

A Revolutionary Holder for the 21st Century

MAJOR DREAM

HOLDER

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

2LOCK
(NBT)

BT Double Face Contact



- Micro Dampening Holder
- Power of TiN Bearing

NEW

MDSK6, 10, 13, 16, 20, 25

Machine performs
100% of its capability.
Cutting tool performs
100% of its capability.



NIKKEN KOSAKUSHO WORKS, LTD.
CAT.NO.2614

MAJOR DREAM
HOLDER

2LOCK MAJOR DREAM HOLDER

NEW

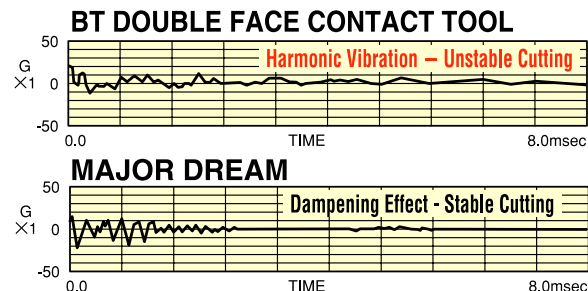
NIKKEN

PAT.

Revolutionary
Dampening
Mechanism

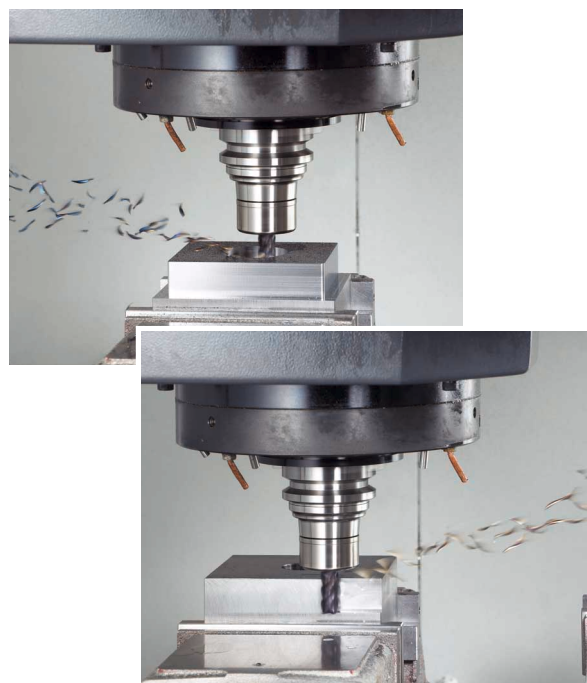


Internal Dampening Mechanism is built-in to the MAJOR DREAM Holder.



Difference due to Dampening Technique and Effect

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



Power of TiN Bearing Nut JAPAN, USA, KOREA PAT.P

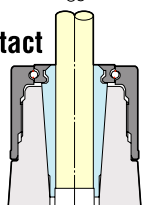
More efficient than conventional ball bearing built-in Nut

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



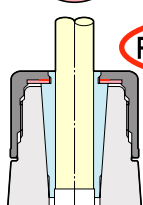
The Tin coated bearing plate reduced friction. This is the best for the thrust load.

Point Contact



Competitors

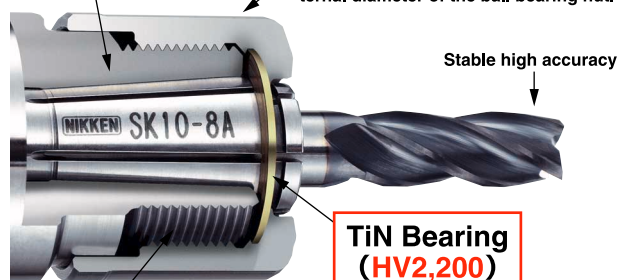
Power of Face Contact



NIKKEN

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

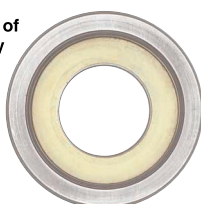
Simple design without the flats for the hook spanner. The GH handle is used to tighten / loosen precisely. The external diameter is much compact than the external diameter of the ball bearing nut.



Stable high accuracy

TiN Bearing (HV2,200)

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



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

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

End Mill Life
Carbide : 3 times
HSS : 1.5 times



Mild Cutting Sound

High Speed Profiling on Die Mould

2LOCK tooling (NBT) can be used as the double face contact tooling on the M/C which spindle is BT double face contact system. **2LOCK** tooling can also be used on the M/C with BT standard spindle. NBT30, NBT40 and NBT50 shank MAJOR DREAM Holders are available.

2LOCK MAJOR DREAM Holder can be used on the M/C which spindle is BT double face contact system.

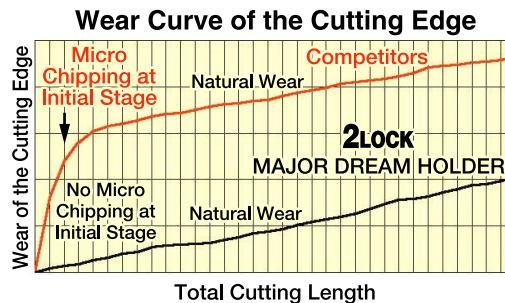
MAJOR DREAM Holder is evolved furthermore. **2LOCK** ⊕ Dampening Effect ⊕ TiN Bearing Nut



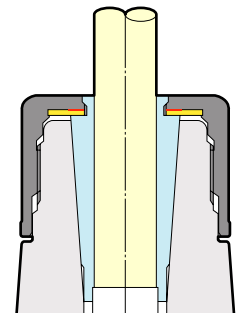
Prove



The excellent taper contact proves to prevent the micro chipping of the cutting edge, to prevent the fretting corrosion, then the excellent cutting can be done.



