



Premiun Tool & Work Holding
PIONEER



Pioneer Group

We have been in the metal cutting industry for over the past four decades and contributed to the progress of the industry through the development and supply of the best quality products both in premier and standard product groups. Some products that we either manufacture or source from outside have supported the most sophisticated products out of Japan with their unsurpassed technological edges.

Our mission

It is our renewed pledge that we shall continue our conscientious efforts to supply our customers with the finest quality and most sophisticated tool holders and other products at competitive prices so our customers stay up in front in ever-changing and competitive metal working industries. As you turn page through page of our catalog, you will find windows for products with the best in quality, performance and in technology that are available in the world today.

All of the products have our uncompromising support and back-up, world-wide through our own organizations and in partnership with our overseas partners.



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▶ MC mill chuck



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▶ MX mini chuck



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▶ VX mini chuck+



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▶ Face Mill arbor



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Type TC



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- HSK shank49
- Straight shank50
- Tap Adaptor51

▶ Tapping chuck

Type RT



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- BT shank53
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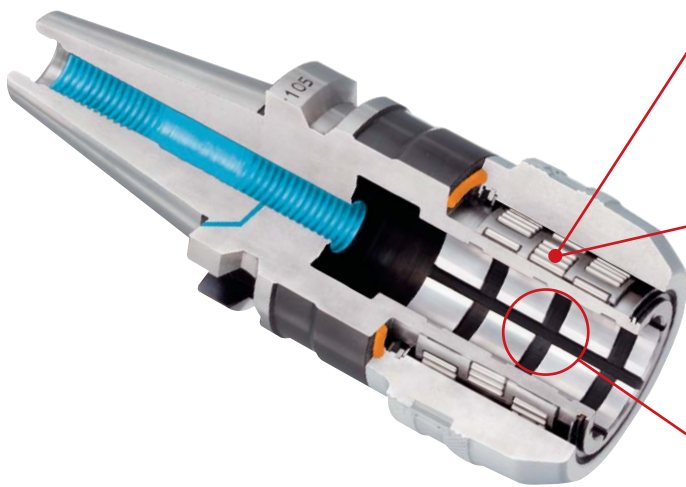
MC Milling Chuck

Roughing and Finishing Milling & Drilling



**POWERFUL & RIGID,
UNBEATABLE
RUN- OUT!**

Features



Roller Bearing System

Retainer sleeve system filled with symmetrically placed needle roller bearings provides smooth operation. 4 needle roller bearings per cell provide maximum contact area and heavy duty gripping capability.

Powerful Gripping Torque

4-row retainer sleeve is used for the 50 taper models(except for SK50- MC32-85). This system allows the MC to achieve 5,000 N/m clamping torque in MC42 milling chuck.

X-GROOVE System (PAT)

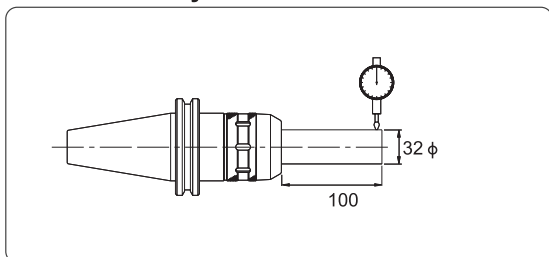
Combination of the Radial and Axial grooves

Ultra-low temperature treatment



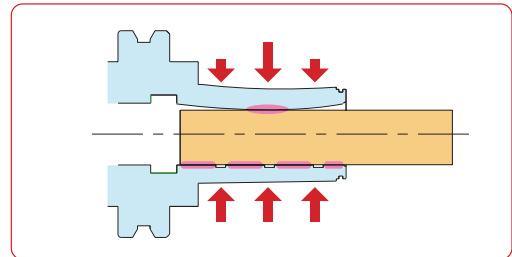
Sub-zero temperature treatment at -100°C to remove the residual austenite from the holder and provides long lasting performance.

Fine accuracy



5 μm at 100mm away from nose.

Radial Grooves



The radial grooves provide more uniform collapse capability and allows the chuck to collapse evenly all the way to the nose. It provides reliable gripping and run-out capability, and also minimizes cutter vibration and chatter.

Axial Grooves



The axial grooves provide more even collapse capability. It distributes gripping power more evenly all the way around the shank or collet and as a result provides better concentricity.

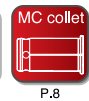
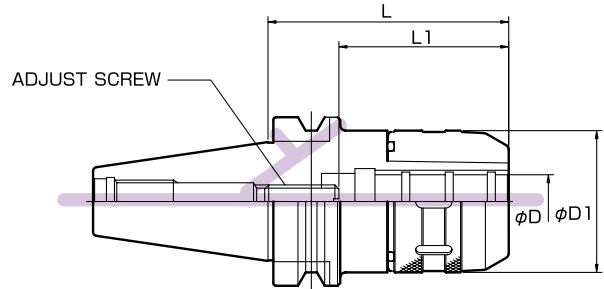


MC Milling Chuck

Kraftspannfutter
Mandrins A Fort Serrage
Mandrini A Forte Serraggio



- Min. 80% taper fit
- 5290Nm gripping power with BT50-MC42-105
- 5 μ m runout capability at 100mm from nose
- Special alloy steel case-hardened and treated at -100 $^{\circ}$ C to remove residual austenite and ensure stable molecule structure.
- "-S" : Taper 30 with balanceable
Taper 40 & 50 with DIN AD/B & balanceable.
- Taper 30 & 40 dynamically balanced body to G6.3 at 20,000rpm.
- Taper 50 dynamically balanced body to G6.3 at 15,000rpm.



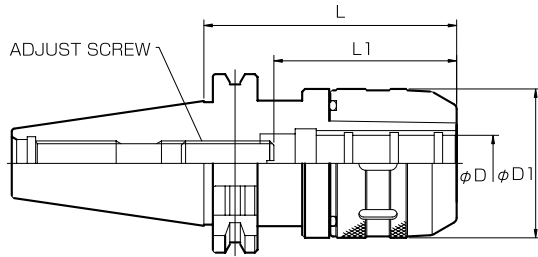
Taper	Code No.	ϕD	L	$\phi D1$	L1	Collet	DIN AD/B flange coolant ENTRY	Balanceable	
BT30	BT30-MC20-080	20	80	53	70	MC20			
	BT30-MC20-085-S		85				Y		
BT40	BT40-MC20-075	20	75	53	70	MC20			
	BT40-MC20-075-S						Y	Y	
	BT40-MC20-090 *		90						
	BT40-MC20-105		105						
	BT40-MC20-120 *		120						
	BT40-MC20-120-S		Y	Y					
	BT40-MC25-085	25	85	62	74	MC25	Y	Y	
	BT40-MC25-085-S		105						
	BT40-MC25-105		120						
	BT40-MC25-120-S		Y	Y					
BT40	BT40-MC32-085	32	85	70	78	MC32			
	BT40-MC32-090-S		90				Y	Y	
	BT40-MC32-105		105						
	BT40-MC32-120		120						
	BT40-MC32-120-S						Y	Y	
BT50	BT50-MC20-105	20	105	53	70	MC20	Y	Y	
	BT50-MC20-105-S								
	BT50-MC20-135		135						
	BT50-MC20-165	165							
	BT50-MC20-165-S		Y	Y					
	BT50-MC25-105	25	105	62	74	MC25	Y	Y	
	BT50-MC25-105-S								
	BT50-MC25-135		135						
	BT50-MC25-165	165							
	BT50-MC25-165-S		Y	Y					
	BT50	BT50-MC32-105	32	105	74	95	MC32	Y	Y
		BT50-MC32-105-S							
		BT50-MC32-135		135					
BT50-MC32-165		165							
BT50-MC32-165-S				Y				Y	
BT50	BT50-MC42-105	42	105	92	98	MC42			
	BT50-MC42-135		135						

* Not regular stock items. Please check for availability.
* See P.24 for how-to-use instruction.

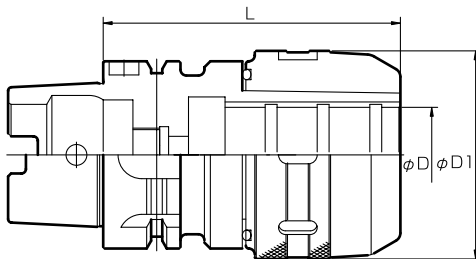


MC Milling Chuck

SK / HSK



Taper	Code No.	φD	L	φD1	L1	Collet	DIN AD/B flange coolant ENTRY	Balanceable
SK40	SK40-MC20-085	20	85	53	70	MC20	Y	Y
	SK40-MC20-085-S							
	SK40-MC20-105		105					
	SK40-MC20-120							
	SK40-MC25-085	25	85	62	74	MC25	Y	Y
	SK40-MC25-095-S		95					
	SK40-MC25-120		120					
	SK40-MC32-105	32	105	70	78	MC32		
	SK40-MC32-120		120					
SK40-MC32-120-S								
SK50	SK50-MC20-90-S	20	90	53	70	MC20	Y	Y
	SK50-MC20-105		105					
	SK50-MC20-135		135					
	SK50-MC20-165		165					
	SK50-MC20-165-S						Y	Y
	SK50-MC25-090-S	25	90	62	74	MC25	Y	Y
	SK50-MC25-105		105					
	SK50-MC25-135		135					
	SK50-MC25-165		165					
	SK50-MC25-165-S						Y	Y
	SK50-MC32-90-S	32	90	74	95	MC32	Y	Y
	SK50-MC32-105		105					
	SK50-MC32-135		135					
	SK50-MC32-165		165					
	SK50-MC32-165-S						Y	Y
SK50-MC42-105	42	105	92	98	MC42			
SK50-MC42-135		135						

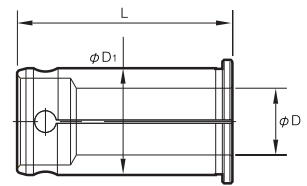


Taper	Code No.	φD	L	φD1	L1	Collet	Balanceable
HSK63A	HSK 63A-MC20-095	20	95	53	66	MC20	Y
	HSK 63A-MC20-110		110				
	HSK 63A-MC20-110-S						
	HSK 63A-MC25-100	25	100	62	70	MC25	
	HSK 63A-MC25-120		120				
	HSK 63A-MC32-100	32	100	70	76	MC32	
	HSK 63A-MC32-120		120				
	HSK 63A-MC32-120-S						



Straight collet for Milling Chuck

MC straight collet

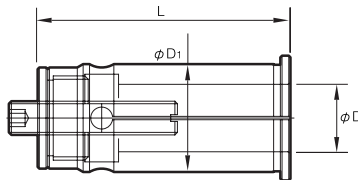


standard φD	MC20	MC25	MC32	MC42
6.0	MC20-M060	MC25-M060	MC32-M060	MC42-M060
8.0	MC20-M080	MC25-M080	MC32-M080	MC42-M080
10.0	MC20-M100	MC25-M100	MC32-M100	MC42-M100
12.0	MC20-M120	MC25-M120	MC32-M120	MC42-M120
16.0	MC20-M160	MC25-M160	MC32-M160	MC42-M160
20.0		MC25-M200	MC32-M200	MC42-M200
25.0			MC32-M250	MC42-M250
32.0				MC42-M320

STYLE	L
MC20	53
MC25	61
MC32	64
MC42	78

- 1) Collets in odd size 1mm ID increment availbale from stock.
- 2) Collets in 0.5mm ID increment available from stock, or subject to delivery confirmation.
- 3) MC12, MC16 & MC22 collets are available from stock, subject to delivery confirmation.

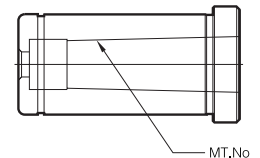
NC height adjustable straight collet



standard φD	MC20	MC25	STYLE	L
6.0	NC20-M060	NC32-M060	NC20	63
8.0	NC20-M080	NC32-M080	NC32	75
10.0	NC20-M100	NC32-M100		
12.0	NC20-M120	NC32-M120		
16.0	NC20-M160	NC32-M160		
20.0		NC32-M200		
25.0		NC32-M250		
32.0				

- 1) Collets in odd size 1mm ID increment availbale from stock.
- 2) Collets in 0.5mm ID increment available from stock, subject to delivery confirmation.
- 3) NC22 collet is available from stock, subject to delivery confirmation.

Morse taper collet

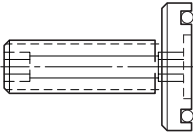



MT	MC32	MC42
MT1	MC32-MT1	MC42-MT1
MT2	MC32-MT2	MC42-MT2
MT3	MC32-MT3	MC42-MT3



Accessories for Milling Chuck

Parts

MC	Adjust screw coolant thru standard	Wrench
		
MC20	ASC-MC20	MCW20
MC25	ASC-MC25	MCW25
MC32	ASC-MC32	MCW32
MC40	ASC-MC42	MCW42

Coolant caps

MC Coolant Caps allow you to seal MC collets for thru tool coolant applications by sealing coolant from slots of MC collet.

- Works with all MC standard Collets.
- Requires MCN Nut & MCC Cap to fit the cutting tool.
- Order Cap to Match Collet ID Size
Example: MCC20-M100 for MC20-M100



Nut Code No.	Collet
MCN20	MC20
MCN25	MC25
MCN32	MC32

Cap Code No.	Available Sizes
MCC20-	6, 8, 10, 12, 14, 16
MCC25-	6, 8, 10, 12, 14, 16, 18, 20
MCC32-	6, 8, 10, 12, 14, 16, 18, 20, 22, 25



Accessories for Milling Chuck

❑ Coolant caps - How to assemble



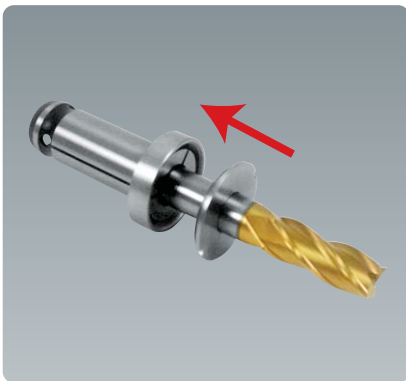
1. Prepare MC collet, MCN nut & MCC cap.



2. Insert a cutting tool into MCC cap.



3. Assemble MC collet into MCN nut.



4. Thread MCC cap ass'y built in 2. into MCN nut ass'y built in 3, and get MC collet ass'y with MCN nut & MCC cap with a cutting tool.



5. Set the ass'y built in 4. into MC milling chuck.



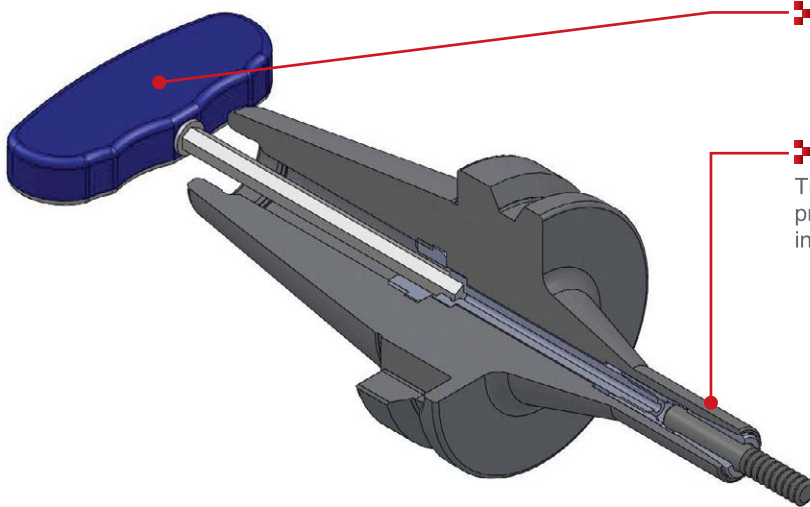
MX mini chuck

Ultimate performance in finishing



**NUT FREE,
ULTIMATE ACCURACY,
HIGH SPEED**

Features

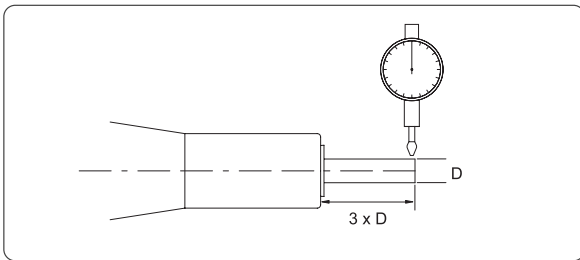


➤ **Rear draw bar locking system**

➤ **Nut Free Design**

The MX nut-free design eliminates collets twist and provides ultra fine run-out. It also provides less interference and excellent holder balance.

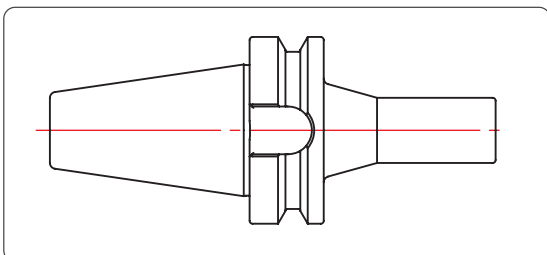
➤ **Ultimate Accuracy**



3 μ m at 3 x D away from the nose

➤ **High Speed Capability**

Symmetric & nut-free design
Ideal design for high speed

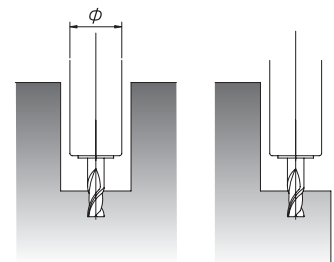


Dynamically balanced to G2.5 at 25,000rpm as standard.

➤ **Slim & Compact**

For hard-to-reach places

Nose diameters,
MX06 ϕ 12.7mm
MX08 ϕ 20.0mm
MX12 ϕ 30.0mm



Minimum Interference

The MX slim & compact design, along with its nut-free system minimizes interference issues and maximizes machining reach capability for those hard to reach places.



