

The Best Chuck for Small Dia.Tools

NEW

NIKKEN

MINI MINI CHUCK

High speed
30,000rpm

Run-Out
within 3 μ m

Counter Balance
G2.5

Compact Design &
Surface Roughness
Rz3



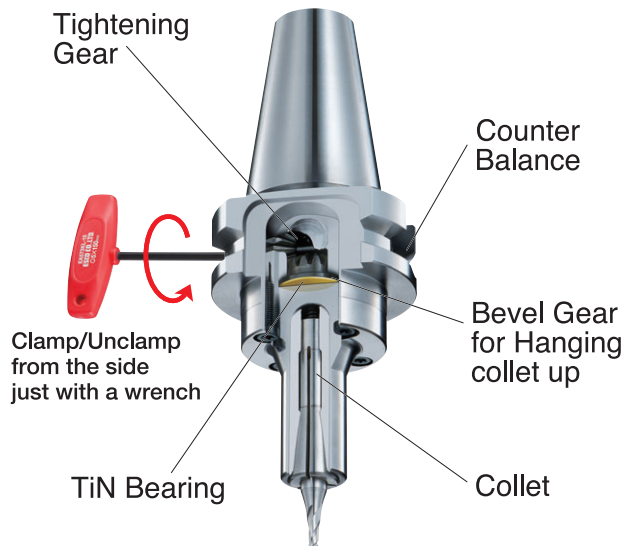
NIKKEN KOSAKUSHOWORKS, LTD.
CAT.NO.1165©

MINI-MINI CHUCK

NIKKEN

Standard Type

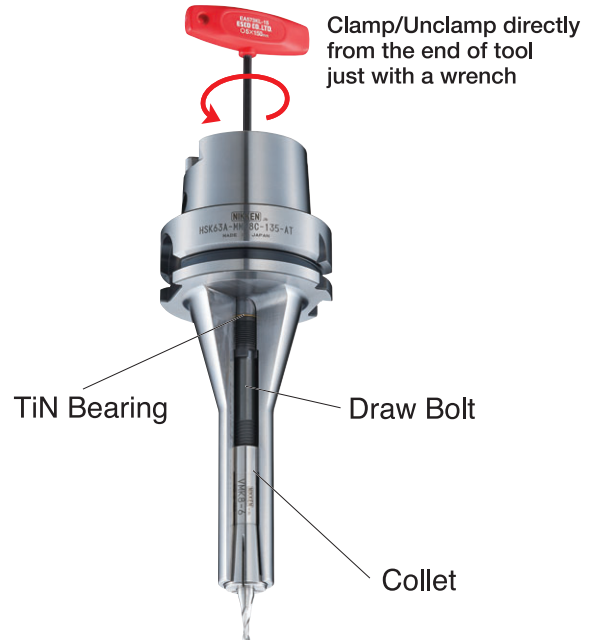
30,000min⁻¹
&
G2.5 (BT40)



Direct Screw Type

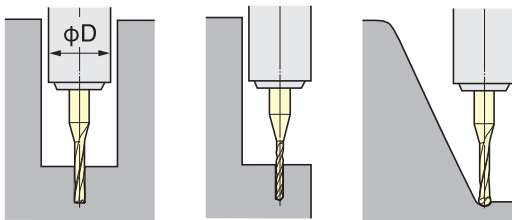
Please add "-AT" at the end of Code No. e.g. HSK63A-MMC8C-107-AT

30,000min⁻¹ & G2.5 (HSK63A)



Slim & Compact

φD : MMC 4 : φ15mm
MMC 8 : φ20mm
MMC12 : φ30mm



High Speed

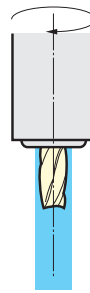
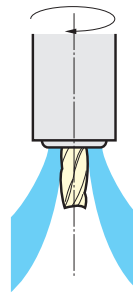
MAX. 30,000min⁻¹ & G2.5

Coolant Through Tool Capability

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



Power of Jet Coolant Groove



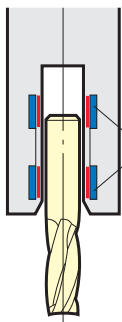
Standard Collet

J type Collet

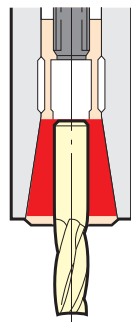


Gripping from Front Nose

×



○



HYDRAULIC CHUCK
No Gripping at Front Nose
Gripping Torque?

