.2	1	SK10
	-SZF16C-120	2.75～16.0	120	50	86	40	59.5	50	SKG16-10HG	1.7		SK16
NC5- 63	NC5- 63-SZF 6C- 90,150	0.7～6.0	90, 150	37, 60	–	19.5	40.5, 48.5	26～31	SKG6-6HG	1.3, 1.6	2	SK 6
	-SZF10C- 90,150	1.75～10.0		37, 97		27.5	48.5	35～41	SKG10-10HG	1.5, 1.7		SK10
	-SZF16C-105,150	2.75～16.0	105, 150	52, 97		40	59.5	45～57	SKG16-12HG	1.7, 2.0		SK16
	-SZF25C-135,180	7.5～25.4	135, 180	70, 115	99, 144	55	66.5	60～65	SKG25-18HGD, 24HG	2.6, 2.9	1	SK25
NC5-100	NC5-100-SZF 6C-105,165	0.7～6.0	105, 165	41, 63	–	19.5	40.5, 59.5	26～31	SKG6-6HG	4.1, 4.5	2	SK 6
	-SZF10C-105,165	1.75～10.0		41, 101		27.5	48.5	35～41	SKG10-10HG	4.3, 4.7		SK10
	-SZF16C-105,165	2.75～16.0		41, 101		40	59.5	45～57	SKG16-12HG	4.6, 5.3		SK16
	-SZF25C-135,165	7.5～25.4	135, 165	61, 101		55	66.5	60～70	SKG25-24HG	5.5, 5.9		SK25

★Adjust screw (G No.), wrench to adjust run-out (**9ZFL**) and **SKL** spanner are available as an option. **SZF6C: SKL-6W, SZF10C: SKL-10, SZF16C: 9HC16, SZF25C: 9HC25**
★**NC5-85** is also available. **NC5-85-SZF6C-105, -150 NC5-85-SZF10C-105, -150 NC5-85-SZF16C-105, -150 NC5-85-SZF25C-135, -165**
★Please use "**P**" class or "**A**" type **SK** collet. ☞**P.234**. ★Please add "**P**" at the end of Code No. for High Speed Zero Fit Slim Chuck. **e.g. NC5-63-SZF10C-90P**
★For centre through coolant application, please use **SK J** type nut and cap. ☞**P.49.** Please note that the total tool length with **J** type nut is extended 6mm longer.
★Multi-Cam style is available. **e.g. NC5-63-SZF16C-105-C3**. (3 Cams) Please contact us for more detail.



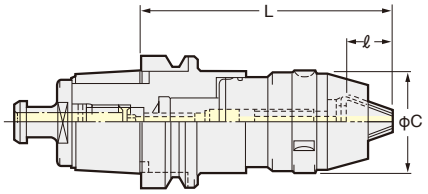
NC5 NPU DRILL CHUCK

NIKKEN



NPU





TAPER	Code No.	Chucking Dia. ϕD	C	ℓ	L MIN.	L MAX.	Weight(kg)
NC5- 46	NC5- 46-NPU 8-100	0.3～8	38	18.8	100	104.7	1.0
	-NPU13-120	1 ～13	48.5	26.5	120	131.7	1.4
NC5- 63	NC5- 63-NPU 8- 90	0.3～8	38	18.8	90	94.7	1.3
	-NPU13-110	1 ～13	48.5	26.5	110	121.7	1.7
NC5- 85	NC5- 85-NPU 8- 90	0.3～8	38	18.8	90	94.7	2.8
	-NPU13-110	1 ～13	48.5	26.5	110	121.7	3.4
NC5-100	NC5-100-NPU 8- 90	0.3～8	38	18.8	90	94.7	3.8
	-NPU13-110	1 ～13	48.5	26.5	110	121.7	4.1

★**NPU8** can not be used for Centre Through Tool Coolant application.
★Please add "**C**" to the Code No. for Centre Through Tool Coolant type **NPU13**(1MPa).
e.g. NC5-63-NPU13C-110

★Wrench is available as an option. **NPU8: NPUL-8, NPU13: NPUL-13.**
★When it is used for centre through tool coolant holder, MIN. Chucking Dia. is 6mm.

NC5 SIDE LOCK HOLDER

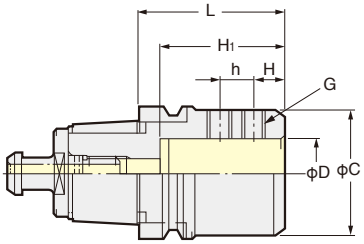
NIKKEN



SL

Photo shows the holder
with **NIKKEN COMBATZ DRILL.**
☞ P.293

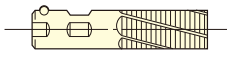




SIDE LOCK HOLDER for Drill

TAPER	Code No.	C	h	H	H_1	G	Weight (kg)
NC5- 63	NC5- 63-SL20C-55	50	—	14	45	M12(P=1.25)	1.4
	-SL25C-60	55	15	11	55		1.6
	-SL32C-70	61	20	12	60		1.7
	-SL40C-80	70	19	15	70		1.8
NC5- 85	NC5- 85-SL20C-70	50	16	12	45	M10(P=1.5)	2.8
	-SL25C-70	55	17	14	55	M12(P=1.25)	2.9
	-SL32C-70	60	15	15	60		2.8
	-SL40C-80	84	19	18	70		3.7
NC5-100	NC5-100-SL20C-80	50	16	12	45	M10(P=1.5)	4.2
	-SL25C-80	55	17	14	55	M12(P=1.25)	4.4
	-SL32C-80	60	16	15	60		4.6
	-SL40C-80	88	19	15	70		5.9

★All holders are High Pressure Centre Through Tool Coolant type. (7MPa).
The Code No. of SIDE LOCK HOLDER for Combination Shank Cutter is"**DM**".
e.g. NC5-100-DM50.8-120
NC5- 85-DM50.8-120



SIDE LOCK HOLDER for End Mill

TAPER	Code No.	C	h	H	H_1	G	Weight (kg)
NC5- 63	NC5- 63-SLS16- 60	48	—	24	60	M14(P=2)	1.4
	-SLS20- 75	52	—	25	70	M16(P=2)	1.7
	-SLS25- 90	63	25	24	75	M18(P=2)	1.9
	-SLS32-105	72	28	24	90	M20(P=2)	2.0
NC5- 85	NC5- 85-SLS16- 70	48	—	24	60	M14(P=2)	2.7
	-SLS20- 70	52	—	25	70	M16(P=2)	3.2
	-SLS25- 95	65	25	24	75	M18(P=2)	3.6
	-SLS32-100	72	28	24	85	M20(P=2)	3.8
	-SLS42-115	90	32	30	95	M20(P=2)	4.7
	-SLS50-120	95	35	35	83	M24(P=2)	6.0
NC5-100	NC5-100-SLS16- 75	48	—	24	60	M14(P=2)	4.0
	-SLS20- 75	52	—	25	70	M16(P=2)	4.5
	-SLS25- 75	65	25	24	75	M18(P=2)	4.7
	-SLS32- 75	72	28	24	90	M20(P=2)	4.9
	-SLS42-115	90	32	30	95	M20(P=2)	6.2
	-SLS50-105	98	34.5	35	90	M24(P=2)	7.5

★The above are suitable for JIS B4005 Shank End Mill.

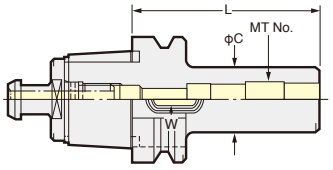
NC5 MORSE TAPER SLEEVE TYPE A

NIKKEN



MTA

■For Drill & Reamer
with MT No.1～No.4 Shank.



TAPER	Code No.	MT No.	C	W	Weight (kg)
NC5- 46	NC5- 46-MTA1- 85	MT1	25	5.6	0.9
	-MTA2- 95	MT2	32	6.6	1.1
	-MTA3-115	MT3	40	8.4	1.3
NC5- 63	NC5- 63-MTA1- 85	MT1	25	5.6	1.2
	-MTA2- 95	MT2	32	6.6	1.3
	-MTA3-115	MT3	40	8.4	1.6
	-MTA4-140	MT4	50	12.4	2.2

TAPER	Code No.	MT No.	C	W	Weight (kg)
NC5- 85	NC5- 85-MTA1- 85	MT1	25	5.6	2.6
	-MTA2- 95	MT2	32	6.6	2.7
	-MTA3-115	MT3	40	8.4	3.0
	-MTA4-140	MT4	50	12.4	3.5
NC5-100	NC5-100-MTA1- 85	MT1	25	5.6	4.1
	-MTA2- 95	MT2	32	6.6	4.2
	-MTA3-115	MT3	40	8.4	4.5
	-MTA4-140	MT4	50	12.4	5.1

★The"**D**"of Code No. shows **MT** No. ★Please contact with us for the Centre Through Tool Coolant type Sleeve.

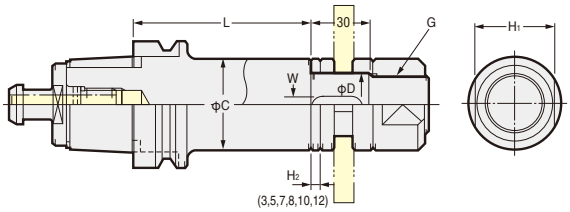
NC5 STUB ARBOR

NIKKEN



SCA

■No Vibration at slotting.



TAPER	Code No.(Inch)	H_1	C	W	G	Weight(kg)	Code No.(Metric)
NC5- 63	NC5- 63-SCA12.7 -75	17	20	—	M12	1.2	NC5- 63-SCA13-75
	-SCA15.875-75	23	26	3.18(4)	M14	1.4	-SCA16-75
	-SCA22.225-75	29	34	3.18(4)	M20	1.7	-SCA22-75
	-SCA25.4 -75	32	40	6.35(7)	M24	2.0	-SCA27-75
	-SCA31.75 -90	41	46	7.92(8)	M30	2.6	-SCA32-90
NC5- 85	NC5- 85-SCA12.7 -75	17	20	—	M12	2.6	NC5- 85-SCA13-75
	-SCA15.875-90	23	26	3.18(4)	M14	2.8	-SCA16-90
	-SCA22.225-90	29	34	3.18(4)	M20	3.2	-SCA22-90
	-SCA25.4 -90, 135	32	40	6.35(7)	M24	3.5	-SCA27-90
	-SCA31.75 -90, 135	41	46	7.92(8)	M30	3.9	-SCA32-95
NC5-100	NC5-100-SCA12.7 -75	17	20	—	M12	4.0	NC5-100-SCA13-75
	-SCA15.875-90	23	26	3.18(4)	M14	4.2	-SCA16-90
	-SCA22.225-90	29	34	3.18(4)	M20	4.4	-SCA22-90
	-SCA25.4 -90	32	40	6.35(7)	M24	4.5	-SCA27-90
	-SCA31.75 -95, 135	41	46	7.92(8)	M30	4.7	-SCA32-90
	-SCA38.1 -95, 135	46	55	9.52(10)	M36	4.9	-SCA40-90

★The "**D**" of Code No. shows shaft diameter. ★Guide Key and Collars are supplied as standard. ★The figures in ( ) of W are for Metric.

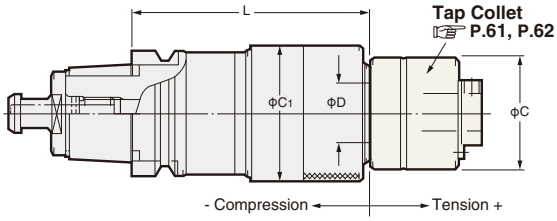
NC5 TAPPER CHUCK

NIKKEN



Z

■Built-in Floating Mechanism and
Torque-Limiter Mechanism on
Tap Collet.



TAPER	Code No.	Tapping Capability M	Tapping Capability U	Tapping Capability P	D	C	C_1	Tap Collet	Weight (kg)
NC5- 63	NC5- 63-Z12- 90	M 2～M12	1/8～1/2	P 1/16～1/4	19	32	45	ZKG12	1.5
	-Z16-120	M 3～M16	1/8～5/8	P 1/8～3/8	25	39	55	ZKG16	2.0
	-Z24-120	M 8～M24	1/2～ 1	P 1/4～5/8	30	46	68	ZKG24	2.1
	-Z38-160	M18～M38	3/8～1 3/8	P 3/8～ 1	45	78	85	ZKN38	6.7
NC5- 85	NC5- 85-Z12-105	M 2～M12	1/8～1/2	P 1/16～1/4	19	32	45	ZKG12	3.3
	-Z16-120	M 3～M16	1/8～5/8	P 1/8～3/8	25	39	55	ZKG16	4.5
	-Z24-120	M 8～M24	1/2～ 1	P 1/4～5/8	30	46	68	ZKG24	4.9
	-Z38-175	M18～M38	3/8～1 3/8	P 3/8～ 1	45	78	85	ZKN38	8.4
	-Z65-195	M36～M100	1～3 3/4	P 1～ 3	68	110(125)	110	ZKN65	8.7
NC5-100	NC5-100-Z12-130	M 2～M12	1/8～1/2	P 1/16～1/4	19	32	45	ZKG12	4.3
	-Z16-135	M 3～M16	1/8～5/8	P 1/8～3/8	25	39	55	ZKG16	5.2
	-Z24-125	M 8～M24	1/2～ 1	P 1/4～5/8	30	46	68	ZKG24	5.8
	-Z38-155	M18～M38	3/8～1 3/8	P 3/8～ 1	45	78	85	ZKN38	8.3
	-Z65-195	M36～M100	1～3 3/4	P 1～ 3	68	110(125)	110	ZKN65	9.0

★Please refer ☞P.61, P.62 for Tap Collet.

★For Synchronized Tapping: **ZH** Tapper Chuck without tension/compression mechanism is available. It improves tap life remarkably by absorbing fine pitch error completely with the small floating mechanism. Please use **ZH** Tapper Chuck only with **ZMK** Tap Collet without torque-limiter mechanism. Please refer ☞P.66.

★Centre through tool coolant type with high pressure or oil mist type is available. In these types, **OZMK-OM** collet is used.



ZH Tapper Chuck + **ZMK** Tap Collet

NC5- 63-ZH12- 90 **NC5-100-ZH12- 90**
-ZH24-105 **-ZH24-105**
NC5- 85-ZH12- 90
-ZH24-105

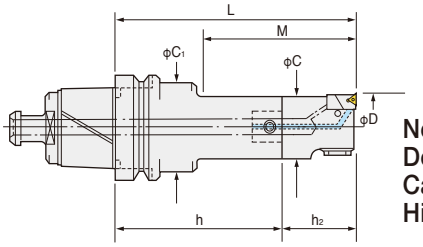
NC5 ZMAC ADVANCED BORING ARBOR (ZMAC-V)

NIKKEN

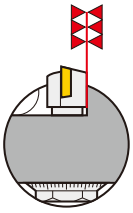
PAT.

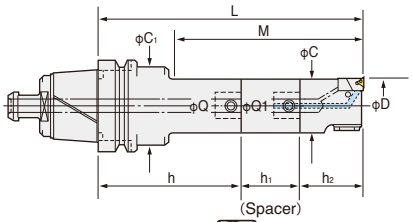
Boring for Finishing



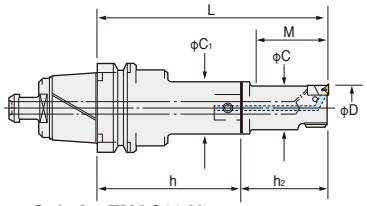


No Micro Vibration due to Double-Contact Support of Cartridge. Long Tool-Life & High Accuracy.





(Spacer)



Only for ZMAC16-V

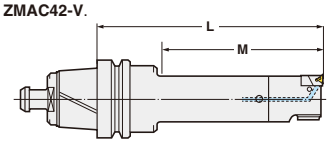
ZMAC-V

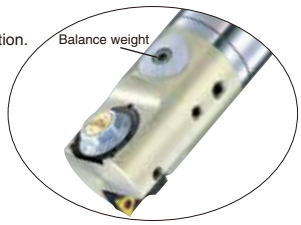
Photo shows **ZMACα-V** head with **A1 spacer**.

All codes shown are for heads with triangular inserts For heads with rhomboid inserts please add the letter "R" to the code No. **e.g. NC5-63-ZMAC32 R -150V**

TAPER	Code No.	Boring Range D	Boring Depth M	P.119 Head No.	P.119 Insert No.	Weight (kg)
NC5-63	NC5- 63-ZMAC16-125V,135V	15.9~20.2	38, 48	12-ZMAC16-45V,55V	3MP-C,B	1.6, 1.6
	-ZMAC20-120V,135V,150V	19.8~25.2	45, 67, 75	9-ZMAC 20- 40V		1.6, 1.6, 1.7
	-ZMAC25-120V,150V,165V	24.8~32.2	52, 90, 97	12-ZMAC 25- 40V		1.7, 1.8, 1.8
	-ZMAC32-150V,180V,195V	31.8~42.2	77, 110, 122	16-ZMAC 32- 55V	4MP-C,B	2.2, 2.4, 2.4
	-ZMAC42-150V,180V,210V	41.8~55.2	97, 130, 157	20-ZMAC 42- 70V	6MP-C,B	2.7, 2.9, 3.2
	-ZMAC55-165V,210V,225V	54.8~70.2	135, 180, 195	26-ZMAC 55- 70V		3.6, 4.3, 4.3
	-ZMAC70-165V,180V,225V	69.8~85.2	165, 180, 225	34-ZMAC 70- 70V		5.1, 5.5, 6.5
	-ZMAC85-195V	84.8~100.2	195	42-ZMAC 85-100V		8.7
NC5-85	NC5- 85-ZMAC16-140V,150V	15.9~20.2	38, 48	12-ZMAC16-45V,55V	3MP-C,B	2.9, 2.9
	-ZMAC20-150V,165V,180V	19.8~25.2	45, 67, 75	9-ZMAC 20- 40V		3.0, 3.0, 3.1
	-ZMAC25-135V,165V,180V	24.8~32.2	52, 90, 97	12-ZMAC 25- 40V		
	-ZMAC32-180V,210V,225V	31.8~42.2	77, 110, 122	16-ZMAC 32- 55V	4MP-C,B	3.7, 3.8, 3.9
	-ZMAC42-180V,195V,225V,240V	41.8~55.2	97, 130, 142, 157	20-ZMAC 42- 70V	6MP-C,B	4.2, 4.2, 4.6, 4.7
	-ZMAC55-210V,240V,270V	54.8~70.2	117, 182, 177	26-ZMAC 55- 70V		5.7, 5.8, 7.3
	-ZMAC70-240V,270V,300V	69.8~85.2	190, 220, 250	34-ZMAC 70- 70V		8.2, 8.8, 9.7
	-ZMAC85-225V,290V,315V	84.8~100.2	187, 252, 277	42-ZMAC 85-100V		10.7, 13.2.14.2
	-ZMAC100-225V,290V,315V	99.5~140.5	225, 290, 315	42-ZMAC100-100V		12.0, 14.7, 14.6
	-ZMAC140-225V,290V,315V	139.5~180.5		42-ZMAC140-100V		12.8, 15.5, 16.2
NC5-100	NC5-100-ZMAC16-140V,150V	15.9~20.2	38, 48	12-ZMAC16-45V,55V	3MP-C,B	3.9, 3.9
	-ZMAC20-150V,165V,180V	19.8~25.2	45, 67, 75	9-ZMAC 20- 40V		4.0, 4.0, 4.1
	-ZMAC25-135V,165V,180V	24.8~32.2	52, 90, 97	12-ZMAC 25- 40V		
	-ZMAC32-180V,210V,225V	31.8~42.2	77, 110, 122	16-ZMAC 32- 55V	4MP-C,B	4.7, 4.8, 4.9
	-ZMAC42-180V,195V,225V,240V	41.8~55.2	97, 130, 142, 157	20-ZMAC 42- 70V	6MP-C,B	5.2, 5.2, 5.6, 5.7
	-ZMAC55-210V,240V,270V	54.8~70.2	117, 182, 177	26-ZMAC 55- 70V		6.7, 6.8, 8.3
	-ZMAC70-240V,270V,300V	69.8~85.2	190, 220, 250	34-ZMAC 70- 70V		9.2, 9.8,10.7
	-ZMAC85-225V,290V,315V	84.8~100.2	187, 252, 277	42-ZMAC 85-100V		11.7, 14.2.15.2
	-ZMAC100-225V,290V,315V	99.5~140.5	225, 290, 315	42-ZMAC100-100V		13.0, 15.7, 15.6
	-ZMAC140-225V,290V,315V	139.5~180.5		42-ZMAC140-100V		13.8, 16.5, 17.2

★MIN. dial readout : **ZMAC25-V** & smaller is 0.02mm on diameter. **ZMAC32-V** and larger are 0.01mm on diameter.
★**"C" grade (Coated) insert for Steel, Stainless & Cast Iron is supplied as Standard with the head (Smooth boring & Long tool-life).**
We would recommend **"B"** grade (**CBN**) insert for Hardened Steel & High Speed boring of Cast Iron. Please refer ☞ **P.117** for cutting condition.
★Please refer ☞ **P.242** for Shank, and ☞ **P.102** for Spacer, and ☞ **P.87, P.88** for Head.
★Centre Through Tool Coolant function is available as standard.
★**When L length is required longer than standard, please specify boring depth M.**
★For **NC5-46,** modular connection system is applied. Please refer ☞ **P.242** for Base Holder.
★The location of the cutting edge is same as the drive key for **ZMAC16-V** to **ZMAC42-V**.





High Speed Boring ZMACα-V ☞P.88

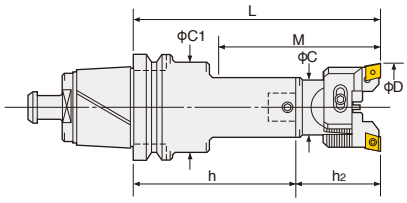
NC5 BALANCE-CUT BORING ARBOR

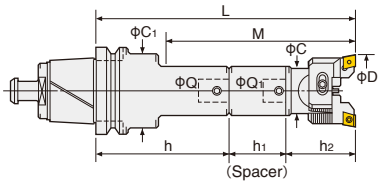
NIKKEN



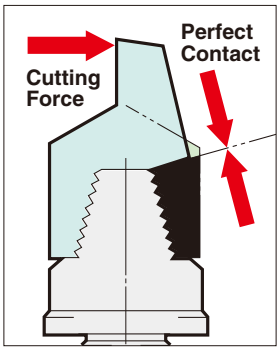
RAC

Photo shows **RAC** head with **A1 spacer**.





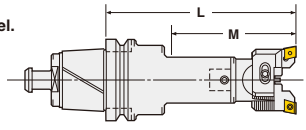
Power of Shoulder Support



TAPER	Code No.	Boring Range D	Boring Depth M	P.74 Head No.	P.74 Insert No.	Weight (kg)
NC5-63	NC5- 63-RAC 25-135E, 165E, 180E	25～32	67, 105, 112	12-RAC 25- 55E	CC07-C	1.7, 1.8, 1.8
	-RAC 32-150E, 180E, 195E	32～45	77, 110, 122	16-RAC 32- 55E	CC08-C	2.1, 2.3, 2.3
	-RAC 43-150E, 180E, 210E	43～55	97, 130, 157	20-RAC 43- 70E	CC12-C	2.4, 2.6, 2.9
	-RAC 53-165E, 210E, 225E	53～70	135, 180, 195	26-RAC 53- 70E		2.2, 3.0, 2.9
	-RAC 70-180E, 195E, 240E	70～100	180, 195, 240	34-RAC 70- 85E		4.5, 4.9, 5.9
	-RAC100-195E	100～130	195	42-RAC100-100E		6.5
NC5-85	NC5- 85-RAC 25-150E, 180E, 195E	25～32	67, 105, 112	12-RAC 25- 55E	CC07-C	2.9, 3.1, 3.0
	-RAC 32-180E, 210E, 225E	32～45	77, 110, 122	16-RAC 32- 55E	CC08-C	3.6, 3.8, 3.8
	-RAC 43-180E, 195E, 225E, 240E	43～55	97, 130, 142, 157	20-RAC 43- 70E	CC12-C	3.9, 4.0, 4.3, 4.4
	-RAC 53-210E, 240E, 270E	53～70	117, 182, 177	26-RAC 53- 70E		5.1, 5.2, 5.8
	-RAC 70-255E, 285E, 315E	70～100	205, 235, 265	34-RAC 70- 85E		7.7, 8.1, 9.1
	-RAC100-225E, 290E, 315E	100～130	187, 252, 277	42-RAC100-100E		10.7, 10.7, 14.1
NC5-100	NC5-100-RAC 25-150E, 180E, 195E	25～32	67, 105, 112	12-RAC 25- 55E	CC07-C	3.9, 4.1, 4.0
	-RAC 32-180E, 210E, 225E	32～45	77, 110, 122	16-RAC 32- 55E	CC08-C	4.6, 4.8, 4.8
	-RAC 43-180E, 195E, 225E, 240E	43～55	97, 130, 142, 157	20-RAC 43- 70E	CC12-C	4.9, 5.0, 5.3, 5.4
	-RAC 53-210E, 240E, 270E	53～70	117, 182, 177	26-RAC 53- 70E		6.1, 6.2, 6.8
	-RAC 70-255E, 285E, 315E	70～100	205, 235, 265	34-RAC 70- 85E		8.7, 9.1, 10.1
	-RAC100-225E, 290E, 315E	100～130	225, 290, 315	42-RAC100-100E		11.7, 11.7, 15.1

★**"C" grade (Coated)** inserts are supplied as standard with the head. ☞**P.74** Please refer ☞**P.116** for cutting condition.
★Please refer ☞**P.242** for base holder, ☞**P.102** for spacer and ☞ **P.79** for head.
★**For centre through tool coolant type, please add"-C"at the end of Code No. e.g. NC5-63-RAC53-165-C**
★Cartridges & Insert tips for the Heavy Duty Boring of Iron and Cast Iron(No letter), for Aluminum**(A)**, and for Through Hole & Multiple Sheets**(K)** are available. Please refer ☞**P.79** for cartridges. Please add the letter "No letter ", **"A"** or **"K"** at the end of Code No. **e.g. NC5-63-RAC53-165A**
★**When L length is required longer than standard, please specify the boring depth M.**
★**Cartridge & Insert for Alloy Steel (E) is recommended for boring on steel and stainless steel. e.g. NC5-63-RAC53-165E**
★For **NC5-46,** modular connection system is applied. Please refer ☞ **P.242** for Base Holder.

Code No. of **RAC25** and **RAC32** with **CC** inserts are changed to **RAC25E** and **RAC32E**.
Please refer ☞ **P.71, P.72**





High Pressure Coolant Through

NC5

NC5 BALANCE-CUT BAC ADVANCED BORING ARBOR for LARGE DIA. NIKKEN

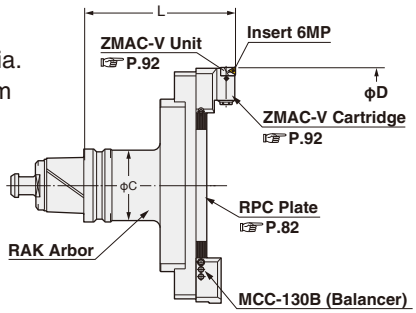
PAT.



BAC-V

For Finishing

- Min. dial read out:main scale dia. 0.02mm,sub scale dia.0.002mm
- Boring Dia:ϕ130～595mm

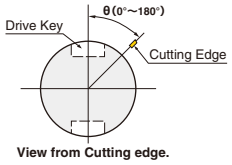


Boring Dia:ϕ130～595mm **for Finishing.**

TAPER	Code.No	D MIN.～MAX.	L	C	Arbor No.	RPC Plante No	Cartridge (Balancer)	Weight (kg)
NC5- 63	NC5-63 -BAC130-205V	130～195	205	61	NC5-63-RAK-130A	RPC-130	MCCZ-130V (MCC-130B) Insert Tip 6MP	6.8
	-BAC180-205V	180～245				-180		7.8
NC5- 85 NC5-100	NC5-85 (NC5-100) -BAC130-185V, 235V, 285V	130～195	185, 235, 285	90	NC5-85-RAK-110A, 160A, 210A (NC5-100)	RPC-130		13.0, 14.5, 17.5
	-BAC180-185V, 235V, 285V	180～245				-180		13.5, 15.0, 18.0
	-BAC230-185V, 235V, 285V	230～295				-230		14.0, 15.5, 18.5
	-BAC280-185V, 235V, 285V	280～345				-280		14.5, 16.0, 19.0
	-BAC330-210V	330～395	210	98	NC5-85-RAK330-125 (NC5-100)	RPC-330		16.2
	-BAC380-210V	380～445				-380		16.5
	-BAC430-210V	430～495				-430		17.5
	-BAC480-210V	480～545				-480		18.5
	-BAC530-210V	530～595				-530		19.5

P.119

★**"C" grade (Coated)** Inserts are supplied as standard.
★Arbor, Plate and Cartridge are delivered in separate packages.
★When ordering, please let us know machine maker and model no. to avoid the interfererce with tool magazine of **ATC**.
★The location of cutting edge is same as drive key in standard.
The different location is available, please specify **θ** in Code No. **e.g. NC5-100-BAC180-235V (90°)**



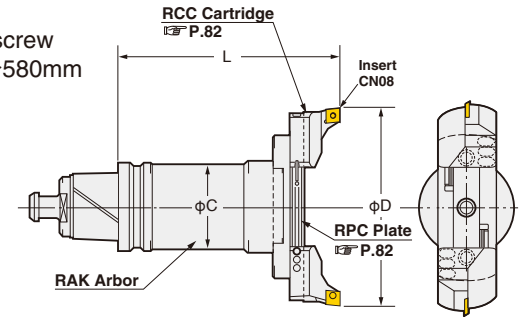
NC5 BALANCE-CUT RAC BORING ARBOR for LARGE DIA. NIKKEN



RAC

For Roughing

- With slight adjust screw
- Boring Dia:ϕ130～580mm



P.74

Boring Dia:ϕ130～580㎜ **for Roughing.**

TAPER	Code.No	D MIN.～MAX.	L	C	Arbor No.	RPC Plate No.	Cartridge No. for Large dia.	Weight (kg)
NC5- 63	NC5-63 -RAC130-205	130～180	205	61	NC5-63-RAK-130A	RPC-130	For Heavy Duty Boring of Iron and Cast Iron RCC-130 ×2 Insert Tip CN08	6.8
	-RAC180-205	180～230				-180		7.8
NC5- 85 NC5-100	NC5-85 (NC5-100) -RAC130-185, 235, 285	130～180	185, 235, 285	90	NC5-85-RAK-110A, 160A, 210A (NC5-100)	RPC-130		11.3, 12.8, 15.8
	-RAC180-185, 235, 285	180～230				-180		11.8, 13.3, 16.3
	-RAC230-185, 235, 285	230～280				-230		12.3, 13.8, 16.8
	-RAC280-185, 235, 285	280～330				-280		12.8, 14.3, 17.3
	-RAC330-210	330～380	210	98	NC5-85-RAK330-125 (NC5-100)	RPC-330		15.5
	-RAC380-210	380～430				-380		16.5
	-RAC430-210	430～480				-430		17.5
	-RAC480-210	480～530				-480		18.5
	-RAC530-210	530～580				-530		19.5

★The Code No. on above table are the boring arbors with **RCC-130** cartridge (Inset tip: **CN08**) the Heavy Duty Boring of Iron and Cast Iron . Please refer ☞ **P.116** for cutting condition.
★Boring arbor with cartridges & insert for Steel, Stainless Steel and Cast Iron **(E)**, for Aluminum **(A)** and for Through Hole & Multi Sheets **(K)** are available.
Please refer ☞ **P.82** for cartridges. **e.g. NC5-100-RAC130-185E**
★Arbor, Plate and Cartridge are delivered in separate packages.
★When ordering, please let us know machine maker and model no. to avoid the interference with tool magazine of **ATC**.
★The location of cutting edge is same as drive key in standard.
The different location is available, please specify **θ** in Code No. **e.g. NC5-100-RAC180-235 (90°)**

NC5 MODULAR TYPE BASE HOLDER

NIKKEN



Q

Fig.1

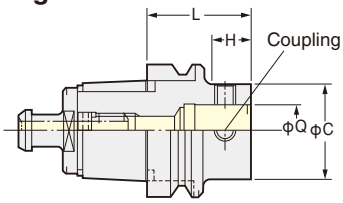


Fig.2

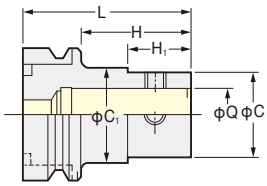
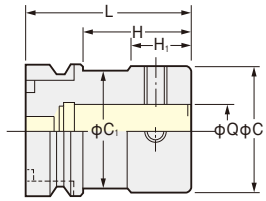
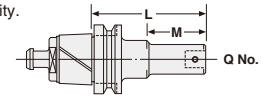


Fig.3



TAPER	Code No.	Coupling Dia Q	L	C	C1	H	H1	Coupling Bolt No.	Fig.	Weight(kg)
NC5- 46	NC5- 46-Q26- 40	26	40	50	45	18	6	B26N	3	0.4
NC5- 63	NC5- 63-Q 9- 80, 95	9	80, 95	19	30	48, 63	5, 27	B19	2	1.6, 1.7
	-Q12- 80, 110	12	80, 110	24	35	48, 78	12, 50	B12		1.6, 1.7
	-Q16- 95, 125	16	95, 125	31	42	63, 93	22, 55	B16		1.9, 2.1
	-Q20- 80, 110	20	80, 110	40	50	48, 78	27, 60	B20		2.0, 2.2
	-Q26- 50, 95, 140	26	50, 95, 140	50	—	20, 65, 110	—	B26N	1	0.9, 1.5, 2.3
	-Q34- 95, 110	34	95, 110	64	62	68, 83	55, 70	B34	3	3.0, 3.4
	-Q42- 95	42	95	83	62	68	55	B42		3.6
NC5- 85	NC5- 85-Q 9-110, 125	9	110, 125	19	40	72, 87	5, 27	B19	2	2.9, 3.1
	-Q12- 95, 125	12	95, 125	24	44	57, 87	12, 50	B12		2.5, 3.2
	-Q16-125, 155	16	125, 155	31	50	87, 117	22, 55	B16		3.6, 3.8
	-Q20-110, 125	20	110, 125	40	60	72, 87	27, 60	B20		3.7, 3.8
	-Q26- 65, 140, 170	26	65, 140, 170	50	65	27, 102, 132	—, 40, 110	B26N	1, 2, 2	2.5, 4.6, 4.7
	-Q34-140, 170, 200	34	140, 170, 200	64	80	102, 137, 167	—, 117, 147	B34		4.5, 6.4, 6.8
	-Q42-125, 190	42	125, 190	83	—	87, 152	—	B42	1	8.0
NC5-100	NC5-100-Q 9-110, 125	9	110, 125	19	40	67, 82	5, 27	B19	2	4.0, 4.2
	-Q12- 95, 125	12	95, 125	24	44	52, 82	12, 50	B12		4.1, 4.3
	-Q16-125, 155	16	125, 155	31	50	82, 112	22, 55	B16		4.7, 4.9
	-Q20-110, 125	20	110, 125	40	60	67, 82	27, 60	B20		4.8, 4.9
	-Q26- 65, 140, 170	26	65, 140, 170	50	65	27, 97, 127	—, 45, 110	B26N	1, 2, 2	3.6, 5.7, 5.8
	-Q34-140, 170, 200	34	140, 170, 200	64	80	97, 127, 157	—, 117, 147	B34		5.6, 7.5, 7.9
	-Q42-125, 190	42	125, 190	83	—	87, 152	—	B42	1	9.1

★ϕC of **Q26** base holder has been increased from 45mm to 50mm due to improvement of its rigidity.
★All base holders have a centre through-tool coolant hole.
★The Coupling screw & wrench are supplied as standard.
★**When L length is required longer than standard, please specify the boring depth M.**



NC5 FACE MILL ARBOR

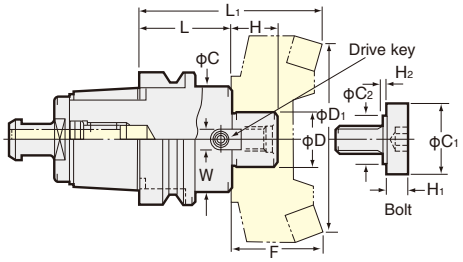
NIKKEN

For JIS B4113 Face Mill Cutter
FMH arbor is available. Please contact us.

■For the Face Milling of
ϕ80～ϕ200mm
For the NIKKEN
PRO-END MILL



FMA



TAPER	Code No. NC5 No. -ϕD -L	H	C	W	C1	C2	H1	H2	Demension of Arbor with cutter L1	D1	F	Drive Key	Bolt	Weight (kg)
NC5- 46	NC5- 46-FMA25.4 -45	22	50	9.5	33	23	10	2	95	80	50	FW5	FM12	0.6
NC5- 63	NC5- 63-FMA25.4 -45,90	22	58	9.5	33	23	10	2	95, 140	80	50	FW5	FM12	1.6, 3.2
	-FMA31.75 -45,90	30	63	12.7	40			6	105, 150	100	60	FW13	FM16	1.7, 3.1
	-FMA38.1 -60	34	80	15.9	50	27	14		120	125		FW18	FM20	2.9
NC5- 85	NC5- 85-FMA25.4 -45,105	22	58	9.5	33	23	10	2	95, 155	80	50	FW5	FM12	2.7, 3.8
	-FMA31.75 -45,105	30	70	12.7	40			6	105, 165	100	60	FW12, FW13	FM16	3.0, 4.3
	-FMA38.1 -45,90	34	80	15.9	50	27	14		105, 150	125		FW18, FW19	FM20	3.4, 4.8
	-FMA47.625-70	38	128.57	25.4	—	—	—	—	130	200		FW26	*	6.3
	-FMA50.8 -65	36	100	19.05	65	37	14	10	125	160		FW23	FM24	5.0
NC5-100	NC5-100-FMA25.4 -45,105	22	58	9.5	33	23	10	2	95, 155	80	50	FW5	FM12	3.7, 5.0
	-FMA31.75 -45,105	30	70	12.7	40			6	105, 165	100	60	FW12, FW13	FM16	4.5, 6.2
	-FMA38.1 -45,95	34	80	15.9	50	27	14		105, 155	125		FW18, FW19	FM20	4.3, 5.8
	-FMA47.625-75	38	128.57	25.4	—	—	—	—	135	200		FW26	*	5.8
	-FMA50.8 -45	36	100	19.05	65	37	14	10	105	160		FW23	FM24	4.9

★The "**D**" in the Code No. shows centre bore dia. of the milling cutter.
★The above arbors are suitable for JIS B4113 milling cutter.
★The arbor marked * requires 4 fixing bolts (M16).
★Drive keys, wrench and bolt are supplied as standard.
★The above weight is for arbor and pull stud only. (not including milling cutter.)
★**FMC22** type arbor is suitable for the NIKKEN PRO-END MILL ϕ50 mm.
NC5-46-FMC22-40, NC5-53-FMC22-40, NC5-63-FMC22-45, NC5-85-FMC22-45, NC5-100-FMC22-60
★Centre through coolant type arbor for the NIKKEN PRO-END MILL is also available.
Please add "**C**" of the Code No. **e.g. NC5-63-FMA25.4C-45**
★Centre Through Tool Coolant type arbor except NIKKEN PRO-END MILL, please provide the drawing of milling cutters.
★For high speed application, balancing must be required after fixing the milling cutter.

NC5 TAPER GAUGE・TEST BAR

NIKKEN



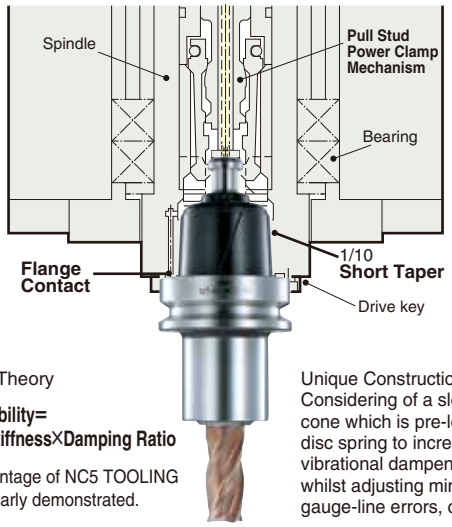
SGT



TB

TAPER	Gauge	Test Bar(φD-L)
NC5- 46	NC5- 46-SGT	NC5- 46-TB40-200
NC5- 63	NC5- 63-SGT	NC5- 63-TB40-300
NC5- 85	NC5- 85-SGT	NC5- 85-TB40-300
NC5-100	NC5-100-SGT	NC5-100-TB40-300

★Above Code No. includes Ring GAUGE(**SG-R**)and Plug Gauge(**SGT-P**).
★Dial Gauge is not included with the Ring Gauge.



E.H.Merritt's Theory

Chattering Stability=
Static Stiffness×Damping Ratio

Thus, the advantage of NC5 TOOLING SYSTEM is clearly demonstrated.

Unique Construction:
Considering of a slotted taper cone which is pre-loaded by a disc spring to increase its vibrational dampening effect whilst adjusting minute gauge-line errors, completely.

NC5 TOOLING SYSTEM is basically developed for the Machine with Centre Through Tool Coolant capability, however, of course, the system is also suitable for the Machine without Centre Through Tool Coolant capability.

NC5 TOOLING SYSTEM takes advantage of the powerful pulling force to improve its static stiffness. Therefore, please ensure that at least the following pulling force figures in the table are required for each size of **NC5 TOOLING**. The Pulling Force Measuring Tool with special Pull Stud is available for the pulling force measurement.

For manufacturing of **NC5** Machine Spindle, we could supply the Gauge for Machine Spindle as well as any other know-how about Spindle Flange Cleaning, Drive Key Mechanism and so on. Please contact with us for any technical correspondences if required.



Pulling Force Measuring Tool

Even the use with 5m cable, it can be measured both manual tool change and ATC.

☞**P.303**

Pull Stud Power Clamp & Lock Mechanism

Please ask for the details of **NIKKEN POWER5 SYSTEM**, Powerful Pulling & Locking Mechanism in order to gain maximum performance of the NIKKEN NC5 TOOLING System.

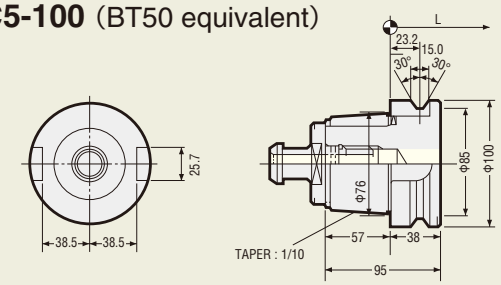
TAPER	Spindle ID	POWER 5 Code No.	Pulling Force (KN)	Measuring Tool	
				Code No.	Pull Stud
NC5- 46	30	POWER- 46-D30	4.5～ 7	NC5- 46-CLP-D30	PS-N46A
	35	-D35	5.5～ 8	-D35	-N46
NC5- 63	40	- 63-D40	11～14	- 63-CLP-D40	-N63A
	45	-D45	14～17	-D45	-N63
NC5- 85	50	- 85-D50	20～23	- 85-CLP-D50	-N85
NC5-100	55	-100-D55	24～27	-100-CLP-D55	-N100

★Pulling Force is only guideline and depends on the M/C specfication. ★Pull Stud Code No. is without hole.

DIMENSION of NC5 TOOL SHANK

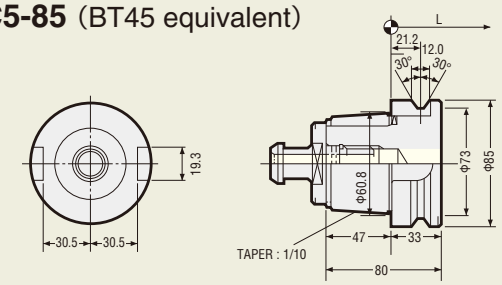
NIKKEN

NC5-100 (BT50 equivalent)



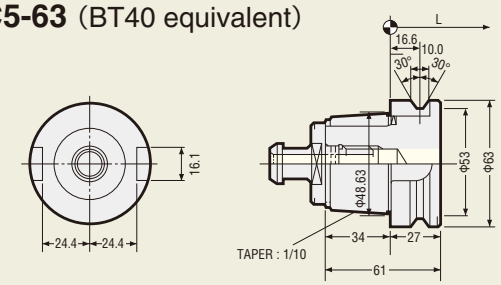
Dimensions of V Flange are same as BT50.

NC5-85 (BT45 equivalent)



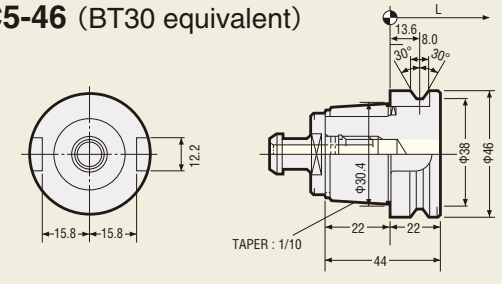
Dimensions of V Flange are same as BT45.

NC5-63 (BT40 equivalent)



Dimensions of V Flange are same as BT40.

NC5-46 (BT30 equivalent)

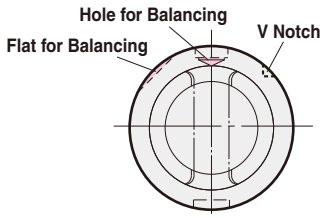


Dimensions of V Flange are same as BT30.
(※Width of drive key grooves are different.)

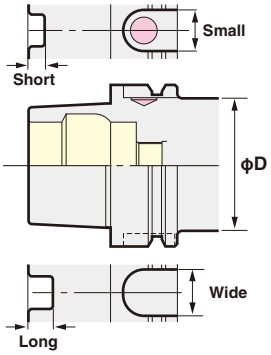
HSK TOOLING SYSTEM

NIKKEN

HSK A···HSK40A, HSK50A, HSK63A, HSK100A







HSK A shank is based on **ISO12164-1 (DIN69893-1)** and Hollow Shank Taper with 1/10 Taper and Double Contact System of Taper & Flange. Its dimension is unsymmetrical shape such as;

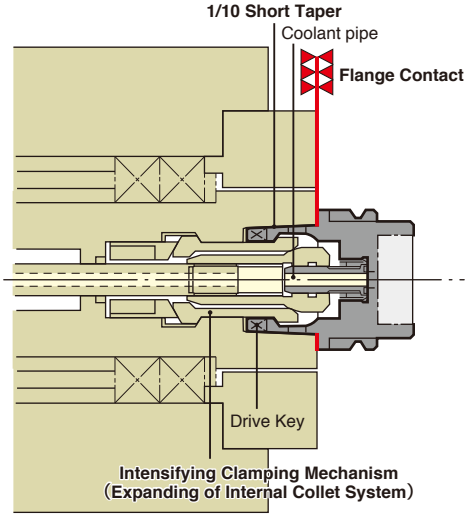
- **Depth of Drive Keys Slots are different.**
- **Width of U Groove are different.**
- **V Notch on one side.**

1. It's not well balanced due to above unsymmetrical shape, therefore NIKKEN HSK A Shank has a hole and a flat for mass balancing as standard.

2. Hole for manual clamp is not standardized for the size smaller or equal to **HSK50A**. **HSK63A and HSK100A tools without a hole for manual clamp are also available for high speed application.**

3. Hole for ID is not standardized for all models.

4. HSK tool is clamped to the main spindle with clamping force more than about 2 times of **BT** tool by intensifying clamp mechanism.



HSK Double Face Contact System

Clamping Force

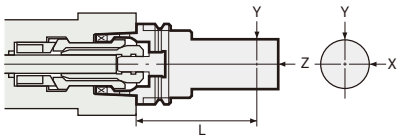
TAPER	HSK40A	HSK50A	HSK63A	HSK100A
Clamp Force	6.8KN	11KN	18KN	45KN

5. A big clamping force and the double face contact system of 1/10 short taper & flange largely improved the static stiffness as the tool interface.

6. Higher repeatability of **ATC** is accomplished due to the run-out accuracy of contact flange for taper is within 0.002mm.