MX mini chuck

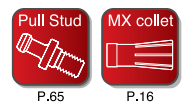
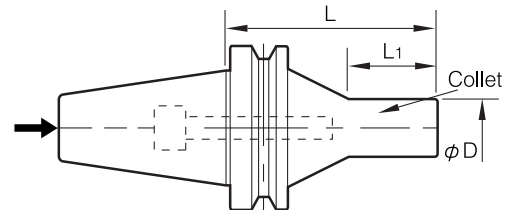
BT / SK



MX06



- Min. 80% taper fit
 - 3 μ m T.I.R. at 3 \times D from nose
 - Taper 30 & 40 dynamically balanced to G2.5 at 25,000rpm
Taper 50 dynamically balanced to G2.5 at 20,000rpm
 - High speed machining up to 30,000 RPM
 - Center-thru coolant
 - DIN AD/B available upon request.
- Please add "-C" at the end of Code No. when ordering.
ex) BT40-MX08-085-C.



Taper	Code No.	Chucking range	L	L1	ϕ D	Collet
BT30	BT30-MX06-090	2~6	90	31.75	12.7	MX06
	BT30-MX08-090	2~10	90	36	20	MX08
	BT30-MX12-105	4~12	105	35	30	MX12
BT40	BT40-MX06-085	2~6	85	31.75	12.7	MX06
	BT40-MX06-120	2~6	120	31.75	12.7	MX06
	BT40-MX06-150	2~6	150	31.75	12.7	MX06
	BT40-MX08-085	2~10	85	36	20	MX08
	BT40-MX08-120	2~10	120	43	20	MX08
	BT40-MX12-090	4~12	90	35	30	MX12
BT50	BT50-MX08-105	2~10	105	40	20	MX08
	BT50-MX08-135	2~10	135	43	20	MX08
	BT50-MX08-165	2~10	165	43	20	MX08
	BT50-MX12-105	4~12	105	35	30	MX12
SK40	SK40-MX06-085	2~6	85	31.75	12.7	MX06
	SK40-MX06-120	2~6	120	31.75	12.7	MX06
	SK40-MX06-150	2~6	150	31.75	12.7	MX06
	SK40-MX08-085	2~10	85	36	20	MX08
	SK40-MX08-120	2~10	120	43	20	MX08
	SK40-MX12-090	4~12	90	35	30	MX12
SK50	SK50-MX08-105	2~10	105	40	20	MX08
	SK50-MX12-105	4~12	105	35	30	MX12

* Wrench is not included. Please order separately.
 * See P.15 for HSK63A-MX holder.
 * See P.15 for Straight shank MX.
 * See P.16 for MX collet.
 * See P.24 for how-to-use instruction.



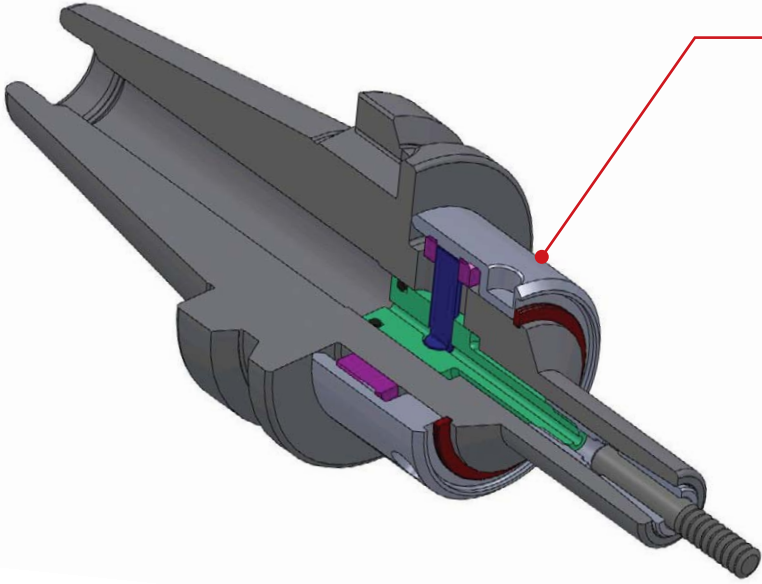
VX mini chuck +

Ultimate performance in finishing



**FRONT LOCKING,
ULTIMATE ACCURACY,
HIGH SPEED**

Features

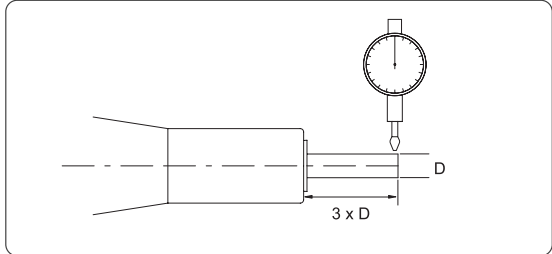


Front locking system

- 4 x the holding power of MX.
- Higher radial torque due to Spanner wrench locking.
- Dual collar front locking system pulls straight back with no twisting of collet for consistent run-out.



Ultimate Accuracy



3 μm at 3 x D away from the nose

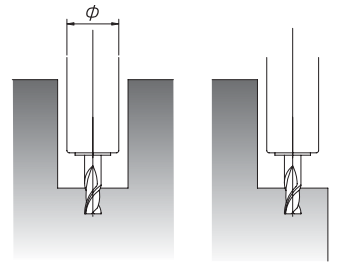
High Speed Capability

Dynamically balanced to G2.5 at 25,000rpm as standard.

Slim & Compact

For hard-to-reach places

- Nose diameters,
 VX06 φ 15.9mm
 VX08 φ 22.0mm
 VX12 φ 30.0mm



Minimum Interference

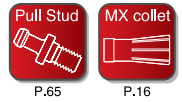
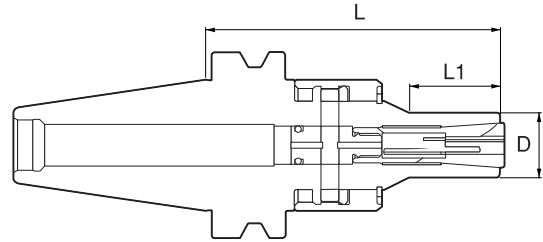


VX mini chuck +

BT / SK



- Front Locking system
- Min. 80% taper fit
- 3μm T.I.R. at 3×D from nose
- Taper 30 & 40 dynamically balanced to G2.5 at 25,000rpm
Taper 50 dynamically balanced to G2.5 at 20,000rpm
- Center-thru coolant
- DIN AD/B available upon request.
Please add "-C" at the end of Code No. when ordering.
ex) BT40-VX08-100-C.



Taper	Code No.	Chucking range	L	L1	φD	Collet
BT30	BT30-VX06-090	2~6	90	34.8	15.9	MX06
	BT30-VX08-092	2~10	92	30.8	22	MX08
BT40	BT40-VX06-100	2~6	100	37.5	15.9	MX06
	BT40-VX06-150	2~6	150	40	15.9	MX06
	BT40-VX08-100	2~10	100	30.8	22	MX08
	BT40-VX08-150	2~10	150	40	22	MX08
	BT40-VX12-110	4~12	110	53.5	30	MX12
	BT40-VX12-150	4~12	150	101	30	MX12
BT50	BT50-VX08-100	2~10	100	43.5	22	MX08
	BT50-VX08-165	2~10	165	116	22	MX08
	BT50-VX12-100	4~12	100	43.5	30	MX12
	BT50-VX12-165	4~12	165	116	30	MX12
SK40	SK40-VX06-100	2~6	100	37.5	15.9	MX06
	SK40-VX06-150	2~6	150	40	15.9	MX06
	SK40-VX08-100	2~10	100	30.8	22	MX08
	SK40-VX08-150	2~10	150	40	22	MX08
	SK40-VX12-110	4~12	110	53.5	30	MX12
	SK40-VX12-150	4~12	150	101	30	MX12
SK50	SK50-VX08-100	2~10	100	43.5	22	MX08
	SK50-VX08-165	2~10	165	116	22	MX08
	SK50-VX12-100	4~12	100	43.5	30	MX12
	SK50-VX12-165	4~12	165	116	30	MX12

* See P.15 for HSK63A-VX holder.
* See P.16 for MX collet.
* See P.24 for how-to-use instruction.

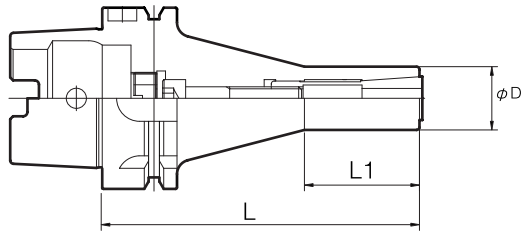


MX mini chuck / VX mini chuck +

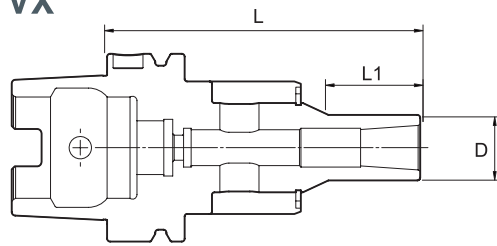
HSK

- Min. 80% taper fit
- $3\mu\text{m}$ T.I.R. at $3\times D$ from nose
- HSK63A dynamically balanced to G2.5 at 25,000rpm
- Center-thru coolant
- Front Locking system for VX

MX

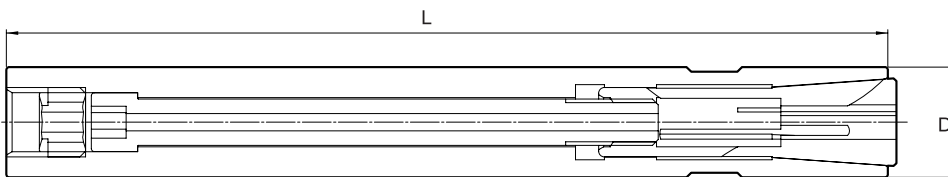


VX



Taper	Holder type	Code No.	Chucking range	L	L1	ϕD	Collet
HSK 63A	MX	HSK 63A-MX06-100	2~6	100	45	12.7	MX06
		HSK 63A-MX08-100	2~10	100	40	20	MX08
		HSK 63A-MX12-110	4~12	110	35	30	MX12
HSK 63A	VX	HSK 63A-VX06-100	2~6	100	37.5	15.9	MX06
		HSK 63A-VX06-150	2~6	150	40	15.9	MX06
		HSK 63A-VX08-105	2~10	105	30.8	22	MX08
		HSK 63A-VX08-150	2~10	150	40	22	MX08
		HSK 63A-VX12-115	4~12	115	51	30	MX12
		HSK 63A-VX12-150	4~12	150	86	30	MX12

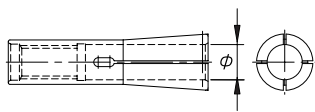
MX Straight shank



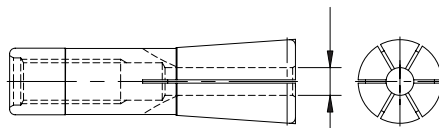
Code No.	Chucking range	ϕD	L	Collet
S12-MX06-100	2~6	12.7	100	MX06
S12-MX06-150	2~6	12.7	150	MX06
S20-MX08-100	2~10	20	100	MX08
S20-MX08-150	2~10	20	150	MX08
S25-MX12-150	4~12	25	150	MX12



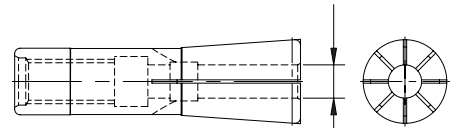
Collet for MX / VX



(Fig 1)



(Fig 2)

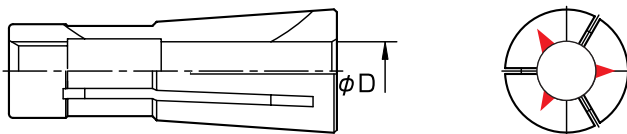


(Fig 3)

Accuracy : 3μm at 4xD

φD	MX06		MX08		MX12	
	Code No.	Fig	Code No.	Fig	Code No.	Fig
2	MX06-M020	1		2		2
3	MX06-M030		MX08-M030			
4	MX06-M040		MX08-M040			
5	MX06-M050		MX08-M050			
6	MX06-M060		MX08-M060			
7			MX08-M070	3	MX12-M060	3
8			MX08-M080		MX12-M070	
9			MX08-M090		MX12-M080	
10			MX08-M100		MX12-M090	
11					MX12-M100	
12					MX12-M110	
					MX12-M120	

● MX collet with coolant slots is also available for cutting tools without coolant hole.
Please add "C" at the end of Code No. when ordering. ex) MX08-M030C.



Accessories

Code No.	description
VXW12	VX Pin spanner



SX Super chuck

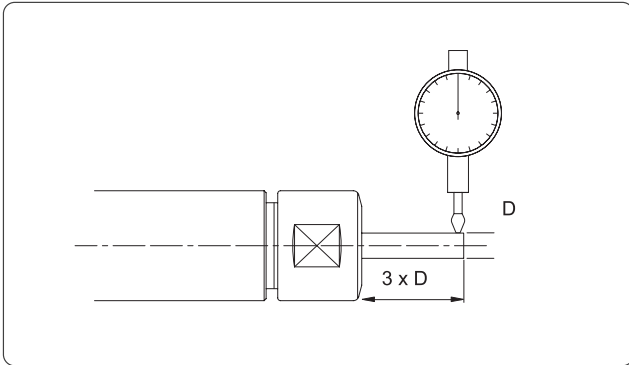
Multi purpose, for Milling, Drilling & Reaming



**ULTRA FINE ACCURACY,
RIGID & POWERFUL,
HIGH SPEED CAPABILITY,**

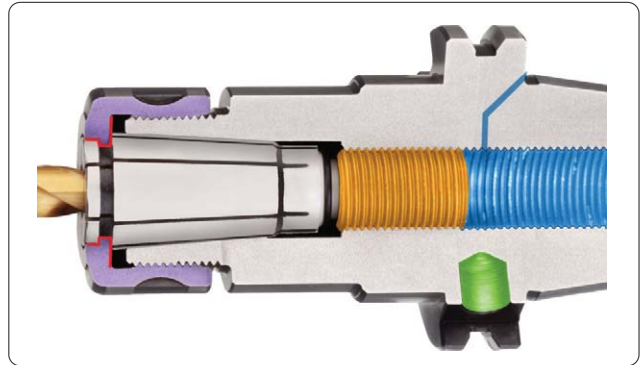
Features

Ultimate Accuracy



5 μ m at 3 x D away from the nose

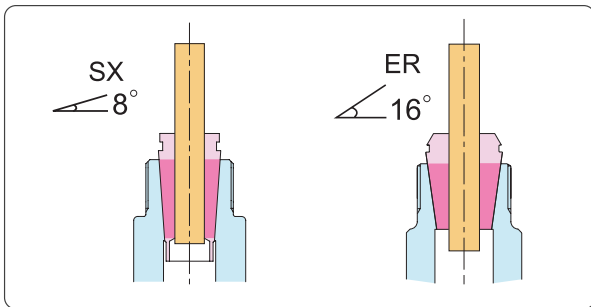
Flat ground shoulder



- eliminates any influence from the locking nut.
- provides locking forces directed into the collet taper.

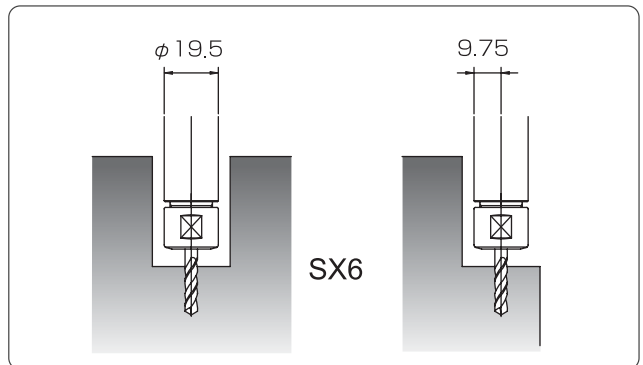
Strong Gripping Power and High Rigidity

Smaller taper angle collet system



- Longer taper provides more surface contact for stability and rigidity.
- Smaller collet taper angle creates higher gripping torque and is more consistent on each tool change.

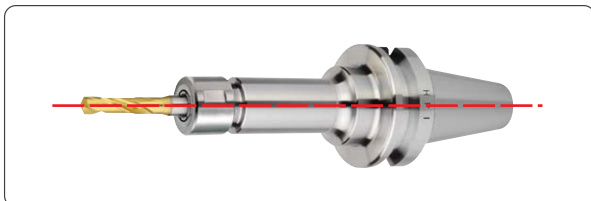
Slim & Compact



- For hard-to-reach places.
- Minimum Interference.

High Speed Capability

Symmetrical design



Dynamically balanced to G2.5 at 25,000rpm as standard.



SX Super chuck

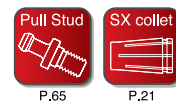
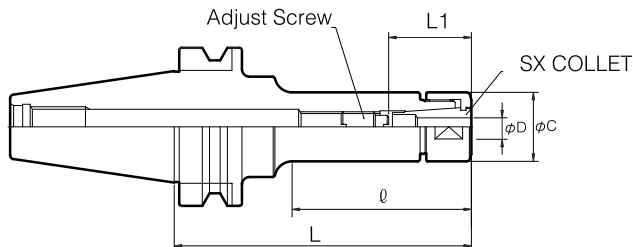
BT



SX20



- Min. 80% taper fit
- 5μT.I.R at 3D away from nose
- 100% more gripping torque than 16°taper collet system
- Taper 30 & 40 dynamically balanced to G2.5 at 25,000rpm.
Taper 50 dynamically balanced to G2.5 at 20,000rpm.
- Symmetric design for high speed machining
- DIN AD/B available upon request.
Please add "-D" at the end of Code No. when ordering.
ex) BT40-SX10-090-D.