Excellent Cutting

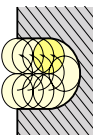


A quick examination of the swarf produced clearly illustrates the speed that can be achieved and the quality of the finish.

NBT40-MDSK16-65
End Mill $\phi 12$ 4t



V=188m/min.
S=5,000min⁻¹
F=2400mm/min.

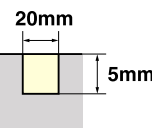


Trochoidal Milling
Ad24mm X Rd2.5mm

NBT40-MDSK20-75
End Mill $\phi 20$ 3t



V=113m/min.
S=1,800min⁻¹
F=580mm/min.

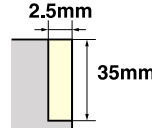


Grooving

NBT40-MDSK20-75
End Mill $\phi 20$ 8t



V=150m/min.
S=2,400min⁻¹
F=3000mm/min.

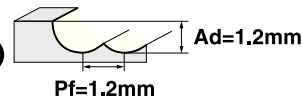


Side Milling

NBT40-MDSK16-65
Ball End Mill $\phi 6.2$ t



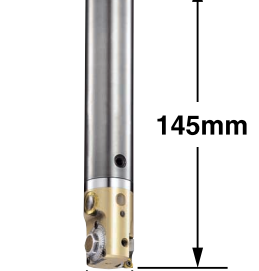
V=150m/min.
S=8,000min⁻¹
F=2,500mm/min.



NAK80
(HRC40)

Pf=1.2mm

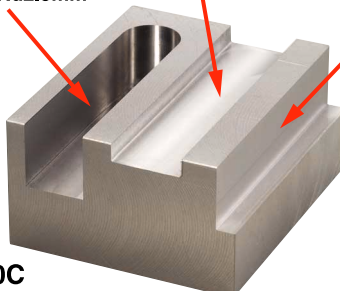
NBT40-MDQ26-65
SP26-12-A1-120
12-ZMAC25-40AA



$\phi 24$ mm

S50C

S50C



NEW

MASAMUNE Shrink Fit Tool

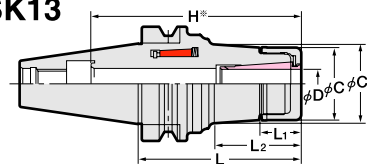
Excellent Cutting



Stock Removal=0.2mm/Dia.
V=280m/min.
S=3,500min⁻¹
F=210mm/min.

2LOCK tooling (NBT) can be used as the double face contact tooling on the M/C which spindle is BT double face contact system. **2LOCK** tooling can also be used on the M/C with BT standard spindle.
NBT30, NBT40 and NBT50 shank MAJOR DREAM Holders are available.

Dampening Effect & TiN Bearing

MDSK6 & MDSK13
AdditionH*: MAX. Cutter Shank
Length to be inserted

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

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

NBT

PAT.

TAPER	Code No.	D	L	L1	L2	C	C1	H*	Weight (kg)	Collet
No.30	NBT30-MDSK 6- 50	3.0~6.0	50	16.2	19.5	19.5	20.0	73	0.5	SK 6-□A
	- 60		60		25.5		20.8	83	0.6	
	- 75		75		40.5		22.9	98	0.7	
	- 90		90		55.5		25.0	113	0.8	
	MDSK10- 50	3.0~10.0	50	18.0	19.0	27.5	27.5	72	0.5	SK10-□A
	- 60		60		25.7		28.6	82	0.6	
	- 75		75		42.9		31.0	97	0.8	
	- 90		90		58.7		33.2	112	1.0	
	MDSK13- 60	3.0~13.0	60	22.0	29.0	33.0	34.0	83	0.8	SK13-□A
	- 75		75		45.0		36.2	98	1.0	
	- 90		90		60.0		38.3	113	1.2	
	MDSK16- 75	3.0~16.0	75	23.0	47.5	40.0	60	60	1.1	SK16-□A
	- 90		90		62.5		75	75	1.3	
No.40	NBT40-MDSK 6- 60	3.0~6.0	60	16.2	18.0	19.5	19.5	86	0.8	SK 6-□A
	- 75		75		33.0		21.9	101	0.9	
	- 90		90		48.0		24.0	116	1.1	
	-105		105		63.0		26.1	131	1.2	
	-120	3.0~10.0	120	18.0	78.0	27.5	28.2	146	1.4	SK10-□A
	-MDSK10- 60		60		19.0		27.5	86	1.1	
	- 75		75		33.0		29.6	101	1.3	
	- 90		90		48.0		31.7	116	1.5	
	-105		105		63.0		33.8	131	1.6	
	-120		120		78.0		35.9	146	1.8	
	-150	3.0~13.0	150	22.0	110.0	33.0	40.4	176	2.2	SK13-□A
	-MDSK13- 65		65		24.0		33.0	91	1.2	
	- 75		75		33.0		34.6	101	1.4	
	- 90		90		48.0		36.7	116	1.7	
	-105		105		63.0		38.8	131	1.8	
	-120	3.0~16.0	120	23.0	78.0	40.0	40.9	146	2.0	SK16-□A
	-150		150		110.0		45.4	176	2.4	
	-180		180		144.0		50.1	206	2.6	
	-MDSK16- 65		65		24.0		40.0	91	1.2	
	- 75		75		33.0		41.4	101	1.5	
	- 90		90		48.0		43.5	116	1.9	
	-105	4.0~20.0	105	25.2	64.0	48.0	45.8	131	2.0	SK20-□A
	-120		120		80.0		48.0	146	2.2	
	-150		150		113.0		52.6	176	2.5	
	-MDSK20- 75		75		41.2		51.3	80	1.9	
	- 90		90		55.0		53.2	95	2.1	
	-105		105		70.0		52.2	110	2.3	
	-120		120		85.0		53.2	125	2.6	

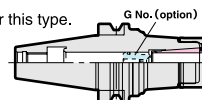
★Please use A type SK collet for the end milling operation. P.6

★Please refer P.11 for the Jet coolant system, J type nut and cap.