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

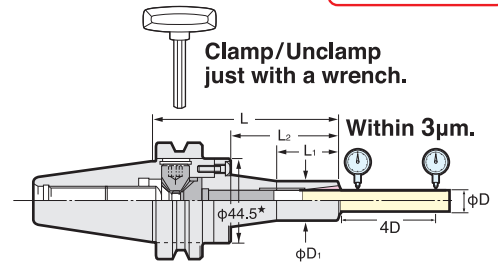
BT MINI-MINI CHUCK

NIKKEN

MMC



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



Dimension marked ★
is φ52.4 for MMC12.

PAT.

High Speed

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

★Wrench EA573KL-6 is attached as standard.

★Collet is available as an option. Please refer P.3

★Center through tool coolant type MINI-MINI Chuck is available for MMC8 and MMC12 type only.

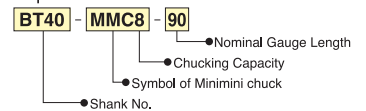
Please add the letter "C" to the Code No. e.g. BT40-MMC8C-90
Please refer P.6



★Extra-long sizes are added

*Extra-long sizes : longer +30~90mm than conventional.

Explanation of the Code No.



Extra-long sizes are added*

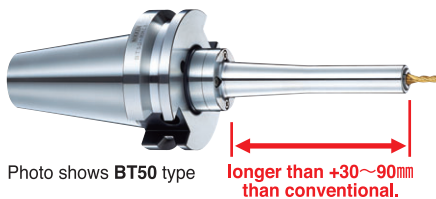


Photo shows BT50 type

longer than +30~90mm
than conventional.



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

BT Direct Screw Type MINI-MINI CHUCK

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TAPER	Code No.	φD	L	φD ₁	L ₁	L ₂	Collet	MAX.min ⁻¹	Weight(kg)
No.30	BT30-MMC8C-65-AT	2~8	65	20	30	40	VMK 8	30,000	0.43

★Wrench EA573KL-15 is attached as standard.

★Wrench both for chuck and pull stud is available as an option. Code No. is MMCLA-BT30.

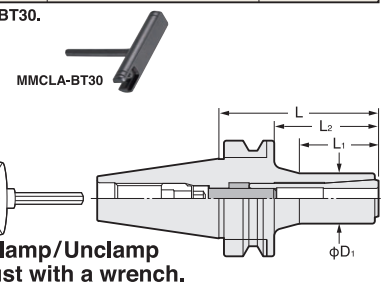
★Collet is available as an option. Please refer P.3

Direct Screw Type



Photo shows BT30-MMC8C-65-AT

HSK Direct Screw Type : P.5



Clamp/Unclamp
just with a wrench.

2LOCK MINI-MINI CHUCK

NIKKEN

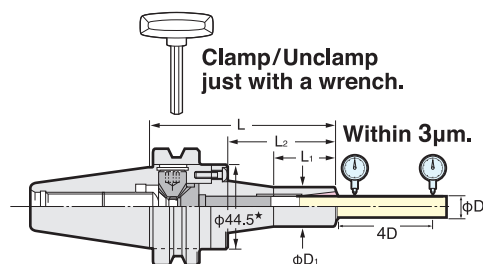
2LOCK tooling (NBT) can be used as the double face contact tooling on the M/C where spindle is BT double face contact system.
2LOCK tooling can also be used on the M/C with BT standard spindle.

MMC



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

High Speed



Dimension marked ★ is φ52.4 for MMC12. PAT.