Taper	Code No.	φD	φC	L	ℓ	L1	Nut	Adjust Screw	Collet	
BT30	BT30-SX06-090	1.8~6.0	19.5	90	56	21~35	SXN-06	SXG-8	SX06	
	BT30-SX10-045			45	22					
	BT30-SX10-060	1.75~10.0	27.5	60	35	30~50	SXN-10	SXG-12L	SX10	
	BT30-SX10-090			90	65					
	BT30-SX16-090			2.75~16.0	40					90
		BT30-SX20-060 **	3.5~20.0	48.5	60	37	65~70	SXN-20	SXG-12S	SX20
		BT30-SX20-090 **			90	67	65~75		SXG-12	
BT30-SX25-090		15.5~25.4			55	90	67	55~75	SXN-25	SXG-12
BT40	BT40-SX06-060	1.8~6.0	19.5	60	30	21~35	SXN-06	SXG-8	SX06	
	BT40-SX06-090			90	51					
	BT40-SX06-120			120	60					
	BT40-SX10-060	1.75~10.0	27.5	60	32	30~50	SXN-10	SXG-12L	SX10	
	BT40-SX10-090			90	48					
	BT40-SX10-120			120	73					
	BT40-SX10-150			150						
	BT40-SX16-060			2.75~16.0	40					60
	BT40-SX16-090	90	58			40~70	SXG-18L			
	BT40-SX16-120	120	88							
	BT40-SX16-150	150	118							
		BT40-SX20-060 **	3.5~20.0	48.5	60	32	47~60	SXN-20	SXG-22	SX20
		BT40-SX20-090 **			90	58	47~80			
		BT40-SX20-120 **			120	88				
	BT40-SX25-090	15.5~25.4	55	90	61	55~75	SXN-25	SXG-28	SX25	
	BT40-SX25-120			120	91	55~85				
	BT50	BT50-SX06-105	1.8~6.0	19.5	105	55	21~35	SXN-06	SXG-8	SX06
BT50-SX06-165		165			60					
BT50-SX10-105		1.75~10.0	27.5	105	57	30~50	SXN-10	SXG-12L	SX10	
BT50-SX10-165				165	75					
BT50-SX16-105		2.75~16.0	40	105	62	40~70	SXN-16	SXG-18L	SX16	
BT50-SX16-165				165	90					
		BT50-SX20-105 **	3.5~20.0	48.5	105	62	47~80	SXN-20	SXG-22	SX20
		BT50-SX20-165 **			165	122				
		BT50-SX25-105	15.5~25.4	55	105	62	55~85	SXN-25	SXG-28	SX25
	BT50-SX25-165	165			122					

* Wrench is not included. Please order separately.
 ** Please ask for availability on SX20 super chuck before ordering.

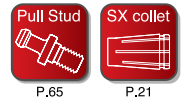
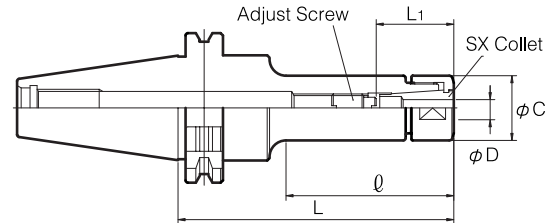


SX Super chuck

SK

SX20


- Mass-balanced shank body
 - Min. 80% taper fit
 - 5 μ T.I.R at 3D away from nose
 - Taper 30 & 40 dynamically balanced to G2.5 at 25,000rpm.
Taper 50 dynamically balanced to G2.5 at 20,000rpm.
 - 100% more gripping torque than 16° taper collet system
 - DIN AD/B available upon request.
- Please add "-D" at the end of Code No. when ordering.
ex) SK40-SX10-105-D.



Taper	Code No.	ϕD	ϕC	L	ϕ	L1	Nut	Adjust Screw	Collet
SK40	SK40-SX06-060	1.8~6.0	19.5	60	30	21~35	SXN-06	SXG-8	SX06
	SK40-SX06-090			90	51				
	SK40-SX06-120			120	60				
	SK40-SX10-060	1.75~10.0	27.5	60	32	30~50	SXN-10	SXG-12L	SX10
	SK40-SX10-090			90	48				
	SK40-SX10-120			120	73				
	SK40-SX10-150			150					
	SK40-SX16-060	2.75~16.0	40	60	32	50~65	SXN-16	SXG-18S	SX16
	SK40-SX16-090			90	58	40~70		SXG-18L	
	SK40-SX16-120			120	88				
	SK40-SX16-150			150	118				
	SK40-SX20-060 **	3.5~20.0	48.5	60	32	47~60	SXN-20	SXG-22	SX20
SK40-SX20-090 **	90			58	47~80				
SK40-SX20-120 **	120			88					
SK40-SX25-090	15.5~25.4	55	90	61	55~75	SXN-25	SXG-28	SX25	
SK40-SX25-120			120	91	55~85				
SK50	SK50-SX06-105	1.8~6.0	19.5	105	55	21~35	SXN-06	SXG-8	SX06
	SK50-SX06-165			165	60				
	SK50-SX10-105	1.75~10.0	27.5	105	57	30~50	SXN-10	SXG-12L	SX10
	SK50-SX10-165			165	75				
	SK50-SX16-105	2.75~16.0	40	105	62	40~70	SXN-16	SXG-18L	SX16
	SK50-SX16-165			165	90				
	SK50-SX20-105 **	3.5~20.0	48.5	105	62	47~80	SXN-20	SXG-22	SX20
	SK50-SX20-165 **			165	122				
	SK50-SX25-105	15.5~25.4	55	105	62	55~85	SXN-25	SXG-28	SX25
	SK50-SX25-165			165	122				

* Wrench is not included. Please order separately.

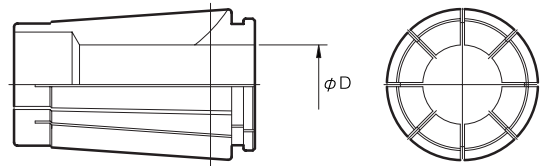
** Please ask for availability on SX20 super chuck before ordering.



SX collet



SX20



Accuracy : 5 μ m at 4xD

D range	SX06
1.8~2.0	SX06-M020
2.05~2.25	SX06-M0225
2.3~2.5	SX06-M025
2.55~2.75	SX06-M0275
2.8~3.0	SX06-M030
3.0~3.5	SX06-M035
3.5~4.0	SX06-M040
4.0~4.5	SX06-M045
4.5~5.0	SX06-M050
5.0~5.5	SX06-M055
5.5~6.0	SX06-M060

D range	SX10	SX16	SX20**	SX25
1.75~2.0	SX10-M020			
2.0~2.25	SX10-M0225			
2.25~2.5	SX10-M025			
2.5~2.75	SX10-M0275			
2.75~3.0	SX10-M030	SX16-M030		
3.0~3.5	SX10-M035	SX16-M035		
3.5~4.0	SX10-M040	SX16-M040	SX20-M040	
4.0~4.5	SX10-M045	SX16-M045	SX20-M045	
4.5~5.0	SX10-M050	SX16-M050	SX20-M050	
5.0~5.5	SX10-M055	SX16-M055	SX20-M055	
5.5~6.0	SX10-M060	SX16-M060	SX20-M060	
6.0~6.5	SX10-M065	SX16-M065	SX20-M065	
6.5~7.0	SX10-M070	SX16-M070	SX20-M070	
7.0~7.5	SX10-M075	SX16-M075	SX20-M075	
7.5~8.0	SX10-M080	SX16-M080	SX20-M080	
8.0~8.5	SX10-M085	SX16-M085	SX20-M085	
8.5~9.0	SX10-M090	SX16-M090	SX20-M090	
9.0~9.5	SX10-M095	SX16-M095	SX20-M095	
9.5~10.0	SX10-M100	SX16-M100	SX20-M100	
10.0~10.5		SX16-M105	SX20-M105	
10.5~11.0		SX16-M110	SX20-M110	
11.0~11.5		SX16-M115	SX20-M115	
11.5~12.0		SX16-M120	SX20-M120	
12.0~12.5		SX16-M125	SX20-M125	
12.5~13.0		SX16-M130	SX20-M130	
13.0~13.5		SX16-M135	SX20-M135	
13.5~14.0		SX16-M140	SX20-M140	
14.0~14.5		SX16-M145	SX20-M145	
14.5~15.0		SX16-M150	SX20-M150	
15.0~15.5		SX16-M155	SX20-M155	
15.5~16.0		SX16-M160	SX20-M160	SX25-M160
16.0~16.5			SX20-M165	SX25-M165
16.5~17.0			SX20-M170	SX25-M170
17.0~17.5			SX20-M175	SX25-M175
17.5~18.0			SX20-M180	SX25-M180
18.0~18.5			SX20-M185	SX25-M185
18.5~19.0			SX20-M190	SX25-M190
19.0~19.5			SX20-M195	SX25-M195
19.5~20.0			SX20-M200	SX25-M200
20.0~20.5				SX25-M205
20.5~21.0				SX25-M210
21.0~21.5				SX25-M215
21.5~22.0				SX25-M220
22.0~22.5				SX25-M225
22.5~23.0				SX25-M230
23.0~23.5				SX25-M235
23.5~24.0				SX25-M240
24.0~24.5				SX25-M245
24.5~25.0				SX25-M250
25.0~25.4				SX25-M254

* *Please ask for availability on SX20 collet before ordering.



SX Super chuck accessories

❖ SX coolant Assembly Tool



Series	Code No.
SX06	SXR-06
SX10	SXR-10
SX16	SXR-16
SX20 **	SXR-20
SX25	SXR-25

Tool is required for assembly and removal of SX collets from nuts.

** Please ask for availability on SX20 before ordering.

❖ Coolant thru Adjust Acrew

Holder	Code No.	Threads
SX06	SXGC-8	M 8 x 1.25
SX10	SXGC-12	M12 x 1.75
SX10	SXGC-12A	M12 x 1.75
SX16	SXGC-16	M18 x 1.5
SX16	SXGC-16A	M18 x 1.5
SX20 **	SXGC-20	M22 x 1.5
SX25	SXGC-25	M28 x 1.5

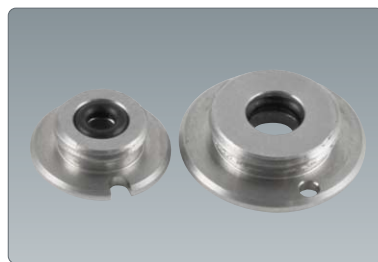
** Please ask for availability on SX20 before ordering.

❖ SXC coolant Nuts and Caps

Front threaded seal for air, coolant or keeping chips & swarf from entering the front of the collet.

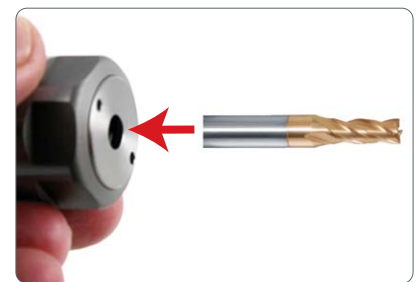
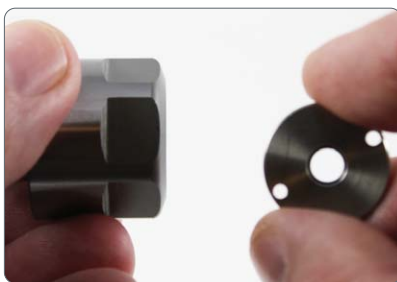
Features :

- O-ring seal for pressure up to 10.3 Mpa
- Prevent chips, dust & swarf from entering holders
- Jet Blast for non-coolant cutting tools available upon request



SXCN coolant nut w / SXC coolant cap SXC coolant cap

❖ How to assemble



1. Thread coolant cap into SXCN nut, tightened with wrench after the collet has been assembled.

2. Insert a cutting tool.
Shank of the cutting tool engaged with o-ring.

❖ SXC coolant Nuts

Code No.	description	Thread	Wrench Type	Nut Wrench	Coolant Cap wrench
SXCN-06	SX06 Coolant Cap Nut	M15.5 X 1.0	Hex	SXW-06	SXCCW-06
SXCN-10	SX10 Coolant Cap Nut	M21.5 X 1.0	Hex	SXW-10	SXCCW-10
SXCN-16	SX16 Coolant Cap Nut	M32 X 1.5	Spanner	SXW-16	SXCCW-16
SXCN-20 **	SX20 Coolant Cap Nut	M36 X 1.5	Spanner	SXW-20	SXCCW-20
SXCN-25	SX25 Coolant Cap Nut	M45 X 1.5	Spanner	SXW-25	SXCCW-25

** Please ask for availability on SXCN-20 before ordering.



SX Super chuck accessories



✚ SXC coolant caps

φD	SX06	SX10	SX16	SX20**	SX25
2.0	SXC06-M020	SXC10-M020			
2.5	SXC06-M025	SXC10-M025			
3.0	SXC06-M030	SXC10-M030	SXC16-M030		
3.5	SXC06-M035	SXC10-M035	SXC16-M035		
4.0	SXC06-M040	SXC10-M040	SXC16-M040	SXC20-M040	
4.5	SXC06-M045	SXC10-M045	SXC16-M045	SXC20-M045	
5.0	SXC06-M050	SXC10-M050	SXC16-M050	SXC20-M050	
5.5	SXC06-M055	SXC10-M055	SXC16-M055	SXC20-M055	
6.0	SXC06-M060	SXC10-M060	SXC16-M060	SXC20-M060	
6.5		SXC10-M065	SXC16-M065	SXC20-M065	
7.0		SXC10-M070	SXC16-M070	SXC20-M070	
7.5		SXC10-M075	SXC16-M075	SXC20-M075	
8.0		SXC10-M080	SXC16-M080	SXC20-M080	
8.5		SXC10-M085	SXC16-M085	SXC20-M085	
9.0		SXC10-M090	SXC16-M090	SXC20-M090	
9.5		SXC10-M095	SXC16-M095	SXC20-M095	
10.0		SXC10-M100	SXC16-M100	SXC20-M100	
10.5			SXC16-M105	SXC20-M105	
11.0			SXC16-M110	SXC20-M110	
11.5			SXC16-M115	SXC20-M115	
12.0			SXC16-M120	SXC20-M120	
12.5			SXC16-M125	SXC20-M125	
13.0			SXC16-M130	SXC20-M130	
13.5			SXC16-M135	SXC20-M135	
14.0			SXC16-M140	SXC20-M140	
14.5			SXC16-M145	SXC20-M145	
15.0			SXC16-M150	SXC20-M150	
15.5			SXC16-M155	SXC20-M155	
16.0			SXC16-M160	SXC20-M160	SXC25-M160
16.5				SXC20-M165	SXC25-M165
17.0				SXC20-M170	SXC25-M170
17.5				SXC20-M175	SXC25-M175
18.0				SXC20-M180	SXC25-M180
18.5				SXC20-M185	SXC25-M185
19.0				SXC20-M190	SXC25-M190
19.5				SXC20-M195	SXC25-M195
20.0				SXC20-M200	SXC25-M200
20.5					SXC25-M205
21.0					SXC25-M210
21.5					SXC25-M215
22.0					SXC25-M220
22.5					SXC25-M225
23.0					SXC25-M230
23.5					SXC25-M235
24.0					SXC25-M240
24.5					SXC25-M245
25.0					SXC25-M250
25.4					SXC25-M254

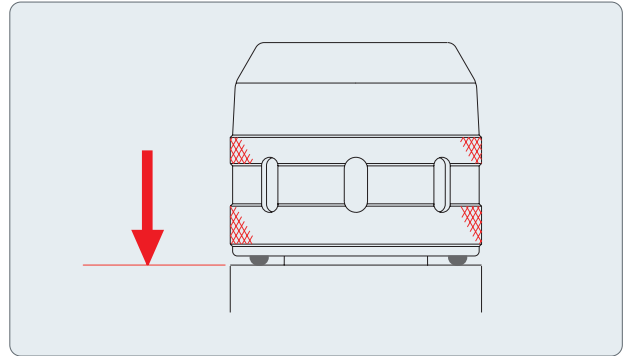
* Above chart refers to SXC coolant caps featured in the previous page.

** Please ask for availability on SX20 before ordering.

Information

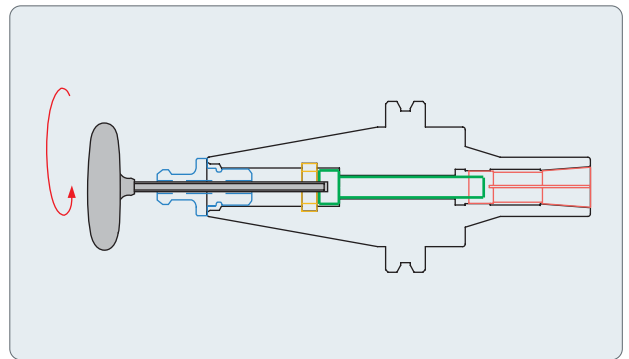
How to use MC

1. Clean up the I.D. of the MC, I.D. and O.D. of the collet and the cutter shank.
2. Insert the collet or the cutter shank in the I.D. of the MC.
3. Tighten the nut using MCW wrench. Tighten the nut all the way down until the o-ring located at the bottom of the nut kisses the flange of the body.
4. Do not tighten the nut after o-ring kisses the flange.



How to use MX

1. Clean up the taper bore of the chuck, O.D and I.D. of MX collet and cutter shank by using air blow.
2. Insert wrench from the back of the holder or through coolant hole of the pull stud. Pull the collet into the chuck by rotating the wrench clockwise. Tightening torque is 42-63 Nm.