Repeatability of ATC

TAPER	L	Repeatability		
		X	Y	Z
HSK 25	40	0.002	0.002	0.002
32	50			
40	60			
50	75			
63	100			
100	150			



HSK E & HSK F···HSK25E, HSK32E, HSK40E, HSK50E, HSK63E, HSK63F

HSK-E type & **HSK-F** type holders are for High Speed Application and are manufactured to **DIN69893-5 & -6** standard. The configuration of the holder is different to that of **HSK-A** type, the holder is designed symmetrically without drive key slots, U-groove, V-notch, holes in the taper for manual clamping and hole for I/D chip.
The tool flange diameter of **HSK-E & -F** are the same, but the taper size on **HSK-F** is one size smaller than **HSK-E**.
TCL-GH clamper is designed for symmetrical holders without drive key slots or U-grove. The **TCL-GH** clamper is also suitable for the other shank tooling with same flange diameter as **E & F** type. ☞**P.266**



HSK50E **HSK63F**

⚠ Caution

- **Always ensure that swarf does not attach at the spindle flange surface, because of the double contact system. Generally the inside of the machining envelope is always covered swarf. This means that there is a possibility that the flange of the tooling may collect swarf easily at the ATC. It is therefore important that the machining envelope is regularly cleaned (Clean the ATC arm, the route through which the tooling passes, the tool pot and the spindle surfaces etc.) at least every 3 months.**
- **Always ensure that M/C has the mechanism to confirm the perfect flange contact.**
- **Always ensure that M/C has the mechanism to clean the spindle flange surface.**

HSK HIGH SPEED MILLING CHUCK

NIKKEN



C
Centre Through
MAX. 7MPa
Photo shows High Speed Milling Chuck

ANNIVERSARY Type
—Powerful gripping torque—
- High rigidity
- High precision
- Compact design

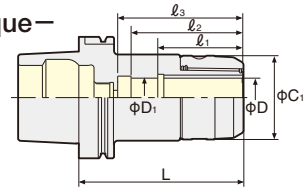


Fig.1

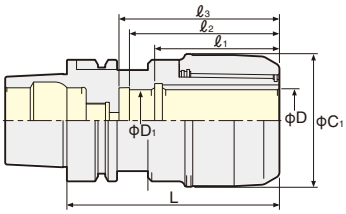


Fig.2

High Speed

TAPER	Code No.	C_1	D	D_1	L	ℓ_1	ℓ_2	ℓ_3	MAX.min^{-1}	Weight (kg)	Fig.	Collet
HSK 40A	HSK 40A-C12- 80G	33	12	12	80	49	53	58	30,000	0.5	2	KM12 CCK12
	-C16- 80G	40	16	16	80	51	57	60		0.7		KM16 CCK16
	-C20-100G*2	48	20	-	100	-	-	57		1.2		KM20 CCK20
HSK 50A	HSK 50A-C12- 80G	33	12	12	80	49	53	56	30,000	0.8	1	KM12 CCK12
	-C16- 90G	40	16	16	90	51	57	60		1.0	2	KM16 CCK16
	-C20- 95G*2	48	20	20	95	58	65	68		1.2		KM20 CCK20
HSK 63A	HSK 63A-C12- 90G	33	12	12	90	49	53	58	30,000	1.3	1	KM12 CCK12
	-C16- 75G*2	40	16	-	75	-	-	50	25,000	1.2		KM16 CCK16
	- 90G			16	90	51	57	60		1.4		
	-120G				120			65		1.7		
	-C20- 85G*2	48	20	-	85	-	-	60		1.5		KM20 CCK20
	- 95G			20	95	58	65	68		1.6		
	-110G*2				110		66	80		1.8		
	-120G				120					1.9		
	-135G				135					2.1		
	-C25- 90G	55	25	25	90	59	62	65	20,000	1.7	2	KM25 CCK25
	-100G				100	61	72	75		1.9		
	-130G				130			80		2.3,2.6		
	-C32-110G	68	32	32	110	66	80	83		2.2		KM32 CCK32
	-130G			25	130	70	81	103		2.6		
	-150G				150			107		2.6		
HSK 100A	HSK100A-C16- 90G	40	16	16	90	52	56	60	20,000	2.4	1	KM16 CCK16
	-135G,165G				135,165			65		3.0,3.4		
	-C20-115G	48	20	20	115	58	66	80		3.0		KM20 CCK20
	-135G,165G				135,165					3.6,4.1		
	-C25-115G	55	25	25	115	61	72		15,000	3.3		KM25 CCK25
	-135G,165G				135,165					3.6,4.2		
	-C32-115G	68	32	25	115	66	78	83	12,000	3.2		KM32 CCK32
	-135G,165G				135,165	70	81	103,107		4.0,4.8		
	-C42-115P	86	42	42	115	73	80	83		4.8	2	KM42 CCK42
	-135P,165P				135,165		100,115	103,125		5.9,7.0		

★Please note the acceptable shank tolerance is h6.
★Please refer ☞P.221 for **KM** and **CCK** collet.
★**GH Handle** is available as an option. ☞P.48
C12G : GH12, C16G : GH16, C20G : GH20, C25G : GH25, C32G : GH32
★NK, CCNK, ONK and OJK collet can not be used for the chucks marked *2.
★Please contact us for the extra long length.



★**GFS** type ☞**P.32** is available for **C25, C32** and **C42**.

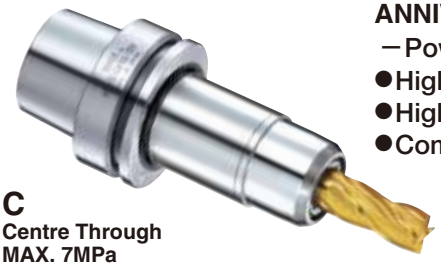


GFS type
For machining of aluminum
PAT.

HSK

HSK- E,F HIGH SPEED MILLING CHUCK

NIKKEN



C
Centre Through
MAX. 7MPa
Photo shows High Speed Milling Chuck

ANNIVERSARY Type
－Powerful gripping torque－
- **High rigidity**
- **High precision**
- **Compact design**

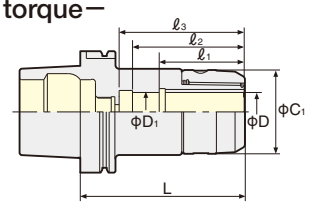


Fig.1

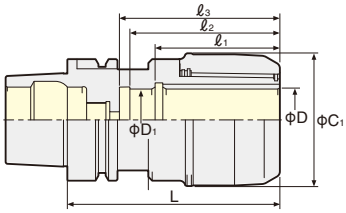


Fig.2

TAPER	Code No.	C_1	D	D_1	L	ℓ_1	ℓ_2	ℓ_3	MAX. min^{-1}	Weight (kg)	Fig.	Collet
HSK 40E	HSK 40E -C12- 80G	33	12	12	80	49	53	58	30,000	0.5	2	KM12 CCK12
	-C16- 80G	40	16	16	80	51	57	60		0.7		KM16 CCK16
	-C20-100G*2	48	20	-	100	-	-	57		1.2		KM20 CCK20
HSK 50E	HSK 50E -C12- 80G	33	12	12	80	46	53	56	30,000	0.9	1	KM12 CCK12
	-C16- 80G*3	40	16	16	80	51	57	60		1.0	2	KM16 CCK16
	-C20- 95G	48	20	20	95	58	65	68		1.2		KM20 CCK20
HSK 63E	HSK 63E -C12- 90G	33	12	12	90	49	53	58	30,000	1.3	1	KM12 CCK12
	-C16- 90G	40	16	16	90	51	57	60	25,000	1.4		KM16 CCK16
	-C20- 95G, 110G	48	20	20	95, 110	58	65, 72	68, 80		1.5,1.8		KM20 CCK20
	-C25-100G	55	25	25	100	61	72	75	20,000	1.9	2	KM25 CCK25
	-C32-110G	68	32	32	110	66	80	83		2.2		KM32 CCK32

TAPER	Code No.	C_1	D	D_1	L	ℓ_1	ℓ_2	ℓ_3	MAX. min^{-1}	Weight (kg)	Fig.	Collet
HSK 63F	HSK 63F -C12- 90G	33	12	12	90	49	53	58	30,000	1.3	1	KM12 CCK12
	-C16- 90G	40	16	16	90	51	58	65	25,000	1.4		KM16 CCK16
	-C20- 95G, 110G	48	20	20	95, 110	58	65, 66	68, 80		1.5		KM20 CCK20
	-C25-100G	55	25	25	100	61	72	75	20,000	1.9	2	KM25 CCK25
	-C32-110G	68	32	32	110	66	80	83		2.2		KM32 CCK32

★Please note the acceptable shank tolerance is h6.
★Please refer ☞**P.221** for **KM** and **CCK** collet.
★**GH Handle** is available as an option. ☞**P.48**
C12G : GH12, C16G : GH16, C20G : GH20, C25G : GH25, C32G : GH32
★**NK, CCNK, ONK and OJK collet can not be used for the chucks marked ＊2.**
★Coolant pipe can not be used for the chuck marked ＊3.
★Please contact us for the extra long length.



★**GFS** type ☞**P.32** is available for **C25** and **C32**.



GFS type
For machining of aluminum
PAT.

HSK MILLING CHUCK

NIKKEN



C
Centre Through
MAX. 7MPa

ANNIVERSARY Type
—Powerful gripping torque—
- **High rigidity**
- **High precision**
- **Compact design**

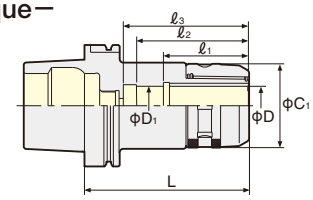


Fig.1

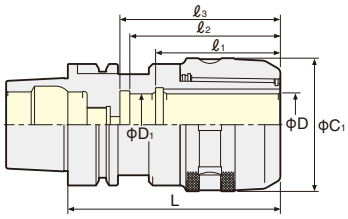


Fig.2

TAPER	Code No.	C1	D	D1	L	ℓ1	ℓ2	ℓ3	Weight (kg)	Fig.	Collet
HSK 40A	HSK 40A-C12- 80	33	12	12	80	49	53	58	0.5	2	KM12 CCK12
	-C16- 80	44	16	16	80	51	57	60	0.7		KM16 CCK16
	-C20-100 *2	52	20	-	100	-	-	57	1.2		KM20 CCK20
HSK 50A	HSK 50A-C12- 80	33	12	12	80	49	53	56	0.8	1	KM12 CCK12
	-C16- 90	44	16	16	90	51	57	60	1.0	2	KM16 CCK16
	-C20- 95 *2	52	20	20	95	58	65	68	1.2		KM20 CCK20
	-C25-100	55 *1	25	25	100	56	72	75	1.5		KM25 CCK25
	-C32-115	64 *1	32	-	115	-	-	66	1.9		KM32 CCK32
HSK 63A	HSK 63A-C12- 90	33	12	12	90	49	53	58	1.3	1	KM12 CCK12
	-C16- 75 *2	44	16	-	75	-	-	50	1.2		
	- 90,120			16	90, 120	51	57	60,65	1.4,1.7		KM16 CCK16
	-C20- 85 *2	52	20	-	85	-	-	60	1.5		
	- 95			20	95	58	65	68	1.6		KM20 CCK20
	-110,120,135				110,120,135		66	80	1.8,1.9,2.1		
	-C25- 90 *2	60	25	25	90	59	62	65	1.7	2	
	-100				100	61	72	75	1.9		KM25 CCK25
	-130,150				130,150			80	2.3,2.6		
	-C32-110 *2	69	32	32	110	66	80	83	2.2		
	-130			25	130	70	81	107	2.6		KM32 CCK32
	-150				150				3.0		
HSK 100A	HSK100A-C16- 90	44	16	16	90	52	56	60	2.4	1	
	-135				135			65	3.0		KM16 CCK16
	-165				165				3.4		
	-C20-115	52	20	20	115	58	66	80	3.3		
	-135				135				3.6		KM20 CCK20
	-165				165				4.1		
	-C25-115	60	25	25	115	61	72		3.3		
	-135				135				3.6		
	-165				165				4.2		KM25 CCK25
	-C32-115	69	32	25	115	66	78	83	3.2		
	-135				135	70	81	103	4.0		
	-165				165			107	4.8		
	-200				200				5.7		
	-250				250				7.0		KM32 CCK32
	-300				300				8.9		
	-C42-115	86	42	42	115	73	80	83	4.8	2	
	-135				135		100	103	5.9		
	-165				165		115	125	7.0		
	-200				200				8.5		
	-250				250				10.8		KM42 CCK42
	-300				300				12.4		

★Spanner is available as an option.
C12 : 9HC12A C16 : 9HC16 C20 : 9HC22
C25 : 9HC25 C32 : 9HC32 C42 : 9HC42
＊1 C25 & ΦC1=55 : 9HC22, C32 & ΦC1=64 : 9HC25
★Please note the acceptable shank tolerance is h6～7.
★For heavy duty milling, please grip the cutter shank longer than ℓ1.



★NK, CCNK, ONK and OJK collet can not be used for the chucks marked ＊2.
★Please refer ☞**P.221** for **KM** and **CCK** collet.
★C22 style is also available.

CENTRE COOLANT STRAIGHT COLLET

NIKKEN

PAT.

Suitable for all models of the NIKKEN MILLING CHUCK

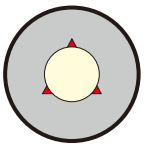




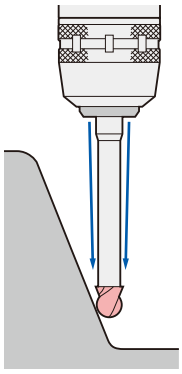
CCK Collet



Front Nut



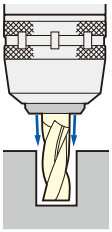
Jet Coolant
⊕
Prevention of Swarf entering the collet through the slots



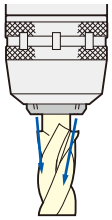
Explanation of the Code No.

CCK 32 – 10
- 10: ID of Collet
- 32: OD of Collet
- CCK: Symbol of CCK Collet

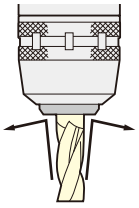
CCK :Centre Coolant
CCNK :Centre Coolant, Adjustable
KM :Standard
NK :Adjustable
ONK :Oil Hole Drill
OJK-A :Jet Coolant
OJK-S :Multiple Nozzles



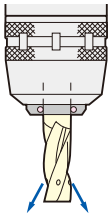
For grooving.



For cutters with cutting diameter which is larger than the shank diameter.



Prevention of the swarf contamination.



A front nut with an O-ring seal, for use with oil hole cutter, is also available as option.



CKFN-MN



CKFN-C

CCK Collet

CKFN front nut and **CCKL** spanner are available as an option.

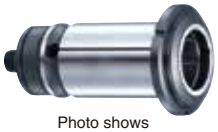


Photo shows with front nut.

CCK

Style	CCK Collet Code No.(OD-ID)	Front Nut Code No.
CCK12	**CCK12**-3, 4, 5, 6, **8**, **10**	**CKFN12**
CCK16	**CCK16**-3, 4, 5, 6, **8**, **10**, **12**	**CKFN16**
CCK20	**CCK20**-6, 8, **10**, **12**, **16**	**CKFN20**
CCK25	**CCK25**-6, 8, **10**, **12**, **16**, **20**	**CKFN25**
CCK32	**CCK32**-6, 8, 10, 12, **16**, **20**, **25**	**CKFN32, CKFN32T**
CCK42	**CCK42**-6, 8, 10, 12, 16, **20**, **25**, **32**	**CKFN42**

★Above bold figures indicate **"ANNIVERSARY" type** Ⓝ **CCK Collet**.
★Please note the acceptable shank tolerance is h6～h7.
★Other metric sizes and imperial sizes, 1/8, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 13/16, 7/8, 1, 1･1/8, 1･1/4, 1･1/2"are also available.



Cutter length adjustment on the collet is possible from front and back.

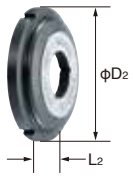
Photo shows with front nut.

CCNK

Style	CCNK Collet Code No.(OD-ID)	Front Nut Code No.
CCNK20	**CCNK20**-6, 8, 10, 12, 16	**CKFN20**
CCNK25	**CCNK25**-6, 8, 10, 12, 16, 20	**CKFN25**
CCNK32	**CCNK32**-6, 8, 10, 12, 16, 20, 25	**CKFN32, CKFN32T**
CCNK42	**CCNK42**-6, 8, 10, 12, 16, 20, 25, 32	**CKFN42**

★Please note the acceptable shank tolerance is h6～h7.
★Other metric sizes and imperial sizes, 1/8, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 13/16, 7/8, 1, 1･1/8, 1･1/4, 1･1/2"are also available.

Front Nut CKFN



Explanation of the Code No.

CKFN 32 – 10
- 10: ID of Collet
- 32: OD of Collet
- CKFN: Symbol of Front Nut

Style	φD2	L2	Front Nut Code No.
CKFN12	19.5	7	**CKFN12** -3, 4, 5, 6, 8,10
CKFN16	28.5	8	**CKFN16** -3, 4, 5, 6, 8,10,12
CKFN20	33	8	**CKFN20** -6, 8,10,12,16
CKFN25	39	8.5	**CKFN25** -6, 8,10,12,16, 20
CKFN32	46.5	9	**CKFN32** -6, 8,10,12,16, 20, 25
CKFN32T	43	9	**CKFN32T**-6, 8,10,12,16, 20, 25
CKFN42	59.5	9	**CKFN42** -6, 8,10,12,16, 20, 25, 32



★The front nut for direct chucking is also available.
e.g. CKFN20-20D, CKFN25-25D, CKFN32-32D

★The Code No. fitted with O-ring is:
e.g. CKFN20-20DC, CKFN25-25DC, CKFN32-32DC

★**For C32 there are 2 sizes, CKFN32 = for nose ring diameter of φ69mm, CKFN32T = for nose ring diameter of φ64mm.**
★Jet Coolant type for the cutter with a cutter dia. larger than shank dia. is also available.
CKFN25-20MN, CKFN32-25MN, CKFN42-32M
★Front Nut fitted with an O-ring is also available.
e.g. The Code No. is **CKFN32-10C**
★The spanner is available as an option.
CKFN12:CCKL12, CKFN16:CCKL16
CKFN20:CCKL20
CKFN25, CKFN32T:CCKL25
CKFN32:CCKL32, CKFN42:CCKL42



KM

Photo shows **ANNIVERSARY type KM Collet**.

Style	KM Collet Code No.(OD-ID)
KM12	**KM12**-2, 3, 4, 5, 6, **7**, **8**, **9**,**10**
KM16	**KM16**-2, 3, 4, 5, 6, 7, **8**, **9**,**10**,**11**,**12**
KM20	**KM20**-2, 3, 4, 5, 6, 7, 8, 9,**10**,**11**,**12**,13,**14**,**15**,**16**
KM25	**KM25**-3, 4, 5, 6, 7, 8, 9,**10**,**11**,**12**,13,**14**,**15**,**16**,17,**18**,**19**, **20**, 21, **22**
KM32	**KM32**-3, 4, 5, 6, 7, 8, 9,10,11,12,13,14,**15**,**16**,17,**18**,**19**, **20**, 21, **22**, 23, **24**, **25**, 26, **30**
KM42	**KM42**-3, 4, 5, 6, 7, 8, 9,10,11,12,13,14,15,16,17,18,**19**, **20**, 21, **22**, 23, **24**, **25**, 26, 27, 28, 29, 30, 31, **32**, **40**

★For Synchronous Tapping Program : Special ID Collets for Tap Shank are also available.
★Other metric sizes and imperial sizes, 1/8, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 13/16, 7/8, 1, 1･1/8, 1･1/4, 1･1/2"are also available.
★The collets with bold character are the **"ANNIVERSARY" type** Ⓝ **KM Collet**.
Ordinary **KM** Collet can be used with **"ANNIVERSARY" type** Ⓝ **Milling Chuck**, but better performance can be found with the **"ANNIVERSARY" type** Ⓝ **KM Collet**.
★Please note the acceptable shank tolerance is h6～h7.

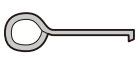
Cutter length adjustment on the collet is possible from front and back.



NK

Style	NK Collet Code No.(OD-ID)
NK20	**NK20**-3, 4, 5, **6**, 7, **8**, 9,**10**,11,**12**,13,14,15,**16**
NK22	**NK22**-3, 4, 5, **6**, 7, **8**, 9,**10**,11,**12**,13,14,15,**16**,17,18
NK25	**NK25**-3, 4, 5, **6**, 7, **8**, 9,**10**,11,**12**,13,14,15,**16**,17,18,19, **20**, 21, 22
NK32	**NK32**-3, 4, 5, **6**, 7, **8**, 9,**10**,11,**12**,13,14,15,**16**,17,18,19, **20**, 21, 22, 23, 24, **25**, 26
NK42	**NK42**-3, 4, 5, **6**, 7, **8**, 9,**10**,11,**12**,13,14,15,**16**,17,18,19, **20**, 21, 22, 23, 24, **25**, 26, 27, 28, 29, 30, 31, **32**

★For Synchronous Tapping Program : Special ID Collets for Tap Shank are also available.
★Other metric sizes and imperial sizes, 1/8, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 13/16, 7/8, 1, 1･1/8, 1･1/4, 1･1/2"are also available.
★The collets with bold character are standard.
★Please note the acceptable shank tolerance is h6～h7.
★Collet removal (**9CKR**) is available as an option.
★Please refer ☞**P.33, P.34** for more detail of the straight collet.



HSK HIGH SPEED SLIM CHUCK

NIKKEN



SK
Centre Through
MAX. 7MPa
Photo shows High Speed HSK Slim Chuck

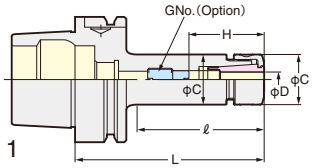


Fig. 1

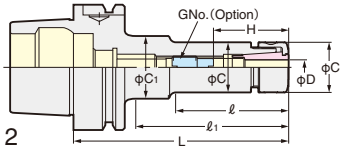


Fig. 2

H1: MAX. H without adjust screw

High Speed

Please add "-J" at the end of code No. for the chuck with SK J type nut. (Cap is not included, please order separately) e.g. HSK63A-SK10C-105P-J
When SK J type nut is used, the total chuck length will be extended by 6mm.

PAT.

TAPER	Code No.	φD	H	H1	ℓ	ℓ1	C	C1	G No. (Option)	MAX. min-1	Weight (kg)	Fig.	SK Collet
HSK 40A	HSK 40A-SK 6 - 60P*3	0.7～6.0	40	40	37	-	19.5	-	-	40,000	0.28	1	SK 6
	-SK10 - 75P*2	1.75～10.0	29～36	43	52		27.5		SKG-6L		0.4		SK10
	-SK13 - 75P*3	2.75～13.0	55	55	54		33		-		0.5		SK13
	-SK16 - 80P*3	2.75～16.0	60	60	59		40			30,000	0.6		SK16
HSK 50A	HSK 50A-SK 6 - 60P*3	0.7～6.0	37	37	31	-	19.5	-	-	30,000	0.4	1	SK 6
	-SK 6C- 80P		26～31	46	51				SKG6-6HG		0.5		
	-SK10 - 60P*3	1.75～10.0	35	35	33		27.5		-		0.5		SK10
	-SK10 - 90P*3		35～41	65	63				SKG-12S		0.6		
	-SK13 - 70P*3	2.75～13.0	47	47	43		33		-		0.9		SK13
	-SK13 - 90P*3		65	65	61						1.1		
	-SK13 -105P*2		31～47	80	76				SKG-15		1.2		
	-SK16 - 80P*3	2.75～16.0	52	52	53		40		-	25,000	0.6		SK16
	-SK16 -105P*2		50～58	65	78				SKG-6L-25L		0.9		
HSK 63A	HSK 63A-SK 6 - 60P*3	0.7～6.0	38	38	31	-	19.5	-	-	30,000	0.7	1	SK 6
	-SK 6 - 80P*2		21～35	58	51				SKG-8-18L		0.8		
	-SK 6C-100P		26～31	46	62	71		32	SKG6-6HG		0.9	2	
	-SK 6C-120P					91			SKG6-6HG		1.0		
	-SK10 - 60P*3	1.75～10.0	35	35	31	-	27.5	-	-		0.7	1	SK10
	-SK10C- 90P		33～36	53	53				SKG10-10HGG		1.0		
	-SK10C-105P		33～41	58	74				SKG10-10HG		1.1		
	-SK10C-120P				60	91		32	SKG10-10HG		1.3	2	
	-SK13 - 70P*3	2.75～13.0	45	45	43	-	33	-	-		0.9	1	SK13
	-SK13 - 90P*3		64	64	61						1.1		
	-SK13 -105P*2		31～47	80	74				SKG-15		1.2		
	-SK13C-120P		39～51	68	89				SKG13-10HG		1.5		
	-SK16 - 80P*3	2.75～16.0	52	52	51		40		-	25,000	1.1		SK16
	-SK16 -105P*2		50～58	65	76				SKG-8		1.3		
	-SK16C-120P		45～52	77	91				SKG16-10HG		1.6		
	-SK20 - 90P*3	3.5～20.0	59	59	63		48.5		-		1.4		SK20
	-SK20 -105P*2		50～57	64	78				SKG-8		1.6		
	-SK20C-120P		50～55	74	93				SKG20-12MFHG		1.8		
	-SK20C-135P				108						2.0		
	-SK25 - 90P*3	7.5～25.4	63	63	61		55		-	20,000	1.6		SK25
	-SK25C-135P		60～65	91	108				SKG25-18HGE		1.9		
HSK 100A	HSK100A-SK 6C-105P	0.7～6.0	26～31	46	62	71	19.5	40	SKG6-6HG	20,000	1.2	2	SK 6
	-SK10C-105P	1.75～10.0	33～41	58	57		27.5		SKG10-10HG		2.6		SK10
	-SK10C-120P				74	86					2.9		
	-SK10C-150P				80	116					3.2		
	-SK13 -105P*3	2.75～13.0	63	63	71	-	33	-	-		2.7	1	SK13
	-SK13C-120P		39～51	68	86				SKG13-10HG		3.1		
	-SK13C-150P				116			45			3.4		
	-SK16 -105P*2	2.75～16.0	45～60	63	71		40	-	SKG-12-30L		2.7		SK16
	-SK16C-120P		45～52	77	86				SKG16-10HG		3.2		
	-SK16C-150P			84	90	116		50	SKG16-12HG		3.5	2	
	-SK20C-120P	3.5～20.0	50～55	74	86	-	48.5	-	SKG20-12MFHG		3.1	1	SK20
	-SK20C-150P		47～3	82	116				SKG20-12HG		3.5		
	-SK20C-200P				166				SKG20-18HG		4.2		
	-SK25 -120P*2	7.5～25.4	55～75	76	86		55		SKG-12-30L	15,000	3.4		SK25
	-SK25C-145P		60～65	91	111				SKG25-18HGE		4.8		

★Nut, adjust screw and collet extractor are supplied as standard. ★Please refer ☞**P.253** for **SK** collet and please refer ☞**P.49** for **J** type nut.
★Collet, adjust screw (G No.) and **GH Handle** are available as an option. The Code No. of the **GH Handle** is **SK6C-P:GH6, SK10C-P:GH10, SK13C-P:GH12, SK16C-P: GH16, SK20C-P:GH20, SK25C-P:GH25**
★All Slim Chucks are High Pressure centre Through Coolant type (MAX. 7MPa). **SK6C:φ4～φ6, SK10C:φ6～φ10, SK16C:φ10～φ16, SK25C:φ16～φ25**
★Slim Chucks marked *2 and *3 can be used for the centre through coolant type with **J** type nut. ★No adjust screw is applied for the Slim Chucks marked *3.
★The "**H1**" is the MAX. dimension without the adjust screw. ★ is **C** type.



☞**P.48**

HSK-E,F HIGH SPEED SLIM CHUCK

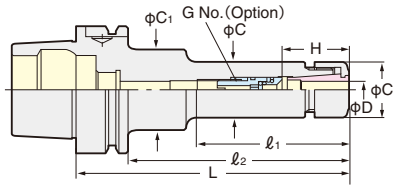
NIKKEN



HSK63E



HSK63F



SK-P
Centre Through
MAX. 7MPa

High Speed

Please add "-J" at the end of code No. for the chuck with SK J type nut. (Cap is not included, please order separately) e.g. HSK63E-SK10C-105P-J
When SK J type nut is used, the total chuck length will be extended by 6mm.

PAT.

TAPER	Code No.	φD	H	H1	ℓ	ℓ1	C	C1	G No. (Option)	MAX. min-1	Weight (kg)	SK Collet
HSK 25E	HSK 25E-SK 6 - 45P*3	0.7~6.0	30.5	30.5	35		19.5				0.1	SK 6
	-SK10 - 55P*3	1.75~10.0	41	41	45		27.5		-	50,000	0.18	SK10
HSK 32E	HSK 32E-SK 6 - 50P*3	0.7~6.0	32	32	29		19.5				0.17	SK 6
	-SK10 - 60P*3, 75P*2	1.75~10.0	44, 29~36	44, 43	41, 54		27.5		-, SKG-6L		0.26, 0.30	SK10
HSK 40E	HSK 40E-SK 6 - 60P*3	0.7~6.0	40	40	37		19.5		-		0.28	SK 6
	-SK10 - 60P*3, 75P*2	1.75~10.0	40, 29~36	40, 43	39, 54		27.5		-, SKG-6L	40,000	0.4, 0.5	SK10
	-SK13 - 75P*3	2.75~13.0	55	55	54		33		-		0.6	SK13
	-SK16 - 80P*3	2.75~16.0	59	59	59		40			30,000		SK16
HSK 50E	HSK 50E-SK 6 - 60P*3	0.7~6.0	40	40	33	-	19.5	-	-		0.5	SK 6
	-SK 6C- 80P		26~31	46	51				SKG6-6HG		0.6	
	-SK10 - 60P*3	1.75~10.0	35	35	33		27.5		-		0.5	SK10
	-SK10 - 90P*2		35~41	65	63				SKG-12S	30,000	0.6	
	-SK10C-105P		33~41	58	76				SKG10-10HG		0.7	
	-SK13 - 70P*3, 90P*3	2.75~13.0	47,65	47,65	43,61		33		-		1.0, 1.2	SK13
	-SK13 -105P*2		31~47	80	76				SKG-15		1.3	
	-SK16 - 80P*3	2.75~16.0	52	52	53		40		-	25,000	0.6	SK16
	-SK16C-120P		45~52	77	93				SKG16-10HG		1.1	
HSK 63E	HSK 63E-SK 6 - 80P*2	0.7~6.0	21~35	58	51	-	19.5	-	SKG8-18L		0.8	SK 6
	-SK 6C-100P, 120P		26~31	46	62, 62	71, 91		32, 32	SKG6-6HG		0.9, 1.0	
	-SK10C- 90P	1.75~10.0	33~36	53	59	-	27.5	-	SKG10-10HGG		1.0	SK10
	-SK10C-105P, 120P, 150P		33~41	58	60, 75, 73	106, 121		32, 40, 34.5	SKG10-10HG	30,000	1.3, 1.5, 1.7	
	-SK13 - 70P*3, 90P*3	2.75~13.0	45,64	45,64	43,61	-	33	-	-		1.0, 1.2	SK13
	-SK13 -105P*2		31~47	80	74				SKG-15		1.3	
	-SK13C-120P		39~51	68	89				SKG13-10HG		1.6	
	-SK16C-120P, 150P	2.75~16.0	45~52	77	91, 121		40		SKG16-10HG	25,000	1.7, 1.8	SK16
	-SK20C-120P, 135P	3.5~20.0	50~55	74	93, 108		48.5		SKG20-12MFHG		1.8, 2.0	SK20
	-SK25C-135P	7.5~25.4	60~65	91	108		55		SKG25-18HGE	20,000	1.9	SK25

TAPER	Code No.	φD	H	H1	ℓ1	ℓ2	C	C1	G No. (Option)	MAX. min-1	Weight (kg)	SK Collet
HSK 63F	HSK 63F-SK10 - 90P*3	1.75~10.0	35~45	-	59	-	27.5	-	SKG-12S	30,000	0.6	SK10
	-SK10C-105P		33~41	58	74				SKG10-10HG		1.3	
	-SK13 - 70P*3	2.75~13.0	45	45	43		33		-		1.0	SK13
	-SK13 -105P*3		31~47	80	74				SKG-15		1.3	
	-SK13C-120P		39~51	68	89				SKG13-10HG		1.6	
	-SK16 - 90P*3	2.75~16.0	67	67	61		40		-		1.2	SK16
	-SK16 -105P*3		50~58	83	76				SKG-18S		1.7	
	-SK16C-120P		45~52	77	91				SKG16-10HG		1.8	
	-SK20C-120P	3.5~20.0	50~55	74	93		48.5		SKG20-12MFHG	25,000	1.8	SK20
	-SK25 - 90P*3	7.5~25.4	67	67	61		55		-	20,000	1.6	SK25

★Nut, adjust screw and collet extractor are supplied as standard.
★Please refer ☞P.253 for **SK** collet and please refer ☞P.49 for **J** type nut.
★Collet, adjust screw (G No.) and **GH Handle** are available as an option.
The Code No. of the **GH Handle** is **SK6C-P: GH6, SK10C-P: GH10, SK13C-P: GH12, SK16C-P: GH16, SK20C-P: GH20, SK25C-P: GH25**
★All Slim Chucks are High Pressure centre Through Coolant type (MAX. 7MPa). **SK6C:φ4~φ6, SK10C:φ6~φ10, SK16C:φ10~φ16, SK25C:φ16~φ25**
★Slim Chucks marked *2 and *3 can be used for the centre through coolant type with **J** type nut.
★No adjust screw is applied for the Slim Chucks marked *3.
★**H1 means MAX.H without an adjust screw.** ★● is **C** type. **HSK63F-SK10C-105P**


☞P.48

HSK SLIM CHUCK

NIKKEN

High Precision·High Speed
Power of TiN Bearing Nut



SK
Centre Through
MAX. 7MPa

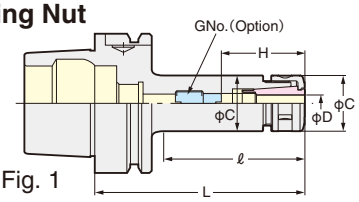


Fig. 1

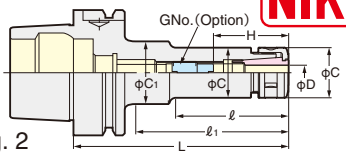


Fig. 2

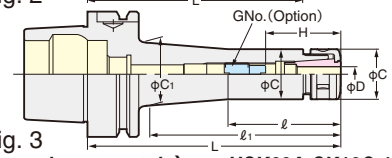


Fig. 3

Please add "-J" at the end of code No. for the chuck with SK J type nut. (Cap is not included, please order separately) e.g. HSK63A-SK10C-105-J
When SK J type nut is used, the total chuck length will be extended by 6mm.

PAT.

TAPER	Code No.	φD	H	H1	ℓ	ℓ1	C	C1	G No. (Option)	Weight (kg)	Fig.	SK Collet
HSK 40A	HSK 40A-SK 6 - 60*3	0.7～6.0	40	40	37	-	19.5	-	-	0.28	1	SK 6
	-SK 6C- 80		26～31	46	57				SKG6-6HG	0.32		
	-SK10 - 60*3	1.75～10.0	40	40	39	-	27.5	-	-	0.35		SK10
	-SK10 - 75*2		29～36	43	52				SKG-6L	0.4		
	-SK10C-100		33～41	58	77				SKG10-10HG	0.5		
	-SK13 - 75*3	2.75～13.0	55	55	54	-	33	-	-	0.5		SK13
	-SK13C-120		39～51	68	100				SKG13-10HG	0.8		
	-SK16 - 80*2	2.75～16.0	60	60	59	-	40	-	-	0.6		SK16
	-SK16C-120		45～52	77	99				SKG16-10HG	0.9		
HSK 50A	HSK 50A-SK 6 - 60*3	0.7～6.0	37	37	31	-	19.5	-	-	0.4	1	SK 6
	-SK 6C- 80		26～31	46	51				SKG6-6HG	0.5		
	-SK10 - 60*3	1.75～10.0	35	35	33	-	27.5	-	-	0.5		SK10
	-SK10 - 90*2		35～41	65	63				SKG-12S	0.6		
	-SK10C-105		35～41	58	76				SKG10-10HG	0.7		
	-SK13 - 70*3	2.75～13.0	47	47	43	-	33	-	-	0.9		SK13
	-SK13 - 90*3		65	65	61					1.1		
	-SK13 -105*2		31～47	80	76				SKG-15	1.2		
	-SK13C-120		39～51	68	89				SKG13-10HG	1.4		
	-SK16 - 80*3	2.75～16.0	52	52	53	-	40	-	-	0.6		SK16
	-SK16 -105*2		50～58	65	78				SKG-6L-25L	0.9		
	-SK16C-120		45～52	77	93				SKG16-10HG	1.1		
HSK 63A	HSK 63A-SK 6 - 60*3	0.7～6.0	38	38	31	-	19.5	-	-	0.7	1	SK 6
	-SK 6 - 80*2		21～35	58	51				SKG8-18L	0.8		
	-SK 6C-100		26～31	46	62	71		32	SKG6-6HG	0.9	2	
	-SK 6C-120		26～31	46	62	91		32		1.0		
	-SK 6C-150		26～31	46	60	121		25		1.2	3	
	-SK10 - 60*3	1.75～10.0	35	35	31	-	27.5	-	-	0.7	1	SK10
	-SK10C- 90		33～36	53	59				SKG10-10HGG	1.0		
	-SK10C-105		33～41	58	74				SKG10-10HG	1.1		
	-SK10C-120		33～41	58	60	91		32		1.3	2	
	-SK10C-135		33～41	58	75	106		40		1.5	3	
	-SK10C-150		33～41	58	73	121		34.5		1.7		
	-SK13 - 70*3	2.75～13.0	45	45	43	-	33	-	-	0.9	1	SK13
	-SK13 - 90*3		64	64	61					1.1		
	-SK13 -105*2		31～47	80	74				SKG-15	1.2		
	-SK13C-120		39～51	68	89				SKG13-10HG	1.5		
	-SK13C-150				88	119		39		1.8	3	
	-SK16 - 80*3	2.75～16.0	52	52	51	-	40	-	-	1.1	1	SK16
	-SK16 -105*2		50～58	65	76				SKG-8	1.3		
	-SK16C-120		45～52	77	91				SKG16-10HG	1.6		
	-SK16C-150		45～57	84	121				SKG16-12HG	1.7		
	-SK20 - 90*3	3.5～20.0	59	59	63	-	48.5	-	-	1.4		SK20
	-SK20 -105*2		50～57	64	78				SKG-8	1.6		
	-SK20C-120		50～55	74	93				SKG20-12MFHG	1.8		
	-SK20C-135				108					2.0		
	-SK25 - 90*3	7.5～25.4	63	63	61	-	55	-	-	1.6		SK25
	-SK25C-135		60～65	91	108				SKG25-18HGE	1.9		

★Collet, adjust screw (G No.) and spanner are available as an option. ★Please refer ☞P.253 for **SK** collet and please refer ☞P.49 for **J** type nut.
The Code No. of the spanner is **SK6C(C=φ18): SKL-6, SK6C(C=φ19.5):SKL-6W, SK10C:SKL-10, SK13C:9HC12A, SK16C:9HC16, SK20C:9HC22, SK25C:9HC25**
★**H1 means MAX.H without an adjust screw.** ★No adjust screw is applied for the Slim Chucks marked *3.
★All Slim Chucks are High Pressure centre Through Coolant type (MAX. 7MPa). **SK6C:φ4～φ6, SK10C:φ6～φ10, SK16C:φ10～φ16, SK25C:φ16～φ25**
★Slim Chucks marked *2 and *3 can be used for the centre through coolant type with **J** type nut. ★ is **C** type. **HSK40A-SK16C-120, HSK50A-SK6C-80, HSK63A-SK25C-135**

HSK SLIM CHUCK

NIKKEN

High Precision·High Speed
Power of TiN Bearing Nut



SK
Centre Through
MAX. 7MPa

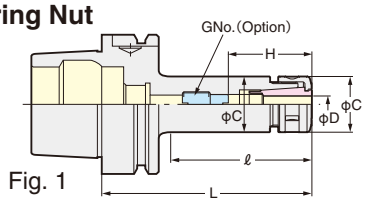


Fig. 1

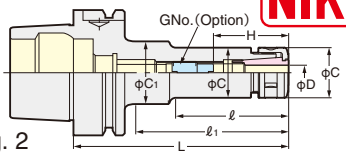


Fig. 2

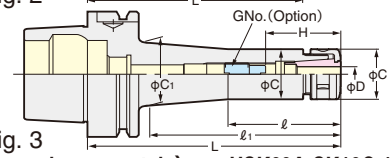


Fig. 3

Please add "-J" at the end of code No. for the chuck with SK J type nut. (Cap is not included, please order separately) e.g. HSK63A-SK10C-105-J
When SK J type nut is used, the total chuck length will be extended by 6mm.

PAT.

TAPER	Code No.	φD	H	H1	ℓ	ℓ1	C	C1	G No. (Option)	Weight (kg)	Fig.	SK Collet
HSK 100A	HSK100A-SK 6C-105	0.7～6.0	26～31	46	62	71	19.5	40	SKG6-6HG	1.2	2	SK 6
	-SK10C-105	1.75～10.0	33～41	58	57	71	27.5	40	SKG10-10HG	2.6	2	SK10
	-SK10C-120				74	86				2.9		
	-SK10C-150				80	116				3.2		
	-SK10C-200				75	166		39		3.5		
	-SK13 -105*3	2.75～13.0	63	63	71	-	33	-	-	2.7	1	SK13
	-SK13C-120		39～51	68	86				SKG13-10HG	3.1		
	-SK13C-150				92	116		45		3.4	2	
	-SK13C-200				92	166		45		3.8	3	
	-SK16 -105*3	2.75～16.0	45～60	63	71	-	40	-	SKG-12-30L	2.7	1	SK16
	-SK16C-120		45～52	77	86	-		-	SKG16-10HG	3.2		
	-SK16C-150		45～52	84	90	116		50	SKG16-12HG	3.5	2	
	-SK16C-200		45～52	84	90	166		55	SKG16-12HG	3.8	3	
	-SK20C-120	3.5～20.0	50～55	74	86	-	48.5	-	SKG20-12MFHG	3.1	1	SK20
	-SK20C-150		47～63	82	116				SKG20-12HG	3.5		
	-SK20C-200				166				SKG20-18HG	4.2		
	-SK25 -120*3	7.5～25.4	55～75	76	86	-	55	-	SKG-12-30L	3.4	1	SK25
	-SK25C-145		60～65	91	111				SKG25-18HGE	4.8		

★Collet, adjust screw (G No.) and spanner are available as an option. ★Please refer ☞**P.253** for **SK** collet and please refer ☞**P.49** for **J** type nut.
The Code No. of the spanner is **SK6C(C=φ18): SKL-6, SK6C(C=φ19.5):SKL-6W, SK10C:SKL-10, SK13C:9HC12A, SK16C:9HC16, SK20C:9HC22, SK25C:9HC25**
★**H1 means MAX.H without an adjust screw**. ★No adjust screw is applied for the Slim Chucks marked *3.
★All Slim Chucks are High Pressure centre Through Coolant type (MAX. 7MPa). **SK6C:φ4～φ6, SK10C:φ6～φ10, SK16C:φ10～φ16, SK25C:φ16～φ25**
★Slim Chucks marked *2 and *3 can be used for the centre through coolant type with **J** type nut. ★ is **C** type. **HSK40A-SK16C-120, HSK50A-SK6C-80, HSK63A-SK25C-135**

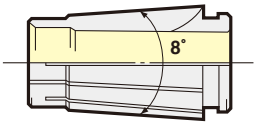


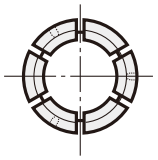
HSK

SLIM CHUCK COLLET

NIKKEN







Explanation of the Code No.

SK 10 - 6 P

- Non: Standard
  P:P class (Run-out Accuracy=3μm)
  A:A type (for End Mill Shank)
- MAX. Chucking Dia.
- Style No.
- Symbol of SK Collet

SK **"A" type SK collet (for End Mill Shank) are marked ● . The acceptable shank tolerance is h8.Code No. is e.g. SK10-10A**
"P" class SK collet (for drill) are available for all series. e.g. SK10-10P

Code No.	Chucking D
SK 6- 0.8	0.7 ~ 0.8
- 1	0.9 ~ 1.0
- 1.25	1.15~ 1.25
- 1.5	1.3 ~ 1.5
- 1.75	1.55~ 1.75
- 2	1.8 ~ 2.0
- 2.25	2.05~ 2.25
- 2.5	2.3 ~ 2.5
- 2.75	2.55~ 2.75
- 3	2.8 ~ 3.0
- 3.5	3.0 ~ 3.5
- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
SK10- 2	1.75~ 2.0
- 2.25	2.0 ~ 2.25
- 2.5	2.25~ 2.5
- 2.75	2.5 ~ 2.75
- 3	2.75~ 3.0
- 3.5	3.0 ~ 3.5
- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
- 6.5	6.0 ~ 6.5
- 7	6.5 ~ 7.0
- 7.5	7.0 ~ 7.5
- 8	7.5 ~ 8.0
- 8.5	8.0 ~ 8.5
- 9	8.5 ~ 9.0
- 9.5	9.0 ~ 9.5
-10	9.5 ~10.0

Code No.	Chucking D
SK13- 3	2.75~ 3.0
- 3.5	3.0 ~ 3.5
- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
- 6.5	6.0 ~ 6.5
- 7	6.5 ~ 7.0
- 7.5	7.0 ~ 7.5
- 8	7.5 ~ 8.0
- 8.5	8.0 ~ 8.5
- 9	8.5 ~ 9.0
- 9.5	9.0 ~ 9.5
- 10	9.5 ~10.0
- 10.5	10.0~10.5
- 11	10.5~11.0
- 11.5	11.0~11.5
- 12	11.5~12.0
- 12.5	12.0~12.5
- 13	12.5~13.0

Code No.	Chucking D
SK16- 3	2.75~ 3.0
- 3.5	3.0 ~ 3.5
- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
- 6.5	6.0 ~ 6.5
- 7	6.5 ~ 7.0
- 7.5	7.0 ~ 7.5
- 8	7.5 ~ 8.0
- 8.5	8.0 ~ 8.5
- 9	8.5 ~ 9.0
- 9.5	9.0 ~ 9.5
- 10	9.5 ~10.0
- 10.5	10.0~10.5
- 11	10.5~11.0
- 11.5	11.0~11.5
- 12	11.5~12.0
- 12.5	12.0~12.5
- 13	12.5~13.0
- 13.5	13.0~13.5
- 14	13.5~14.0
- 14.5	14.0~14.5
- 15	14.5~15.0
- 15.5	15.0~15.5
- 16	15.5~16.0

Code No.	Chucking D
SK20- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
- 6.5	6.0 ~ 6.5
- 7	6.5 ~ 7.0
- 7.5	7.0 ~ 7.5
- 8	7.5 ~ 8.0
- 8.5	8.0 ~ 8.5
- 9	8.5 ~ 9.0
- 9.5	9.0 ~ 9.5
- 10	9.5 ~ 10.0
- 10.5	10.0~ 10.5
- 11	10.5~ 11.0
- 11.5	11.0~ 11.5
- 12	11.5~ 12.0
- 12.5	12.0~ 12.5
- 13	12.5~ 13.0
- 13.5	13.0~ 13.5
- 14	13.5~ 14.0
- 14.5	14.0~ 14.5
- 15	14.5~ 15.0
- 15.5	15.0~ 15.5
- 16	15.5~ 16.0
- 16.5	16.0~ 16.5
- 17	16.5~ 17.0
- 17.5	17.0~ 17.5
- 18	17.5~ 18.0
- 18.5	18.0~ 18.5
- 19	18.5~ 19.0
- 19.5	19.0~ 19.5
- 20	19.5~ 20.0

Code No.	Chucking D
SK25- 8	7.5~8.0
- 10	9.5~10.0
- 12	11.5~12.0
- 16	15.5~16.0
- 16.5	16.0~16.5
- 17	16.5~17.0
- 17.5	17.0~17.5
- 18	17.5~18.0
- 18.5	18.0~18.5
- 19	18.5~19.0
- 19.5	19.0~19.5
- 20	19.5~20.0
- 20.5	20.0~20.5
- 21	20.5~21.0
- 21.5	21.0~21.5
- 22	21.5~22.0
- 22.5	22.0~22.5
- 23	22.5~23.0
- 23.5	23.0~23.5
- 24	23.5~24.0
- 24.5	24.0~24.5
- 25	24.5~25.0
- 25.4	25.0~25.4

★**SK6** collet with the special internal dia. is also available.

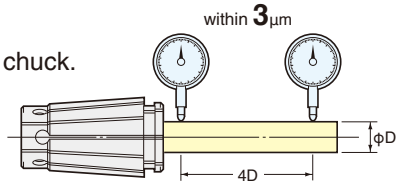


Collet removal **(SKR-6)** is supplied as standard only for **SK6**. **SKR-10**, **SKR-16** and **SKR-25** are available as an option. Collet removal is not necessary for **the new types of collet (SK10 to SK25 collet including SK13 and SK20)** .

★**Please refer** ☞**P.44 for SK Coolant Collet (AC).**

■"P" class SK collet for drill

It guarantees the Run-out accuracy within 3 micron at the nose (4D) from the chuck.
Additionally Collet Set is also available.



■"A" type SK collet for endmill

The acceptable shank tolerance ids h8.

SK Collet A Type
SK 6-3A, 4A, 5A, 6A
SK10-3A, 4A, 5A, 6A, 8A, 10A
SK13-3A, 4A, 5A, 6A, 8A, 10A, 12A, 13A
SK16-3A, 4A, 5A, 6A, 8A, 10A, 12A, 16A
SK20-4A, 5A, 6A, 8A, 10A, 12A, 16A, 20A
SK25-8A, 10A, 12A, 16A, 20A, 25A

SK Collet A Type (Inch)
SK 6 -1/8A, 3/16A
SK10 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A
SK13 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A
SK16 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A, 9/16A, 5/8A
SK20 -1/8A, 3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A, 9/16A, 5/8A, 3/4A
SK25 -3/16A, 1/4A, 5/16A, 3/8A, 7/16A, 1/2A, 5/8A, 3/4A, 25.4A

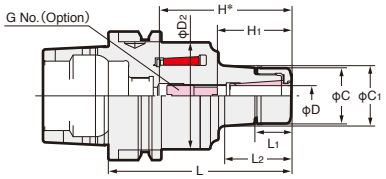
HSK MAJOR DREAM HOLDER

NIKKEN



Dampening Effect TiN Bearing Effect

H* : MAX. Cutter Shank Length to be inserted



MDSK

PAT.