★GH handle is available as an option. P.11 Please order with the Code No. GH6: MDSK6 &, GH10:MDSK10, GH13:MDSK13, GH16:MDSK16, GH20:MDSK20, GH25:MDSK25

★Please add "P" at the end of Code No. for high speed specification, e.g NBT40-MDSK10-60P

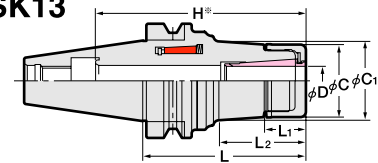
★MAJOR DREAM HOLDER with the axial stopper is available. The adjust screw (G No.) is an optional accessory for this type. Please contact us for more detail.



Explanation of the Code No.

NBT40 - MDSK10 - 90

- Nominal Gauge Length
- Chucking Capacity
- MAJOR DREAM HOLDER
- Shank No.

Dampening Effect & TiN Bearing**MDSK6 & MDSK13
Addition**H*: MAX. Cutter Shank
Length to be inserted

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

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

NBT**PAT.**

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

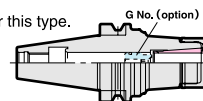
★ Please use A type SK collet for the end milling operation. P.6

★ Please refer P.11 for the Jet coolant system, J type nut and cap.

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★ Please add "P" at the end of Code No. for high speed specification, e.g NBT40-MDSK10-60P

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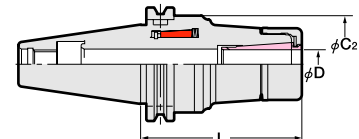
**IT MAJOR DREAM HOLDER**

■ $\phi C2$ of IT40N is larger than the dimension of IT40 standard.

■ IT40N is the mass balanced type IT40 shank.

■ IT50X is the mass balanced type IT50 shank.

2LOCK tooling (NIT) is also available.



IT40N-MDSK 6 -60, 75, 90, 105, 120
 -MDSK10 -60, 75, 90, 105, 120, 150, 180
 -MDSK13 -65, 75, 90, 105, 120, 150, 180
 -MDSK16 -65, 75, 90, 105, 120, 150, 180
 -MDSK20 -75, 90, 105, 120

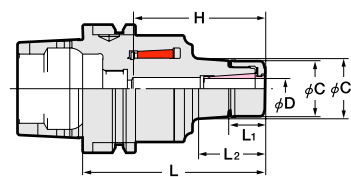
IT50X-MDSK 6 -105, 120, 135
 -MDSK10 -105, 120, 135, 165, 195
 -MDSK13 -105, 120, 135, 165, 195
 -MDSK16 -105, 120, 135, 165, 195
 -MDSK20 -105, 135, 165, 195
 -MDSK25 -105, 135, 165, 195

MDSK6 & MDSK13 Addition
Difference of the swarfs

With Jet Coolant Splash



With Air Blow

H*: MAX. Cutter Shank
Length to be inserted

HSK

Please use Jet Coolant Splash for better swarf generation. P. 11

PAT.

TAPER	Code No.	D	L	L1	L2	C	C1	C2	H	Weight (kg)	Collet
HSK 50A	HSK 50A-MDSK 6- 70	3.0~6.0	70	16.2	18.2	19.5	19.5	41.6	48	0.7	SK 6-□A
	- 90		90		38.2		21.9		68	1.0	
	-MDSK10- 70	3.0~10.0	70	18.2	19.2	27.5	27.5		46	0.7	SK10-□A
	- 90		90		38.2		30.3		66	1.0	
HSK 63A	-MDSK16-115	3.0~16.0	115	23.0	24.0	40.0	40.0	54.0	91	1.4	SK16-□A
	HSK 63A-MDSK 6- 75	3.0~6.0	75	16.2	18.0	19.5	19.5	52.4	50	1.0	SK 6-□A
	- 90		90		33.0		21.9		65	1.1	
	-105		105		48.0		24.0		80	1.4	
	-120		120		63.0		26.1		95	1.6	
	-MDSK10- 75	3.0~10.0	75	18.2	19.0	27.5	27.5		49	1.1	SK10-□A
	- 90		90		33.0		29.6		64	1.4	
	-105		105		48.0		31.7		79	1.6	
	-120		120		63.0		33.8		94	1.8	
	-135		135		79.0		36.0		109	2.1	
	-MDSK13- 80	3.0~13.0	80	22.0	24.0	33.0	33.0		54	1.2	SK13-□A
	- 90		90		33.0		34.6		64	1.5	
	-105		105		48.0		36.7		79	1.7	
	-120		120		63.0		38.8		94	1.9	
	-135		135		78.0		40.9		110	2.2	
	-MDSK16- 80	3.0~16.0	80	23.0	24.0	40.0	40.0		54	1.3	SK16-□A
	- 90		90		34.2		41.6		64	1.5	
	-105		105		49.3		43.7		79	1.7	
	-120		120		64.3		45.8		94	1.9	
	-135		135		79.0		47.9		109	2.2	
	-MDSK20- 90	4.0~20.0	90	25.2	40.9	48.0	51.2		64	1.9	SK20-□A
	-105		105		54.3		51.1		79	2.1	
	-120		120		70.0		50.6		94	2.4	
	-135		135		85.8		51.2		105	2.5	
HSK 100A	HSK100A-MDSK 6-110	3.0~6.0	110	16.2	33.0	19.5	21.9	52.4	80	3.9	SK 6-□A
	-125		125		48.0		24.0		95	4.0	
	-140		140		63.0		26.1		110	4.1	
	-165		165		88.0		29.6		135	4.5	
	-MDSK10-110	3.0~10.0	110	18.2	33.0	27.5	29.8		80	4.0	SK10-□A
	-125		125		48.0		31.7		95	4.1	
	-140		140		63.0		33.8		110	4.2	
	-165		165		89.0		37.4		135	4.6	
	-MDSK13-110	3.0~13.0	110	22.0	33.0	33.0	34.6		75	4.3	SK13-□A
	-125		125		48.0		36.7		90	4.4	
	-140		140		63.0		38.8		105	4.5	
	-165		165		88.0		42.3		130	5.0	
	-MDSK16-125	3.0~16.0	125	23.0	51.0	40.0	44.0		89	4.6	SK16-□A
	-140		140		66.0		46.1		104	4.8	
	-165		165		91.0		49.6		129	5.3	
	-MDSK20-140	4.0~20.0	140	25.2	42.0	48.0	51.4	84.0	104	4.9	SK20-□A
	-165		165		67.0		54.9		129	5.5	
	-MDSK25-140	8.0~25.4	140	27.0	43.0	55.0	57.3		104	4.9	SK25-□A
	-165		165		69.0		60.9		129	5.6	