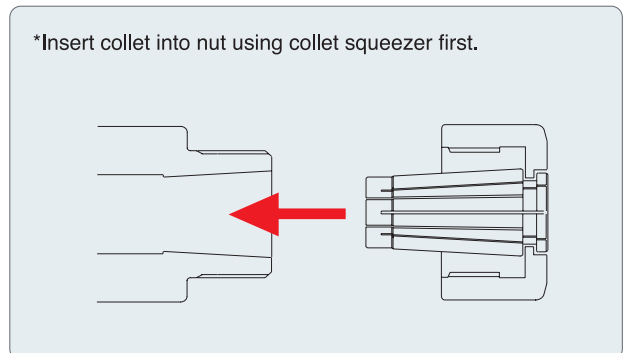
How to use VX

1. Turn locking collar counter-clockwise until it stops by hand.
2. Insert collet and turn clockwise by hand.
3. Turn collet until it stops or reaches 3mm from the face of the chuck by hand.
4. Insert cutter, do not allow the cutter to rest on the bottom, while holding the cutter hand tighten the locking collar clockwise until the locking collar holds the tool.
5. Tighten locking collar to 108N/m Maximum by wrench. Do not over tighten!



How to use SX

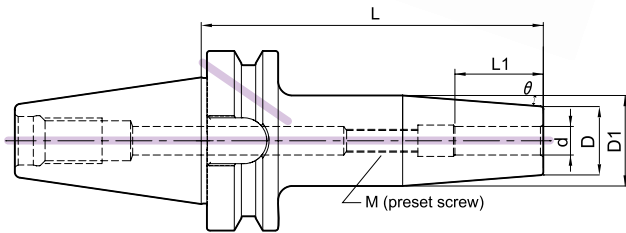
1. Clean up the taper bore of the chuck, O.D. and I.D. of SX collet and cutter shank by using air blow.
2. Insert collet into nut using collet squeezer first.
3. Put nut and collet into the bore of the chuck.
4. Insert cutter into the collet.
5. Tighten the nut. Refer to the tightening torques shown right.



size	Nm
SX 6	29 - 39
SX10	44 - 58
SX16	73 - 83
SX25	88 - 97



Shrink fit holder

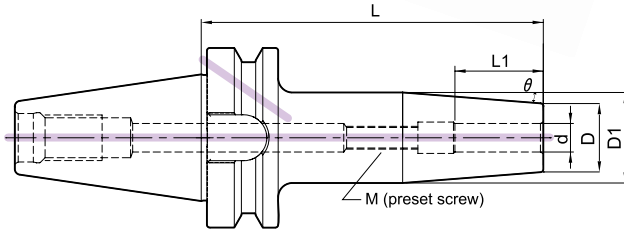
BT


- Taper contact 80% or better
- TIR Taper to Bore $3.0\mu\text{m}$
- Designed for tools with h6 shank tolerance
- Taper 30 DIN AD standard
- Taper 40 DIN AD/B standard
- Prset screw included
- Taper 30 & 40 dinamicly balanced to G2.5 at 25,000rpm
- Nose angle $\theta=4.5^\circ$ standard
- Nose angle $\theta=3.0^\circ$ available upon request
Please add "-3.0" at the end of Code No..
ex) BT40-SDM08-090-3.0
- Balanceable available upon request
Please add "-B" at the end of Code No..
ex) BT40-SDM08-090-B



P.65

Taper	Code No.	ϕd	L	ϕD	$\phi D1$	L1
BT30	BT30-SDM03-080	3	80	10	18	15
	BT30-SDM04-080	4	80	10	18	20
	BT30-SDM06-080	6	80	21	27	22
	BT30-SDM08-080	8	80	21	27	26
	BT30-SDM10-080	10	80	24	32	31
	BT30-SDM12-080	12	80	24	32	36
	BT30-SDM16-080	16	80	27	34	36
	BT30-SDM18-090	18	90	33	42	39
	BT30-SDM20-090	20	90	33	42	39
BT40	BT40-SDM03-080	3	80	10	18	15
	BT40-SDM03-160	3	160	10	20	15
	BT40-SDM04-080	4	80	10	18	20
	BT40-SDM04-160	4	160	10	20	22
	BT40-SDM06-090	6	90	21	27	22
	BT40-SDM06-160	6	160	21	27	22
	BT40-SDM08-090	8	90	21	27	26
	BT40-SDM08-160	8	160	21	27	26
	BT40-SDM10-090	10	90	24	32	31
	BT40-SDM10-160	10	160	24	32	31
	BT40-SDM12-090	12	90	24	32	36
	BT40-SDM12-160	12	160	24	32	36
	BT40-SDM16-090	16	90	27	34	36
	BT40-SDM16-160	16	160	27	34	36
	BT40-SDM18-090	18	90	33	42	39
	BT40-SDM18-160	18	160	33	42	39
	BT40-SDM20-090	20	90	33	42	39
	BT40-SDM20-160	20	160	33	42	39
	BT40-SDM25-100	25	100	44	53	47
	BT40-SDM25-160	25	160	44	53	47
BT40-SDM32-100	32	100	44	53	47	



- Taper contact 80% or better
- TIR Taper to Bore 3.0 μ m
- Designed for tools with h6 shank tolerance
- Taper 50 DIN AD/B standard
- Preset screw included
- Taper 50 dynamically balanced to G2.5 at 20,000rpm
- Nose angle $\theta=4.5^\circ$ standard
- Nose angle $\theta=3.0^\circ$ available upon request
Please add "-3.0" at the end of Code No..
ex) BT50-SDM08-100-3.0
- Balanceable available upon request
Please add "-B" at the end of Code No..
ex) BT50-SDM08-100-B

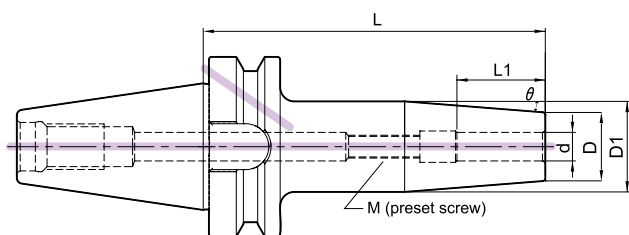


P.65

Taper	Code No.	ϕd	L	ϕD	$\phi D1$	L1
BT50	BT50-SDM03-100	3	100	10	18	15
	BT50-SDM03-160	3	160	10	20	15
	BT50-SDM04-100	4	100	10	18	20
	BT50-SDM04-160	4	160	10	20	22
	BT50-SDM06-100	6	100	21	27	22
	BT50-SDM06-160	6	160	21	27	22
	BT50-SDM08-100	8	100	21	27	26
	BT50-SDM08-160	8	160	21	27	26
	BT50-SDM10-100	10	100	24	32	31
	BT50-SDM10-160	10	160	24	32	31
	BT50-SDM12-100	12	100	24	32	36
	BT50-SDM12-160	12	160	24	32	36
	BT50-SDM16-100	16	100	27	34	36
	BT50-SDM16-160	16	160	27	34	36
	BT50-SDM18-100	18	100	33	42	39
	BT50-SDM18-160	18	160	33	42	39
	BT50-SDM20-100	20	100	33	42	39
	BT50-SDM20-160	20	160	33	42	39
	BT50-SDM25-100	25	100	44	53	47
	BT50-SDM25-160	25	160	44	53	47
BT50-SDM32-100	32	100	44	53	47	
BT50-SDM32-160	32	100	44	53	47	



Shrink fit holder

SK


- Taper contact 80% or better
- TIR Taper to Bore $3.0\mu\text{m}$
- Designed for tools with h6 shank tolerance
- Taper 40 & 50 DIN AD/B standard
- Prset screw included
- Taper 40 dynamically balanced to G2.5 at 25,000rpm
- Taper 50 dynamically balanced to G2.5 at 20,000rpm
- Nose angle $\theta=4.5^\circ$ standard
- Nose angle $\theta=3.0^\circ$ available upon request
Please add "-3.0" at the end of Code No..
ex) SK40-SDM08-090-3.0
- Balanceable available upon request
Please add "-B" at the end of Code No..
ex) SK40-SDM08-090-B

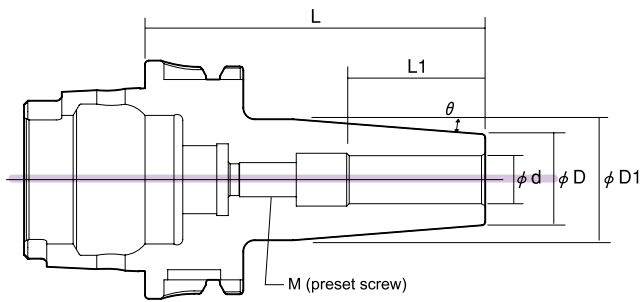


P.65

Taper	Code No.	ϕd	L	ϕD	$\phi D1$	L1
SK40	SK40-SDM03-080	3	80	10	18	15
	SK40-SDM03-160	3	160	10	20	15
	SK40-SDM04-080	4	80	10	18	20
	SK40-SDM04-160	4	160	10	20	22
	SK40-SDM06-090	6	90	21	27	22
	SK40-SDM06-160	6	160	21	27	22
	SK40-SDM08-090	8	90	21	27	26
	SK40-SDM08-160	8	160	21	27	26
	SK40-SDM10-090	10	90	24	32	31
	SK40-SDM10-160	10	160	24	32	31
	SK40-SDM12-090	12	90	24	32	36
	SK40-SDM12-160	12	160	24	32	36
	SK40-SDM16-090	16	90	27	34	36
	SK40-SDM16-160	16	160	27	34	36
	SK40-SDM18-090	18	90	33	42	39
	SK40-SDM18-160	18	160	33	42	39
	SK40-SDM20-090	20	90	33	42	39
	SK40-SDM20-160	20	160	33	42	39
	SK40-SDM25-100	25	100	44	53	47
	SK40-SDM25-160	25	160	44	53	47
SK40-SDM32-100	32	100	44	53	47	
SK50	SK50-SDM03-100	3	100	10	18	15
	SK50-SDM03-160	3	160	10	20	15
	SK50-SDM04-100	4	100	10	18	20
	SK50-SDM04-160	4	160	10	20	22
	SK50-SDM06-100	6	100	21	27	22
	SK50-SDM06-160	6	160	21	27	22
	SK50-SDM08-100	8	100	21	27	26
	SK50-SDM08-160	8	160	21	27	26
	SK50-SDM10-100	10	100	24	32	31
	SK50-SDM10-160	10	160	24	32	31
	SK50-SDM12-100	12	100	24	32	36
	SK50-SDM12-160	12	160	24	32	36
	SK50-SDM16-100	16	100	27	34	36
	SK50-SDM16-160	16	160	27	34	36
	SK50-SDM18-100	18	100	33	42	39
	SK50-SDM18-160	18	160	33	42	39
	SK50-SDM20-100	20	100	33	42	39
	SK50-SDM20-160	20	160	33	42	39
	SK50-SDM25-100	25	100	44	53	47
	SK50-SDM25-160	25	160	44	53	47
SK50-SDM32-100	32	100	44	53	47	
SK50-SDM32-160	32	100	44	53	47	



Shrink fit holder

HSK


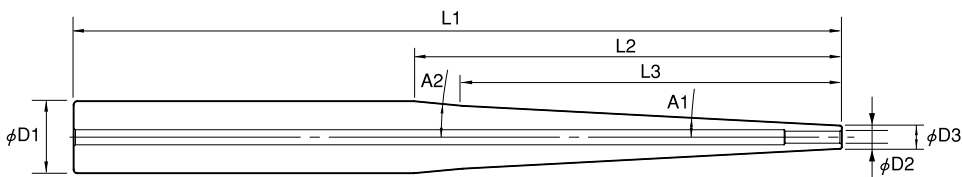
- Taper contact 80% or better
- TIR Taper to Bore 3.0μm
- Designed for tools with h6 shank tolerance
- Prset screw included
- Taper HSK63A dinamically balanced to G2.5 at 25,000rpm
- Nose angle $\theta=4.5^\circ$ standard
- Nose angle $\theta=3.0^\circ$ available upon request
Please add "-3.0" at the end of Code No..
ex) HSK63A-SDM08-080-3.0
- Balanceable available upon request
Please add "-B" at the end of Code No..
ex) HSK63A-SDM08-080-B

27-28
PAGE

Shrink fit holder

Taper	Code No.	ϕd	L	ϕD	$\phi D1$	L1
HSK63A	HSK63A-SDM03-080	3	80	10	18	15
	HSK63A-SDM03-160	3	160	10	20	15
	HSK63A-SDM04-080	4	80	10	18	20
	HSK63A-SDM04-160	4	160	10	20	22
	HSK63A-SDM06-080	6	80	21	27	22
	HSK63A-SDM06-160	6	160	21	27	22
	HSK63A-SDM08-080	8	80	21	27	26
	HSK63A-SDM08-160	8	160	21	27	26
	HSK63A-SDM10-085	10	85	24	32	31
	HSK63A-SDM10-160	10	160	24	32	31
	HSK63A-SDM12-090	12	90	24	32	36
	HSK63A-SDM12-160	12	160	24	32	36
	HSK63A-SDM16-095	16	95	27	34	36
	HSK63A-SDM16-160	16	160	27	34	36
	HSK63A-SDM20-100	20	100	33	42	39
	HSK63A-SDM20-160	20	160	33	42	39
	HSK63A-SDM25-115	25	115	44	53	47
HSK63A-SDM25-160	25	160	44	53	47	

Shrink fit Straight shank



Code No.	$\phi D1$	$\phi D2$	$\phi D3$	L1	L2	L3	A1	A2
S10-SN03-080	10	3	6	80	35		2.8	
S10-SN04-080		4	8	80	35		1.5	
S16-SN03-140	16	3	6	140	67		3	
S16-SN04-140		4	8	140	67		3	
S16-SN06-140		6	10	140	67		3	
S16-SN08-140		8	12	140	67		3	
S20-SN03-200	20	3	6	200	113		3	
S20-SN04-200		4	8	200	113	100	2.9	5.4
S20-SN06-200		6	10	200	113		2.5	
S20-SN08-200		8	12	200	113		2.5	
S25-SN10-200	25	10	12	200	110	97	3	6
S25-SN12-200		12	15	200	110	97	2	6

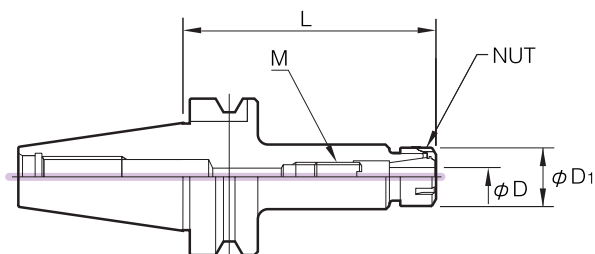


ER collet chuck

BT

Spannzangenfutter ER Type
Mandrins A Pines Type ER
Mandrini Portapinza Tipo ER

- Min. 80% taper fit
- Maximum Taper to Taper TIR 3.0 μ m
- Taper 30 dynamically balanced to G6.3 at 20,000rpm
- "SG" = dynamically balanced to G2.5 at 20,000rpm with balanced nut



Taper	Code No.	ϕD	$\phi D1$	L	M	Nut	Adjust Screw	Collet
BT30	BT30-ER11H-060	0.5~7.0	19	60	M8	ERN11H	ASC-ER11	ER11
	BT30-ER11H-100			100				
	BT30-ER16-070	0.5~10.0	28	70	7/16"-20	ERN16	ASC-ER16	ER16
	BT30-ER16-070 SG			100		ERN16SG		
	BT30-ER16-100					ERN16		
	BT30-ER16-100 SG			ERN16SG				
	BT30-ER20-070	0.5~13.0	35	70	9/16"-18	ERN20	ASC-ER20	ER20
	BT30-ER20-070 SG			100		ERN20SG		
	BT30-ER20-100					ERN20		
	BT30-ER20-100 SG			ERN20SG				
	BT30-ER25-070	0.5~16.0	42	70	11/16"-16	ERN25	ASC-ER25	ER25
	BT30-ER25-070 SG			100		ERN25SG		
	BT30-ER25-100					ERN25		
	BT30-ER25-100 SG			ERN25SG				
	BT30-ER32-070	1.0~20.0	50	70	15/16"-16	ERN32	ASC-ER32	ER32
	BT30-ER32-070 SG					ERN32SG		

* Order collet & Wrench separately.

* "H" = Hex nut.

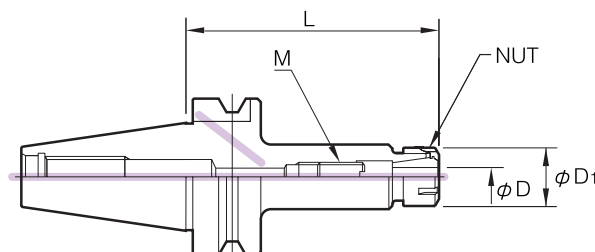


ER collet chuck

BT

Spannzangenfutter ER Type
Mandrins A Pincas Type ER
Mandrini Portapinza Tipo ER

- Min. 80% taper fit
- Maximum Taper to Taper TIR 3.0 μ m
- DIN AD/B standard
- Taper 40 dynamically balanced to G6.3 at 20,000rpm
- "SG" = dynamically balanced to G2.5 at 20,000rpm with balanced nut



Taper	Code No.	φD	φD1	L	M	Nut	Adjust Screw	Collet	
BT40	BT40-ER11H-060	0.5~7.0	19	60	M8	ERN11H	ASC-ER11	ER11	
	BT40-ER11H-100			100					
	BT40-ER11H-150			150					
	BT40-ER16-060	0.5~10.0	28	60	7/16"-20	ERN16	ASC-ER16	ER16	
	BT40-ER16-060 SG			100		ERN16SG			
	BT40-ER16-100					ERN16			
	BT40-ER16-100 SG					ERN16SG			
	BT40-ER16-160					160			ERN16
	BT40-ER16-160 SG								ERN16SG
	BT40-ER20-070	0.5~13.0	35	70	9/16"-18	ERN20	ASC-ER20	ER20	
	BT40-ER20-070 SG			100		ERN20SG			
	BT40-ER20-100					ERN20			
	BT40-ER20-100 SG					ERN20SG			
	BT40-ER20-160					160			ERN20
	BT40-ER20-160 SG								ERN20SG
	BT40-ER25-060	0.5~16.0	42	60	11/16"-16	ERN25	ASC-ER25	ER25	
	BT40-ER25-060 SG			100		ERN25SG			
	BT40-ER25-100					ERN25			
	BT40-ER25-100 SG					ERN25SG			
	BT40-ER25-160					160			ERN25
	BT40-ER25-160 SG								ERN25SG
	BT40-ER32-075	1.0~20.0	50	75	15/16"-16	ERN32	ASC-ER32	ER32	
	BT40-ER32-075 SG			100		ERN32SG			
	BT40-ER32-100					ERN32			
	BT40-ER32-100 SG					ERN32SG			
	BT40-ER32-160					160			ERN32
	BT40-ER32-160 SG								ERN32SG
	BT40-ER40-080	2.0~30.0	63	80	1-1/8"-16	ERN40	ASC-ER40	ER40	
BT40-ER40-080 SG	160			ERN40SG					
BT40-ER40-160				ERN40					
BT40-ER40-160 SG				ERN40SG					

* Order collet & Wrench separately.