TAPER	Code No.	D	L	L1	L2	C	C1	C2	H*	H1	G No. (Option)	Weight (kg)	Collet
HSK 50A	HSK 50A-MDSK 6- 70	3.0～6.0	70	16.2	18.2	19.5	19.5	41.6	48	48	-	0.7	SK 6 A
	- 90		90		38.2		21.9		68	21～35	SKG- 8	1.0	
	-MDSK10- 70	3.0～10.0	70	18.2	19.2	27.5	27.5		46	46	-	0.7	SK10 A
	- 90		90		38.2		30.3		66	31～45	SKG-12S	1.0	
	-MDSK13- 90	3.0～13.0	90	22.0	40.0	33.0	35.6		66	66	-	1.1	SK13 A
	-MDSK16-115	3.0～16.0	115	23.0	24.0	40.0	40.0	54.0	91	45～70	SKG-18S	1.4	SK16 A
HSK 63A	HSK 63A-MDSK 6- 75	3.0～6.0	75	16.2	18.0	19.5	19.5	52.4	50	21～28	SKG- 8	1.0	SK 6 A
	- 90		90		33.0		21.9		65	21～35		1.1	
	-105		105		48.0		24.0		80			1.4	
	-120		120		63.0		26.1		95			1.6	
	-MDSK10- 75	3.0～10.0	75	18.2	19.0	27.5	27.5		49	49	-	1.1	SK10 A
	- 90		90		33.0		29.6		64	31～40	SKG-12S	1.4	
	-105		105		48.0		31.7		79	31～50		1.6	
	-120		120		63.0		33.8		94	30～50	SKG-12L	1.8	
	-135		135		79.0		36.0		109			2.1	
	-MDSK13- 80	3.0～13.0	80	22.0	24.0	33.0	33.0		54	54	-	1.2	SK13 A
	- 90		90		33.0		34.6		64	64		1.5	
	-105		105		48.0		36.7		79	31～54	SKG-15	1.7	
	-120		120		63.0		38.8		94			1.9	
	-135		135		78.0		40.9		110			2.2	
	-MDSK16- 80	3.0～16.0	80	23.0	24.0	40.0	40.0		54	54	-	1.3	SK16 A
	- 90		90		34.2		41.6		64	64		1.5	
	-105		105		49.3		43.7		79	45～60	SKG-18S	1.7	
	-120		120		64.3		45.8		85			1.9	
	-135		135		79.0		47.9		105		SKG-18L	2.2	
	-MDSK20- 90	4.0～20.0	90	25.2	40.9	48.0	51.2		64	64	-	1.9	SK20 A
	-105		105		54.3		51.1		79	79		2.1	
	-120		120		70.0		50.6		94	47～70	SKG-22	2.4	
	-135		135		85.8		51.2		105			2.5	
HSK 100A	HSK100A-MDSK 6-110	3.0～6.0	110	16.2	33.0	19.5	21.9	54.0	80	21～35	SKG- 8	3.9	SK 6 A
	-125		125		48.0		24.0		95			4.0	
	-140		140		63.0		26.1		110			4.1	
	-165		165		88.0		29.6		135			4.5	
	-MDSK10-110	3.0～10.0	110	18.2	33.0	27.5	29.8		80	30～50	SKG-12L	4.0	SK10 A
	-125		125		48.0		31.7		95			4.1	
	-140		140		63.0		33.8		110			4.2	
	-165		165		89.0		37.4		135			4.6	
	-MDSK13-110	3.0～13.0	110	22.0	33.0	33.0	34.6		75	31～52	SKG-15	4.3	SK13 A
	-125		125		48.0		36.7		90	31～54		4.4	
	-140		140		63.0		38.8		105			4.5	
	-165		165		88.0		42.3		130			5.0	
	-MDSK16-125	3.0～16.0	125	23.0	51.0	40.0	44.0		87	45～65	SKG-18S	4.6	SK16 A
	-140		140		66.0		46.1		104	45～70		4.8	
	-165		165		91.0		49.6		129	40～70	SKG-18L	5.3	
	-MDSK20-140	4.0～20.0	140	25.2	42.0	48.0	51.4	84.0	104	47～70	SKG-22	4.9	SK20 A
	-165		165		67.0		54.9		129	47～80		5.5	
	-MDSK25-140	8.0～25.4	140	27.0	43.0	55.0	57.3		104	55～75	SKG-28	4.9	SK25 A
	-165		165		69.0		60.9		129	55～85		5.6	

★**Please use A type SK collet for the end milling operation.** ☞ **P.253** ★Please refer ☞ **P.49** for the Jet coolant system. **J** type nut and cap.
★**GH Handle** is available as an option. ☞ **P.48** Please order with the Code No. **GH6: MDSK6 &, GH10:MDSK10, GH12 : MDSK13, GH16:MDSK16, GH20:MDSK20, GH25:MDSK25**
★**Please add"P"at the end of Code No. for high speed specification, e.g HSK63A-MDSK10-75P**
★**Holder with an adjust screw for axial adjustment is supplied as an option. Please contact us.**



HSK MINI-MINI CHUCK ADVANCED ALPHA

NEW

NIKKEN

MMC

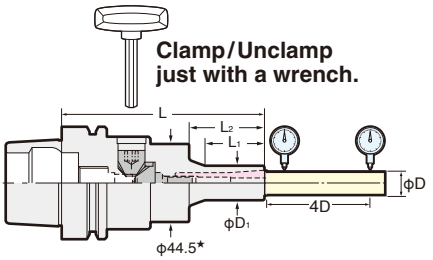
Centre Through
MAX. 7MPa

Extra-long sizes are added

High Speed



30,000min^{-1} & G2.5
Gripping from Front Nose
Run-Out Accuracy :
3μm at 4D



Dimension marked ★ is 52.4 for **MMC12**.

PAT.

TAPER	Code No.	φD	L	φD1	L1	Collet	MAX.min^{-1}	Weight(kg)
HSK50A	HSK 50A-MMC 4 -128-AA	1～4	128	15	30	MPK 4	30,000	1.4
	8C-127-AA		127		33			1.4
	-157-AA	2～8	157	20	40	PMK 8 VMK 8		1.5
	-187-AA		187					1.6
	12C-129-AA	4～12	129	30	35	PMK12 VMK12		1.6
	-159-AA		159		60			1.7
	-189-AA		189		70			1.8
HSK63A	HSK 63A-MMC 4 -116-AA	1～4	116	15	30	MPK 4	30,000	1.4
	8C-115-AA	2～8	115	20	33	PMK 8 VMK 8		1.4
	-145-AA		145		40			1.5
	-175-AA		175					1.6
	12C-117-AA	4～12	117	30	35	PMK12 VMK12		1.6
	-147-AA		147		60			1.7
	-177-AA		177		70			1.8
HSK100A	HSK100A-MMC 4 -131-AA	1～4	131	15	30	MPK 4	30,000	2.9
	8C-130-AA	2～8	130	20	33	PMK 8 VMK 8	20,000	2.9
	-160-AA		160		40			3.0
	-190-AA		190					3.1
	12C-130-AA	4～12	130	30	35	PMK12 VMK12		3.1
	-160-AA		160		60			3.2
	-190-AA		190		70			3.3

TAPER	Code No.	φD	L	φD1	L1	Collet	MAX.min^{-1}	Weight(kg)
HSK50E	HSK 50E-MMC 4 -128-AA	1～4	128	15	30	MPK 4	30,000	1.4
	8C-127-AA	2～8	127	20	33	PMK 8 VMK 8		1.4
	12C-129-AA	4～12	129	30	36	PMK12 VMK12		1.6
HSK63E	HSK 63E-MMC 4 -116-AA	1～4	116	15	30	MPK 4	30,000	1.4
	8C-115-AA	2～8	115	20	33	PMK 8 VMK 8		1.4
	12C-117-AA	4～12	117	30	36	PMK12 VMK12		1.6

TAPER	Code No.	φD	L	φD1	L1	Collet	MAX.min^{-1}	Weight(kg)
HSK63F	HSK 63F-MMC 4 -128-AA	1～4	128	15	30	MPK 4	30,000	1.4
	MMC 8C-127-AA	2～8	127	20	33	PMK 8 VMK 8		1.4
	MMC12C-129-AA	4～12	129	30	36	PMK12 VMK12		1.6

★Wrench **EA573KL-6** is attached as standard.
★Collet is available as an option. Please refer ☞P.38

★**Extra-long sizes are added**
*Extra-long sizes : longer +30～90㎜ than conventional.



EA573KL-6

■Extra-long sizes are added*

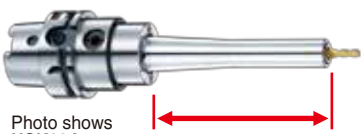


Photo shows **HSK63A** type

longer than +30～90㎜ than conventional.

Easy to approach a complicated work piece due to compact and extra-long design

HSK Direct Screw Type MINI-MINI CHUCK ADVANCED ALPHA

NIKKEN



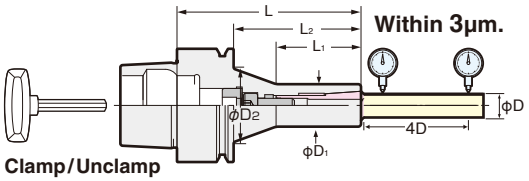
NEW

MMC-AT

Centre Through
MAX. 7MPa

High Speed

30,000min^{-1} & G2.5
Gripping from Front Nose
Run-Out Accuracy :
3μm at 4D



Clamp/Unclamp
just with a wrench.

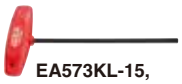
PAT.

TAPER	Code No.	φD	L	φD1	φD2	L1	L2	Collet	MAX.min-1	Weight(kg)
HSK25E	HSK 25EN-MMC 4 - 60-AT	1～4	60	15	19.3	30	50	MPK 4	30,000	0.1
HSK32E	HSK 32EN-MMC 4 - 65-AT		65		26.0		45			0.2
HSK40E	HSK 40EN-MMC 4 - 65-AT									0.25
HSK50E	HSK 50E -MMC 4 - 70-AT		70		31.2		44			0.5
HSK63E	HSK 63E -MMC 8C-107-AT	2～8	107	20	42.6	36	78	PMK 8 VMK 8	30,000	0.95
	-135-AT		135			64	106			1.0
	HSK 63E -MMC12C-110-AT	4～12	110	30	51.8	43	83	PMK12 VMK12	30,000	1.2
	-135-AT		135			68	108			1.3
HSK63F	HSK 63F -MMC 4 - 70-AT	1～4	70	15	31.2	30	44	MPK 4	30,000	0.8
HSK40A	HSK 40AN-MMC 4 - 65-AT	1～4	65	15	26.0	30	45	MPK 4	30,000	0.25
HSK50A	HSK 50A -MMC 4 - 70-AT		70		31.2		44			0.5
HSK63A	HSK 63A -MMC 8C-107-AT	2～8	107	20	42.6	36	78	PMK 8 VMK 8	30,000	0.95
	-135-AT		135			64	106			1.0
	HSK 63A -MMC12C-110-AT	4～12	110	30	51.8	43	83	PMK12 VMK12		1.2
	-135-AT		135			68	108			1.3
HSK100A	HSK100A -MMC 8C-117-AT	2～8	117	20	46.3	36	85	PMK 8 VMK 8	20,000	2.35
	-145-AT		145			64	113			2.4
	HSK100A -MMC12C-120-AT	4～12	120	30	55.5	43	90	PMK12 VMK12		2.7
	-145-AT		145			68	115			2.8

★Wrench is attached as standard **MMC4:9ZFL,MMC8:EA573KL-15,MMC12:EA573KL-16**
★Collet is available as an option. Please refer ☞**P.38**
★For the chucks warked*1 coolant pipe can not be attached. Please use external cooling
★For the chucks marked*2 center through tool Coolant is available.



9ZFL



EA573KL-15,
EA573KL-16

Direct Screw Type



Photo shows **HSK40EN-MMC4-65-AT**

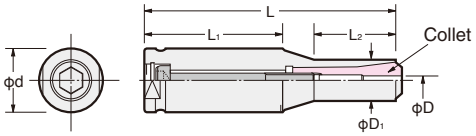
High Accuracy and High Gripping Torque by rigid and smooth shape body

Straight Shank MINI-MINI CHUCK

NIKKEN







Style	Code No.	φD	L	φD1	L1	L2	Collet	Weight(kg)
16	K16-MMP 4- 70, 150	1～ 4	70, 150	15	50, 130	20	MPK 4	0.1, 0.2
20	K20-MMC 8-100	2～ 8	100	20	80	20	PMK 8 VMK 8	0.2
32	K32-MMC 8-122, 160	2～ 8	122, 160	20	67	40	PMK 8 VMK 8	0.5, 0.7
	K32-MMC12-170S	4～12	170	30	120	50	PMK12 VMK12	1.0

★Wrench is attached as standard Code No. iS **MMCL-40.**
★Collet is available as an option. Please refer ☞**P.38**



MMCL-40

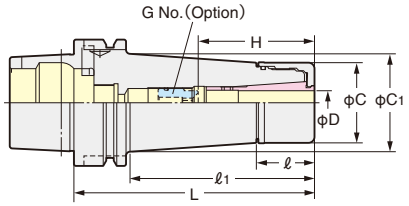
HSK ANNIVERSARY TYPE VC HOLDER

NIKKEN



VC
Centre Through
MAX. 7MPa

With TiN Bearing Nut
MAX.40,000min^{-1} & G2.5
Run-Out Accuracy:3μm at 4D



High Speed

PAT.

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	H	G No. (Option)	Weight (kg)	MAX. min^{-1}	Collet
HSK 40A	HSK 40A-VC 6- 65, 90	2.0	65,90	23	45,70	28	33.6	-,35~45	-,VCG 6- 8A	0.4,0.6	40,000	VCK 6
	-VC13- 90, 120	3.0~12.0	90,120	29	70,100	40	40.0	-,50~60	-,VCG13-15A	0.7,1.0		VCK13
HSK 50A	HSK 50A-VC 6- 70, 90, 120	2.0~6.0	70,90,120	23	41,61,91	28	33.8,32.8,37.0,	-,-,35~45	-,-,VCG 6- 8A	0.6,0.8,0.9	40,000	VCK 6
	-VC13- 90, 120	3.0~12.0	90,120	29	64,94	40	40.0	-,50~60	-,VCG13-15A	0.9,1.2		VCK13
HSK 63A	HSK 63A-VC 6- 70, 90, 120	2.0~6.0	70,90,120	23	41,61,91	28	33.8,32.8,37.0	-,35~45,35~45	-,VCG 6- 8A,VCG 6- 8A	0.9,1.0,1.2	30,000	VCK 6
	-VC13- 90, 120	3.0~12.0	90,120	29	61,92	40	44.5,48.8	-,50~60	-,VCG13-15A	1.2,1.6		VCK13
HSK 100A	HSK 100A-VC 6- 105, 135, 165	2.0~6.0	105,135,165	23	71,101,131	28	34.2,38.4,42.6	35~45	VCG 6- 8A	2.4,2.6,2.9	20,000	VCK 6
	-VC13- 105, 135, 165	3.0~12.0		29		40	45.9,50.1,54.3	-,50~60,50~60	-,VCG13-15A,VCG13-15A	2.7,3.1,3.6		VCK13

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	H	G No. (Option)	Weight (kg)	MAX. min^{-1}	Collet
HSK 40E	HSK 40E-VC 6- 65, 90	2.0~6.0	65,90	23	45,70	28	34	-,35~45	-,VCG 6- 8A	0.5,0.7	40,000	VCK 6
	-VC13- 90, 120	3.0~12.0	90,120	29	70,100	40	40.0	-,50~60	-,VCG13-15A	0.8,1.1		VCK13
HSK 50E	HSK 50E-VC 6- 70, 90, 120	2.0~6.0	70,90,120	23	41,61,91	28	33.8,32.8,37.0	-,35~45,35~45	-,VCG 6- 8A,VCG 6- 8A	0.7,0.9,1.0	40,000	VCK 6
	-VC13- 90, 120	3.0~12.0	90,120	29	64,94	40	40.0	-,50~60	-,VCG13-15A	1.0,1.3		VCK13
HSK 63E	HSK 63E-VC 6- 70, 90, 120	2.0~6.0	70,90,120	23	41,61,91	28	33.8,32.8,37.0	-,35~45,35~45	-,VCG 6- 8A,VCG 6- 8A	1.0,1.1,1.3	30,000	VCK 6
	-VC13- 90, 120	3.0~12.0	90,120	29	61,92	40	44.5,48.8	-,50~60	-,VCG13-15A	1.3,1.7		VCK13

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	H	G No. (Option)	Weight (kg)	MAX. min^{-1}	Collet
HSK 63F	HSK 63F-VC 6- 65, 90, 120	2.0~6.0	65,90,120	23	37,61,91	28	27.5,30.6,34.8	-,35~45,35~45	-,VCG 6- 8A,VCG 6- 8A	0.8,0.9,1.1	30,000	VCK 6
	-VC13- 90, 120	3.0~12.0	90,120	44	61,92	40	44.5,48.8	-,50~60	-,VCG13-15A	1.2,1.5		VCK13

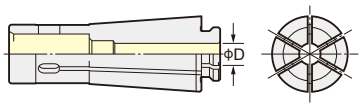
★TiN Bearing Nut is supplied as standard.
★When the axial stopper is required, please use Adjust Screw (**G No.**).
★Collet, adjust screw (G No.) and **GH Handle** are available as an option. ☞**P.48**
The Code No. of the **GH Handle** is **VC6:GH10, VC13:GH16**
★**HSK63A-VC6-150, HSK63A-VC13-150, HSK100A-VC13-90, -120** are available as an option.
★Please use **VC J** type Nut & Cap ☞**P.49** for Centre Through Coolant application.
The Code No. of **VC J** type Nut is **VCN-6BJ, VCN-13BJ**.
The Code No. of the Cap is **SKJ10-□, SKJ16-□**
When **VC J** type Nut is used, the total holder length will be extended to 6mm.
★**All series are for High Speed Rotation.**



GH Handle

VCK Collet





VCK Collet Code No.
VCK 6-2, 3, (3.175), 4, 5, 6
VCK13-3, (3.175), 4, 5, 6, 7, 8, 9, 10, 11, 12

VCK Collet (Inch) Code No.
VCK 6 -1/8, 3/16, 1/4
VCK13 -1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2

★The acceptable shank tolerance of **VCK** collet is h8.
★**VCK6-3.175** is same as **VCK6-1/8** : **VCK13-3.175** is same as **VCK13-1/8**.

■ Jet coolant splash with **J** type Nut.



Cap with triangular grooves
The jet coolant pressure creates a tornado effect.



Cap with O-ring
For oil hole cutting tool



J type NUT Code.

Style	J-type NUT	GH Handle	Cap	Wenche
VC 6	VCN- 6BJ	GH10	Cap With triangular grooves **SKJ10-○.○** Cap With O-rong **SKJ10-○.○C**	SKJL-10
VC13	VCN-13BJ	GH16	Cap With triangular grooves **SKJ16-○.○** Cap With O-rong **SKJ16-○.○C**	SKJL-16

■ Easy, safe and reliable handling with GH Handle ☞P. 48



MAJOR DREAM HOLDER HSK MAJOR DREAM PRO-ENDMILL

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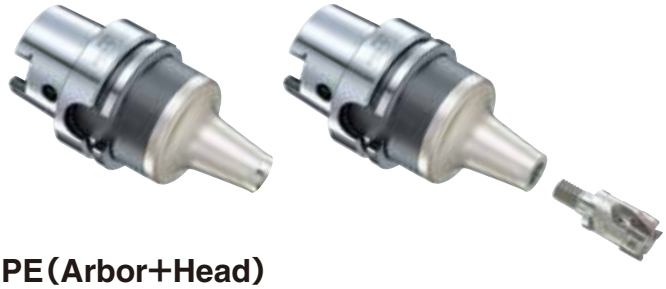

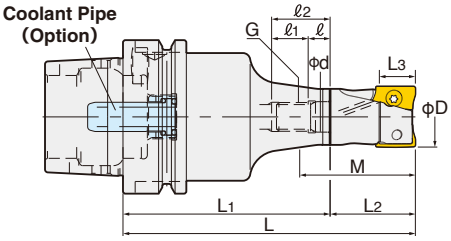

HSK-MDPE(Arbor+Head)

TAPER	Code No.	φD	L	L1	L2	MAX. Depth L3	M	Arbor Code No.	Head Code No.
HSK 63A	HSK 63A-MDPE16-100,120,135	16	100,120,135	70, 90,105	30	10	37.4	HSK 63A-MDPE-M 8- 70, 90,105	M 8-MDPE16-30
	-MDPE20-105,120,135	20	105,120,135	75, 90,105			40.0	-MDPE-M10- 75, 90,105	M10-MDPE20-30
	-MDPE25-105,120,135	25		70, 85,100	35	15	45.3,47.5,47.5	-MDPE-M12- 70, 85,100	M12-MDPE25-35
	-MDPE32-120,135,150	32	120,135,150	80, 95,110	40		52.5	-MDPE-M16- 80, 95,110	M16-MDPE32-40
HSK 100A	HSK100A-MDPE16-120,140,155	16	120,140,155	90,110,125	30	10	37.4	HSK100A-MDPE-M 8- 90,110,125	M 8-MDPE16-30
	-MDPE20-125,140,155	20	125,140,155	95,110,125			40.0	-MDPE-M10- 95,110,125	M10-MDPE20-30
	-MDPE25-125,140,155	25		90,105,120	35	15	45.3,47.5,47.5	-MDPE-M12- 90,105,120	M12-MDPE25-35
	-MDPE32-140,155,170	32	140,155,170	100,115,130	40		52.5	-MDPE-M16-100,115,130	M16-MDPE32-40

★2pcs of tip clamp bolt and tip clamp wrench are supplied as standard.
★Please refer ☞P.258 for cutting condition.
★Insert tip is available as an option . Please refer ☞P.202.
★Centre through tool coolant is available for all series.

HSK-MDPE-M(Arbor)

TAPER	Code No.	φD	L1	ID φd	Arbor Front Dia.	ℓ	ℓ1	ℓ2	Screw G
HSK 63A	HSK 63A-MDPE-M 8- 70, 90,105	16	70, 90,105	8.5	14.7	9	11	20	M 8
	-MDPE-M10- 75, 90,105	20	75, 90,105	10.5	18.7		12	21	M10
	-MDPE-M12- 70, 85,100	25	70, 85,100	12.5	23.0		15	24	M12
	-MDPE-M16- 80, 95,110	32	80, 95,110	17.0	30.0		16	25	M16
HSK 100A	HSK100A-MDPE-M 8- 90,110,125	16	90,110,125	8.5	14.7		11	20	M 8
	-MDPE-M10- 95,110,125	20	95,110,125	10.5	18.7		12	21	M10
	-MDPE-M12- 90,105,120	25	90,105,120	12.5	23.0		15	24	M12
	-MDPE-M16-100,115,130	32	100,115,130	17.0	30.0		16	25	M16

★Head is available as an option. ☞P.202 ★Centre through tool coolant is available for all series.
★This is interchangeable with DEPO. When the connection interface (Screw G and ID φd) is same, the cutter head of other carbide makers can be used.

HSK

CUTTING CONDITION of PRO-ENDMILL

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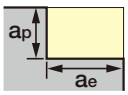
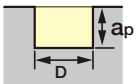
Side Milling



- The bold figures of cutting speed **V**(mm/min.) show the cutting speed when ae=0.5 X D. **V**(mm/min.) should be reduced to 80%, when ae=0.75 X D.
- Feed rate per 1 tooth/ 1 revolution **f**(mm/tooth) should be smaller, when ap is getting larger. The feed rate of **f**(mm/tooth) shows the feed rate when ae=0.5 X D & ap=MAX.

Material		Mild Steel (SS400, S10C)	Carbon Steel (S45C, SCM440)	Cast Iron (FC300)	Ductile Cast Iron (FCD450)	Hardened Steel HRC40~55 (SKD)
Cutting Speed V		**220**(140~270)	**170**(110~210)	**170**(110~210)	**120**(80~150)	**85**(50~100)
f	MDPE16	**0.1**(0.1~0.15)			**0.07**(0.07~0.1)	
	MDPE20	**0.1**(0.1~0.25)			**0.07**(0.07~0.2)	**0.07**(0.07~0.15)
	MDPE25	**0.1**(0.1~0.3)			**0.07**(0.07~0.25)	**0.07**(0.07~0.15)
	MDPE32					

Groove Milling



- Feed rate per 1 tooth/ 1 revolution **f**(mm/tooth) should be smaller, when ap is getting larger. The feed rate of **f**(mm/tooth) shows the feed rate when ae=0.5 X D & ap=MAX.
- MAX. ramping angle is **MDPE16: 15˚**, **MDPE20: 9˚**, **MDPE25: 11˚**, **MDPE32: 7˚**

Material		Mild Steel (SS400, S10C)	Carbon Steel (S45C, SCM440)	Cast Iron (FC300)	Ductile Cast Iron (FCD450)	Hardened Steel HRC40~55 (SKD)
Cutting Speed V		**180**(140~210)	**140**(110~160)	**100**(80~120)	**100**(80~120)	**70**(50~80)
f	MDPE16	**0.1**			**0.07**	
	MDPE20	**0.07**(0.07~0.1)				**0.07**
	MDPE25	**0.07**(0.07~0.15)				**0.07**
	MDPE32					

⚠ · Please clamp the insert tip with the suitable torque.
AOMT123608 : 1.0Nm , AOMT184808 : 4.0Nm
· For the guide line of insert tip life, the frank wear within 0.3mm under normal cutting will be recommended.

HSK MINI-MINI MASTER CHUCK

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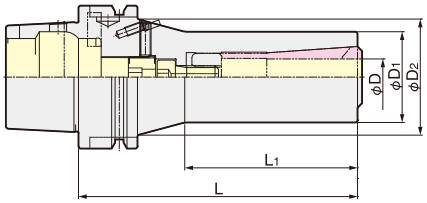
MINI-MINI MASTER CHUCK



MMC-ATB



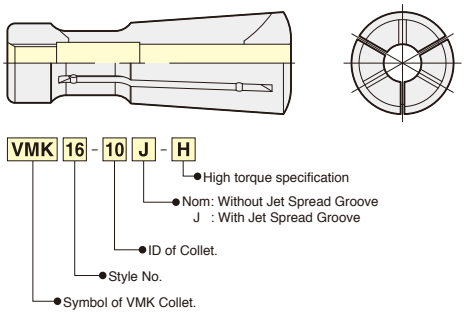
TAPER	Code No.	φD	L	φD1	L1	Collet	Weight (kg)
HSK63A	HSK 63A-MMC16C-125-ATB	10～16	125	40	76	VMK16-SF VMK16-H	1.4
	-MMC20C-125-ATB	12～20		47	89	VMK20-SF VMK20-H	1.6
HSK100A	HSK100A-MMC16C-132-ATB	10～16	132	40	73.5	VMK16-SF VMK16-H	2.8
	-MMC20C-132-ATB	12～20		47	85.3	VMK20-SF VMK20-H	3.0

★**VMK-H** collet for high torque is recommended.
★Wrench is attached as standard.
★Balance adjustment screw is available as an option. The Code No. of the screw is **9SFB-ASC-M4-3, 4, 6**
★Mounting handle is available as an option. The Code No. of the handle is **9SFB-AL-M2**
★Set Code for handle and all screws are **S.9SFB-ASC-M4**

High torque specification VMK-H Collet



VMK-H



VMK-H Collet Code No.	Min.Gripping Length
VMK16-10, 12, 16-H	40, 42, 42
VMK20-12, 16, 20-H	47, 47, 47

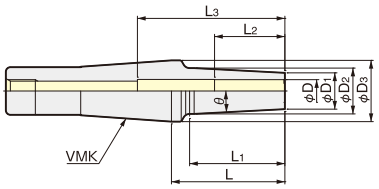
VMK-H Collet Code No.	Min.Gripping Length
VMK16-10J, 12J, 16J-H	40, 42, 42
VMK20-12J, 16J, 20J-H	47, 47, 47

★Please note the acceptable shank tolerance ius h6～h8.

VMK-SF Shrink Fit Holder



VMK-SF



Standard Type

TAPER	Code No.	φD	φD1	φD2	φD3	θ	L	L1	L2	L3	Weight (kg)
VMK16	VMK16-SF 3S- 50	3	6	10.2	27	3°	50	42	10	-	0.3
	-SF 4S- 50	4	7	11.2					13		
	-SF 6S- 50	6	9	13.2					19		
	-SF 8S- 50	8	13	17.2					25		
	-SF10S- 50,80,110	10	16	20.2, 23.4, 27			50, 80, 110	42, 72, 105	31	65	0.3, 0.4, 0.5
	-SF12S- 50,80,110	12	19	23.2, 27, 27			50, 80, 110	42, 76.4, 76.4		50	0.3, 0.4, 0.5
	-SF16S- 50,80,110	16	24	27			50, 80, 110	28.7	33		0.4, 0.5, 0.6

High Rigidity Type

TAPER	Code No.	φD	φD1	φD2	φD3	θ	L	L1	L2	L3	Weight (kg)
VMK20	VMK20-SF10R- 50,80,110	10	22	26.2, 29.4, 32	32	3°	50, 80, 110	42, 72, 95.4	31	65	0.5, 0.6, 0.8
	-SF12R- 50,80,110	12	26	30.2, 32, 32			50, 80, 110	42, 57.3, 57.3		80	0.5, 0.7, 0.9
	-SF16R- 50,80,110	16	32	32		-	50, 80, 110	50, 80, 110	33	50	0.6, 0.7, 0.9

★Hibride Shrink Fit Holder can be built by Mini-Mini Chuck Master and **VMK-SF** Shrink Fit Holder.

HSK HIBRID SHRINK-FIT HOLDER

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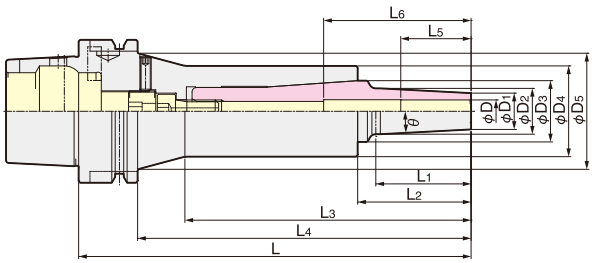
MMSF-B



MMSF-B holder is pre-balanced by the balance adjusting screws.
G2.5 30,000min^{-1}

Standard Type

TAPER	Code No.	φD	φD1	φD2	φD3	φD4	φD5	θ	L	L1	L2	L3	L4	L5	L6	Weight (kg)
HSK63A	HSK 63A-MMSF 3S-173B	3	6	10.2	27	40	51.2	3°	173	42	50	126	147	10	-	1.7
	-MMSF 4S-173B	4	7	11.2										13		
	-MMSF 6S-173B	6	9	13.2										19		
	-MMSF 8S-173B	8	13	17.2										25		
	-MMSF10S-173B	10	16	20.2										31	65	1.8
	-203B			23.4					203	72	80	156	177			
	-233B			27					233	105	110	186	207			1.9
	-MMSF12S-173B	12	19	23.2					173	42	50	126	147		50	1.7
	-203B			27					203	76.4	80	156	177			1.8
	-233B								233		110	186	207			1.9
	-MMSF16S-173B	16	24						173	28.7	50	126	147	33		1.8
	-203B								203		80	156	177			1.9
	-233B								233		110	186	207			2.0
HSK100A	HSK100A-MMSF 3S-180B	3	6	10.2	27	40	55.5	3°	180	42	50	123.5	151	10	-	3.1
	-MMSF 4S-180B	4	7	11.2										13		
	-MMSF 6S-180B	6	9	13.2										19		
	-MMSF 8S-180B	8	13	17.2										25		
	-MMSF10S-180B	10	16	20.2										31	65	3.2
	-210B			23.4					210	72	80	153.5	181			
	-240B			27					240	105	110	183.5	211			3.3
	-MMSF12S-180B	12	19	23.2					180	42	50	123.5	151		50	3.1
	-210B			27					210	76.4	80	153.5	181			3.2
	-240B								240		110	183.5	211			3.3
	-MMSF16S-180B	16	24						180	28.7	50	123.5	151	33		3.2
	-210B								210		80	153.5	181			3.3
	-240B								240		110	183.5	211			3.4

High Rigidity Type

TAPER	Code No.	φD	φD1	φD2	φD3	φD4	φD5	θ	L	L1	L2	L3	L4	L5	L6	Weight (kg)
HSK63A	HSK 63A-MMSF10R-173B	10	22	26.2	32	47	51.3	3°	173	42	50	139	147	31	65	2.1
	-203B			29.4					203	72	80	169	177			2.2
	-233B			32					233	95.4	110	199	207			2.4
	-MMSF12R-173B	12	26	30.2					173	42	50	139	147		80	2.1
	-203B			32					203	57.3	80	169	177			2.3
	-233B								233		110	199	207			2.5
	-MMSF16R-173B	16	32					-	173	50	50	139	147	33	50	2.2
	-203B								203	80	80	169	177			2.3
	-233B								233	110	110	199	207			2.5
HSK100A	HSK100A-MMSF10R-180B	10	22	26.2	32	47	55.5	3°	180	42	50	133.5	151	31	65	3.5
	-210B			29.4					210	72	80	163.5	181			3.6
	-240B			32					240	95.4	110	193.5	211			3.8
	-MMSF12R-180B	12	26	30.2					180	42	50	133.5	151		80	3.5
	-210B			32					210	57.3	80	163.5	181			3.7
	-240B								240		110	193.5	211			3.9
	-MMSF16R-180B	16	32					-	180	50	50	133.5	151	33	50	3.6
	-210B								210	80	80	163.5	181			3.7
	-240B								240	110	110	193.5	211			3.9

★Hibride Shrink Fit Holder can be built by Mini-Mini Chuck Master and **VMK-SF** Shrink Fit Holder. ☞P.259

HSK ZERO FIT TYPE MILLING CHUCK

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CZF

Fig.1

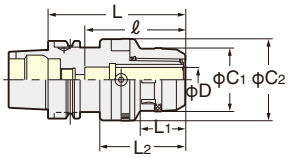
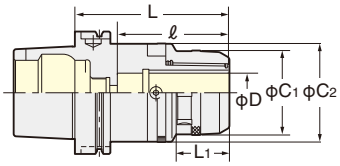


Fig.2



PAT.

TAPER	Code No.	C1	C2	L	L1	L2	ℓ	Weight(kg)	Fig.	Collet
HSK 50A	HSK 50A-CZF20-115	51.5	66.5	115	35	73	80	1.8	1	KM20 CCK20
HSK 63A	HSK 63A-CZF20-110			110		68		2		KM20 CCK20
	-CZF25-110	59.5	74.5					2.5		KM25 CCK25
	-CZF32-130	69	80.5	130	42	88	105	2.8		KM32 CCK32
HSK 100A	HSK 100A-CZF20-115	51.5	66.5	115	35	–	80	3.5	2	KM20 CCK20
	-CZF25-115	59.5	74.5					3.8		KM25 CCK25
	-CZF32-115	69	80.5		42		83	4		KM32 CCK32

★Spanner is available as an option. **CZF20 type:9HC22, CZF25 type:9HC25, CZF32 type:9HC32**
★Please note that the acceptable shank tolerance is h6~h7.
★Wrench to adjust run-out (**9ZFL**) is available as an option.
★Please add **"P"** at the end of Code No. for **High Speed Zero Fit Milling Chuck**. **e.g. HSK63A-CZF25-110P**
★Multi-Cam style is available. **e.g. HSK63A-CZF32-130-C3**. (3 Cams) Please contact us for more detail.





9ZFL

★Please refer ☞**P.248** for **KM**, **CCK** collet.
★For Center Through Coolant application:
Please use **CKFN-D Nut** for the direct chucking.
Please use **CCK** collet and **CKFN** nut for chucking with collet.

HSK

HSK ZERO FIT TYPE SLIM CHUCK

NIKKEN



SZF

Fig.1

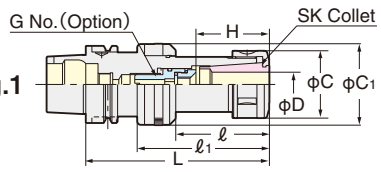
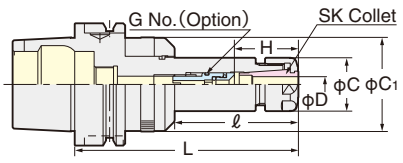


Fig.2



PAT.

TAPER	Code No.	D	L	ℓ	ℓ1	C	C1	H	G No.(Option)	Weight(kg)	Fig.	Collet
HSK 40A	HSK 40A-SZF 6C-105	0.7~6.0	105	32	70	19.5	40.5	26~31	SKG 6- 6HG	0.6	1	SK 6
	-SZF10C-105	1.75~10.0				27.5	48.5	35~41	SKG10-10HG	0.7		SK10
	-SZF16C-120	2.75~16.0	120	48	85	40	59.5	45~52	SKG16-10HG	0.8		SK16
HSK 50A	HSK 50A-SZF 6C-120	0.7~6.0	120	68	-	19.5	40.5	26~31	SKG 6- 6HG	0.9	2	SK 6
	-SZF10C-120	1.75~10.0		46	78	27.5	48.5	35~41	SKG10-10HG	1.1	1	SK10
	-SZF16C-135	2.75~16.0	135	57	93	40	59.5	45~52	SKG16-10HG	1.5		SK16
	-SZF25C-135	7.5~25.4				55	66.5	60~65	SKG25-18HGE	1.8		SK25
HSK 63A	HSK 63A-SZF 6C-120	0.7~6.0	120	68	-	19.5	40.5	26~31	SKG 6- 6HG	1.2	2	SK 6
	-SZF10C-105, 150	1.75~10.0	105, 150	53, 98		27.5	48.5	35~41	SKG10-10HG	1.3, 1.9		SK10
	-SZF16C-150	2.75~16.0	150	76		40	59.5	45~57	SKG16-12HG	2		SK16
	-SZF25C-135	7.5~25.4	135	57	93	55	66.5	60~65	SKG25-18HGE	2.1	1	SK25
HSK 100A	HSK 100A-SZF 6C-120	0.7~6.0	120	54	-	19.5	40.5	26~31	SKG 6- 6HG	2.4	2	SK 6
	-SZF10C-150	1.75~10.0	150	85		27.5	48.5	35~41	SKG10-10HG	3.4		SK10
	-SZF16C-150	2.75~16.0				40	59.5	45~57	SKG16-12HG	3.7		SK16
	-SZF25C-150	7.5~25.4		95		55	66.5	60~65	SKG25-18HGE	4.1		SK25

★Adjust screw (G No.), wrench to adjust run-out (**9ZFL**) and **SKL** spanner are available as an option. **SZF6C:SKL-6W, SZF10C:SKL-10, SZF16C:9HC16, SZF25C:9HC25**
★Spanner for run-out adjustment is available as an option. Code No. is **9ZFL**.
★Please use **"P"** class or **"A"** type **SK** collet. ☞**P.253**
★For High Speed type, Code No. is **"SZF-P"**. **e.g. HSK63A-SZF10C-105P**
★For Centre Through Coolant application, please use **SK J** type nut and cap. ☞**P.49**
Please note that the total tool length with **J** type nut is extended 6mm longer.
★Multi-Cam style is available. **e.g. HSK63A-SZF16C-150-C3**. (3 Cams) Please contact us for more detail.





9ZFL

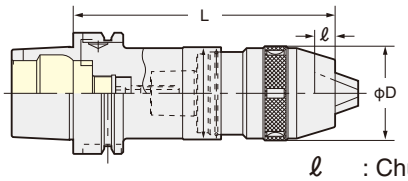
HSK NC DRILL CHUCK

NIKKEN

■Compact, High Accuracy and Rigidity



NPU



ℓ : Chucking Length
NPU 8 : 18.8mm
NPU13 : 26.5mm

TAPER	Code No	Chucking Dia ϕ mm	D	L		Weight(kg)
				MIN.	MAX.	
HSK 40A	HSK 40A-NPU 8-114	0.3～8	38	114	121	0.8
HSK 50A	HSK 50A-NPU 8-118	0.3～8	38	118	125	1.0
	-NPU13-135	1～13	48.5	135	147	1.5
HSK 63A	HSK 63A-NPU 8-120	0.3～8	38	120	127	1.3
	-NPU13-135	1～13	48.5	135	147	1.9
HSK100A	HSK100A-NPU 8-130	0.3～8	38	130	137	2.7
	-NPU13-145	1～13	48.5	145	157	3.4

★Wrench is available as an option. The Code No. of wrench is **NPU8:NPUL-8, NPU13:NPUL-13**
★Centre Through Coolant (MAX. 1MPa) is available for **NPU13** style only. Please add "**C**" at the Code No. **e.g. HSK63A-NPU13C-135**
★When it is used for centre through tool coolant holder, MIN. Chucking Dia. is 6mm.

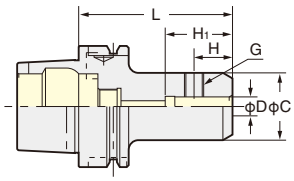
HSK SIDE LOCK HOLDER

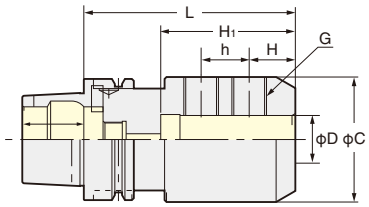
NIKKEN

■Simple and Rigid



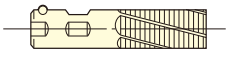
SL





TAPER	Code No	ϕD	L	C	h	H	H1	G	Weight(kg)
HSK 63A	HSK 63A-SLS 6- 80	6	80	25	-	18	25	M6	0.9
	-SLS 8- 80	8		28			30	M8	0.9
	-SLS10- 80	10		35		20	42	M10	1.0
	-SLS12- 80	12		42		22.5	46	M12	1.2
	-SLS16- 80	16		48		24	52	M14	1.3
	-SLS20- 80	20		52		25	52	M16	1.4
	-SLS25-110	25	110	65	25	24	70	M18	1.8
	-SLS32-110	32		72	28		75	M20	2.6
HSK100A	HSK100A-SLS 6- 80	6	80	25	-	18	25	M6	2.3
	-SLS 8- 80	8		28			30	M8	2.3
	-SLS10- 80	10		35		20	42	M10	2.4
	-SLS12- 80	12		42		22.5	49	M12	2.6
	-SLS16-100	16	100	48		24	52	M14	3.0
	-SLS20-100	20		52		25	54	M16	3.1
	-SLS25-100	25		65	25	24	65	M18	3.7
	-SLS32-100	32		72	28		68	M20	3.9

★JIS B4005 end mill can be gripped.
★The Code No. for ultra heavy duty combination shank end mill is"**DM**". **e.g. HSK100A-DM50.8-120**

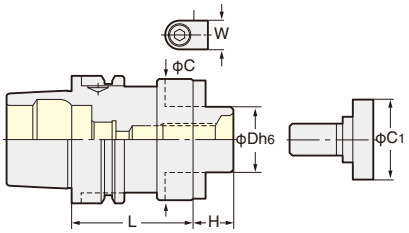


HSK FACE MILL ARBOR / HSK SHOULDER CUTTER ARBOR

NIKKEN



■FMA:JIS B 4113 Face Mill Cutter
FMC:Shoulder Cutter (SANDVIK, SUMITOMO etc.)



FMA

TAPER	Code No.	Dimensions D	L	H	C	C1	W	Drive key	Lock bolt	Weight (kg)
HSK 40A	HSK 40A-FMA25.4 -50	25.4	50	22	50	33	9.5	FW5	FM12	0.7
HSK 50A	HSK 50A-FMA25.4 -55	25.4	55	22	50	33	9.5	FW5	FM12	0.8
HSK 63A	HSK 63A-FMA25.4 -50	25.4	50	22	50	33	9.5	FW5	FM12	1.2
	-FMA31.75 -60	31.75	60	30	60	40	12.7	FW13	FM16	1.6
	-FMA38.1 -60	38.1		34	80	50	15.9	FW18	FM20	1.8
HSK100A	HSK100A-FMA25.4 -50	25.4	50	22	50	33	9.5	FW5	FM12	2.4
	-FMA31.75 -75	31.75	75	30	70	40	12.7	FW13	FM16	3.4
	-FMA38.1 -75	38.1		34	80	50	15.9	FW19	FM20	3.8
	-FMA50.8 -75	50.8		36	100	65	19	FW24	FM24	4.4
	-FMA47.625-75	47.625		38	128.57	–	25.4	FW26	9GM16-55	5.3

★The arbor marked * requires 4 fixing bolts. (M16)

FMC

TAPER	Code No.	Dimensions D	L	H	C	C1	W	Drive key	G Cap bolt	Weight (kg)
HSK 40A	HSK 40A-FMC22-50	22	50	18	45	16	10	FW 8	M10×30	0.6
HSK 50A	HSK 50A-FMC22-50	22	50	18	45	16	10	FW 8	M10×30	0.7
	-FMC27-60	27	60	20	60	18	12	FW11	M12×35	1.1
HSK 63A	HSK 63A-FMC22-45, 60	22	45, 60	18	45	16	10	FW 8	M10×30	1.0, 1.2
	-FMC27-60	27	60	20	60	18	12	FW11	M12×35	1.4
	-FMC32-60	32		22	80	24	14	FW16	M16×35	1.9
HSK100A	HSK100A-FMC22-50	22	50	18	45	16	10	FW 8	M10×30	2.4
	-FMC27-50	27		20	60	18	12	FW11	M12×35	2.6
	-FMC32-75	32	75	22	80	24	14	FW16	M16×35	3.4

★Drive key, L-Wrench & Bolts are supplied as standard.
★The bolt may not be the same as above table, please use the bolt specified by the cutter maker.
★Extended length Face Mill Arbors are available as an option.
HSK100A-FMA25.4 -200, 250
-FMA31.75-150, 200
-FMA38.1 -150, 200

★Above weight is for arbor only. (Not include Face Mill Cutter)
★In case of the special cutter, please specify the dimension below.

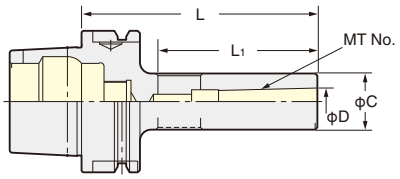
★In case of the special cutter, please specify the dimensions below.

HSK MORSE TAPER ADAPTER A TYPE

NIKKEN



■For Drill & Reamer with MT1～MT5 Shank.
■With Side Lock Screw.



MTA

TAPER	Code No.	MT.No.	D	C	L1	Weight(kg)
HSK 63A	HSK 63A-MTA1-105	1	12.065	25	74	0.9
	-MTA2-120	2	17.780	32	89	1.1
	-MTA3-150	3	23.825	40	119	1.6
	-MTA4-165	4	31.267	50	136	2.2
HSK100A	HSK100A-MTA1-110	1	12.065	25	71	2.3
	-MTA2-125	2	17.780	32	86	2.3
	-MTA3-140	3	23.825	40	106	2.8
	-MTA4-165	4	31.267	50	131	3.6
	-MTA5-195	5	44.399	65	161	4.9

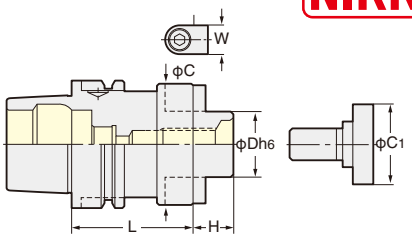
HSK FMH FACE MILL ARBOR

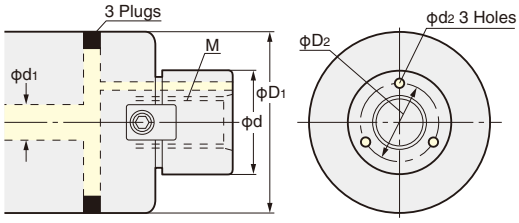
NIKKEN



FMH

■For Oil Hole Cutter
For High Feed Cutter





Code No.	Cutter Dia.	φd	φD1	M	Coolant Hole φD2	Coolant Hole φd1	Coolant Hole φd2
FMH22(22.225)	φ50, φ52 φ63, φ66	22(22.225)	47 60	M10×1.5	16	6~8	3
FMH27(25.4)	φ80	27(25.4)	76(70)	M12×1.75	19.5(18.5)	8~10	3.5
FMH32(31.75)	φ100	32(31.75)	96	M16×2.0	24	10~13	4
FMH40(38.1)	φ125	40(38.1)	100	M20×2.5	30(29)	10~15	5
FMH50.8	φ160	50.8	100	M24×3.0	37.5	15~20	7

★Fixing dimension is basically based on **FMA/FMC.** ★The combination of the other cutter dia. are also available.

FMH Inch Series

TAPER	Arbor Code No.	D	L	H	C	C1	W	Drive Key	Lock Bolt	G Cap Bolt	Weight (kg)
HSK 63A	HSK 63A-FMH22.225 - 47 - 45	22.225	45	17	47	28	8	FW 3	FM10	—	1.1
	- 60		60								1.3
	- 90		90								1.7
	-150		150								2.5
	-FMH25.4 - 70 - 60	25.4	60	22	70	33	9.5	FW 5	FM12	—	1.8
	- 90		90								2.5
	-150		150								4.1
	-FMH31.75 - 76 - 60	31.75	60	30	76	40	12.7	FW13	FM16	—	2.0
	- 90		90								2.7
HSK100A	HSK100A-FMH22.225 - 47 -105	22.225	105	17	47	28	8	FW 3	FM10	—	3.4
	-150		150								4.0
	-200		200								4.7
	-250		250								5.3
	-FMH22.225 - 60 - 60	22.225	60	17	60	28	8	FW 3	FM10	—	2.9
	-105		105								3.9
	-150		150								4.9
	-200		200								6.1
	-250		250								7.2
	-FMH25.4 - 70 - 60	25.4	60	22	70	33	9.5	FW 5	FM12	—	3.2
	- 90		90								4.1
	-150		150								5.9
	-200		200								7.4
	-FMH31.75 - 76 - 60	31.75	60	30	76	40	12.7	FW13	FM16	—	3.9
	- 90		90								5.5
	-105		105								6.4
	-150		150								9.0
	-200		200								11.8
	-FMH38.1 -100 - 60	38.1	60	34	100	50	15.9	FW19	FM20	—	4.1
	- 90		90								5.9
	-105		105								6.8
	-150		150								9.6

FMH Metric Series

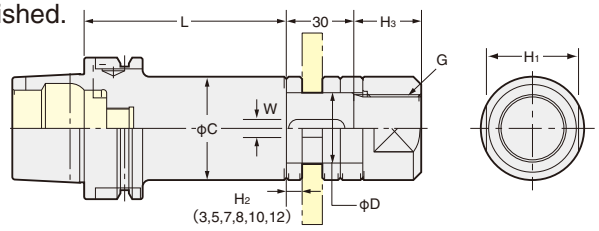
TAPER	Arbor Code No.	D	L	H	C	C1	W	Drive Key	Lock Bolt	G Cap Bolt	Weight (kg)
HSK 63A	HSK 63A-FMH16 - 37 - 45	16	45	17	37	20	8	FW 3	FM 8	—	1.0
	-FMH22 - 47 - 45	22	45	18	47	16	10	FW 8	—	M10 × 30	1.1
	- 60		60								1.3
	- 90		90								1.7
	-150		150								2.5
	-FMH27 - 60 - 60	27	60	20	60	18	12	FW11	—	M12 × 35	1.6
	- 90		90								2.3
HSK100A	HSK100A-FMH22 - 47 -105	22	105	18	47	16	10	FW 8	—	M10 × 30	3.4
	-150		150								4.0
	-200		200								4.7
	-250		250								5.4
	-FMH22 - 60 - 60	22	60	18	60	16	10	FW 8	—	M10 × 30	2.9
	-105		105								3.9
	-150		150								5.4
	-200		200								6.1
	-250		250								7.2
	-FMH27 - 60 - 60	27	60	20	60	18	12	FW11	—	M12 × 35	2.9
	- 90		90								3.7
	-150		150								5.0
	-FMH27 - 76 - 60	27	60	20	76	18	12	FW11	—	M12 × 35	3.2
	- 90		90								4.3
	-150		150								6.5
	-FMH32 - 96 - 60	32	60	22	96	24	14	FW16	—	M16 × 35	3.8
	- 90		90								5.5
	-150		150								8.9
	-FMH40 -100 - 75	40	75	26	100	50	16	FW22	FM20	—	4.9
	-105		105								6.8

HSK STUB ARBOR

NIKKEN

■Reliable Milling with No Chattering Accomplished.





SCA

(●)shows for Metric Series.