TAPER	Code No.	φD	L	φD ₁	L ₁	L ₂	Collet	MAX.min ⁻¹	Weight(kg)
No.30	NBT30-MMC 4-105	1〜4	105	15	30	43	MPK 4	30,000	0.9
	-MMC 8-105	2〜8		20	33	42	PMK 8 VMK 8		0.9
	-MMC 12-105	4〜12		30	35	44	PMK12 VMK12		1.1
No.40	NBT40-MMC 4- 90	1〜4	90	15	30	43	MPK 4	30,000	1.2
	-MMC 8- 90	2〜8		20	33	42	PMK 8 VMK 8		1.2
	-120				72	1.3			
	-150*		102		1.4				
	-180*		70		132	1.5			
	-MMC 12- 90	4〜12	30	35	44	PMK 8 VMK 8	1.4		
	-120			60	74		1.5		
	-150*			70	104		1.6		
	-180*			100	134		1.7		
	No.50	NBT50-MMC 4-105	1〜4	105	15	30	43		MPK 4
-MMC 8-105		2〜8	20		33	42	PMK 8 VMK 8	3.8	
-135					72	3.9			
-165*				102	4.0				
-195*				70	132	4.1			
-MMC 12-105		4〜12	30	35	44	PMK12 VMK12	4.0		
-135				60	74		4.1		
-165*				70	104		4.2		
-195*				100	134		4.3		

★Wrench EA573KL-6 is attached as standard.
★Collet is available as an option. Please refer P.3
★Center through tool coolant type MINI-MINI Chuck is available for MMC8 and MMC12 type only.
Please add the letter "C" to the Code No. e.g. NBT40-MMC8C-90
Please refer P.6

★Extra-long sizes are added
★Extra-long sizes : longer +30~90mm than conventional.



Photo shows NBT50 type

Explanation of the Code No.
NBT40 - MMC8 - 90
●Nominal Gauge Length
●Chucking Capacity
●Symbol of Minimini chuck
●Shank No.

MINI-MINI CHUCK COLLET

NIKKEN

Standard:PMK Collet



Explanation of the Code No.
PMK 8 - 2
●ID of Collet
●Style No.
●Symbol of PMK Collet

PMK Collet Code No.	Shank Tolerance
MPK 4-1, 1.5, 2, 2.5, 3, 3.5, 4	h6
PMK 8-2, 2.2, 2.4, ...3, ...4, ...5, ...6, ...7, ...8 (each 0.2mm)	h6~h8
PMK12-4, 5, 6, 8, 10, 12	

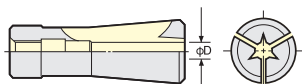
★Please note the acceptable shank tolerance of MPK Collet is h6.
★Even the gripping range of PMK collet is 0.2mm/dia. (e.g. PMK8-2 : 1.8~2.0),
but the shank tolerance of h6 is highly recommended for precision machining.

For centre through tool:VMK, VMK-J Collet



• Standard VMK collet is for the cutting tool with coolant hole.
• VMK-J collet is for the cutting tool without coolant hole.

Explanation of the Code No.
VMK 12 - 6 J
●Non : Without Jet Spread Groove
●J : With Jet Spread Groove
●ID of Collet
●Style No.
●Symbol of VMK Collet



Jet Spread Groove (J type)

JAPAN PAT.

Coolant Perfect Sealing

VMK Collet Code No.
VMK 8-2,3,4,5,6,8
VMK12-4,5,6,8,10,12

With Jet Spread Groove

VMK-JCollet Code No.
VMK 8-2J,3J,4J,5J,6J,8J
VMK12-4J,5J,6J,8J,10J,12J

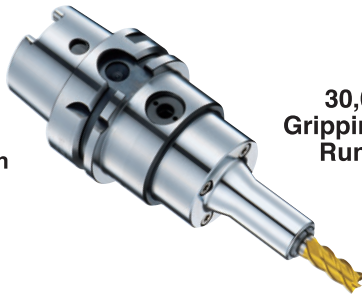
★Please note the acceptable shank tolerance is h6.
★Please add "J" for the Jet Spread Coolant type. e.g. VMK8-6J
★VMK8-2J is Jet Spread Hole type.