* "H" = Hex nut.

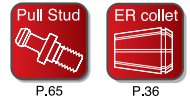
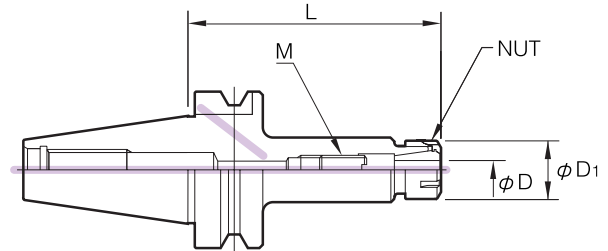


ER collet chuck

BT

Spannzangenfutter ER Type
Mandrins A Pincas Type ER
Mandrini Portapinza Tipo ER

- Min. 80% taper fit
- Maximum Taper to Taper TIR $3\mu\text{m}$
- DIN AD/B standard
- Taper 50 dynamically balanced to G6.3 at 15,000rpm

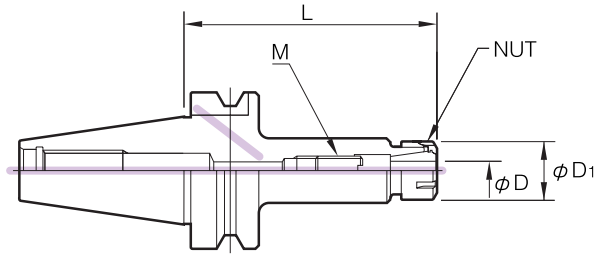


Taper	Code No.	ϕD	$\phi D1$	L	M	Nut	Adjust Screw	Collet
BT50	BT50-ER16-063	0.5~10.0	28	63	7/16"-20	ERN16	ASC-ER16	ER16
	BT50-ER16-100			100				
	BT50-ER16-160			160				
	BT50-ER20-070	0.5~13.0	35	70	9/16"-18	ERN20	ASC-ER20	ER20
	BT50-ER20-105			105				
	BT50-ER20-150			150				
	BT50-ER20-200			200				
	BT50-ER20-250			250				
	BT50-ER20-300			300				
	BT50-ER20-350			350				
	BT50-ER25-070	0.5~16.0	42	70	11/16"-16	ERN25	ASC-ER25	ER25
	BT50-ER25-100			100				
	BT50-ER25-150			150				
	BT50-ER25-200			200				
	BT50-ER25-250			250				
	BT50-ER25-300			300				
	BT50-ER25-350	350						
	BT50-ER32-070	1.0~20.0	50	70	15/16"-16	ERN32	ASC-ER32	ER32
	BT50-ER32-100			100				
	BT50-ER32-150			150				
	BT50-ER32-200			200				
	BT50-ER32-250			250				
	BT50-ER32-300			300				
	BT50-ER32-350	350						
	BT50-ER40-080	2.0~30.0	63	80	1-1/8"-16	ERN40	ASC-ER40	ER40
	BT50-ER40-100			100				
	BT50-ER40-150			150				
	BT50-ER40-200			200				
BT50-ER40-250	250							
BT50-ER40-300	300							
BT50-ER40-350	350							

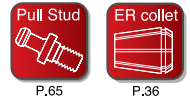
* Order collet & Wrench separately.



ER collet chuck



- Min. 80% taper fit
- Maximum Taper to Taper TIR 3µm
- DIN AD/B standard
- Taper 40 dynamically balanced to G6.3 at 20,000rpm
- Taper 50 dynamically balanced to G6.3 at 15,000rpm
- "SG" = dynamically balanced to G2.5 at 20,000rpm with balanced nut



Taper	Code No.	φD	φD1	L	M	Nut	Adjust Screw	Collet						
SK40	SK40-ER11H-060	0.5~7.0	19	60	M8	ERN11H	ASC-ER11	ER11						
	SK40-ER11H-100			100										
	SK40-ER16-063	0.5~10.0	28	63	7/16"-20	ERN16	ASC-ER16	ER16						
	SK40-ER16-063 SG			ERN16SG										
	SK40-ER16-100								100					
	SK40-ER16-100 SG			ERN16SG										
	SK40-ER16-160								160					
	SK40-ER16-160 SG			ERN16SG										
	SK40-ER25-060								0.5~16.0	42	60	11/16"-16	ERN25	ASC-ER25
	SK40-ER25-060 SG			ERN25SG										
	SK40-ER25-100	100												
	SK40-ER25-100 SG	ERN25SG												
	SK40-ER25-160		160											
	SK40-ER25-160 SG	ERN25SG												
	SK40-ER32-070		1.0~20.0	50	70	15/16"-16	ERN32	ASC-ER32	ER32					
	SK40-ER32-070 SG	ERN32SG												
	SK40-ER32-100				100									
	SK40-ER32-100 SG	ERN32SG												
	SK40-ER32-160				160									
	SK40-ER32-160 SG	ERN32SG												
SK40-ER40-080	2.0~30.0		63	80	1-1/8"-16	ERN40	ASC-ER40	ER40						
SK40-ER40-080 SG		ERN40SG												
SK40-ER40-160				160										
SK40-ER40-160 SG		ERN40SG												
SK50	SK50-ER16-063		0.5~10.0	28	63	7/16"-20	ERN16	ASC-ER16	ER16					
	SK50-ER16-100	100												
	SK50-ER16-160	160												
	SK50-ER25-060	0.5~16.0	42	60	11/16"-16	ERN25	ASC-ER25	ER25						
	SK50-ER25-100			100										
	SK50-ER25-160			160										
	SK50-ER32-070	1.0~20.0	50	70	15/16"-16	ERN32	ASC-ER32	ER32						
	SK50-ER32-100			100										
	SK50-ER32-160			160										
	SK50-ER40-080	2.0~30.0	63	80	1-1/8"-16	ERN40	ASC-ER40	ER40						
	SK50-ER40-100			100										
	SK50-ER40-160			160										

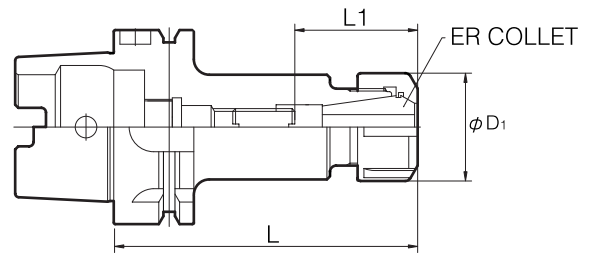
* Order collet & Wrench separately.
 * "H" = Hex nut.



ER collet chuck

HSK

● HSK63A dynamically balanced to G6.3 at 20,000rpm



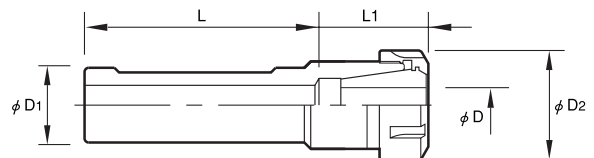
Taper	Code No.	φD	φD1	L	M	Nut	Adjust Screw	Collet
HSK63A	HSK 63A-ER16 -100	0.5~10.0	28	100	7/16"-20	ERN16	ASC-ER16	ER16
	HSK 63A-ER16 -160			160				
	HSK 63A-ER20-100	0.5~13.0	35	100	9/16"-18	ERN20	ASC-ER20	ER20
	HSK 63A-ER20-160			160				
	HSK 63A-ER25-100	0.5~16.0	42	100	11/16"-16	ERN25	ASC-ER25	ER25
	HSK 63A-ER25-160			160				
	HSK 63A-ER32-100	1.0~20.0	50	100	15/16"-16	ERN32	ASC-ER32	ER32
	HSK 63A-ER32-160			160				
HSK 63A-ER40-120	2.0~30.0	63	120	1-1/8"-16	ERN40	ASC-ER40	ER40	
HSK 63A-ER40-160			160					

* Order collet & Wrench separately.

ER straight shank

ER Collet Chuck for NC Lathe

- For Drill, Center Drill, Boring Bar
- 10μm runout at 4XD from chuck nose



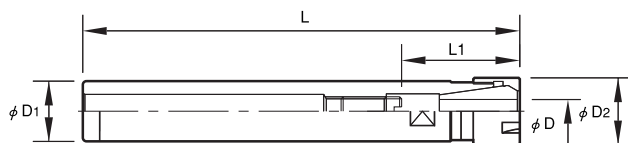
Code No.	φD (Range)	φD1	φD2	L	L1	Collet
SNL20-ER16	0.5~10.0	20	28	60	32	ER16
SNL25-ER16	0.5~10.0	25	28	65	32	ER16
SNL25-ER25	0.5~16.0	25	42	65	32	ER25
SNL32-ER20	0.5~13.0	32	35	70	32	ER20
SNL32-ER25	0.5~16.0	32	42	70	32	ER25
SNL32-ER32	1.0~20.0	32	50	70	38	ER32



ER straight shank

- For small dia. drilling and End Milling.
- Can be used with MC Milling chuck.

Slim type ER Collet Chuck with straight shank



Code No.	ϕD	$\phi D1$	$\phi D2$	L	Collet	
S12-ER11H-140	0.5~7.0	12	19	140	ER11	
S12-ER11M-140			16	140		
S16-ER11H-140	0.5~7.0	16	19	140	ER11	
S16-ER11M-140			16	140		
S16-ER16-060	0.5~10.0	20	28	60	ER16	
S20-ER16-050				50		
S20-ER16-100				100		
S20-ER16-140				140		
S20-ER16M-140				140		
S20-ER20-063	0.5~13.0	25	35	63	ER20	
S25-ER20-140				140		
S25-ER25-050	0.5~16.0	25	42	50	ER25	
S25-ER32-050	1.0~20.0			50	50	ER32
S25-ER40-050	2.0~30.0			63	50	ER40
S32-ER32-060	1.0~20.0	32	50	60	ER32	
S32-ER32-140				140		

* Spanner is available as an option.

* "H" = Hex nut.

* "M" = Mini nut.

Accessories

Parts

ER	Nut	Nut description	Adjust screw	Wrench	Wrench type
11	ERN11H	ER11Hex nut	ASC-ER11	ERW-11H	Hex type
	ERN11M	ER11 Mini nut		ERW-11M	Mini E type
16	ERN16	ER16 nut E type	ASC-ER16	ERW-16E	E type
	ERN16H	ER16 Hex nut		ERW-16H	Hex type
	ERN16M	ER16 Mini nut		ERW-16M	Mini E type
20	ERN20	ER20 nut E type	ASC-ER20	ERW-20E	E type
25	ERN25	ER25 nut E type	ASC-ER25	ERW-25E	E type
32	ERN32	ER32 nut E type	ASC-ER32	ERW-32E	E type
40	ERN40	ER40 nut E type	ASC-ER40	ERW-40E	E type



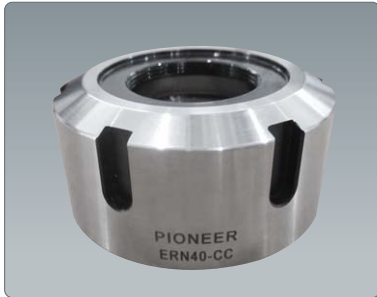
ER Coolant nut with SXC coolant cap

Front threaded seal for air, coolant or keeping chips & swarf from entering the front of the collet.

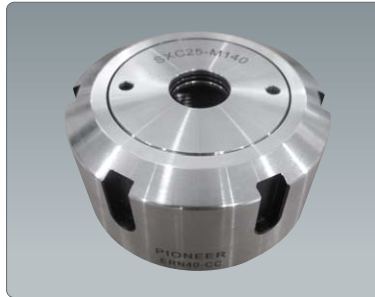
Features



- O-ring seal for pressure up to 10.3 Mpa
- Prevent chips, dust & swarf from entering holders
- Jet Blast for non-coolant cutting tools available upon request



ER coolant nut



ER coolant nut w / SXC coolant cap

Code No.	description	SXC coolant cap to use
ERN11-CC	ER11 Hex coolant nut	SXC06-ID
ERN16-CC	ER16 Hex coolant nut	SXC10-ID
ERN20-CC	ER20 Hex coolant nut	SXC16-ID
ERN25-CC	ER25 E type coolant nut	SXC16-ID
ERN32-CC	ER32 E type coolant nut	SXC25-ID
ERN40-CC	ER40 E type coolant nut	SXC25-ID

* Please refer to "how to assemble" instruction on page.22 when using.

* Please refer to the chart for SXC coolant caps on page.23 when ordering.



ER collet

ER precision collet.

● DIN6499 Form B.



Range(mm)	ER08	ER11
0.5~1.0	ER08-M010 *	ER11-M010
1.0~1.5	ER08-M015 *	ER11-M015
1.5~2.0	ER08-M020 *	ER11-M020
2.0~2.5	ER08-M025 *	ER11-M025
2.5~3.0	ER08-M030 *	ER11-M030
3.0~3.5	ER08-M035 *	ER11-M035
3.5~4.0	ER08-M040	ER11-M040
4.0~4.5	ER08-M045	ER11-M045
4.5~5.0	ER08-M050	ER11-M050
5.0~5.5		ER11-M055
5.5~6.0		ER11-M060
6.0~6.5		ER11-M065
6.5~7.0		ER11-M070

* Not regular stock items.

Range(mm)	ER16	ER20	ER25	ER32	ER40
0.5~1.0	ER16-M010	ER20-M010 *	ER25-M010 *		
1.0~2.0	ER16-M020	ER20-M020	ER25-M020	ER32-M020 *	
2.0~3.0	ER16-M030	ER20-M030	ER25-M030	ER32-M030	
3.0~4.0	ER16-M040	ER20-M040	ER25-M040	ER32-M040	ER40-M040
4.0~5.0	ER16-M050	ER20-M050	ER25-M050	ER32-M050	ER40-M050
5.0~6.0	ER16-M060	ER20-M060	ER25-M060	ER32-M060	ER40-M060
6.0~7.0	ER16-M070	ER20-M070	ER25-M070	ER32-M070	ER40-M070
7.0~8.0	ER16-M080	ER20-M080	ER25-M080	ER32-M080	ER40-M080
8.0~9.0	ER16-M090	ER20-M090	ER25-M090	ER32-M090	ER40-M090
9.0~10.0	ER16-M100	ER20-M100	ER25-M100	ER32-M100	ER40-M100
10.0~11.0		ER20-M110	ER25-M110	ER32-M110	ER40-M110
11.0~12.0		ER20-M120	ER25-M120	ER32-M120	ER40-M120
12.0~13.0		ER20-M130	ER25-M130	ER32-M130	ER40-M130
13.0~14.0			ER25-M140	ER32-M140	ER40-M140
14.0~15.0			ER25-M150	ER32-M150	ER40-M150
15.0~16.0			ER25-M160	ER32-M160	ER40-M160
16.0~17.0				ER32-M170	ER40-M170
17.0~18.0				ER32-M180	ER40-M180
18.0~19.0				ER32-M190	ER40-M190
19.0~20.0				ER32-M200	ER40-M200
20.0~21.0					ER40-M210
21.0~22.0					ER40-M220
22.0~23.0					ER40-M230
23.0~24.0					ER40-M240
24.0~25.0					ER40-M250
25.0~26.0					ER40-M260



SER rubber sealed ER collet



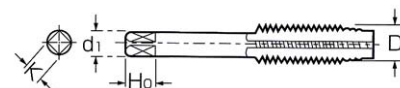
- Coolant sealed by rubber.
- Seal pressure up to 5.2Mpa.

