

NIKKEN

CONVENTIONAL TOOLING SYSTEM

*your **P**artner in
precision*

NIKKEN KOSAKUSHO WORKS, LTD.
CAT.NO.5600




MULTI LOCK MILLING CHUCK  P.5



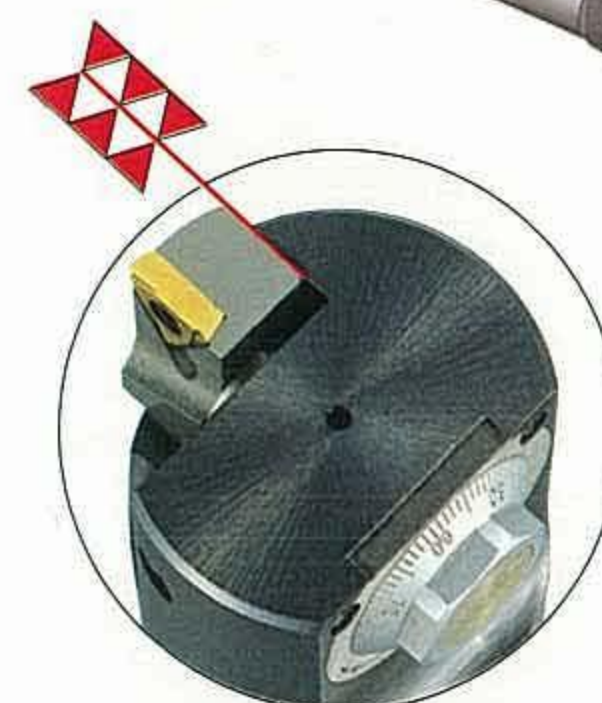
QUICK CHANGE HOLDER  P.15




TAPPER CHUCK
 P.21




DJ BORING HEAD
 P.29



ZMAC BORING HEAD  P.27



UNIVERSAL ROTARY
& TILTING TABLE  P.31

INDEX

1.MULTI LOCK MILLING CHUCK SERIES

MULTI LOCK MILLING CHUCK3
MILLING CHUCK <ISO TAPER>	MCA5
MILLING CHUCK <QUICK CHANGE>	MCT5
MILLING CHUCK <MORSE TAPER>	MCM5
ATTACHMENT for MILLING CHUCK	
STRAIGHT COLLET	KM6
TAPER COLLET	K-MT6
<Straight Shank> NPU DRILL CHUCK	D-NPU6
<Straight Shank> CENTERING BAR	Y6
<Straight Shank> MILLING CHUCK	S-C6
<Straight Shank> FACE MILL ARBOR	F6
<Straight Shank> PRO-END MILL	PE8
<Straight Shank> STUB ARBOR	K-SCA8
<Straight Shank> SLIM CHUCK	K-SK9
SLIM CHUCK COLLET	SK10
<Straight Shank> MINI-MINI CHUCK	K-MMC18
MINI-MINI CHUCK COLLET	VMK18
<Straight Shank> ZMAC BORING BAR	K-ZMAC11
<Straight Shank> MICRO CUT BORING BAR	K-BCB11
<Straight Shank> DEEP HOLE ZMAC BORING BAR	ZMACX11
<Straight Shank> DJ BORING BAR	K-DJ12
<Straight Shank> BALANCE CUT BORING BAR	K-RAC12
<Straight Shank> TAPPER CHUCK	NZ12
<Straight Shank> UNIVERSAL MICRO TOUCH SENSOR	UMT13
UNIVERSAL MICRO STAND	UDS13
<Straight Shank> TOUCH POINT SENSOR	TP14
<Straight Shank> CENTERING HOLDER	SY14
BALL CENTRALIZER	BAL14
MILLING CHUCK BOXED SET	S.MCA7

2.QUICK CHANGE HOLDER SERIES

QUICK CHANGE HOLDER	HA15
QUICK CHANGE TYPE MILLING CHUCK	MCT16
STRAIGHT COLLET	KM16
QUICK CHANGE TYPE FACE MILL ARBOR	FT16
QUICK CHANGE TYPE MORSE TAPER SLEEVE	TT16
QUICK CHANGE TYPE STUB ARBOR	ET16
QUICK CHANGE TYPE NPU DRILL CHUCK	DT-NPU16
QUICK CHANGE HOLDER BOXED SET	S.MHA17
COTTER HOLE DIMENSIONS18
MILLING CHUCK FOR HOBBING MACHINE	CF18

3.CONVENTIONAL ARBOR

SPINDLE SPEEDER	NX19
FACE MILL ARBOR	FN19
STUB ARBOR	EA19

4.TAPPER CHUCK SERIES

NON-STOP CHUCK	NQ20
MORSE TAPER TAPPER CHUCK	ZM21
TAPPER CHUCK FOR NON-STOP CHUCK	ZQ21
AUTO. REVERSING TAPPER CHUCK	ZR22

ONE TOUCH TAP COLLET	
ZK TAP COLLET	

ZKG23
ZK24

5.BORING BAR SERIES

MODULAR ZMAC BORING SYSTEM25
MODULAR TYPE SHANK, SPACER	Q,SP26
ZMAC BORING HEAD	ZMAC27
MICRO CUT BORING HEAD	BCB28
BALANCE CUT BORING HEAD	RAC28
DJ BORING HEAD	DJ29
DJ CARBIDE CORED BIT	J29
INSERT TIP30

6.MEASURING ATTACHMENT

<Straight Shank> UNIVERSAL MICRO TOUCH SENSOR	UMT13
UNIVERSAL MICRO STAND	UDS13
<Straight Shank> TOUCH POINT SENSOR	TP14
<Straight Shank> CENTERING HOLDER	SY14
BALL CENTRALIZER	BAL14

7.CONVENTIONAL ROTARY TABLE

UNIVERSAL ROTARY & TILTING TABLE	NST-HP31
ROTARY SUPER INDEX TABLE	SRI32

8. NC TOOLING SYSTEM

Please refer NC TOOLING catalogue.

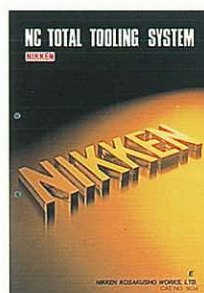
9.CNC ROTARY TABLE

Please refer CNC ROTARY TABLE catalogue.

10.REAMER SERIES

Please refer P121~P128 on NC TOOLING catalogue.

NC TOTAL TOOLING SYSTEM

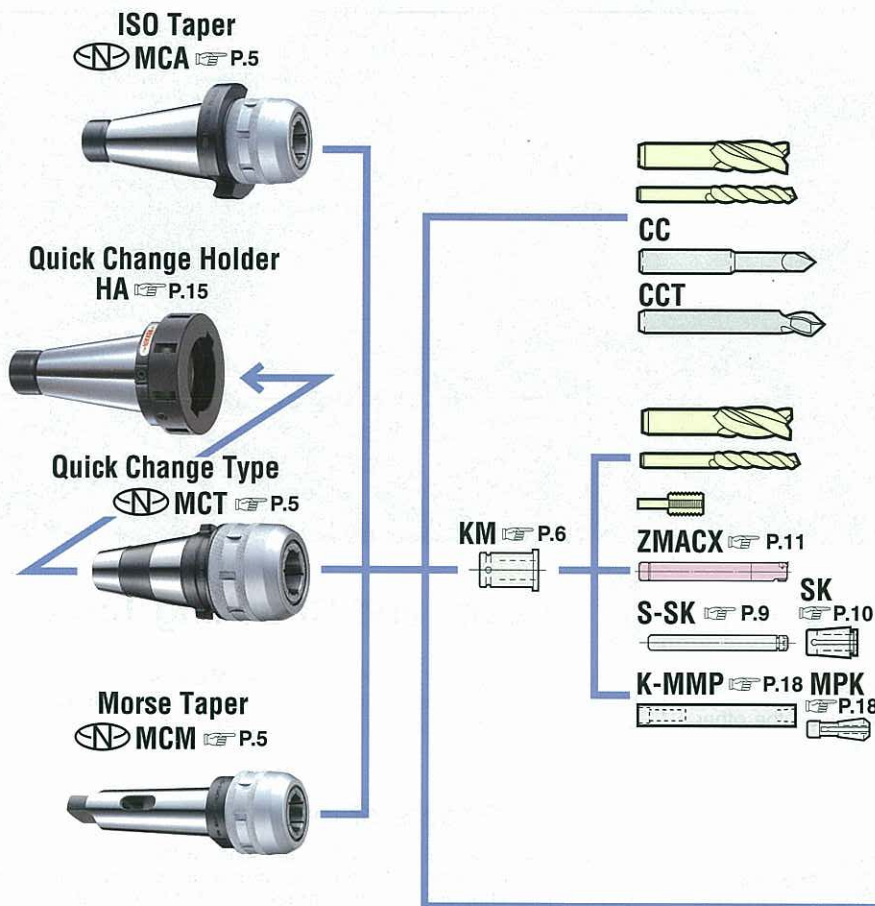


CNC ROTARY TABLE



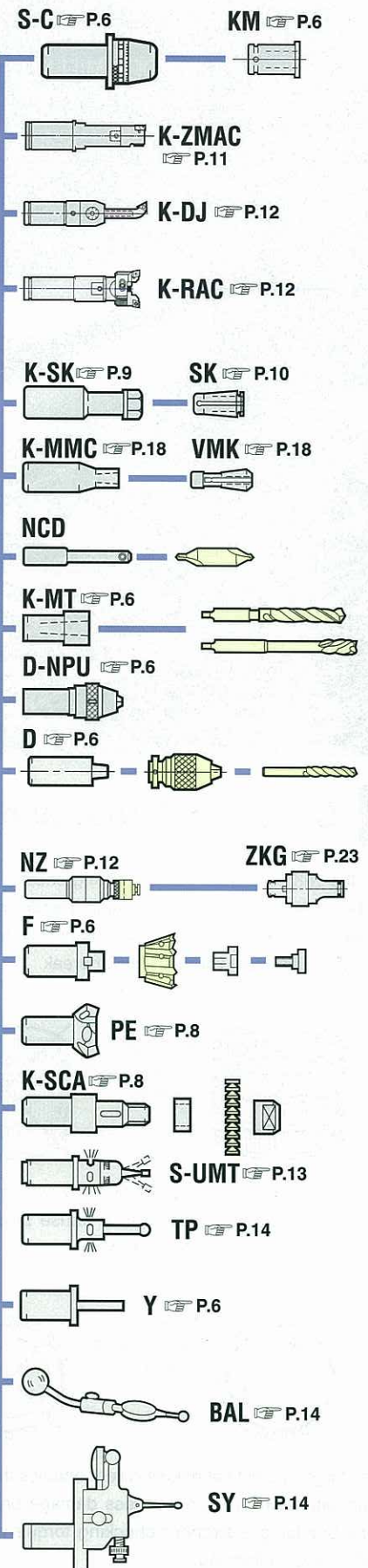
MILLING CHUCK SYSTEM

The method of tool clamping on a conventional machine tool uses the draw bar system. This method produces a very high pulling force and the ANNIVERSARY Chuck allows the machine to perform to 100% of its capability.



The ANNIVERSARY Chuck is an efficient multi purpose base holder for conventional machine use. It incorporates a simple, easy to use chucking mechanism.

- ◆ Easy Operation
- ◆ High precision
- ◆ High Rigidity • Powerful Performance



ISO Taper is based on ISO297 and DIN2080.

It has been 40 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 the greatest possible care of NIKKEN spirits.

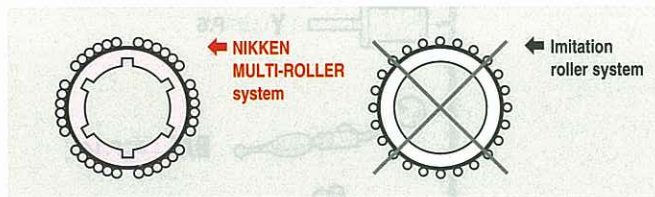


1 Chucking Torque and Durability

All the NIKKEN MULTI-LOCK milling chucks incorporate the multi-roller system including **140% more needle rollers** than the other imitations. Important, 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 scatterers in the imitations.



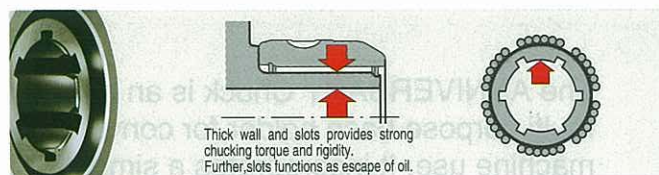
The larger quantity of needle rollers enables the moving of the same load with a small force and less damage on the bearing surface, thus providing a stronger chucking torque without creating even rolling when tightening.

2 Rigidity and Chucking Torque

Internal slots together with thickened wall of chuck body ensure no distortion even at heavier milling. Thus, smooth millingwork 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.

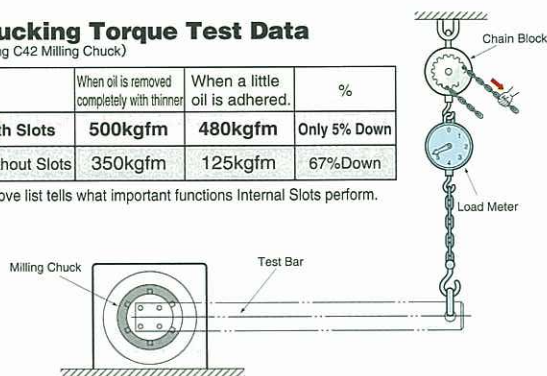


Chucking Torque Test Data (Using C42 Milling Chuck)

	When oil is removed completely with thinner	When a little oil is adhered.	%
With Slots	500kgfm	480kgfm	Only 5% Down
Without Slots	350kgfm	125kgfm	67% Down

For other chuck

● Above list tells what important functions Internal Slots perform.



MULTI LOCK MILLING CHUCK



**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 PAT.P

Cutting Data **HSS** Endmill • **Carbide** Endmill

CHUCK	ENDMILL	CUTTING CONDITION	Ad×Rd
BT50-C32-90	HSS Coating 32 φ 4t	V 38m/min S 380rpm F 152mm/min	S55C 60mm OIL 12mm
BT50-C42-95	HSS Roughing 42 φ 45 φ 6t	V 30m/min S 210rpm F 130mm/min	S55C 110mm OIL 20mm
BT50-C20-135 KM20-16	Carbide Coating 16 φ 4t	V 176m/min S 3500rpm F 2000mm/min	S55C 35mm 3mm
BT40-C25-70	HSS Coating 25 φ 4t	V 38m/min S 480rpm F 192mm/min	S55C 50mm OIL 8mm
BT40-C16-60	Carbide Coating 16 φ 4t	V 200m/min S 4000rpm F 2000mm/min	S55C 30mm 3mm
BT30-C12-55 KM12-10	Carbide Coating 10 φ 4t	V 160m/min S 5000rpm F 2000mm/min	S50C 15mm 3mm
BT30-C12-55	HSS Non Coating 12 φ 4t	V 30m/min S 800rpm F 250mm/min	S50C 18mm WATER 4mm
		V 228m/min S 6000rpm F 3600mm/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.

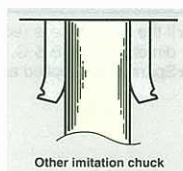
4 Clamping at Nose Mechanism

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.



NIKKEN MULTI-LOCK Milling Chuck



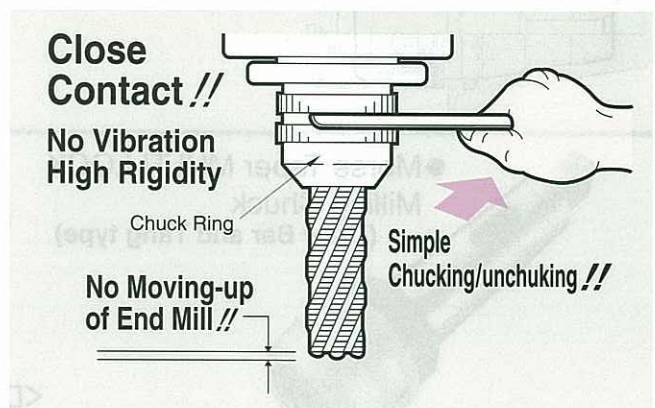
Other imitation chuck

5 Stable Milling with Stopper

Easy for " anyone to attain a stable torque."

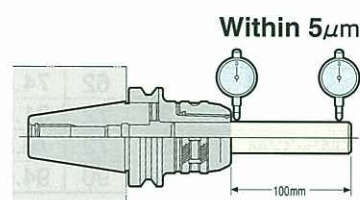
Wear of the bearing surface is only 1~2microns even after practical use of 4~5years owing to the use of 140% more needle rollers than imitations, the use of special material (steel) of NIKKEN own. and the know-how of hardening. The stopper is therefore located to the MULTI-LOCK milling chuck where the maximum efficiency of chucking torque is exerted. Tightening the chuck close to the stopper 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 5 μm (T. I. R) at the position 100mm apart from the nose.



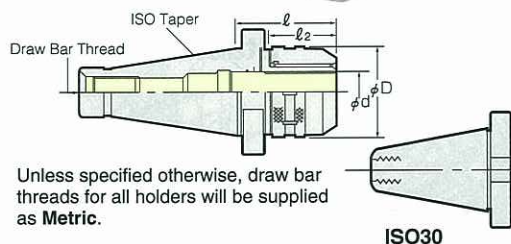


MULTI LOCK MILLING CHUCK

NIKKEN

MCA

●ISO Taper MULTI LOCK Milling Chuck



Unless specified otherwise, draw bar threads for all holders will be supplied as **Metric**.

TAPER	Code No.	ϕd	ϕD	l	l_2	Thread
ISO30	MCA30F-16M	16	45	46.1	36.5	M12 P=1.75 (W $\frac{1}{2}$ -12Threads) (U $\frac{1}{2}$ -13Threads)
	-20M	20	54	59.6	59.6	
	-22M	22	59	64.6	64.6	
	-25M	25	62	77	77	
ISO40	MCA40F-16M	16	45	48.1	36.5	M16 P=2 (U $\frac{5}{8}$ -11Threads)
	-20M	20	54	57	45.4	
	-22M	22	59	60.8	47.2	
	-25M	25	62	57	45.4	
	-32M	32	72	68.6	68.6	
	-42M	42	88	101.6	101.6	
ISO50	MCA50F-20M	20	54	75	59.8	M24 P=3 (U1-8Threads)
	-22M	22	59	75	59.8	
	-25M	25	62	75	59.8	
	-32M	32	72	73.6	52.4	
	-42M	42	90	79	54.8	

★Chuck bore Dia. d= ϕ 50mm and ϕ 50.8mm are also available.

★Long Gauge Length series are also available.

★Spanner is supplied as standard.

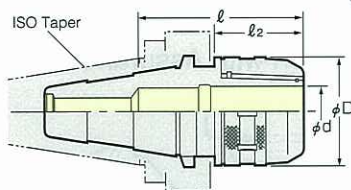
★Please refer P.7 for the explanation of Code No.

MCT

●Quick Change type MULTI LOCK Milling Chuck



Quick Change
Master Holder
refer P.15



TAPER	Master Holder	Code No.	ϕd	ϕD	l	l_2
ISO30	HA30-T30M	MCT30-16	16	45	86.6	45
		-20	20	54	90.4	48.8
		-22	22	54	90.4	48.8
ISO40	HA40-T35M	MCT35-20	20	54	85.8	50.2
		-22	22	54	86.6	51
		-25	25	62	86.6	51
		-32	32	69	95.6	60
ISO50	HA50-T45M	MCT45-20	20	54	93	48.2
		-22	22	59	94	49.2
		-25	25	62	90	45.2
		-32	32	72	100.2	55.4
		-42	42	88	108.8	64

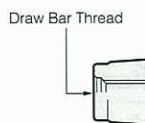
★Please refer P.15 for Quick Change Master Holder.

★Spanner is supplied as standard.