★Please use A type SK collet for the end milling operation. P.6

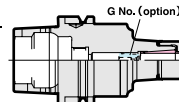
★Please refer P.11 for the Jet coolant system, J type nut and cap.

★GH handle is available as an option. P.11 Please order with the Code No. GH6: MDSK6 &, GH10: MDSK10, GH13: MDSK13, GH16: MDSK16, GH20: MDSK20, GH25: MDSK25

★Please add "P" at the end of Code No. for high speed specification, e.g HSK63A-MDSK10-75P

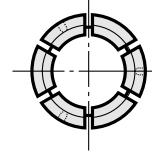
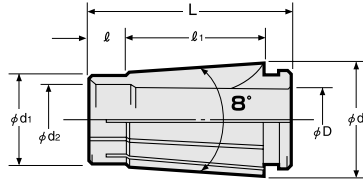
★MAJOR DREAM HOLDER with the axial stopper is available. The adjust screw (G No.) is an optional accessory for this type.

Please contact us for more detail.





SK



Explanation of the Code No.

SK	10	6	P
• No mark:	P	Standard Precision Collet (3microns accuracy)	
	A	A Type Collet (End Milling)	
		• MAX. Chucking Dia.	
		• Style No.	
		• Code of SK Collet	

A type collet is available as marked . Please note the gripping range of A type collet is h8.

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

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

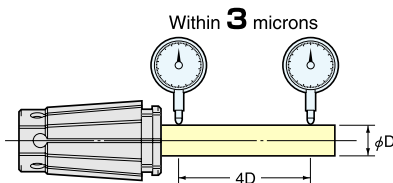
Code No.	Chucking Dia.
SK16- 3	2.75 ~ 3.0
- 3.5	3.0 ~ 3.5
- 4	3.5 ~ 4.0
- 4.5	4.0 ~ 4.5
- 5	4.5 ~ 5.0
- 5.5	5.0 ~ 5.5
- 6	5.5 ~ 6.0
- 6.5	6.0 ~ 6.5
- 7	6.5 ~ 7.0
- 7.5	7.0 ~ 7.5
- 8	7.5 ~ 8.0
- 8.5	8.0 ~ 8.5
- 9	8.5 ~ 9.0
- 9.5	9.0 ~ 9.5
- 10	9.5 ~ 10.0
- 10.5	10.0 ~ 10.5
- 11	10.5 ~ 11.0
- 11.5	11.0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

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

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

★Other internal dia. is available for SK6, e.g SK6-1.1

P Class / A Type



A Type Collet for EndMill Shank

Gripping range of A type collet is h8.

SK Collet A Type
SK 6-3A, 3.175A, 4A, 5A, 6A
SK10-3A, 3.175A, 4A, 5A, 6A, 8A, 10A
SK13-3A, 4A, 5A, 6A, 8A, 10A, 12A
SK16-3A, 4A, 5A, 6A, 8A, 10A, 12A, 16A
SK20-4A, 5A, 6A, 8A, 10A, 12A, 16A, 20A
SK25-8A, 10A, 12A, 16A, 20A, 25A

Revolutional holder for boring operation · Dampening effect.



The photo shows the holder with spacer and head.

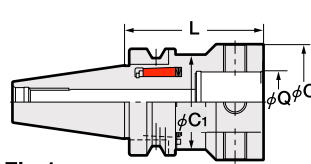


Fig.1

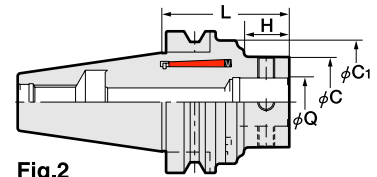
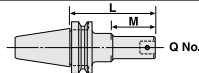