ID(mm)	SER16	SER20	SER25	SER32	SER40
3.0	SER16-M030	SER20-M030	SER25-M030	SER32-M030	
3.5	SER16-M035	SER20-M035	SER25-M035	SER32-M035	
4.0	SER16-M040	SER20-M040	SER25-M040	SER32-M040	
4.5	SER16-M045	SER20-M045	SER25-M045	SER32-M045	
5.0	SER16-M050	SER20-M050	SER25-M050	SER32-M050	
5.5	SER16-M055	SER20-M055	SER25-M055	SER32-M055	
6.0	SER16-M060	SER20-M060	SER25-M060	SER32-M060	SER40-M060
6.5	SER16-M065	SER20-M065	SER25-M065	SER32-M065	SER40-M065
7.0	SER16-M070	SER20-M070	SER25-M070	SER32-M070	SER40-M070
7.5	SER16-M075	SER20-M075	SER25-M075	SER32-M075	SER40-M075
8.0	SER16-M080	SER20-M080	SER25-M080	SER32-M080	SER40-M080
8.5	SER16-M085	SER20-M085	SER25-M085	SER32-M085	SER40-M085
9.0	SER16-M090	SER20-M090	SER25-M090	SER32-M090	SER40-M090
9.5	SER16-M095	SER20-M095	SER25-M095	SER32-M095	SER40-M095
10.0	SER16-M100	SER20-M100	SER25-M100	SER32-M100	SER40-M100
10.5		SER20-M105	SER25-M105	SER32-M105	SER40-M105
11.0		SER20-M110	SER25-M110	SER32-M110	SER40-M110
11.5		SER20-M115	SER25-M115	SER32-M115	SER40-M115
12.0		SER20-M120	SER25-M120	SER32-M120	SER40-M120
12.5		SER20-M125	SER25-M125	SER32-M125	SER40-M125
13.0		SER20-M130	SER25-M130	SER32-M130	SER40-M130
13.5			SER25-M135	SER32-M135	SER40-M135
14.0			SER25-M140	SER32-M140	SER40-M140
14.5			SER25-M145	SER32-M145	SER40-M145
15.0			SER25-M150	SER32-M150	SER40-M150
15.5			SER25-M155	SER32-M155	SER40-M155
16.0			SER25-M160	SER32-M160	SER40-M160
16.5				SER32-M165	SER40-M165
17.0				SER32-M170	SER40-M170
17.5				SER32-M175	SER40-M175
18.0				SER32-M180	SER40-M180
18.5				SER32-M185	SER40-M185
19.0				SER32-M190	SER40-M190
19.5				SER32-M195	SER40-M195
20.0				SER32-M200	SER40-M200
20.5					SER40-M205
21.0					SER40-M210
21.5					SER40-M215
22.0					SER40-M220
22.5					SER40-M225
23.0					SER40-M230
23.5					SER40-M235
24.0					SER40-M240
24.5					SER40-M245
25.0					SER40-M250
25.5					SER40-M255
26.0					SER40-M260



ER rigid tapping collet

● JIS, ISO & DIN standard available.



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PAGE

ER collet chuck

DIN 374 /376	DIN 352 /2181	DIN371	φd1	K(sq)	TER16	TER20	TER25	TER32	TER40
	M1-M1.8	M1-M1.8	2.5	2.1	TER16D-025	TER20D-025	TER25D-025		
	M2-M2.5	M2-M2.5	2.8	2.1	TER16D-028	TER20D-028	TER25D-028		
M5	M3	M3	3.5	2.7	TER16D-035	TER20D-035	TER25D-035	TER32D-035	TER40D-035
M5.5	M3.5	M3.5	4.0	3.0	TER16D-040	TER20D-040	TER25D-040	TER32D-040	TER40D-040
M6	M4	M4	4.5	3.4	TER16D-045	TER20D-045	TER25D-045	TER32D-045	TER40D-045
M7			5.5	4.3	TER16D-055	TER20D-055	TER25D-055	TER32D-055	TER40D-055
M8	M4.5-M8	M4.5-M6	6.0	4.9	TER16D-060	TER20D-060	TER25D-060	TER32D-060	TER40D-060
M9,M10	M9,M10	M7	7.0	5.5	TER16D-070	TER20D-070	TER25D-070	TER32D-070	TER40D-070
M11	M11	M8	8.0	6.2	TER16D-080	TER20D-080	TER25D-080	TER32D-080	TER40D-080
M12	M12	M9	9.0	7.0	TER16D-090	TER20D-090	TER25D-090	TER32D-090	TER40D-090
		M10	10.0	8.0	TER16D-100	TER20D-100	TER25D-100	TER32D-100	TER40D-100
M14	M14		11.0	9.0		TER20D-110	TER25D-110	TER32D-110	TER40D-110
M16	M16		12.0	9.0		TER20D-120	TER25D-120	TER32D-120	TER40D-120
M18	M18		14.0	11.0			TER25D-140	TER32D-140	TER40D-140
M20	M20		16.0	12.0			TER25D-160	TER32D-160	TER40D-160
M22-M24	M22-M24		18.0	14.5				TER32D-180	TER40D-180
M27	M27		20.0	16.0				TER32D-200	TER40D-200
M30	M30		22.0	18.0					TER40D-220
M33	M33		25.0	20.0					TER40D-250
M36	M36		28.0	22.0					
M39-M42	M39-M42		32.0	24.0					

ISO			φd1	K(sq)	TER16	TER20	TER25	TER32	TER40
M3	U No.4	U No.5	3.15	2.50	TER16S-031	TER20S-031	TER25S-031	TER32S-031	TER40S-031
M4	U No.12		4.00	3.15	TER16S-040	TER20S-040	TER25S-040	TER32S-040	TER40S-040
M4.5	U No.8		4.50	3.55	TER16S-045	TER20S-045	TER25S-045	TER32S-045	TER40S-045
M6	U 1/4		6.30	5.00	TER16S-063	TER20S-063	TER25S-063	TER32S-063	TER40S-063
M7	U 3/8		7.10	5.60	TER16S-071	TER20S-071	TER25S-071	TER32S-071	TER40S-071
M8	U 5/16	P 1/8	8.00	6.30	TER16S-080	TER20S-080	TER25S-080	TER32S-080	TER40S-080
M12	U 1/2		9.00	7.10	TER16S-090	TER20S-090	TER25S-090	TER32S-090	TER40S-090
M14	U 9/16		11.20	9.00		TER20S-112	TER25S-112	TER32S-112	TER40S-112
M16	U 5/8	P 3/8	12.50	10.00			TER25S-125	TER32S-125	TER40S-125
M18-M20	U 3/4		14.00	11.20			TER25S-140	TER32S-140	TER40S-140
M22	U 7/8	P 1/2	16.00	12.50			TER25S-160	TER32S-160	TER40S-160
M24	U 1	P 6/8	18.00	14.00					TER40S-180

ISO			φd1	K(sq)	TER16	TER20	TER25	TER32	TER40
M6	U 1/4		6.0	4.5	TER16J-060	TER20J-060	TER25J-060	TER32J-060	TER40J-060
M7,M8			6.2	5.0	TER16J-062	TER20J-062	TER25J-062	TER32J-062	TER40J-062
M11	U 7/16	P1/8, P1/16	8.0	6.0	TER16J-080	TER20J-080	TER25J-080	TER32J-080	TER40J-080
M12			8.5	6.5		TER20J-085	TER25J-085	TER32J-085	TER40J-085
M14,M15	U 9/16		10.5	8.0		TER20J-105	TER25J-105	TER32J-105	TER40J-105
M17			13.0	10.0			TER25J-130	TER32J-130	TER40J-130
M20			15.0	12.0			TER25J-150	TER32J-150	TER40J-150
M22	U 7/8		17.0	13.0				TER32J-170	TER40J-170
M24,M25	P 5/8		19.0	15.0				TER32J-190	TER40J-190
M26,M27	U 1		20.0	15.0				TER32J-200	TER40J-200
M28			21.0	17.0					TER40J-210

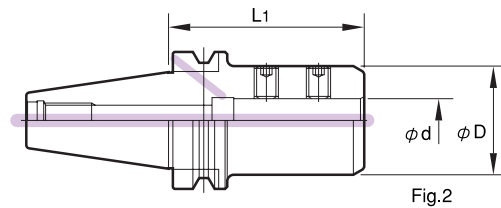
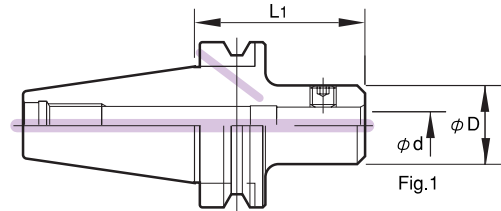


SL side lock holder

BT

Schafffräseraufnahmen
Mandrins Pour Outil
Mandrini Portafrese

- Min. 80% taper fit
- ID bore ground to H4 tolerance.
- Max. TIR at ID bore $3.0\mu\text{m}$
- Taper 30 & 40 dynamically balanced to G6.3 at 20,000rpm
- Taper 30 DIN AD standard
- Taper 40 DIN AD/B standard



P.65

Shank	Code No.	Fig	ϕd	ϕD	L1
BT30	BT30-SL06-050	1	6	25	50
	BT30-SL08-050	1	8	28	50
	BT30-SL10-050	1	10	35	50
	BT30-SL12-050	1	12	42	50
	BT30-SL16-063	1	16	48	63
BT40	BT30-SL20-063	1	20	52	63
	BT40-SL06-050	1	6	25	50
	BT40-SL06-100	1			100
	BT40-SL06-160	1			160
	BT40-SL08-050	1	8	28	50
	BT40-SL08-100	1			100
	BT40-SL08-160	1			160
	BT40-SL10-063	1	10	35	63
	BT40-SL10-100	1			100
	BT40-SL10-160	1			160
	BT40-SL12-063	1	12	42	63
	BT40-SL12-100	1			100
	BT40-SL12-160	1			160
	BT40-SL16-063	1	16	48	63
	BT40-SL16-100	1			100
	BT40-SL16-160	1			160
	BT40-SL18-063	1	18	50	63
	BT40-SL20-063	1	20	52	63
	BT40-SL20-100	1			100
	BT40-SL20-160	1			160
	BT40-SL25-090	2	25	65	90
	BT40-SL32-065	2	32	62	65



SL side lock holder

BT

- Taper 50 dynamically balanced to G6.3 at 15,000rpm
- Taper 50 DIN AD/B standard



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PAGE
Side lock holder

Shank	Code No.	Fig	ϕd	ϕD	L1		
BT50	BT50-SL06-063	1	6	25	63		
	BT50-SL08-063	1	8	28	63		
	BT50-SL10-063	1	10	35	63		
	BT50-SL12-080	1	12	42	80		
	BT50-SL12-100	1			100		
	BT50-SL12-160	1			160		
	BT50-SL12-200	1			200		
	BT50-SL12-250	1			250		
	BT50-SL12-300	1			300		
	BT50-SL12-350	1			350		
	BT50-SL16-080	1			16	48	80
	BT50-SL16-100	1					100
	BT50-SL16-160	1					160
	BT50-SL16-200	1	200				
	BT50-SL16-250	1	250				
	BT50-SL16-300	1	300				
	BT50-SL16-350	1	350				
	BT50-SL20-080	1	20	52			80
	BT50-SL20-100	1			100		
	BT50-SL20-160	1			160		
	BT50-SL20-200	1			200		
	BT50-SL20-250	1			250		
	BT50-SL20-300	1			300		
	BT50-SL20-350	1			350		
	BT50-SL25-100	2	25	65	100		
	BT50-SL25-160	2			160		
	BT50-SL25-200	2			200		
	BT50-SL25-250	2			250		
	BT50-SL25-300	2			300		
	BT50-SL25-350	2			350		
	BT50-SL32-100	2	32	72	100		
	BT50-SL32-160	2			160		
	BT50-SL32-200	2			200		
	BT50-SL32-250	2			250		
	BT50-SL32-300	2			300		
	BT50-SL32-350	2			350		
	BT50-SL40-110	2	40	80	110		

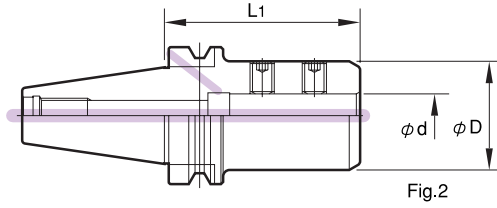
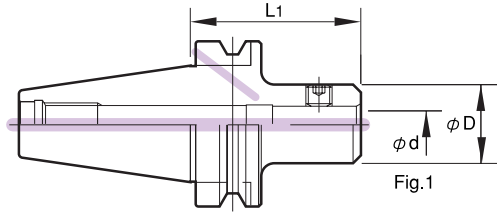
Note :
Fig.1 or Fig.2 in above dimension table refer to the locking bolt arrangement as per Fig.1 or Fig.2 in the previous page.



SL side lock holder

SK

- Taper 30 & 40 dynamically balanced to G6.3 at 20,000rpm
- Taper 40 DIN AD/B standard



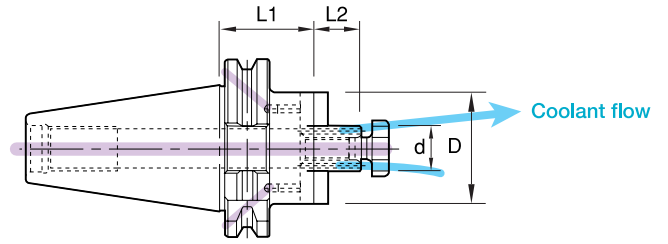
Shank	Code No.	Fig	ϕd	ϕD	L1
SK40	SK40-SL06-050	1	6	25	50
	SK40-SL06-100	1			100
	SK40-SL06-160	1			160
	SK40-SL08-050	1	8	28	50
	SK40-SL08-100	1			100
	SK40-SL08-160	1			160
	SK40-SL10-050	1	10	35	50
	SK40-SL10-100	1			100
	SK40-SL10-160	1			160
	SK40-SL12-050	1	12	42	50
	SK40-SL12-100	1			100
	SK40-SL12-160	1			160
	SK40-SL14-050	1	14	44	50
	SK40-SL14-100	1			100
	SK40-SL14-160	1			160
	SK40-SL16-063	1	16	48	63
	SK40-SL16-100	1			100
	SK40-SL16-160	1			160
	SK40-SL18-063	1	18	50	63
	SK40-SL18-100	1			100
	SK40-SL18-160	1			160
	SK40-SL20-063	1	20	52	63
	SK40-SL20-100	1			100
	SK40-SL20-160	1			160
	SK40-SL25-065	2	25	65	65
	SK40-SL25-100	2			100
	SK40-SL25-160	2			160
	SK40-SL32-065	2	32	72	65
	SK40-SL32-100	2			100
	SK40-SL32-120	2			120
	SK40-SL32-160	2			160



FC Face Mill Arbor (DIN6357)

BT / SK

- Min. 80% taper fit
- DIN AD/B standard
- FX coolant ports version standard



P.65

Shank	Code No.	ϕd	ϕD	L1	L2
BT40 (SK40)	BT40-FC16-040F	16	38	40	17
	BT40-FC16-100F			100	
	BT40-FC16-150F			150	
	BT40-FC22-040F/045	22	48	40/45	19
	BT40-FC22-090/100F			90/100	
	BT40-FC22-150F			150	
	BT40-FC27-040/040F	27	58	40	21
	BT40-FC27-100F			100	
	BT40-FC27-150F			150	
	BT40-FC32-050F	32	78	50	24
	BT40-FC32-100F			100	
BT40-FC40-050F	40	88	50	27	
BT50 (SK50)	BT50-FC22-040F	22	48	40	19
	BT50-FC22-100F			100	
	BT50-FC22-150F			150	
	BT50-FC22-200F			200	
	BT50-FC22-250F			250	
	BT50-FC22-300F			300	
	BT50-FC22-350F			350	
	BT50-FC27-040F	27	58	40	21
	BT50-FC27-100F			100	
	BT50-FC27-150F			150	
	BT50-FC27-200F			200	
	BT50-FC27-250F			250	
	BT50-FC27-300F			300	
	BT50-FC27-350F	350			
	BT50-FC32-050F	32	78	50	24
	BT50-FC32-100F			100	
	BT50-FC32-150F			150	
	BT50-FC32-200F			200	
	BT50-FC40-050F	40	88	50	27
	BT50-FC40-100F			100	
BT50-FC60-080F	60	129	80	40	



FB Face Mill Arbor

BT / SK

- Min. 80% taper fit
- For sandvik Coromant

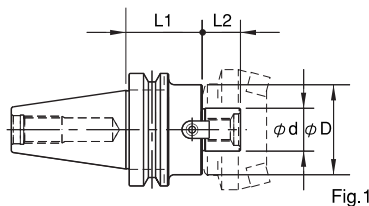


Fig.1

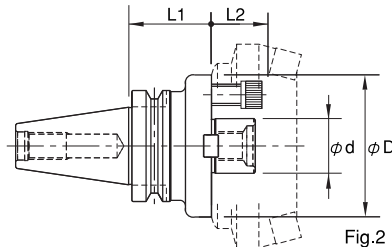
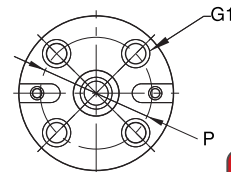


Fig.2



P.65

Shank	Code No.	Fig	ϕd	ϕD	L1	L2
BT40 (SK40)	BT40-FB27-060	1	27	80	60	26
	BT40-FB27-090				90	
	BT40-FB40-060	1	40	85	60	26
BT50 (SK50)	BT50-FB27-045	1	27	80	45	26
	BT50-FB27-090				90	
	BT50-FB27-150				150	
	BT50-FB40-045	1	40	85	45	26
	BT50-FB40-075				75	
	BT50-FB40-105				105	
	BT50-FB60-075				2	

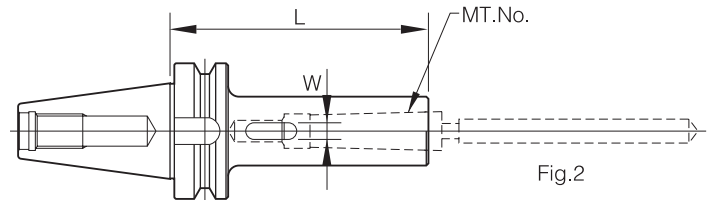
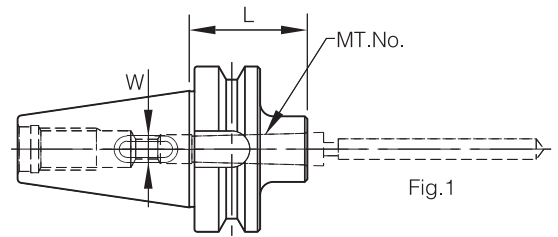


MA Morse Taper Adaptor

BT / SK

Morsekegelhülsen für Werkzeuge mit Austreibblappen
 Adaptateur CM Pour Percage
 Mandrini Portapunte Attacco Cono Morse

● Min. 80% taper fit



Taper	Code No.	MT No.	L	W	Fig
BT40 (SK40)	BT40-MA1-045	1	45	5.6	1
	BT40-MA2-050	2	50	6.6	1
	BT40-MA3-070	3	70	8.4	1
	BT40-MA3-135	3	135	8.4	2
BT50 (SK50)	BT50-MA2-060	2	60	6.6	1
	BT50-MA2-135	2	135	6.6	2
	BT50-MA3-065	3	65	8.4	1
	BT50-MA3-150	3	150	8.4	2
	BT50-MA3-180	3	180	8.4	2
	BT50-MA4-095	4	95	12.4	1
	BT50-MA4-180	4	180	12.4	2
	BT50-MA5-105	5	105	16.5	1



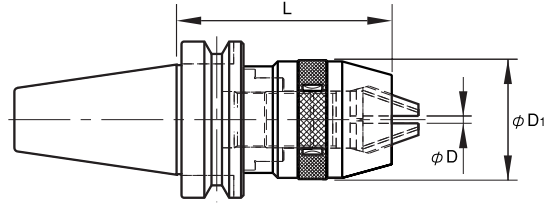
DC Drill chuck

BT / SK

DC-Bohrfutter
Mandrin de Percage
Mandrino di foratura tipo DC



- Min. 80% taper fit
- Compact design with a short nose
- Runout accuracy of 0.04mm at 4×D from chuck nose
- Chucking torque is 2.2-2.5 Kgf.f/m.
- A spanner is provided as standard to insure secure and positive tightening of the jaws.