TAPER	Inch Series Code No.	D	L	C	W	H1	H3	G	Weight(kg)	Metric Series Code No.
HSK 63A	HSK 63A-SCA25.4 -90	25.4(27)	90	40	6.35(7)	32	25	M24	1.8	HSK 63A-SCA27-90
	SCA31.75-90	31.75(32)		46	7.92(8)	41	30	M30	2.3	HSK 63A-SCA32-90
HSK100A	HSK100A-SCA25.4 -90	25.4(27)	90	40	6.35(7)	32	25	M24	3.2	HSK100A-SCA27-90
	SCA31.75-90	31.75(32)		46	7.92(8)	41	30	M30	3.7	HSK100A-SCA32-90

★JIS B4206, JIS B4107, JIS B4219, JIS B4109 cutters can be attached.
★Key and collars (H2=3, 5, 7, 8, 10, 12mm) are supplied as standard. For Code No. of collar and nut, please refer ☞P.128.

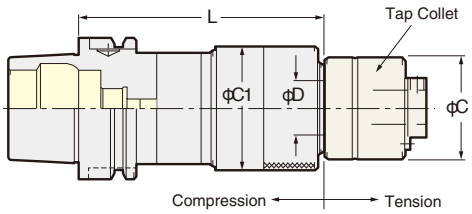
HSK TAPPER CHUCK

NIKKEN

■With the axial NC floating system.



Z



TAPER	Code No.	Tapping Capability M	U	P	D	C	C1	Tap Collet	Weight (kg)
HSK 63A	HSK 63A-Z 8-115*1	M 2～M 8	1/8～1/4	—	13	23	33	ZKN 8	2.7
	-Z12-120	M 3～M12	1/8～1/2	P 1/8	19	32	45	ZKG12	3.2
	-Z16-130	M 3～M16	1/8～5/8	P 1/8～3/8	25	39	55	ZKG16	4.3
	-Z24-140	M 8～M24	1/2～ 1	P 1/4～5/8	30	46	68	ZKG24	4.7
	-Z38-190	M18～M38	3/8～1 3/8	P 3/8～ 1	45	78	85	ZKN38	8.2
HSK100A	HSK100A-Z 8-120*1	M 2～M 8	1/8～1/4	—	13	23	33	ZKN 8	3.5
	-Z12-125	M 3～M12	1/8～1/2	P 1/8	19	32	45	ZKG12	3.6
	-Z16-140	M 3～M16	1/8～5/8	P 1/8～3/8	25	39	55	ZKG16	5.0
	-Z24-150	M 8～M24	1/2～ 1	P 1/4～5/8	30	46	68	ZKG24	5.8
	-Z38-190	M18～M38	3/8～1 3/8	P 3/8～ 1	45	78	85	ZKN38	8.3
	-Z65-215	M36～M100	1～3 3/4	P 1～ 3	68	110(125)	110	ZKN65	9.0

★Marked *1 **Z8** Tapper Chuck and **ZK8** Tap Collet are available as semi-standard.
★Please refer ☞**P.59** for **ZKG/ZKN** tap collet.
★**For Synchronized Tapping**
ZH Tapper Chuck without tension/compression mechanism is available. It improves tap life remarkably by absorbing fine error completely with the small floating mechanism. Please use ZMK Tap Collet without torque-limited mechanism ☞P.66 only for ZH Tapper Chuck.
★**High pressure centre through tool coolant type and oil mist type are available. But, OZMK Tap Collet must be used. Please contact us.**



ZH Tapper Chuck + **ZMK** Tap Collet

e.g. HSK 40A-ZH12CH-100
HSK 50A-ZH12CH-100
HSK 63A-ZH12CH-100
-ZH24CH-130
HSK100A-ZH12CH-105
-ZH24CH-130

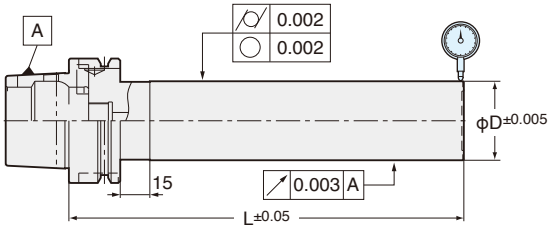
HSK TEST BAR

NIKKEN

Indispensable for checking your machine spindle.
Sub-zero treatment keeps accuracy to prevent from the deformation.
Each test bar is provided in a safety wooden box.



TB



Exact size of φD and L are marked on each test bar.

TAPER	Code No.	φD	L	Weight (Kg)	Run-out at total length	Circularity, Cylindricality
HSK 40A	HSK 40A-TB30-150	30	150	1.0	Within 0.003mm	Within 0.002mm
HSK 50A	HSK 50A-TB40-200	40	200	2.2		
HSK 63A	HSK 63A-TB40-200	40	200	2.4		
HSK100A	HSK100A-TB50-300	50	300	6.3		

★The different dimension of φd and L are available. e.g. HSK100A-TB50-400
But, the accuracy standard will be different. Please contact us.

The inspection certificate traceable to the national standard is available with charge.

HSK LUBRICATION PIPE

NIKKEN



TAPER	Lubrication Pipe Code No.		Wrench Code No. for Movable type*1
	Movable	Stationary	
HSK 40A	HSK 40-LP	HSK 40-LPS	HSK 40-LPL
HSK 50A	HSK 50-LP	HSK 50-LPS	HSK 50-LPL
HSK 63A	HSK 63-LP	HSK 63-LPS	HSK 63-LPL
HSK100A	HSK100-LP	HSK100-LPS	HSK100-LPL

★Wrench for movable type marked ✻1 is as an option.
★Standard wrench can be used for stationary type.
HSK40-LPS:W=5, HSK50-LPS:W=5, HSK63-LPS:W=6, HSK100-LPS:W=8
★Stationary type is popular but, movable type is used for the M/C of JTEKT, TSUGAMI, KOMATSU NTC or TAKIZAWA. Please check your M/C specification.

Caution

- For the HSK M/C with centre through coolant delivered via the tool clamping system, please make sure that the lubrication pipe is fitted in the rear of the HSK tool. This will prevent coolant from flooding the hollow chamber of the HSK Tool.
- For the HSK M/C without centre through coolant facility, but only external coolant source, care must be taken to prevent coolant from entering the front nose of chuck or collet slots and so contaminating the hollow area of the chuck. Please fit recommended plug. Please add -"LPGP" at the end of HSK No. e.g. HSK63-LPGP

HSK BALANCE-CUT BORING ARBOR (RAC-E)

NIKKEN

Rough Boring— For Steel, Stainless Steel and Cast Iron
CC Insert (Positive type)



RAC-E

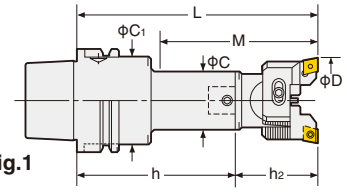


Fig.1

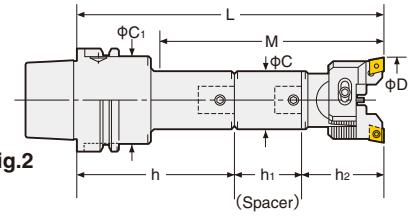


Fig.2

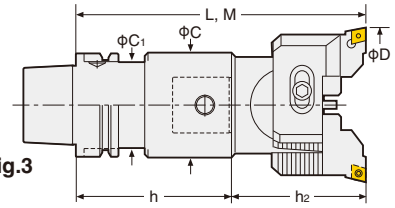
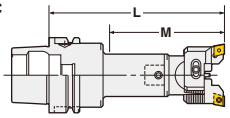


Fig.3

TAPER	Code No.	Boring Range D	Boring Depth M	C	C1	Shank Code No.	Spacer Code No.	P.268 Head Code No.	P.268 Tip No.	Weight (kg)	Fig
HSK63A	HSK 63A-RAC25-135E	25～32	67	15	24	HSK 63A-Q12- 80	—	12-RAC 25- 55E	CC07-C	1.7	1
	-165E		105			-Q12-110				1.8	
	-180E		112			-Q12- 80	SP12-12-45			1.8	2
	-RAC32-150E	32～45	77	19	30	-Q16- 95	—	16-RAC 32- 55E	CC08-C	2.1	1
	-180E		110			-Q16-125				2.3	
	-195E		122			-Q16- 95	SP16-16-45			2.3	2
	-RAC43-150E	43～55	97	40	50	-Q20- 80	—	20-RAC 43- 70E	CC12-C	2.4	1
	-180E		130			-Q20-110				2.6	
	-210E		157			-Q20- 80	SP20-20-60			2.9	2
	-RAC53-165E	53～70	135	53		-Q26- 95	—	26-RAC 53- 70E		2.2	1
	-210E		180			-Q26-140				3.0	
	-225E		195			-Q26- 95	SP26-26-60			2.9	2
	-RAC70-180E	70～100	180	64	52.4	-Q34- 95	—	34-RAC 70- 85E		4.5	3
	-195E		195			-Q34-110				4.9	
	-240E		240			-Q34- 95	SP34-34-60			5.9	
	-RAC100-195E	100～130	195	83		-Q42- 95	—	42-RAC100-100E		6.5	

★**"C" grade (Coated)** inserts are supplied as standard with the head. ☞**P.268** Please refer ☞**P.116** for cutting condition.
★Please refer ☞**P.283** for base holder, ☞**P.102** for spacer and ☞**P.79** for head.
★**For centre through tool coolant type, please add "-C" at the end of Code No. e.g. HSK63A-RAC53-165E-C**
★For **HSK40A** or **50A**, modular connection system is applied. Please refer ☞**P.283** for Base Holder.
★**When L length is required longer than standard, please specify the boring depth M.**

★Code No. of RAC25 and RAC32 are changed to RAC25E and RAC32E.
e.g. HSK63A-RAC25-135 → HSK63A-RAC25-135E
12-RAC25- 55 → 12-RAC25- 55E





High Pressure Coolant Through Tool

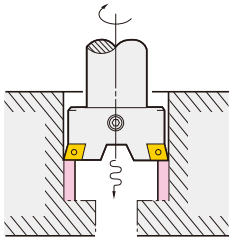
HSK

HSK BALANCE-CUT BORING ARBOR (RAC-E)

NIKKEN

Balance cut boring bar executes boring in 2 cartridge inserts absorbing the vibration each other. The faster the feed rate, the better swarf ejection. This is ideal for rough and medium boring.

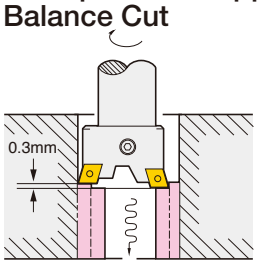
Double Cutting Capability



Please use RAC-K for through hole boring.
☞P.273, P.274



Example of 2 Stepped Balance Cut



Approx. double removal of below cutting condition is possible by **-0.3 Cartridge.**
☞P.80

TAPER	Code No.	Boring Range D	Boring Depth M	C	C_1	Shank Code No.	Spacer Code No.	P.268 Head Code No.	P.268 Tip No.	Weight (kg)	Fig
HSK100A	HSK100A-RAC 25-150E	25～32	67	15	24	HSK100A-Q12- 95	—	12-RAC 25- 55E	CC07-C	3.9	1
	-180E		105			-Q12-125				4.1	
	-195E		112			-Q12- 95	SP12-12-45			4.0	2
	-RAC 32-180E	32～45	77	31	50	-Q16-125N	—	16-RAC 32- 55E	CC08-C	4.6	1
	-210E		110			-Q16-155				4.8	
	-225E		122			-Q16-125N	SP16-16-45			4.8	2
	-RAC 43-180E	43～55	97	40	60	-Q20-110	—	20-RAC 43- 70E	CC12-C	4.9	1
	-195E		130			-Q20-125				5.0	
	225E		142			-Q20-110	SP20-20-45			5.3	2
	-240E		157			-Q20-110	SP20-20-60			5.4	
	-RAC 53-210E	53～70	117	53	65	-Q26-140	—	26-RAC 53- 70E		6.1	1
	-240E		182			-Q26-170N				6.2	
	-270E		177			-Q26-140	SP26-26-60			6.8	2
	-RAC 70-255E	70～100	202	64	80	-Q34-170	—	34-RAC 70- 85E		8.7	1
	-285E		232			-Q34-200				9.1	
	-315E		262			-Q34-170	SP34-34-60			10.1	2
	-RAC100-225E	100～130	225	83	83	-Q42-125	—	42-RAC100-100E		11.7	1
	-290E		290			-Q42-190				11.7	
	-315E		315			-Q42-125	SP42-42-90			15.1	2

★**"C" grade (Coated)** inserts are supplied as standard with the head. ☞**P.268** Please refer ☞**P.116** for cutting condition.
★Please refer ☞**P.283** for base holder, ☞**P.102** for spacer and ☞**P.79** for head.
★**For centre through tool coolant type, please add"-C"at the end of Code No. e.g. HSK100A-RAC53-210E-C**
★For **HSK40A** or **50A**, modular connection system is applied. Please refer ☞**P.283** for Base Holder.
★**HSK100A-RAC100-375E, 425E and 475E are also available.**

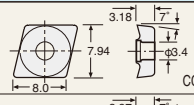
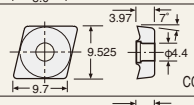
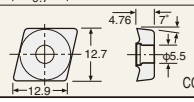
★**Code No. of RAC25 and RAC32 with CC inserts are changed to RAC25E and RAC32E.**
e.g. HSK100A-RAC25-150 → HSK100A-RAC25-150E
12-RAC25- 55 → 12-RAC25- 55E

Insert tip for RAC-E

● : best ○ : good

Material		Coated Carbide M	Coated Carbide K
	Steel	●	
	Stainless Steel	●	
	Cast Iron	○	●
	Aluminium		

Please add the grade indication into ○, and add the insert tip material indication at the end off the Code No.
e.g. CC12-C8(AC630M)

Applicable Arbor	Dimension	Code No.	Grade / Material Nose R	C AC630M	C AC410K
RAC25E	 CCMT0803○L	CC07-○4	0.4	●	●
		CC07-○8	0.8	●	●
RAC25E(CC08), RAC32E	 CCMT09T3○N	CC08-○4	0.4	●	●
		CC08-○8	0.8	●	●
RAC43E - RAC530E	 CCMT1204○N	CC12-○4	0.4	●	●
		CC12-○8	0.8	●	●

★Minimum order quantity : 10pcs.

HSK BALANCE-CUT BORING ARBOR (RAC)

NIKKEN

Rough Boring— **For Heavy Duty Boring of Iron and Cast Iron**
CN Insert (Negative type)

Heavy Duty Boring



RAC

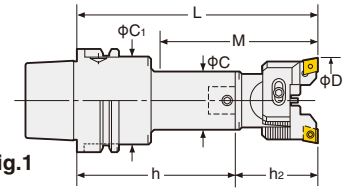


Fig.1

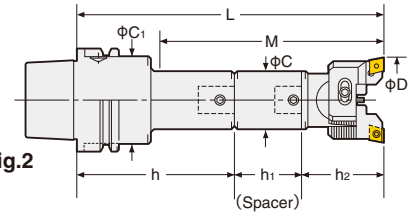


Fig.2

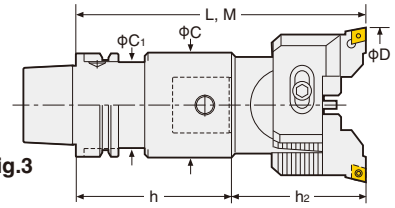
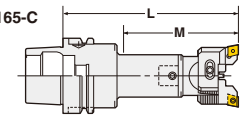


Fig.3

TAPER	Code No.	Boring Range D	Boring Depth M	C	C1	Shank Code No.	Spacer Code No.	P.270 Head Code No.	P.270 Tip No.	Weight (kg)	Fig
HSK63A	HSK 63A-RAC43-150	43～55	97	40	50	HSK 63A-Q20- 80	—	20-RAC 43- 70	CN08-C	2.4	1
	-180		130			-Q20-110				2.6	
	-210		157			-Q20- 80	SP20-20-60			2.9	2
	-RAC53-165	53～70	135	53		-Q26- 95	—	26-RAC 53- 70		2.2	1
	-210		180			-Q26-140				3.0	
	-225		195			-Q26- 95	SP26-26-60			2.9	2
	-RAC70-180	70～100	180	64	52.4	-Q34- 95	—	34-RAC 70- 85		4.5	3
	-195		195			-Q34-110				4.9	
	-240		240			-Q34- 95	SP34-34-60			5.9	
	-RAC100-195	100～130	195	83		-Q42- 95	—	42-RAC100-100		6.5	

★**"C" grade (Coated)** inserts are supplied as standard with the head. ☞ **P.270** Please refer ☞ **P.116** for cutting condition.
★Please refer ☞ **P.283** for base holder, ☞ **P.102** for spacer and ☞ **P.79** for head.
★**For centre through tool coolant type, please add "-C" at the end of Code No. e.g. HSK63A-RAC53-165-C**
★For **HSK40A** or **50A**, modular connection system is applied. Please refer ☞ **P.283** for Base Holder.
★**When L length is required longer than standard, please specify the boring depth M.**



★Code No. of RAC25 and RAC32 with CC inserts are changed to RAC25E and RAC32E. Please refer ☞ P.267, P.268



High Pressure Coolant Through Tool

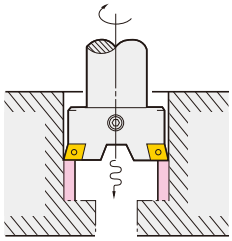
HSK

HSK BALANCE-CUT BORING ARBOR (RAC)

NIKKEN

Balance cut boring bar executes boring in 2 cartridge inserts absorbing the vibration each other. The faster the feed rate, the better swarf ejection. This is ideal for rough and medium boring.

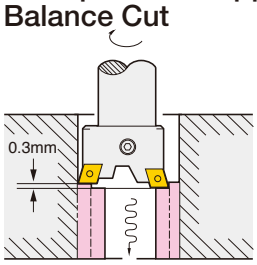
Double Cutting Capability



Please use RAC-K for through hole boring.
☞P.273, P.274



Example of 2 Stepped Balance Cut



Approx. double removal of below cutting condition is possible by **-0.3 Cartridge.**
☞P.80

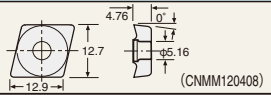
TAPER	Code No.	Boring Range D	Boring Depth M	C	C_1	Shank Code No.	Spacer Code No.	P.270 Head Code No.	P.270 Tip No.	Weight (kg)	Fig
HSK100A	HSK100A-RAC 43-180	43～55	97	40	60	HSK100A-Q20-110	—	20-RAC 43- 70	CN08-C	4.9	1
	-195		130			-Q20-125				5.0	
	225		142			-Q20-110	SP20-20-45			5.3	2
	-240		157			-Q20-110	SP20-20-60			5.4	
	-RAC 53-210	53～70	117	53	65	-Q26-140	—	26-RAC 53- 70		6.1	1
	-240		182			-Q26-170N				6.2	
	-270		177			-Q26-140	SP26-26-60			6.8	2
	-RAC 70-255	70～100	202	64	80	-Q34-170	—	34-RAC 70- 85		8.7	1
	-285		232			-Q34-200				9.1	
	-315		262			-Q34-170	SP34-34-60			10.1	2
	-RAC100-225	100～130	225	83	83	-Q42-125	—	42-RAC100-100		11.7	1
	-290		290			-Q42-190				11.7	
	-315		315			-Q42-125	SP42-42-90			15.1	2

★**"C" grade (Coated)** inserts are supplied as standard with the head. ☞**P.270** Please refer ☞**P.116** for cutting condition.
★Please refer ☞**P.283** for base holder, ☞**P.102** for spacer and ☞**P.79** for head.
★**For centre through tool coolant type, please add"-C"at the end of Code No. e.g. HSK100A-RAC53-210-C**
★For **HSK40A** or **50A**, modular connection system is applied. Please refer ☞**P.283** for Base Holder.
★**HSK100A-RAC100-375, 425 and 475 are also available.**

★**Code No. of RAC25 and RAC32 with CC inserts are changed to RAC25E and RAC32E. Please refer ☞P.267, P.268**

Insert tip for RAC for Heavy Duty Boring

Material	
Steel	●
Stainless Steel	●
Cast Iron	●
Aluminium	

Applicable Arbor	Dimension	Code No.	Grade	Coated Carbide M
			Material	AC630M
			Nose R	
RAC43 - RAC530	 (CNMM120408)	CN08-○8	0.8	●

Please add the grade indication into ○, and add the insert tip material indication at the end off the Code No.
e.g. CC08-C8(AC630M)

★Minimum order quantity : 10pcs.
★**When CN08 insert (CN○○1204○○) in the market is used, please use the eccentric bolt type cartridge (S.RCC-○○Q) ☞P.113. Nikken CN08-○8 insert can be used on the eccentric bolt type cartridge.**

HSK

HSK BALANCE-CUT BORING ARBOR (RAC-A)

NIKKEN

Rough Boring—For Aluminium



RAC-A

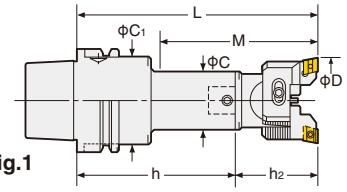


Fig.1

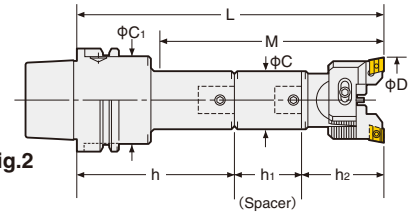


Fig.2

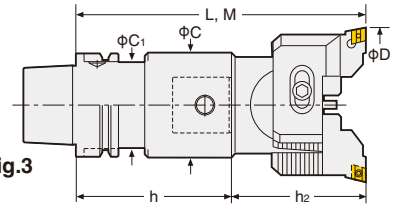
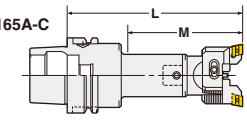


Fig.3

TAPER	Code No.	Boring Range D	Boring Depth M	C	C1	Shank Code No.	Spacer Code No.	P.272 Head Code No.	P.272 Tip No.	Weight (kg)	Fig
HSK63A	HSK 63A-RAC25-135A	25～32	67	15	24	HSK 63A-Q12- 80	—	12-RAC 25- 55A	AEG12	1.7	1
	-165A		105			-Q12-110				1.8	
	-180A		112			-Q12- 80	SP12-12-45			1.8	2
	-RAC32-150A	32～45	77	19	30	-Q16- 95	—	16-RAC 32- 55A		2.1	1
	-180A		110			-Q16-125				2.3	
	-195A		122			-Q16- 95	SP16-16-45			2.3	2
	-RAC43-150A	43～55	97	40	50	-Q20- 80	—	20-RAC 43- 70A	AEG16	2.4	1
	-180A		130			-Q20-110				2.6	
	-210A		157			-Q20- 80	SP20-20-60			2.9	2
	-RAC53-165A	53～70	135	53		-Q26- 95	—	26-RAC 53- 70A		2.2	1
	-210A		180			-Q26-140				3.0	
	-225A		195			-Q26- 95	SP26-26-60			2.9	2
	-RAC70-180A	70～100	180	64	52.4	-Q34- 95	—	34-RAC 70- 85A		4.5	3
	-195A		195			-Q34-110				4.9	
	-240A		240			-Q34- 95	SP34-34-60			5.9	
	-RAC100-195A	100～130	195	83		-Q42- 95	—	42-RAC100-100A		6.5	

★**"F" grade** inserts are supplied as standard with the head. ☞**P.272** Please refer ☞**P.116** for cutting condition.
★Please refer ☞**P.283** for base holder, ☞**P.102** for spacer and ☞ **P.79** for head.
★**For centre through tool coolant type, please add "-C" at the end of Code No. e.g. HSK63A-RAC53-165A-C**
★For **HSK40A** or **50A**, modular connection system is applied. Please refer ☞ **P.283** for Base Holder.
★**When L length is required longer than standard, please specify the boring depth M.**





High Pressure Coolant Through Tool

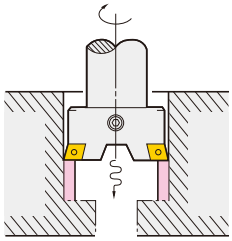
HSK

HSK BALANCE-CUT BORING ARBOR (RAC-A)

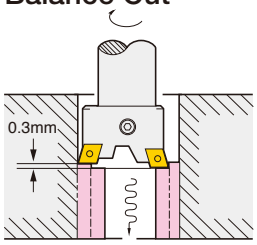
NIKKEN

Balance cut boring bar executes boring in 2 cartridge inserts absorbing the vibration each other. The faster the feed rate, the better swarf ejection. This is Ideal for rough and medium boring.

Double Cutting Capability



Example of 2 Stepped Balance Cut



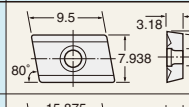
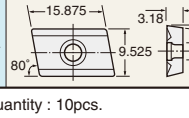
Approx. double removal of below cutting condition is possible by **-0.3 Cartridge.** ☞**P.80**

TAPER	Code No.	Boring Range D	Boring Depth M	C	C_1	Shank Code No.	Spacer Code No.	P.272 Head Code No.	P.272 Tip No.	Weight (kg)	Fig
HSK100A	**HSK100A-RAC 25-150A**	25～32	67	15	24	HSK100A-Q12- 95	—	**12-RAC 25- 55A**	**AEG12**	3.9	1
	-180A		105			-Q12-125				4.1	
	-195A		112			-Q12- 95	SP12-12-45			4.0	2
	-RAC 32-180A	32～45	77	31	50	-Q16-125N	—	**16-RAC 32- 55A**		4.6	1
	-210A		110			-Q16-155				4.8	
	-225A		122			-Q16-125N	SP16-16-45			4.8	2
	-RAC 43-180A	43～55	97	40	60	-Q20-110	—	**20-RAC 43- 70A**	**AEG16**	4.9	1
	-195A		130			-Q20-125				5.0	
	225A		142			-Q20-110	SP20-20-45			5.3	2
	-240A		157			-Q20-110	SP20-20-60			5.4	
	-RAC 53-210A	53～70	117	53	65	-Q26-140	—	**26-RAC 53- 70A**		6.1	1
	-240A		182			-Q26-170N				6.2	
	-270A		177			-Q26-140	SP26-26-60			6.8	2
	-RAC 70-255A	70～100	202	64	80	-Q34-170	—	**34-RAC 70- 85A**		8.7	1
	-285A		232			-Q34-200				9.1	
	-315A		262			-Q34-170	SP34-34-60			10.1	2
	-RAC100-225A	100～130	225	83	83	-Q42-125	—	**42-RAC100-100A**		11.7	1
	-290A		290			-Q42-190				11.7	
	-315A		315			-Q42-125	SP42-42-90			15.1	2

★**"F" grade** inserts are supplied as standard with the head. ☞**P.272** Please refer ☞**P.116** for cutting condition.
★Please refer ☞**P.283** for base holder, ☞**P.116** for spacer and ☞**P.79** for head.
★**For centre through tool coolant type, please add"-C"at the end of Code No. e.g. HSK100A-RAC53-210A-C**
★For **HSK40A** or **50A**, modular connection system is applied. Please refer ☞**P.283** for Base Holder.
★**HSK100A-RAC100-375A, 425A and 475A are also available.**

Insert tip for RAC-A

Material	
	Steel
	Stainless Steel
	Cast Iron
	Aluminium ●

				Coated Carbide K
			Grade	F
Applicable Arbor	Dimension	Code No.	Material Nose R	KW10
RAC25A, RAC32A	 (AEGT090304L)	**AEG12-○1**	0.1	●
		AEG12-○2	0.2	●
		AEG12-○4	0.4	●
RAC43A-RAC530A	 (AEGT150304L)	**AEG16-○1**	0.1	●
		AEG16-○2	0.2	●
		AEG16-○4	0.4	●

★Minimum order quantity : 10pcs.

Please add the grade indication into ○, and add the insert tip material indication at the end off the Code No.
e.g. AEG16-F2(KW10)

HSK

HSK BALANCE-CUT BORING ARBOR (RAC-K)

NIKKEN

Rough Boring—For Through Hole and Multi Sheets



RAC-K

Fig.1

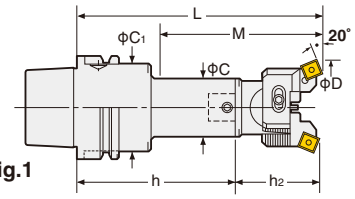


Fig.2

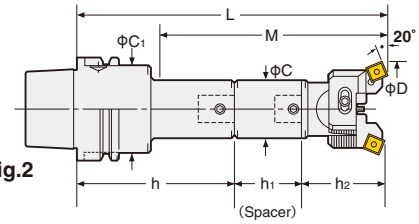
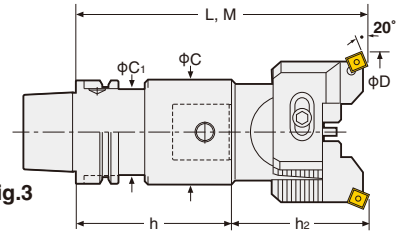
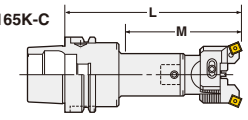


Fig.3



TAPER	Code No.	Boring Range D	Boring Depth M	C	C1	Shank Code No.	Spacer Code No.	P.274 Head Code No.	P.274 Tip No.	Weight (kg)	Fig
HSK63A	HSK 63A-RAC25-135K	25～32	67	15	24	HSK 63A-Q12- 80	—	12-RAC 25- 55K	SC09	1.7	1
	-165K		105			-Q12-110				1.8	
	-180K		112			-Q12- 80	SP12-12-45			1.8	2
	-RAC32-150K	32～45	77	19	30	-Q16- 95	—	16-RAC 32- 55K		2.1	1
	-180K		110			-Q16-125				2.3	
	-195K		122			-Q16- 95	SP16-16-45			2.3	2
	-RAC43-150K	43～55	97	40	50	-Q20- 80	—	20-RAC 43- 70K	SC12	2.4	1
	-180K		130			-Q20-110				2.6	
	-210K		157			-Q20- 80	SP20-20-60			2.9	2
	-RAC53-165K	53～70	135	53		-Q26- 95	—	26-RAC 53- 70K		2.2	1
	-210K		180			-Q26-140				3.0	
	-225K		195			-Q26- 95	SP26-26-60			2.9	2
	-RAC70-180K	70～100	180	64	52.4	-Q34- 95	—	34-RAC 70- 85K		4.5	3
	-195K		195			-Q34-110				4.9	
	-240K		240			-Q34- 95	SP34-34-60			5.9	
	-RAC100-195K	100～130	195	83		-Q42- 95	—	42-RAC100-100K		6.5	

★**"C" grade (Coated)** inserts are supplied as standard with the head. ☞**P.274** Please refer ☞**P.116** for cutting condition.
★Please refer ☞**P.283** for base holder, ☞**P.102** for spacer and ☞**P.79** for head.
★**For centre through tool coolant type, please add "-C" at the end of Code No. e.g. HSK63A-RAC53-165K-C**
★For **HSK40A** or **50A**, modular connection system is applied. Please refer ☞ **P.283** for Base Holder.
★**When L length is required longer than standard, please specify the boring depth M.**





High Pressure Coolant Through Tool

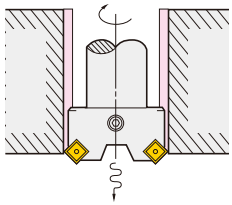
HSK

HSK BALANCE-CUT BORING ARBOR (RAC-K)

NIKKEN

Balance cut boring bar executes boring in 2 cartridge inserts absorbing the vibration each other. The faster the feed rate, the better swarf ejection. This is Ideal for rough and medium boring.

Double Cutting Capability



TAPER	Code No.	Boring Range D	Boring Depth M	C	C_1	Shank Code No.	Spacer Code No.	P.274 Head Code No.	P.274 Tip No.	Weight (kg)	Fig
HSK100A	HSK100A-RAC 25-150K	25～32	67	15	24	HSK100A-Q12- 95	—	12-RAC 25- 55K	SC09	3.9	1
	-180K		105			-Q12-125				4.1	
	-195K		112			-Q12- 95	SP12-12-45			4.0	2
	-RAC 32-180K	32～45	77	31	50	-Q16-125N	—	16-RAC 32- 55K		4.6	1
	-210K		110			-Q16-155				4.8	
	-225K		122			-Q16-125N	SP16-16-45			4.8	2
	-RAC 43-180K	43～55	97	40	60	-Q20-110	—	20-RAC 43- 70K	SC12	4.9	1
	-195K		130			-Q20-125				5.0	
	225K		142			-Q20-110	SP20-20-45			5.3	2
	-240K		157			-Q20-110	SP20-20-60			5.4	
	-RAC 53-210K	53～70	117	53	65	-Q26-140	—	26-RAC 53- 70K		6.1	1
	-240K		182			-Q26-170N				6.2	
	-270K		177			-Q26-140	SP26-26-60			6.8	2
	-RAC 70-255K	70～100	202	64	80	-Q34-170	—	34-RAC 70- 85K		8.7	1
	-285K		232			-Q34-200				9.1	
	-315K		262			-Q34-170	SP34-34-60			10.1	2
	-RAC100-225K	100～130	225	83	83	-Q42-125	—	42-RAC100-100K		11.7	1
	-290K		290			-Q42-190				11.7	
	-315K		315			-Q42-125	SP42-42-90			15.1	2

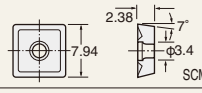
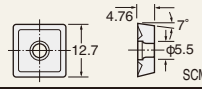
★**"C" grade (Coated)** inserts are supplied as standard with the head. ☞**P.274** Please refer ☞**P.116** for cutting condition.
★Please refer ☞**P.283** for base holder, ☞**P.102** for spacer and ☞**P.79** for head.
★**For centre through tool coolant type, please add "-C" at the end of Code No. e.g. HSK100A-RAC53-210K-C**
★For **HSK40A** or **50A**, modular connection system is applied. Please refer ☞**P.283** for Base Holder.
★**HSK100A-RAC100-375K, 425K and 475K are also available.**

Insert tip for RAC-K

● : best ○ : good

Material		Coated Carbide M	Coated Carbide K
	Steel	●	
	Stainless Steel	●	
	Cast Iron	○	●
	Aluminium		

Please add the grade indication into ○, and add the insert tip material indication at the end off the Code No. e.g. SC12-C8 (AC630M)

Applicable Arbor	Dimension	Code No.	Grade / Material Nose R	C AC630M	C AC410K
RAC25K, RAC32K		SC09-○4	0.4	●	●
RAC43K-RAC100K		SC12-○8	0.8	●	●

★Minimum order quantity : 10pcs.

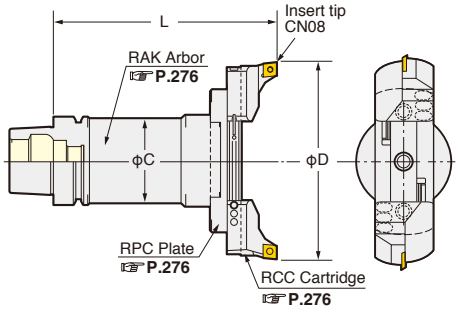
HSK BALANCE-CUT RAC BORING ARBOR for LARGE DIA. NIKKEN

For Roughing

- With the screws for slight adjustment
- Boring Dia. : φ130～φ580mm



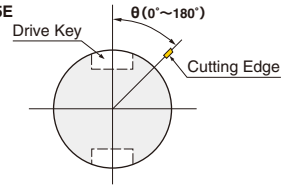
RAC



Boring Dia.:φ130～580mm

TAPE	Code.No	D MIN.～MAX.	L	C	RAK Arbor Code No.	RPC Plate No.	RCC Cartridge No.	Weight (Kg)
HSK 63A	HSK 63A-RAC130-205	130～180	205	61	HSK 63A-RAK-130A	RPC-130		6.5
	-RAC180-205	180～230				-180		7.5
HSK100A	HSK100A-RAC130-185	130～180	185	90	HSK100A-RAK-110A	RPC-130	For Heavy Duty Boring of Iron and Cast Iron RCC-130 ×2 Insert Tip CN08	9.3
	-235		235		-160A			11.8
	-285		285		-210A			14.5
	-335		335		-260A			17.2
	-385		385		-310A			19.9
	-435		435		-360A			22.6
	-485		485		-410A			25.3
	-RAC180-185	180～230	185		-RAK-110A	RPC-180		11.3
	-235		235		-160A			9.9
	-285		285		-210A			12.4
	-335		335		-260A			15.1
	-385		385		-310A			17.8
	-435		435		-360A			20.5
	-485		485		-410A			23.2
	-RAC230-185	230～280	185		-RAK-110A	RPC-230		10.6
	-235		235		-160A			13.1
	-285		285		-210A			15.8
	-335		335		-260A			18.5
	-385		385		-310A			21.2
	-435		435		-360A			23.9
	-485		485		-410A			26.6
	-RAC280-185	280～330	185		-RAK-110A	RPC-280		11.2
	-235		235		-160A			13.7
	-285		285		-210A			16.4
	-335		335		-260A			19.1
	-385		385		-310A			21.8
	-435		435		-360A			24.5
	-485		485		-410A			27.2
	-RAC330-210	330～380	210	98	HSK100A-RAK330-125	RPC-330		17.8
	-RAC380-210	380～430				-380		18.6
	-RAC430-210	430～448				-430		19.5
	-RAC480-210	480～530				-480		20.4
	-RAC530-210	530～580				-530		21.2

★The Code No. on above table are the boring arbors with **RCC-130** cartridge (Insert tip: **CN08**) the Heavy Duty Boring of Iron and Cast Iron.
Please refer ☞**P.116** for cutting condition.
★Boring arbor with cartridges & insert for Steel, Stainless Steel and Cast Iron (**E**) , for Aluminum (**A**) and for Through Hole & Multi Sheets (**K**) are available. Please refer☞**P.276** for cartridges. **e.g. HSK100A-RAC130-185E**
★Please refer☞**P.276** for **RAK** arbor and **RPC** plate.
★Arbor, plate and cartridges are delivered in separate packages.
★Please check the interference of the arbor with your M/C not to occur the interference in the tool magazine.
★The location of the cutting edge is same as the drive key for standard. The different location is available, please specify θ. **e.g. HSK100A-RAC180-235 (90˚)**
★**For centre through tool coolant type, please add"-C"at the end of Code No. e.g. HSK100A-RAC130-185-C**



View from Cutting Edge



High Pressure Coolant Through Tool

HSK MODULAR TYPE ARBOR

NIKKEN

BALANCE CUT RAK BORING ARBOR for LARGE DIA.<RAK Arbor>



RAK

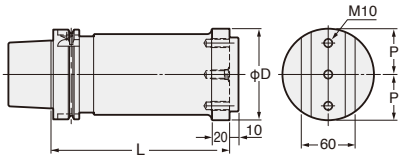


Fig.1

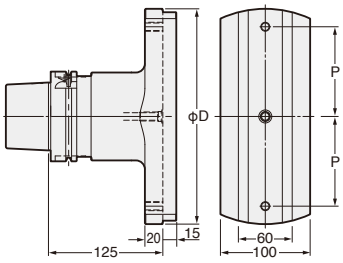


Fig.2

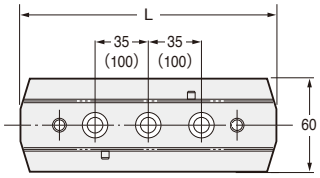
Code No.	Boring Range	L	D	P	Weight (Kg)	Applicable RPC Plate	Hex. Socket bolt	Fig.
HSK 63A-RAK-130A	130～230	130	102	35	4.3	RPC-130, 180	M1035	1
HSK100A-RAK-110A	130～330	110			6.7	RPC-130, 180, 230, 280		
-RAK-160A		160			9.2			
-RAK-210A		210			11.9			
-RAK-260A		260			14.6			
-RAK-310A		310			17.3			
-RAK-360A		360			20.0			
-RAK-410A		410			22.7			
-RAK330-125	330～580	125	240	100	11.3	RPC-330, 380, 430, 480, 530	M1045	2

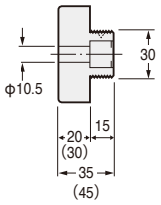
★The location of the cutting edge is same as the drive key for standard. The different location is available, please specify θ. **e.g. HSK100A-RAK-160A(90°)**
★**For centre through tool coolant type, please add"-C"at the end of Code No. e.g. HSK100A-RAK-160A-C 2 set of coolant nozzles are standard accessory.**



BALANCE CUT PLATE for LARGE DIA.<RPC Plate>







Dimensions in( )are for RPC-330, 380, 430, 480 and 530.

Code No.	Boring Range	L	Weight(Kg)	Code No.	Boring Range	L	Weight(Kg)	Code No.	Boring Range	L	Weight(Kg)
RPC-130	130～180	118	1.4	**RPC-330**	330～380	316	5.3	**RPC-530**	530～580	516	8.7
-180	180～230	166	2.0	**-380**	380～430	366	6.1				
-230	230～280	216	2.7	**-430**	430～480	416	7.0				
-280	280～330	266	3.3	**-480**	480～530	466	7.9				

Accessories for Balance-Cut RAC

Steel, Stainless Steel and Cast Iron
RCC-130 (CN08)



Heavy Duty Boring of Iron and Cast Iron
RCC-130E (CC12)



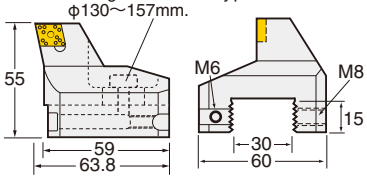
For aluminum
RCC-130A (AEG16)



For Through Hole and Multi Sheets
RCC-130K (SC12)



Cartridge Lock Bolt
Please remove the bolt when using **RAC-130** type for φ130～157mm.



Weight : 0.6Kg

Accessories	Insert Tip	Clamp Bolt	Adjust Screw	Adjust Wrench	Wrench for Insert	Set Screw (M8)	L-Wrench for M815 Bolt	Hex Socket Bolt	Applicable RPC Plate
Code No.	*	CSM-70	M540	M3	20S	M815	M4	M625	RPC-130,180,230,280,330,380,430,480,530

★* : The insert tip is **RCC-130:CN08 (☞P.270)**, **RCC-130E:CC12 (☞P.268)**, **RCC-130A:AEG16 (☞P.272)**, **RCC-130K:SC12 (☞P.274)** Please refer☞**P.116** for cutting condition.
★There are two different types clamping system. One is eccentric system, the other is screw on system. Above parts are for screw on system.
★Code No. **RCC-130** indicates a single cartridge. When ordering a pair cartridge, please appoint to us Code No. **S.RCC-130**.
★The Code No. of the cartridges for 2 stepped balance cut is **SRCC-130-0.3**

HSK ZMAC ADVANCED BORING ARBOR (ZMAC-V)

NIKKEN

Boring for Finishing



ZMAC-V

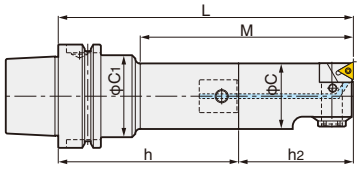


Fig.1

Only for ZMAC16-V

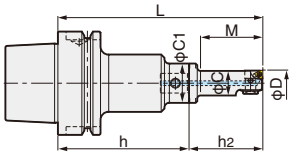


Fig.3

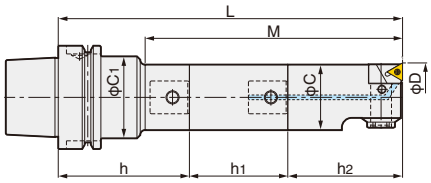


Fig.2

ZMAC100-V, 140-V

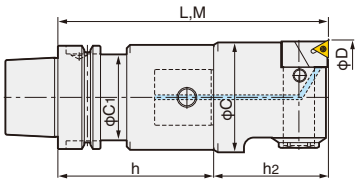
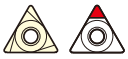


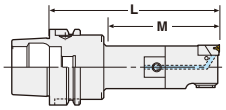
Fig.4

Code No. of the insert tip  are shown.

PAT.

TAPER	Code No.	Boring Range D	Boring Depth M	C	C1	Shank Code No.	Extension Spacer Code No.	P.119 Head No.	P.119 Insert No.	Weight (kg)	Fig
HSK63A	HSK63A-ZMAC16-125V	15.8～20.2	38	15	24	HSK63A-Q12- 80	—	12-ZMAC16- 45V	3MP-C,B	1.6	3
	-135V		48					12-ZMAC16- 55V		1.6	
	-ZMAC20-120V	19.8～25.2	45	19	30	-Q 9- 80		9-ZMAC20- 40V		1.6	1
	-135V		67			-Q 9- 95N				1.6	
	-150V		75			-Q 9- 80	SP 9- 9-30			1.7	2
	-ZMAC25-120V	24.8～32.2	52	24	35	-Q12- 80	—	12-ZMAC25- 40V		1.7	1
	-150V		90			-Q12-110				1.8	
	-165V		97			-Q12- 80	SP12-12-45			1.8	2
	-ZMAC32-150V	31.8～42.2	77	31	42	-Q16- 95	—	16-ZMAC32- 55V	4MP-C,B	2.2	1
	-180V		110			-Q16-125				2.4	
	-195V		122			-Q16- 95	SP16-16-45			2.4	2
	-ZMAC42-150V	41.8～55.2	97	40	50	-Q20- 80	—	20-ZMAC42- 70V	6MP-C,B	2.7	1
	-180V		130			-Q20-110				2.9	
	-210V		157			-Q20- 80	SP20-20-60			3.1	2
	-ZMAC55-165V	54.8～70.2	135	53	50	-Q26- 95	—	26-ZMAC55- 70V		3.6	1
	-210V		180			-Q26-140				4.3	
	-225V		195			-Q26- 95	SP26-26-60			4.3	2
	-ZMAC70-165V	69.8～85.2	165	67	52.4	-Q34- 95	—	34-ZMAC70- 70V		5.1	4
	-180V		180			-Q34-110				5.5	
	-225V		225			-Q34- 95	SP34-34-60			6.5	
	-ZMAC85-195V	84.8～100.2	195	83	52.4	-Q42- 95	—	42-ZMAC85-100V		8.7	

★MIN. dial readout : **ZMAC25-V** & smaller is 0.02mm on diameter. **ZMAC32-V** and larger are 0.01mm on diameter.
★**"C" grade (Coated) insert for Steel, Stainless & Cast Iron is supplied as Standard with the head (Smooth boring & Long tool-life).** ☞**P.119** Please refer ☞**P.117** for cutting condition.
We would recommend **"B"** grade (**CBN**) insert for Hardened Steel & High Speed boring of Cast Iron.
★Please refer ☞ **P.283** for base holder, ☞ **P.102** for spacer and ☞**P.87, P.88** for head.
★Centre Through Tool Coolant function is available as standard.
★For **HSK40A** or **50A**, modular connection system is applied. Please refer ☞ **P.283** for Base Holder.
★**When L length is required longer than standard, please specify boring depth M.**



Boring Arbor with Extension Spacer



ZMAC-V for Multi-Stage Boring Bar ☞P.107

Please contact us for the special boring bar.





High Pressure Coolant Through Tool

HSK ZMAC ADVANCED BORING ARBOR (ZMAC-V)

NIKKEN

With ZMACα-V Boring Head

Please add "AA" at the end of Code No.
e.g. HSK63A-ZMAC42-150AAV



ZMACα-V

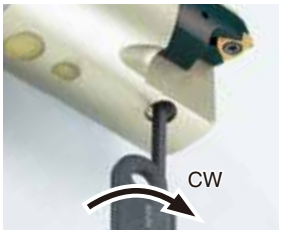
Diameter can be adjusted easily and quickly by new handle with wrench.



Unlock



Adjust diameter



Lock

Code No. of the insert tip   are shown.

PAT.

TAPER	Code No.	Boring Range D	Boring Depth M	C	C1	Shank Code No.	Extension Spacer Code No.	P.119 Head No.	P.119 Insert No.	Weight (kg)	Fig
HSK100A	HSK100A-ZMAC 16-140V	15.8～20.2	38	15	24	HSK100A-Q12- 95	—	12-ZMAC 16- 45V	3MP-C,B	3.9	3
	-150V		48					12-ZMAC 16- 55V		3.9	
	-ZMAC 20-150V	19.8～25.2	45	19	40	-Q 9-110		9-ZMAC 20- 40V		4.0	1
	-165V		67			-Q 9-125N				4.0	
	-180V		75			-Q 9-110	SP 9- 9-30			4.1	2
	-ZMAC 25-135V	24.8～32.2	52	24	44	-Q12- 95	—	12-ZMAC 25- 40V		4.0	1
	-165V		90			-Q12-125				4.0	
	-180V		97			-Q12- 95	SP12-12-45			4.1	2
	-ZMAC 32-180V	31.8～42.2	77	31	50	-Q16-125N	—	16-ZMAC 32- 55V	4MP-C,B	4.7	1
	-210V		110			-Q16-155				4.8	
	-225V		122			-Q16-125N	SP16-16-45			4.9	2
	-ZMAC 42-180V	41.8～55.2	97	40	60	-Q20-110	—	20-ZMAC 42- 70V	6MP-C,B	5.2	1
	-195V		130			-Q20-125				5.2	
	-225V		142			-Q20-110	SP20-20-45			5.6	2
	-240V		157			-Q20-110	SP20-20-60			5.7	
	-ZMAC 55-210V	54.8～70.2	117	53	65	-Q26-140	—	26-ZMAC 55- 70V		6.7	1
	-240V		182			-Q26-170N				6.8	
	-270V		177			-Q26-140	SP26-26-60			8.3	2
	-ZMAC 70-240V	69.8～85.2	187	67	80	-Q34-170	—	34-ZMAC 70- 70V		9.2	1
	-270V		217			-Q34-200				9.8	
	-300V		247			-Q34-170	SP34-34-60			10.7	2
	-ZMAC 85-225V	84.8～100.2	187	83	—	-Q42-125	—	42-ZMAC 85-100V		11.7	1
	-290V		252			-Q42-190				14.2	
	-315V		277			-Q42-125	SP42-42-90			15.2	2
	-ZMAC100-225V	99.5～140.5	225	95	98	-Q42-125	—	42-ZMAC100-100V		11.6	4
	-290V		290			-Q42-190				14.3	
	-325V		325			-Q42-225A				17.0	
	-375V		375			-Q42-275A				19.7	
	-425V		425			-Q42-325A				22.4	
	-ZMAC140-225V	139.5～180.5	225	135	98	-Q42-125	—	42-ZMAC140-100V		13.0	
	-290V		290			-Q42-190				15.7	
	-325V		325			-Q42-225A				18.4	
	-375V		375			-Q42-275A				21.1	
	-425V		425			-Q42-325A				23.8	

★MIN. dial readout : **ZMAC25-V** & smaller is 0.02mm on diameter. **ZMAC32-V** and larger are 0.01mm on diameter.
★**When L length is required longer than standard, please specify boring depth M.** ★Centre Through Tool Coolant function is available as standard.
★**"C" grade (Coated) insert for Steel, Stainless&Cast Iron is supplied as Standard with the head (Smooth boring & Long tool-life).** ☞**P.119**
We would recommend **"B"** grade (**CBN**) insert for Hardened Steel & High Speed boring of Cast Iron. Please refer ☞**P.117** for cutting condition.
★Please refer ☞ **P.283** for base holder, ☞ **P.102** for spacer and ☞**P.87, P.88** for head.