Fig.2

NBT

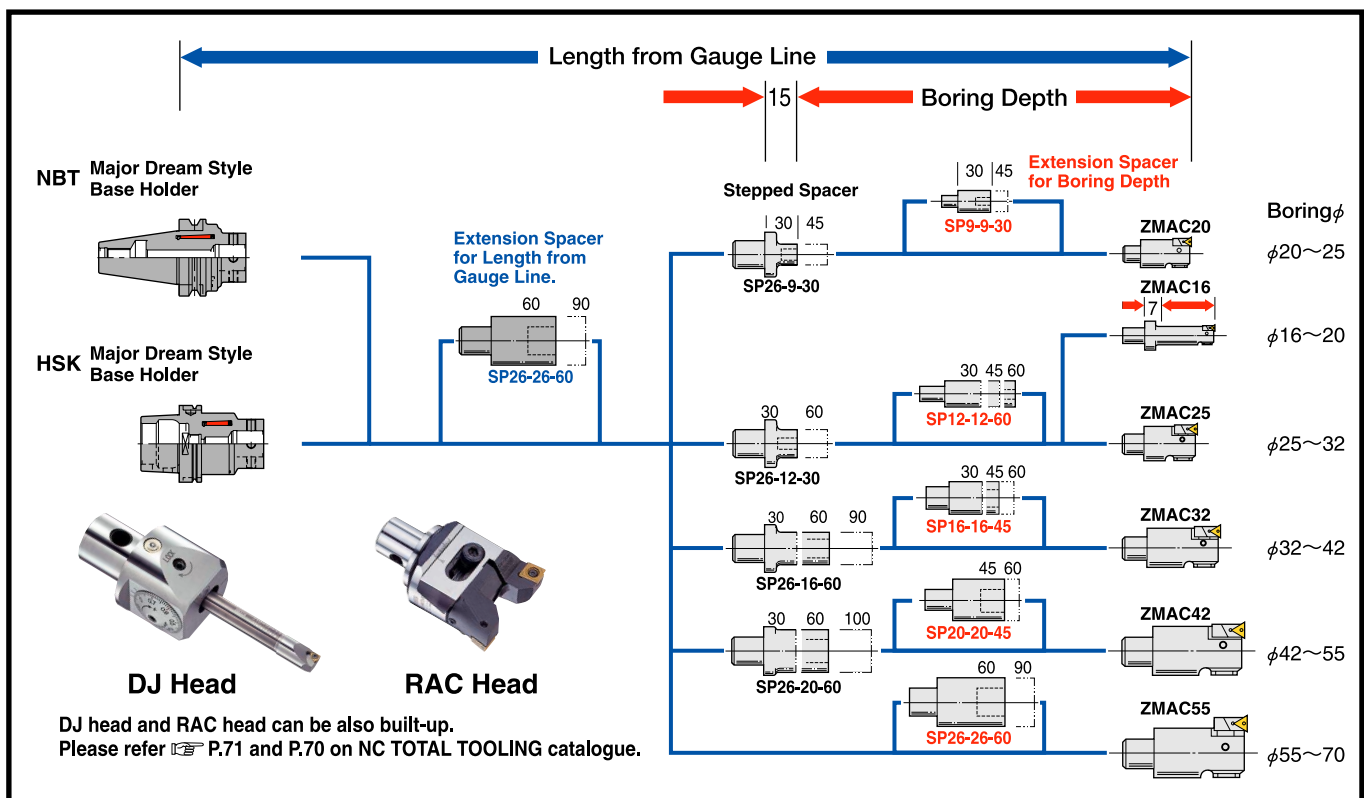
TAPER	Code No.	Q	L	C	C1	H	Weight (kg)	ZMAC Boring Range	Fig
No.30	NBT30-MDQ26- 60	26	60	50	50	37.5	0.8	16~70	1
No.40	NBT40-MDQ26- 65	26	65	50	54	30.0	1.3	16~70	2
No.50	NBT50-MDQ26- 80	26	80	50	87	22.0	4.6	16~70	2
	-MDQ34- 90	34	90	64	87	32.0	4.9	16~85	
	-MDQ42-100	42	100	83	87	45.0	5.7	16~180	

- ★All base holders have a centre through coolant hole.
- ★The coupling bolt and wrench are supplied as standard.
- ★When L length is required longer than standard, please specify the boring depth M and Q No.

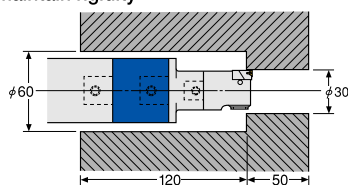


Selection for Modular System.

First of all, please select a head, spacer or stepped spacer to suit the boring diameter and depth.
Then select base holder and extension spacer by the length from gauge line.

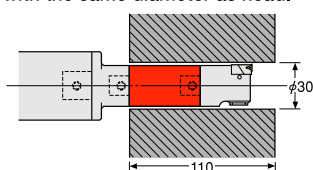


Example of small diameter boring in a deep recess using the largest diameter extension spacer in order to maintain rigidity.



NBT40-MDQ 26-65
SP26-26-60
SP26-12-30
12-ZMAC25-40

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



NBT40-MDQ 26-65
SP26-12-30
SP12-12-60
12-ZMAC25-40

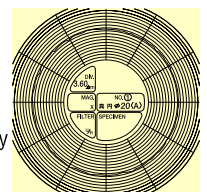
Example of hardened steel boring with CBN insert.
Reduce L/D as small as possible: Max.3times.
16 to 180mm diameter ZMAC+CBN insert.



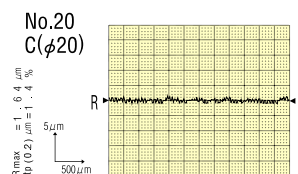
Example of interrupted boring of hardened steel(HRC60) φ 20mm



Results of concentricity on 24 pieces were all within 3.6 microns.



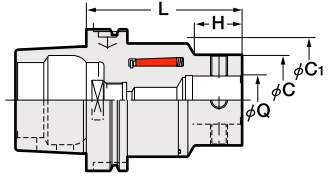
Results of surface finish on 24 pieces were all within 2.8 microns.(Rmax.)



Power of Dampening effect.

- High Speed & High Precision Boring with extended tool life of 3 times.
- Suitable for deep hole boring and multi stage boring.

The photo shows the holder with spacer and head.