●Morse Taper MULTI LOCK Milling Chuck (Draw Bar and Tang type)

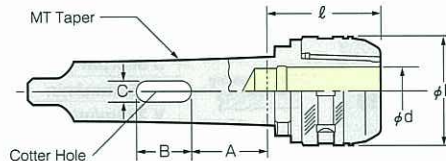


MCM



<Draw Bar type>

MCM □ T



<Tang type>

<Draw Bar type>

TAPER	Code No.	ϕd	ϕD	l	Thread
MT3	MCM3-16M	16	45	56.5	M12 P=1.75
	-20M	20	54	69	
	-22M	22	59	68.2	
	-25M	25	62	73	
MT4	MCM4-20M	20	54	70	M16 P=2
	-22M	22	59	70	
	-25M	25	62	74.5	
	-32M	32	72	81.5	
MT5	MCM5-32M	32	72	76.5	M24 P=3
	-42M	42	90	94.5	

★Unless specified otherwise, draw bar threads for all holders will be supplied as **Metric**.

★B&S type is also available.

★Spanner is supplied as standard.

<Tang type>

TAPER	Code No.	ϕd	ϕD	l
MT4	MCM4T-25	25	62	74.5
	-32	32	72	81.5
MT5	MCM5T-32	32	72	76.5
	-42	42	90	94.5
MT6	MCM6T-32	32	72	63
	-42	42	90	83

★If the cotter hole is required on the shank, please specify the dimensions A, B & C. Please refer P.18.

★Spanner is supplied as standard.

ATTACHMENT for MULTI LOCK MILLING CHUCK

NIKKEN

KM Straight collet



Photo. shows ANNIVERSARY type.

- ★An oil groove in the internal bore of the collet prevents the cutter from slipping.

For straight shank cutter

Milling Chuck ID	Code No.
φ 12	KM12-3,4,5,6,8,10
φ 16	KM16-6,8,10,12
φ 20	KM20-6,8,10,12,16
φ 22	KM22-6,8,10,12,16,20
φ 25	KM25-6,8,10,12,16,20
φ 32	KM32-6,8,10,12,16,20,25
φ 42	KM42-6,8,10,12,16,20,25,32

★Internal bore size: The following special metric and imperial sizes are also available.

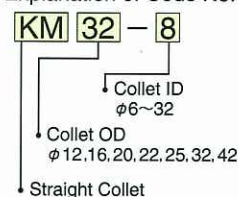
2, 3, 4, 5, 5.5, 6, 2, 7, 8, 5, 9, 10, 5, 11, 12, 5, 13, 14, 15, 17, 18, 19, 21, 22, 23, 24, 26, 27, 28, 29, 30, 31, 33, 34, 40

1. 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/8, 1 1/4, 1 1/2

★KM50 & KM50.8 type collets are also available.

★The following ANNIVERSARY type KM collets are also available.
KM12-8,10, KM16-12, KM20-16, KM22-16, KM25-16, 20, KM32-16, 20, 25, KM42-20, 25, 32

Explanation of Code No.

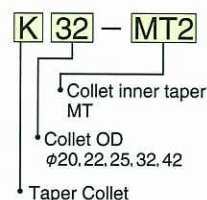


K-MT Morse Taper Collet



For Morse taper shank drills and reamers

Milling Chuck ID	Code No.
φ 20	K20-MT1,2
φ 22	K22-MT1,2
φ 25	K25-MT1,2
φ 32	K32-MT1,2,3
φ 42	K42-MT1,2,3,4

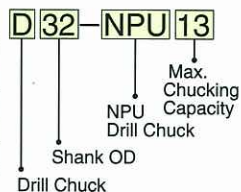


D-NPU Straight Shank NPU Drill Chuck



Arbor complete with NPU Drill Chuck

Milling Chuck ID	Code No.	Drill Dia.
φ 32	D32-NPU 8	0.3~ 8
	-NPU13	1 ~13
φ 42	D42-NPU 8	0.3~ 8
	-NPU13	1 ~13



Y Centering Bar



Please refer P.13, P.14 for Electric Edge Finder.



UMT

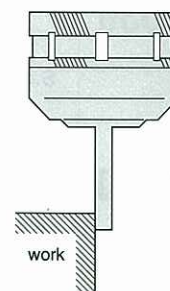
TP

For positioning

Milling Chuck ID	Code No.
φ 20	Y20-10
φ 22	Y22-10
φ 32	Y32-10
φ 42	Y42-15

★Easy positioning can be achieved by touching the component with the bar.

★An alternative bar with a 60° point at the front end is also available.



D Straight Shank Drill Chuck Adapter

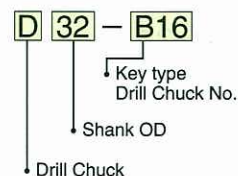


For centre drills & Drills

Milling Chuck ID	Code No.	Drill Dia.
φ 20	D20-B12	φ 1~13
φ 22	D22-B12	
φ 32	D32-B16	
φ 42	D42-B16	

★Drill Chuck is not included.

★D20-J6 & D22-J6 are also available without the chuck.



S-C Straight Shank Milling Chuck



Photo. shows S32-C12-200

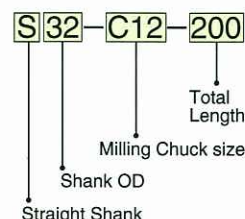


For milling in confined spaces.

Shank OD φd	Code No.
φ 32	S32-C12-120,160,200
	-C16-130
	-C20-150
φ 42	S42-C16-180
	-C20-185

★Please use NIKKEN KM collet.

★The MC and NC straight shank Milling Chuck is unified to the above Code No.



F Straight Shank Face Mill Arbor



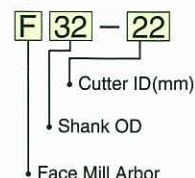
For improved surface finishes.

Milling Chuck ID	Code No.
φ 32	F32-22,27,32
φ 42	F42-22,27,32

★Ideal for finishing operations

★Various types of face mill can be fitted

★For specific dimensions, please refer P.19.

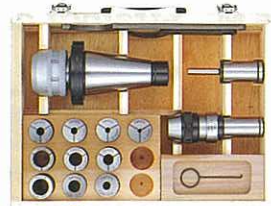




MULTI LOCK MILLING CHUCK - STANDARD BOXED SET

NIKKEN





S.MCA Series



★Photo. shows the Boxed Set for Japan.
(Set of Straight & MT Collets, NPU Drill Chuck and Centering Bar.)

The content of Boxed Set differs from each country situation. Please contact with your local agent for more details. The complete set marketing in Japan is also available. Please refer Japanese CONVENTIONAL TOOLING catalogue.

< Please select the set which best suits your applications >

TAPER	Milling Chuck Boxed Set Code No.	Boxed Set Content				Country
		Milling Chuck 	Straight Collet 	MT Collet 	Drill Chuck Adapter 	
ISO30	S.MCA30F-20MU	MCA30F-20M	KM20-6,10,12,16	K20-MT1,2	—	UK
	-20MA		KM20-4,5,6,8,10,12,14,16	—	—	Standard
	-20MB			K20-MT1,2	D20-B12	
ISO40	S.MCA40F-20MU	MCA40F-20M	KM20-6,10,12,16	K20-MT1,2	—	UK
	-20MA		KM20-4,5,6,8,10,12,14,16	—	—	Standard
	-20MB			K20-MT1,2	D20-B12	
	-25MU	MCA40F-25M	KM25-6,10,12,16	—	—	UK
	-25MA		KM25-6,8,10,12,16,20	—	—	Standard
	-32MU	MCA40F-32M	KM32-6,10,12,16,25	K32-MT1,2,3	—	UK
	-32MA		KM32-6,8,10,12,16,20,25	—	—	Standard
ISO50	S.MCA50F-32MU	MCA50F-32M	KM32-6,10,12,16,25	K32-MT1,2,3	—	UK
	-32MA		KM32-6,8,10,12,16,20,25	—	—	Standard
	-32MB			K32-MT1,2,3	D32-B16	
	-42MU	MCA50F-42M	KM42-6,10,12,16,20,32	K42-MT1,2,3	—	UK
	-42MA		KM42-6,8,10,12,16,20,25,32	—	—	Standard
	-42MB			K42-MT1,2,3,4	D42-B16	

★C22 type Boxed Set is also available.

ISO30: S.MCA30F-22MU(UK), S.MCA30F-22MA(Standard), S.MCA30F-22MB(Standard)

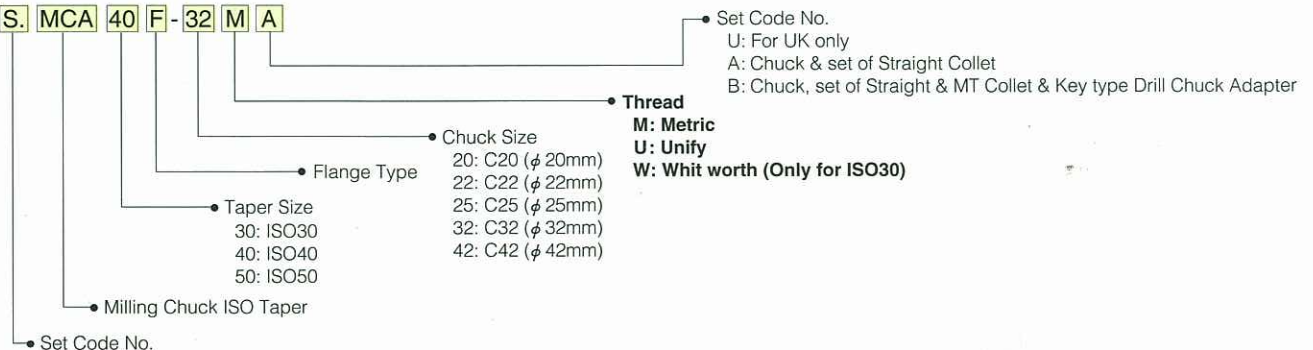
ISO40: S.MCA40F-22MU(UK), S.MCA40F-22MA(Standard), S.MCA40F-22MB(Standard)

★Drill Chuck is not included in Drill Chuck Adapter.

Direct mount type MULTI LOCK Milling Chuck Standard Boxed Set.

Note: Please specify the Taper Size, Chuck Size, Thread and the Set Code No.

e.g. **S. MCA 40 F - 32 M A**



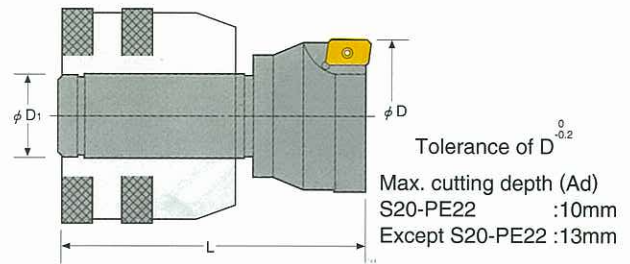
Straight Shank PRO-END MILL

NIKKEN



For use on
MULTI LOCK Milling Chuck

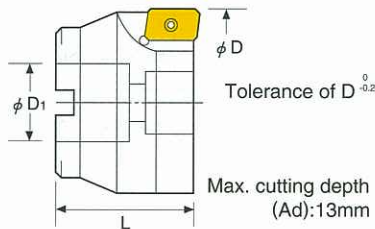
S-PE



Code No.	D	D1	L	No. of Teeth	Insert Tip	Tip Clamp Screw	Milling Chuck, Collet
S20-PE22	22	20	120	2	Steel, Cast Iron : 9DKT12	PE-M 3070	C20,C32+KM32-20
S25-PE26	26	25	120	2	Steel : 9DKT15 Aluminium, Cast Iron : 9DKR15	PE-M 4090	C25,C32+KM32-25
S32-PE34	34	32	120	3			C32 Milling Chuck
S32-PE50	50	32	125	5			
S32-PE60	60	32	125	5			
S32-PE80	80	32	125	6		PE-M 40120	

★One set of tip clamp screws and tip clamp wrench are supplied as standard.
★Inserts are not included.

PE



Code No.	D	D1	L	No. of Teeth	Arbor
PE 50H	50	22	45	5	FNO-22M
PE 60H	60	25.4	45	5	FA ⁴⁰ ₅₀ -3M
PE 80H	80	25.4	45	6	FA ⁴⁰ ₅₀ -4M
PE100H	100	31.75	50	6	FA ⁴⁰ ₅₀ -4M

★One set of tip clamp screws and tip clamp wrench are supplied as standard.
★Inserts are not included.
★To suit the NIKKEN standard face mill arbor type **FN (P.19)**.
★The cutter clamp bolt is not included in **PE50H**. Please use a bolt (**M10×30**) supplied to **FNO-22**.
★The cutter clamp bolts are included with **PE60H, PE80H & PE100H**.
PE60H:M12×35, PE80H:9PEM12-50, PE100H:9PEM16-55

Code No.	Dimension	Grade	Material	PRO-END MILL	ISO Code No.	Tip Clamp Screw	Tip Clamp Wrench
9DKT12		IC50M	Steel, Cast Iron	S20-PE22	APKT1203	M3070	T-10
9DKT15			Steel	Except S20-PE22	ADKT1505	PE-M 4090*1	PE-T15
9DKR15		IC28	Aluminium, Cast Iron		ADKR1505	PE-M 40120*1	

★Please enquire for different grades of insert. e.g. IC520M (Coated Cermet) Inserts are suitable for heavy milling of cast iron.
★Inserts are available in box of 10 pieces.
★*1Please note the two different sizes of tip clamp screws.

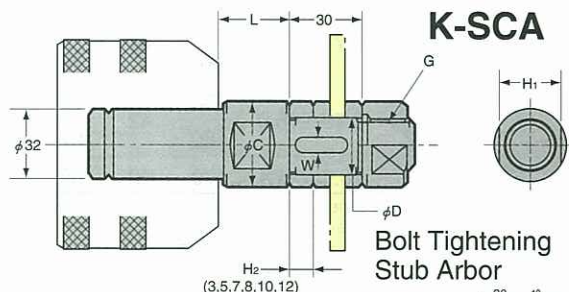
Straight Shank STUB ARBOR

NIKKEN

**K-SCA
-SCC**



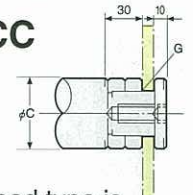
For use on
MULTI LOCK Milling Chuck



Style	K No.	φ D	-L	H1	C	W	G	Weight(kg)
32	K32-SCA27-30			32	40	7	M24	1.2
42	K42-SCA27-30							1.3

★A spigot dia. = φ25.4mm is also available.

K-SCC



Thinner Bolt Head type is available.

Straight Shank SLIM CHUCK

NIKKEN

K-SK

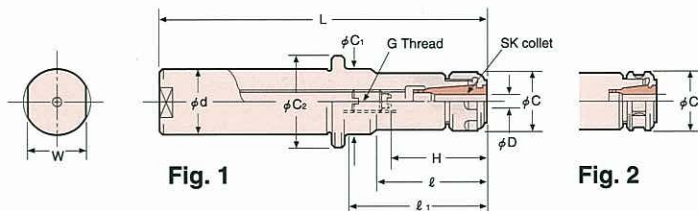


Explanation of Code No.

K **20** - **SK** **6** - **100**

• Length
• MAX Chucking Dia
• Symbol of Slim chuck
• OD of Shank
• Symbol of Straight Shank

Being used with NIKKEN Multi Lock Milling Chuck, small dia milling and drilling can be done immediately.
φ 20, 22, 25, 32 and 42 shanks are available to be used with any size of Multi Lock Milling Chuck.



Code No.	D	L	d	ℓ	ℓ ₁	C	C ₁	C ₂	W	H	G No.	Weight (kg)	Fig	SK Collet
K20-SK 6-100	0.7 ~ 6.0	100	20	36	36	18	18	27	18	21~35	SKG-8	0.2	1	SK 6
-120		120		56	56									
-SK10-100	1.75~10.0	100	20	40	40	27.5	27.5	27.5	18	30~50	SKG-12L			SK10
-120		120		60	60									
K22-SK 6-100	0.7 ~ 6.0	100	22	36	36	18	18	27	19	21~35	SKG-8	0.2	1	SK 6
-120		120		56	56									
-SK10-100	1.75~10.0	100	22	40	40	27.5	27.5	27.5	19	30~50	SKG-12L			SK10
-120		120		60	60									
K25-SK 6-100	0.7 ~ 6.0	100	25	30	30	18	18	30	22	21~35	SKG-8	0.2	1	SK 6
-130		130		60	60									
-SK10-120	1.75~10.0	120	25	50	50	27.5	27.5	30	22	30~50	SKG-12L			SK10
-150		150		75	75									
K32-SK 6-120	0.7 ~ 6.0	120	32	43	53	18	32	37	27	21~35	SKG-8	0.4	1	SK 6
-140		140		63	73		24							
-170		170		63	100									
-SK10-120	1.75~10.0	120	32	47	53	27.5	32	37	27	30~50	SKG-12L			SK10
150		150		75	83									
-180*		180		75	111		31.5							
-210*		210		75	141									
-SK16-120	2.75~16.0	120	32	58	58	40	40	40	36	40~70	SKG-18L	0.5	2	SK16
-150		150		88	88									
-180		180		118	118									
-210		210		148	148									
-SK25-150	16.0~25.4	150	32	88	88	55	55	42	46	50~85	SKG-18L	0.5		SK25
K42-SK 6-150	0.7 ~ 6.0	150	42	50	61	18	32	47	36	21~35	SKG-8	0.8	1	SK 6
-170		170		60	81									
-SK10-150	1.75~10.0	150	42	55	55	27.5	27.5	47	36	30~50	SKG-12			SK10
-180		180		75	91		42							
-SK16-150	2.75~16.0	150	42	61	61	40	40	47	36	40~70	SKG-18L		2	SK16
-180		180		91	91									
-SK25-170	16.0~25.4	170	42	88	88	55	55	45.5	46	50~85	SKG-18L			SK25

★Nut, Adjust Screw (G No.), Spanner and Collet Extractor are supplied as standard.

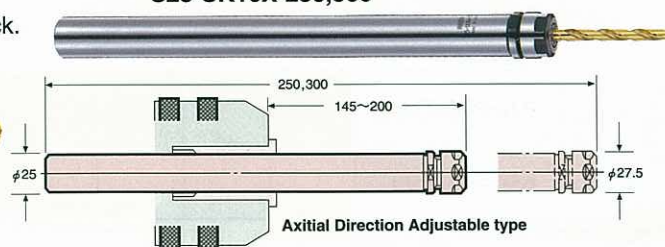
★For Slim Chuck Collet, please refer **P.10**.

★All Slim Chucks except marked * are through hole type.
For use of Centre Through Coolant application.

Straight Shank SLIM CHUCK
ULTRA LONG type
S25-SK10-250,300
S25-SK10X-250,300

Please refer **P.40** on NC TOOLONG catalogue.

◀ Insert into Multi-Lock Milling Chuck.



SLIM CHUCK COLLET

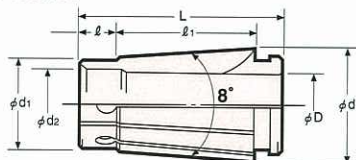
NIKKEN

SK



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

φ 0.7 ~ 25.4 Precise Collets are available in accordance with 4 styles of Slim Chuck, **SK 6** (SK10) (SK16) (SK25). There are suitable for End Mill, Drill, Center-Drill, Tap, Reamer, Boring Tool for CNC Lathe.



Explanation of Code No.

SK 6-2.5

- MAX Chucking Dia
- Style No.
- Symbol of SK Collet

Please refer **P.41** for "A" type SK Collet (for END MILL Shank) on NC TOOLING catalogue.