HSK ZMAC ADVANCED BORING ARBOR (ZMAC-VR)

NIKKEN

Boring for Semi-Finishing—ZMAC-VR



ZMAC-VR

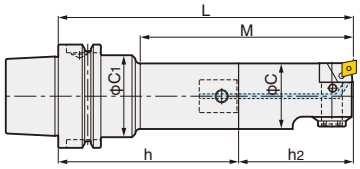


Fig.1

ZMAC100-VR, 140-VR

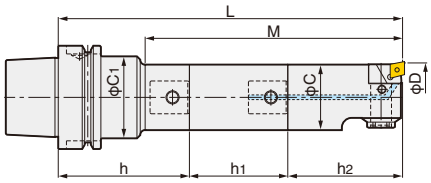


Fig.2

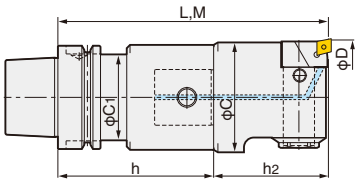


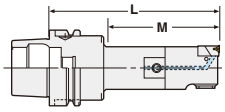
Fig.3

Code No. of the insert tip  are shown.

PAT.

TAPER	Code No.	Boring Range D	Boring Depth M	C	C_1	Shank Code No.	Extension Spacer Code No.	P.280 Head No.	P.280 Insert No.	Weight (kg)	Fig
HSK63A	HSK63A-ZMAC32R-150V	31.8～42.2	77	31	42	HSK63A-Q16- 95	—	16-ZMAC32R- 55V	CC06-C	2.2	1
	-180V		110			-Q16-125				2.4	
	-195V		122			-Q16- 95	SP16-16-45			2.4	2
	-ZMAC42R-150V	41.8～55.2	97	40	50	-Q20- 80	—	20-ZMAC42R- 70V		2.7	1
	-180V		130			-Q20-110				2.9	
	-210V		157			-Q20- 80	SP20-20-60			3.1	2
	-ZMAC55R-165V	54.8～70.2	135	53	50	-Q26- 95	—	26-ZMAC55R- 70V		3.6	1
	-210V		180			-Q26-140				4.3	
	-225V		195			-Q26- 95	SP26-26-60			4.3	2
	-ZMAC70R-165V	69.8～85.2	165	67	52.4	-Q34- 95	—	34-ZMAC70R- 70V	CC08-C	5.1	4
	-180V		180			-Q34-110				5.5	
	-225V		225			-Q34- 95	SP34-34-60			6.5	
	-ZMAC85R-195V	84.8～100.2	195	83	52.4	-Q42- 95	—	42-ZMAC85R-100V		8.7	

★MIN. dial readout : **ZMAC25-VR** & smaller is 0.02mm on diameter. **ZMAC32-VR** and larger are 0.01mm on diameter.
★**"C" grade (Coated) insert for Steel, Stainless & Cast Iron is supplied as Standard with the head (Smooth boring & Long tool-life).** ☞**P.280** Please refer ☞**P.117** for cutting condition.
We would recommend "B" grade (CBN) insert for Hardened Steel & High Speed boring of Cast Iron.
★Please refer ☞**P.283** for base holder, ☞**P.102** for spacer and ☞**P.87, P.88** for head.
★Centre Through Tool Coolant function is available as standard.
★For **HSK40A** or **50A**, modular connection system is applied. Please refer ☞**P.283** for Base Holder.
★**When L length is required longer than standard, please specify boring depth M.**



Boring Arbor with Extension Spacer



ZMAC-V for Multi-Stage Boring Bar ☞P.107

Please contact us for the special boring bar.





High Pressure Coolant Through Tool

HSK ZMAC ADVANCED BORING ARBOR (ZMAC-VR)

NIKKEN

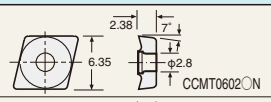
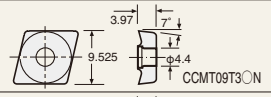
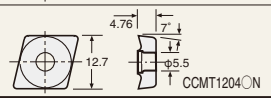
Insert Tip for ZMAC-VR

●:best ○:good

Material	Coated Carbide M	Coated Carbide K
Steel	●	
Stainless Steel	●	
Cast Iron	○	●
Aluminium		
High Speed finish for Cast Iron		
Hardened Steel		
High Speed finish for Aluminium		

Please add the grade indication into ○, and add the insert tip material indication at the end off the Code No.
e.g. CC12-C8(AC630M)

There is the CBN insert tip which both corners can be used.
Please refer ☞**P.119** for ISO code of the insert tip.

Applicable Arbor	Dimension	Code No.	Grade	C	
			Material / Nose R	AC630M	AC410K
ZMAC32-VR, ZMAC42-VR, ZMAC55-VR		CC06-○4	0.4	●	●
		CC06-○8	0.8	●	●
ZMAC70-VR, ZMAC85-VR		CC08-○4	0.4	●	●
		CC08-○8	0.8	●	●
ZMAC100-VR, ZMAC140-VR		CC12-○4	0.4	●	●
		CC12-○8	0.8	●	●

Code No. of the insert tip are shown.

TAPER	Code No.	Boring Range D	Boring Depth M	C	C1	Shank Code No.	Extension Spacer Code No.	P.280 Head No.	P.280 Insert No.	Weight (kg)	Fig
HSK100A	HSK100A-ZMAC 32R-180V	31.8～42.2	77	31	50	HSK100A-Q16-125N	—	16-ZMAC 32R- 55V	CC06-C	4.7	1
	-210V		110			-Q16-155				4.8	
	-225V		122			-Q16-125N	SP16-16-45			4.9	2
	-ZMAC 42R-180V	41.8～55.2	97	40	60	-Q20-110	—	20-ZMAC 42R- 70V		5.2	1
	-195V		130			-Q20-125				5.2	
	-225V		142			-Q20-110	SP20-20-45			5.6	2
	-240V		157			-Q20-110	SP20-20-60			5.7	
	-ZMAC 55R-210V	54.8～70.2	117	53	65	-Q26-140	—	26-ZMAC 55R- 70V		6.7	1
	-240V		182			-Q26-170N				6.8	
	-270V		177			-Q26-140	SP26-26-60			8.3	2
	-ZMAC 70R-240V	69.8～85.2	187	67	80	-Q34-170	—	34-ZMAC 70R- 70V	CC08-C	9.2	1
	-270V		217			-Q34-200				9.8	
	-300V		247			-Q34-170	SP34-34-60			10.7	2
	-ZMAC 85R-225V	84.8～100.2	187	83	—	-Q42-125	—	42-ZMAC 85R-100V		11.7	1
	-290V		252			-Q42-190				14.2	
	-315V		277			-Q42-125	SP42-42-90			15.2	2
	-ZMAC100R-225V	99.5～140.5	225	95	83	-Q42-125	—	42-ZMAC100R-100V	CC12-C	11.6	4
	-290V		290			-Q42-190				14.3	
	-325V		325			-Q42-225A				17.0	
	-375V		375			-Q42-275A				19.7	
	-425V		425			-Q42-325A				22.4	
	-ZMAC140R-225V	139.5～180.5	225	135	83	-Q42-125	—	42-ZMAC140R-100V		13.0	
	-290V		290			-Q42-190				15.7	
	-325V		325			-Q42-225A				18.4	
	-375V		375			-Q42-275A				21.1	
	-425V		425			-Q42-325A				23.8	

★MIN. dial readout : **ZMAC25-VR** & smaller is 0.02mm on diameter. **ZMAC32-VR** and larger are 0.01mm on diameter.
★**When L length is required longer than standard, please specify boring depth M.** ★Centre Through Tool Coolant function is available as standard.
★**"C" grade (Coated) insert for Steel, Stainless&Cast Iron is supplied as Standard with the head (Smooth boring & Long tool-life).** ☞**P.280**
We would recommend **"B"** grade (**CBN**) insert for Hardened Steel & High Speed boring of Cast Iron. Please refer ☞**P.117** for cutting condition.
★Please refer ☞ **P.283** for base holder, ☞ **P.102** for spacer and ☞**P.87, P.88** for head.

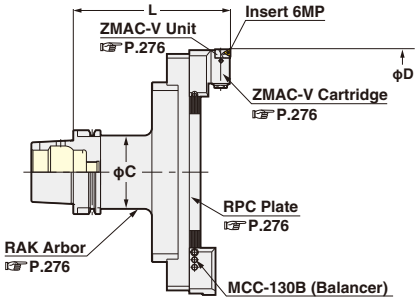
HSK BALANCE-CUT BAC ADVANCED BORING ARBOR for LARGE DIA. NIKKEN



BAC-V

For Finishing

- MIN. dial readout on dia. : 0.01mm
- Boring Dia : φ130～φ595mm

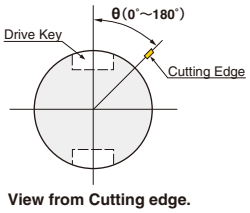


P.119

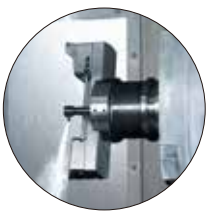
Boring Dia:φ130～595mm

TAPER	Code.No	D MIN.～MAX.	L	C	RAK Arbor Code No.	PPC Plante No	Cartridge (Balancer)	Weight (Kg)
HSK 63A	HSK 63A-BAC130-205V	130～195	205	61	HSK 63A-RAK-130A	RPC-130		6.5
	-BAC180-205V	180～245				-180		7.5
HSK100A	HSK100A-BAC130-185V	130～195	185	90	HSK100A-RAK-110A	RPC-130	MCCZ-130V (MCC-130B) Insert 6MP	9.5
	-235V		235		-160A			12.0
	-285V		285		-210A			14.7
	-335V		335		-260A			17.3
	-385V		385		-310A			20.1
	-435V		435		-360A			22.8
	-485V		485		-410A			25.5
	-BAC180-185V	180～245	185		-RAK-110A	RPC-180		10.1
	-235V		235		-160A			12.6
	-285V		285		-210A			15.3
	-335V		335		-260A			18.0
	-385V		385		-310A			20.7
	-435V		435		-360A			23.3
	-485V		485		-410A			26.1
	-BAC230-185V	230～295	185		-RAK-110A	RPC-230		10.8
	-235V		235		-160A			13.3
	-285V		285		-210A			16.0
	-335V		335		-260A			18.7
	-385V		385		-310A			21.3
	-435V		435		-360A			24.1
	-485V		485		-410A			26.8
	-BAC280-185V	280～345	185		-RAK-110A	RPC-280		11.4
	-235V		235		-160A			13.9
	-285V		285		-210A			16.6
	-335V		335		-260A			19.3
	-385V		385		-310A			22.0
	-435V		435		-360A			24.7
	-485V		485		-410A			27.4
	-BAC330-210V	330～395	210	98	HSK100A-RAK330-125	RPC-330		18.0
	-BAC380-210V	380～445				-380		18.8
	-BAC430-210V	430～495				-430		19.7
	-BAC480-210V	480～545				-480		20.6
	-BAC530-210V	530～595				-530		21.4

★**"C" grade** (**Coated**) Inserts are supplied as standard.☞**P.119** Please refer☞**P.117** for cutting condition.
★Unit **"M5HZ-55V"** is provided as standard, please refer ☞**P.276** for Arbor (**RAK**) and Plate (**RPC**).
★Arbor, Plate and Cartridge are delivered in separate packages.
★When ordering, please let us know machine maker and model no. to avoid the interfererce with tool magazine of **ATC**.
★The location of cutting edge is same as drive key in standard.
The different location is available, please specify **θ** in Code No. **e.g. HSK100A-BAC180-235V (90°)**
★**For centre through tool coolant type, please add "-C" at the end of Code No. e.g. HSK100A-BAC130-185V-C**



View from Cutting edge.



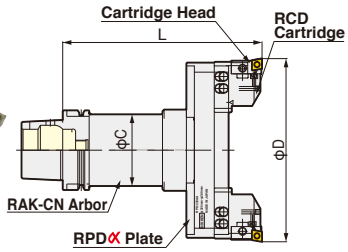
High Pressure Coolant Through Tool

BALANCE-CUT BORING ARBOR for LARGE DIA. ULTRA-LIGHT WEGHT NIKKEN

RACα BORING ARBOR

For Roughing





RACα

High Pressure Coolant Through Tool

P.74

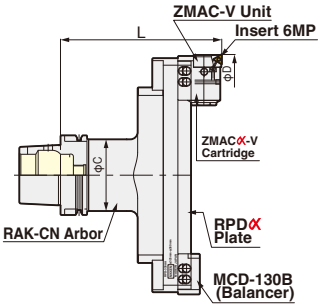
TAPE	Code.No	D MIN.~MAX.	L	Over Turning MIN.~MAX.
HSK63A	HSK 63A-RAC130-225AA	130~180	225	10~30
	-RAC180-225AA	180~230		30~80
HSK100A	HSK100A-RAC130-205AA	130~180	205	10~30
	-255AA		255	
	-305AA		305	
	-355AA		355	
	-405AA		405	
	-455AA		455	
	-505AA		505	
	-RAC180-205AA	180~230	205	30~80
	-255AA		255	
	-305AA		305	
	-355AA		355	
	-405AA		405	
	-455AA		455	
	-505AA		505	
	-RAC230-205AA	230~280	205	80~130
	-255AA		255	
	-305AA		305	
	-355AA		355	
	-405AA		405	
	-455AA		455	
	-505AA		505	
	-RAC280-205AA	280~330	205	130~180
	-255AA		255	
	-305AA		305	
	-355AA		355	
	-405AA		405	
	-455AA		455	
	-505AA		505	
	-RAC330-220AA*	330~380	220 (230*)	180~230
	-RAC380-220AA*	380~430		230~280
	-RAC430-220AA*	430~480		280~330
	-RAC480-220AA*	480~530		330~380
	-RAC530-220AA*	530~580		380~430

★The Code No. on above table are the boring arbors with **RCD-130** cartridge (Insert tip: **CN08**) the Heavy Duty Boring of Iron and Cast Iron. Please refer ☞**P.116** for cutting condition.
★Boring arbor with cartridges & insert for Steel, Stainless Steel and Cast Iron (**E**) , for Aluminum (**A**) and for Through Hole & Multi Sheets (**K**) are available. Please refer ☞**P.96** for cartridges. **e.g. HSK100A-RAC130-205AA-E**
★Please refer ☞**P.96** for **RAK** arbor and **RPD** plate.
★Arbor, plate and cartridges are delivered in separate packages.
★Please check the interference of the arbor with your M/C not to occur t he interference in the tool magazine.
★The location of the cutting edge is same as the drive key for standard. The different location is available, please specify θ. **e.g. HSK100A-RAC180-255AA (90˚)**

BACα ADVANCED BORING ARBOR

For Finishing





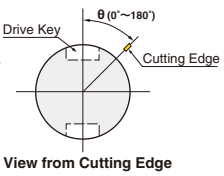
BACα-V

High Pressure Coolant Through Tool

PAT. P.119

TAPE	Code.No	D MIN.~MAX.	L	Over Turning MIN.~MAX.
HSK63A	HSK 63A-BAC130-225AAV	130~195	225	10~30
	-BAC180-225AAV	180~245		30~80
HSK100A	HSK100A-BAC130-205AAV	130~195	205	10~30
	-255AAV		255	
	-305AAV		305	
	-355AAV		355	
	-405AAV		405	
	-455AAV		455	
	-505AAV		505	
	-BAC180-205AAV	180~245	205	30~80
	-255AAV		255	
	-305AAV		305	
	-355AAV		355	
	-405AAV		405	
	-455AAV		455	
	-505AAV		505	
	-BAC230-205AAV	230~295	205	80~130
	-255AAV		255	
	-305AAV		305	
	-355AAV		355	
	-405AAV		405	
	-455AAV		455	
	-505AAV		505	
	-BAC280-205AAV	280~345	205	130~180
	-255AAV		255	
	-305AAV		305	
	-355AAV		355	
	-405AAV		405	
	-455AAV		455	
	-505AAV		505	
	-BAC330-220AAV*	330~395	220 (230*)	180~230
	-BAC380-220AAV*	380~445		230~280
	-BAC430-220AAV*	430~495		280~330
	-BAC480-220AAV*	480~545		330~380
	-BAC530-220AAV*	530~595		380~430

★**"C" grade (Coated)** Inserts are supplied as standard. ☞**P.119** Please refer ☞**P.116** for cutting condition.
★Unit **"M10HZ-75V"** is provided as semi-standard, please refer **"M10HZ-85V"** ☞**P.98** for Arbor (**RAK**) and Plate (**RPD**).
★Arbor, Plate and Cartridge are delivered in separate packages.
★When ordering, please let us know machine maker and model no. to avoid the interferece with tool magazine of **ATC**.
★The location of cutting edge is same as drive key in standard. The different location is available, please specify **θ** in Code No. **e.g. HSK100A-BAC180-255AAV (90°)**



View from Cutting Edge

HSK BASE HOLDER for MODULAR TYPE

NIKKEN



Q

Fig.1

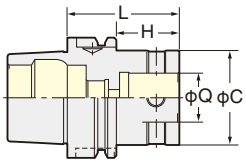


Fig.2

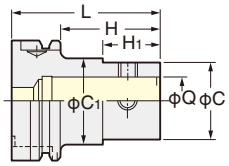
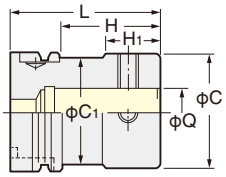
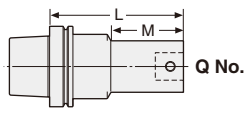


Fig.3



TAPER	Code No.	Q	L	C	C1	H	H1	Coupling Bolt No.	Fig.	Weight(kg)
HSK 40A	HSK 40A-Q26- 75	26	75	50	33.6	55	40	B26N	3	0.8
HSK 50A	HSK 50A-Q26- 75	26	75	50	41.6	48	33	B26N	3	1.1
HSK 63A	HSK 63A-Q 9- 80	9	80	19	30	49	5	B19	2	0.7
	- 95N		95			64	27			0.7
	-Q12- 80	12	80	24	35	49	12	B12	2	0.8
	-110		110			79	50			0.8
	-Q16- 95	16	95	31	42	64	22	B16	2	1.0
	-125		125			94	55			1.1
	-Q20- 80	20	80	40	50	53	27	B20	2	1.4
	-110		110			83	60			1.3
	-Q26- 60	26	60	50	—	33	—	B26N	1	1.0
	- 95		95			68				1.5
	-140		140			113				2.3
	-Q34- 95	34	95	64	52.4	68	53	B34	3	2.0
	-110		110			83	68			2.4
	-Q42- 95	42	95	83	52.4	68	35	B42	3	2.5
HSK100A	HSK100A-Q 9-110	9	110	19	40	76	5	B19	2	2.3
	-125N		125			91	27			2.3
	-Q12- 95	12	95	24	44	61	12	B12	2	2.3
	-125		125			91	50			2.3
	-Q16-125N	16	125	31	50	91	22	B16	2	2.8
	-155		155			121	55			2.9
	-Q20-110	20	110	40	60	76	27	B20	2	3.0
	-125		125			91	60			2.9
	-Q26- 65	26	65	50	—	33	—	B26N	1	2.4
	-140		140		65	106	45		2	4.5
	-170N		170			136	110			4.6
	-Q34-140	34	140	64	—	106	—	B34	1	4.4
	-170		170		80	138	117		2	5.3
	-200		200			168	147			5.9
	-Q42-125	42	125	83	—	95	—	B42	1	5.3
	-190		190			160				7.9
	-Q42-225A	42	225	83		—				11.7
	-275A		275							14.4
	-325A		325							17.1
	-375A		375							19.8

★ϕC of **Q26** base holder has been increased from 45mm to 50mm due to improvement of its rigidity.
★All base holders have a centre through-tool coolant hole.
★The Coupling screw & wrench are supplied as standard.
★When L length is required longer than standard, please specify the boring depth M.



HSK

HSK DJ BORING BAR

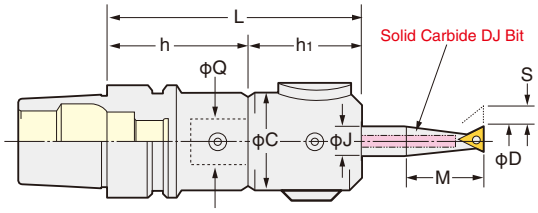
NIKKEN



DJ



High Pressure Coolant Through Tool is available.



P.119 P.120

TAPER	Code No.	Boring Range D	Boring Depth M	L	C	Bit Hole Size J	Shank Code No. HSK No.-Q-h	Head Code No. Q-MinD-h1	Bit Stroke S	DJ Bit Code No.
HSK 63A	HSK 63A -DJ3-100A	3~28	14~ 80	100	50	10	HSK 63A-Q26- 60	Q26-DJ3-40A	5.2	J10
	-135A			135			- 95			
	-DJ8-104AN	3~50	14~130	104	59	16	HSK 63A-Q26- 60	-DJ8-44AN	6.0	J16
	-139AN			139			- 95			
HSK100A	HSK100A -DJ3-105A	3~28	14~ 80	105	50	10	HSK100A-Q26- 65	Q26-DJ3-40A	5.2	J10
	-210A			210			-170			
	-DJ8-109AN	3~50	14~130	109	59	16	HSK100A-Q26- 65	-DJ8-44AN	6.0	J16
	-214AN			214			-170			

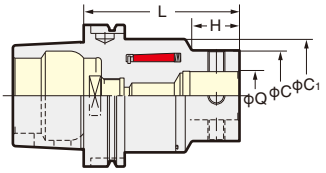
★**MIN. dial readout on dia.: 0.01mm, Sub scale: 0.005mm, 0.8mm/rev.**
★Each boxed set of **DJ3** and **DJ8** Boring Bars include 4 pcs of **DJ** Boring Bits as standard.
Bits included to **HSK63A-DJ8-104A : J16-8-40, J16-18-80, J16-28-85, J16-38-85**
Bits included to **HSK63A-DJ8-104AN : J16-8-40, J16-18-60, J16-28-65, J16-38-65**
★**DJ** Boring Bar without Boring Bits is also available. Please add**"-BD"**at the end of Code No. **e.g. HSK63A-DJ3-100A-BD**
★Shank and **DJ** Head(including Boring Bits)are delivered in separate packages.
★Please refer ☞**P.100** for Boring Bits. Please refer ☞**P.118** for cutting condition.

MAJOR DREAM HOLDER HSK BASE HOLDER for MODULAR TYPE

NIKKEN

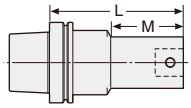


MDQ
Photo shows with spacer and **ZMAC𝒳-V** head.



TAPER	Code No.	Q	L	C	C1	H	Weight(kg)	ZMAC-V Boring Range
HSK 50A	HSK 50A-MDQ26- 95	26	95	50	50	95.0	1.2	16~70
HSK 63A	HSK 63A-MDQ26-100	26	100	50	52.4	30.0	1.5	16~70
HSK100A	HSK100A-MDQ26-135	26	135	50	80	18.0	5.2	16~70
	-MDQ34-140	34	140	64		27.5	5.3	16~85
	-MDQ42-150	42	150	83		121	6.1	16~180

★All base holders have a centre through coolant hole.
★The coupling bolt and wrench are supplied as standard.
★**When L length is required longer than standard, please specify the boring depth M and Q No.**



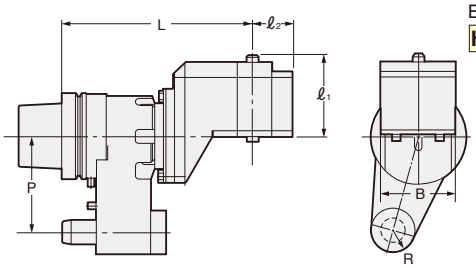
QUICK TYPE ANGULAR HEAD (Free Positioning in 360°)

NIKKEN

Quick type Off-Set Angular Head



AFT



Explanation of the Code No.

HSK63A - AF T 30 - 210

- 210: Length from Gauge Line
- 30: Taper No. of Adapter
- T: Quick type
- AF: Off-Set type Angular Head
- HSK63A: Shank

MAX2,000min-1

TAPER	Code No.	Shank	L	P	ℓ1	ℓ2	B	R	Adapter	Weight (kg)
HSK 63A	HSK 63A-AFT30-210	HSK 63A	210	65	85	35	70	17.5	AHK30	7.5
HSK100A	HSK100A-AFT35-237	HSK100A	237	110	85	45	84	25	AHK35	16.0

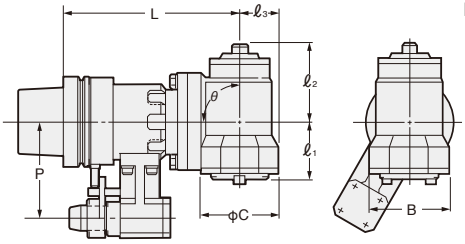
★Taper Connection System is applied to Stopper Block. (Different from the another FA Tooling) ★All types are available with Oil Hole System. ★Test bar is attached as standard.
★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension.
★When M/C spindle rotates CW, the cutter rotates CW.



Quick type 90° Angular Head



AHT



Explanation of the Code No.

HSK63A - AH T 30 - 165 - 90

- 90: Angle
- 165: Length from Gauge Line
- 30: Taper No. of Adapter
- T: Quick type
- AH: Symbol of Angular Head
- HSK63A: Shank

MAX2,000min-1

TAPER	Code No. L -θ	Shank	L	P	ℓ1	ℓ2	ℓ3	C	B	θ	Adapter	Weight (kg)
HSK 63A	HSK 63A-AHT30-165 -90	HSK 63A	165	65	58	61	37	86	80	90	AHK30	6.5
	-250*-90	HSK 63A	250									10.5
HSK100A	HSK100A-AHT35-217 -90	HSK100A	217	110	65	88	45	100	90	90	AHK35	17.0
	-300*-90	HSK100A	300									22.0

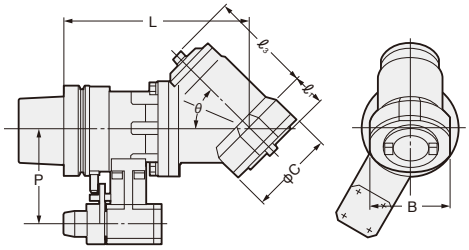
★Taper Connection System is applied to Stopper Block. (Different from the another FA tooling) ★All types are available with Oil Hole System. ★Test bar is attached as standard.
★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension.
★Models with ✻ mark : Detailed discussion is needed. **★When M/C spindle rotates CCW, the cutter rotates CW.**



Quick type 30°, 45°, 60°Angular Head



AHT Photo shows 30° type.



Explanation of the Code No.

HSK63A - AH T 30 - 220 - 30

- 30: Angle
- 220: Length from Gauge Line
- 30: Taper No. of Adapter
- T: Quick type
- AH: Symbol of Angular Head
- HSK63A: Shank

MAX2,000min-1

TAPER	Code No. L -θ	Shank	L	P	ℓ1	ℓ2	C	B	θ	Adapter	Weight (kg)
HSK 63A	HSK 63A-AHT30-220 -30	HSK 63A	220	65	1.5	122	86	80	30	AHK30	6.5
	-185 -45		185		35	88			45		6.5
	-175 -60		175		35	88			60		6.5
	-250*-30	HSK 63A	250	65	1.5	122	86	80	30	AHK30	10.5
	-45				35	88			45		10.5
	-60				35	88			60		10.5
HSK 100A	HSK100A-AHT35-265 -30	HSK100A	265	110	0	140	100	90	30	AHK35	17.0
	-232 -45		232		26	110			45		17.0
	-217 -60		217		40	105			60		17.0
	-300*-30	HSK100A	300	110	0	140	100	90	30	AHK35	22.0
	-45				26	110			45		22.0
	-60				40	105			60		22.0

★Taper Connection System is applied to Stopper Block. (Different from the another FA tooling) ★All types are available with Oil Hole System. ★Test bar is attached as standard.
★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension.
★Models with ✻ mark : Detailed discussion is needed. **★When M/C spindle rotates CCW, the cutter rotates CW.**



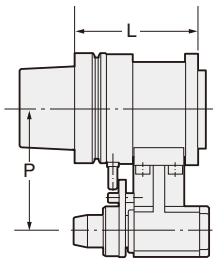
MODULAR TYPE ANGULAR HEAD

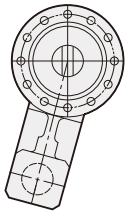
NIKKEN

Modular type Angular Head AHM



AHM





MAX**6,000**min-1

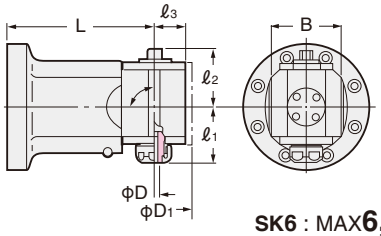
TAPER	Code No. -L	L	P	Weight (kg)	Suitable Modular Head
HSK 63A	**HSK 63A-AHM-115**	100	65	4.5	
HSK100A	**HSK100A-AHM-127**	120	110	11.5	

★Taper Connection System is applied to Stopper Block. (Different from the another FA Tooling) ★All types are available with Oil Hole System.
★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension.

90°type Modular Head AHM90



AHM



Explanation of the Code No.
AHM90 - **SK6** - **80**
- 80: Length from Gauge Line
- SK6: Symbol of Slim Chuck
- AHM90: Symbol of Modular Head 90°type

SK6 : MAX**6,000**min-1 **SK10,16** : MAX**4,000**min-1

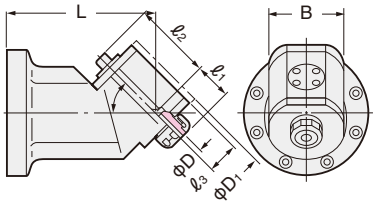
Code No. -L	D	ℓ1	ℓ2	ℓ3	D1	B		Weight (kg)	SK Collet
AHM90-SK 6-80, 120, 150*	0.7～6	42	35	22	50	48	90	3.0, 4.0, 4.5	**SK 6**
-SK10-80, 120, 150*	1.75～10	63	57	32	64	60		3.5, 4.5, 5.0	**SK 10**
-SK16-80, 120, 150*	2.75～16	66	58	35	74	70		4.2, 5.2, 5.7	**SK 16**

★*Mark is for light machining. ★For **SK** Collet, please refer ☞**P.253**. ★**When M/C spindle rotates CCW, the cutter rotates CW.** ★Test bar is attached as standard.





AHM



Explanation of the Code No.
AHM45 - **SK6** - **120**
- 120: Length from Gauge Line
- SK6: Symbol of Slim Chuck
- AHM45: Symbol of Modular Head 45°type

SK6 : MAX**6,000**min-1 **SK10,16** : MAX**4,000**min-1

Code No. -L	D	ℓ1	ℓ2	ℓ3	D1	B		Weight (kg)	SK Collet
AHM45-SK 6-120, 150*	0.7～6	27	67	22	50	52	45	3.0, 4.0, 4.5	**SK 6**
-SK10-120, 150*	1.75～10	39	80	30	64	60		3.5, 4.5, 5.0	**SK 10**
-SK16-120, 150*	2.75～16	38	90	35	74	70		4.2, 5.2, 5.7	**SK 16**

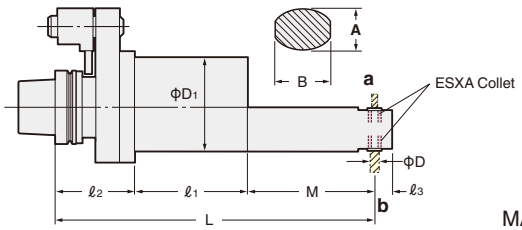
★*Mark is for light machining. ★For **SK** Collet, please refer ☞**P.253**. ★Angle 30°, 60° are also available as an option. ★**When M/C spindle rotates CCW, the cutter rotates CW.**
★Test bar is attached as standard.



Angular head for deep hole



AHPL



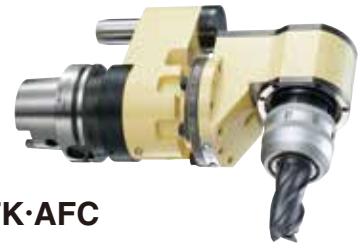
MAX**3,500**min-1

TAPER	Code No. -L	D	D1	A	B	L	M	ℓ1	ℓ2	ℓ3	min-1	Weight (kg)	Applicable Collet
HSK 63A	**HSK 63A-AHPL4-194**	1.0～4.0	80	25	31	194	32	67.5	94.5	14.5	6,450	5.0	**ESXA4**
	-218					218	56					5.5	
	-242					242	80					6.0	
	-266					266	104					7.5	
	-AHPL6-203	1.0～6.0	80	36	45	202.5	46.5	61.5	94.5	15	8,000	5.0	**ESXA6**
	-231					230.5	74.5					6.0	
	-259					258.5	102.5					8.0	
HSK 100A	**HSK100A-AHPL6-206**	1.0～6.0	80	36	45	205.5	46.5	61.5	97.5	15	8,000	7.0	**ESXA6**
	-234					233.5	74.5					8.0	
	-262					261.5	102.5					10.0	
	-AHPL8-255	1.0～8.0	110	43	47.5	254.5	73	78	103.5	20	6,000	9.0	**ESXA8**
	-287					286.5	105					10.0	
	-307					306.5	125					11.0	

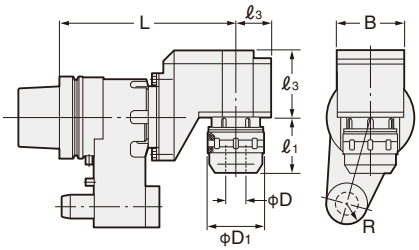
★**ESXA** Collet is supplied as an option. ★**Different shape is possible, please contact with us for more detail.**
★**When M/C spindle rotates cw, the cutter at a rotates CW and the cutter at b rotates CCW.**

HSK SOLID TYPE ANGULAR HEAD (Free Positioning in 360°) NIKKEN

Solid OFF SET type Angular head



AFK·AFC



Explanation of the Code No.

HSK63A - AF K 16 - 210

- 210: Length from Gauge Line
- 16: MAX. Chucking Dia.
- K: Kind of chuck — K : Slim Chuck, C : Milling Chuck
- AF: OFF SET type Symbol of Angular Head
- HSK63A: Shank

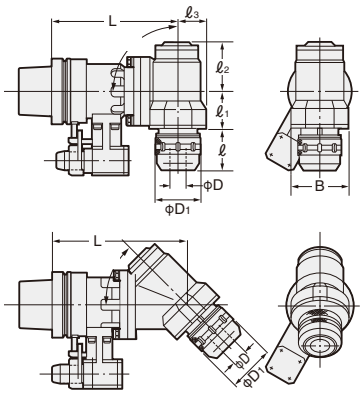
TAPER	Code No. -L	D	D_1	ℓ_1	ℓ_2	ℓ_3	B	R	min^{-1}	Weight (kg)	Collet
HSK 63A	HSK 63A-AFK16-210	2.75～16	40	50	85	35	70	17.5	2,000	8.5	SK 16
	-AFC20-210	2～20	52	56						8.7	KM 20
HSK100A	HSK100A-AFC20-237	2～20	52	58	85	45	84	25	2,000	17.0	KM 20
	-AFC32-237	3～32	69	65						17.2	KM 32

★Taper Connection System is applied to Stopper Block. (Different from the another FA Tooling) ★Test bar is attached as standard.
★All types are available with Oil Hole System.
★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension.
★For SK16, please refer ☞ P.253. For KM20 and KM32, please refer ☞ P.248.
★Please advise name of M/C builder and model No. etc. **★When M/C spindle rotates CW, the cutter rotates CW.**

Solid - 90°, 45°type Angular head



AHK·AHC



Explanation of the Code No.

HSK63A - AH K 10 - 195 - 90

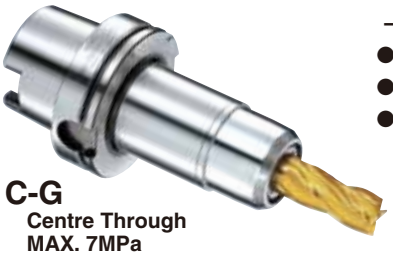
- 90: angle 30°, 45°, 60°, 90°
- 195: Length from Gauge Line
- 10: MAX chucking Dia
- K: Kind of chuck — K : Slim Chuck, C : Milling Chuck
- AH: Symbol of Angular Head
- HSK63A: Shank

TAPER	Code No. -L -	D	D_1	ℓ	ℓ_1	ℓ_2	ℓ_3	B	min^{-1}	Weight (kg)	Collet
HSK 63A	HSK 63A-AHK10-195 -90	1.75～10	27.5	18	45	57	32	60	4,000	8.0	SK 10
	-235*-90									9.0	
	-AHK16-195 -90	2.75～16	40	25	41	58	35	70		8.7	SK 16
	-235*-90									9.7	
	-AHC20-165 -90	2～20	52	57	58	61	37	80	2,000	7.1	KM20
	-250*-90									11.1	
HSK100A	HSK100A-AHK10-207 -90	1.75～10	27.5	18	45	57	32	60	4,000	15.0	SK 10
	-247*-90									16.0	
	-AHK16-207 -90	2.75～16	40	25	41	58	35	70		15.7	SK 16
	-247*-90									16.7	
	-AHK25-217 -90	7.5～25.4	55	57	60	82	45	90	2,000	17.2	SK 25
	-300*-90									22.2	
	-AHC32-217 -90	3～32	69							17.5	KM32
	-300*-90									22.5	

★Taper Connection System is applied to Stopper Block. (Different from the another FA Tooling) ★Test bar is attached as standard.
★All types are available with Oil Hole System.
★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension.
★For SK10 SK16 SK25, please refer ☞ P.253. For KM20 KM25 and KM32, please refer ☞ P.248.
★Angle 30°, 45°, 60° are also available as an option. ★ ✻Mark is for light cutting.
★When M/C spindle rotates CCW, the cutter rotates CW.
★Please contact with us for the dimension of 30°, 45°, 60° type.

HSK HIGH SPEED MILLING CHUCK (INCH)

NIKKEN



C-G
Centre Through
MAX. 7MPa
Photo shows High Speed Milling Chuck

ANNIVERSARY Type
—Powerful gripping torque—
- High rigidity
- High precision
- Compact design

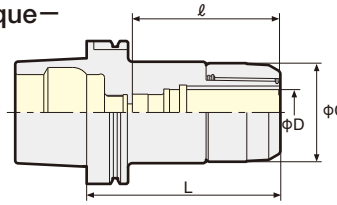


Fig. 1

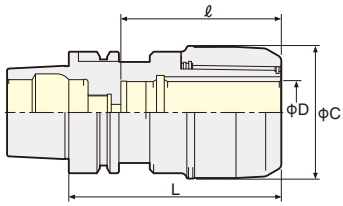


Fig. 2

TAPER	Code No.	C1	D	ℓ	L	MAX. min-1	Weight (kg)	Fig.	Collet	Chucking	Handle (Option)
HSK 63A	HSK 63A-C3/4 -95G	1.890	0.750	2.244	3.740	25,000	1.6	1	KM3/4	0.125～0.750	GH20
	-110G				4.331		1.8				
	-C1 -100G	2.165	1.000	2.362	3.937	20,000	1.9	2	KM1	0.125～1.000	GH25
	-130G				5.118		2.3				
	-C1 1/4 -110G	2.677	1.250	2.559	4.331		2.2		KM1 1/4	0.187～1.250	GH32
	-130G			2.756	5.118		2.6				
HSK100A	HSK100A-C 3/4 -115G	1.890	0.750	2.244	4.528	20,000	3.0	1	KM3/4	0.125～0.750	GH20
	-135G				5.315		3.6				
	-C1 -115G	2.165	1.000	2.362	4.528	15,000	3.3		KM1	0.125～1.000	GH25
	-135G				5.315		3.6				
	-C1 1/4 -115G	2.677	1.250	2.559	4.528	12,000	3.2		KM1 1/4	0.187～1.250	GH32
	-165G			2.756	6.496		4.8				

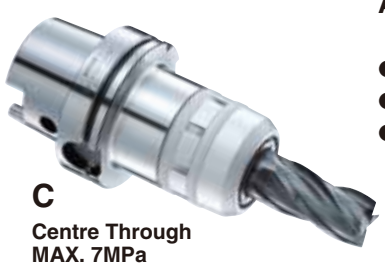
★Please note the acceptable shank tolerance is h6
★Please refer ☞P.291 for **KM** collet.(inch)



GH Handle ☞P. 48

HSK MILLING CHUCK (INCH)

NIKKEN



C
Centre Through
MAX. 7MPa

ANNIVERSARY Type
—Powerful gripping torque—
- High rigidity
- High precision
- Compact design

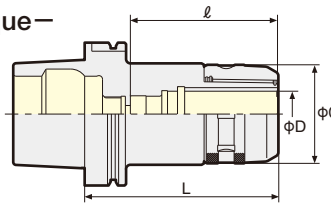


Fig. 1

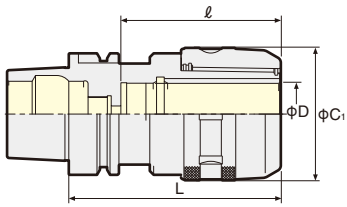


Fig. 2

TAPER	Code No.	C1	D	ℓ	L	Weight (kg)	Fig.	Collet	Chucking	Spanner (Option)
HSK 63A	HSK 63A-C3/4 -95	2.047	0.750	2.244	3.740	1.6	1	KM3/4	0.125～0.750	9HC22
	-110				4.331	1.8				
	-C1 -100	2.362	1.000	2.362	3.937	1.9	2	KM1	0.125～1.000	9HC25
	-130				5.118	2.3				
	-C1 1/4 -110	2.717	1.250	2.559	4.331	2.2		KM1 1/4	0.187～1.250	9HC32
	-130			2.756	5.118	2.6				
HSK100A	HSK100A-C 3/4 -115	2.047	0.750	2.244	4.528	3.0	1	KM3/4	0.125～0.750	9HC22
	-135				5.315	3.6				
	-C1 -115	2.362	1.000	2.362	4.528	3.3		KM1	0.125～1.000	9HC25
	-135				5.315	3.6				
	-C1 1/4 -115	2.717	1.250	2.559	4.528	3.2		KM1 1/4	0.187～1.250	9HC32
	-165			2.756	6.496	4.8				

★Please refer ☞P.291 for **KM** collet.(inch)
★Please note the acceptable shank tolerance is h6～7.



Spanner ☞P. 48

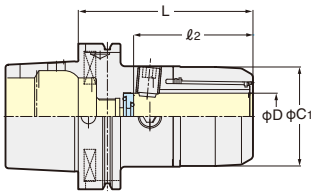
HSK

X-Treme Shank HSK X-Treme Chuck

NIKKEN



Centre Through
MAX. 7MPa



Explanation of the Code No.

HSK100A – C32EX – 121 – J

- J: J-Type (Jet Groove)
- Nominal Gauge Length
- X-Treme Chuck
- Chucking Capacity
- Symbol of Milling Chuck
- Shank No.

JAPAN, USA, EU PAT. CHINA PAT.P

TAPER	Code No. (ϕD - L)	C1	L	ℓ2	End mill with oil hole		Handle (Option)	Weight (kg)
					Stopper*	Face cap*		
HSK63A	HSK 63A-C12EX- 96	40	96	58	9MC12HEX- 6L	9C12SL-FS-EX-A1	GH16	1.3
	-C16EX-101	48	101	68	9MC16HEX-6.5L	9C16SL-FS-EX-A1	GH20	1.5
	-C20EX-106	55	106	71	9MC20HEX- 7L	9C20 -FS-EX-A1	GH25	1.7
HSK100A	HSK100A-C12EX- 96	40	96	58	9MC12HEX- 6L	9C12SL-FS-EX-A1	GH16	2.7
	-C16EX-106	48	106	68	9MC16HEX-6.5L	9C16SL-FS-EX-A1	GH20	3.0
	-C20EX-116	55	116	71	9MC20HEX- 12L	9C20 -FS-EX-A1	GH25	3.6
	-C25EX-116	55	116.3	76.3	9MC25HEX-6.2L	9C25SL-FS-EX-A1	GH25	3.5
	-C32EX-121	68	121.3	83.3	9MC32HEX- 7L	9C32SL-FS-EX-A1	GH32	4.0
	-C42EX-136	86	136	86	9MC42HEX- 9L	9C42SL-FS-EX-A1	9HC42	5.7
HSK125A	HSK125A-C20EX-121S	55	121	71	9MC20HEX- 12L	9C20 -FS-EX-A1	GH25	5.4
	-C25EX-121S	55	121.3	77.3	9MC25HEX-6.2L	9C25SL-FS-EX-A1	GH25	5.3
	-C32EX-136S	68	136.3	83.3	9MC32HEX- 7L	9C32SL-FS-EX-A1	GH32	6.3
	-C42EX-136S	86	136	86	9MC42HEX- 9L	9C42SL-FS-EX-A1	9HC42	7.1

Please use direct chucking without KM collet.

★ MAX. 7MPa of center through coolant is available with the stopper.
★ Please use **J**-type **X-Treme** chuck, when end mill without oil hole is used. **eg) HSK125A-C32EX-136S-J**
In case of **J**-type **X-Treme** chuck, **J**-type stopper and **J**-type face cap (with Jet grooves) are attached. **9MC32HEX-7L-J, 9C32L-FS-EX-J1**
J-type **X-Treme** chuck is used for the pocket milling and side milling.



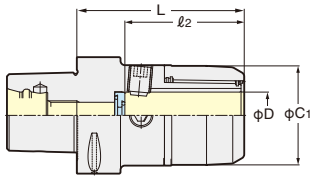
GH Handle ☞P. 48

X-Treme Shank C8 X-Treme Chuck

NIKKEN



Centre Through
MAX. 7MPa



Explanation of the Code No.

C8 – C32EX – 116 – J

- J: J-Type (Jet Groove)
- Nominal Gauge Length
- X-Treme Chuck
- Chucking Capacity
- Symbol of Milling Chuck
- Shank No.

JAPAN, USA, EU PAT. CHINA PAT.P

TAPER	Code No. (ϕD - L)	C1	L	ℓ2	End mill with oil hole		Handle (Option)	Weight (kg)
					Stopper*	Face cap*		
C8	C8-C20EX-106	55	106	71	9MC20HEX- 7L	9C20 -FS-EX-A1	GH25	3.0
	-C25EX-111	55	111.3	77.3	9MC25HEX-6.2L	9C25SL-FS-EX-A1	GH25	3.0
	-C32EX-116	68	116.3	83.3	9MC32HEX- 7L	9C32SL-FS-EX-A1	GH32	3.5

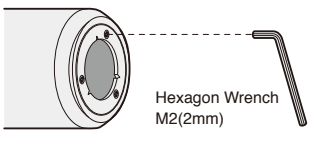
Please use direct chucking without KM collet.

★ MAX. 7MPa of center through coolant is available with the stopper.
★ Please use **J**-type **X-Treme** chuck, when end mill without oil hole is used. **eg) C8-C32EX-116-J**
In case of **J**-type **X-Treme** chuck, **J**-type stopper and **J**-type face cap (with Jet grooves) are attached. **9MC32HEX-7L-J, 9C32L-FS-EX-J1**
J-type **X-Treme** chuck is used for the pocket milling and side milling.



GH Handle ☞P. 48

How to exchange the face caps



The face cap is fixed with 3 pieces of M2.5 screws. (**C42EX**: M3) The face cap must be centred or centralized, when exchanged. The special centering jig fixture and wrench are provided as an option.

	screw
C12EX, C16EX, C20EX	M2.5-6L
C25EX, C32EX	SNSS-M2.5 × 6-SD
C42EX	CBS3-6

Please refer P.3 the accessories such as the stopper and face cap.

CAT MILLING CHUCK (INCH)

NIKKEN



CAT

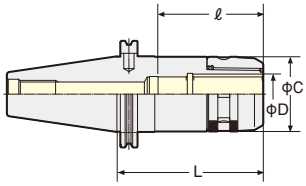


Fig. 1

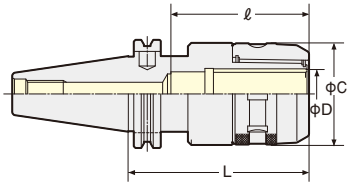


Fig. 2

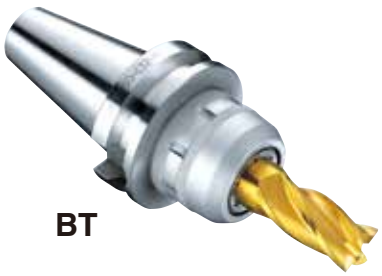
TAPER	Code No.	C	D	ℓ	L	Weight (kg)	Fig.	Collet	Chucking	Spanner (Option)
CAT40	CAT40 -C3/4 - 70U	2.047	0.750	3.150	2.75	1.6	2	KM3/4	0.125～0.750	9HC22
	- 85U				3.346	1.8				
	-105U				4.134	2.0				
	-120U				4.724	2.2				
	-C1 - 85U	2.362	1.000	3.150	3.346	2.1		KM1	0.125～1.000	9HC25
	-105U				4.134	2.3				
	-C1 1/4SL- 85U	2.717	1.250	3.031	3.346	2.1		KM1 1/4	0.187～1.250	9HC32
	-105U			3.543	4.134	2.5				
	-120U			4.134	4.724	2.8				
CAT50	CAT50 -C 3/4 -105U	2.047	0.750	3.150	4.134	4.5	1	KM3/4	0.125～0.750	9HC22
	-135U				5.315	4.8				
	-160U				6.496	5.1				
	-C1 -105U	2.362	1.000	3.150	4.134	4.8		KM1	0.125～1.000	9HC25
	-135U				5.315	5.2				
	-C1 1/4 - 90U	2.717	1.250	4.134	3.543	4.3		KM1 1/4	0.187～1.250	9HC32
	-105U				4.134	4.6				
	-135U				5.315	5.6				
	-165U				6.496	6.4				

★Please refer ☞P.291 for **KM** collet.(inch)
★Please note the acceptable shank tolerance is h6～7.