45-46

Morse Taper Adaptor
DC Drill Chuck

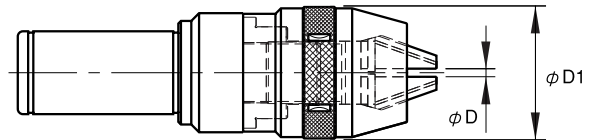
Taper	Code No.	ϕD	$\phi D1$	L
BT30	BT30-DC13-105	1~13	48	105
BT40(SK40)	BT40-DC13-110	1~13	48	110
BT50(SK50)	BT50-DC13-120	1~13	48	120

* Not regular stock items. Please check for availability.

Straight Shank DC Drill Chuck

● Can be used with MC Milling chuck.

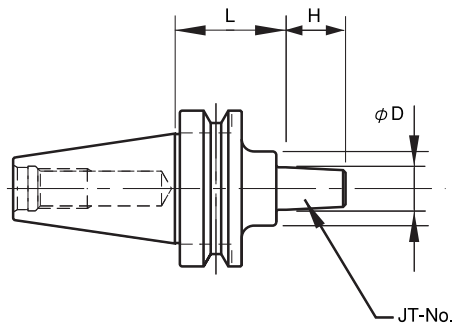
Shank	Code No.	ϕD	$\phi D1$
$\phi 40$	S32-DC13	1~13	48



Drill Chuck Adapter

BT / SK

Jacobskegel Bohrfutter
Adapter Porte-Mandrin de Percage
Adaftatore per mandrino di foratura



Shank	Code No.	JT-No.	ϕD	H	L
BT30	BT30-JT06-030	6	17.17	24	30
	BT40				BT40-JT06-045
	BT40-JT06-090	6	17.17	24	90
BT50	BT50-JT06-045	6	17.17	24	45
	BT50-JT06-105				105

Shank	Code No.	B-No.	ϕD	H	L
SK40	SK40-B16-025	B16	15.733	24	25
	SK40-B16-090				90
SK50	SK50-B16-025	B16	15.733	24	25
	SK50-B16-105				105

* Drill chuck is not included.



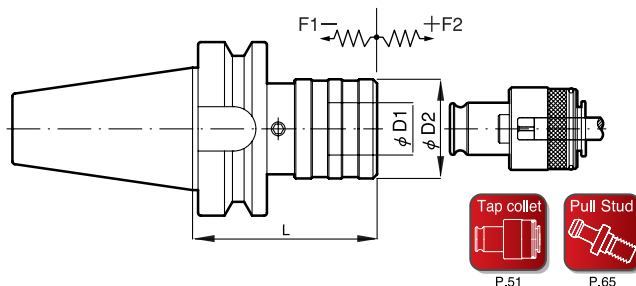
Quick Change Tap Holders

BT

Tension/Compression Tap Holders



- Complete interchangeability with Bilz tap holders and adapters.
- Quick Change on holders and adapters – all in less than a few seconds.
- Proven design for smooth stroke and positive drive – Even under full torque load, the tension compression stroke is full and free.



BT Taper Tension/Compression Tap Holders

Code No.	Tap range		System	L	D1	D2	Float		Tap adapter
	Hand	Pipe					F1	F2	
BT30-TC1-062	M3-M12	1/8	#1	62	19	36	7.5	7.5	TC1
BT40-TC1-067	M3-M12	1/8	#1	67	19	36	7.5	7.5	TC1
BT40-TC1-100	M3-M12	1/8	#1	100	19	36	7.5	7.5	TC1
BT40-TC1-135	M3-M12	1/8	#1	135	19	36	7.5	7.5	TC1
BT40-TC2-094	M8-M20	1/4~1/2	#2	94	31	53	12.5	12.5	TC2
BT50-TC1-077	M3-M12	1/8	#1	77	19	36	7.5	7.5	TC1
BT50-TC1-100	M3-M12	1/8	#1	100	19	36	7.5	7.5	TC1
BT50-TC1-135	M3-M12	1/8	#1	135	19	36	7.5	7.5	TC1
BT50-TC1-165	M3-M12	1/8	#1	165	19	36	7.5	7.5	TC1
BT50-TC2-102	M8-M20	1/4~1/2	#2	102	31	53	12.5	12.5	TC2
BT50-TC3-163	M14-M33	1/2~1"	#3	163	48	78	20.0	20.0	TC3

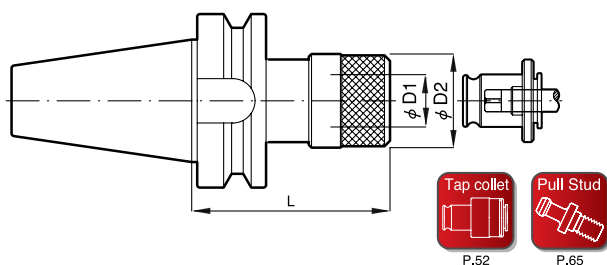
For size 3 tap adapters on BT40 and BT50 spindle, we recommend a combination of end mill holder SL(P.39~40) and S32-TC3 straight shank tap holder (P.50) as a less costly option and for added mating flexibility.

Rigid tap holders

Rigid tap holders



- Complete interchangeability with Bilz tap holders and adapters.
- Quick Change on holders and adapters – all in less than a few seconds.
- For machining centers with synchronized tapping function.



BT Taper Rigid Tap Holders

Code No.	Tap range		System	L	D1	D2	Float		Tap adapter
	Hand	Pipe					F1	F2	
BT30-RT1-067	M3-M12	1/8	#1	67	19	34	—	—	RA1
BT40-RT1-070	M3-M12	1/8	#1	72	19	34	—	—	RA1
BT40-RT2-091	M8-M20	1/4~1/2	#2	91	31	49	—	—	RA2
BT50-RT1-078	M3-M12	1/8	#1	78	19	34	—	—	RA1
BT50-RT2-095	M3-M12	1/4~1/2	#2	95	31	49	—	—	RA2
BT50-RT3-142	M14-M33	1/2~1"	#3	142	48	73.5	—	—	RA3

For size 3 tap adapters on BT40 and BT50 spindle, we recommend a combination of end mill holder SL(P.39~40) and S32-RT3 straight shank tap holder (P.50) as a less costly option and for added mating flexibility.

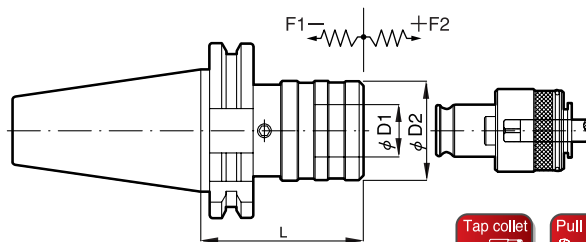


Quick Change Tap Holders

SK

Tension/Compression Tap Holders

- Complete interchangeability with Bilz tap holders and adapters.
- Quick Change on holders and adapters – all in less than a few seconds.
- Proven design for smooth stroke and positive drive – Even under full torque load, the tension compression stroke is full and free.



SK Taper Tension/Compression Tap Holders

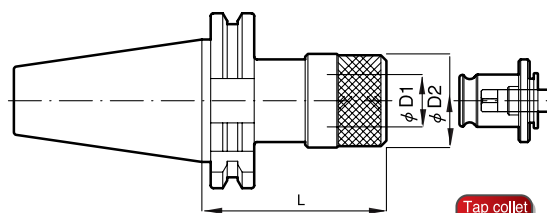
Code No.	Tap range		System	L	D1	D2	Float		Tap adapter
	Hand	Pipe					F1	F2	
SK40-TC1-059	M3-M12	1/8	#1	59	19	36	7.5	7.5	TC1
SK40-TC1-100	M3-M12	1/8	#1	100	19	36	7.5	7.5	TC1
SK40-TC2-097	M8-M20	1/4~1/2	#2	97	31	53	12.5	12.5	TC2
SK50-TC1-059	M3-M12	1/8	#1	59	19	36	7.5	7.5	TC1
SK50-TC1-100	M3-M12	1/8	#1	100	19	36	7.5	7.5	TC1
SK50-TC1-135	M3-M12	1/8	#1	135	19	36	7.5	7.5	TC1
SK50-TC2-097	M8-M20	1/4~1/2	#2	97	31	53	12.5	12.5	TC2
SK50-TC3-139	M14-M33	1/2~1"	#3	139	48	78	20.0	20.0	TC3

For size 3 tap adapters on SK40 and SK50 spindle, we recommend a combination of end mill holder SL (P.41~42) and S32-TC3 straight shank tap holder (P.50) as a less costly option and for added mating flexibility.

Rigid tap holders

Rigid tap holders

- Complete interchangeability with Bilz tap holders and adapters.
- Quick Change on holders and adapters – all in less than a few seconds.
- For machining centers with synchronized tapping function.



SK Taper Rid Tap Holders – without length compensation

Code No.	Tap range		System	L	D1	D2	Float		Tap adapter
	Hand	Pipe					F1	F2	
SK40-RT1-072	M3-M12	1/8	#1	72	19	34	—	—	RA1
SK40-RT2-091	M8-M20	1/4~1/2	#2	91	31	49	—	—	RA2
SK50-RT1-072	M3-M12	1/8	#1	72	19	34	—	—	RA1
SK50-RT2-091	M8-M20	1/4~1/2	#2	91	31	49	—	—	RA2
SK50-RT3-130	M14-M33	1/2~1"	#3	130	48	73.5	—	—	RA3

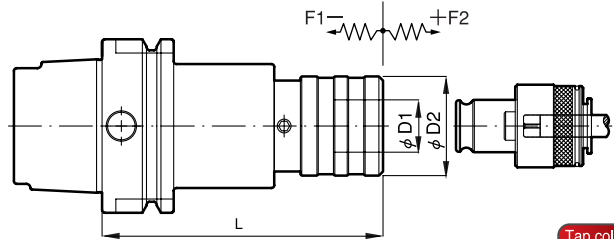
For size 3 tap adapters on SK40 and SK50 spindle, we recommend a combination of end mill holder SL(P.41~42) and S32-RT3 straight shank tap holder (P.50) as a less costly option and for added mating flexibility.



Quick Change Tap holder

HSK

- Complete interchangeability with Bilz tap holders and adapters.
- Quick Change on holders and adapters – all in less than a few seconds.
- Proven design for smooth stroke and positive drive – Even under full torque load, the tension compression stroke is full and free.



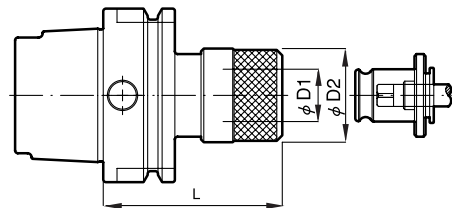
P.51

HSK Shank Tension/Compression Tap Holders

Code No.	Tap range		System	L	D1	D2	Float		Tap adapter
	Hand	Pipe					F1	F2	
HSK 63A-TC1- 102	M3-M12	1/8	#1	102	19	36	7.5	7.5	TC1
HSK 63A-TC2- 137	M8-M20	1/4~1/2	#2	137	31	53	12.5	12.5	TC2
HSK100A-TC1-105	M3-M12	1/8	#1	105	19	36	7.5	7.5	TC1
HSK100A-TC2-140	M8-M20	1/4~1/2	#2	140	31	53	12.5	12.5	TC2



- Complete interchangeability with Bilz tap holders and adapters.
- Quick Change on holders and adapters – all in less than a few seconds.
- For machining centers with synchronized tapping function.



P.52

HSK Shank Rigid Tap Holders

Code No.	Tap range		System	L	D1	D2	Float		Tap adapter
	Hand	Pipe					F1	F2	
HSK 63A-RT1-065	M3-M12	1/8	#1	65	19	34	—	—	RA1
HSK 63A-RT2-098	M8-M20	1/4~1/2	#2	98	31	49	—	—	RA2
HSK100A-RT1-065	M3-M12	1/8	#1	65	19	34	—	—	RA1
HSK100A-RT2-098	M8-M20	1/4~1/2	#2	98	31	49	—	—	RA2



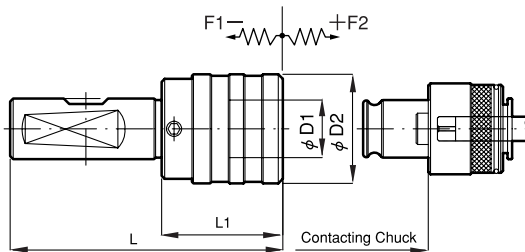
Quick Change Tap holder / Straight shank (DIN1835 B + E)

Weldon Shank
Tension/Compression Tap Holders

- Less costly option than extended length integral shank tap holders
- Complete interchangeability with Bilz tap holders and adapters.
- Quick Change on adapters – Press in on the end of the adapter nose and the tool is released free in a second



Optional whistle notch shown



P.51

Weldon Shank Tension/Compression Tap Holders

Code No.	Tap range		System	Shank Dia	L	L1	D1	D2	Float		Tap adapter
	Hand	Pipe							F1	F2	
S20-TC1-040	M3-M12	1/8	#1	20mm	90	40	19	36	7.5	7.5	TC1
S25-TC2-065	M8-M20	1/4~1/2	#2	25mm	121	65	31	53	12.5	12.5	TC2
S32-TC3-100	M14-M33	1/2~1"	#3	32mm	160	100	48	78	20.0	20.0	TC3

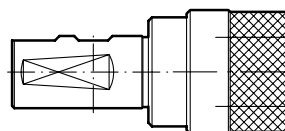
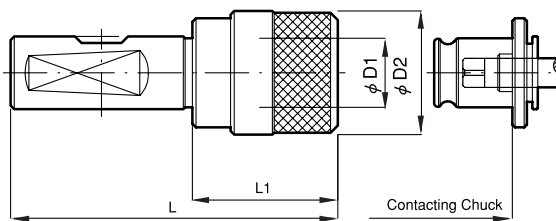
Quick Change Tap holder / Straight shank (DIN1835 B + E)

Weldon Shank
Rigid tap holders

- Complete interchangeability with Bilz tap holders and adapters.
- Quick Change on holders and adapters – all in less than a few seconds.
- For machining centers with synchronized tapping function.