Style	Code No.	Chuckling D	d
SK6 SK6P	SK 6- 0.8	0.7 ~ 0.8	10.4
	- 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	
SK10 SK10P	SK10- 2	1.75 ~ 2.0	15.6
	- 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	

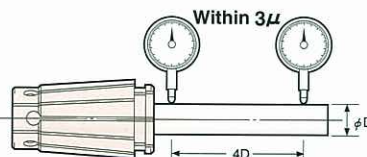
Style	Code No.	Chuckling D	d
SK16 SK16P	SK16- 3	2.75 ~ 3.0	24.6
	- 3.5	3.0 ~ 3.5	
	- 4	3.5 ~ 4.0	
	- 4.5	4.0 ~ 4.5	
	- 5	4.5 ~ 5.0	
	- 5.5	5.0 ~ 5.5	
	- 6	5.5 ~ 6.0	
	- 6.5	6.0 ~ 6.5	
	- 7	6.5 ~ 7.0	
	- 7.5	7.0 ~ 7.5	
	- 8	7.5 ~ 8.0	
	- 8.5	8.0 ~ 8.5	
	- 9	8.5 ~ 9.0	
	- 9.5	9.0 ~ 9.5	
SK25 SK25P	SK25- 16.5	16.0 ~ 16.5	35.7
	- 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	22.5 ~ 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	

Style	Code No.	Chuckling D	d
SK25 SK25P	SK25- 16.5	16.0 ~ 16.5	35.7
	- 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	22.5 ~ 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	

Dimensions of SK Collets

	d	d ₁	d ₂	L	ℓ	ℓ ₁
SK 6	10.2	7.5	5.8	24.6	4	17.4
SK 10	15.3	12	9.8	30.5	5	21.3
SK 16	24.3	18.8	16	45	8	32
SK 25	35.7	28.9	25.4	57	8.5	43

High Precision SK Collet (P)



Even the above SK Collet can obtain the runout accuracy within 5μ, but more Precise SK Collet is also available.
It guarantees the runout accuracy within 3μ at the nose (4D) from the chuck.
Additionally, Collet Set is also available.

Collet Code No.	Set Code No.	Runout Accuracy
SK 6- 1P... 6P	S.SK 6P(1.0~ 6.0 6pcs set)	Within 3μ
SK10- 2P...10P	S.SK10P(2.0~10.0 9pcs set)	
SK16- 3P...16P	S.SK16P(3.0~16.0 14pcs set)	
SK25-16P...25P	S.SK25P(16.0~25.0 9pcs set)	

★For Set Code No. of all sizes collets, please add "FP" at the end of Set Code No. e.g. **S.SK6FP** (1.0~6.0 15pcs set)

Explanation of Code No.

- Single **SK 10-6 P**
 - 3μ guaranteed
 - MAX Chucking Dia
 - Style No.
 - Symbol of SK Collet
- Set **S. SK 10 P**
 - 3μ guaranteed
 - Style No.
 - Symbol of SK Collet
 - Set Code No.

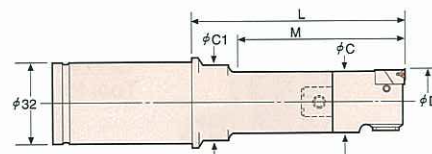
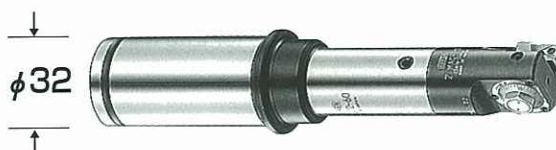


★Collet Extractor 1pc is supplied with SK Holder as the standard accessories, if you need additional one, please order **SKR-6, 10, 16, 25** according to the style.

Straight Shank ZMAC BORING BAR

NIKKEN

K-ZMAC



For use on your existing C32 Multi Lock Milling Chuck. (Ideal for Low-Volume Production with Wide Variety of Boring Sizes)

Code No.	Boring Range D	Boring Depth M	C	C ₁	Insert Tip P.30		Insert Tip P.30		Weight (kg)
					Head No.	Insert No.	Head No.	Insert No.	
KNo.-Min.D -L									
K32-ZMAC16- 65	15.9~ 20.2	38	15	-	ZMAC 16- 45	3MP-C,B	-	-	0.5
- 75		48		-	ZMAC 16- 55		-	-	0.5
-ZMAC20- 60	19.8~ 25.2	55	19	-	ZMAC 20- 40		-	-	0.6
- 80		63		30	ZMAC 20- 40		-	-	0.7
-ZMAC25- 60	24.8~ 32.2	55	24	-	ZMAC 25- 40		-	-	0.6
-100		83		30	ZMAC 25- 40		-	-	0.7
-ZMAC32- 75	31.8~ 42.2	70	31	-	ZMAC 32- 55	4MP-C,B	ZMAC 32R- 55	CC06-C	0.9
-110		105		-	ZMAC 32- 55		ZMAC 32R- 55		1.1
-ZMAC42-110	41.8~ 55.2	105	40	-	ZMAC 42- 70	6MP-C,B	ZMAC 42R- 70		1.5
-ZMAC55-110		105		-	ZMAC 55- 70		ZMAC 55R- 70		1.6

★All codes shown are for heads with triangular inserts. For heads with rhomboid inserts please add the letter "R" to code No. e.g. BT40-ZMAC32 R -75

★MIN. dial readout : ZMAC32 & above is 0.01mm on diameter.

: ZMAC25 & below is 0.02mm on diameter. Easy adjustment of 3-5microns on diameter using our precision screw mechanism.

★"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.

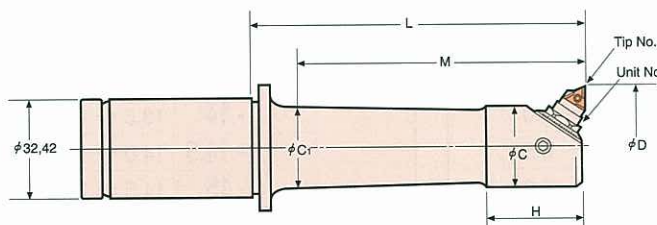
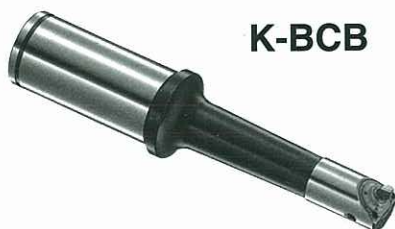
★For Centre Through-tool coolant heads, add the letter "C" to end of ordering code e.g. K32-ZMAC42-110C.

★Please refer P.27 for Head Code No.

Straight Shank MICRO CUT BORING BAR

NIKKEN

K-BCB

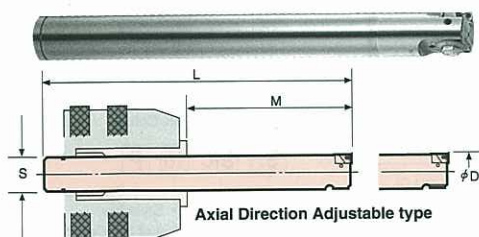


Style	Code No.		Boring Range D	Boring Depth M	H	C	C ₁	Unit No.	Tip No.
	KNo.	-Min.D -L							
K32	K32-BCB12.7- 80		12.7~14.5	60	25	12	12.5	M1-12.7	1MP-T
	BCB14.5- 80		14.5~19.5	65		13	13.5	M1-14.5	
K42	K42-BCB12.7- 80		12.7~14.5	60		12	12.5	M1-12.7	1MP-T
	BCB14.5- 80		14.5~19.5	65		13	13.5	M1-14.5	

★"T" grade (Cermet) Insert is supplied as standard.

★Please use ZMAC Boring Bar for the bore dia. is larger equal to ϕ 16mm.

Straight Shank DEEP HOLE ZMAC BORING BAR (SOLID CARBIDE)



Code No.	Boring Range D	Boring Depth M	L	S	Tip No.
SNo. -Min.D -M					
S12-BCBX12.7- 95	12.7~14.5	50~95	130	12	1MP-T
S13-BCBX14.5-105	14.5~19.5	50~105	135	13	
S15-ZMACX16-120	15.9~20.2	65~120	150	15	3MP-C,B
S19-ZMACX20-150	19.8~25.2	100~150	180	19	
S24-ZMACX25-190	24.8~32.2	140~190	220	24	

★"T" grade (Cermet) Insert is supplied with BCBX, and "C" grade (Coated) Insert is supplied with ZMACX.

★The boring bar larger equal to ϕ 16mm is modified to ZMACX type.

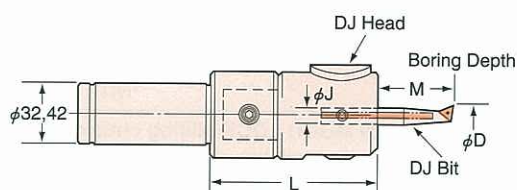
Straight Shank DJ BORING BAR

NIKKEN

K-DJ



Photo. shows cut-sample.



Style	Code No. K No.-Min D-L	Boring Range D	M	J	Bit
32	K32-DJ3-76	3~28	14~80	10	J10
	-DJ8-84	8~50	40~130	16	J16
42	K42-DJ3-76	3~28	14~80	10	J10
	-DJ8-84	8~50	40~130	16	J16

★Min. dial readout for Dia. : Main scale 0.01mm, Sub scale 0.005mm.

★Each boxed set of DJ3 & DJ8 boring bars includes 4 pieces Carbide Cored Boring Bits as standard.

★DJ type boring heads without Boring Bits are available. e.g. K32-DJ3-76-BD.

★Solid Carbide and Carbide Cored long and short series Bits are also available (P.29).

★"C" grade (Coated) inserts are supplied as standard.

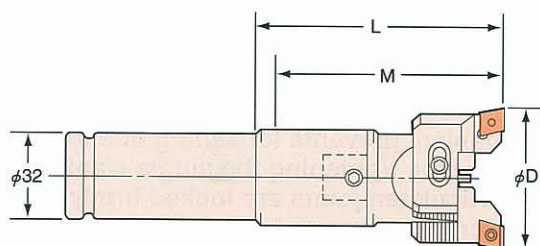
★One set of insert clamp spanner and micron adjusting spanner are supplied as standard.

★The straight shank (P.26) and DJ head (P.29) are delivered in separate packages.

Straight Shank BALANCE CUT BORING BAR

NIKKEN

K-RAC



Code No. K No.-Min D-L	Boring Range D	Boring Depth M	Cartridge No.	Tip No.
K32-RAC25- 75*	25~32	70	RCC-025*	CC07*
-115*		93		
-RAC32- 75	32~45	70	RCC-32	CC08
-110		105		
-RAC43-110	43~55	105	RCC-43	CN08
-RAC53-110	53~70	105	RCC-53	
-RAC70-110	70~100	105	RCC-70	

★"C" grade (coated) Insert is supplied as standard.

★The straight shank (P.26) and RAC head (P.28) are delivered in separate packages.

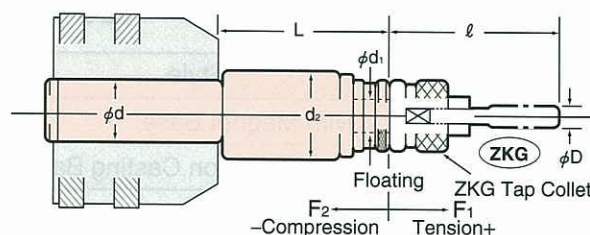
★Cartridges & Inserts for Alloy Steel (E), for Aluminium & Cast iron (A) and for Through Hole (K) are also available. Please refer P.28.

★For RAC25, Cartridge No. RCC-25 & Tip No. CC08 is available.

Straight Shank TAPPER CHUCK

NIKKEN

NZ ■ For slim body and ultra smooth tapping operations with float mechanism.



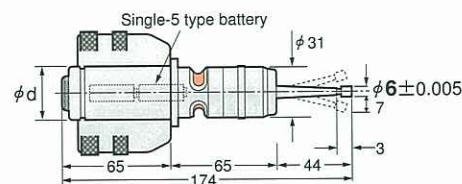
Style	Code No.	Tapping Capacity		L	d1	d	d2	Float		Weight (kg)	Tap Collet
		M	P					F1	F2		
32	NZ32-12-105	M3~12	P1/8	105~125	19	32	45	15	5	1.3	ZKG12
	-16-125	M3~20	P1/8~3/8	125~145	25		55	20	8	2.2	ZKG16
	-24-140	M8~24	P1/4~5/8	140~160	30		63			2.8	ZKG24
42	NZ42-12- 90	M3~12	P1/8	90~125	19	42	45	15	5	2.0	ZKG12
	-16-125	M3~20	P1/8~3/8	125~160	25		55	20	8	3.0	ZKG16
	-24-140	M8~24	P1/4~5/8	140~175	30		63	20	8	3.6	ZKG24

★Please refer P.23 for details of ZKG Tap Collets.

Straight Shank UNIVERSAL MICRO TOUCH SENSOR NIKKEN



Straight Shank Universal Micro Touch Sensor



Code No.	Shank Dia. ϕd
S 20-UMT*	20
S 32-UMT*	32
MT2-UMT	MT2

★**For use on NIKKEN MULTI LOCK Milling chuck.
★ $\phi 6$ mm ball type stylus is available. e.g. S32-UMTB

Large Over-Travel Safety Limit.

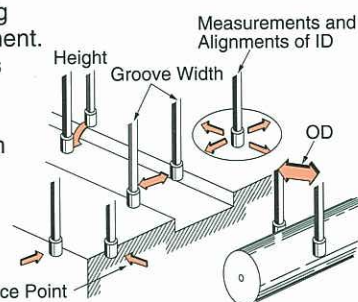
As shown in the photo., the large over-travel safety limit protects this unit from damage during operation.



Direction	Over-Travel
X, Y	± 7 mm
Z	3mm

How to obtain the touch-on dimension.

Move the stylus slowly towards the measuring surface of the component. The red lamp lights as soon as the stylus touches the surface. As the stylus is $\phi 6$ mm dia., the position is 3mm from that point.

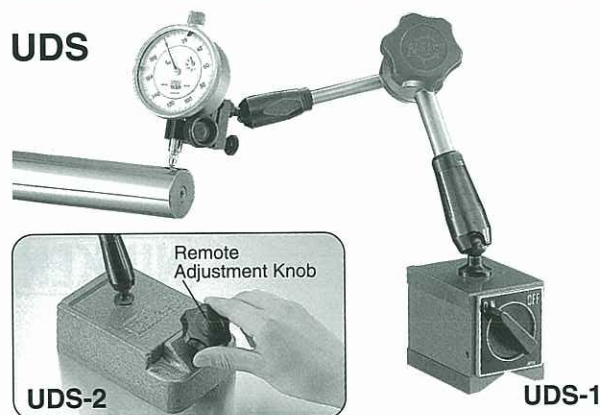


A wide range of measuring functions can be obtained with this sensor.

UNIVERSAL MICRO STAND

NIKKEN

UDS

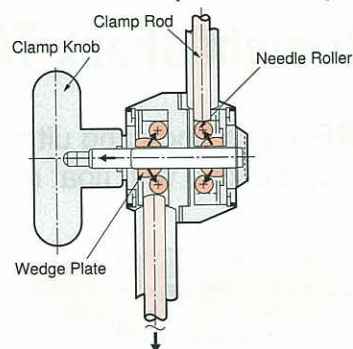


Code No.	Style
UDS-1	With Magnet Base
UDS-2	With Precision Casting Base

★Dial Gauge is not included.

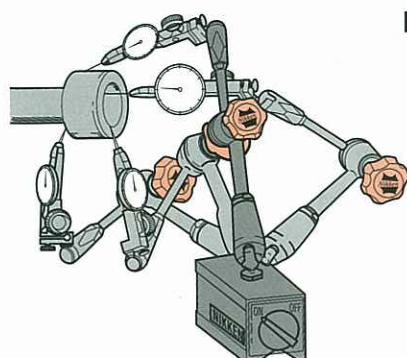
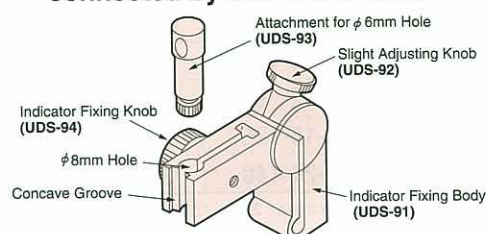
■ New mechanism prevents loosening due to vibration by only tightening the single clamp knob, all articulated joints are locked firmly and no fine (micron) movement will occur even after being left for 100 hours.

Clamp Mechanism (Cam Clamp & Lock)



■ Strong magnet base makes it possible to adapt to vertical, angular, uneven surface etc.

■ Every dial gauge, picktest can be connected by this attachment.



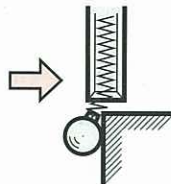
■ Free flexing with single knob, no dead angle and long reach
Two arms incorporating ball joint mechanism at both ends provide free movement in any direction such as vertical, lateral, longitudinal or rotational etc. if stretched horizontally, as long as 300mm can be attained.
Measurements of inside and outside Dia., end face and back face etc. can be made at will.

Straight Shank TOUCH POINT SENSOR

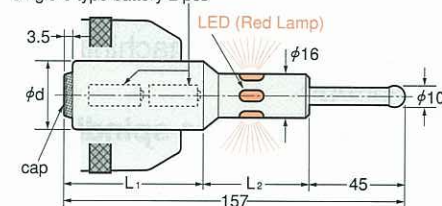
NIKKEN



High Sensitive Position Sensor
with Safety Mechanism
against Over run.



Single-5 type battery 2 pcs



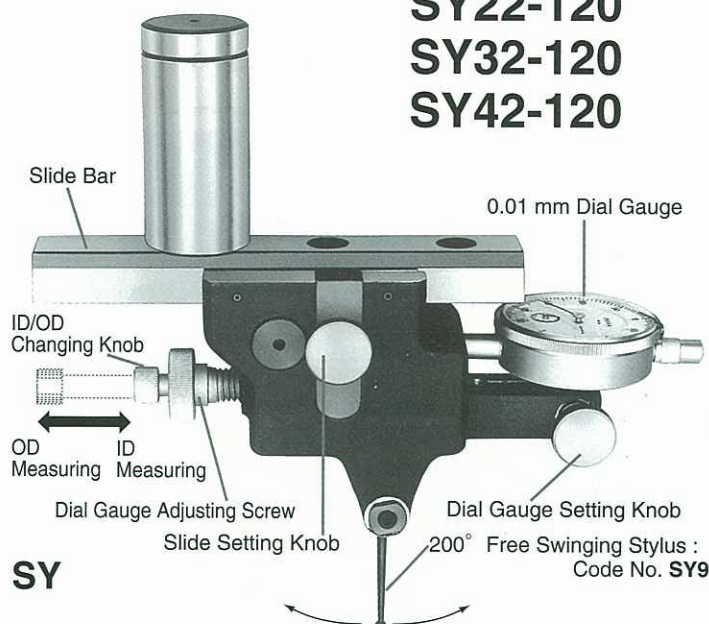
Code No.	ϕd	L1	L2
TP - 20	20	77	35
TP - 32	32	71	41

★For use on MULTI LOCK Milling chuck.

Straight Shank CENTERING HOLDER

NIKKEN

SY22-120
SY32-120
SY42-120



SY

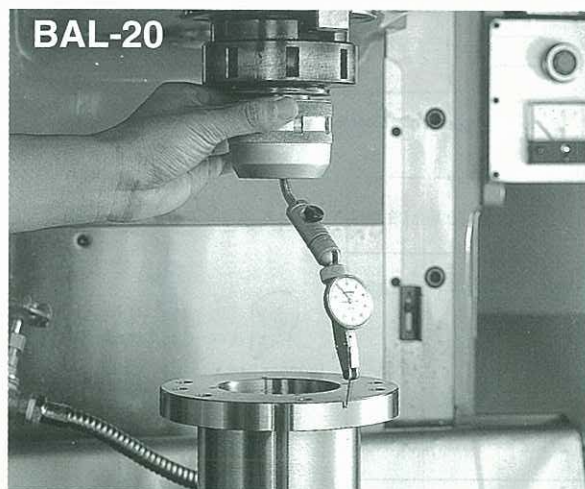
■ No need of changing the setting of Dial Gauge. Only by turning Knob, ID, OD and Parallelism can be easily measured.

■ Large Measuring Range. Cross Moving Distance of Stylus is 120mm in radius.