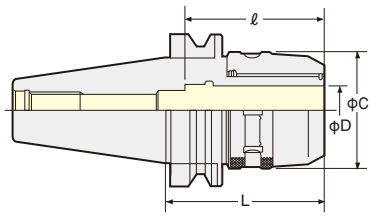
Spanner ☞P. 48

BT MILLING CHUCK (INCH)

NIKKEN



BT



TAPER	Code No.	C	D	ℓ	L	Weight (kg)	Collet	Chucking	Spanner (Option)
BT40	BT40 -C3/4 - 70	2.047	0.750	3.150	2.756	1.6	KM3/4	0.125～0.750	9HC22
	-105				4.134	2.0			
	-C1 - 70	2.362	1.000	3.150	2.756	1.8	KM1	0.125～1.000	9HC25
	- 90				3.543	2.1			
	-C1 1/4- 85	2.717	1.250	3.031	3.346	2.1	KM1 1/4	0.187～1.250	9HC32
	-120			4.134	4.724	2.8			
BT50	BT50 -C 3/4 -105	2.047	0.750	3.150	4.134	4.5	KM3/4	0.125～0.750	9HC22
	-135				5.315	4.8			
	-C1 -105	2.362	1.000	3.150	4.134	4.8	KM1	0.125～1.000	9HC25
	-135				5.315	5.2			
	-C1 1/4- 90	2.717	1.250	4.134	3.543	4.3	KM1 1/4	0.187～1.250	9HC32
	-135				5.315	5.6			

★Please refer ☞P.291 for **KM** collet.(inch)
★Please note the acceptable shank tolerance is h6～7.

Spanner ☞P. 48

CAT HIGH SPEED MILLING CHUCK (INCH)

NIKKEN



CAT

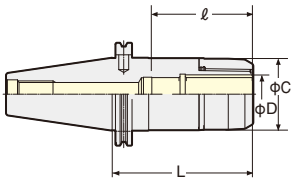


Fig. 1

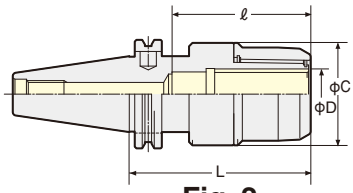


Fig. 2

TAPER	Code No.	C	D	ℓ	L	MAX. (min^{-1})	Weight (kg)	Fig.	Collet	Chucking	Handle (Option)
CAT40	CAT40-C3/4 - 85UG	1.890	0.750	3.150	3.346	25,000	1.8	2	KM3/4	0.125～0.750	GH20
	-105UG				4.134		2.0				
	-C1 - 85UG	2.165	1.000	3.150	3.346	20,000	2.1		KM1	0.125～1.000	GH25
	-105UG				4.134		2.3				
	-C1 1/4SL -105UG	2.677	1.250	2.500	4.134		2.5		KM1 1/4	0.187～1.250	GH32
	-120UG			3.150	4.724		2.8				
CAT50	CAT50-C 3/4 -105UG	1.890	0.750	3.150	4.134	20,000	4.5	1	KM3/4	0.125～0.750	GH20
	-135UG				5.315		4.8				
	-C1 -105UG	2.165	1.000	3.150	4.134	15,000	4.8		KM1	0.125～1.000	GH25
	-135UG				5.315		5.2				
	-C1 1/4 -105UG	2.677	1.250	4.134	4.134		4.6		KM1 1/4	0.187～1.250	GH32
	-135UG				5.315		5.6				

★Please note the acceptable shank tolerance is h6
★Please refer ☞P.291 for **KM** collet.(inch)



GH Handle ☞P. 48

STRAIGHT COLLET (INCH)

NIKKEN



KM phot shows **ANNIVERSARY type KM Collet .**

Style	KM Collet Code No.(OD-ID)
KM3/4	**KM3/4** -1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8
KM1	**KM1** -1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4, 7/8
KM1 1/4	**KM1 1/4** -1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4, 7/8,1

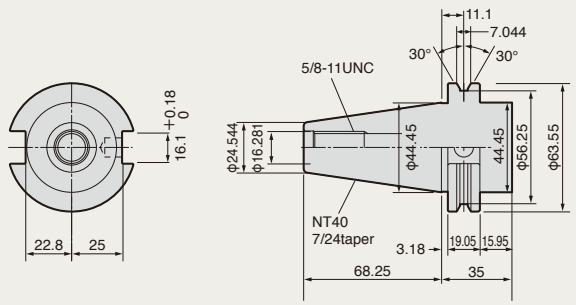
★Please note the acceptable shank tolerance is h6～h7.
★**KM** collet with OD: Inch & ID: Metric is also available as an option.
★Collet removal (**9CKR**) is an optional accessory for NC milling chuck.



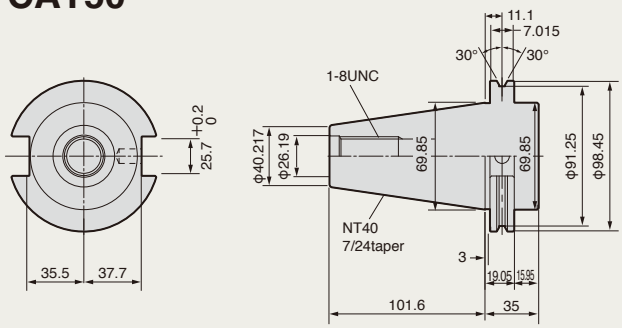
DIMENSION of CAT TOOL SHANK

NIKKEN

CAT40



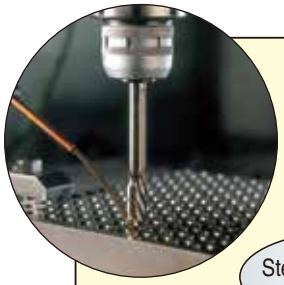
CAT50



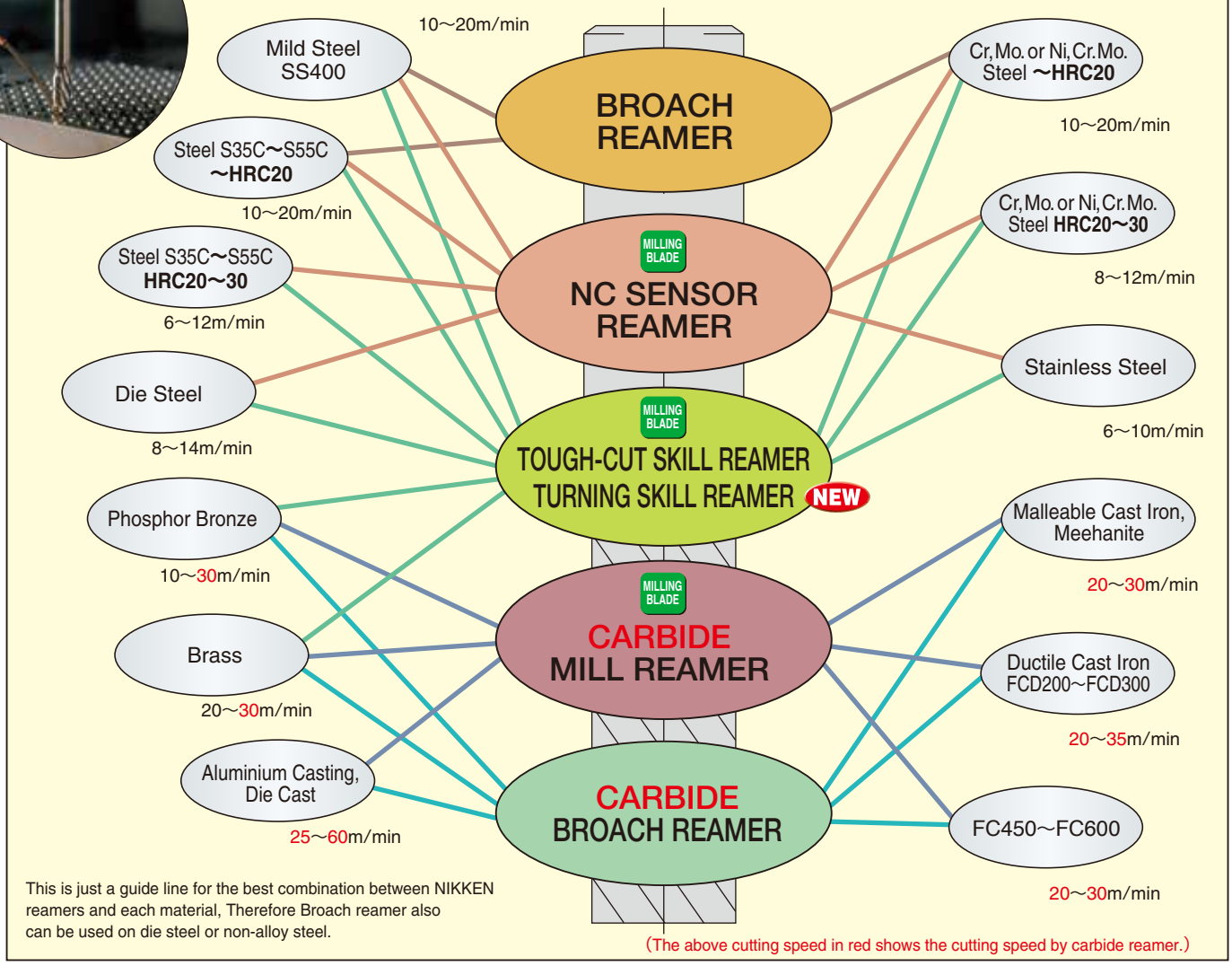
CAT standard is based on **ASME B5-50-1985 (CATERPILLAR 1975).**

NIKKEN

Wide Product Range to meet Any Material Requirements
Long Life•High Finishing Accuracy on Tough Materials



Cutting Speed on Each Material for Oil Base Coolant Use



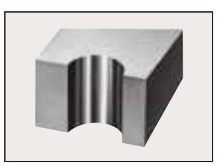
This is just a guide line for the best combination between NIKKEN reamers and each material, Therefore Broach reamer also can be used on die steel or non-alloy steel.

(The above cutting speed in red shows the cutting speed by carbide reamer.)

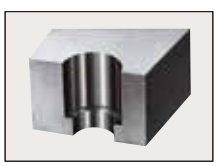
■REAMERS FOR THROUGH HOLE / STEPPED HOLE / BLIND HOLE

CAN BE SELECTED BY SHAPE OF THE HOLE

EXCELLENT STRAIGHTNESS AND CIRCULARTY.
FOR THROUGH HOLE



EXCELLENT STRAIGHTNESS AND CIRCULARTY.
FOR STEPPED HOLE



EXCELLENT STRAIGHTNESS AND CIRCULARTY.
FOR BLIND HOLE



WHEN YOU CANNOT GET GOOD RESULT FOR BLIND HOLE BY USING ENDMILL, BORING ARBOR AND SO ON, PLEASE TRY “REAMERS FOR BLIND HOLE

PARTICULAR CASE

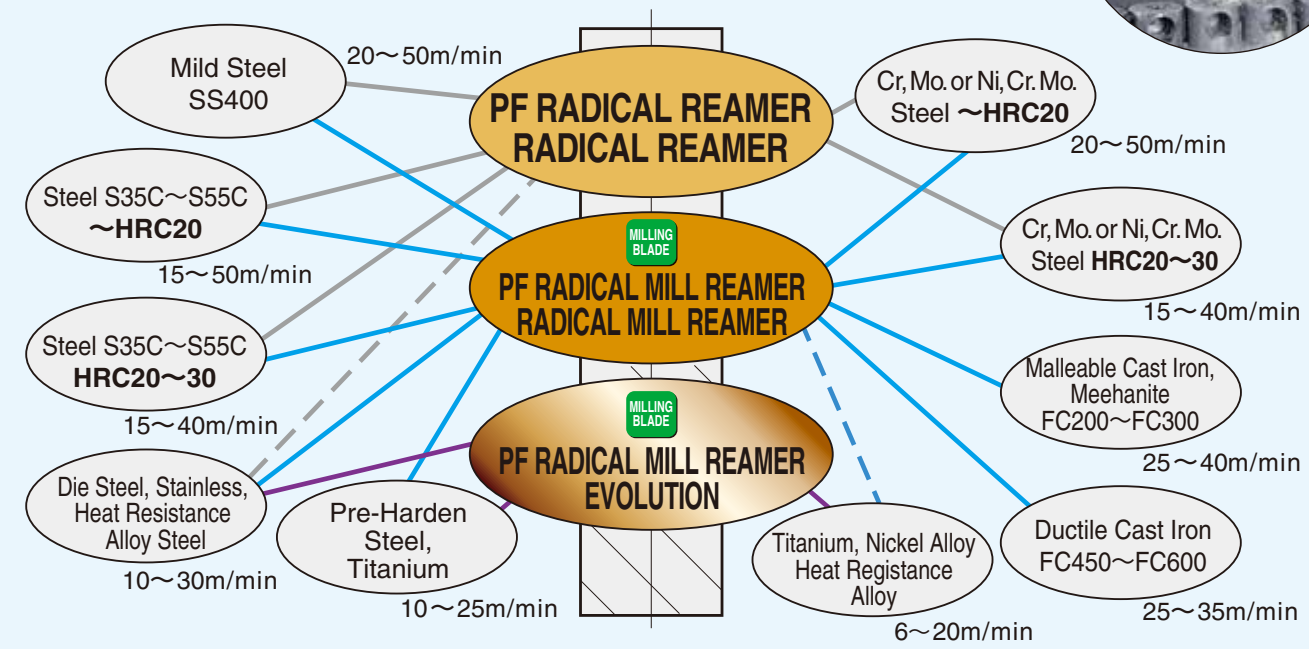
＊Coated reamer is normally not suitable for the cast iron, however(PF)RADICAL REAMER / NC SENSOR REAMER may be suitable for FCD400-600.
＊Under normal conditions, coated reamer is not suitable for the aluminium, however (PF)RADICAL REAMER may be suitable for ADC as well.
＊For the cast iron with soluable coolant, CARBIDE MILL REAMER (K01 GRADE) may be used.

NIKKEN

Wide Product Range to meet All Material Requirements
Long Tool Life•High Finishing Accuracy on Tough Materials

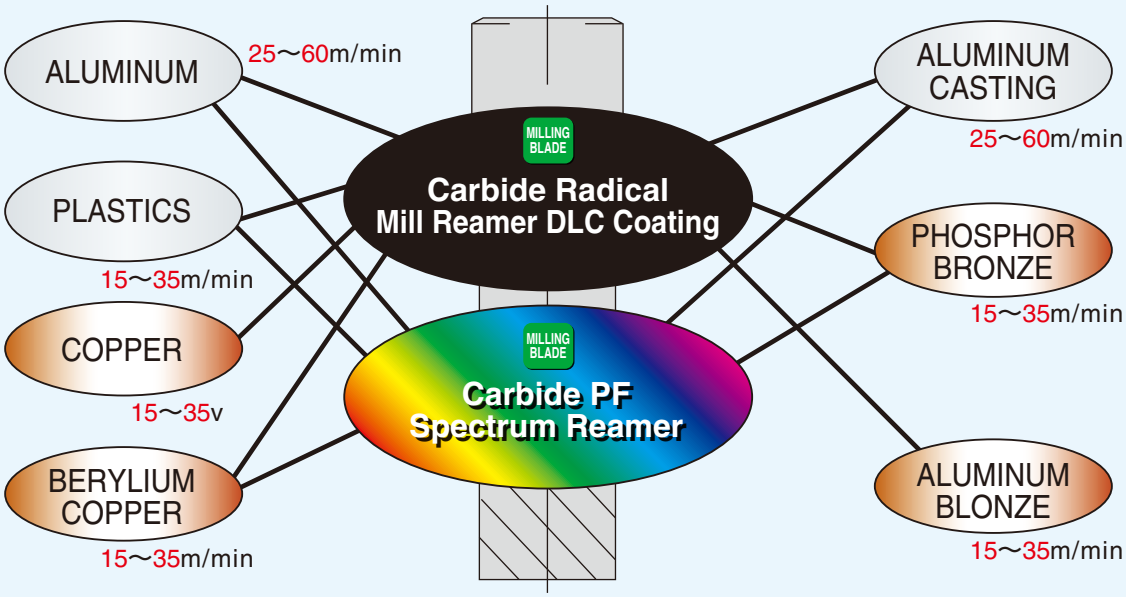


Cutting Speed on Each Material for Soluble Coolant Use



●Please select the other reamers as PF radical reamer(below) for alminium / copper / no-ferrous alloy.
●When using oil base coolant, you could get better accuracy and longer tool life.

Cutting Speed on Each Material for Soluble Coolant Use



●Please select the other reamers for the other materials.
●With using oil base coolant, you could get better accuracy and longer tool life.

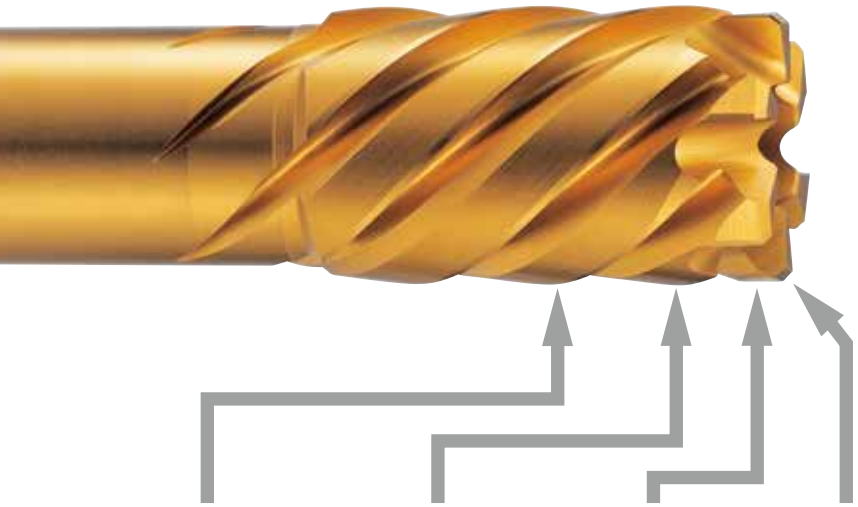
NIKKEN REAMER SERIES / WITH MILLING BLADE

NIKKEN

■CHARACTERISTICS of REAMER With MILLING BRLADE

●Hole accuracy is not required for inspection (finished hole tolerance within H7)

●Outstanding surface roughness and durability (surface roughness within 3S)



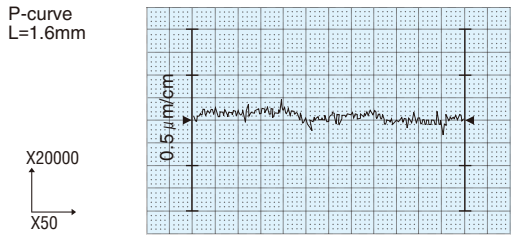
Burnishing
This is a polishing section without a cutting edge to cleans up the roughness of the finished surface.

Reamer blade (finishing)
Smooth finish is achieved by reamer blade for the optimal finishing removal from milling blade.

Pilot part
NC sensor reamer moves forward guiding the pilot hole machined by milling blade.

Milling blade (Semi-Finish)
Semi-finish (Optimal finishing removal) is achived by milling blade from dnilled hole variation.

■Plane roughness data of NCS-16.0



Material : S45C
Cutting speed : 14.5m/min
Feed rate : 0.35mm/rev.
Drilled hole : φ15.5（φ0.5 stock removal）



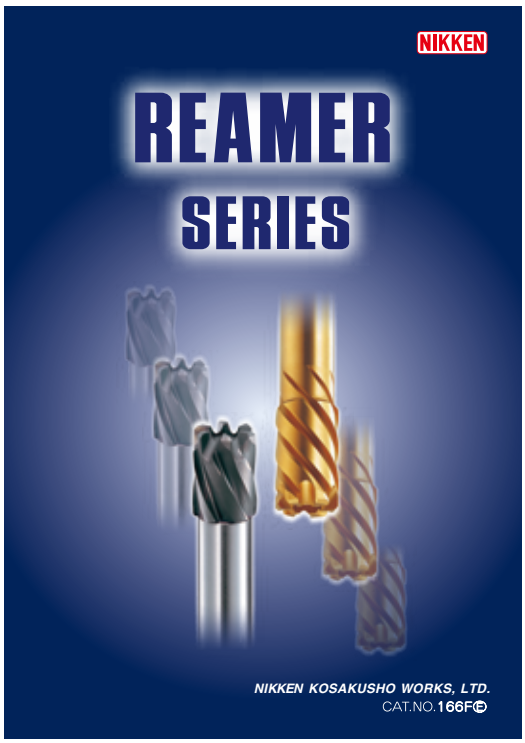
Swarf by milling blade



Swarf by reaming blade

NIKKEN REAMER SERIES CATALOG

NIKKEN



☞ Please refer to **REAMER SERIES** Catalogue.

■CARBIDE, HSS / With / Without MILLING BRLADE / from SMALL DIA. to LARGE DIA.

■REAMER SERIES CATALOGUE CAT No.166F to cover all kinds of Reamers (Carbide / HSS, Without / With End Tooth, Diameter from φ2mm to φ100mm)

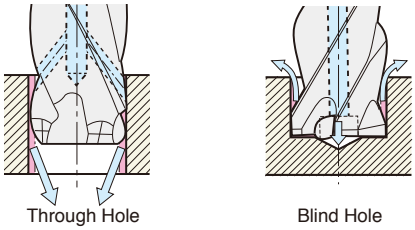
■CARBIDE PF RADICAL MILL REAMER EVO

Specially designed for the tough material such as Inconel, Hastelly, Waspaloy and Titanium Smooth cutting capability and special coating to protect the base material from cutting heat and deposition.

■CARBIDE PF SPECTRUM REAMER SPX

The newest reamer for Aluminium and Nonferrous Metals
Due to the high hardness level (**6000HV**) has been achived using Hydrogen-Free **DLC** coating, the hardnee of the **SPX** reamer closes to the hardness of the diamond.

■Two types of OH reamer, through hole and blind hole, are line-up.



Through Hole　　Blind Hole

OH shape of reamer with OH

REAMER·DRILL

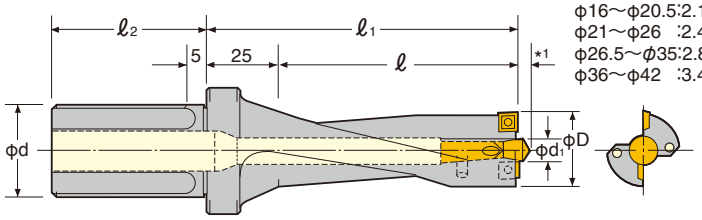
COMBAT Z DRILL

Cost down can be achieved by improvement of drilling operation.

NIKKEN



Dimensions of φ16～42 mm COMBAT Z DRILL



*1 Dimension
φ16～φ20.5:2.1mm
φ21～φ26 :2.4mm
φ26.5～φ35:2.8mm
φ36～φ42 :3.4mm

φ16～φ38
L／D=3 or 4

φ16～φ35mm by every 0.5mm increment, φ36～φ60mm by every 1mm increment,φ60～φ80mm by every 5mm increment are standard.

Each 0.1mm increment drill is available as an option.

Drill Dia.	3D Series			4D Series			3D, 4D					
	Code No.	ℓ	ℓ1	Code No.	ℓ	ℓ1	φd	ℓ2	Pilot Drill	Insert Tip	Clamp Screw	Tip Clamp Handle
	φd -φD -ℓ			φd -φD -ℓ								
16	ST20-COMZ16 - 50	50	75	ST20-COMZ16 - 65	65	90	20	43	9CMD5 d1=φ5	9CMT4 2 pcs	M1840	T-6
16.5	-COMZ16.5- 50			-COMZ16.5- 65								
17	-COMZ17 - 50			-COMZ17 - 65								
17.5	-COMZ17.5- 50			-COMZ17.5- 65								
18	-COMZ18 - 55	55	80	-COMZ18 - 75	75	100					M1845	
18.5	-COMZ18.5- 55			-COMZ18.5- 75								
19	-COMZ19 - 55			-COMZ19 - 75								
19.5	-COMZ19.5- 60	60	85	-COMZ19.5- 80	80	105						
20	-COMZ20 - 60			-COMZ20 - 80								
20.5	-COMZ20.5- 60			-COMZ20.5- 80								
21	ST25-COMZ21 - 60	60	85	ST25-COMZ21 - 80	80	105	25	53	9CMD6 d1=φ6	9CMT6 2 pcs	M2560	T-8
21.5	-COMZ21.5- 60			-COMZ21.5- 80								
22	-COMZ22 - 65	65	90	-COMZ22 - 85	85	110						
22.5	-COMZ22.5- 65			-COMZ22.5- 85								
23	-COMZ23 - 70	70	95	-COMZ23 - 90	90	115						
23.5	-COMZ23.5- 70			-COMZ23.5- 90								
24	-COMZ24 - 70			-COMZ24 - 90								
24.5	-COMZ24.5- 70			-COMZ24.5- 90								
25	-COMZ25 - 75	75	100	-COMZ25 -100	100	125						
25.5	-COMZ25.5- 75			-COMZ25.5-100								
26	-COMZ26 - 75			-COMZ26 -100								
26.5	ST32-COMZ26.5-80N	80	105	ST32-COMZ26.5-110N	110	135	32	58	9CMD8 d1=φ8	9CMT7 2 pcs	M3070	T-10
27	-COMZ27 - 80			-COMZ27 -110								
27.5	-COMZ27.5- 80			-COMZ27.5-110								
28	-COMZ28 - 80			-COMZ28 -110								
28.5	-COMZ28.5- 90	90	115	-COMZ28.5-120	120	145						
29	-COMZ29 - 90			-COMZ29 -120								
29.5	-COMZ29.5- 90			-COMZ29.5-120								
30	-COMZ30 - 90			-COMZ30 -120								
30.5	-COMZ30.5- 90			-COMZ30.5-120								
31	-COMZ31 - 90			-COMZ31 -120								
31.5	-COMZ31.5- 90			-COMZ31.5-120								
32	-COMZ32 - 90			-COMZ32 -120								
32.5	-COMZ32.5- 90			-COMZ32.5-120								
33	-COMZ33 - 90			-COMZ33 -120								
33.5	-COMZ33.5- 90			-COMZ33.5-120								
34	-COMZ34 - 90			-COMZ34 -120								
34.5	-COMZ34.5- 90			-COMZ34.5-120								
35	-COMZ35 - 90			-COMZ35 -120								
36	-COMZ36 -100	100	125	-COMZ36 -140	125	125			9CMD10 d1=φ10	9CMT9 2 pcs	M4090	T-15
37	-COMZ37 -100			-COMZ37 -140								
38	-COMZ38 -100			-COMZ38 -140								

★2 off Pilot Drill, one set of Insert and Insert Clamp Handle are supplied as standard.
★Please refer ☞**P.130** for Centre Through Side Lock Holder,☞**P.132** for Flange Through Side Lock Holder and ☞**P.135** for Oil Hole Holder for **COMBAT Z Drill** at M/C use.

COMBAT Z DRILL

Cost down can be achieved by improvement of drilling operation.

NIKKEN

φ39～φ49 L／D=2, 3 or 4

Drill Dia.	2D Series Code No. φd -φD -ℓ	ℓ	ℓ1	3D Series Code No. φd -φD -ℓ	ℓ	ℓ1	4D Series Code No. φd -φD -ℓ	ℓ	ℓ1	2D,3D,4D φd	ℓ2	Pilot Drill	Insert Tip	Clamp Screw	Tip Clamp Handle
39	ST32-COMZ39- 80	80	105	ST32-COMZ39-120	120	145	ST32-COMZ39-160	160	185	32	58	9CMD10 d1=φ10	9CMT9 2 pcs	M4090	T-15
40	-COMZ40- 80			-COMZ40-120			-COMZ40-160								
41	-COMZ41- 80			-COMZ41-120			-COMZ41-160								
42	-COMZ42- 80			-COMZ42-120			-COMZ42-160								
43	-COMZ43- 80			-COMZ43-120			-COMZ43-160						9CMT6 4 pcs	M2560	T-8
44	-COMZ44- 80			-COMZ44-120			-COMZ44-160								
45	-COMZ45- 80			-COMZ45-120			-COMZ45-160								
46	-COMZ46- 80			-COMZ46-120			-COMZ46-160								
47	-COMZ47- 80			-COMZ47-120			-COMZ47-160								
48	-COMZ48- 80			-COMZ48-120			-COMZ48-160								
49	-COMZ49- 80			-COMZ49-120			-COMZ49-160								

Dimensions ofφ43mm or larger COMBAT Z DRILL

4 insert tips are installed on the drill larger thanφ43mm for less cutting resistance.



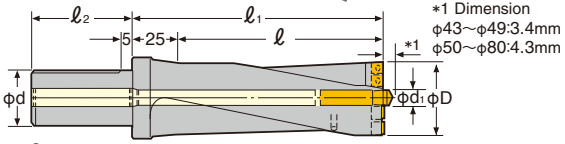




Photo. shows **ST25-COMZ21-130**

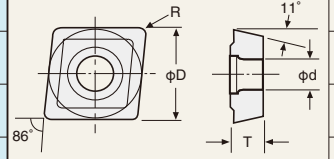
The extended drill longer than L/D=5 or with chamfering tool are available as an option.
MIN. order quantity of special drill is 2 off.

φ50～φ80 L／D=2

Drill Dia.	2D Series Code No. φd -φD -ℓ	ℓ	ℓ1	φd	ℓ2	Pilot Drill	Insert Tip	Clamp Screw	Tip Clamp Handle
50	ST32-COMZ50-100	100	125	32	58	9CMD12 d1=φ12	9CMT6 4 pcs	M2560	T-8
51	-COMZ51-100								
52	-COMZ52-100								
53	-COMZ53-100								
54	-COMZ54-100								
55	-COMZ55-100								
56	-COMZ56-110	110	135				9CMT7 4 pcs	M3070	T-10
57	-COMZ57-110								
58	-COMZ58-110								
59	-COMZ59-110								
60	ST40-COMZ60-120	120	145	40	68	9CMD12 d1=φ12	9CMT7 4 pcs	M3070	T-10
65	-COMZ65-120								
70	-COMZ70-130	130	155				9CMT9 4 pcs	M4090	T-15
75	-COMZ75-130								
80	-COMZ80-150	150	175						

★2 off Pilot Drill, one set of Insert and Insert Clamp Handle are supplied as standard.
★Please refer ☞P.128 for Centre Through Side Lock Holder,☞P.130 for Flange Through Side Lock Holder and ☞P.133 for Oil Hole Holder for **COMBAT Z Drill** on M/C.

Insert Tip for COMBAT Z DRILL

Code No.	Insert Tip Dimensions	φD	T	φd	Nose Radius	ISO Code No.	Grade	Material	Applicable Drill
9CMT4		4.76	1.98	1.9	0.4	MPMT04T104	Coated (PR630)	Steel Cast Iron	COMZ16～20.5
9CMT6		6.35	2.38	2.8		MPMT060204			COMZ21～26 COMZ43～55
9CMT7		7.94	3.18	3.4	0.8	MPMT070308			COMZ26.5～35 COMZ56～65
9CMT9		9.525		4.4		MPMT090308			COMZ36～42 COMZ66～80

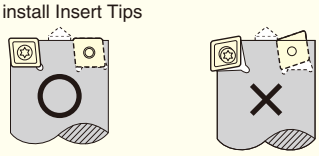
★The Rhomboid insert tips are installed on the drill. Total 4 corners at 2 external and 2 internal diameters can be used. Please pay attention to install the insert into the pockets correctly.
★The spare Insert Tips are available per a box(10 off).

COMBAT Z DRILL Economical Cutting Condition

- For Steel/Cast Iron
  "40,000" is the basic figure for cutting speed, and the rotation speed could be obtained by dividing above figure by the drill diameter.
  e.g. forφ32mm diameter drill:40,000÷32=1,250(min-1)
- For Stainless Steel/Steel Plate SS41
  "25,000" is the basic figure for cutting speed, and the rotation speed could be obtained by dividing above figure by the drill diameter.
  e.g. forφ32mm diameter drill:25,000÷32= 780(min-1)
- Feed Rate

Drill Dia		φ16～φ26	φ26.5～φ42	φ43～φ85
Mild Steel	Feed per rev.	0.1～0.15	0.1～0.2	0.15～0.2
Cast Iron	Feed per rev.	0.15～0.2	0.2～0.3	0.2～0.35

★How to install Insert Tips



★Coolant higher than 0.5MPa pressure must be supplied.
★For Stainless Steel/Steel Plate, even the cutting speed is reduced to meet with the materials, please do not reduce the feed rate and keep it as for steel.
★For tough materials, e.g. steel plate, please use stepped feed (G73) for breaking the swarf.
★This drill is suitable for offset hole, or inter-merged twin bore, but not suitable for stacked plate drilling.

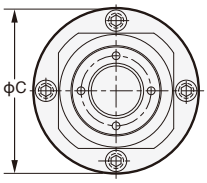
ZERO-ZERO HOLDER FOR TURNING MACHINE PAT.P

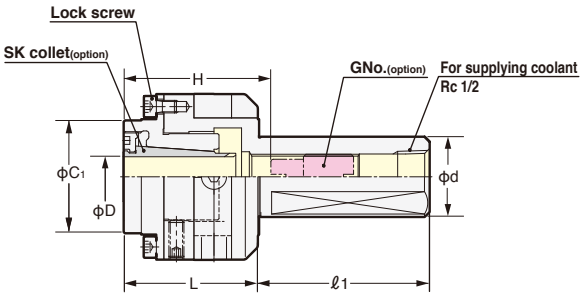
NIKKEN



LCH40-SZF16S-55

Required for ultra-high precision drilling and ultra precision reaming





Code.No.	D	d	L	ℓ1	H	C	c1	G No. (Option)	Nut (Standard)	SK Collet	Spanner (Option)
LCH32-SZF10S-52	1.75～10	32	52.1	68	50	66	35	SKG-18-SZF10S	SKN-10SB	SK10	SKL-10S-P
LCH40-SZF10S-52		40								SK10-P	
LCH32-SZF10S-52-A		32							SKN-10SB-11L	SK10-A	
LCH40-SZF16S-52-A		40								SK10-AC	
LCH32-SZF16S-55	2.75～16	32	54.3		70		45	SKG-18L	SKN-16SB	SK16	SKL-16S-P
LCH40-SZF16S-55		40								SK16-P	
LCH32-SZF16S-55-A		32							SKN-16SB-9L	SK16-A	
LCH40-SZF16S-55-A		40								SK16-AC	

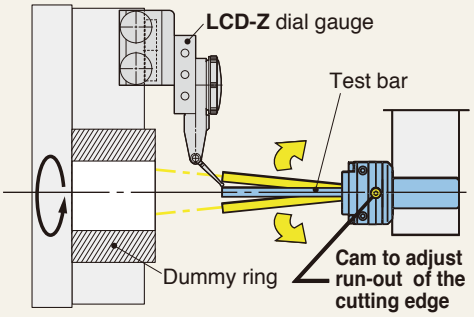
★Nut is supplied as standard.
★Collet is available as an option. Please refer ☞**P.43, P44**.
★A Type and SK Coolant Collect : Chucking range : h8
★Tightening Spanner **SKL-10S-P, SKL-16S-P** is available as an option.
★Adjustment Wrench **9ZFL** is available as an option.
★Dial Gauge **LCD-Z** is available as an option.
★Test bar is available as an option.
Code.No. is **SZF-TB10-140**、**SZF-TB16-200**

★There is also a **ZERO-ZERO holder** Pro set in which a collet, a tightening spanner and a wrench for swing ajustment are setin the **ZERO-ZERO holder**.

■Pro set with standard collet : **S.LCH32-SZF16S**、**S.LCH40-SZF16S**

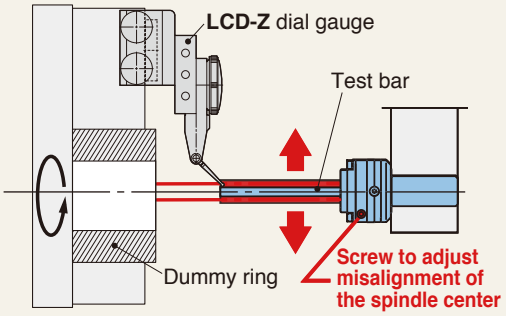
■Pro set with coolant collet : **S.LCH32-SZF16SC**、**S.LCH40-SZF16SC**

Run-out adjustment



Run-out adjustment range at the tip of 100mm test bar : 0.05mm (Cam ring indication : Φ 0.1mm)

Misalignment adjustment



Misalignment adjustment range : 0.5mm/diameter

■ Better Hole Diameter
■ Better Surface Roughness
■ Extend Tool Life

COLLETS FOR ZERO-ZERO HOLDER

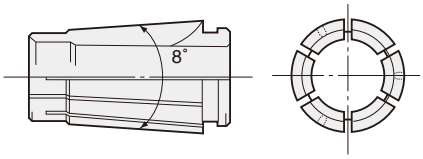


SK Collet



Perfect seal, ideal for coolant-thru tools

SK Coolant Collet



☞**P.43, P44**

Explanation of the Code No.

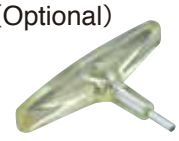
SK 16 - 6 P

- SK Collet
- Style No.
- MAX. Chucking Dia.
- Non Standard Type
  - P P-class
  - A A-type
  - AC Coolant-thru

HOW TO ADJUST

Required Tools

Adjustment Wrench
9ZFL (Optional)



Tightening Spanner
SKL-10S-P (Optional)
SKL-16S-P (Optional)



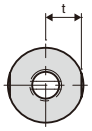
Dial Gauge
LCD-Z (Optional)

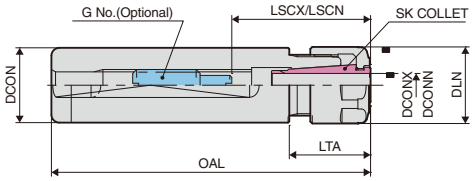


SK SLEEVE (SLIM CHUCK)

High accuracy Slim Chuck makes it possible to achieve precise hole-making operation.







Code.No.	Tool Shank Dia. DCON	t	Chucking Dia. DCONN~DCONX	Total Length OAL	Stem Length LTA	Nut Dia. DLN	Adjustable Range LSCN~LSCX	G No. (Optional)	Weight (kg)	Collet	Wrench (Optional)
ST3/4(20)-SK 6- 81	19.05(20)	9	0.7 ~ 6.0	80.5	20.5	19.5	21 ~ 35	SKG-8	0.14	SK6	SKL-6W (SKL-6WS)
ST3/4(20)-SK 6-141				140.5					0.26		
ST3/4CM-SK 6- 97				96.5		19.0			0.17		
ST1(25) -SK10- 82	25.4(25)	11	1.75 ~ 10.0	82.1	22.1	27.5	30 ~ 57	SKG-12L	0.23	SK10	SKL-10
ST1(25) -SK10-142				142.1					0.40		
ST1CM -SK10- 97	25.4			97.1			30 ~ 60		0.30		

Nut is included.
Collet is not included.

Please confirm the machine specification. The modification is sometimes required.
Tool shank Dia 22mm and 15.875mm are available. (Optional) (Ex.) **S22-SK6-141**

FOR SK SLEEVE
SK COLLET



Code No.	Chucking Dia.
SK6 - 0.8	0.7 ~ 0.8
- 1	0.9 ~ 1.0
- 1.25	1.15 ~ 1.25
- 1.5	1.3 ~ 1.5
- 1.75	1.55 ~ 1.75
- 2	1.8 ~ 2.0
- 2.25	2.05 ~ 2.25
- 2.5	2.3 ~ 2.5
- 2.75	2.55 ~ 2.75
- 3	2.8 ~ 3.0
- 3.5	3.0 ~ 3.5
- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0

Code No.	Chucking Dia.
SK10- 2	1.75 ~ 2.0
- 2.25	2.0 ~ 2.25
- 2.5	2.25 ~ 2.5
- 2.75	2.5 ~ 2.75
- 3	2.75 ~ 3.0
- 3.5	3.0 ~ 3.5
- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
- 6.5	6.0 ~ 6.5
- 7	6.5 ~ 7.0
- 7.5	7.0 ~ 7.5
- 8	7.5 ~ 8.0
- 8.5	8.0 ~ 8.5
- 9	8.5 ~ 9.0
- 9.5	9.0 ~ 9.5
-10	9.5 ~10.0

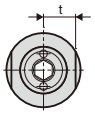
Wrench (Optional)
SKL-6W,SKL-10

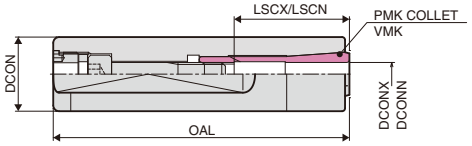


Small size wrench **"SKL-6WS"** is available when there is some interferences.

MMC SLEEVE (MINI MINI CHUCK)







Code.No.	Tool Shank Dia. DCON	t	Chucking Dia. DCONN~DCONX	Total Length OAL	Adjustable Range LSCN~LSCX	Collet	Wrench (Optional)
K5/8CM-MMC4- 50	15.875	7	1.0 ~ 4.0	52.0	16 ~ 24	MPK4	Hex 4mm
K3/4CM-MMC8- 80	19.05	9	1.8 ~ 8.0	81.5	22 ~ 41	PMK8 VMK8	Hex 6mm or EA573KL-6
K20CM -MMC8-100	20.0			101.5			
K1CM -MMC8-100	25.4	11		101.5			

Both Collet and Wrench are not included.

FOR MMC4
MPK COLLET



Code No.
MPK4-1, 1.5, 2, 2.5, 3, 3.5, 4

MPK Collet clamping range: h6

FOR MMC8
PMK COLLET
VMK



Code No.
PMK 8-2, 2.2, 2.4,...3,...4,...5,...6,...7,...8 (each 0.2mm)
VMK 8-2, 3, 4, 5, 6, 8, 10

Choosing exactly the same size with tool shank (tolerance h6) is highly recommended.
PMK Collet Clamping Range: 0.2mm
VMK Collet Clamping Range: h6~h8

Clamp / Unclamp from the back side of the tool
EA573KL-6



CNC ROTARY TABLE with αX21 CONTROLLER

NIKKEN

Minimum Command Increment: 0.001° or 1sec.

αX21 controller can drive all models of NIKKEN CNC rotary table.

Single M signal provides Various Automatic Operation.

Any unequal dividing, equal dividing, arc cutting, lead cutting etc. can be done very easily.

RS232C Interface is provided as standard.

Block data/ parameter data can be up loaded/down loaded through RS232C interface. Moreover when the direct angle command interface is used, all program and management can be done on M/C side. **JAPAN PAT.**

Upgrade of Water Proof Characteristic EMC Assessment

The direct out type connection is applied for all models of CNC rotary table, and the EMC assessment is satisfied as the total system.

Digital Servo System & Absolute Encoder αX21 controller only

Very excellent acceleration/deceleration characteristics, the powered up torque and the best suited servo parameter realize the high quality and long life.

M ZRN after Power ON or after releasing the emergency stop condition is not necessary. *

Plenty of Optional Functions

True Closed Loop, Manual Pulse Generator, M Function (Input: 5/ Output: 5), External N Number Search, External Position Display, External Power ON/OFF, Pitch Error Compensation

More than 30,000 sets working in the field.

This fact ensures the highest reliability.

Product compatible with ROHS2 commands

Version equipped with a controller that can be shipped to EU member nations.

* : The operation to establish the coordinate system is required at once, when turning the POWER ON at first time just after connecting the cable.



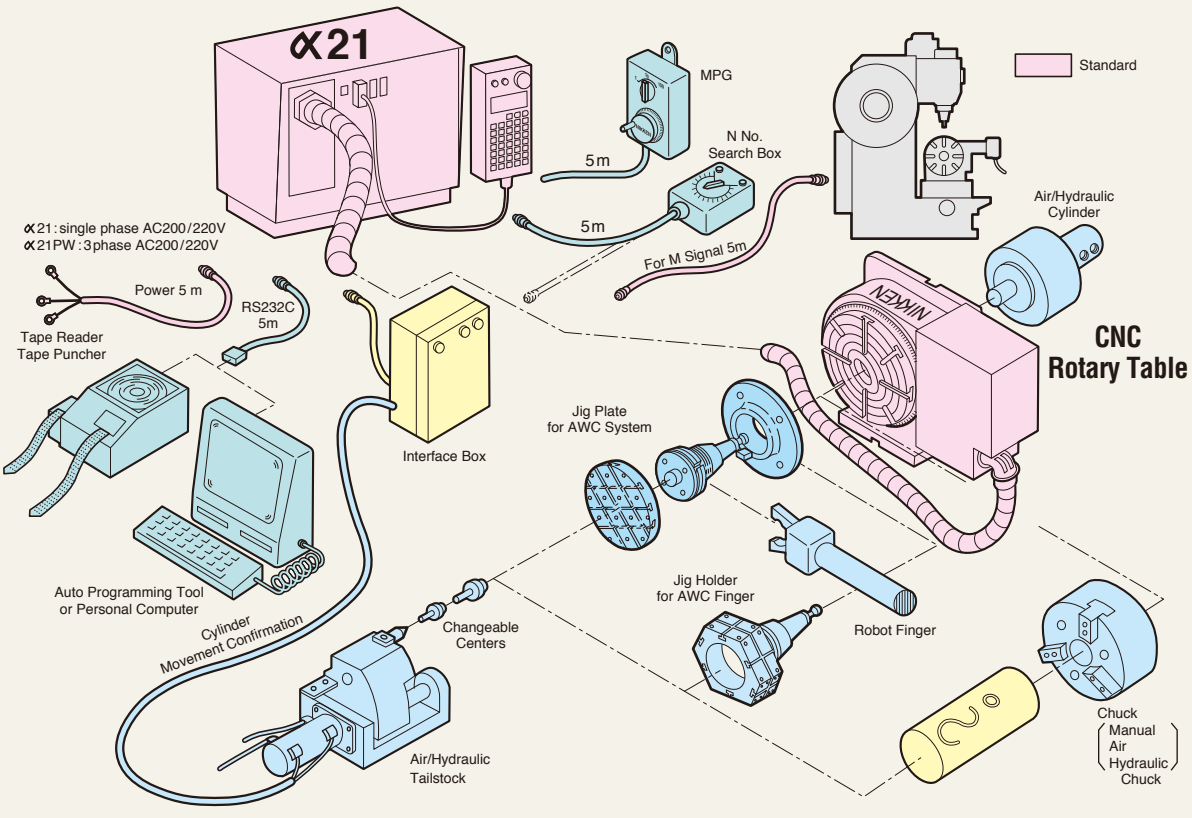
αX21 controller
- Standard (400W, 750W) 300×280×285 10kg
- **Single Phase AC200/220V**



αX21PW controller
- Power up (1.3KW, 1.8KW) 540×360×400 28kg
- **3 phase AC200/220V**



αX21 controller for larger capacity
- (2.7KW, 4.4KW and 11kW) is available.
- **3 phase AC200/220V**

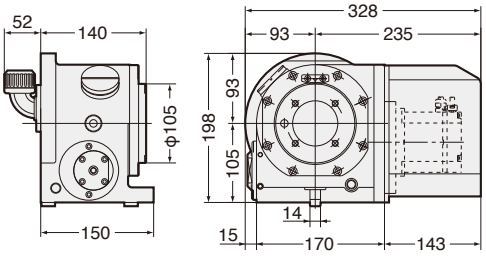


CNC ROTARY TABLE with αi21 CONTROLLER

NIKKEN

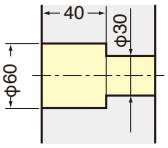
CNC105AA21-04



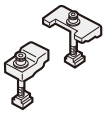


Powerful Clamping Torque : 205Nm

Face Plate Through Hole



Clamp Device

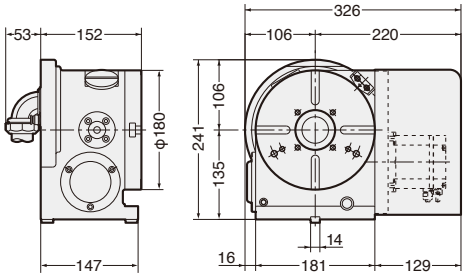


Air purge function is provided.

CNC180AA21-04

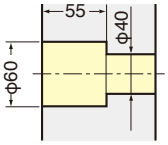


CNC180AA21-04 (400W) is standard. **CNC180AA21-08 (750W)** and **CNC180AA21-06 (High Torque)** are available.

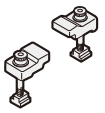


Powerful Clamping Torque : 303Nm

Face Plate Through Hole



Clamp Device

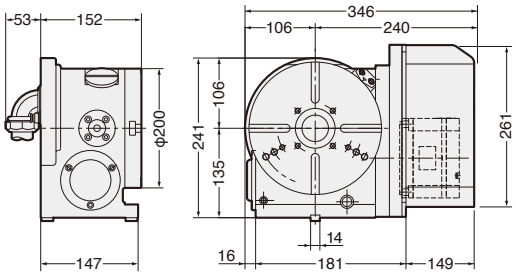


Air purge function is provided.

CNC202AA21-08

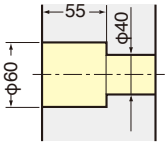


CNC202AA21-08 (750W) is standard. **CNC202AA21-06 (High Torque)** is available.

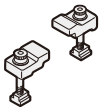


Powerful Clamping Torque : 303Nm

Face Plate Through Hole



Clamp Device



Air purge function is provided.

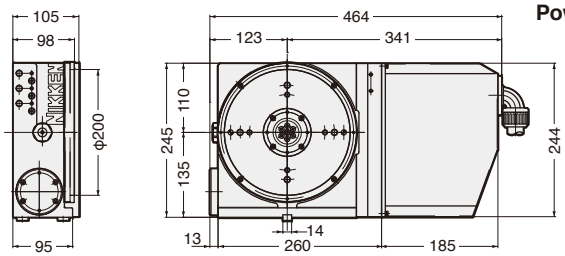
CNC205AA21-05

NEW



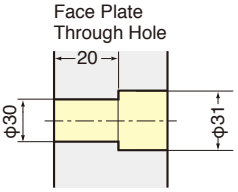
Rotary joint is included in the photo. (optional)

NC202AA21-05 (450W) is standard. ★Built-in type rotary joint 6+1 can be mounted.