HSK MINI-MINI CHUCK

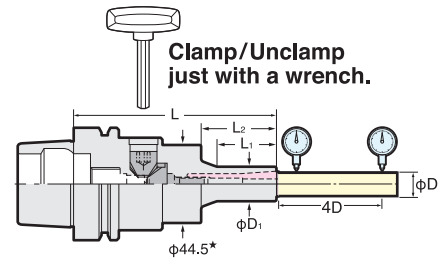
NIKKEN

MMC

Centre Through
MAX. 7MPa



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



Dimension marked ★ is φ52.4 for MMC12. **PAT.**

High Speed

TAPER	Code No.	φD	L	φD ₁	L ₁	L ₂	Collet	MAX.min ⁻¹	Weight(kg)
HSK50A	HSK 50A-MMC 4 -128	1~4	128	15	30	43	MPK 4	30,000	1.4
	-MMC 8C-127	2~8	127		33	42			PMK 8 VMK 8
	-157		20	40	72	1.5			
	-187			187	102	1.6			
	-MMC12C-129	4~12	129	30	35	44	PMK12 VMK12		1.6
	-159		159		60	74			1.7
	-189		189		70	104			1.8
HSK63A	HSK 63A-MMC 4 -116	1~4	116	15	30	43	MPK 4	30,000	1.4
	-MMC 8C-115	2~8	115	20	33	42	PMK 8 VMK 8		1.4
	-145*		145		40	72			1.5
	-175*		175			102			1.6
	-MMC12C-117	4~12	117	30	35	44	PMK12 VMK12		1.6
	-147*		147		60	74			1.7
	-177*		177		70	104			1.8
HSK100A	HSK100A-MMC 4 -131	1~4	131	15	30	43	MPK 4	30,000	2.9
	-MMC 8C-130	2~8	130	20	33	42	PMK 8 VMK 8	20,000	2.9
	-160*		160		40	72			3.0
	-190*		190			102			3.1
	-MMC12C-130	4~12	130	30	35	44	PMK12 VMK12		3.1
	-160*		160		60	74			3.2
	-190*		190		70	104			3.3

TAPER	Code No.	φD	L	φD ₁	L ₁	L ₂	Collet	MAX.min ⁻¹	Weight(kg)
HSK50E	HSK 50E-MMC 4 -128	1~4	128	15	30	43	MPK 4	30,000	1.4
	-MMC 8C-127	2~8	127	20	33	42	PMK 8 VMK 8		1.4
	-MMC12C-129	4~12	129	30	35	44	PMK12 VMK12		1.6
HSK63E	HSK 63E-MMC 4 -116	1~4	116	15	30	43	MPK 4	30,000	1.4
	-MMC 8C-115	2~8	115	20	33	42	PMK 8 VMK 8		1.4
	-MMC12C-117	4~12	117	30	35	44	PMK12 VMK12		1.6

TAPER	Code No.	φD	L	φD ₁	L ₁	L ₂	Collet	MAX.min ⁻¹	Weight(kg)
HSK63F	HSK 63F-MMC 4 -128	1~4	128	15	30	43	MPK 4	30,000	1.4
	-MMC 8C-127	2~8	127	20	33	42	PMK 8 VMK 8		1.4
	-MMC12C-129	4~12	129	30	35	44	PMK12 VMK12		1.6

★Wrench EA573KL-6 is attached as standard.

★Collet is available as an option. Please refer to P.3



★Extra-long sizes are added

*Extra-long sizes : longer +30~90mm than conventional.

Extra-long sizes are added*

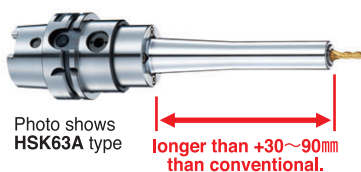


Photo shows
HSK63A type

longer than +30~90mm
than conventional.



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

HSK Direct Screw Type MINI-MINI CHUCK

NIKKEN



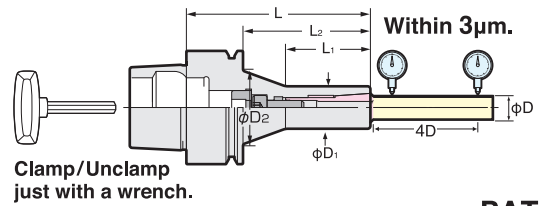
NEW

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

MMC-AT

Centre Through
MAX. 7MPa

High Speed



PAT.