Code No.	Milling Chuck ID	Measuring Range
SY22 - 120	$\phi 22$	0 ~ $\phi 240$
SY32 - 120	$\phi 32$	
SY42 - 120	$\phi 42$	

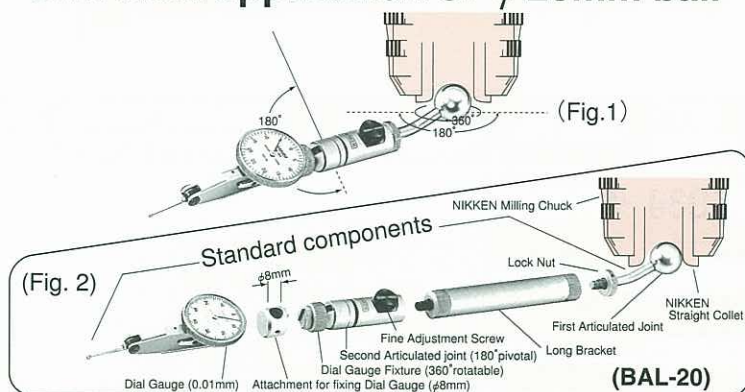
BALL CENTRALIZER

NIKKEN



BAL-20

■ Indispensable for Accuracy Control
Universal application of $\phi 20\text{mm}$ ball



Measuring Range

Fig.1	Fig.2
ID $\phi 3.5 \sim \phi 320$	ID $\phi 3.5 \sim \phi 520$
OD MAX. $\phi 300$	OD MAX. $\phi 500$

Ball Centralizer, only being chucked at its ball portion by NIKKEN Milling Chuck, enable simple and easy alignment of inside and outside Dia. and measurement of parallelism etc.

■ Efficiency with quick tool change

All types of conventional machining operations can be achieved with the added advantage of quick tool change.

■ Protection of machine spindle taper for long term, high precision use.

■ Ideal Taper holder

The master holder has an ISO taper both internally and externally, therefore this is an ideal tool holder for heavy cutting applications and quick tool fitting and removal.

■ High precision and long life.

The master holder is made of SNCM materials and sub-zero heat treated after carburizing. This guarantees a high precision finish and high durability.

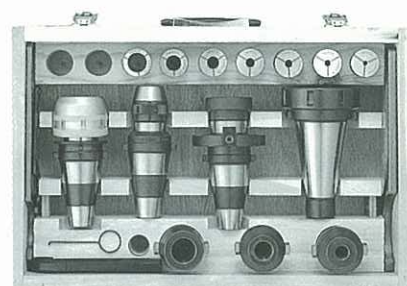
■ Modular System

Besides standard tool holders, a quick change spindle speeder (P.19) and quick change boring heads (P.26) are also available.

Quick Change Master Holder HA

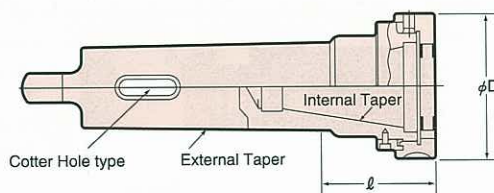
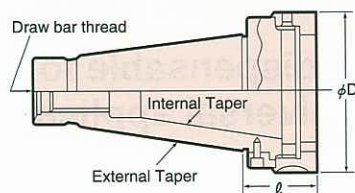


Side Lock Screw
For safety during heavy milling operations.

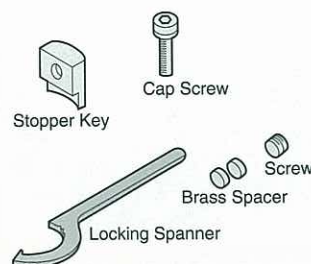


● Please refer P.17 for Boxed set.

■ Unless specified otherwise, draw bar threads for all holders will be supplied as Metric.
Please refer P.17 for the explanation of Code No.



EXT. TAPER	Code No.	INT. TAPER	φ D	ℓ	Draw Bar Thread	Stopper key	Brass Spacer	Cap Screw	Screw	Spanner
ISO30	HA30-T30M	ISO30	60	41.6	M12P=1.75 (W $\frac{1}{2}$ -12)	9H31	9H34	9H42	9H43	9HA30
ISO40	HA40-T35M	ISO35	79	35.6	M16P=2 (U $\frac{5}{8}$ -11)	9H41	9H44	9H42	9H43	9HA40
ISO50	HA50-T45M	ISO45	103	44.8	M24P=3 (U1-8)	9H51	9H45	9H52		9HA50
MT 5	HM5T-T35	ISO35	79	—	—	9H41	9H44	9H42	9H43	9HA40
MT 6	HM6T-T45	ISO45	103	—	—	9H51	9H45	9H52		9HA50



★R8 Shank with Internal Taper=ISO30 is available, Code No. is **HR8-T30**.

ATTACHMENT for QUICK CHANGE HOLDER

NIKKEN

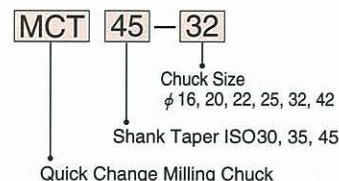
Quick Change type MULTI LOCK Milling Chuck

MCT



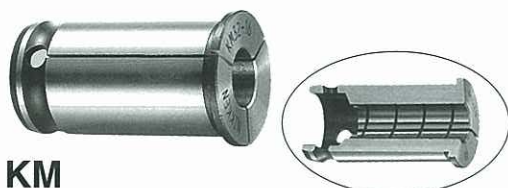
Quick Change Holder	Code - No.
HA30	MCT30-16, 20, 22
HA40	MCT35-20, 22, 25, 32
HA50	MCT45-20, 25, 32, 42

●Explanation of Code No.



Straight Collet

KM



★An oil groove in the internal bore of the collet prevents the cutter from slipping.

Milling Chuck ID	Code - No.
φ 16	KM16-6, 8, 10, 12
φ 20	KM20-6, 8, 10, 12, 16
φ 22	KM22-6, 8, 10, 12, 16, 20
φ 25	KM25-6, 8, 10, 12, 16, 20
φ 32	KM32-6, 8, 10, 12, 16, 20, 25
φ 42	KM42-6, 8, 10, 12, 16, 20, 25, 32

★Internal bore size: The following special metric and imperial sizes are also available.

2, 3, 4, 5.5, 6.2, 7, 8.5, 9, 10.5, 11, 12.5, 13, 14, 15, 17, 18, 19, 21, 22, 23, 24, 26, 27, 28, 29, 30, 31, 33, 34, 40

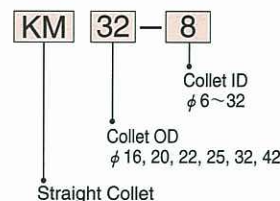
$\frac{1}{4}$, $\frac{3}{8}$, $\frac{5}{16}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{13}{16}$, $\frac{7}{8}$, 1, $1\frac{1}{8}$, $1\frac{1}{4}$, $1\frac{1}{2}$

★KM50 & KM50.8 type collets are also available.

★The following ANNIVERSARY type KM collets are also available.

KM12-8, 10, KM16-12, KM20-16, KM22-16, KM25-16, 20,

KM32-16, 20, 25, KM42-20, 25, 32



Quick Change type Face Mill Arbor

FT

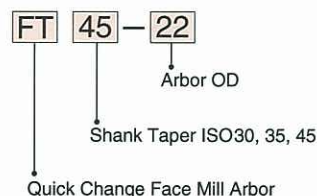


Quick Change Holder	Code - No.
HA30	FT30-22, 27
HA40	FT35-22, 27, 32, 40
HA50	FT45-22, 27, 32, 40, 50

★Various types of face mill cutter can be fitted.

★Please refer P.19 for cutter fitting dimensions.

★Drive keys, bolt and spanner are supplied as standard.



Quick Change type Morse Taper Sleeve

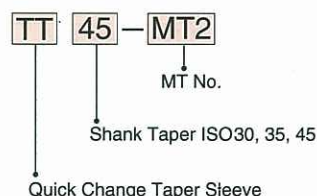
TT



■For drills and reamers with Morse Taper Shanks.

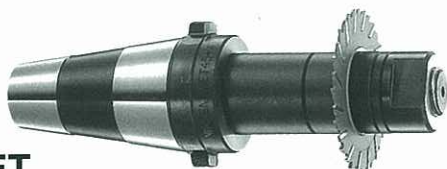
Quick Change Holder	Code - No.
HA30	TT30-MT1, 2
HA40	TT35-MT1, 2, 3, *4
HA50	TT45-MT1, 2, 3, 4, *5

★The sleeves marked * are only for reamer or light drilling only.



Quick Change type Stub Arbor

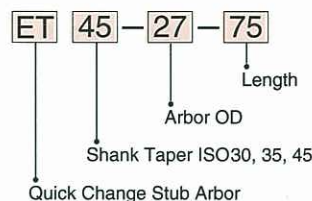
ET



Quick Change Holder	Code - No.
HA40	ET35-27-75, 100, 125
HA50	ET45-27-75, 100, 125, 150

★A spigot dia. = 25.4mm is also available.

★5, 10, 20 & 40mm extended collars, drive key, and nut are supplied as standard. Please refer P.19.



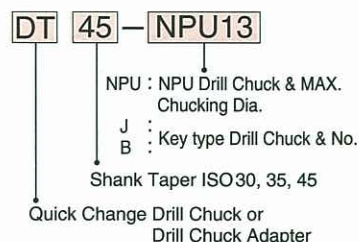
Quick Change type NPU Drill Chuck

DT-NPU



■With NPU Drill Chuck

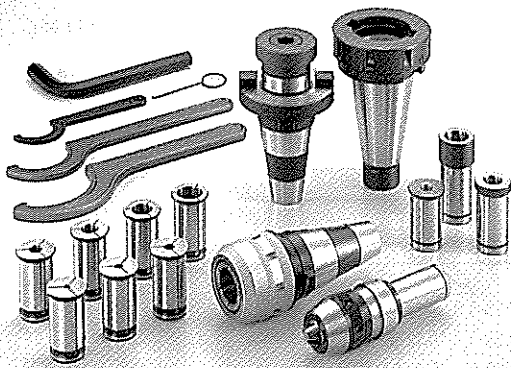
Quick Change Holder	Code - No.	Drill Dia.
HA30	DT30-NPU 8	φ 0.3~ 8
	-NPU13	φ 1 ~13
HA40	DT35-NPU 8	φ 0.3~ 8
	-NPU13	φ 1 ~13
HA50	DT45-NPU 8	φ 0.3~ 8
	-NPU13	φ 1 ~13



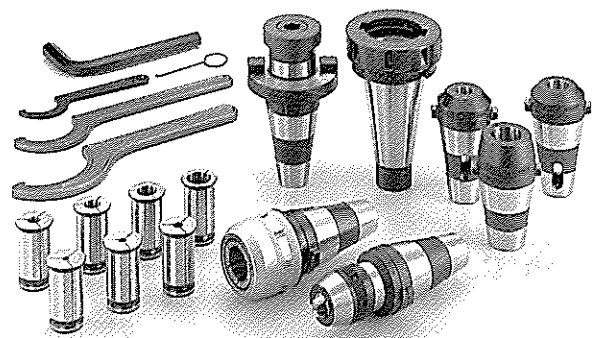
QUICK CHANGE HOLDER BOXED SET

NIKKEN

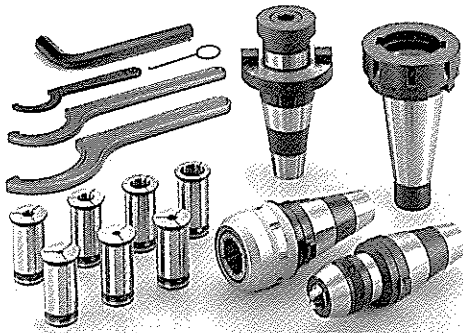
S.MHA Series



Set Code No. : 3N (For Japan)









Set Code No. : 8N (For Japan)



Set Code No. : 4N (For Japan)

The content of Boxed Set differs from each country situation. Please contact with your local agent for more details.
The complete set marketing in Japan is also available. Please refer Japanese CONVENTIONAL TOOLING catalogue.

◁Please select the set which best suits your applications▷

TAPER	Quick Change Holder Boxed Set Code No.	Boxed Set Content						Country
		Quick Change Holder	Milling Chuck	Straight Collet	Face Mill Arbor	Drill Chuck Adapter	Taper Sleeve	
								
ISO30	S.MHA30-20MU	HA30-T30M	MCT30-20	KM20-6,10,12,16	FT30-22	DT30-J6	TT30-MT1,2	UK only
	-20MF			KM20-4,5,6,8,10,12,14,16		DT30-B12		FRANCE only
	-20M			KM20-6,8,10,12,16				Standard
ISO40	S.MHA40-20M	HA40-T35M	MCT35-20	KM20-6,8,10,12,16	FT35-27	DT35-B12	TT35-MT1,2,3,4	Standard
	MCT35-32		KM32-6,10,12,16,25	FT35-32	DT35-J6	UK only		
			KM32-6,8,10,12,16,20,25	FT35-27	DT35-B16	TT35-MT2,3,4	FRANCE only	
					DT35-B12	TT35-MT1,2,3,4	Standard	
					DT35-J6			
				-32MU				
-32MF								
-32MI								
-32M								
-32ME								
ISO50	S.MHA50-32MU	HA50-T45M	MCT45-32	KM32-6,10,12,16,25	FT45-32	DT45-J6	TT45-MT2,3,4	UK only
	KM32-6,8,10,12,16,20,25			DT45-B16		FRANCE,ITALY		
				MCT45-42		KM42-6,8,10,12,16,20,25,32	DT45-J6	TT45-MT1,2,3,4
	DT45-B16		TT45-MT2,3,4				UK only	
	KM42-6,10,12,16,20,32							DT45-J6
	-32MF							
-32M								
-32ME								
-42M								
-42MU								
R8	S.MHR 8-20U	HR8-T30	MCT30-20	KM20-6,10,12,16	FT30-22	DT30-J6	TT30-MT1,2	UK only

★C22 type Boxed Set is also available.

ISO30 : S.MHA30-22MU(UK), S.MHA30-22MF(FRANCE), S.MHA30-22M(standard)

ISO40 : S.MHA40-22M(standard)

R 8 : S.MHR 8-22U(UK)

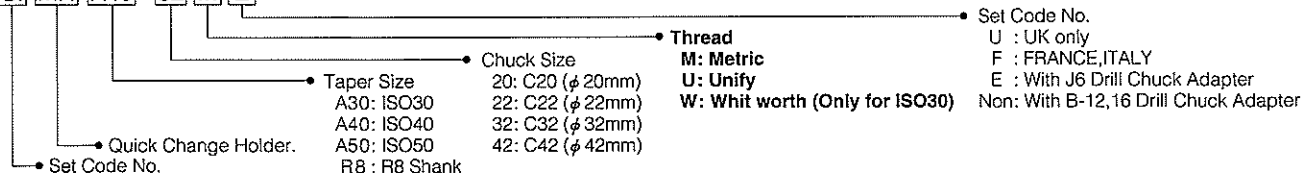
★Please refer P.6 for Straight Collet, MT Collet & NPU Drill Chuck.

★Drill Chuck is not included in Drill Chuck Adapter.

Quick Change Holder Standard Boxed Set.

Note: When purchasing the boxed set of quick change tooling, please advise us of the machine details, the machine spindle size and the required milling chuck size. Also advise the required Set Code No.

e.g. S. MH A40 - 32 M E



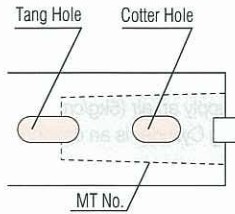
COTTER HOLE DIMENSIONS

NIKKEN

What is a cotter hole?

Milling machines and Boring machines that use Morse Taper Spindles, normally have elliptically shaped holes on the spindle quill. The hole prevents the tooling from dropping down during heavy cutting operations. In particular these operations tend to be large dia. end milling and large dia. tapping. During normal drilling, reaming and boring operations, it is not necessary to use the cotter hole.

Please specify the size of the cotter hole from the attached list of machine models, or simply supply the details of dimensions A, B and C. We can then manufacture the holes to suit.

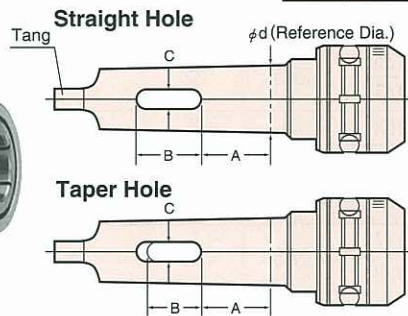
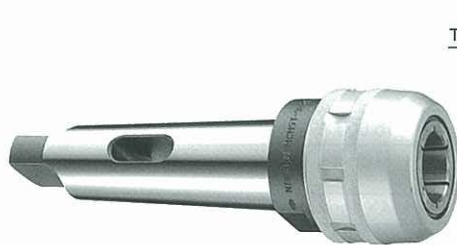


Example of Japanese Machines

TAPER	MAKER	Cotter Hole No.	ϕd	Cotter Hole			Shape	
				A	B	C		
MT 4	IKEGAI	-I	31.267	33	24	10		*
	OKUMA	-B		27	28	8.4		*
	KURASHIKI	-K		26.3	28.7	12.2		*
	OHYA	-O		10	16	8.2		*
	YOSHIDA	-Y		6	20	8		*
MT 5	OKUMA	-B	44.399	27	38.5	12.4		*
	IKEGAI	-K		52	33	13		*
	KURASHIKI	-N		27	35	12.2		*
	NOMURA	-S		37	37	16		*
	SHINADA	-T		50.8	34.93	12.95		*

DIN 1806

	MT No.	Cotter Hole No.	ϕd	Cotter Hole			Shape	
				A	B	C		
DIN	MT3	-DIN3	23.825	23.5	32	8.3		
	MT4	-DIN4	31.267	22.5	37	8.3		
	MT5	-DIN5	44.399	22	42	12.4		
	MT6	-DIN6	63.348	21	35	16.4		



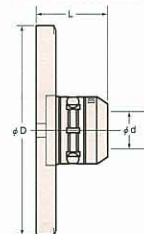
e.g. MC M5 T - 42 - T
 Identification of Cotter Hole (T = Toshiba)
 Chuck Size $\phi 32\text{mm}$, $\phi 42\text{mm}$
 Tang
 Morse Taper Size MT 4,5,6
 Milling Chuck

[Note]

★ Please specify dimensions A, B & C, if your machine details are not listed.

★ Milling chucks marked * are standard items.

CF MILLING CHUCK for HOBBING MACHINE



Style	Code No.	Milling Chuck ID	Flange Dia ϕD	L	Mounting Width
32	CF-32	32	165	77	14mm \times 3
42	CF-42	42	175	80	14mm \times 3

The CF chuck is ideal for improving efficiency with its powerful gripping force.

★ Quick & accurate setting can be achieved.

★ Powerful gripping torque can be achieved with hand tightening.

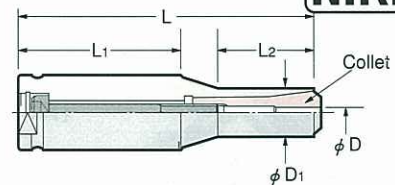
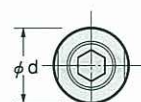
★ Arbor chucks and extended type chucks are also available.

★ Lathe turret chucks can be supplied on request.

Straight Shank MINI-MINI CHUCK

NIKKEN

K-MMC



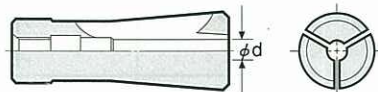
Style (ϕd)	Code No.	Chuck Dia. ϕD	L	ϕD_1	L1	L2	Collet	Weight (kg)
16	K16-MMP 4-70	1~4	70	15	50	20	MPK 4	0.1
	-150		150		130			0.2
20	K20-MMC 8-100	2~8	100	20	80	20	VMK 8	0.2
32	K32-MMC 8-122	2~8	122	20	67	40	VMK 8	0.5
	-160		160					0.7
	K32-MMC12-170S	4~12	170	30	120	50	VMK12	1.0

★ The spanner is supplied as standard.

★ Collets are not included, please order separately.

★ MMC12 type is new one. Ordinary MMC12 collets can not be used, please use VMK12 collets.

Mini-Mini Chuck Collet (Vega Chuck Collet)



Style	Collet Code No.
MPK 4	MPK 4-1, 1.5, 2, 2.5, 3, 3.5, 4
VMK 8	VMK 8-2, 3, 4, 5, 6, 8
VMK12	VMK12-4, 5, 6, 8, 10, 12

★ When using the VMK & MPK collet, always use tools with a shank tolerance of h6 to h8.

SPINDLE SPEEDER

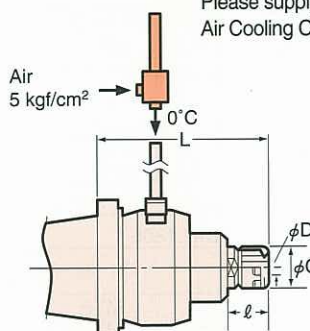
NIKKEN



With an increasing speed ratio of 4 or 5 times, the machine spindle is prevented from overheating and over loading, thus the machine productivity will be greatly improved.