Powerful Clamping Torque : 380Nm

Face Plate Through Hole

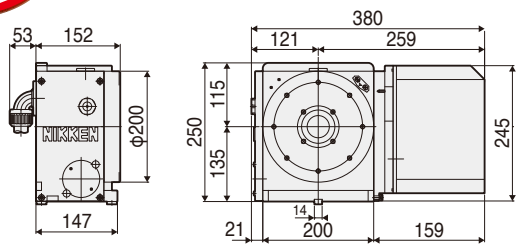


Air purge function is provided.

NCT200AA21-08

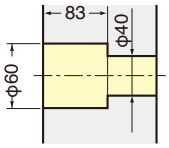
NEW



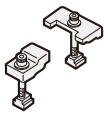


Powerful Clamping Torque : 900Nm

Face Plate Through Hole

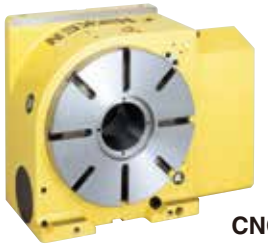


Clamp Device



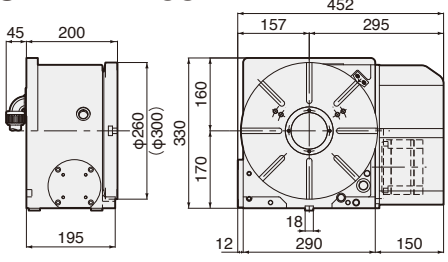
Air purge function is provided.

CNC260AA21-08, 302AA21-08



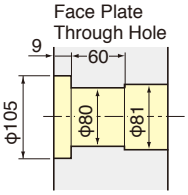
CNC260

CNC260, 302AA21-08 (750W) is standard. **CNC260, 302AA21-06 (High Torque)** is available.

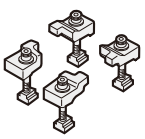


Pneumatic Clamping Torque UP 588Nm

Face Plate Through Hole



Clamp Device



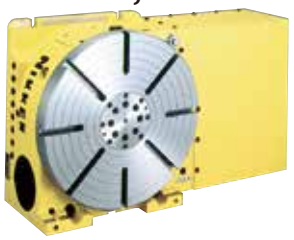
For the rotary table with pneumatic brake, air purge function is provided inside the motor cover as standard.

High seed rotation Z series is available for all models of CNC rotary table. **e.g. CNCZ260AA21**

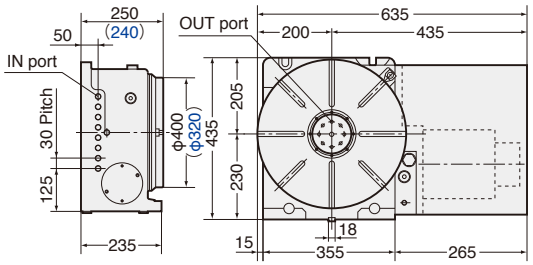
CNC ROTARY TABLE with αi21 CONTROLLER

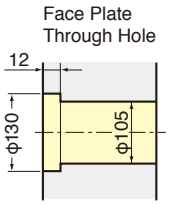
NIKKEN

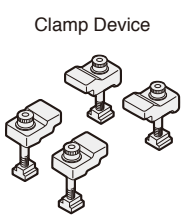
CNC321, 401AA21-18



Rotary joint is included in the photo. (optional)

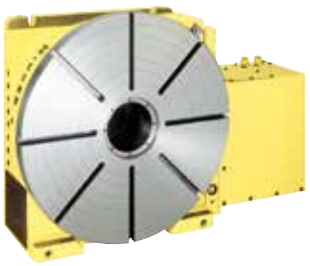


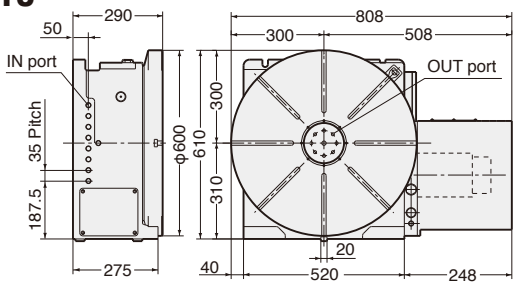


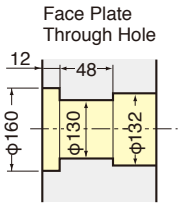


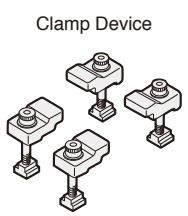
★ Please contact us for the dimension of **CNC321A21-18**.

CNC501, 601, 802AA21-18







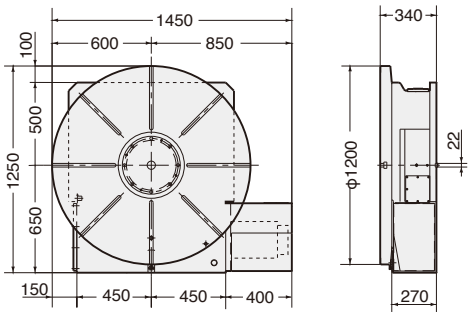


★ Please contact us for the dimension of **CNC501, 802A21-18**.

CNC1000, 1200AA21



Center socket is included in the photo. (optional)

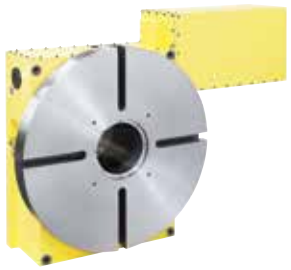


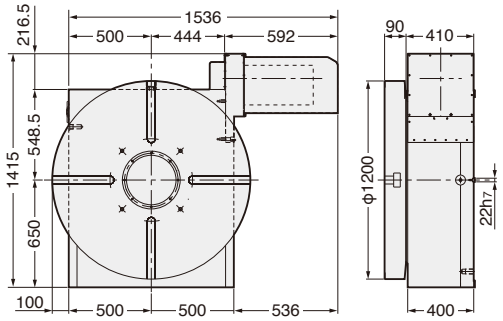
★ Ultra precision of ±3sec. is available as an option. There is no through hole on the rotary table due to the rotary encoder for ultra precision option.

★ Please contact us for the dimension of **CNC1000A21**.

★ **Code No. will be varied according to the servo motor capacity. e.g CNC1000AA21-44 (4.4kW Motor)**

CNC1201AA21



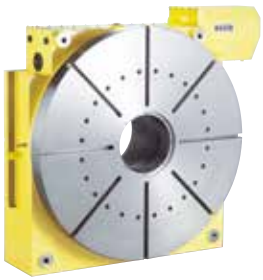


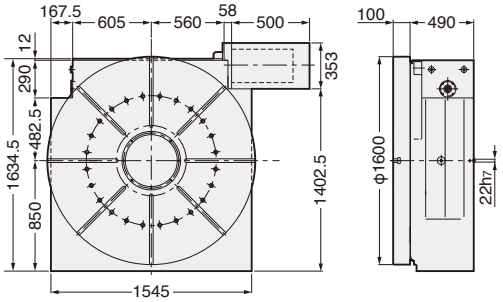
★ Ultra precision of ±3sec. is available as an option. There is no through hole on the rotary table due to the rotary encoder for ultra precision option.

★ Please contact us for the dimension of **CNC1000A21**.

★ **Code No. will be varied according to the servo motor capacity. e.g CNC1201AA21-110 (11kW Motor)**

CNC1600AA21





★ Ultra precision of ±3sec. is available as an option. There is no through hole on the rotary table due to the rotary encoder for ultra precision option.

★ Please contact us for the dimension of **CNC2000A21**.

★ **Code No. will be varied according to the servo motor capacity. e.g CNC1600AA21-44 (5kW Motor)**

The specification of the large rotary table will be varied according to your application.

1. With/without T slot, Width of T slot
2. Spindle hole dimension···Center socket for centering is normally installed.
3. Layout of the rotary table···Vertical use, horizontal use, vertical and horizontal use
4. Total reduction ratio···Suitable capacity of the servo motor can be selected.

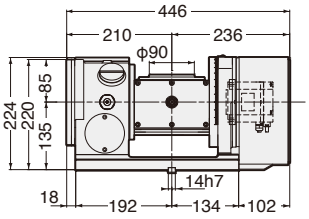
☞ Please refer to **CNC ROTARY TABLE** Catalogue.

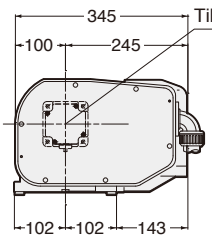
Tilting Rotary Table with α21 Controller

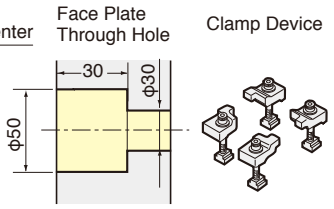
NIKKEN

5AX-100WAA21 NEW









Motor capacity of rotary axis and tilting axis are added at the end of Code No. e.g 5AX-100WAA21-0404

5AX-130WAA21

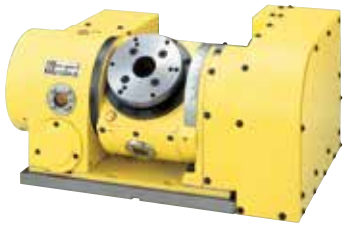
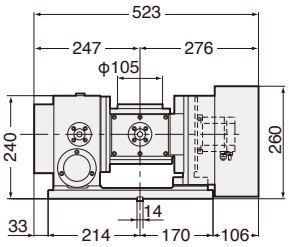
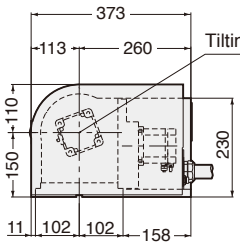
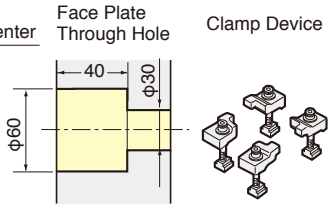


Photo with φ130mm plate.
Rotary axis cable stays.

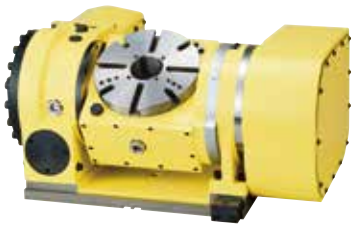


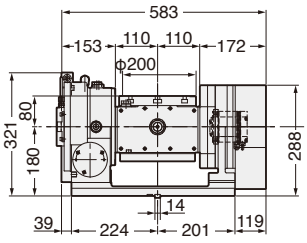


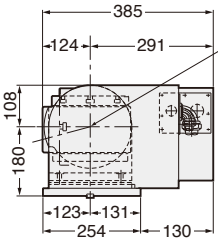


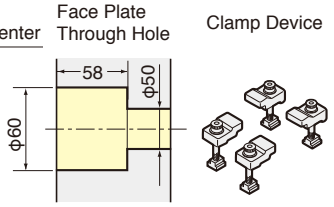
Motor capacity of rotary axis and tilting axis are added at the end of Code No. e.g 5AX-130WAA21-0404

5AX-201WAA21





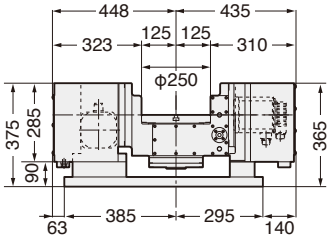


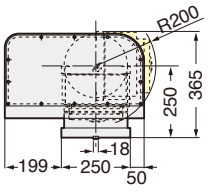


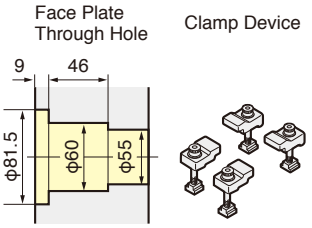
Motor capacity of rotary axis and tilting axis are added at the end of Code No. e.g 5AX-201WA21-0408

5AX-250WAA21





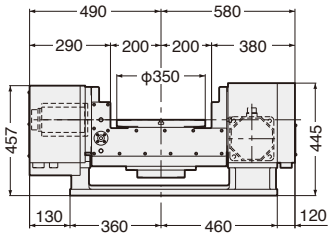


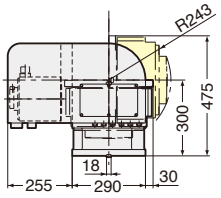


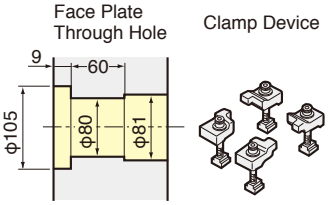
Motor capacity of rotary axis and tilting axis are added at the end of Code No. e.g 5AX-250WA21-1313

5AX-350WAA21









Motor capacity of rotary axis and tilting axis are added at the end of Code No. e.g 5AX-350WA21-1318

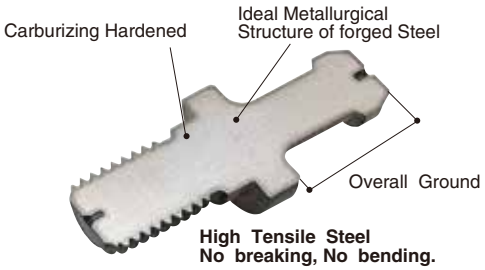
☞ Please refer to CNC ROTARY TABLE Catalogue.

PULL STUD

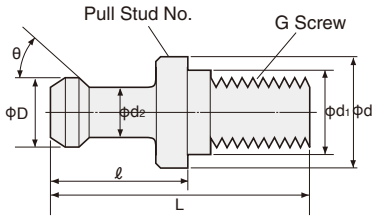
NIKKEN



PS



High Tensile Steel
No breaking, No bending.



●PULL STUDS of new standard are also available.

Pulling Force Measuring Tool



Transducer size
W X H X D = 100 X 140 X 200

We would strongly recommend that a regular check on the pulling force of your M/C should be carried out to identify any problems at early stage. **The NIKKEN Pulling Force Measuring Tool - CLP** comes complete with 5m cable and the pulling force of your machine can be measured with the **CLP** using either a manual tool change or A.T.C.

Pull Stud No.	D	d	d1	d2	L	ℓ	G	θ°	Type	Remarks
PS- 1	15	23	17	10	60	35	M16	45°	BT40 MAS-1 Standard Type	MAS P40T-1
- 2								60°	BT40 MAS-2 Standard Type	MAS P40T-2
- 3	19	31	21	14	70	40	M20	45°	BT45 MAS-1 Standard Type	MAS P45T-1
- 4								60°	BT45 MAS-2 Standard Type	MAS P45T-2
- 5	23	38	25	17	85	45	M24	45°	BT50 MAS-1 Standard Type	MAS P50T-1
- 6								60°	BT50 MAS-2 Standard Type	MAS P50T-2
-16	11	16.5	12.5	7	43	23	M12	45°	BT30 MAS-1 Standard Type	MAS P30T-1
-17								60°	BT30 MAS-2 Standard Type	MAS P30T-2
-18	13	20		8.5	48	28		45°	BT35 MAS-1 Standard Type	MAS P35T-1
-19								60°	BT35 MAS-2 Standard Type	MAS P35T-2
-5F	23	38	25	17	85	45	M24	45°	BT50 MAS-1	PS-5 Top face ground
-6F								60°	BT50 MAS-2	PS-6 Top face ground
-50					110	70		45°	BT50	
-53			26.187		85.2	45.2	1-8UNC		CAT50U	
-63			26		82.5	45	1-8UNC	60°	CAT50U	
-70	19	23	17	14	60	35	M16	45°	BT40	
-72	15		16.281	10	57.15	32.15	5/8-11UNC		CAT40U	
-O	23	38	25	17	85	45	M24	90°	BT50-90° Type	
-O8-1	15	23	17	10	60	35	M16		BT40-90° Type	
-P	24	36	25	18	71	31	M24		BT50 MITSUI SEIKI	
-P5-1	15	23	17	10	50	25	M16		BT40 MITSUI SEIKI	
-P10	11	16	12.5	7	40	20	M12		BT30 MITSUI SEIKI	
-U2	13.7	20	13	8.9	53	28		60°	BT35 MATSUURA	
-G4	23	38	25	17	85	45	M24	90°	BT50 MAZAK	
-G5	15	23	17	10	54.6	29.6	M16		BT40 MAZAK	
-G45	28.956	37	25	20.828	65.2	25.2	M24	45°	BT50 MAZAK **Top face ground**	PS-G41 w/o hole
-G58	18.796	22	17	12.446	44.1	19.106	M16		BT40 MAZAK **Top face ground**	PS-G51 w/o hole
-G60	18.796	21.8	16.281	12.446	41.256	16.256	5/8-11UNC		CAT40U OKUMA	
-O19	23	38	—	17	85	45.2	1-8UNC	90°	CAT50U	
-O47-2			25	17	85	45.2	M24		IT50 MORI SEIKI	
-P13	24	36	—	18	71	31	1-8UNC		CAT50U MITSUI SEIKI	
-H30	15	23	16.281	10	57.2	32.2	5/8-11UNC	45°	CAT40U HITACHI SEIKI	
-B1	22	38	25	16	112	72	M24	60°	BT50 OKUMA	
-809	28			21	74	34		75°	BT50 **Top face ground**	JIS-B6339-89
-805	19	23	17	14	54	29	M16		BT40 **Top face ground**	JIS-B6339-89
-801	12	16.5	12.5	8	43	23.4	M12		BT30 **Top face ground**	JIS-B6339-89
-J	14	20	13		45	23		90°	BT35 KITAMURA	
-M10	14	16	12.5	10	40	22		45°	CAT30S MAKINO SEIKI	
-R3	10	18	13	7	43	25			BT35 ROKU-ROKU	
-C	21	39	25	15	105.1	63.1	M24		BT50 HITACHI SEIKO	
-301	15	23	17	11	60	35	M16	60°	BT40 TSUGAMI	
-Q3	16	16.5	12.5	12.5	31.8	11.8	M12	45°	BT30 OKADA	
-BR*1	7	10	6.5	4	28	17	M 6	45°	BT15 BROTHER	
-81	12	16.5	12.5	8	44	24	M12	R4	BT30 CKD	
-581	28	36	25	21	74	34	M24	75°	IT50	DIN69872-B-1988
-302	19	23	17	14	54	26	M16		IT40	DIN69872-A-1988
-122	13	17	13	9	44	24	M12		IT30	DIN69872-A-1988
-S27	18.95	22.5	17	12.95	44.25	19.25	M16	45°	BT40 SNK	

★When Pull Stud w/o hole is used on Centre Through Coolant M/C, please use the Pull Stud which Top Face is ground.
★*1 The monoblock style of BT15 Slim Chuck with PS-BR is recommended.

PULL STUD with ID



Please add the abbrevation of ID maker on to the PULL STUD No.
e.g. PS-6-IDB

OMRON	V600-D23P53 (φ8×6)	: **—IDM**
	V600-D23P54 (φ12×5)	: **—IDN**
BALLUFF	BIS-C122-04/L (φ10×4.5)	: **—IDU**
	BIS-C105-05 (φ12×6)	: **—IDB**
JAPAN ID SYSTEM	WDD12B (φ12×6)	: **—IDQ**

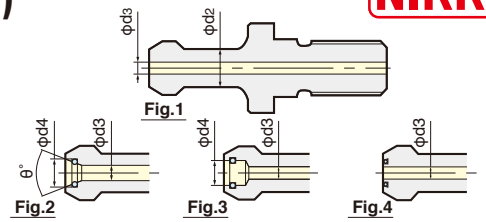
PULL STUD (CENTRE THROUGH COOLANT)

NIKKEN



PS
(Centre Through Coolant)

The specification of the pull stud may be different depending on the machine specification and the machine serial number. Please confirm the specification of your machine and order the proper pull stud.



Pull Stud	Specification	Machine Maker	φd3	FIG	Remarks
PS-130E	BT30 MAS-Ⅱ Special **PS-17**	BROTHER, TOYOSK	2.5	1	φd2=7.5
-132	BT30 MAS-Ⅰ Special **PS-16**	FANUC	4	1	φd2=8
-114		MORI SEIKI	2.5	2	φd4=6.5 θ=30°
-802	BT30 JIS **PS-801**		4	1	PS-801 with hole
-876		MAZAK	2.5	2	φd4=5.5 θ=30°
PS-73*1	BT40 MAS-I **PS-1**		4	1	PS-1 with hole
-371		OKUMA HOWA	3	2	φd4=7 θ=30°
-392		JTEKT	3	3	φd4=7.3
-H28		HITACHI	3	3	φd4=5
-75*1	BT40 MAS-II **PS-2**		4	1	PS-2 with hole
-806-1	BT40 JIS **PS-805**		6	1	PS-805 with φ6 hole
-813-1		MAKINO	6	1	AS568-015 with O-ring
-854		YASDA	6	1	φ3 with air hole
-874			6	2	φd4=10 θ=30°
-877		JTEKT	3	3	φd4=7.3
-881		KITAMURA	3	2	φd4=7 θ=30°
-B62-1		OKUMA	4	1	With O-ring S15
-366-D7	BT40 Centre Through	DMG MORI	7	1	
-366E-1		MORI SEIKI	7	2	φd4=10 θ=30° **N29104*3**
-G51	BT40 ANSI **PS-G58**	MAZAK	7	1	PS-G58 with hole **34931900680*2**
-G510			7	3	PS-G51 High pressure **34261910160*2**
-309	IT40 DIN **PS-302**		7	1	DIN 69872-A-1988
-380E	IT40 DIN Centre Through	MORI SEIKI	7	2	φd4=10 θ=30° **N29106*3**
-A1	IT40 ISO A		7	1	ISO-7388/2-1984A
-A4	IT40 ISO B		7.35	1	ISO-7388/2-1984B
-G52	IT40 ANSI	MAZAK	7	1	**34931900660*2**
-G53	CAT40U ANSI	MAZAK	7	1	**34931900670*2**
-B64-1		OKUMA	4	1	With O-ring S15
-D72			7	1	ANSI/ASME B5,50-1985
-381E	CAT40U Centre Through	MORI SEIKI	7	2	φd4=10 θ=30° **N29105*3**
PS-5E	BT50 MAS-Ⅰ **PS-5**		6	1	PS-5 with hole
-552		JTEKT	6	3	φd4=10.4
-563		YASDA, KOMATSU NTC	5.5	2	φd4=11.2 θ=60°
-595		MORI SEIKI	8	2	φd4=11 θ=30° **N29120*3**
-5024		OKUMA HOWA	6	2	φd4=9.5 θ=30°
-B66		OKUMA	6	1	With O-ring P21
-5027		OKK	6	4	With O-ring S9 at Face
-5030G		TOSHIBA	4.5	1	With O-ring P21
-M16		MAKINO	6	1	With O-ring P21
-H38-B		HITACHI	3	4	With O-ring S5 at Face
PS-6E	BT50 MAS-Ⅱ **PS-6**		6	1	PS-6 with hole
-578		JTEKT	6	3	φd4=10.4
-579		YASDA	5.5	2	φd4=11.2 θ=60°
-596		MORI SEIKI	8	2	φd4=11 θ=30° **N29121*3**
-5016		OKUMA HOWA	6	2	φd4=9.5 θ=30°
-5022G		TOSHIBA	4.5	1	With O-ring P21
-5031		OKK	6	4	With O-ring S9 at Face
-B60		OKUMA	6	1	With O-ring P21
-H39-B		HITACHI	3	4	With O-ring S5 at Face
-M23		MAKINO	6	1	With O-ring P21
PS-O31	BT50 90° **PS-O**		6	1	PS-O with hole
-O54		OKUMA	6	1	With O-ring P21
-O56		MORI SEIKI	8	2	φd4=11 θ=30° **N29119*3**
-O67		OKK	6	4	With O-ring S9 at Face
-O72		OKUMA HOWA	6	2	φd4=9.5 θ=30°
-O48-B		HITACHI	3	4	With O-ring S5 at Face
PS-810	BT50 JIS **PS-809**		10	1	PS-809 with hole
-816-1		MAKINO	6	1	With O-ring P21
-819		JTEKT	6	3	φd4=10.4
-833		YASDA	5.5	2	φd4=11.2 θ=60°
-850		OKUMA	6	1	With O-ring P21
PS-P16	BT50 MITSUI	MITSUI	8	1	PS-P with hole, Top surface ground
PS-G41	BT50 ANSI **PS-G45**	MAZAK	10	4	With O-ring P12 at Face **44831901160*2**
-G63			10	1	PS-G45 with hole, Top surface ground **32551901720*2**
-G410			10	3	PS-G41 High pressure **34341901620*2**
-D92	CAT50U ANSI		11.7	1	ANSI/ASME B5,50-1985
PS-A3	IT50 ISO A		11.5	1	ISO-7388/2-1984A
-A6	IT50 ISO B		11.55	1	ISO-7388/2-1984B
-512	IT50 DIN		11.5	1	DIN 69872-A-1988

★When pull stud without hole is used on the M/C with the centre through tool coolant, please use the pull stud which fop surface is ground.
★JIS40 type pull stud (φd2=14) is recommended for the machine with the centre through tool coolant instead of MAS40 type pull stud marked ∗1(φd2=10).
★ ∗2 shows the pull stud Code No. of MAZAK. ★The top surface of the pull stud of **Fig.2** is not ground. ★ ∗3 shows the pull stud Code No. of MORI SEIKI. ★ ∗4 φd3=φ7 is also available.

PULL STUDS CODE NO.

NIKKEN

:NC5 Spindle Available

Machine Maker	Machine Model	TAPER	Holder	Code No.
IKEGAI	**TV**4, 4F, 4L	No.40	BT40	PS-1
	TV-U4, 4LII **H**4 **TH**500 **THU**500	40	40	-805
	TV5, U5 **MX**series **BX110P**series **BX130P**series **TH**600 **THU**600 **AH**6, 8	50	50	-5
IWASHITA INDUSTRIAL	**IAM**series	No.40	BT40	PS-2
	IAMseries	50	50	-6
EGURO	**E**-32V **E**-32VLC	No.30	BT30	PS-16
	REVOLVER-32	30	NC5-46 Special	-837
	E-43V	40	BT40	-805
	APORO4	40	NC5-63	-834-1
ENSHU	**S**300 **SS**300 **DT** CENTERseries **JE**30S **ES**400	No.30	BT30	PS-16
	E-130 **JE**130 **JE**30S **JE**30G **ES**400 **EV**360, 360T	30	30	-17
	Super400, 450FV **VMC**series **HMC**series	40	40	-1
	JEseries **ES**450, 450T **EV**450, 530S **GE**460H, 480H	40	40	-2
	JE50	40	NC5-63	-N63AE
	EV650, 600MV **VMC**series **HMC**series **VE**65E	50	BT50	-5
	JE80, 80**G** **EV**530 **GE**580, 590H	50	50	-6
OKUMA	**MA, MB, MC, MD, MF, MX**-Aseries **VH**-40 **VR**-40 **MP**-46V **GENOS**series	No.40	BT40	PS-2
	Centre Through(JIS)	40	40	-B62-1
	MX-55VA	40	NC5-63	-N63AE
	MA, MB, MC, MD, MX-B, **MCV**-A, B, **MCR,MU,MF**series **MCM**-B	50	BT50	-6
	Centre Through	50	50	-B60
OKUMA HOWA	**MILLAC** Vseries, Hseries **MAC TURN**series **MM**-300 **ML**-300	No.40	BT40	PS-1
	Centre Through	40	40	-371
	MILLAC VIIseries	40	40	-2
	Centre Through	40	40	-B62-1
	MILLAC Vseries, Hseries **VTM**series **VMP**-10, 16	50	50	-6
	Centre Through	50	50	-5016
	MILLAC VIIseries	50	50	-6
	Centre Through	50	50	-B60
	VTM-65, 100	50	NC5-100	-N100VE
OKK	**PM**300, 350	No.30	BT30	PS-801
	PCV, TRC, VM, AMC, DGM, VP, GC, HM, HP, VCseries **PG**8 **PM**400III **DV**5, V1 **VB**53 **GR**400	40	40	-1
	MCV-350, 410/40 **PCH**-400, 500 **HPV**400 **MPH**-400	40	40	-08-1
	VM4, 5 **PCV**-40II **PCV**-55 **VC8**-Jr4, 5 **HM** 40 **HC8**-40 **PM** 400 **PG** 8	40	NC5-63	-N63VE
	KCV600/800 **MCV**series **VC8**series **HM** 50, 63 **MCH**600 **HC8**-50, 63, 600	45	NC5-85	-N85VE
	MCV, MCH, MHA, KCV, ACM, DCM, VM, HMseries **PCV**-510, 620 **VG**5000 **GC**600 **DV**5	50	BT50	-0
	PCV50, 55, 60	50	50	-5
	PM500II	50	NC5-100	-N100VE
OHTORI	**OSH**-54 **OSV**series **OSU**-545 **BMV**II-85	No.40	BT40	PS-1
	FTV-500, 500HV	40	40	-805
	BMV-40NC(OP), 400NC(OP), 500LNC, 500ANC **OSV**-139 **FTV**-1200	50	50	-5
OM	**OMC**-40HS	No.40	BT40	PS-1
	OMC-50V, 50HS	50	50	-5
	TDC, Omega-M, VTLex-M, Neoαseries	50	50	-6
	Centre Through	50	50	-579
KITAMURA	**HX**-250G	No.30	BT30	PS-801
	Centre Through	30	30	-802
	Mycenter-3XG, 4XiF, 7X, **HX**400G, **Supercell**-400 **Mytrunnion**-5 **JIGcenter**-5	No.40	BT40	PS-805
	Centre Through	40	40	-806-1
	Mycenter-4XiF, 7X, **HX**500i, 630i, 800iL, 1000i, 1250i, **BridgeCenter**-8F, 10	No.50	BT50	PS-809
	Centre Through	50	50	-810
KIRA	**VMC, HMC, Arik, KN, VTC**series **PC**-30E, 30F, 30H, 30W **KPC**30a, 30b **HPC**-30Vb **PCV**-30, 150	No.30	BT30	PS-16
	Centre Through	30	30	-802
	VTC-30a	30	NC5-46	-N46AE
	KV, Arik, VTC, KNseries **PC**40G	40	BT40	-1
	Centre Through	40	40	-806-1
KIWA	**KCW**-5VR	No.30	BT30	PS-16
	Triple-V21i, V41 **KNH**-426 **KH**-41, 45 **KCW**-10V	40	40	-805
	Centre Through	40	40	-806-1
	KH-55	No.50	BT50	PS-809
	Centre Through	50	50	-810
KURASHIKI	**KV**-500, 500H, 700	No.40	BT40	PS-1
	KVseries **KMV**series **KBT**series **KH**series **CMN**series **KHM**-125 **KBM**11X	50	50	-5
KOMATSU NTC	**N, Z**series	No.30	BT30	PS-16
	TMC, NH, NV, H, N, Z, ZV, ZHseries	40	40	-1
	ZV5400 **ZH**4000, 5000(Centre Through)	40	40	-371
	TMC, CNC, N, ZVseries	50	50	-5
	ZV5500(Centre Through)	50	50	-563
SHIZUOKA	**CM**-210G, 350B **CM**300-A, 300-5A	No.30	BT30	PS-16
	Bseries **CM**-350 **SSR**-550 **HSR**-7, 10	40	40	-08-1
	Bseries **SMV**series **SG**-600	50	50	-0
SHIN NIPPON KOKI (SNK)	**SUPER HIGH SPEED MACHINE CMV**	No.30	NC5-46	PS-N46
	CMV-50, 70T	40	BT40	-2
	CMV, DC, ESP FSP, HF, HPS, PS, RB, BFRseries **PC**-55V **EXI**-70K	50	50	-6
	REBO FLAME MACHINE, RAIL MACHINE	50	NC5-100	-N100VE
JTEKT	**PV**640J	No.30	BT30	PS-16
	FA, FV, FVN, FXN, JV, PVseries **e**500H4, **UX**570	40	40	-1
	FH-40II	40	NC5-63	-N63AE
	FV, FVN, FHN, FXN, PV, BN, FH, FA, RB, SBseries **SV**-65 **e**500H5	50	BT50	-5
	DN-1V, 2V, 1H(Centre Through)	50	50	-52
SUGINO MACHINE	Self Centre **V**15, **NSV**15, **VC**15, **H**15, **H**15B	No.30	BT30	PS-17
TAKIZAWA	**MAC**-V1E, 430VP VP10	No.40	BT40	-1
	MAC-V40, 40B Y520	40	40	-805
	MAC-V40, 40B Y520(Centre Through)	40	40	-806-1
	MAC-V40	40	NC5-63	-N63VE
TAKEDA KIKAI	**MV, TK-VS**series	No.40	BT40	PS-1
	VSseries	50	50	-6
TSUGAMI	**VMA**3-III **VMC**3-III **VML**3-III **VA**31H, 32H **VA**3	No.30	BT30	PS-16
	FMA3-III **FMA**5-III	40	40	-2
	VMA4-III	40	40	-1
	VMT4-III	40	40	-805

★This table shows the standard Pull Stud Code No. for the newest M/C. Please refer old NIKKEN catalogue for the Pull Stud of the old M/C.
★The Pull Stud Code No. depends on your M/C specification, therefore please check your M/C specification to select the proper Pull Stud.

PULL STUDS CODE NO.

NIKKEN

:NC5 Spindle Available

Machine Maker	Machine Model	TAPER	Holder	Code No.
TOSHIBA	**JRV**400, 450 **NX**76B	No.40	BT40	PS-1
	BMC, BTD, BP, MPC, MPE, MPF, MPH, VMC, BF, BTU, NX, BTH, BSF, BTFseries	50	50	PS-5
	MF-2020 **MP**-2635(5A)	45	NC5-85	PS-N85VE
	NX-76 **MGF**-21130	50	NC5-100	PS-N100VE
	BTD-110R13U	50	NC5-100	PS-831
TOYO SEIKI	**TVT, TVMC, THMC, TTC, DTR**series	No.30	BT30	PS-17
	Centre Through	30	30	-130E
	VT 30SR **TVMC** 301 **THMC** 310 **TVT**310S **TVT**313M1.S, SL **TVT**302M1.S, L	30	NC5-46	-N46AE
	TVT 30SR Special **TVMC** 301 **THMC** 310 **TVT**310S **TVT**302M1.S, L	30	NC5-46	-N46E
	H-44, 45 **THMC**410 **H**-46	40	BT40	-1
NIIGATA	**PN**40, 40A **SPN**40 **EF**40H **EN**series **VN**series **PN**series	No.40	BT40	PS-2
	HNseries **BHN**series **SPN**50, 63 **ULTY**501, 701, 901 **MPN**-80	50	50	-6
	BFN-50, 63	40	NC5-63	-820-1
	SBS-2	40	-63	-358
NISHIDA KIKAI	**HFA**-3 **VFR**-3 **HAS**-3 **HLA**-3 **HLB**-3	No.30	BT30	PS-16
	HDB-3	30	NC5-46	-827
	HKD-3 **HDB**-3	30	-46	-N46E
	VS-4, **HS**-4C, 4M **HT**-4 **HD**-4 **HW**-4 **HLE**-4 **HFA**-4 **HLB**-4	40	BT40	-1
	HDC-4	40	NC5-63	-849
	HFB-4 **HFC**-4 **HDC**-4	40	-63	-N63AE
	HS-5C, 5M, 5D **HP**-5A, 5B **HFA**-5 **HLB**-3	50	BT50	-6
HASEGAWA	**V**3, **V**3-5AX	No.30	NC5-46	PS-N46AE
HAMAI	**FZ**-16, 16L, 16E, 26, 26L **DZ**-16, 16L, 16LA	No.30	BT30	PS-16
	MC-3VA, 3VS, 4VS **EN**-3, 4, 6 **EN**-40 **HN**-40	40	40	-1
	MC-50V, 70V, 80V, 6V, 5VA, 6VA, 8VA **T**-80MH, 180MH	50	50	-5
FANUC	**ROBO DRILL/DRILL/DRILL MATE**series α-T14iA α-T21iD α-T21iE α-T21iF α-D14iA α-D21iA	No.30	BT30	PS-16
	Centre Through	30	30	-132
	α-T14iB α-T14iC α-T21iD α-T21iE α-T21iF	30	NC5-46	-123-AIR
	Centre Through	30	NC5-46	-123E
FUJI SEIKI	**FMC**-3V, 30V5, 35V5	No.40	BT40	PS-2
	Centre Through	40	40	-806-1
	FMC-6V, **6VR**, **VG**, **VP**, **50HF**, **300QT**	50	50	-5
	Centre Through	50	50	-526
BROTHER	**TC**-201, 203, 203C, 20A	No.15	No.15	PS-BR
	TC-221, 225, 227, 229, 229N, 22A, 311, 312N, 31A, 321, 323, 324, 324N, 325, 32A, 32B, S2A, S2B, S2C, R2A, 22B, S2D, 32BN, 31B, R2B, S500X1, S700X1	30	30	-17
	Centre Through	30	30	-130E
	TC-22A, 32A, 32B	30	NC5-46	-N46AE
	TC-731, 731S	40	BT40	-1
HEIAN CORPORATION	**REX, ER, NC**series	No.30	BT30	PS-16
	ER, NCseries	35	MAS BT35	PS-19
	NCseries	40	BT40	PS-2
HORKOS	**HFN, HTNC, ES**series **NJ**50 **RS**50H **PM**70H **RM**70 **ES**50H **ES**50V-I	No.30	BT30	PS-16
	HFN, HTNC, RM, DM, HFNseries **NS**70 **MOH**630 **THMC**410 **TM**70H **TG**70H **MBE**	40	40	-1
	HFN-SAM40 **HFN**-SM30H **RS**50H	30	NC5-46	-N46E
	Centre Through	40	BT40	-73
	HFN, HTNCseries **G**50H **C**50H **DM**100H **RM**100H **NM**100 **DM**100H **NM**100	50	50	-5
	Centre Through	50	50	-5E
HOWA	**MMN, MDT, MBN, MSN, MEN, MJN, MZN, MKN**series	No.30	BT30	PS-16
	Centre Through	30	30	-132
	MXN-600-VCJ	30	NC5-46	-N46AE
	MBN, MCN, MHNseries **MCV**-800	40	BT40	-1
	Centre Through	40	40	-73
	MBN-800 **HS**-500	50	50	-5
	Centre Through	50	50	-5E
HONDA ENGINEERING	SPOOL HOLE MACHINE	No.30	NC5-46 Special	PS-N46AE
	H-VS5000	30	NC5-46	-N46AE
	H-VT6000 SHAFT END MACHINE	40	NC5-63	-N63AE
	H-CR462	40	NC5-63 Special	Special
	NN-S **HB**-LB461	50	NC5-100	PS-N100VE
HOMMA	**FM, TAC, STAC, HM, HTM, HGM**series	No.50	BT50	PS-5
MAKINO	a1, **A, V**series **J**55, 88 **D**300, 500, 800Z **BH**50	No.40	BT40	PS-805
	Centre Through	40	40	-813-1
	BNC, FNC, MCseries **SF**64 **A**55, 66, 88 **FB**127series	40	40	-1
	a1, **A, V, GF**series	50	50	-809
	Centre Through	50	50	-816-1
	FDNC, FNC, GF, MC, MCC, MCD, MCFseries **GN**1712-A **a**71, 81 **A**77, 88, 99, 100 **V**77	50	50	-5
MAKINO SEIKI	**MSA**30, 40, 50 **MS**5A, 5B **MSX**30 **PS**1-W **MSJ**25 **MSJX**25 **MSB**58, 512, 516	No.30	BT30	PS-16
	MSA30, 40, 50 **MS**5A, 5B **MSX**30 **MSB**58, 512, 516, S5B	40	40	-1
	MSA30, 40, 50 **MSB**58	40	NC5-63	-N63VE
	Centre Through	40	BT40	-73
MATSUURA	μ**MASTER**, 400V-24, **FX**-1	No.30	BT-30	PS-17
	VX-0, -1 **FX**-0, 1G, 2 **LX**-0, 160 **LF**-160 **LV**-500	30	30	-801
	MC, RA, MAM, FXM, FX, H.Max, V.Max, H.Plus, R.Plus, V.Plusseries **Mold Plus**800 **MX**-520 **VX**-1000	40	40	-805
	MC-600VG, 600VDC **RA**-4G **MAM**-500HF	40	NC5-63	-N63AE
	MCseries **RA**series **MAM**series	40	NC5-63	-N63VE
	Centre Through	40	BT40	-806-1
	MC-1000V, 1250 V, 1500V, 2000V **MC**900H, 900HG **H.Plus**series	50	50	-6
	RA-4G(#50) **MC**-1500VG(#50) **MC**-900HG **LX**-1500	50	50	-809
MITSUI SEIKI	**VS, HR, HT, HU**series **VT**3A **VU**50A	No.40	BT40	PS-P5-1
	Vertexseries	40	40	-805
	Centre Through	40	40	-813-E5
	VU, VJ, VS, H, HU, HS, HR, HPTseries	50	50	-P
	Centre Through	50	50	-P16
MITSUBISHI	**V**-360 **M**-V4C, V5C **M**-H4B, H5B **MPA**series **M**-Vseries **M**-Hseries	No.40	BT40	PS-1
	V, M-V, **M**-H, **M**-VS, **MPA, MAF, MVR, MHT, MKH, DH**series	50	50	-6
	Centre Through	50	50	-6E
	MAF	50	NC5-100	-N100VE
MECTRON (MIYANO)	**MSV, MTV**-C, , **MTV**-T, **MTS, TSV**series **MCH**-80	No.30	BT30	PS-17
	MSV, MTV-C, **MTV**-T, **TSV**series	40	40	-2

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★The Pull Stud Code No. depends on your M/C specification, therefore please check your M/C specification to select the proper Pull Stud.

PULL STUDS CODE NO.

NIKKEN

:NC5 Spindle Available

Machine Maker	Machine Model	TAPER	Holder	Code No.
MORI SEIKI	**TV**-300, 400 **ACCUMILL**4000 **ULTIMILL** H3000, V3000 **MILLTAP**700 **MAX**3000	No.30	BT30	PS-16
	Centre Through	30	30	-114
	SV, SH, SLV, MV, MH, NV, NMV, NVD, NH, AFM, Dura Vertical, NVX, NHX, VS, NTseries **Super TILT**500 **SVL**5000, 5250	40	40	-O8-1
	Centre Through	40	40	-366E-1
	SV400	40	NC5-63	-N63AE
	SV500 **SH**50 **SH**500	40	NC5-63	-N63VE
	SV, SH, MV, MH, MB, NV, NH, NVX, NHX, VS, NMH, NMV, NTseries	50	BT50	-0
	MV1003	50	NC5-100	-N100VE
	MV65B/50	50	-100	-835
DMG MORI SEIKI	**duo BLOCK**series	No.40	BT40	PS-366
		40	I T40	-302
	duo BLOCKseries Centre Through	40	BT40	-366-D7
		40	I T40	-309
HITACHI	**VK**series **VM**-40, 50 **VS**-40, 50, 60 **VKC**series **VA**series **HG**-400 **HS**series **HK**-630 **HA**series	No.40	BT40	PS-1
	VS-50, 60	40	NC5-63	-N63AE
	Centre Through	40	BT40	-H28
	VS-40, 50, 60, **HG**- 800	45	NC5-85	-N85VE
	VK-45, 55, 65, 85 **VA**series **VG**series **VF**series **VS**-50, 60 **HS**series **HK**-630 **HG**series **HC**series	50	BT50	-0
	HS-630 **HG**-630 **VF**-23 **VK**-85	50	NC5-100	-N100
	Centre Through	50	BT50	-048B
YAMAZAKI MAZAK	**IMPULSE**30 TypeA , B , C **UN**-600V, 600H	No.30	BT30	PS-17
	VTC, V, VQC, AJV, FJV, FH, FF, VARIAXIS, NEXUS, INTEGREX, VCN, HCN, PFH, μseries **ANGULAX**900	40	40	-G58*1
	FF-510, 660	40	NC5-63	-N63AE
	VTC, V, VQC, AJV, FJV, SV, H, FH, MTV, HV, INTEGREX, VORIEX, VARIAXIS, VCN, HCN, VERSATECH, μseries	50	BT50	-G45*1
	H-12, 12N, 15, 20, 25 **V**12, 15, 20 **VQC**-10/15, 20/50	50	50	-G4
YASDA	**YBM, YPC, VPC**series **H**30i **H**40	No.40	BT40	PS-1
	VBMVi40	40	40	-805
	Centre Through	40	40	-854
	YBM, YMCseries	50	50	-5
	Centre Through	50	50	-563
	YBM-700N, **YBM**-120N	50	NC5-100	-N100VE
ROKU-ROKU	**LIBERO RX**series	No.30	BT30	PS-16
	LIBERO RXseries	30	NC5-46	-110
	GIGA LIBERO RXseries	30	NC5-46	-N46E
	KX, MX, LX, GR-655N **VERTIMAC**series **RM**series **GIGA**	40	BT40	-1

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★*1 Please order the pull stud Code No. of MAZAK ☞ P.304

TECHNICAL INFORMATION for STOPPER PIN

NIKKEN

This is typical information (guide line) of the stopper pin only for the Spindle Speeder and Oil Hole Holder.
Be careful that the dimension of the stopper pin for Angular Head is different from this.
Please refer your M/C specification very carefully for more detail.

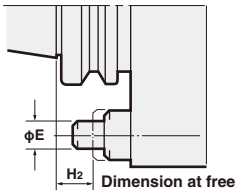


Fig.1

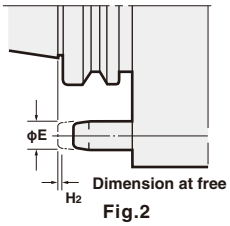
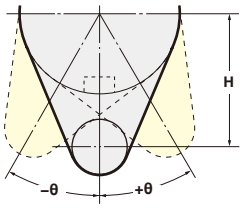


Fig.2



Machine Maker	Shank	H	E	H2	Fig.
ENSHU	BT30	50	12	4	1
	40	60	12	14	1
	50	82	18	22	1
OKUMA	BT40	65	18	0	2
	50	80	18	0	2
OKUMA HOWA	BT40	65	18	0	2
	50	80	18	11	2
OKK	BT40	65	12	16	1
	50	82	18	22	1
KITAMURA	BT40	65	18	0	2
	50	82	18	22	1
KURASHIKI	BT40	60	12	14	1
	50	145	18	0	2
SHIN NIPPON KOKI(SNK)	BT50	82	18	22	1
TOSHIBA	BT40	65	18	0	2
	50	145	24	24	2
JTEKT	BT40	65	18	0	2
	50	80	18	4	2
NIIGATA	BT40	65	18	0	2
	50	80	18	11	2

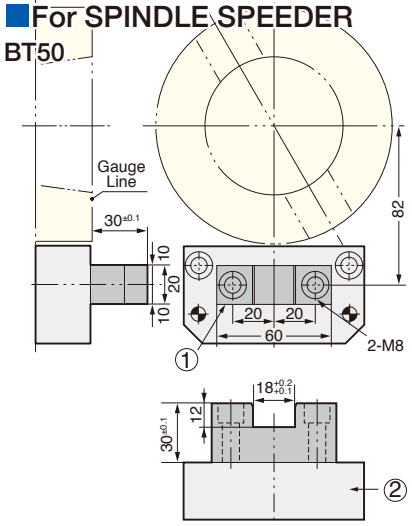
Machine Maker	Shank	H	E	H2	Fig.
MORI SEIKI (HITACHI SEIKI)	BT40	60	12	14	1
	50	82	18	22	1
BROTHER	BT30	40	12	12	1
	40	60	12	14	1
KIRA	BT30	55	12	-1	1
FANUC	BT30	55	12	29	1
MAKINO	BT40	65	18	2	2
	50	80	18	5	2
MATSUURA	BT40	60	12	28	1
	50	82	18	22	1
MITSUI SEIKI	BT40	60	12	14	1
	50	82	18	22	1
MITSUBISHI	BT40	65	18	0	2
	50	80	18	27.7	2
MORI SEIKI	BT40	65	18	4	2
	50	80	18	0	2
YAMAZAKI MAZAK	BT40	65	18	2	2
	50	80	18	0	2
ROKU-ROKU	BT40	65	18	9	2
YASDA	BT40	60	12	14	1
	50	82	18	22	1

TECHNICAL INFORMATION for STOPPER BLOCK

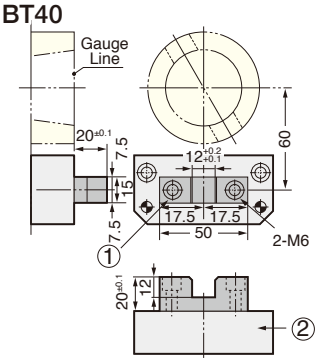
This is the information for the stopper block when **NIKKEN Standard Spindle Speeder, Oil Hole Holder and Angular Head** are used. Please be careful that the pitch between the spindle centre and the centre of the hole of the stopper block varies depending on your M/C specification. When the stopper block has been already installed on your M/C, **please specify the drawing of the spindle flange on your M/C**, when ordering of the Spindle Speeder, Oil Hole Holder and Angular Head etc.

For SPINDLE SPEEDER

BT50



BT40



1. Please use **NIKKEN Original Stopper Block for Spindle Speeder** ① and make the **Stopper Block Base** ② by yourself.

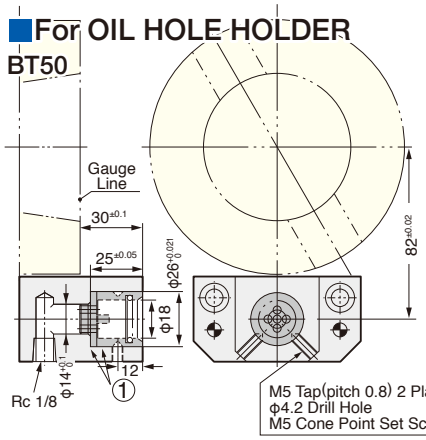
   Code No. of Stopper Block
   #40:NX40-STB
   #50:NX50-STB

2. How to make the Stopper Block Base
   - Make the suitable shape to meet with the tapped holes and the dowel pin holes on your M/C.
   - It's not necessary to be heat-treated.

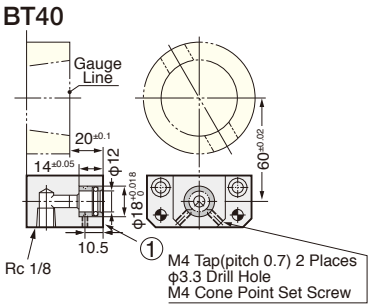
3. The pitch between the spindle centre and the centre of stopper block has to be physically adjusted when the spindle speeder is clamped on the spindle.