TAPER	Code No.	φD	L	φD ₁	φD ₂	L ₁	L ₂	Collet	MAX.min ⁻¹	Weight(kg)
HSK25E	HSK 25EN ^{*1} -MMC 4 - 60-AT	1~4	60	15	19.3	30	50	MPK 4	30,000	0.1
HSK32E	HSK 32EN ^{*1} -MMC 4 - 65-AT		65		26.0		45			0.2
HSK40E	HSK 40EN ^{*1} -MMC 4 - 65-AT		70		31.2		44			0.25
HSK50E	HSK 50E -MMC 4 - 70-AT		70		31.2		44			0.5
HSK63E	HSK 63E -MMC 8C ^{*2} -107-AT	2~8	107	20	42.6	36	78	PMK 8 VMK 8	30,000	0.95
	-135-AT	135	64			106	1.0			
	HSK 63E -MMC12C ^{*2} -110-AT	4~12	110	30	51.8	43	83	PMK12 VMK12		1.2
	-135-AT	135	68			108	1.3			
HSK63F	HSK 63F -MMC 4 - 70-AT	1~4	70	15	31.2	30	44	MPK 4	30,000	0.8
HSK40A	HSK 40AN ^{*1} -MMC 4 - 65-AT	1~4	65	15	26.0	30	45	MPK 4	30,000	0.25
HSK50A	HSK 50A -MMC 4 - 70-AT		70		31.2		44			0.5
HSK63A	HSK 63A -MMC 8C ^{*2} -107-AT	2~8	107	20	42.6	36	78	PMK 8 VMK 8	30,000	0.95
	-135-AT	135	64			106	1.0			
	HSK 63A -MMC12C ^{*2} -110-AT	4~12	110	30	51.8	43	83	PMK12 VMK12		1.2
	-135-AT	135	68			108	1.3			
HSK100A	HSK100A -MMC 8C ^{*2} -117-AT	2~8	117	20	46.3	36	85	PMK 8 VMK 8	20,000	2.35
	-145-AT	145	64			113	2.4			
	HSK100A -MMC12C ^{*2} -120-AT	4~12	120	30	55.5	43	90	PMK12 VMK12		2.7
	-145-AT	145	68			115	2.8			

★Wrench is attached as standard MMC4:9ZFL,MMC8:EA573KL-15,MMC12:EA573KL-16

★Collet is available as an option. Please refer to P.3

★For the chucks marked*1 coolant pipe can not be attached. Please use external cooling

★For the chucks marked*2 center through tool Coolant is available.



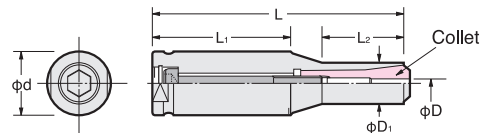
Direct Screw Type



Photo shows HSK40EN-MMC4-65-AT

Straight Shank MINI-MINI CHUCK

NIKKEN



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

★Wrench EA573KL-6 is attached as standard.

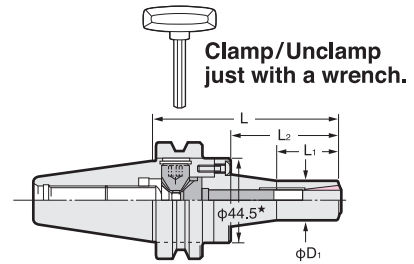
★Collet is available as an option. Please refer to P.3



MINI-MINI CHUCK for Centre Trough

NIKKEN

MMC-C



High Speed

PAT.

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

★Wrench EA573KL-6 is attached as standard.

★Collet is available as an option. Please refer P.3



★Extra-long sizes are added

*Extra-long sizes : longer +30~90mm than conventional.

★Please use VMK collet for the cutter with oil hole, and use VMK-J collet for the cutter without oil hole.

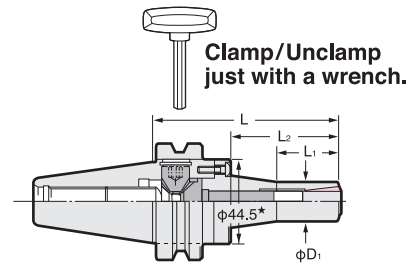
★Photo shows MINI-MINI CHUCK & VMK collet chucking with φ2.7mm oil hole drill.



2LOCK MINI-MINI CHUCK for Centre Trough

NIKKEN

MMC-C



High Speed

PAT.