Please supply an air (5kg/cm²) for **E-Type**.

Air Cooling Cylinder is an optional accessory. Code No. is **NXE-COOL**



Explanation of Code No.

T40	M	-	NX	5	E	-121	
							Gauge Length
							Type E : E Type Non : Standard
							Ratio
							Spindle Speed
							Thread Type
							Shank Size

NX

E-Type version is ideal for end milling operations. (Backlash free mechanism with oil bath)

TAPER	Code No.	D	L	φC	ℓ	Ratio	MAX.rpm	Weight (kg)	Collet
ISO40	T40M (U) -NX5E-138	1.75~10	138	27.5	32	5	20,000	5.0	SK10A
ISO50	T50M (U) -NX5E-143		143					7.0	
	-NX4E-168	2.75~16	168	40	46	4	16,000	11.0	SK16A

Standard

TAPER	Code No.	D	L	φC	ℓ	Ratio	MAX.rpm	Weight (kg)	Collet
ISO40	T40M (U) -NX5-117	1.75~10	117	27.5	32	5	20,000	4.8	SK10A
ISO50	T50M (U) -NX5-122		122					6.8	
	-NX4-147	2.75~16	147	40	46	4	10,000	10.8	SK16A

★For SK type collets, the **SK-P** class collet or **SK-A** type collet is recommended.

★Special shank spindle speeder is also available on request.

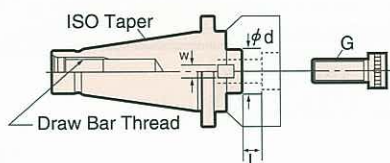
★Stopper Arm, wrench, Collet Extractor and **SK-A** type collets are supplied as standard. **NX5E, NX5** : **SK10-6A, 8A, 10A** **NX4E, NX4** : (**SK16-8A, 10A, 12A, 16A**)

★Unless specified otherwise, the **metric** size draw bar thread is supplied as standard. **M** : Metric **U** : Unify

FACE MILL ARBOR

NIKKEN

Face Mill Arbor



[FA-PM] Centering Plug



FN

FN is semi-standard.

TAPER	Code No.	Cutter Dia	φd	L	W	G CAP Bolt
ISO40	FN40-22M	50	22	15	10	M10×30
	-27M	80	27	16	12	M12×35
	-32M	125	32		14	M14×35
ISO50	FN50-22M	50	22	15	10	M10×30
	-27M	80	27	16	12	M12×35
	-32M	125	32		14	M14×35

★Drive key, bolt and spanner are supplied as standard. (Not for centering plug)

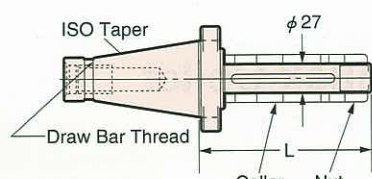
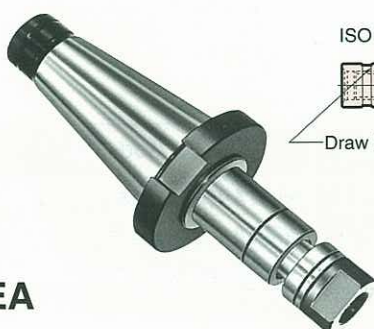
★Unless specified otherwise, the **metric** size draw bar thread is supplied as standard.

★**Centering Plug** : Special flange type can be supplied to fit directly onto the spindle for mounting larger cutters.

STUB ARBOR

NIKKEN

Stub Arbor



EA

EA is semi-standard.

TAPER	Code No.	L	Draw Bar Thread
ISO40	EA40-27- 75M	75	M16 P=2 (U $\frac{5}{8}$ - 11 Threads)
	-100M	100	
	-125M	125	
ISO50	EA50-27- 75M	75	M24 P=3 (U1 - 8 Threads)
	-100M	100	
	-125M	125	
	-150M	150	

★Spacer collars, drive key and front end nut are supplied as standard.

★Unless specified otherwise, the **metric** size draw bar thread is supplied as standard.

★A spigot dia. = φ 32mm or φ 25.4mm is also available.



S.NQ

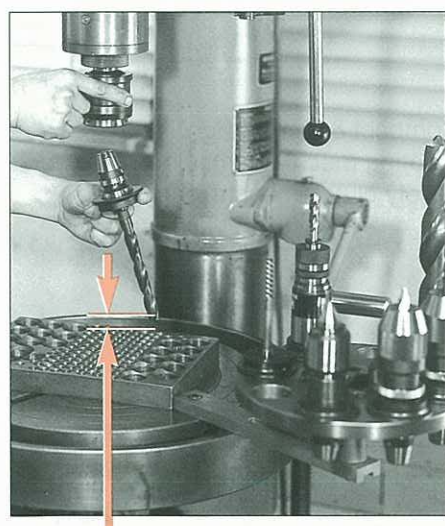
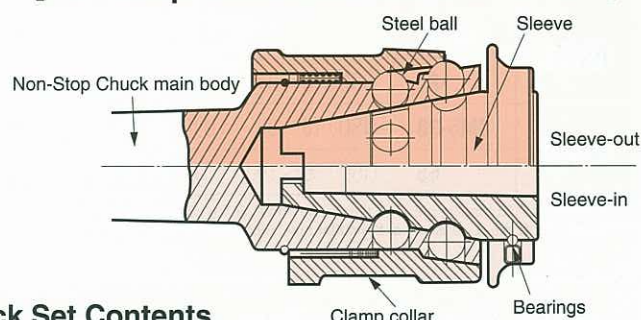


S. NQ M2-30N
 Internal Taper N30 N40
 Shank Type : MT2, 3, 4 : 40=ISO40, 50=ISO50
 Non-Stop Chuck
 Set Code No.

- **Quick and easy tool change system.**
 ("Non-Stop Chuck" is the trade name, do not change tools during spindle rotation)
- **Damage to the machine tool spindle can be kept to a minimum as the tool change is carried out smoothly and efficiently.**
- **Only 10mm clearance between the tool and the workpiece is required for a tool change.**
- **Powerful tool clamping.**
- **NPU drill chuck is available.**



[Non-Stop Chuck internal mechanism]



Only 10mm clearance between the tool and the workpiece is required for a tool change.

■ Non-Stop Chuck Set Contents

TAPER	Non-Stop Chuck Set Code No.	Max. Drilling Dia.	Non-Stop Chuck	NPU Drill Chuck ϕ 1~13mm	MT Taper Sleeve
MT 2	S.NQM2-30N	ϕ 23	NQM2-30	N30-NPU13	N30-MT1, 2
MT 3	S.NQM3-35N	ϕ 32	NQM3-35	N35-NPU13	N35-MT1, 2, 3
MT 4	S.NQM4-35N	ϕ 32	NQM4-35	N35-NPU13	N35-MT1, 2, 3
	S.NQM4-40N	ϕ 50	NQM4-40	N40-NPU13	N40-MT1, 2, 3, 4
MT 5	S.NQM5-40N	ϕ 50	NQM5-40	N40-NPU13	N40-MT1, 2, 3, 4
ISO40	S.NQ40-35NM	ϕ 32	NQ40-35M	N35-NPU13	N35-MT1, 2, 3
ISO50	S.NQ50-40NM	ϕ 50	NQ50-40M	N40-NPU13	N40-MT1, 2, 3, 4

★N30-NPU8, N35-NPU8 and N40-NPU8 are also available.
 ★Non-Stop Chuck is not available for sale in UK.
 ★For ISO Taper, the metric size draw bar thread is supplied as standard.



Do not change tools during spindle rotation.

Morse Taper Tapper Chuck (MT)

M3~M100
ZKG

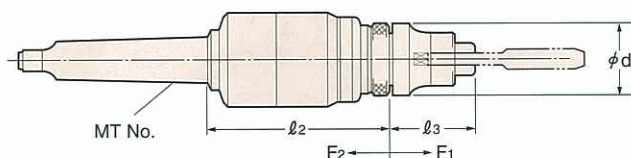
- Ideal for production lines and all mass production. (Tapping only)
- The safety clutch guarantees long tap life and no breakage.
- The floating mechanism is built into taper chuck itself.

ZM 2-12

Style: M12, M16, M24, M38, M65

Size of Taper 2: MT2, 3: MT3, 4: MT4

Morse Taper Tapper Chuck

ZM


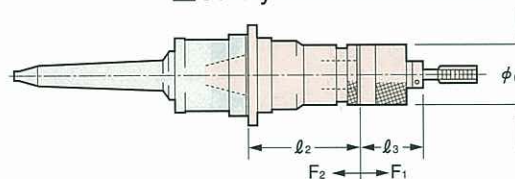
TAPER	Code No.	Tapping Capacity	l_2	l_3	d	Float		Tap Collet
						F ₁	F ₂	
MT3	ZM3-12	(ISO) 3~12, (U) $\frac{1}{8}$ ~ $\frac{1}{2}$	97	55	32	15	5	ZKG 12
	-16	(ISO) 3~20, (U) $\frac{1}{8}$ ~ $\frac{3}{4}$	120	66	39	20	8	ZKG 16
	-24	(ISO) 8~24, (U) $\frac{1}{2}$ ~1	120	74	46	20	8	ZKG 24
MT4	ZM4-16	(ISO) 3~20, (U) $\frac{1}{8}$ ~ $\frac{3}{4}$	120	66	39	20	8	ZKG 16
	-24	(ISO) 8~24, (U) $\frac{1}{2}$ ~1	120	74	46	20	8	ZKG 24
MT5	ZM5-38	(ISO) 18~38, (U) $\frac{3}{4}$ ~ $1\frac{3}{8}$	156	64	78	25	10	ZK 38
	-65	(ISO) 36~100, (U) $1\frac{1}{16}$ ~ $3\frac{3}{4}$	192	89	110	25	10	ZK 65

★ Please refer P.23 for suitable ZKG tap collets and P.24 for suitable ZK tap collet.

★ Please specify the dimensions of the cotter hole, if required. Please refer P.18

Tapper Chuck for Non -Stop Chuck

- Compact & slim design.
- Floating mechanism built in.
- Safety clutch mechanism.


 Non-Stop Chuck
refer P.20

 ZKG Tap Collet
refer P.23

ZQ

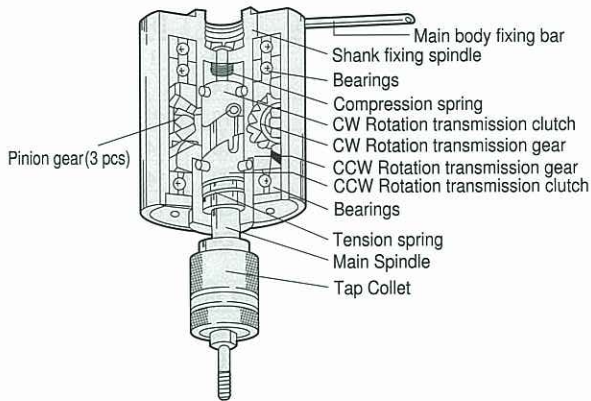
Non-Stop Chuck Code No.	Tapper Chuck Code No.	l_2	l_3	ϕd	Float		Tap Collet
					F ₁	F ₂	
NQM○-35	ZQ35-12	120	55	32	15	5	ZKG12
	-16	130	66	39	20	8	ZKG16
	-24	134	74	46	20	8	ZKG24
NQM○-40	ZQ40-16	130	66	39	20	8	ZKG16
	-24	135	74	46	20	8	ZKG24
	-38	105	64	78	0	0	ZK 38


Do not change tools during spindle rotation.



ZR

[Internal Parts Illustration]



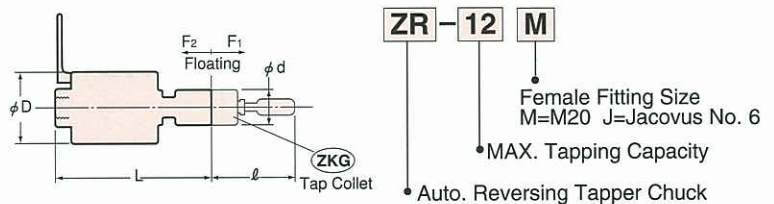
ZRM

Morse Taper Shank to suit ZR Tapper Chuck (Option)



Shank Size

- This chuck is suited to all machines which do not have the capability of reversing the spindle.
- As this tapper has a built-in reversing mechanism, it is ideally suited to drilling machines, milling machines and turret mills.
- Torque adjustment: With quick change tap collet to suit the chuck, tapping of blind holes in tough materials can be achieved safely and efficiently.
- Floating mechanism: With a built in floating mechanism, high accuracy tapping operations can be achieved.
- Smooth tapping operations can be achieved by absorbing the impact of changing the rotation direction at the bottom of the hole.
- Tapping depth can be kept within $\pm 0.1\text{mm}$.

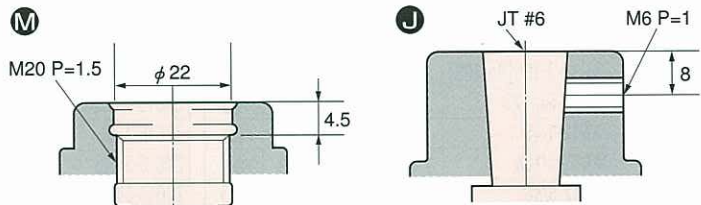


Code No.	ZR-12M, 12J	ZR-20M
Tapping Capacity	(ISO) 3~12, (U) $\frac{1}{8}$ ~ $\frac{1}{2}$	(ISO) 3~20, (U) $\frac{1}{8}$ ~ $\frac{3}{4}$
Shank Taper	Jacobus # 6, M20 P=1.5	M20 P=1.5
Floating at cw	F ₁ : 5mm, F ₂ : 4mm	F ₁ : 7mm, F ₂ : 6mm
Tension at ccw	9mm	16mm
L	132	162
ϕ D	70	80
ϕ d	32	39
MAX. RPM	1,000rpm	600rpm
Tap Collet	ZKG12	ZKG16

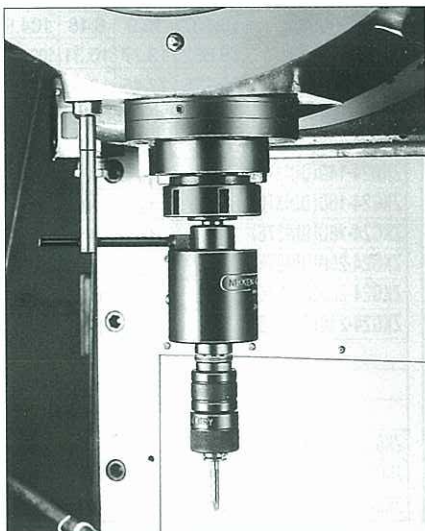
★ Various sizes of tap collet are available. (refer P.23)

★ ZR 8 Type is also available.

Shank fitting details

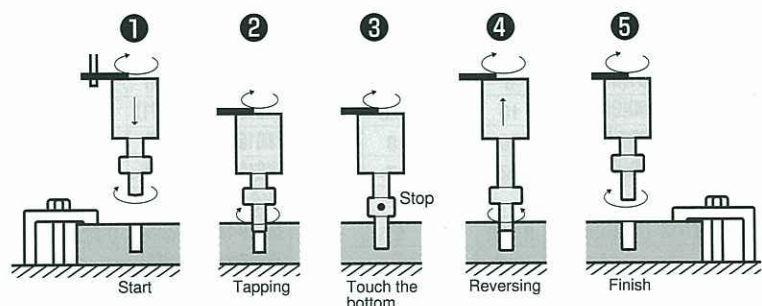


Instruction for the Auto. Reversing Tapper Chuck



Tapping procedure (Manual Feed)

- ① Fix the main body fixing bar.
- ② Feed the tap into the pre-drilled hole.
- ③ When the tap reaches the bottom of the hole, the tap will not feed any further due to the safety torque mechanism.
- ④ Feed the chuck upwards.
- ⑤ Remove the tap from the tapped hole.



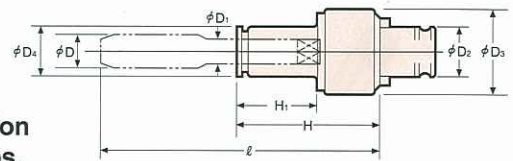
ONE TOUCH TAP COLLET

NIKKEN

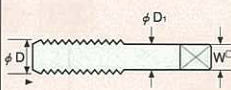
ZKG

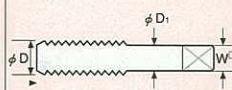


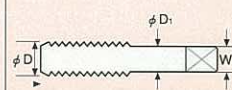
- Can be used with all NIKKEN Tapper Chucks.
- Setting and Removal of Tap can be done in ONE TOUCH.
- Torque Limiter Mechanism built-in.
Reversing Torque is 1.4 times of Normal Rotation in order to prevent the troubles caused by chips.



Tapping Capacity	ZKG12		ZKG16			ZKG24		
	M3~5	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				
	Code No.	D	D ₁	W	L
ISO Metric	ZKG12-3S	3	3.15	2.5	79
	ZKG12-4S	4	4	3.15	83
	ZKG12-5S	5	5	4	87
	ZKG12-6S	6	6.3	5	92
	ZKG12-8S	8	8	6.3	96
	ZKG12-10S	10	10	8	103
	ZKG12-12S	12	9	7.1	111
ISO Pipe	ZKG12-1/8PS	9.728	8	6.3	87
IMPERIAL BSW BSF	ZKG12-1/8S(No.5S)	3.175	3.15	2.5	78
	ZKG12-No.6S	3.505	3.55	2.8	80
	ZKG12-No.8S	4.166	4.5	3.55	82
	ZKG12-3/16S(No.10S)	4.762	5	4	86
	ZKG12-No.12S	5.48	5.6	4.5	90
	ZKG12-1/4S	6.35	6.3	5	90
	ZKG12-5/16S	7.937	8	6.3	95
	ZKG12-3/8S	9.525	10	8	101
	ZKG12-7/16S	11.112	8	6.3	108
	ZKG12-1/2S	12.7	9	7.1	111
IMPERIAL Pipe	ZKG12-1/8PB	9.728	8.08	6	83.037
DIN Metric	ZKG12-3D(DIN371)	3	3.5	2.7	85
	ZKG12-4D(DIN371)	4	4.5	3.4	92
	ZKG12-5D(DIN371)	5	6	4.9	97
	ZKG12-6D(DIN371)	6	6	4.9	107
	ZKG12-8D(DIN376)	8	6	4.9	117
	ZKG12-8D7(DIN371)	8	8	6.2	113
	ZKG12-10D(DIN376)	10	7	5.5	124
	ZKG12-10D7(DIN371)	10	10	8	121
	ZKG12-12D(DIN376)	12	9	7	132
DIN Pipe	ZKG12-1/8R(DIN353)	9.728	7	5.5	92