HSK

TAPER	Code No.	Q	L	C	C1	H	Weight (kg)	ZMAC Boring Range
HSK50A	HSK 50A-MDQ26- 95	26	95	50	50	95.0	1.2	16~70
HSK63A	HSK 63A-MDQ26-100	26	100	50	52.4	30.0	1.5	16~70
HSK100A	HSK100A-MDQ26-135	26	135	50	80	18.0	5.2	16~70
	-MDQ34-140	34	140	64	80	27.5	5.3	16~85
	-MDQ42-150	42	150	83	80	121	6.1	16~180

★All base holders have a centre through coolant hole.

★The coupling bolt and wrench are supplied as standard.

★When L length is required longer than standard, please specify the boring depth M and Q No.

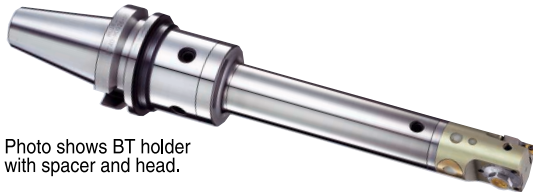
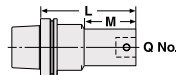
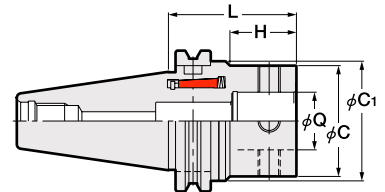


Photo shows BT holder with spacer and head.



IT

TAPER	Code No.	Q	L	C	C1	H	Weight (kg)	ZMAC Boring Range
No.40	IT40N-MDQ26- 65	26	65	50	54	30.0	1.3	16~70
No.50	IT50X-MDQ26- 80	26	80	50	87	22.0	4.6	16~70
	-MDQ34- 90	34	90	64	87	32.0	4.9	16~85
	-MDQ42-100	42	100	83	87	45.0	5.7	16~180

★All base holders have a centre through coolant hole.

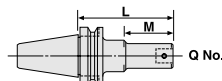
★The coupling bolt and wrench are supplied as standard.

★When L length is required longer than standard, please specify the boring depth M and Q No.

★C1 of IT40N is larger than the dimension of the IT40 standard.

★IT40N is the mass balanced type IT40 shank.

★IT50X is the mass balanced type IT50 shank.



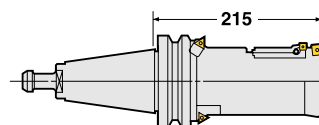
Cutting Speed of the Boring can be increased by 50%.

Effective Length of the Deep Hole Boring can be extended by 50%.

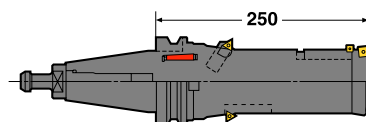
NBT50 Effect of Multi Stage Boring Arbor with Major Dream.

The following shows the comparison between BT standard type and Major Dream type, for the machining torque (spindle motor current) and number of the work pieces achieved.

BT standard □ 100%

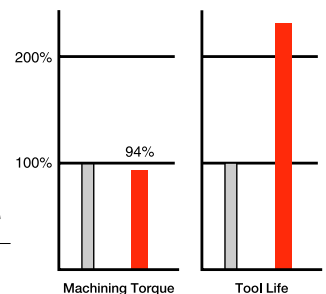


MAJOR DREAM ■

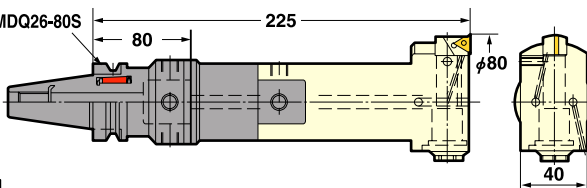
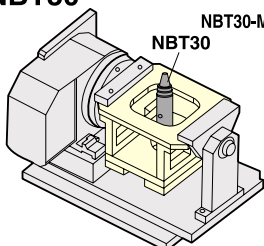


6% decrease

228% extended

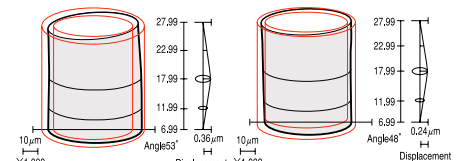


NBT30



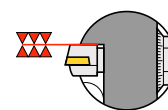
Nikken special ZMAC80K boring arbor with diamond insert 6MP-D2. Coolant 7MPa soluble.

Work material: Aluminium



1.V 1,500m/min.
S 6,000min⁻¹
F 180mm/min.
Cylindricity:4.6μm

2.V 2,000m/min.
S 8,000min⁻¹
F 240mm/min.
Cylindricity:4.3μm



ZMAC



Triangular Insert type head

For Finishing

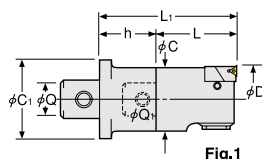


Fig.1

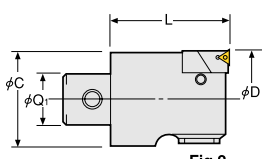


Fig.2

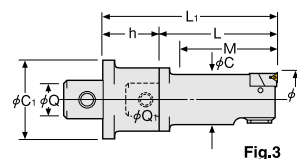


Fig.3



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	4MP-C,B	1
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		
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	6MP-C,B	2
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		
26 -ZMAC 55- 70	54.8~70.2	70	34	—	26-ZMAC 55- 70	—	—	—	53	—	M 5HZ- 55		
34 -ZMAC 70- 70	69.8~85.2	70		—	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-ZMAC100-100	—	—	—	95	—	M10HZ-100		
42 -ZMAC140-100	139.5~180.5	100	42	—	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. Head & spacer will be supplied in separate boxes.