TAPER	Code No.	φD	L	φD ₁	L ₁	L ₂	Collet	MAX.min ⁻¹	Weight(kg)
No.40	NBT40-MMC 8C- 90, 120	2~8	90,120	20	30,40	42,72	PMK 8 VMK 8	30,000	1.2, 1.3
	-150*, 180*		150,180		40,70	102,132	PMK 8 VMK 8		1.4, 1.5
	-MMC 12C- 90, 120	4~12	90,120	30	35,60	44,74	PMK 8 VMK 8		1.4, 1.5
	-150*, 180*		150,180		70,100	104,134	PMK 8 VMK 8		1.6, 1.7
No.50	NBT50-MMC 8C-105, 135	2~8	105,135	20	30,40	42,72	PMK 8 VMK 8	20,000	3.8, 3.9
	-165*, 195*		165,195		40,70	102,132	PMK 8 VMK 8		4.0, 4.1
	-MMC 12C-105, 135	4~12	105,135	30	35,60	44,74	PMK12 VMK12		4.0, 4.1
	-165*, 195*		165,195		70,100	104,134	PMK12 VMK12		4.2, 4.3

★Wrench EA573KL-6 is attached as standard.

★Collet is available as an option. Please refer P.3



★Extra-long sizes are added

*Extra-long sizes : longer +30~90mm than conventional.

★Please use VMK collet for the cutter with oil hole, and use VMK-J collet for the cutter without oil hole.

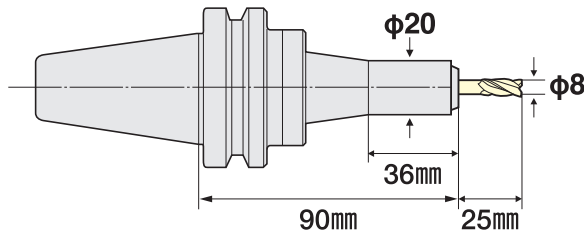
★Photo shows MINI-MINI CHUCK & VMK collet chucking with φ2.7mm oil hole drill.



MINI-MINI CHUCK Technical Data

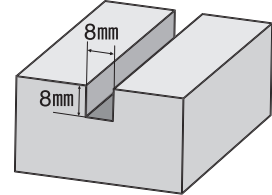
NIKKEN

Cutting data of Standard Type

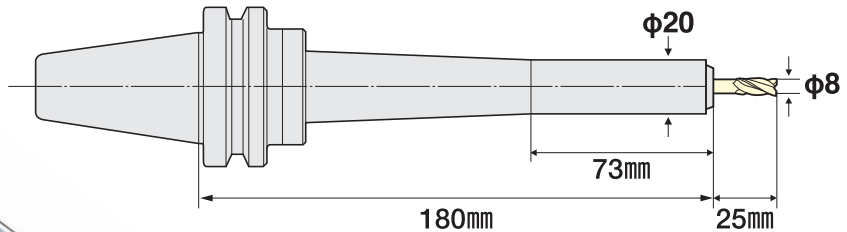


Tooling : **NBT40-MMC8-90**
 Cutting Tool : **Carbide square endmill**
φ8×4NT
 Work Material : **S50C**

● **Slotting**
S2000 (V=50m/min)
F360 (f=0.18mm/rev)
 ap : **8mm**



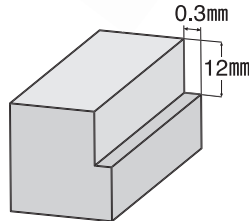
Cutting data of Extra-long Type.



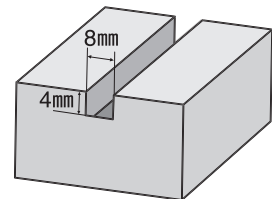
Tooling : **BT40-MMC8-180**
 Cutting Tool : **Carbide square endmill φ8×4NT**

Work Material : **S50C**
 Gauge Line : **180mm**

● **Side Cutting**
S600 (V=15m/min)
F360 (f=0.6mm/rev)
 ap : **12mm**
 ae : **0.3mm**



● **Slotting**
S800 (V=20m/min)
F200 (f=0.25mm/rev)
 ap : **4mm**



The Best Chuck for Small Dia Endmill on Die Mould



Bottom of PET bottle



Artificial joint model



Mould

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