TAP SPEC.	ZKG16				
	Code No.	D	D ₁	W	L
ISO Metric	ZKG16-4S	4	4	3.15	93
	ZKG16-5S	5	5	4	97
	ZKG16-6S	6	6.3	5	102
	ZKG16-8S	8	8	6.3	106
	ZKG16-10S	10	10	8	113
	ZKG16-12S	12	9	7.1	121
	ZKG16-14S	14	11.2	9	122
	ZKG16-16S, 18S, 20S D=16, 18, 20				
	ZKG16-1/8PS	9.728	8	6.3	97.5
	ZKG16-1/4PS	13.157	10	8	103.5
	ZKG16-3/8PS	16.662	12.5	10	109.5
IMPERIAL BSW BSF	ZKG16-1/8S(No.5S)	3.175	3.15	2.5	88
	ZKG16-No.6S	3.505	3.55	2.8	90
	ZKG16-No.8S	4.166	4.5	3.55	92
	ZKG16-3/16S(No.10S)	4.762	5	4	96
	ZKG16-No.12S	5.48	5.6	4.5	100
	ZKG16-1/4S	6.35	6.3	5	100
	ZKG16-5/16S	7.937	8	6.3	105
	ZKG16-3/8S	9.525	10	8	111
	ZKG16-7/16S	11.112	8	6.3	118
	ZKG16-1/2S	12.7	9	7.1	121
	ZKG16-9/16S	14.288	11.2	9	122
	ZKG16-5/8S	15.875	12.5	10	128
IMPERIAL Pipe	ZKG16-1/8PB	9.728	8.08	6	93.537
	ZKG16-1/4PB	13.157	10.9	8.18	98.3
	ZKG16-3/8PB	16.662	13.77	10.31	99.888
DIN Metric	ZKG16-4D(DIN371)	4	4.5	3.4	102
	ZKG16-5D(DIN371)	5	6	4.9	107
	ZKG16-6D(DIN371)	6	6	4.9	117
	ZKG16-8D(DIN376)	8	6	4.9	127
	ZKG16-8D7(DIN371)	8	8	6.2	123
	ZKG16-10D(DIN376)	10	7	5.5	134
	ZKG16-10D7(DIN371)	10	10	8	131
	ZKG16-12D(DIN376)	12	9	7	142
	ZKG16-14D(DIN376)	14	11	9	137
	ZKG16-16D, 18D, 20D D=16, 18, 20				
DIN Pipe	ZKG16-1/8R(DIN353)	9.728	7	5.5	102.5
	ZKG16-1/4R(DIN353)	13.157	11	9	98.5
	ZKG16-3/8R(DIN353)	16.662	12	9	105.5

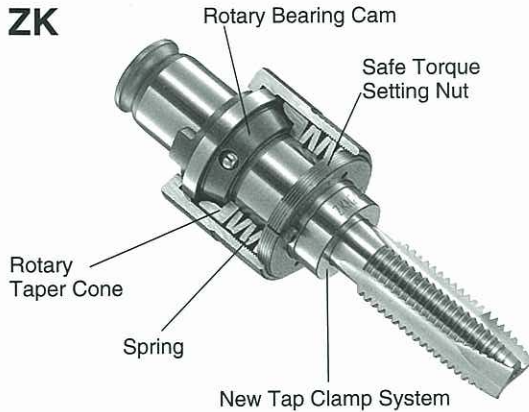
TAP SPEC.	ZKG24				
	Code No.	D	D ₁	W	L
ISO Metric	ZKG24-12S	12	9	7.1	129
	ZKG24-14S	14	11.2	9	130
	ZKG24-16S	16	12.5	10	136
	ZKG24-18S	18	14	11.2	145
	ZKG24-20S	20	14	11.2	145
	ZKG24-22S	22	16	12.5	145
	ZKG24-24S	24	18	14	155
IMPERIAL BSW BSF	ZKG24-1/4PS	13.157	10	8	110
	ZKG24-3/8PS	16.662	12.5	10	116
	ZKG24-1/2PS	20.955	16	12.5	122
	ZKG24-5/8PS	22.911	18	14	124
	ZKG24-1/2S	12.7	9	7.1	129
	ZKG24-9/16S	14.288	11.2	9	130
	ZKG24-5/8S	15.875	12.5	10	136
	ZKG24-3/4S	19.05	14	11.2	145
	ZKG24-7/8S	22.225	16	12.5	145
	ZKG24-1S	25.4	18	14	155
IMPERIAL Pipe	ZKG24-1/4PB	13.157	10.9	8.18	104.8
	ZKG24-3/8PB	16.662	13.77	10.31	106.388
	ZKG24-1/2PB	20.955	17.45	13.08	114.5
	ZKG24-5/8PB	22.911	20.32	15.3	114.5
	ZKG24-12D(DIN376)	12	9	7	150
	ZKG24-14D(DIN376)	14	11	9	145
	ZKG24-16D(DIN376)	16	12	9	145
	ZKG24-18D(DIN376)	18	14	11	158
	ZKG24-20D(DIN376)	20	16	12	168
	ZKG24-22D(DIN376)	22	18	14.5	166
	ZKG24-24D(DIN376)	24	18	14.5	186
DIN Pipe	ZKG24-1/4R(DIN353)	13.157	11	9	105
	ZKG24-3/8R(DIN353)	16.662	12	9	112
	ZKG24-1/2R(DIN353)	20.955	16	12	116

★ Long size TAP Collet (50, 100mm long) is available. e.g. ZKG12-4S-50L.
★ For JIS Taps, please refer P.27 on Japanese CONVENTIONAL TOOLING catalogue.
★ TAP Clamp Mechanism for PIPE TAP is Side Lock System.

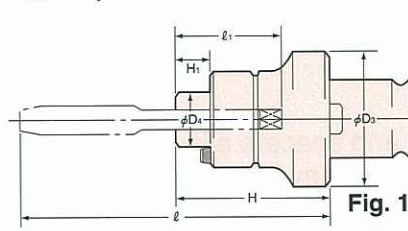
ZK TAP COLLET

NIKKEN

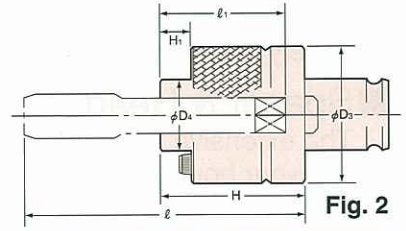
ZK



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



Total length "l" is calculated as;
 $l = \text{Tap length} - l_1 + H$



	ZK8	ZK38	ZK65
D ₄	13	45	68
D ₃	23	78	110
H ₁	6.5	12	13
H	29.5	64	89

ZK8 type is semi-standard.

TAP SPEC.	ZK8	Fig			
		D	D ₁	W	l ₁
ISO Metric	ZK8-2S	2	2.5	2.0	22.5
	-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
	-No.3S	2.515			
	-No.4S	2.845	3.15	2.5	23.5
	-No.5S (1/8S)	3.175			
	-No.6S	3.505			
	-No.8S	4.166	4.5	3.55	24.5
	-No.10S (3/8S)	4.826	5.0	4.0	25.5
	-No.12S	5.480	5.6	4.5	26.5
	-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
	-3D	3(Din 371)	3.5	2.7	24.5
	-4D	4(Din 371)	4.5	3.4	24.5
	-5D	5(Din 371)	6.0	4.9	26.5
	-6D	6(Din 371)			
	-8D	8(Din 371)			
DIN Pipe					

ZK38	Fig			
	D	D ₁	W	l ₁
ZK38-18S	18	14	11.2	44
-20S	20			
-22S	22	16	12.5	46
-24S	24	18	14	48
-27S	27	20	16	54
-30S	30			
-33S	33	22.4	18	56
-36S	36	25	20	58
ZK38-3/8PS	16.662	12.5	10	34
-1/2PS	20.955	16	12.5	38
-5/8PS	22.911	18	14	40
-3/4PS	26.441	20	16	46
-7/8PS	30.201	22.4	18	48
-1PS	33.249	25	20	50
ZK38-3/4S	19.050	14	11.2	44
-7/8S	22.225	16	12.5	46
-1S	25.400	18	14	48
-1 1/8S	28.575	20	16	54
-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
-1/2PB	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
-7/8PB	30.201	27.76	20.6	45.1
-1PB	33.249	28.57	21.4	46.6
ZK38-18D	18(Din 376)	14	11	44
-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
-30D	30(Din 376)	22	18	55
-33D	33(Din 376)	25	20	57
-36D	36(Din 376)	28	22	59
ZK38-3/8R	16.622	12	9	33
-1/2R	20.955	16	12	37
-5/8R	22.911	18	14.5	39
-3/4R	26.411	20	16	45
-7/8R	30.201	22	18	47
-1R	33.249	25	20	49

ZK65	Fig			
	D	D ₁	W	l ₁
ZK65-36S	36	25.0	20.0	58
-39S	39	28.0	22.4	60
-42S	42			
-45S	45	31.5	25.0	65
-48S	48	35.5	28.0	68
-52S	52			
-56S	56	40.0	31.5	71
-60S	60			
-64S	64			
ZK65-1 1/4PS	41.910	31	24	51
-1 3/8PS	44.325	34	26	55
-1 1/2PS	47.803	37	29	
-1 3/4PS	53.746	40	32	62
-2PS	59.614	50	39	
ZK65-1 1/2S	1 1/2	28	22.4	60
-1 3/4S	1 3/4	31.5	25.0	65
-2S	2	35.5	28.0	68
-2 1/4S	2 1/4	40.0	31.5	71
-2 1/2S	2 1/2			
ZK65-1 1/4PB	41.910	33.32	25.0	51
-1 1/2PB	47.803	38.10	28.57	50
-1 3/4PB	53.746	41.28	30.94	62
-2PB	59.614	47.63	35.71	56
ZK65-36D	36(Din 376)	28.0	22.0	59
-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
-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)			
-2R	59.614 (Din 353)			

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

Base Holder

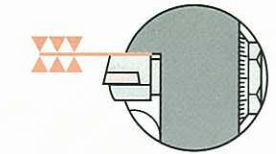
Q26 type base holder can be used for various combination of boring applications. Ideal for low volume production on manual machine with wide variety of boring sizes.

Spacer & Head

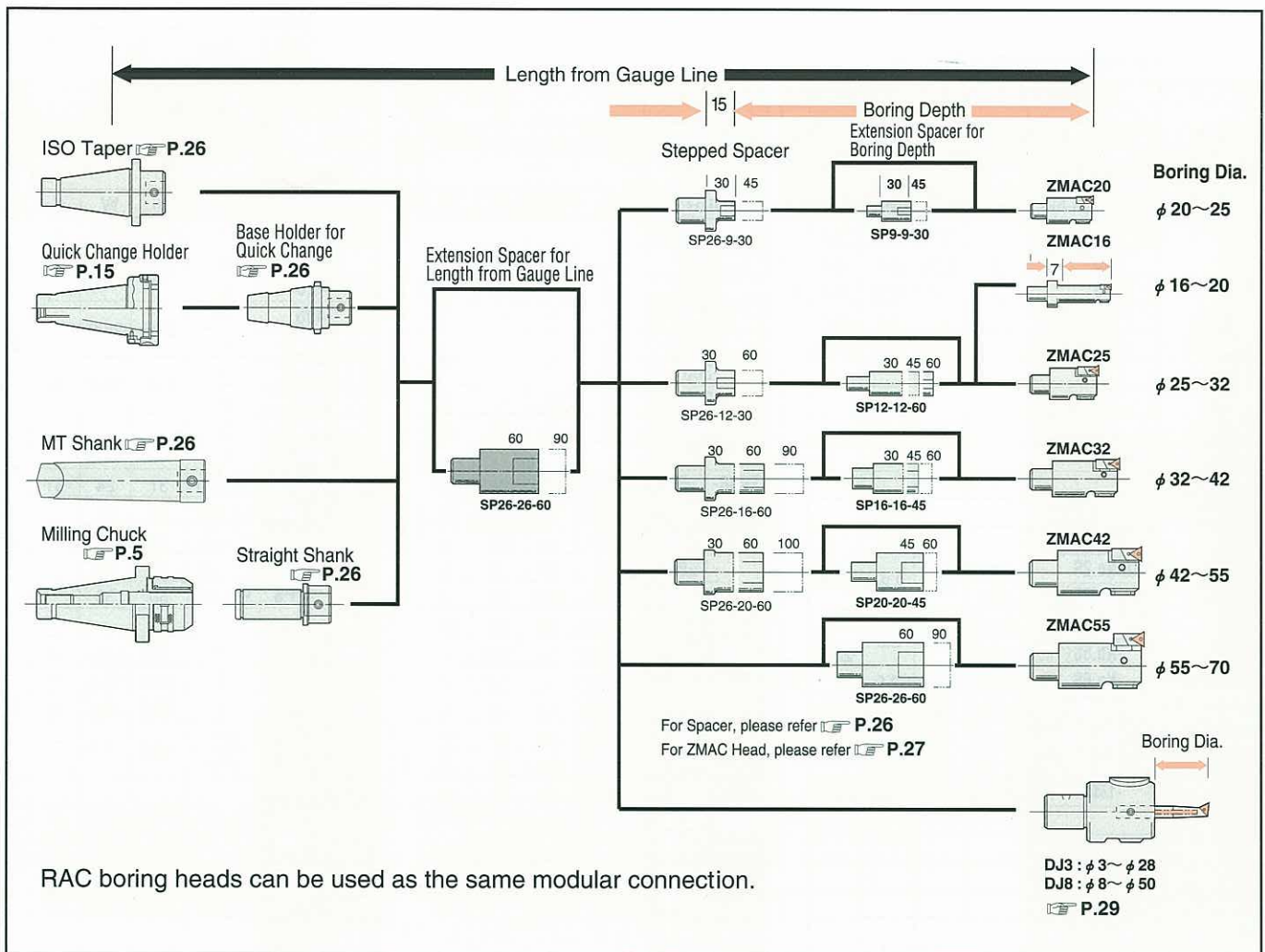
The extensive range of heads and spacers allow the correct selection to suit your boring application without any lost of rigidity.

Method of Selection for Modular ZMAC Boring Arbors

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

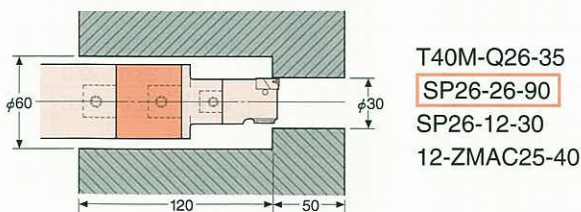


No Micro Vibration due to Double-Contact Support of Cartridge. Long Tool-Life & High Accuracy.

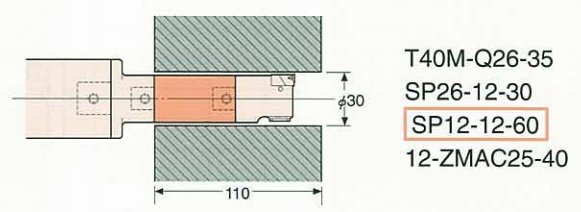


RAC boring heads can be used as the same modular connection.

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



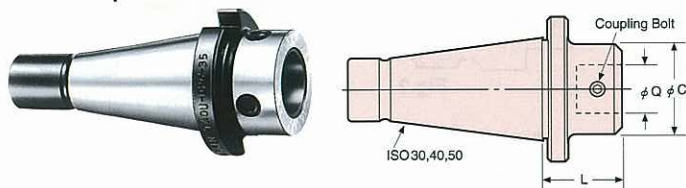
Example of deep hole boring, using the extension spacer with the same dia. as head.



BASE HOLDER SHANK for MODULAR SYSTEM

NIKKEN

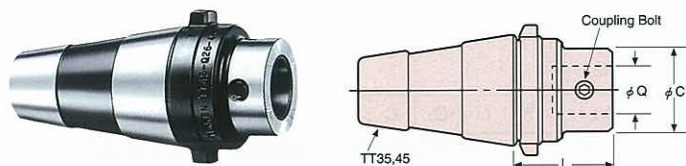
ISO Taper Shank



TAPER	Code No. TNo.-Q-L	C	Coupling Bolt No.	Draw Bar Thread
ISO30	T30M(W) -Q26-40	50	B26 N	M12 P=1.75
ISO40	T40M(U) -Q26-35	50	B26 N	M16 P=2
ISO50	T50M(U) -Q26-45	50	B26 N	M24 P=3
	-Q34-50	64	B34	

★Unless specified other wise, the **metric** size draw bar thread is supplied as standard.

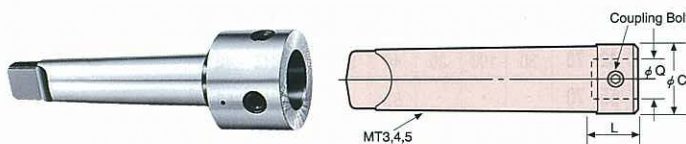
TT Taper Shank for Quick Change Holder



Quick Change Master Holder	Code No. TTNo.-Q-L	L	C	Coupling Bolt No.
HA40	TT35-Q26-35	35	50	B26N
HA50	TT45-Q26-45	45	50	B26N

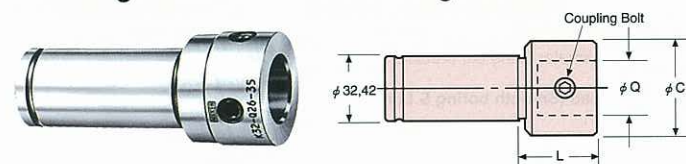
★Please refer P.15 for Quick Change Master Holder.

MT Morse Taper Shank



TAPER	Code No. MTNo.-Q-L	L	C	Coupling Bolt No.
MT3	MT3T-Q26-45	45	50	B26N
MT4	MT4T-Q26-45	45	50	B26N
MT5	MT5T-Q26-35	35	50	B26N

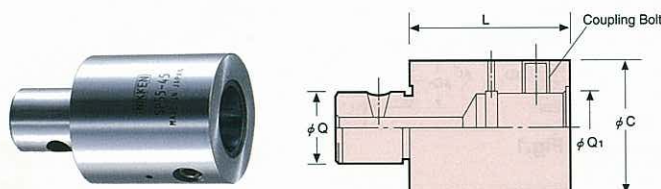
K Straight Shank to suit Milling Chuck



Style	Code No. KNo.-Q-L	L	C	Coupling Bolt No.
32	K32-Q26-40	40	50	B26N
42	K42-Q26-40	40	50	B26N

K32-Q 9-20, -40
K32-Q12-20, -60
K32-Q16-20, -55
K32-Q20-40
are also available.

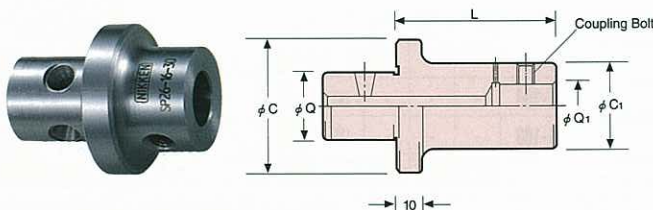
SP Extension Spacer



Extension Spacer

Code No. Q-Q ₁ -L	Coupling Dia		C	Coupling Bolt No.
	Q	Q ₁		
SP 9- 9-30,45	9	9	19	B19
SP 12-12-30,45,60	12	12	24	B12
SP 16-16-30,45,60	16	16	31	B16
SP 20-20-45,60	20	20	40	B20
SP 26-26-60,90	26	26	50	B26
SP 34-34-60,90	34	34	64	B34
SP 42-42-60,90	42	42	83	B42

SP Stepped Spacer



Stepped Spacer

Code No. Q-Q ₁ -L	Coupling Dia		C	C ₁	Coupling Bolt No.
	Q	Q ₁			
SP 12- 9-45	12	9	24	19	B19
SP 16- 9-45	16	9	31	19	B19
		12		24	B12
SP 20- 9-45	20	9	40	19	B19
		12		24	B12
SP 26- 9-30,45	26	16	50	31	B16
		12		19	B19
SP 34-16-60,90	34	20	64	40	B20
		16		31	B16
SP 42-20-60,100	42	26	83	50	B26N
		20		40	B20
SP 42-26-60,100	42	34	83	64	B34
		26		50	B26N

Modular connection system is the Face Contact System by drawing into with the bolt, which top shape is gentle taper.

★ 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 Bolt is included as standard.

MODULAR type ZMAC BORING HEAD

NIKKEN

ZMAC Triangular Insert type head

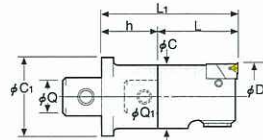


Fig.1

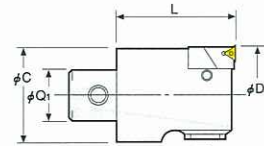


Fig.2

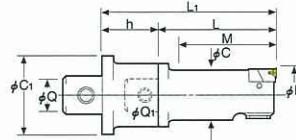
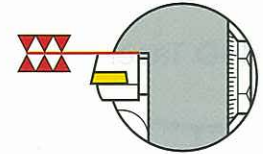


Fig.3



No Micro Vibration due to Double-Contact Support of Cartridge. Long Tool-Life & High Accuracy.