★For head-only orders, please use head No.

★For Centre Through Tool Coolant type, add "C" at the end of Code No. e.g. 26-ZMAC55-70C.

★Please add "AA" at the end of Code No. for ZMAC α head. e.g. 26-ZMAC55-70AA.ZMAC α

ZMAC- R



Rhomboid Insert type head

For Roughing, Middle Finishing

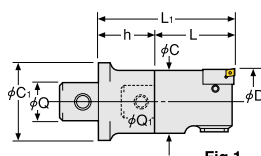


Fig.1

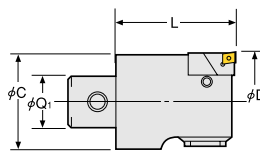


Fig.2



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	34	—	26-ZMAC 55R - 70	—	—	—	53	—	M 5HZ- 55R	CC08-C	2
34 -ZMAC 70R - 70	69.8~85.2	70		—	34-ZMAC 70R - 70	—	—	—	67	—	M 7HZ- 70R		
42 -ZMAC 85R -100	84.8~100.2	100		—	42-ZMAC 85R -100	—	—	—	83	—	M10HZ- 85R		
42 -ZMAC 100R -100	99.5~140.5	100		—	42-ZMAC 100R -100	—	—	—	95	—	M10HZ-100R		
42 -ZMAC 140R -100	139.5~180.5	100	42	—	42-ZMAC 140R -100	—	—	—	135	—	M10HZ-140R	CC12-C	

★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. Head & spacer will be supplied in separate boxes.

For head-only orders, please use head No.

★For Centre Through Tool Coolant type, add "C" at the end of Code No. e.g. 26-ZMAC55R-70C.

RAC Balance-Cut Boring Head

For Roughing

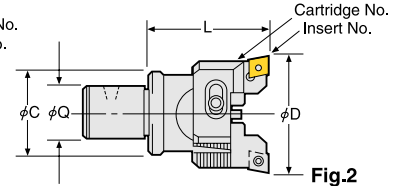
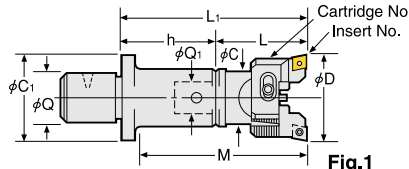


Fig.1

Fig.2

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 No.	Fig.		
Q26-12-RAC 25 - 85	25 ~ 32	70	26	SP26-12-30	12-RAC25-55	30	85	12	24	50	RCC-025	CC07	1		
Q26-16-RAC 32 - 85	32 ~ 45			SP26-16-30	16-RAC32-55			16	31		RCC- 32	CC08			
Q26-20-RAC 43 -100	43 ~ 55			SP26-20-30	20-RAC43-70			20	40		RCC- 43	CN08			
26-RAC 53 - 70	53 ~ 70	70		—	—	—	—	50	—	RCC- 53	2				
26-RAC 70 - 70	70 ~ 100		—	—	—	—	50	—	RCC- 70						
34-RAC 70 - 85			—	—	—	64	—	RCC- 70							
42-RAC100 -100	100 ~ 130	100	42	—	—	—	—	—	83	—	RCC-100				

★Cartridges and Inserts for Alloy steel(E), for Aluminum and Cast iron(A) for Through hole(K) are also available.

★Please add the letter "E", "A" or "K" to Code No. e.g. Q26-12-RAC25-55A

★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 a Head Code No.

★For Centre Through Tool Coolant types except 26-RAC70-70, please add "C" at the end of Code No. e.g. 26-RAC53-70-C

★Cartridge & Insert for Alloy Steel (E) is recommended for boring on steel and stainless steel.

For Alloy Steel

For Aluminum and Cast Iron

For Through Hole and Multi Sheets



Head No.	Insert No.
RCC - 43E	CC12
- 53E	
- 70E	
-100E	

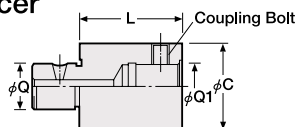


Head No.	Insert No.
RCC - 25A	AEG12
- 32A	
- 43A	AEG16
- 53A	
- 70A	
-100A	

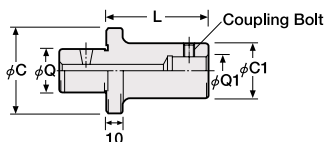


Head No.	Insert No.
RCC - 25K	SC09
- 32K	
- 43K	SC12
- 53K	
- 70K	
-100K	

SP Extension spacer



Stepped spacer



Extension spacer

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

Stepped spacer

Code No.	Coupling Dia.		C	C1	Coupling Bolt No.	Weight (kg)
Q-Q1-L	Q	Q1				
SP 12- 9-45	12	9	24	19	B19	0.1
SP 16- 9-45	16	9	31	19	B19	0.15
-12-60		12		24	B12	0.25
SP 20- 9-45	20	9	40	19	B19	0.2
-12-60		12		24	B12	0.3
-16-60, 90		16		31	B16	0.4, 0.6
SP 26- 9-30, 45	26	9	50	19	B19	0.3, 0.3
-12-30, 60		12		24	B12	0.3, 0.4
-16-30, 60, 90		16		31	B16	0.3, 0.5, 0.6
-20-30, 60, 100		20		40	B20	0.4, 0.6, 1.0

★The external diameter of SP26 has been altered to 50mm for improvement of its rigidity.

★All spacers have a centre through coolant hole. ★The coupling screw is supplied as standard.