For OIL HOLE HOLDER

BT50



BT40



1. Please use **NIKKEN Bushing & Push Pin for the Oil Hole Holder** ① and make the Stopper Block by yourself.

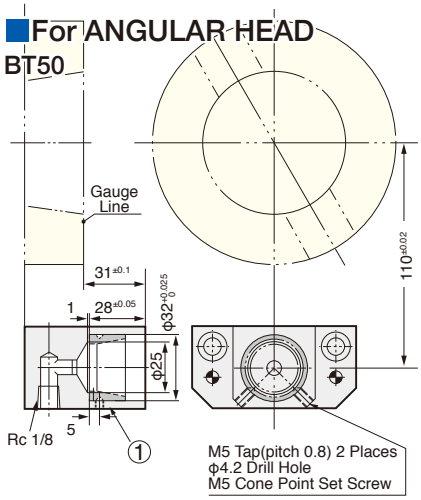
   Code No. of Bushing & Push Pin
   #40:BK40BS-A with O-ring P12
   #50:BK50BS-A & BK50PP-A with O-ring P18

2. How to make the Stopper Block.
   - Make the suitable shape to meet with the tapped holes and the dowel pin holes on your M/C.
   - It's not necessary to be heat-treated.

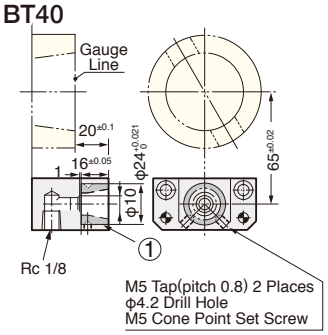
3. The pitch between the spindle centre and the centre of the hole of stopper block has to be physically adjusted when the oil hole holder is clamped on the spindle.

For ANGULAR HEAD

BT50



BT40



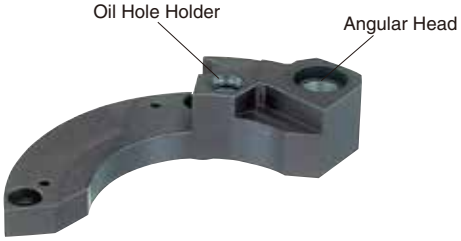
1. Please use **NIKKEN Bushing for the Angular Head** ① and make the Stopper Block by yourself.

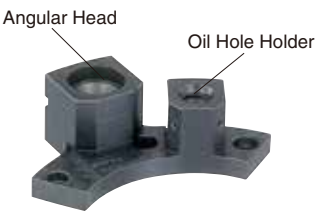
   Code No. of Bushing
   #40:AHA-03000-01
   #50:AHA-01000-02

2. How to make the Stopper Block
   - Make the suitable shape to meet with the tapped holes and the dowel pin holes on your M/C.
   - It's not necessary to be heat-treated.

3. The pitch between the spindle centre and the centre of the hole of stopper block has to be physically adjusted when the angular head is clamped on the spindle.

The combination stopper block is also available. Please specify the dimension when ordering.

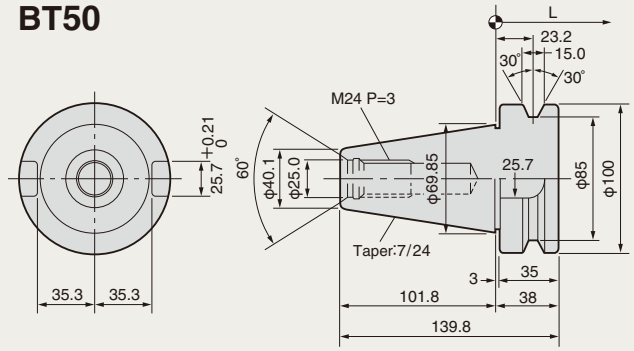




DIMENSIONS of ISO, DIN & MAS BT SHANK

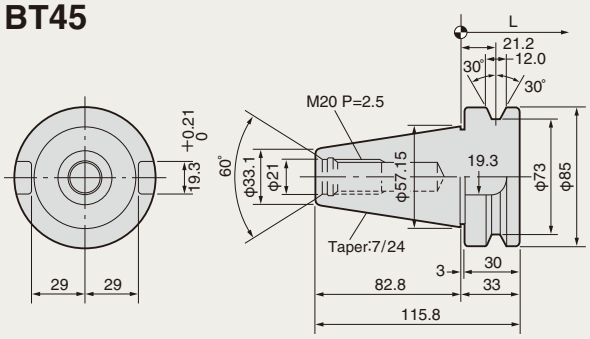
NIKKEN

BT50



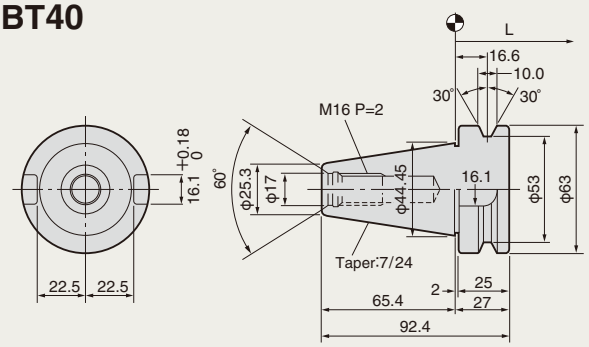
Pull Stud Code No. : PS-5, 6, 0, P, G41, G45, 50, 52

BT45



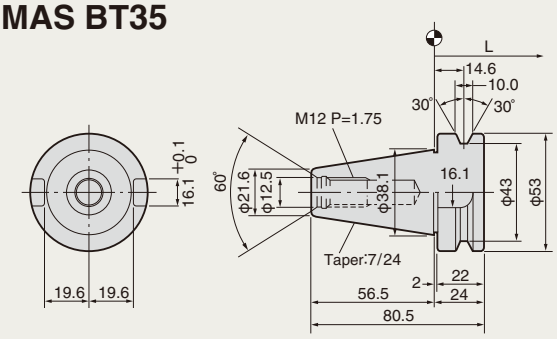
Pull Stud Code No. : PS-3, 4, 02, G1

BT40



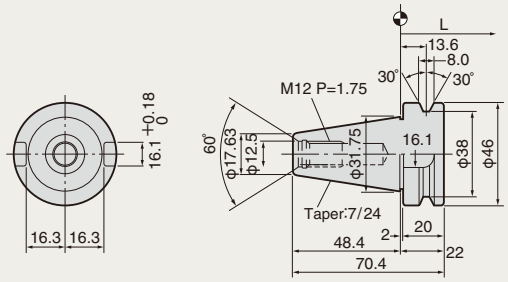
Pull Stud Code No. : PS-1, 2, 08, P5, G51, G58, G5, 301, 302

MAS BT35



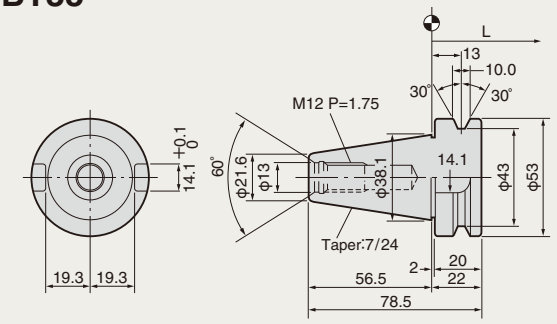
Pull Stud Code No. : PS-18, 19

BT30



Pull Stud Code No. : PS-16, 17, 81, P10

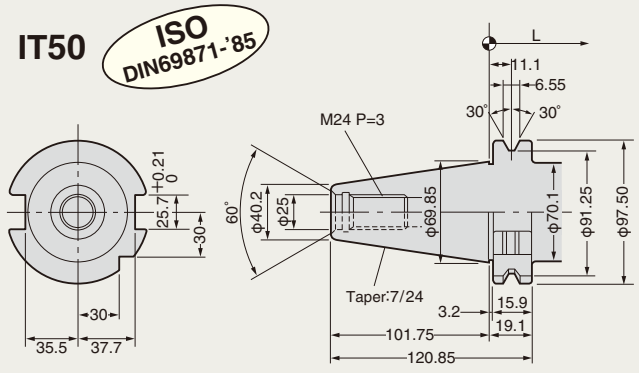
BT35



Pull Stud Code No. : PS-U2, J

IT50

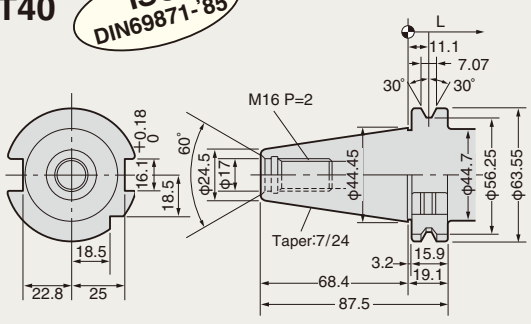
ISO DIN69871-'85



Pull Stud Code No. : PS-A3, A6, 512

IT40

ISO DIN69871-'85



Pull Stud Code No. : PS-A1, A4, 319

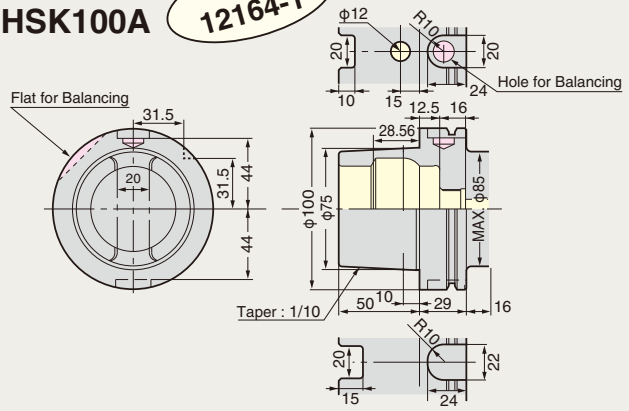
☞ For CAT Tooling, please refer to P291

DIMENSION of ISO, DIN & HSK SHANK

NIKKEN

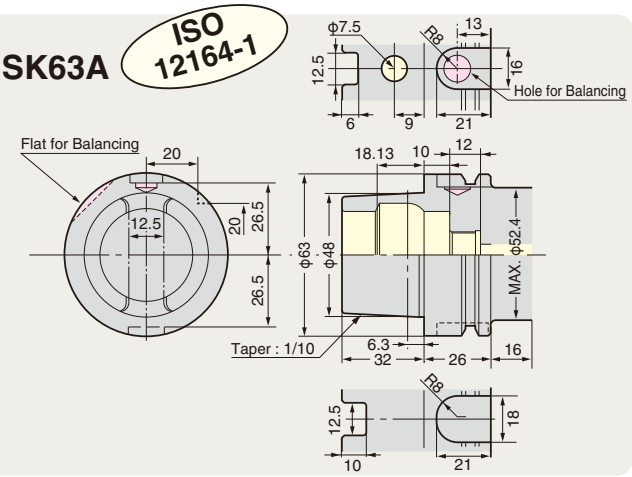
HSK100A

ISO 12164-1



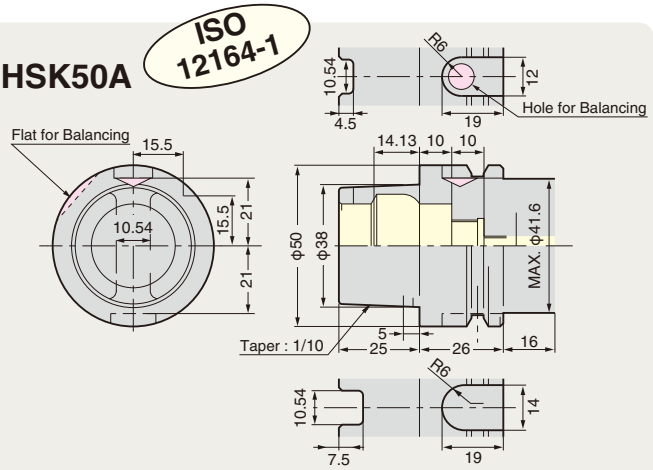
HSK63A

ISO 12164-1



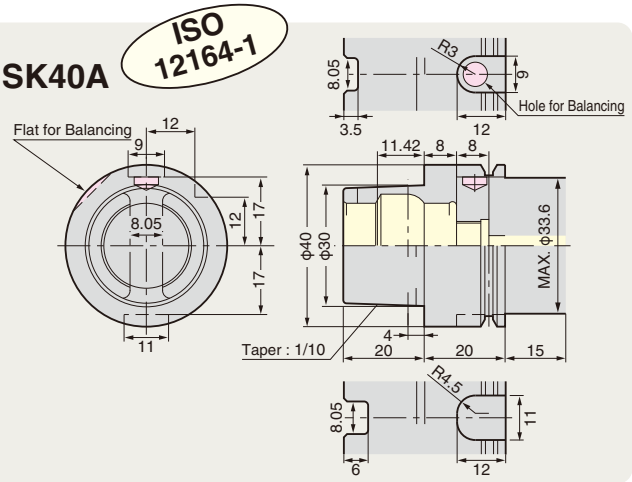
HSK50A

ISO 12164-1



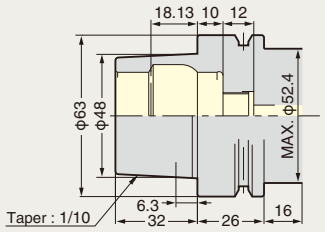
HSK40A

ISO 12164-1



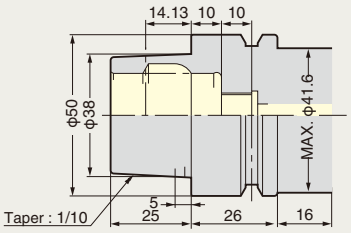
HSK63E

DIN69893-5



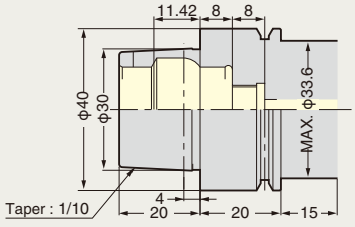
HSK50E

DIN69893-5



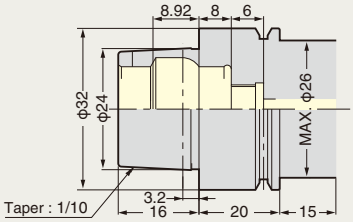
HSK40E

DIN69893-5



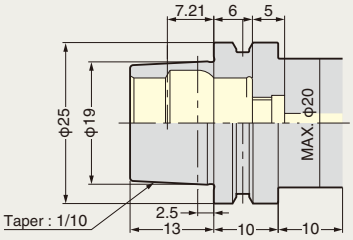
HSK32E

DIN69893-5



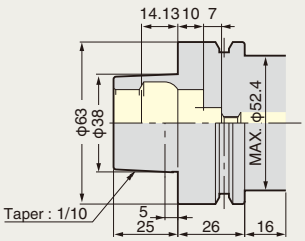
HSK25E

DIN69893-5



HSK63F

DIN69893-6



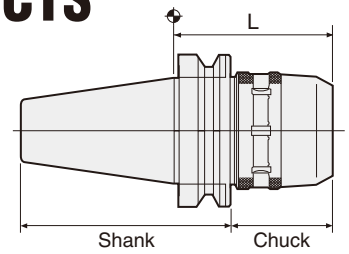
NIKKEN HSK Tooling has a hole and a flat for mass balancing as standard. Hole for manual clamp and hole for ID are not standardized.
Special HSK_A type which U grooves and drive key slots are synmetric design without V notch is also available. Please contact with us.

ALPHABETICAL INDEX OF THE PRODUCTS

Explanation of Code No.

e.g. **BT40** – **C32** – **85**

- **BT40**: Shank No.
- **C32**: Symbol of Chuck
- **85**: Nominal Gauge Length



BT/IT/CAT **BT/IT** standard ☞**P.309**, **CAT** ☞**P.291**

Code No. "**MBT□□**" is **3Lock Toolig** for **BT**. ☞**P.169**
Code No. "**NBT□□**" is **2Lock Toolig** for **BT**. ☞**P.189**
Code No. "**NC5-□□**" is **NC5 Toolig**. ☞**P.229**

Code No. "**IT□□**" is **IT Toolig**. ☞**P.151**
Code No. "**MIT□□**" is **3Lock Toolig** for **IT**. ☞**P.184**
Code No. "**NIT□□**" is **2Lock Toolig** for **IT**. ☞**P.223**
Code No. "**HSK□□**" is **HSK Toolig**. ☞**P.244**
Code No. "**CAT□□**" is **CAT Toolig**. ☞**P.290**

When shank No. is **BT□□-**, please search by the symbol of chuck.
e.g. If Codo No. is **BT40-C32-85**, please refer **P.31** seached by **BT-C**.

BT/IT-C□□ MULTI LOOK MILLING CHUCK ····· 31

When shank No. is started except **BT□□-**, please seach by the shank No.
e.g. If Codo No. is **HSK63A-C32-115G**, please refer **P.245** seached by **HSK□□-C□□**.

HSK□□-C□-G HIGH SPEED MULTI LOOK MILLING CHUCK ····· 245

FIGURES

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4MP	INSERT TIP	119
5P	INSERT TIP	121
5AX-	CNC ROTARY TABLE	302
6MP	INSERT TIP	119
7P	INSERT TIP	121
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9CKR	COLLET REMOVAL for MILLING CHUCK	33
9CMD	PILOT DRILL for COMBAT Z DRILL	295
9CMT	INSERT TIP for COMBAT Z DRILL	295
9DKT	INSERT TIP for PRO-END MILL	127
9HC	SPANNER	48
9HC-TW	BOTH HAND CLAMPING HANDL BENKEI	48
9MC	STOPPER for MILLING CHUCK	129
9PEM	LOCK BOLT for PRO-END MILL	127
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10MP	INSERT TIP	119
10P	INSERT TIP	121
□S	TIP CLAMP HANDLE	113

A

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A21PW	ALPHA CONTROLLER POWER UP	299
AB	BLADE of CHAMFERING TOOL	
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AHK□□-□□	ADAPTER for QUICK type ANGULAR HEAD	142
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AM□-□	CHAMFERING TOOL	
AS-□□	CHAMFERING TOOL	
AW□□-C□	AIR MASTER	
AWC	AWC SYSTEM	CNC
AWC-C□	CHAIN type AWC MAGAZINE	CNC
AWC-F□	FREE type AWC MAGAZINE	CNC

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BRS	STRAIGHT SHANK BROACH REAMER	REAMER
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BT/IT-BSB□□	BORING BAR for SQUARE BORING TOOL	122

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BT/IT-CZFO	ZERO FIT TYPE OIL HOLE HOLDER MILLING CHUCK	136
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D

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★CNC:Please refer CNC Rotary Table catalogue. ★□□–:Coupling Dia. of Modular Boring Head 9, 12, 16, 20, 26, 34, 42

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NBT□□-SZF□□ ZERO FIT type SLIM CHUCK 204
NBT□□-VC□□ VC HOLDER 201
NBT□□-Z□□ TAPPER CHUCK 207
NBT□□-ZL□□ TAPPER CHUCK 207
NBT□□-ZMAC□□ ZMAC-V BORING ARBOR 208

NIT

NIT□□-□□ **2 Lock Tooling for IT** 223
NIT□□-C□□ MULTI-LOCK MILLING CHUCK 223
NIT□□-FMA□□ FACE MILL ARBOR 226
NIT□□-FMH□□ FACE MILL ARBOR 226
NIT□□-MDSK□□ MAJOR DREAM HOLDER 225
NIT□□-MMC□□AA MINI-MINI CHUCK ADVANCED ALPHA 224
NIT□□-NR AIR MOTOR SPINDLE TOOL 138
NIT□□-SK□□ SLIM CHUCK 224
NIT□□-VC□□ VC HOLDER 225

MBT

MBT□□-□□ **3 Lock Tooling for BT** 169
MBT□□-BAC□□ BALANCE CUT BAC BORING ARBOR for LARGE DIA. 180
MBT□□-BLK□□ BLANK ARBOR 179
MBT□□-C□ MULTI-LOCK MILLING CHUCK 171
MBT□□-C□-G HIGH SPEED MULTI-LOCK MILLING CHUCK 171
MBT□□-CLEF FLANGE CLEANER 183
MBT□□-CZF□□ ZERO FIT type MILLING CHUCK 182
MBT□□-DJ□□ DJ BORING HEAD 179
MBT□□-FMA□□ FACE MILL ARBOR(JIS) 181
MBT□□-FMC□□ SHOULDER CUTTER ARBOR 181
MBT□□-MMC□AA MINI-MINI CHUCK ADVANCED ALPHA 176
MBT□□-PFL□ PFL MASTER HOLDER
MBT□□-Q□□ BASE HOLDER for MODULAR type 179
MBT□□-RAC□□ BALANCE CUT RAC BORING BAR 178
MBT□□-RAC□□□ BALANCE CUT RAC BORING ARBOR for LARGE DIA. 180
MBT□□-SKT□□C SLIM CHUCK 173
MBT□□-SZF□□ ZERO FIT type SLIM CHUCK 182
MBT□□-VC□□ VC HOLDER 176
MBT□□-ZMAC□□ ZMAC-V BORING BAR 177

MIT

MIT□□-□□ **3 Lock Tooling for IT** 184
MIT□□-C□□ MULTI-LOCK MILLING CHUCK 184
MIT□□-FMA□□ FACE MILL ARBOR 187
MIT□□-FMH□□ FACE MILL ARBOR 188
MIT□□-MMC□AA MINI-MINI CHUCK ADVANCED ALPHA 185
MIT□□-SK□□ SLIM CHUCK 186
MIT□□-VC□□ VC HOLDER 187

HSK

HSK□□-□□ **HSK TOOLING** 244
HSK□□-AH□□ ANGULAR HEAD 285
HSK□□-BAC□□ BALANCE CUT BAC BORING ARBOR for LARGE DIA. 281
HSK□□-C□ MULTI-LOCK MILLING CHUCK 247
HSK□□-C□-G HIGH SPEED MULTI-LOCK MILLING CHUCK 245
HSK□□-CZF□□ ZERO FIT type MILLING CHUCK 261
HSK□□-DJ□□ DJ BORING BAR 284
HSK□□-□□EX X-Treme CHUCK 289
HSK□□-FMA□□ FACE MILL ARBOR 263
HSK□□-FMC□□ FACE MILL ARBOR 263
HSK□□-FMH□□ FACE MILL ARBOR 264
HSK-IC300 AIR DRIVE ANGULAR HEAD 145
HSK□□-LP LUBRICATION PIPE 266
HSK□□-MDPE□□ MAJOR DREAM PRO-ENDMILL 258
HSK□□-MDQ□□ MAJOR DREAM Style MODULAR type BORING BASE HOLDER 284
HSK□□-MDSK□□ MAJOR DREAM HOLDER 254
HSK□□-MTA□□ MORSE TAPER ADAPTER A type 263
HSK□□-MMC□AA MINI-MINI CHUCK ADVANCED ALPHA 255
HSK□□-MMC□□C-□□-ATB MINI MINI MASTER CHUCK 259
HSK□□-MMSF□□S-□□B HIBRID SHRINK-FIT HOLDER 260
HSK□□-NC5- DREAM-CUT HOLDER
HSK□□-NPU□□ NC DRILL CHUCK 262
HSK□□-Q□□ BASE HOLDER for MODULAR type 283
HSK□□-RAC□□ BALANCE CUT RAC BORING ARBOR 267
HSK□□-RAC□□□ BALANCE CUT RAC BORING ARBOR for LARGE DIA. 275
HSK□□-SCA□□ STUB ARBOR 265
HSK□□-SK□□ SLIM CHUCK 251
HSK□□-SK□□-P HIGH SPEED SLIM CHUCK 249
HSK□□-SL□□ SIDE LOCK HOLDER 262
HSK□□-SMS□□ SHELL END MILL ARBOR
HSK□□-SZF□□ ZERO FIT type SLIM CHUCK 261
HSK□□-TB□□ TEST BAR 266
HSK□□-VC□□ VC HOLDER 257
HSK□□-Z□□ TAPPER CHUCK 265
HSK□□-ZMAC□□ ZMAC-V BORING ARBOR 277

NC5

NC5-□□-□□ **NC5 TOOLING** 229
NC5-□□-BAC□□ BALANCE CUT BAC BORING ARBOR for LARGE DIA. 241
NC5-□□-C□□ MULTI-LOCK MILLING CHUCK 231
NC5-□□-CZF□□ ZERO FIT type MILLING CHUCK 236
NC5-□□-FMA□□ FACE MILL ARBOR 242
NC5-□□-MTA□□ MORSE TAPER ADAPTER A type 238
NC5-□□-NPU□□ NC DRILL CHUCK 237
NC5-□□-PFL□□ PF MASTER HOLDER
NC5-□□-Q□□ BASE HOLDER for MODULAR type 242
NC5-□□-RAC□□ BALANCE CUT RAC BORING ARBOR 240
NC5-□□-RAC□□ BALANCE-CUT RAC BORING ARBOR for LARGE DIA. 241
NC5-□□-SCA□□ STUB SRBOR 238
NC5-□□-SK□□ SLIM CHUCK 233
NC5-□□-SL□□ SIDE LOCK HOLDER 237
NC5-□□-SZF□□ ZERO FIT type SLIM CHUCK 236
NC5-□□-TB TEST BAR 243
NC5-□□TBC□□ TURBINE BLADE HOLDER
NC5-□□-VC□□ VC HOLDER 235
NC5-□□-VMC□□ VEGA CHUCK 235
NC5-□□-Z□□ TAPPER CHUCK 238
NC5-□□-ZMAC□□ ZMAC-V BORING ARBOR 239

CAT

CAT□□-C□□ MILLING CHUCK(INCHI) 290
CAT□□-C□□G HIGH SPEED MILLING CHUCK(INCHI) 291
CAT-FMD SHOULDER CUTTER ARBOR

IT

IT□□-□□ **IT Tooling** 151
IT□□-C□ MULTI-LOCK MILLING CHUCK 151
IT□□-CZF□□ ZERO FIT type MILLING CHUCK 156
IT□□-MDSK□□ MAJOR DREAM HOLDER 154
IT□□-MMC□□AA MINI-MINI CHUCK ADVANCED ALPHA 155
IT□□-NC5- DREAM-CUT HOLDER
IT□□-SK□ SLIM CHUCK 152
IT□□-SK□-P HIGH SPEED SLIM CHUCK 153
IT□□-SZF□□ ZERO FIT type SLIM CHUCK 156
IT□□-VC□□ VC HOLDER 155

Code No. of Stop Production / Sales

A

	ANQ	ON NON STOP TOOL

B

BT/IT-	BCB□□	MICRO CUT BORING BAR (SOLID type)
BT/IT-	BRB□□	RING type BORING BAR
	BS50-□□	MAS Straight Shank TOOL
	BT50T-□□	TOOL for TOSHIBA TURNNING CENTRE
	BTP50-□□	TOOL for SNK BOTTLE GRIP SHANK
BT/IT-	BL□□	BALANCE CUT BORING BAR
BT/IT-	LB□□	LB ARBAR for LARGE DIA.

C

	CAT30S-□□	TOOL for MAKINO SEIKI
	CBT□□-□□	COMBINATION TOOL
	CG	GERMAN COOLANT NOZZLE
BT/IT-	CV	CV CHUCK

D

BT/IT-	DAC□□	DOUBLE CUT BORING BAR
BT/IT-	DAC□□□	DOUBLE CUT BORING ARBOR for LARGE DIA.
	DCD-□□	TOOL for HITACHI DRILLING CENTRE
	DK□□-□□	DRILL MATRE COLLET
	DS□-□□	DS type BORING HEAD
BT/IT-	DW□□	DOUBLE ANGLE CHUCK (DRILL MATE CHUCK)

E

	E238-MBT	TOOL PRESETTER
	EBA-□□-□□	NATIONAL TAPER BCB BORING BAR
	EBK-□□-□□	Straight SHANK BCB BORING BAR
	EBM-□□-□□	MORSE TAPER BCB BORING BAR
	EBR-□□-□□	CENTURY TAPER BCB BORING BAR
	EBT-□□-□□	QUICK CHANGE type BCB BORING BAR

G

	GSK□□	Old type HIGH SPEED SLIM CHUCK

H

	HA-□□-T□□	FLANGE type QUICK CHANGE HOLDER
BT/IT-	HC□□	HYDRAULIC CHUCK
	HNA-□□	TOOL for HITACHI (1-8UNC) BOYTTLE GRIP SHANK
	HNB-□□	TOOL for HITACHI (1-8UNC) BOYTTLE GRIP SHANK
	HNC-□□	TOOL for HITACHI (M24) BOYTTLE GRIP SHANK
	HSK□□-NC5-	DREAM CUT HOLDER
	H□□U(M)-□□	FLANGE type QUICK CHANGE TOOL

J

BT/IT-	JB	JIG BORING HEAD
BT/IT-	JBD	JIG BORING HEAD

L

	LB	LB ARBOR for LARGE DIA.
	L□□-NPU□□	DRILL CHUCK for NC LATHE

M

	M□A(B, C)-□	DAC UNIT
	MHP□-□□	MASTER BORING HEAD
	MC□□-□□	Straight SHANK MILLING CHUCK (OLD Code No.)
	MPA-□□	TOOL for MITSUBISHI BOTTLE GRIP SHANK
	MTO	MOT SLEEVE for OIL HOLE HOLDER

N

	NC□□-□□	Adjustable Straight SHANK MILLING CHUCK
	ND□□-JTA	Adjustable DRILL CHUCK ARBOR
	NEB□□-□□	Adjustable Straight SHANK BCB BORING BAR
	NG-□	GERMAN STAND
	NK□□-MT□□	Adjustable MORSE TAPERCOLLET

O

	ON□□	ON ONON STOP TOOL

P

	PC□□	Straight SHANK PRO-CUT ENDMILL
BT/IT-	PC□□	Straight SHANK PRO-CUT ENDMILL

R

	RH□□-BRB□□	MICRO CUT BORING BAR for LARGE DIA.
	RH□□-BRS□□	SQUARE BYTE BORING BAR for LARGE DIA.

S

BT/IT-	SC□□	SC SLIM CHUCK
	SC□-□	SC SLIM CHUCK COLLET
	SKN□	NUT for SLIM CHUCK
	SKN-□J	J type NUT for SLIM CHUCK
BT/IT-	SKZ□□	SLIM CHUCK for TAP with SQUARE HOLE
	SKZ□-□	SLIM CHUCK COLLET for TAP with SQUARE HOLE
	SQ□□×□□	SQUARE BYTE with MICRO CUT CARTRIDGE
	ST□□-SK□□	SLIM CHUCK for SIDE LOCK type A

T

BT/IT-	TA□□	SEMI-AUTOMATIC BORING HEAD
	TCL□□	TOOL CLAMPER
	TCP	TOOL CLAMPING PRESETTER
	TDC-□□	TOOL for FANUC DRILL MATE
BT/IT-	TA□□	BT SHANK QUICK CHANGE HOLDER

U

BT-	UAR	AUTO REVERSE BFACING HEAD
	UCA□□-□□	NATIONAL TAPER ULTRA MILL MILLING CHUCK
	UCR□□-□□	CENTYURY TAPER ULTRA MILL MILLING CHUCK
	UCT□□-□□	QUICK CHANGE type ULTRA MILL MILLING CHUCK
BT-	UC□□	ULTRA MILL MILLING CHUCK
	UK□-□	ULTRA MILL COLLET
BT-	UP□□	HIGH SPEED BASE CHUCK
	UPA	UNIVERSAL BORING HEAD
	UPK□-□	UPK COLLET for UP BASE CHUCK

W

	WASP	ECONOMY type PRESETTER
BT/IT-	WE□□	SIDE LOCK HOLDER (USA)

Ending of the Maintenance Duties of Nikken Controller for CNC Rotary Table

The maintenance duties of Nikken controller had been continued as long as the electric parts/boards could be supplied. But, the electric parts / boards for the controllers described below became impossible. Therefore, the maintenance duties is ended. Please exchange to new CNC rotary table with𝒩 21 controller.

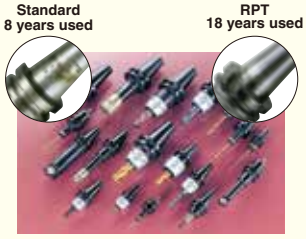
- **•Controllers for CNC rotary table** **ND5000, 8000DC, 8800DC, 9000DC** ····· **Ended at 2005. APR**
- **•Controllers for NSV Index table** **NSV controller(M function/B function)** ····· **Ended at 2005. APR**
- **•Controllers for CNC rotary table** **8800DX, 8800AX** ····· **Ended at 2013. APR**

CAUTION

NIKKEN

⚠ Caution for Tooling

- **Please use a NIKKEN collet for the NIKKEN chucks.**
- **Please use a NIKKEN chuck for the NIKKEN collets. may not be performed 100% using on the other makers chucks.**
- Please be careful not to inflict personal injury at your handling of cutting tools.
- Please clean the contact surface on a holder & cutting tool shank.
- Please pay attention to prevent from the rust at the storage. We will recommend to use **NIKKEN TOOLINGS with RPT process for rust prevention. Due to the optical system to detect the tool existing on the tool magazine of certain machines, NIKKEN's RP treated tooling may not be detected. Please check your machine's specifications very carefully to avoid this problem before you purchase our RP treated tooling.The taper connection of the tool shank with RP treatment is**



more stuck than the taper connection of the tool shank without RP treatment. Then, the unclamping force for the tool with RP treatment is required 20% stronger than the unclamping force for the tool without RP treatment. Please be careful to check the unclamping force of your M/C, when the tool with RP treatment is chosen.

- Please do not use the tooling that has scratches, damaged or rusted on its taper. This may cause false accuracy readings and reduce cutting performance.
- Please pay attention not to inflict personal injury with the broken tools or swarfs.
- Please do not modify the holders by yourselves.
- Please do not touch the tool at its rotating.
- Please do not touch the tool just after machining, it might be very hot.
- Please check if the cutting tool is held with the holder properly before the machining.
- For high speed application, please use NIKKEN **HIGH SPEED TOOLINGS** or the pre-balanced toolings.

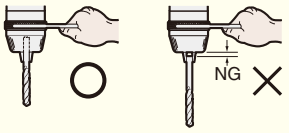
MTA
- Please insert the tool shank into the bore of the holder with adjusting the tang location, and hold them with facing tool front end upwards, and hit the bottom end of the holder(pull stud end) by copper hammer hardly.
- For removal of the tool, insert a bar into tang hole and hit the bar by hammer with special care to prevent the tool from popping out.
- Please clamp side lock screw in case of coolant through application. **For high pressure coolant through application, please use milling chuck, slim chuck or side lock holder instead of MT adapter.**

MTB
- Please insert the tool shank into the bore of the holder and tighten the draw bolt for the setting.
- For removal of the tool, loosen the bolt at couple rotation and hit the bolt head by a hammer in order to remove the taper fitness,then remove the bolt.

SCA, SCC
- When setting of side cutter or metal saw onto the arbor, please adjust the location of the drive key.

JTA
- When setting drill chuck onto the arbor please put the chuck onto the arbor with adjusting the locations of male & female tapers and hit the bottom end of the holder(pull stud end) by copper hammer.
- Please use **NIKKEN SLIM CHUCK** for high precision and high speed operation.

NPU
- Please insert the drill shank into the bottom, and chuck the shank with the total chucking length of **NPU**.
- Please check the run-out accuracy before machining especially for the small diameter drill.
- When setting the drill onto the chuck, set the drill into the chuck and tighten the chuck ring by hand then tighten the ring by attached spanner to complete.



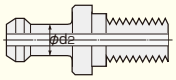
SL, SLA, SLB, SLS, DM
- When setting the tool onto the holder, adjust the locations between notches or flat face of the tool shank and side lock screws, and tighten the screws completly.
- The dimension of the flat portion of the cutter shank varies, therefore please select a proper holder according to the cutter shank dimension.
- Code No. of the side lock holder for oil hole drill is **SL○C**. **OK25～OK40** collet can be used for **SL○C**.

Type	Cutter	Axitial Adjustment
SL	φ 6～φ16 Drill,Endmill	—
SLA	φ20～φ42 Endmill	○
SLS*	φ 6～φ50 Endmill	—
WE	Inch Size Endmill	—
SLB	Drill Used with **DSA** socket	○

*SLS is the holder for JIS B 4005 endmill or weldon type endmill.

FMA, FMB, FMC, SMA, SMB, SMS
- Please use the bolt specified by the cutter maker.
- When setting the face milling cutter onto the arbor, insert the spigot of the arbor into the cutter bore and minimize the backlash between the drive key and the slot against the direction of rotation, then tighten the end bolt.
- For the cutter with coolant through the body, please check the coolant pass in the arbor and the cutter before machining.
- For high speed application, please perform the balancing operation with the cutter and insert tips fitted.

PS
- The pull stud is considered to consumption item and should be replaced pediodically. The guide line of replace ment is ;
  Without hole : 3 years or 150,000 times of ATC.
  With coolant hole : 2 years or 100,000 times of ATC.



⚠ Caution for 3LOCK・2LOCK

- Always ensure that M/C has the mechanism to confirm the perfect flange contact.
- Always ensure that M/C has the mechanism to clean the spindle flange surface.
- Please ensure that the suitable spacer is fitted on the machine spindle flange when the **3LOCK** tooling is used on the standard BT/IT/CAT spindle machine. Please do not use the **3LOCK** tooling on the standard spindle machine without the suitable thickness of the spacer.

Caution at Use

- Always ensure that swarf should not attach at the spindle flange surface of the double contact system. Generally the inside of the machining envelope is always covered with swarf. This means that there is a possibility that the flange of the tooling may collect swarf easily at the ATC. It is therefore important that the machine envelope is regularly cleaned(Clean the ATC arm, the route through which the tooling passes, the tool pot and the spindle surfaces etc.)at least every 3 months.
- The rust or fine swarf may be fitted on vacant pot inside. So, if ATC mechanism of your M/C is random pot change mechanism(the tool on the spindle is returned to the pot in which the next tool is stored), please insert the dummy tool into all vacant pots to protect this.
- Caution for centre through tool coolant application

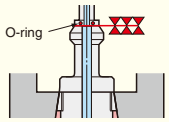
There are 2 types of the sealing method of the coolant at pull stud, sealing of face contact and sealing of taper contact. please choose the proper pull stud for your M/C.

- If your center through tool coolant M/C does not have the sealing mechanism at pull stud, the coolant stays inside the spindle and is sealed at BT/IT taper connection. tool can not seal the coolant at taper connection, because the taper cone of tool has the slit.Please select tooling instead.

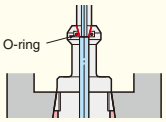
Pulling Force of the M/C

- If the pulling force of machine spindle decreases substantially, the NIKKEN **3LOCK** tooling cannot perform 100% at its capability. We would recommend that regular inspection of the pulling force is carried out to prevent any reduction in the pulling force at an early stage. Please refer ☞ **P.303** for pulling force measurement tool.
- When the pulling force of the M/C became too low, **3LOCK** tool can not perform its capability. Please ensure the MIN. pulling force as follows:
  MBT40: 5KN
  MBT50: 15KN

The periodical inspection of the pulling force is required.



Sealing of Face Contact



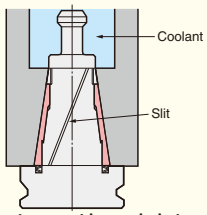
Sealing at Taper Contact

Rust Proof Treatment

- The taper connection of the tool shank with RP treatment is more stuck than the taper connection of the tool shank without RP treatment. Then, the unclamping force for the tool with RP treatment is required 20% stronger than the unclamping force for the tool without RP treatment. Please be careful to check the unclamping force of your M/C, when the tool with RP treatment is chosen.
- Therefore, the taper cone of **3LOCK** tool and **NC5** tool is changed to without RPT treatment as standard. And the special anti-rust treatment is applied to the taper cone of the **3LOCK** tool and **NC5** tool.

M/C with Flange Trough Tool Coolant

- When the stroke of the coolant nozzle at spindle flange is not sufficient on BT/IT standard M/C, **2LOCK** tooling may not be used due to the collision. Please check the specification of your M/C.



Coolant can not be sealed at taper connection for 3LOCK tooling. Please 2LOCK tooling instead.

NIKKEN WORLD WIDE SALES BRANCH

There are overseas Sales Branches in 12 countries. Each sales branch has stocks for toolings and CNC Rotary Tables, and service engineers look after the maintenance and service operation of our products. In the other region, e.g. East-South Asia, Ozaena, South America, Africa, etc., there are some distributors. At the production line in abroad, as there are many requirements for special tools and CNC Rotary Table to suit the special specifications, please ask us or distributors for spare tools and maintenance parts in advance.





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NIKKEN SCANDINAVIA (SWEDEN)


NIKKEN DEUTSCHLAND (GERMANY)



PROCOMO-NIKKEN (FRANCE)


KOREA NIKKEN (KOREA)


VEGA INTERNATIONAL (ITALY)



OLASA (SPAIN)


CUTTING TOOL (SPAIN)


NIKKEN TURKEY (TURKEY)


NIKKEN CHINA (CHINA)


SIAM NIKKEN (THAILAND)



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SCANDINAVIA
SWEDEN

NIKKEN SCANDINAVIA AB
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E-20018 DONOSTIA-SAN SEBASTIAN
Tel.+34-(0)-902-820090 Fax.+34-(0)-902-820099
UTILLAJES OLASA,S.L. (CNC ROTARY TABLE)
Tel.+34-(0)-943-107177

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NIKKEN CHINA

New Nikken facility was opened at Zhao Hua Road, Shanghai on 2004 JAN due to the Chinese business expansion. The standard items of NC tooling & CNC rotary table and each important spare parts are stocked for quick delivery.

You can access to Nikken China with Chinese, Japanese or English. Not only Chinese catalogue but also Chinese instruction manual are provided for Chinese domestic market. Our office has the show room to see and touch our products, and our presentation will be done more practically. Technical seminar of Nikken is also opened at user factory side.













Chinese engineer well trained in Japan is engaged in the service of our products. Different types of the NC controller for the CNC rotary table are provided for the trial running after repair. The most important spare parts are stocked. It is possible to stock the special spare parts of the custom-made tooling or CNC rotary table for further discussion. Please consider to make a contract of“Nikken Rotary Table Overseas Warantee Contract”for the CNC rotary table delivered to China.

The sales of nikken products through Internet is not started in China. For after service and the further maintenance, please purchase Nikken products through authorized distributors.





LYNDEX-NIKKEN (NIKKEN USA)

As North America's leading supplier of machine tool accessories, LYNDEX-NIKKEN is a wholly-owned subsidiary of NIKKEN Kosakusho Works., Ltd. - Japan. Backed by over a half century of experience, LYNDEX-NIKKEN sets the standard for high quality and high technology with a complete line of superior toolholders and machine tool accessories. From one source you can expect the best of both worlds: Extreme Quality and Advanced Technology.

LYNDEX-NIKKEN has a team of dedicated application and engineering staff available to advise you on your application and support our entire product line throughout the U.S., Canada, Mexico and South America. Our regional managers in Chicago, Los Angeles, Boston, Charlotte, Dallas and Seattle support our 1,000 plus distributors with machine tool accessories expertise.
LYNDEX-NIKKEN provides expert process and product consultation for even the most demanding applications with full on-demand field support and ongoing training.







North American Facility

The LYNDEX-NIKKEN North American headquarters is centrally located near Chicago Illinois. Our 50,000 sg ft. facility warehouses an inventory of over 12,000 machine tool accessories stocked for fast delivery. Over 95% of orders are shipped out same day. Our extensive inventory of products includes:



Products

- Rotary Tables - NIKKEN's complete line of CNC Rotary Tables are known worldwide for their wear-resistance, rigidity and high-speed rotation. NIKKEN rotary tables are built to provide high accuracy, increased production and a trouble-free long life.

- Advanced Toolholders - Maximize the potential of your machine tools with LYNDEX-NIKKEN's advanced toolholders.

- Standard Toolholders - LYNDEX-NIKKEN's complete range of quality-driven toolholding solutions are designed to meet your strictest requirements.



- Presetters - Our full line of Presetters are full-featured for optimum accuracy in tooling setup, measurement and inspection.



Service & Support

- Dedicated application and engineering support staff
- Support for entire product line spans the U.S., Canada, Mexico and South America
- On-demand field support and ongoing training
- Customer service and technical support staff
- Expert process and product consultation for even the most demanding applications
- Cutting trials and testing
- Service, repair and custom configuration completed on-site
- Attention to high-tech application demands, including high-speed and balanced toolholding solutions

NIKKEN EUROPE (NIKKEN UK)

The NIKKEN Euro Centre based in the UK was opened in 1999; from here we sell, distribute and support all products to our subsidiaries and dealers in over 20 countries around Europe. At the NIKKEN Euro Centre we take great pride in the consistent delivery of the four founding principles of our business: **Absolute Integrity, Uncompromising Quality, Unflinching Support,** and above all **"Total Commitment" to our customers.**

NICE (NIKKEN Innovation Center Europe) is established in AMRC park at the end of 2015, and user support of the difficulty cut materials processing for plane in particular, energy industry is enriched.





Product Inventory

NIKKEN Euro Centre facilities has a warehouse space of 13,000m^2. which holds over 50,000 individual items covering a range of some 4,000 product lines, including the latest generation of Single & Multi Axis CNC Rotary tables, thus making it the largest stock of NIKKEN products in Europe.





Our Technical Support and Training Section provides our existing customers and potential customers access to:

- A Multimedia based training facility that ensures our customers, through comprehensive training, will realize the full productivity potential of their application.
- A wealth of engineering expertise covering all aspects of application set-up, optimization and implementation that is available for the full life of the NIKKEN product.





Our machining centre equipped with Testing Facilities enables us to:

- Research, develop and optimize all of our tooling systems.
- Demonstrate to our potential customers the advantages of using both NIKKEN Tooling and CNC Rotary Tables in their applications.





Our Service Department specializes in:

- Providing on-site inspections prior to rotary table repairs and refurbishment by our own NIKKEN trained service engineers.
- Providing tooling and rotary tables optimized to seamlessly integrate into any application.

NIKKEN DEUTSCHLAND (NIKKEN GERMANY)

Nikken Deutschland GmbH, a wholly owned subsidiary in Germany of NIKKEN Kosakusho Works, was established in 2003 to take over the sales activities of the previous distributor. Based in Russelsheim, which is a town made famous by the manufacturing complex of Opel, the company is located about 15 minutes away by car from Frankfurt airport. Germany has ranked at the top of the machine tool industry for many years, and is also the supply source of machine tools that are fuelling the significant expansion now taking place in Eastern Europe. Nikken Deutschland GmbH has its base at the centre of the huge market of Germany and Eastern Europe, and continues to broaden the range of the company's sales operations.

NIKKEN has achieved some impressive successes in Germany with its CNC rotary tables and tool holders thanks to a long sales history of the company's sales activities. A sales force consisting mainly of German personnel stands on the front line of this activity to address the sales and servicing needs of the entire country. More specifically, the company provides technical advice, repairs, aftersales support and other services to end users, distributors and machine dealers.









To enable speedy delivery of standard items in the German market and of popular products compliant with European standards, Nikken Deutschland GmbH works closely Nikken Euro Centre to keep a full stock at its disposal. The company uses the most appropriate type of delivery in each case, including parcel post, DHL, door-to-door service and flash shipment, to meet the demands of customers.

The sales territory of Nikken Deutschland GmbH spans the vast area of eastern Europe and covers such countries as the Czech Republic, Slovakia, Austria, Russia, Poland, Hungary, Romania and Bulgaria, all countries in which Japanese companies are rapidly expanding their business. The service is not limited to sales, but engineers make on-site adjustments, repairs and service calls as well.









Nikken Deutschland GmbH has participated in and contributed to many trade shows and exhibitions held in Germany, including the EMO show, METAF, AMB and EURO MOULD. The company's fully furnished showroom is a Mecca of information to the constant stream of visitors who can inspect products and examples of machining, as well as receive application advice and technical training. They can handle NIKKEN's products for themselves, learn about the construction and capability of the CNC rotary tables, and learn about the accuracy and other features of NIKKEN's products.

A complete support organisation is in place to ensure that advice is relayed promptly by telephone and other rapid communication media, that repairs or delivery of tool holders and CNC rotary tables are carried out promptly with all due diligence, and that emergency service calls are responded to rapidly.

To make it possible to support all types of motors and controllers for NIKKEN's CNC rotary tables, the company has set up trial run equipment that accommodates many different motors, and offers a full range of accessories including tailstocks, support tables, scroll chucks and collet chucks adapted to the CNC rotary tables. The fact that NIKKEN's CNC rotary tables are endowed with outstanding durability and that a complete support service is provided instil confidence in users that the equipment will give outstanding service in the years ahead.

PROCOMO-NIKKEN (NIKKEN FRANCE)

Procomo France S.A.S was established 30 years ago with the avowed intent to deliver the high-accuracy and high-quality tool holders and CNC rotary tables as well as related services, applications and after-sales servicing, into the hands of engineers in France. A major milestone in the company's history was marked in 2006 with the change of the company name to PROCOMO-NIKKEN, and the company took on a new lease of life as NIKKEN's wholly owned subsidiary in France.





In 2005, PROCOMO-NIKKEN embarked on a complete renovation of its buildings and facilities in order to make it possible for users to gain hands-on experience of NIKKEN's products in a bright and comfortable environment.



In the meeting room, which is fitted out with all the latest multimedia technology, technical seminars are regularly held so that attendees will come away with a clear understanding of NIKKEN's products and technology. The showroom is where videos of cutting operations are screened, and visitors can actually handle some of NIKKEN's products in this room as well. The machining centre, which is used for cutting trials, enables visitors to identify what makes NIKKEN's products different from those of other companies and to judge how impressive are the machining accuracy and advanced cutting capabilities of NIKKEN's products. As the top tool holder manufacturer, NIKKEN believes is that once customers have their own personal experience of the low machining noise, attractive-looking cut surfaces and uniform discharge of chips, they will be convinced that they can completely trust in and depend on the expertise and capabilities of the company.









The stocks of a large number of standard products are always on hand, enabling the products that customers need to be delivered in the shortest possible time. The NIKKEN Euro Centre and PROCOMO-NIKKEN retain constant and close contact; together they take on the challenge of how to machine products in a more rationalized manner, in a shorter time and to a higher accuracy so that France's engineers can meet every need of the French marketplace.

NIKKEN has already earned an enviable reputation in the global marketplace for the high accuracy and outstanding wear resistance of the company's CNC rotary tables. PROCOMO-NIKKEN has a team of five engineers dedicated full-time to providing users with application support prior to placing orders for tool holders and CNC rotary tables and to carrying out the preparation for shipment, education and training programs, maintenance and repairs, and servicing. This support network delivers a wide range of services, while willingly taking up the challenge of coming to grips with new applications.

NIKKEN

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■Please give your order to the following agent.

D.NH.1

●Specifications are subject to change without notice.