Insert Tip P.30



For Modular type

For Solid type

Set/Head Code No.	Boring Range D	Boring Depth M	Coupling Dia. Q	Spacer No.	Head No.	Remarks							
(Q -)Q1-Min.D -L1/L				Q -Q1-h	Q1-Min.D-L	h	L1	Q1	C	C1	Unit No.	Insert No.	Fig.
Q26-12-ZMAC 16- 75	15.9~20.2	38	26	SP26-12-30	12-ZMAC 16- 45	30	75	12	15	50	M 2HZ - 16	3MP-C,B	3
Q26-12-ZMAC 16- 85		48		SP26-12-30	12-ZMAC 16- 55		85						
Q26- 9-ZMAC 20- 70	19.8~25.2	55		SP26- 9-30	9-ZMAC 20- 40	30	70	9	19	50	M 2HZ - 20		
Q26-12-ZMAC 25- 70	24.8~32.2	55		SP26-12-30	12-ZMAC 25- 40	30	70	12	24	50	M 3HZ - 25	4MP-C,B	1
Q26-16-ZMAC 32- 85	31.8~42.2	70		SP26-16-30	16-ZMAC 32- 55	30	85	16	31	50	M 4HZ - 32		
Q26-20-ZMAC 42-100	41.8~55.2	85		SP26-20-30	20-ZMAC 42- 70	30	100	20	40	50	M 5HZ - 42	6MP-C,B	2
26 -ZMAC 55- 70	54.8~70.2	70	-	26-ZMAC 55- 70	-	-	-	53	-	M 5HZ - 55			
34 -ZMAC 70- 70	69.8~85.2	70	34	-	34-ZMAC 70- 70	-	-	-	67	-	M 7HZ - 70		
42 -ZMAC 85-100	84.8~100.2	100	-	42-ZMAC 85-100	-	-	-	83	-	M10HZ - 85			
42 -ZMAC100-100	99.5~140.5	100	42	-	42-ZMAC100-100	-	-	-	95	-	M10HZ -100		
42 -ZMAC140-100	139.5~180.5	100		-	42-ZMAC140-100	-	-	-	135	-	M10HZ -140		

★MIN. dial readout :ZMAC32 & above is 0.01mm on diameter.

:ZMAC25 & below is 0.02mm on diameter. Easy adjustment of 3-5microns on diameter using our precision screw mechanism.

★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).

We would recommend "B"grade (CBN) insert for Hardened Steel & High Speed boring of Cast Iron.

★The above set code No.(Fig.1 & 3) includes 30mm long stepped spacer to suit Q26 size base holder. When ordering only a Head, please use Head Code No.

★Head & spacer will be supplied separate boxes.

★For Centre Through-tool Coolant heads, add the letter "C" to end of ordering code e.g. 26-ZMAC55-70C

ZMAC- R Rhomboid Insert type head

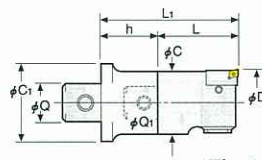


Fig.1

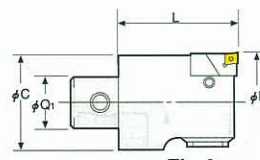


Fig.2

Insert Tip P.30



For Modular type

For Solid type

Set/Head Code No.	Boring Range D	Boring Depth M	Coupling Dia. Q	Spacer No.	Head No.	Remarks								
(Q -)Q1-Min.D -L1/L				Q -Q1-h	Q1-Min.D-L	h	L1	Q1	C	C1	Unit No.	Insert No.	Fig.	
Q26-16-ZMAC 32R - 85	31.8~42.2	70	26	SP26-16-30	16-ZMAC 32R - 55	30	85	16	31	50	M 4HZ- 32R	CC06-C	1	
Q26-20-ZMAC 42R -100	41.8~55.2	85		SP26-20-30	20-ZMAC 42R - 70	30	100	20	40	50	M 5HZ- 42R			
26 -ZMAC 55R - 70	54.8~70.2	70		-	26-ZMAC 55R - 70	-	-	-	53	-	M 5HZ- 55R	CC08-C	2	
34 -ZMAC 70R - 70	69.8~85.2	70	34	-	34-ZMAC 70R - 70	-	-	-	67	-	M 7HZ- 70R			
42 -ZMAC 85R -100	84.8~100.2	100	42	-	42-ZMAC 85R -100	-	-	-	83	-	M10HZ- 85R			
42 -ZMAC 100R -100	99.5~140.5	100		-	42-ZMAC 100R -100	-	-	-	95	-	M10HZ-100R			CC12-C
42 -ZMAC 140R -100	139.5~180.5	100		-	42-ZMAC 140R -100	-	-	-	135	-	M10HZ-140R			

★MIN. dial readout : 0.01mm on diameter. Easy adjustment of 3-5microns on diameter using our precision screw mechanism.

★ "C"grade (coated) insert for Steel, Stainless & Cast Iron is supplied as Standard with the head (Smooth boring & Long tool-life).

★The above set code No.(Fig.1) includes 30mm long stepped spacer to suit Q26 size base holder. When ordering only a Head, please use Head Code No.

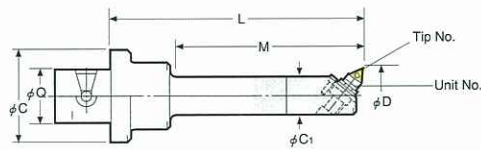
★Head & spacer will be supplied separate boxes.

★For Centre Through-tool Coolant heads, add the letter "C" to end of ordering code e.g. 26-ZMAC55R-70C.

MODULAR type BORING HEAD

NIKKEN

BCB Micro Cut Boring Head



Insert Tip
P.30



Code No. Q- Min.D - L	Boring Range D	Boring Depth M	Coupling Dia. Q	L	C	C ₁	Unit No.	Tip 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	

★Above boring heads are not carbide cored type.
★"T" Grade (Cermet) insert is supplied as standard.

RAC Balance Cut Boring Head

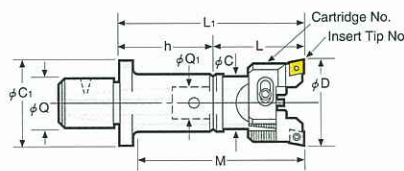
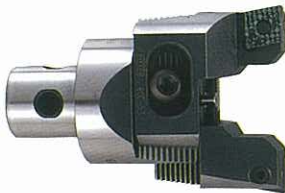


Fig. 1

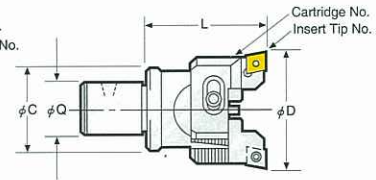


Fig. 2

Insert Tip
P.30



Set/Head Code No.	Boring Range	Boring Depth	Coupling Dia.	Spacer No.	Head No.	Remarks									
Q- Q ₁ - Min.D -L	D	M	Q	Q-Q ₁ -h	Q ₁ -MIN D-L	h	L ₁	Q ₁	C	C ₁	Cartridge No.	Insert Tip No.	Fig.		
Q26-12-RAC 25 - 55*	25~ 32	70	26	SP26-12-30	12-RAC25-55*	30	85	12	24	50	RCC-025*	CC07*	1		
Q26-16-RAC 32 - 55	32~ 45			SP26-16-30	16-RAC32-55			16	31		RCC- 32	CC08			
Q26-20-RAC 43 - 70	43~ 55	85		SP26-20-30	20-RAC43-70	100	20	40	RCC- 43	CN08	2				
26 -RAC 53 - 70	53~ 70	70		-	-			-	-			50	-	RCC- 53	
26 -RAC 70 - 70	70~100			-	-	-	-	-	50			-	RCC- 70		
34 -RAC 70 - 85		85	34	-	-	-	-	64	-						
42 -RAC100 -100	100~130	100	42	-	-	-	-	-	83			-	RCC-100		

★"C" Grade (Coated) insert is supplied as standard.
★Cartridges & Inserts for Alloy Steel (E), for Aluminium & Cast iron (A) and for Through Hole (K) are also available.
★The above Set Code No. (Fig.1) includes 30mm long stepped spacer to suit Q26 size base holder. When ordering only a Head, please use Head Code No.
★For RAC25, Cartridge No.RCC-25 & Tip No.CC08 is available.

Various type of Cartridges

For Alloy Steel



Cartridge No.	Tip No.
RCC- 43E	CC12
- 53E	
- 70E	
-100E	

For Aluminium&Cast Iron



Cartridge No.	Tip No.
RCC- 25A	AEG12
- 32A	
- 43A	AEG16
- 53A	
- 70A	
-100A	

For Through Hole



Cartridge No.	Tip No.
RCC- 25K	SC09
- 32K	
- 43K	SC12
- 53K	
- 70K	
-100K	

★Pair (2 Cartridges) Code No. : e.g. S.RCC43E

Cutting Condition (Removal & Feed)

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

Boring Range	Type	Best Condition		Max. Condition	
		Removal mm/φ	Feed mm/rev.	Removal mm/φ	Feed mm/rev.
φ 25~ 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

Selection of Tips and Proper Cutting Speed

◎ : best ○ : good — : inadequate

Tip			SS41	S55C	SCM	SKD	SC	FC,FCD	SUS	AL,ALC
Code No.	Grade									
CC	Coated	CN	◎	◎	◎	◎	◎	◎	◎	—
		CC	◎	◎	◎	◎	◎	◎	◎	—
AEG	K10		—	—	—	—	—	—	—	—
			—	—	—	—	—	—	—	—
SC	Coated		◎	◎	◎	◎	◎	◎	◎	—
			◎	◎	◎	◎	◎	◎	◎	—

★For Interrupted Boring, Cutting Speed should be reduced to approx. 50%.

DJ BORING HEAD with CARBIDE CORED BIT

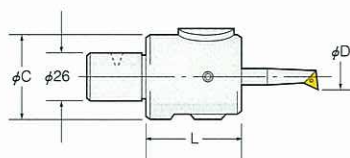
NIKKEN

DJ Boring Head



Photo. shows cut-sample.

Code No.	D	M	L	C	Bit
Q26-DJ3-36	3~28	14~80	36	45	J10
Q26-DJ8-44	8~50	40~130	44	54	J16



★4 pcs of bits are included as standard. Please refer below **DJ CARBIDE CORED BIT**.
★DJ Head without Bit is available. e.g. CodeNo. **Q26-DJ3-36-BD, Q26-DJ-8-44-BD**

DJ CARBIDE CORED BIT

NIKKEN



Fig. 4
The world smallest Boring Bit (φ5mm) with Insert Tip

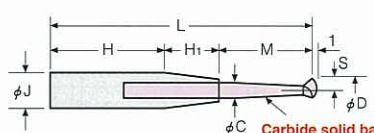


Fig. 1

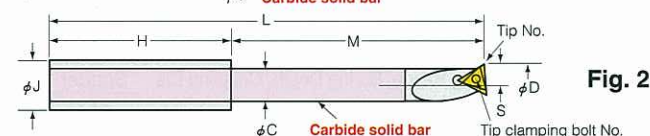


Fig. 2

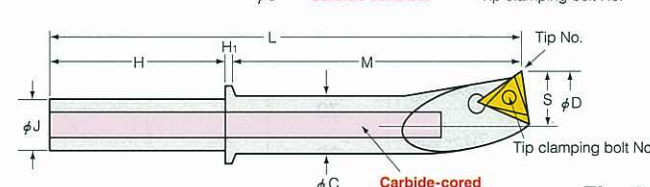


Fig. 3

Explanation of Code No.

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

Insert Tip
P.30



Style	Code No.	Boring Range D	Boring Depth M	J	L	H	H ₁	C	S	Equipped Tip	Tip Clamping Bolt No.	Tip Clamping Handle No.	Fig.
DJ3	J10- 3- 14	3~8	14	10	62	30	18	2.2	1.5	—	—	—	1
	- 5- 35	5~15	35		70	35	—	4.3	2.5	CC03-C	M611	10S	4
	- 8- 40	8~18	40		75	26	5	7.2	4.0	3MP-C	M2040	T6	2
	- 8- 55*		55		90			11.2	6.0				
	-12- 55*	12~22	55		85	33	—	16	9.0	6MP-C	M2577	T8	3
	-18- 65	18~28	65		96			16	9.0				
	-18- 80*		80		111			16	9.0				
DJ8	J16- 5- 35*	5~15	35	16	78	43	—	4.3	2.5	CC03-C	M611	10S	4
	- 8- 40	8~18	40		83			7.2	4.0	3MP-C	M2040	T6	2
	- 8- 55*		55		98			11.2	6.0				
	-12- 60*	12~22	60		103	5	—	16.5	9.0	6MP-C	M2577	T8	3
	-18- 80	18~28	80		118			16.5	9.0				
	-18-100*		100		138			16.5	9.0				
	-18-120*		120		158	33	—	23	14.0	6MP-C	M2577	T8	3
	-28- 85	28~39	85		118			23	14.0				
	-28-100*		100		133			23	14.0				
	-28-130*		130		163	—	—	19.0	19.0				
	-38- 85	38~50	85		118			19.0	19.0				
	-38-100*		100		133			19.0	19.0				
	-38-130*	38~50	130		163			19.0	19.0				

The bits marked * are optional accessories.

NIKKEN INSERT TIP (EXCLUSIVE for BORING ARBOR)

NIKKEN

Insert Tip Code No.			Dimension	Grade	Material	Applicable Arbor
R0.2	R0.4	R0.8				
1MP-T2				Cermet	Alloy Steel, Stainless Steel	BCB12.7 BCB14.5
-E2				P10	Alloy Steel	
-F2				K10	Cast Iron, Aluminium	
3MS-T2				Cermet	Alloy Steel, Stainless Steel	BCB19,BCB22, BCB29
-E2				P10	Alloy Steel	
-F2				K10	Cast Iron, Aluminium	
3MP-C2	3MP-C4			CBN	Hardened steel	ZMAC16,ZMAC20, ZMAC25 DJ Bit
-E2				Coated	Alloy Steel, Stainless, Cast Iron	
-F2				P10	Alloy Steel	
	-B4			K10	Cast Iron, Aluminium	ZMAC32
-D2	-D4			CBN	Hardened steel	
				Diamond	High Speed Aluminium	
4MP-C2	4MP-C4			Coated	Alloy Steel, Stainless, Cast Iron	ZMAC42,ZMAC55, ZMAC70,ZMAC85, ZMAC100,ZMAC140 BCB38,BCB48, DJ Bit,MCC130
-E2				P10	Alloy Steel	
-F2				K10	Cast Iron, Aluminium	
	-B4			CBN	Hardened steel	DAC Ctype BCB62,BCB82, BCB100
-D2	-D4			Diamond	High Speed Aluminium	
				Coated	Alloy Steel, Stainless, Cast Iron	
6MP-C2	6MP-C4	6MP-C8		P10	Alloy Steel	ZMAC32R,ZMAC42R ZMAC55R
-E2	-E4	-E8		K10	Cast Iron, Aluminium	
	-F4	-F8		CBN	Hardened steel	
	-B4	-B8		Diamond	High Speed Aluminium	RAC025
-D2*	-D4*	-D8*		Cermet	Alloy Steel, Stainless Steel	
				P10	Alloy Steel	
10MP-T2	10MP-T4	10MP-T8		K10	Cast Iron, Aluminium	ZMAC70R,ZMAC85R RAC25,RAC32
-E2	-E4	-E8		CBN	Hardened steel	
	-F4	-F8		Coated	Alloy Steel, Stainless, Cast Iron	
				P10	Alloy Steel	RAC43~RAC530
				K10	Cast Iron, Aluminium	
				CBN	Hardened steel	
CC03-C2				Coated	Alloy Steel, Stainless, Cast Iron	ZMAC100R,ZMAC140R RAC43E~RAC100E
	CC06-C4	CC06-C8		Coated	Alloy Steel, Stainless, Cast Iron	
				Coated	Alloy Steel, Stainless, Cast Iron	
	CC07-C4	CC07-C8		Coated	Alloy Steel, Stainless, Cast Iron	ZMAC32R,ZMAC42R ZMAC55R
				Coated	Alloy Steel, Stainless, Cast Iron	
				Coated	Alloy Steel, Stainless, Cast Iron	
	CC08-C4	CC08-C8		Coated	Alloy Steel, Stainless, Cast Iron	RAC025
				Coated	Alloy Steel, Stainless, Cast Iron	
				Coated	Alloy Steel, Stainless, Cast Iron	
		CN08-C8		Coated	Alloy Steel, Stainless, Cast Iron	ZMAC70R,ZMAC85R RAC25,RAC32
				Coated	Alloy Steel, Stainless, Cast Iron	
				Coated	Alloy Steel, Stainless, Cast Iron	
	CC12-C4	CC12-C8		Coated	Alloy Steel, Stainless, Cast Iron	RAC43~RAC530
				Coated	Alloy Steel, Stainless, Cast Iron	
				Coated	Alloy Steel, Stainless, Cast Iron	

★Minimum order quantity of CBN and Diamond insert:1pcs All other inserts:10pcs

★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.

★ "T" Grade (Cermet) insert is TIN Coated as standard. Please specify uncoated insert, if required for deep hole boring applications.

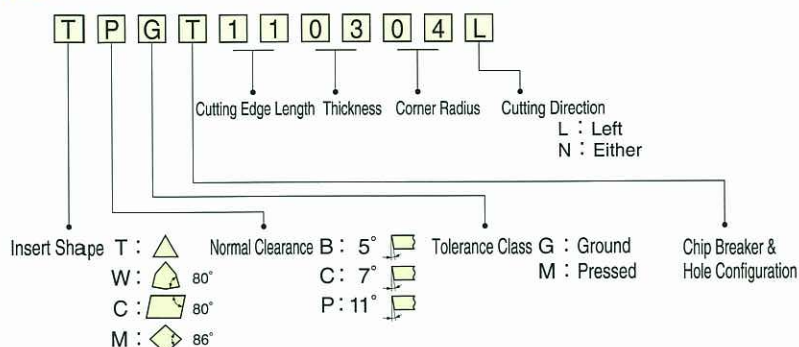
★For NIKKEN Special Geometric Nose Inserts for deep hole boring application, please specify Code No. adding "SR".

★Code No. of Coated CCMT type inserts are now prefixed with a "C".

★Insert Tip of DJ Bit was changed from 3MS to 3MP.

★The centre hole of 6MP-D (Diamond) insert marked * is different from standard hole, so the different clamp screw must be used.

Code No. of ISO standard Insert Tip



The majority of ISO inserts available are designed for turning where the workpiece rotates and are not recommended for use in boring as it's the tool which is rotating, however these inserts can be fitted on to the cartridge if the size is the same.

Diameters of centre holes on ISO standard insert can vary and you may, therefore have to change the clamp screw to suit the insert.

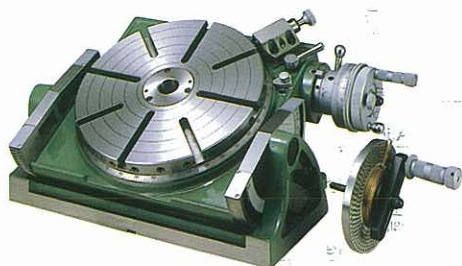
UNIVERSAL ROTARY & TILTING TABLE

NIKKEN

Universal Rotary & Tilting Table $\phi 250, \phi 300, \phi 450$ & $\phi 500$

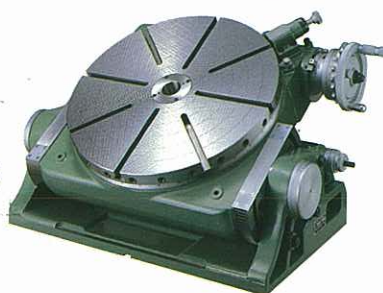
NST-300HP

With Universal Dividing Mechanism
With Quick Dividing Mechanism



NST-500HP

With Universal Dividing Mechanism
With Quick Dividing Mechanism



■ 0° ~ 90° Universal Use

The work setting angle can be shifted between 0° ~ 90°, and the table can be rotated.

■ Rotary Indexing Angle

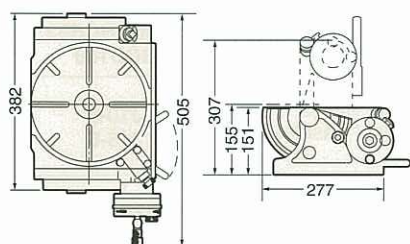
The majority of the 1 to 100 equalized dividing indexing operation can be done easily by attached dividing plates.

■ Quick Indexing

Quick indexing for equal dividing of 2, 3, 4, 6, 8, 12 and 24 can be done with using of indexing notch pin and 24 holes on the external dia. of the face plate.