L/D:MAX.6 times

Coupling Dia.	C	C1	MAX.L
Q	Q1		
26	9	19	85
	12	24	115
	16	31	140
	20	40	180
	26	50	190

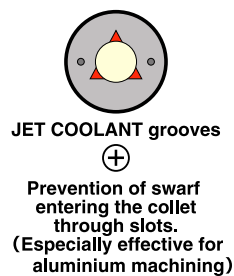
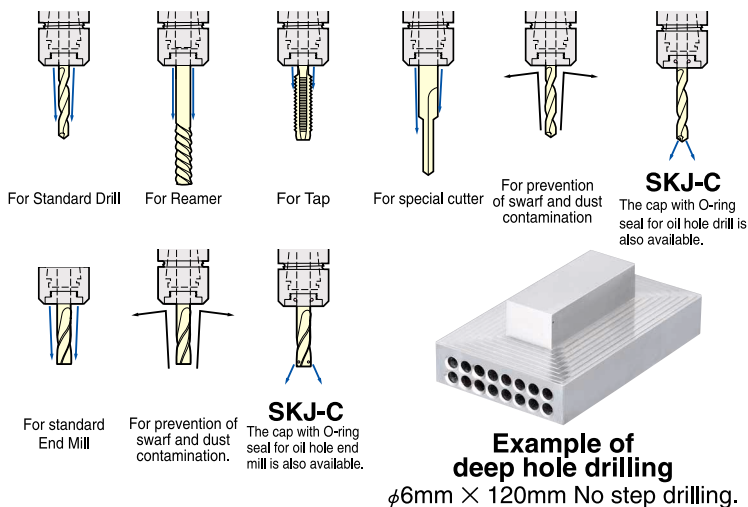
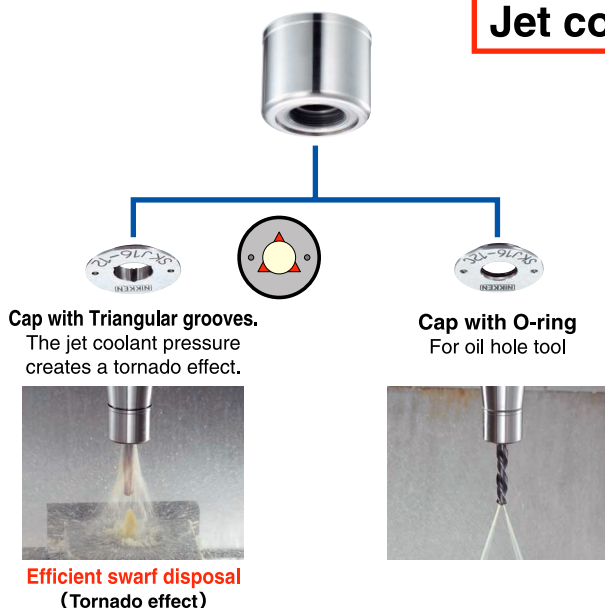
Please specify the "L" length when ordering. Code No. is e.g. SP26-9-85-A1 (Q1=9 and L=85)



Please refer to NC Total Tooling System catalogue for larger head than ZMAC85 and spacers SP34 & SP42.

Jet coolant supply with J type Nut

J-type Nut



Style	J type nut Code No.	Cap Code No.	Wrench Code No.
MDSK 6	MDSKN- 6BJ	SKJ 6-3, 3.3, 4, 4.2, 5, 6	SKJL- 6
MDSK10	SKN-10BJ (GH)	SKJ10-3, 4.5, 5.5, 6, 6.2, 6.8, 7.8, 8.5, 10	SKJL-10
MDSK13	MDSKN-13BJ	SKJ16-7, 8, 8.5, 10, 10.3, 12, 12.5	SKJL-16
MDSK16	MDSKN-16BJ	SKJ16-7, 8, 8.5, 10, 10.3, 12, 12.5, 14, 15, 16	
MDSK20	MDSKN-20BJ	SKJ25-8, 10, 12, 16, 17.5, 20	SKJL-25
MDSK25	MDSKN-25BJ	SKJ25-8, 10, 12, 16, 17.5, 20, 25	

- ★ Please pay attention that the total chuck length will be extended by 6mm when J type nut is used.
- ★ J type nut with Cap can prevent dust and swarf ingress even the chuck is not used without through coolant.
- ★ Special internal diameter cap is also available as an option.
- ★ J type Cap with O-ring is also available. Please add "C" at the end of Code No. e.g. SKJ10-4C.
- ★ When the internal hole is machined on the blank cap, please make sure that the operation has to be carried out with good concentricity.



GH

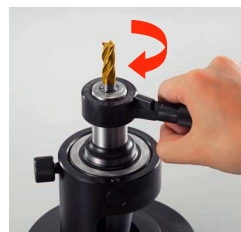


GH Handle is on direction clutch handle for high speed tooling. The ratchet allows that the quick tightening and loosening operation with small torque, and is effective especially for presetting of the extended length of the tool. The **GH handle** also dispenses with the need for notches on the nose ring for simple and compact design.

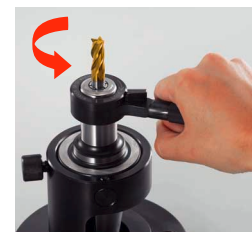


Code No.	Milling Chuck	Slim Chuck	Major Dream Holder	VC Holder
GH 6*	—	SK 6-P / SKT 6	MDSK 6	—
GH10*	—	SK10-P / SKT10	MDSK10	VC6
GH12	C12-G	SK13-P / SKT13	MDSK13	—
GH16*	C16-G	SK16-P / SKT16	MDSK16	VC13
GH20	C20-G	SK20-P / SKT20	MDSK20	—
GH25*	C25-G	SK25-P / SKT25	MDSK25	—
GH32S	C32-G (φ62mm)	—	—	—
GH32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

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



Tightening



Loosening

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