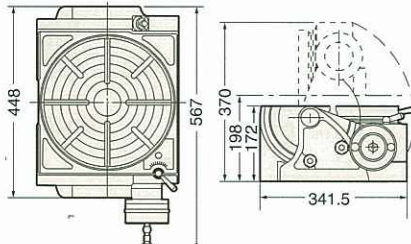
Minimum Incremental: 10 sec.
Indexing Accuracy : ± 15 sec.

NST-250HP



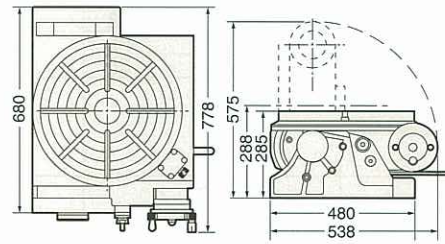
Max. Work Load: 100kg, 200kg

NST-300HP



Max. Work Load: 100kg, 200kg

NST-450HP, -500HP



Max. Work Load: 200kg, 500kg

Specifications

Code No.	NST-250HP	NST-300HP	NST-450HP	NST-500HP
Table Dia.	250mm	300mm	450mm	500mm
Table Height at 0° Pos.	151mm	172mm	285mm	285mm
Total Table height at 90° Pos.	307mm	370mm	575mm	575mm
Centre Bore Dia.	MT #3	MT #4	MT #5	MT #5
Table Centre Height at 90° Pos.	155mm	198mm	288mm	288mm
Through Hole Dia.	$\phi 50$	$\phi 53$	$\phi 63$	$\phi 63$
Net Weight	67kg	93kg	300kg	310kg
Number of Quick dividing	24	24	24	24
Guide Key Slot Width	16h7	16h7	20h7	20h7
T-slot on the Face Plate	10H7	12H7	14H7	14H7
Circular Handle One Rotation	3°	3°	2°	2°
Circular Handle One Graduation	1min.	1min.	20sec.	20sec.
Circular Handle Sub-Scale	10sec.	10sec.	5sec.	5sec.
Tilting Handle One Rotation	3°	3°	2°	2°
Tilting Handle One Graduation	5min.	5min.	1min.	1min.
Tilting Handle Sub-Scale	1min.	1min.	10sec.	10sec.

Accuracy

Code No.	NST-250HP	NST-300HP	NST-450HP	NST-500HP
Parallelism between Table Surface & Base	0.015mm	0.02mm	0.02mm	0.02mm
Run-out of Table Surface	0.015mm	0.02mm	0.02mm	0.02mm
Run-out of Table Outside Dia.	0.015mm	0.02mm	0.02mm	0.02mm
Run-out of Table Centre Bore	0.01 mm	0.01mm	0.01mm	0.01mm
Quick Dividing Accuracy	40sec.	40sec.	40sec.	40sec.
Rotating Indexing Accuracy	15sec.	15sec.	15sec.	15sec.
Tilting Indexing Accuracy	40sec.	60sec.	60sec.	60sec.

Accessories

Code No.	NST-250HP	NST-300HP	NST-450HP	NST-500HP
Tail Stock	*P-150S	*P-190S	*P-280S	*P-280S
Dividing Plate A & B	Each 1	Each 1	Each 1	Each 1
Guide Key	2	2	2	2
Clamp Bolt	4set	4set	4set	4set
Lifting Hook	2	2	4set	4set
Chuck Plate & Scroll Chuck	*X-7E, 7"	*X-7B, 7"	*X-9B, 9"	*X-9B, 9"

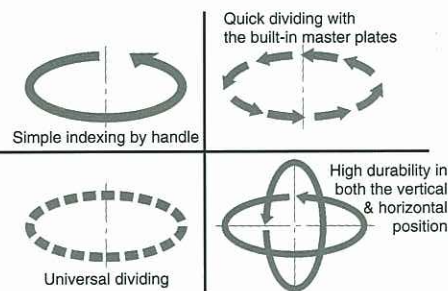
★Items marked * are optional accessories.

ROTARY SUPER INDEX TABLE

NIKKEN

ϕ 150, ϕ 200 & ϕ 300 Index Table
can be used both
vertically & horizontally.

Minimum Read Out : 10 sec.
Indexing Accuracy: ± 15 sec.



SRI-150

With 6" Scroll Chuck
With Quick Dividing Mechanism



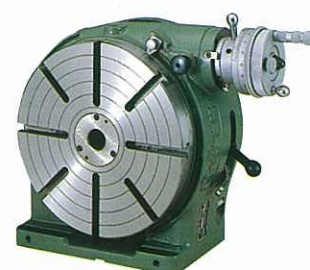
SRI-200

With 7" Scroll Chuck
With Quick Dividing Mechanism



SRI-300

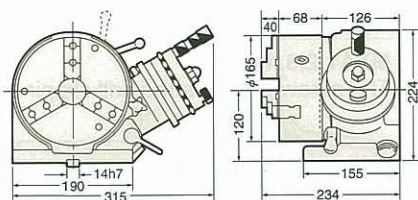
With Quick Dividing Mechanism



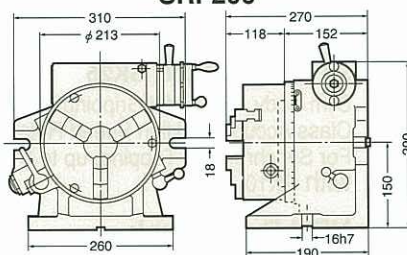
SRI-150

SRI-200

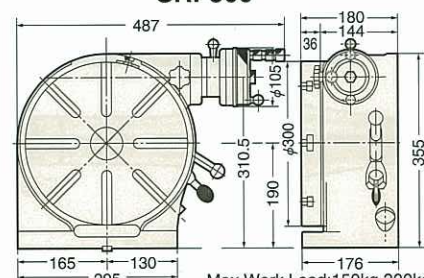
SRI-300



Max. Work Load: 50kg, 100kg



Max. Work Load: 100kg, 200kg



Max. Work Load: 150kg, 300kg

Specifications

	Code No.	SRI-150	SRI-200	SRI-300
Table Face Plate Dia.		168mm	213mm	300mm
Table Surface Height at Horizontal Pos.		126mm (No Chuck)	152mm (No Chuck)	180mm
Table Total Height at Vertical Pos.		224mm	290mm	355mm
Circular Handle One Rotation		4°	4°	3°
Circular Handle One Graduation		1min.	1min.	1min.
Circular Handle Sub-Scale		10sec.	10sec.	10sec.
One Graduation on the Face Plate		1°	1°	1°
Quick Dividing		2. 3. 4. 6. 8. 12. 24	2. 3. 4. 6. 8. 12. 24	2. 3. 4. 6. 8. 12. 24
T-slot on the Face Plate		12H7 (Jig Plate Installation)	12H7 (Jig Plate Installation)	12H7
Guide Key Slot Width		14h7	16h7	16h7
Centre Bore Dia.		At Root : 43mm	63.5mm	60mm
Centre Socket Bore Size		—	—	MT #4
Scroll Chuck to suit		R-6	R-7	*7", 9"
Weight		37kg	65kg	85kg

Accuracy

	Code No.	SRI-150	SRI-200	SRI-300
Parallelism between Table Surface and Base		0.015mm	0.015mm	0.02mm
Run-Out of Table Surface		0.015mm	0.015mm	0.02mm
Quick Dividing Accuracy		± 20 sec.	± 20 sec.	± 20 sec.
Positioning Indexing Accuracy		± 15 sec.	± 15 sec.	± 15 sec.

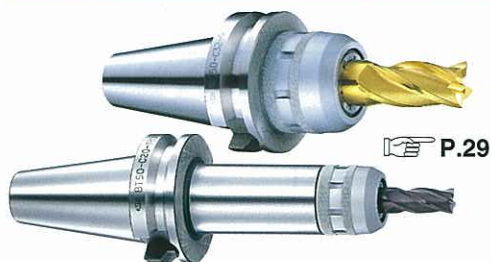
Accessories

	Code No.	SRI-150	SRI-200	SRI-300
Circular Handle		1	1	1
Table Clamps & Bolts		4	3	4
Scroll Chuck		R-6...1	R-7...1	*7", 9"
Guide Key		2	2	2
Jig Plate		*	*	—
Multi Indexing Plate A, B		*	*	*
Tail Stock		*P-110S	*P-150S	*P-190S
Chuck Plate		—	—	*X-7B, X-9A

*Items marked * are optional accessories.

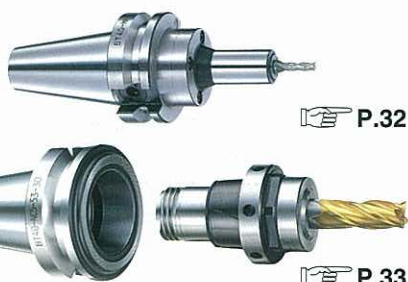
*The above scroll chucks are NIKKEN standard 2-pcs jaw type. (Top jaw is changeable.)

Base Holder of M/C



P.29

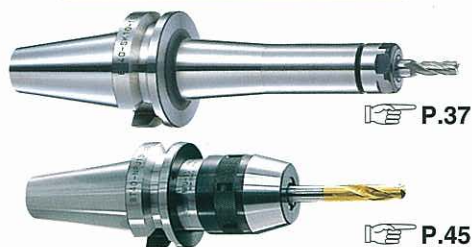
End Mill Holder



P.32

P.33

Drill Holder



P.37

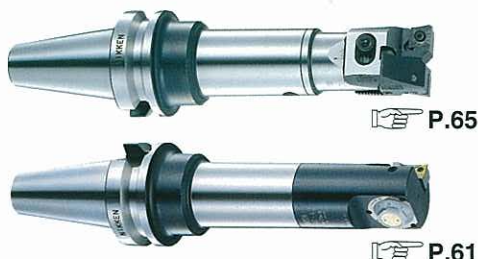
P.45

Tapper Chuck



P.49, 50

Boring Bar



P.65

P.61

Measuring attachment



Height Presetter

Quick and accurate presetting of reference location of component without damage of cutting edge.

- LED lamp for approaching.
- Powerful magnetic base (with ON/OFF switch)

P.114

Anniversary type Milling Chuck C12,C16,C20,C25,C32,C42 PAT.P

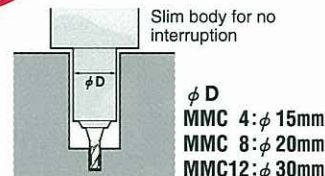
- Simple operation
- Wide range utilization for various kinds of applications. Extended gauge length chuck - useful for horizontal machining centre due to the size of the component and the fixture. e.g.BT40-C16-120,BT50-C20-180
- For high speed machining please select the small diameter Anniversary type Chuck.
- Safety and confident operation with reliable Anniversary type Chuck.

Quiet,
high speed heavy milling



Expert for End Milling

Mini-Mini Chuck MMC4,MMC8,MMC12
High Speed Rotation · 30,000rpm
Gripping at Nose · Powerful Gripping
Run-out Accuracy : Within 3 μm



DREAM-CUT Holder + Vega Chuck VMC8,12,16,20,25,32
Damping Effect PAT.P

Tool Life

Carbide End Mill More than 3 times longer.
HSS End Mill More than 1.5 times longer.

Slim Chuck SK6, SK10, SK16, SK25

Slim Body · Powerful Gripping · First Class Accuracy · High Speed Rotation
For Synchronized Tapping, up to M12 with SK10.

NPU Drill Chuck NPU8, NPU13

Solid & Compact Body · High Accuracy · Rigidity

MTA Morse Taper Sleeve with side lock screw

MTA1,2,3,4,5
The screw prevents the drill slipping.



P.47

Tapper Chuck

Z12, Z16, Z24, Z38, Z65
Smooth float mechanism increases the finish thread accuracy.



P.54

ZKG Tap collet ZKG12, 16, 24

Smooth clutch system for high precision tapping operation.

The New Era of fine Boring Shoulder Support · Double Face contact

RAC Balance Cut
φ 25 ~ φ 130



High Speed Boring
12,000rpm, V=2,000m/min

Balance Weight

World Leading ZMAC Boring Head
φ 16 ~ φ 180

DAC Double Cut Boring Bar φ 130 ~ φ 586



P.75

Labor Cost Saving Series

Multi Oil Hole Holder

External coolant supply protects cutting shoulder of tool, thus increases the tool life 3 times.

P.93



Particularly at the last stage of through hole drilling, the coolant supply at the cutting shoulder of the tool is very critical.

CNC ROTARY TABLE

Carbide Worm Screw System

NIKKEN

25,800 tables have been delivered to all over the world.

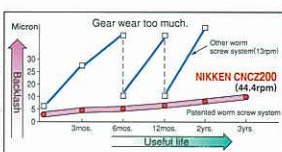
The NIKKEN CNC Rotary Table meets any users demands with

High Speed Precision & No Trouble Rigidity



Durability and Accuracy

Carbide Worm Screw and Ion-Nitrided Worm Wheel are used. Comparing traditional worm system, wearing is highly reduced and table is usable for much more years, resulting in great cost-down.



CNC Rotary Table
φ 100~φ 1,200
High Speed Rotation Z series
(44.4rpm)



Rotary Hirth Coupling Index
φ 180~φ 500
Indexing Accuracy: ±2"



Multi-Spindle CNC Rotary Table
φ 100~φ 250
(2, 3 or 4 Spindles)



5AX Tilting Rotary Table
φ 120~φ 550
Powerful Brake 500kgfm



Manual Tilting Rotary Table
φ 250~φ 500



Multi-Spindle Tilting Rotary Table
φ 105~φ 200
(2, 3 or 4 Spindles)

Please refer **CNC ROTARY TABLE** catalogue.

REAMER SERIES

Reaming is the best for surface finish & diameter tolerance. It's guaranteed with accuracy on automated production line.

NIKKEN's own long-term experience creates the reamer for application of steel/stainless steel with soluble coolant. The Carbide Mill Reamer series for aluminum/cast iron materials.

NIKKEN Reamer series

Since NIKKEN first developed Broach Reamer, we did research and improvements, and have completed 6 series. Broach Reamer, SQ Reamer, NC Sensor Reamer, Tough Cut Skill Reamer, Carbide Mill Reamer and Radical Reamer.



Broach Reamer

Broach reamer offers both heavy cutting capability of broach and high precision of reamer. Reaming is slow and difficult, but this is solved by Left-handed High Helix of 60°.

NC Sensor Reamer

With End Teeth Perfect performance even with water soluble coolant. This reamer functions as plug gauge, then inspection may be eliminated.

Tough Cut Skill Reamer

With End Teeth This is all-mighty reamer good for hard-to-machine materials, such as die steel, heat treated & tempered steel.

Carbide Mill Reamer

With End Teeth Being made of Carbide (K10), faster cutting speed is possible. Especially suitable to Cast Iron, Meechanite and Aluminum.

Application

The various series of reamers are available for each application. i.e. Through Hole, Stepped Hole and Blind Hole.



Special reamer

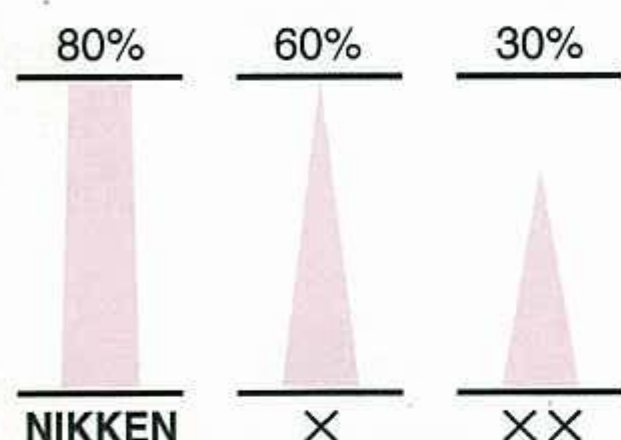
The reamer dia. out of standard (0.001mm increment) are also available. The following specially designed reamers according to your applications are also available.



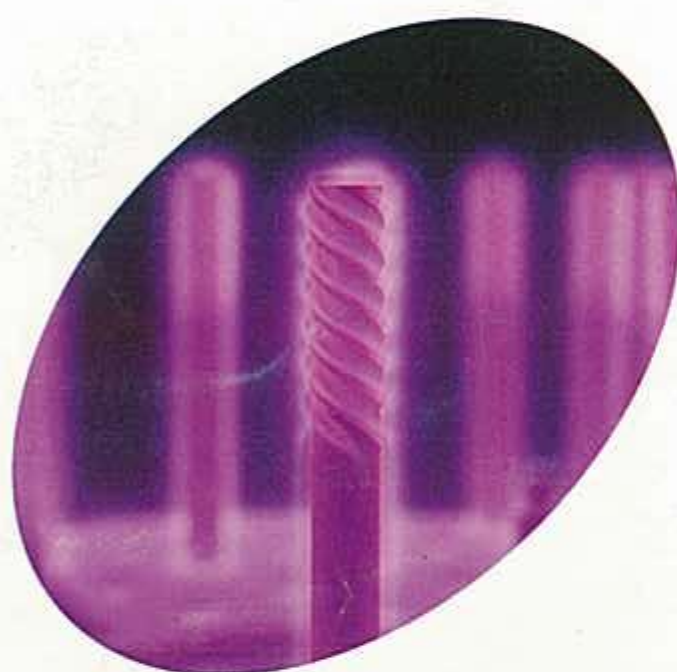
Please refer **P.121~P.128** on **NC TOOLING** catalogue.



SUB-ZERO TREATMENT(-90°C)



More than 80% TAPER CONTACT is needed for the vital linkage bed. Machine & Workpiece. NIKKEN Holders protect the spindle.



ION-NITRIDED TREATMENT



CARBIDE WORM SYSTEM for CNC ROTARY TABLE



NIKKEN KOSAKUSHO WORKS, LTD. OSAKA, JAPAN.

6-53, 1-chome, Motomachi, Higashiosaka-shi, Osaka-fu, Japan.

Telephone : (0729)85-1525 Telefax : (0729)87-1338

U.S.A. IL, NJ, CA, NC H.P.I NIKKEN LTD.

1299A LUNT AVENUE, ELK GROVE VILLAGE,
ILLINOIS 60007-5617
Tel : (847) 593-6000 Fax : (847) 593-6005

FRANCE PROCOMO FRANCE S.A.

6, avenue du 1er Mai-Z.A.E. Les Glaises
91127 Palaiseau Cedex
Tel : 01.69.19.17.35 Fax : 01.69.30.64.68

UK NIKKEN KOSAKUSHO UK LTD.

Precision House, Barbot Hall Industrial
Estate, Rotherham, South Yorkshire, S61 4RL
Tel : (01709) 366306 Fax : (01709) 376683

F.R.GERMANY NIKKEN HEARTECH (E) GMBH

Robert-Bunsen-Str./e 75 D-65428 Rüsselsheim
Tel : (06142) 51021 Fax : (06142) 59479

ITALY VEGA INTERNATIONAL TOOLS S.R.L.

Via Asti N. 9 10026-Santena(TORINO)
Tel : (011) 9456330/40/50~70 Fax : (011) 9456380

SWEDEN NIKKEN SCANDINAVIA AB

Säterigatan 27 41764 göteborg
Tel : (0) 31519855 Fax : (0) 31519955

SPAIN CUTTING TOOL S.L.

POL.UGALDET XO-PARCELA 28-B, NAVE 6 20180
OIARTZUM(GIPUZKOA)APARTADO 1421-20080
SAN SEBASTIAN.
Tel : (943) 494144 Fax : (943) 494409

BELGIUM DAMACO S.A.

AVENUE DU COMMERCE, 2 B-1391 ENGHIEM
Tel : (02) 395-5970 Fax : (02) 395-4300

KOREA KOREA NIKKEN LTD.

16-2 MAN SUK-DONG, DONG-KU, INCHON
Tel : (032) 763-4461 Fax : (032) 763-4464

P.R.CHINA

R.C/12F ZHONG XI BUILDING,
NO.121~123 JIANG SHU ROAD, SHANGHAI
Tel : (021) 6210-2506 Fax : (021) 6210-2083

<http://www.nikken-world.com>
e-mail : nikkenex@mb.infoweb.ne.jp

■ Please give your order to the following agent.

D.SL20

● Specifications are subject to change without notice.