Optional whistle notch shown



P.52

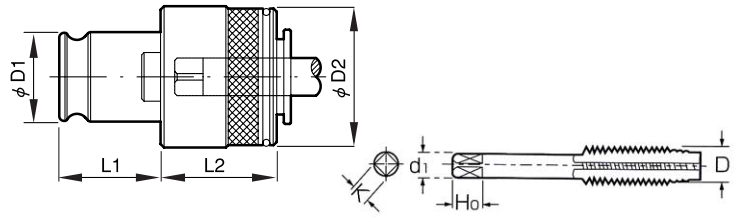
Weldon Shank Rigid Tap Holders

Code No.	Tap range		System	Shank Dia	L	L1	D1	D2	Float		Tap adapter
	Hand	Pipe							F1	F2	
S20-RT1-040	M3-M12	1/8	#1	20mm	90	40	19	34	—	—	RA1
S25-RT2-060	M8-M20	1/4~1/2	#2	25mm	116	60	31	49	—	—	RA2
S32-RT3-095	M14-M33	1/2~1"	#3	32mm	155	95	48	73.5	—	—	RA3



Tap Adaptors with Overload clutch

TC



	Tapping Capacity	D1	D2	L1	L2
TC1	M03~M12	19.0	32.0	21.5	25.0
TC2	M08~M20	31.0	50.0	35.0	34.0
TC3	M14~M33	48.0	72.0	55.5	45.0

Tap (JIS standard)				shk dia	□dia	length	Tap Adaptors		
D				d1	K	Ho	System #1	System #2	System #3
M3	M3.5	No.5	No.6	4.0	3.2	6.0	TC1J-M03		
M4	M4.5	No.8		5.0	4.0	7.0	TC1J-M04		
M5		No.10	No.12	5.5	4.5	7.0	TC1J-M05		
M6		No.14	U1/4	6.0	4.5	7.0	TC1J-M06		
M8	M7			6.2	5.0	8.0	TC1J-M08	TC2J-M08	
M10	M9	U3/8		7.0	5.5	8.0	TC1J-M10	TC2J-M10	
M11		U7/16	P1/8	8.0	6.0	9.0	TC1J-M11	TC2J-M11	
M12				8.5	6.5	9.0	TC1J-M12	TC2J-M12	
M14	M15	U9/16		10.5	8.0	11.0		TC2J-M14	TC3J-M14
M16				12.5	10.0	13.0		TC2J-M16	TC3J-M16
M18		U3/4	P3/8	14.0	11.0	14.0		TC2J-M18	TC3J-M18
M20				15.0	12.0	15.0		TC2J-M20	TC3J-M20
M22		U7/8		17.0	13.0	16.0		TC2J-M22	TC3J-M22
M24	M25		P5/8	19.0	15.0	18.0		TC2J-M24	TC3J-M24
M27	M26	U1"		20.0	15.0	18.0			TC3J-M27
M30			P3/4	23.0	17.0	20.0			TC3J-M30
M33				25.0	19.0	22.0			TC3J-M33
M36	M38		P1.1/8	28.0	21.0	24.0			TC3J-M36

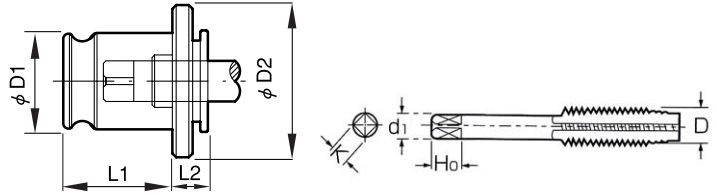
Tap (DIN standard)				shk dia	□dia	length	Tap Adaptors		
D				d1	K	Ho	System #1	System #2	System #3
M3(371)	M5(376)			3.5	2.7	6.0	TC1D-M03(371)		
M4(371)	M6(376)			4.5	3.4	6.0	TC1D-M04(371)		
M5(371)	M6(371)	M8(376)		6.0	4.9	8.0	TC1D-M05(371)	TC2D-M08(376)	
M8(371)				8.0	6.2	9.0	TC1D-M08(371)	TC2D-M08(371)	
M10(371)				10.0	8.0	11.0	TC1D-M10(371)	TC2D-M10(371)	
M10(376)	P1/8			7.0	5.5	8.0	TC1D-M10(376)	TC2D-M10(376)	
M12(376)				9.0	7.0	10.0	TC1D-M12(376)	TC2D-M12(376)	
M14(376)	P1/4			11.0	9.0	12.0		TC2D-M14(376)	TC3D-M14(376)
M16(376)	P3/8			12.0	9.0	12.0		TC2D-M16(376)	TC3D-M16(376)
M18(376)				14.0	11.0	14.0		TC2D-M18(376)	TC3D-M18(376)
M20(376)	P1/2			16.0	12.0	15.0		TC2D-M20(376)	TC3D-M20(376)
M22(376)	M24(376)	P5/8		18.0	14.5	17.0		TC2D-M22(376)	TC3D-M22(376)
M27(376)	P3/4			20.0	16.0	19.0			TC3D-M27(376)
M30(376)	P7/8			22.0	18.0	21.0			TC3D-M30(376)
M33(376)	P1"			25.0	20.0	23.0			TC3D-M33(376)
M36(376)	P1.1/8			28.0	22.0	25.0			TC3D-M36(376)

Tap (ISO standard)				shk dia	□dia	length	Tap Adaptors		
D				d1	K	Ho	System #1	System #2	System #3
M3	No.4	No.5		3.15	2.5	5.0	TC1S-M03		
M4				4.0	3.15	6.0	TC1S-M04		
M5	No.10			5.0	4.0	7.0	TC1S-M05		
M6	U1/4			6.3	5.0	8.0	TC1S-M06		
M8	U5/16	P1/8		8.0	6.3	9.0	TC1S-M08	TC2S-M08	
M10	U3/8	P1/4		10.0	8.0	11.0	TC1S-M10	TC2S-M10	
M12	U1/2			9.0	7.1	10.0	TC1S-M12	TC2S-M12	
M14				11.2	9.0	12.0		TC2S-M14	TC3S-M14
M16	U5/8	P3/8		12.5	10.0	13.0		TC2S-M16	TC3S-M16
M18	M20	U3/4		14.0	11.2	14.0		TC2S-M18	TC3S-M18
M22	U7/8	P1/2		16.0	12.5	16.0		TC2S-M22	TC3S-M22
M24	U1"	P5/8		18.0	14.0	18.0		TC2S-M24	TC3S-M24
M27	M30	U1.1/8	P3/4	20.0	16.0	20.0			TC3S-M27
M33	U1.1/4	P7/8		22.4	18.0	22.0			TC3S-M33
M36	U1.3/8	P1"		25.0	20.0	24.0			TC3S-M36



Tap Adaptors without Overload clutch

RA



	Tapping Capacity	D1	D2	L1	L2
RA1	M03~M12	19.0	30.0	21.5	7.0
RA2	M08~M20	31.0	48.0	35.0	11.0
RA3	M14~M33	48.0	70.0	55.5	14.0

Tap (JIS standard)				shk dia	□dia	length	Tap Adaptors		
D				d1	K	Ho	System #1	System #2	System #3
M3	M3.5	No.5	No.6	4.0	3.2	6.0	RA1J-M03		
M4	M4.5	No.8		5.0	4.0	7.0	RA1J-M04		
M5		No.10	No.12	5.5	4.5	7.0	RA1J-M05		
M6		No.14	U1/4	6.0	4.5	7.0	RA1J-M06		
M8	M7			6.2	5.0	8.0	RA1J-M08	RA2J-M08	
M10	M9	U3/8		7.0	5.5	8.0	RA1J-M10	RA2J-M10	
M11		U7/16	P1/8	8.0	6.0	9.0	RA1J-M11	RA2J-M11	
M12				8.5	6.5	9.0	RA1J-M12	RA2J-M12	
M14	M15	U9/16		10.5	8.0	11.0		RA2J-M14	RA3J-M14
M16				12.5	10.0	13.0		RA2J-M16	RA3J-M16
M18		U3/4	P3/8	14.0	11.0	14.0		RA2J-M18	RA3J-M18
M20				15.0	12.0	15.0		RA2J-M20	RA3J-M20
M22		U7/8		17.0	13.0	16.0		RA2J-M22	RA3J-M22
M24	M25		P5/8	19.0	15.0	18.0		RA2J-M24	RA3J-M24
M27	M26	U1"		20.0	15.0	18.0			RA3J-M27
M30			P3/4	23.0	17.0	20.0			RA3J-M30
M33				25.0	19.0	22.0			RA3J-M33
M36	M38		P1.1/8	28.0	21.0	24.0			RA3J-M36

Tap (DIN standard)				shk dia	□dia	length	Tap Adaptors		
D				d1	K	Ho	System #1	System #2	System #3
M3(371)	M5(376)			3.5	2.7	6.0	RA1D-M03(371)		
M4(371)	M6(376)			4.5	3.4	6.0	RA1D-M04(371)		
M5(371)	M6(371)	M8(376)		6.0	4.9	8.0	RA1D-M05(371)	RA2D-M08(376)	
M8(371)				8.0	6.2	9.0	RA1D-M08(371)	RA2D-M08(371)	
M10(371)				10.0	8.0	11.0	RA1D-M10(371)	RA2D-M10(371)	
M10(376)	P1/8			7.0	5.5	8.0	RA1D-M10(376)	RA2D-M10(376)	
M12(376)				9.0	7.0	10.0	RA1D-M12(376)	RA2D-M12(376)	
M14(376)	P1/4			11.0	9.0	12.0		RA2D-M14(376)	RA3D-M14(376)
M16(376)	P3/8			12.0	9.0	12.0		RA2D-M16(376)	RA3D-M16(376)
M18(376)				14.0	11.0	14.0		RA2D-M18(376)	RA3D-M18(376)
M20(376)	P1/2			16.0	12.0	15.0		RA2D-M20(376)	RA3D-M20(376)
M22(376)	M24(376)	P5/8		18.0	14.5	17.0		RA2D-M22(376)	RA3D-M22(376)
M27(376)	P3/4			20.0	16.0	19.0			RA3D-M27(376)
M30(376)	P7/8			22.0	18.0	21.0			RA3D-M30(376)
M33(376)	P1"			25.0	20.0	23.0			RA3D-M33(376)
M36(376)	P1.1/8			28.0	22.0	25.0			RA3D-M36(376)

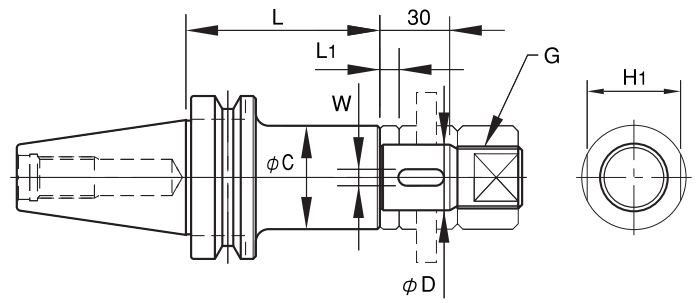
Tap (ISO standard)				shk dia	□dia	length	Tap Adaptors		
D				d1	K	Ho	System #1	System #2	System #3
M3	No.4	No.5		3.15	2.5	5.0	RA1S-M03		
M4				4.0	3.15	6.0	RA1S-M04		
M5	No.10			5.0	4.0	7.0	RA1S-M05		
M6	U1/4			6.3	5.0	8.0	RA1S-M06		
M8	U5/16	P1/8		8.0	6.3	9.0	RA1S-M08	RA2S-M08	
M10	U3/8	P1/4		10.0	8.0	11.0	RA1S-M10	RA2S-M10	
M12	U1/2			9.0	7.1	10.0	RA1S-M12	RA2S-M12	
M14				11.2	9.0	12.0		RA2S-M14	RA3S-M14
M16	U5/8	P3/8		12.5	10.0	13.0		RA2S-M16	RA3S-M16
M18	M20	U3/4		14.0	11.2	14.0		RA2S-M18	RA3S-M18
M22	U7/8	P1/2		16.0	12.5	16.0		RA2S-M22	RA3S-M22
M24	U1"	P5/8		18.0	14.0	18.0		RA2S-M24	RA3S-M24
M27	M30	U1.1/8	P3/4	20.0	16.0	20.0			RA3S-M27
M33	U1.1/4	P7/8		22.4	18.0	22.0			RA3S-M33
M36	U1.3/8	P1"		25.0	20.0	24.0			RA3S-M36



SB stub arbor

BT / SK

● Min. 80% taper fit



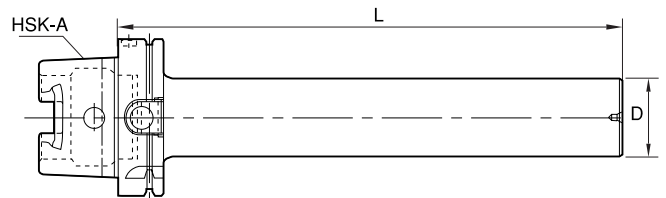
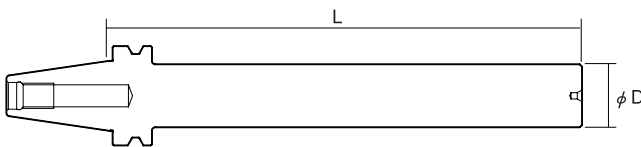
L1=3,5,7,8,10,12

Taper	Code No.	H1	ϕC	W	G
BT40(SK40)	BT40-SB27-075	32	40	7	M24
BT50(SK50)	BT50-SB32-090	41	46	8	M30

Test bar

Precision test bar with the highest quality.

- Concentric to Taper within $3.0\mu\text{m}$ TIR.
- 100% individually inspected with Certificate Included.
- Contained in Wooden Box.



Code No.	ϕD	L
BT30-TB32-235	32	235
BT40-TB40-300	40	300
BT50-TB50-300	50	300
SK40-TB40-300	40	300
SK50-TB50-300	50	300
HSK63A-TB40-300	40	300
HSK100A-TB50-320	50	320



Tool locking fixture - Tool Block

53-54
PAGE Stub arbor / Test bar
Tool Block



PIONEER's flexible, Indexable Tool Block with Interchangeable Heads.

The system is designed to prevent injury and allow operators to move the holder into the best position for manipulation.

4 locking positions at 90 degree's apart with auto lock provides the easiest and safest way of changing cutters and pull studs.

Tool Block is a must-item for all tool rooms.



How to use



Assemble TB-HEAD with TB-BASE with Hex wrench through the access hole in the release disk.

Rotate the release disk. The tool holder will snap in automatically. To release, pull out the release pin.



Rotate the release disk up to index the TB-Head



Rotate the release disk down to lock the TB-Head into position



Repeat the last 2 steps for the additional 2 positions



The tool holder will snap in automatically. To release pull out on the release pin

Code No.	Øshank
TB-BASE	
TB-HEAD BT30	BT30
TB-HEAD BT40	BT40
TB-HEAD BT50	BT50
TB-HEAD CAT40	CAT40, ISO7388-40, DIN69871-40
TB-HEAD CAT50	CAT50, ISO7388-50, DIN69871-50
TB-HEAD HSK63A	DIN69893 HSK63A
TB-HEAD HSK100A	DIN69893 HSK100A



TB-BASE



TB-HEAD



Diaphragm Chuck



PIONEER Diaphragm Chuck is basically to clamp the workpiece “Soft” and “Evenly” to avoid the distortion by utilizing the tensile strength of special material used for Diaphragm and jaw, and thus to achieve the highest possible accuracy in turning field. It is also designed not to be affected by the centrifugal force at high speed, and can be used up to 10,000min⁻¹ or over. It ensures super high precision and stable turning operation.

● **Repeatability**

Below 0.4 micron (0.000015”) guaranteed.

● **Maintenance Free**

No Lubrication Necessary.
Chuck is completely sealed.

● **Flex. Clamping Power**

For both OD & ID clamping, fine adjustment of clamping power is possible.

● **Excellent High Speed Capability**

3” and 4” chucks can be used at 10,000min⁻¹ or over due to unique counter-weight balance incorporated.

● **High Durability**

Long life of rigidity and accuracy is insured due to unique diaphragm material.

● **Flex. Application**

Both OD & ID clamping is possible with one chuck, and workpiece support can be arranged flexibly.

■ **Work Example**



- Hard Disk Drive Motor Parts
- Motor Parts for OA Equipment
- VCR Drum
- Parts for Space & Comm. Equip.
- Automobile Parts.
- DVD Parts
- Medical Equipment.

- High Speed Turning
- Mirror Machining
- Assembly Machining
- Grinding
- Measuring



4HN6-3

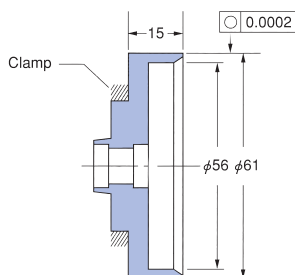
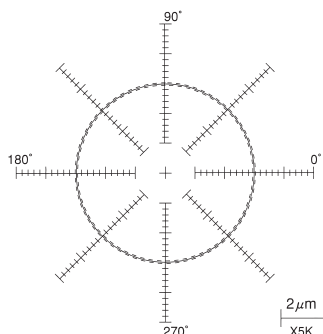


3HN6-3



4/5HN8-3

■ **Example of Application**



Chuck : 4WZ8-3
Workpiece : VCR drum
Material : Aluminium
Spindle RPM : 8,000min⁻¹
Clamp : O.D.Clamp

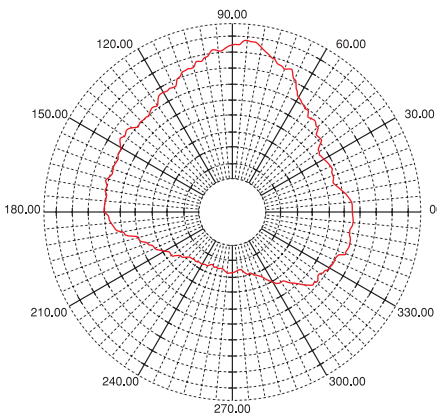
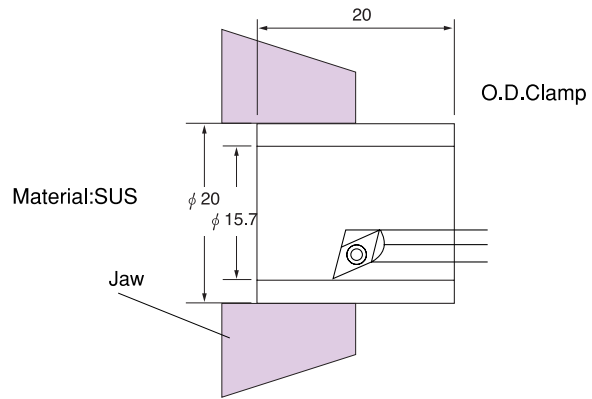
Out of roundness **0.4 µm**



Diaphragm Chuck

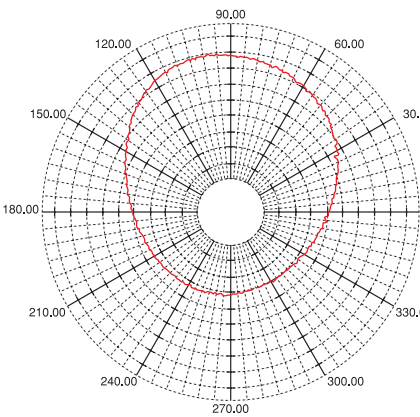


Comparison Against Other Chucks



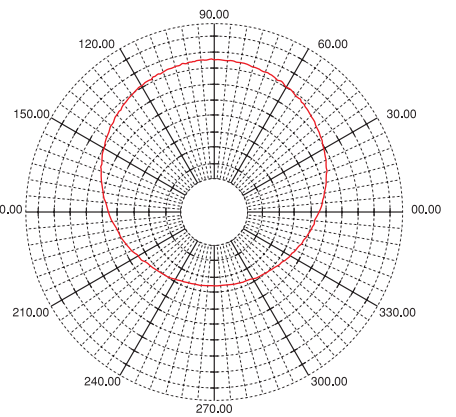
Hydraulic Chuck 6"

Roundness	12 μm
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Precision Air Chuck 6"

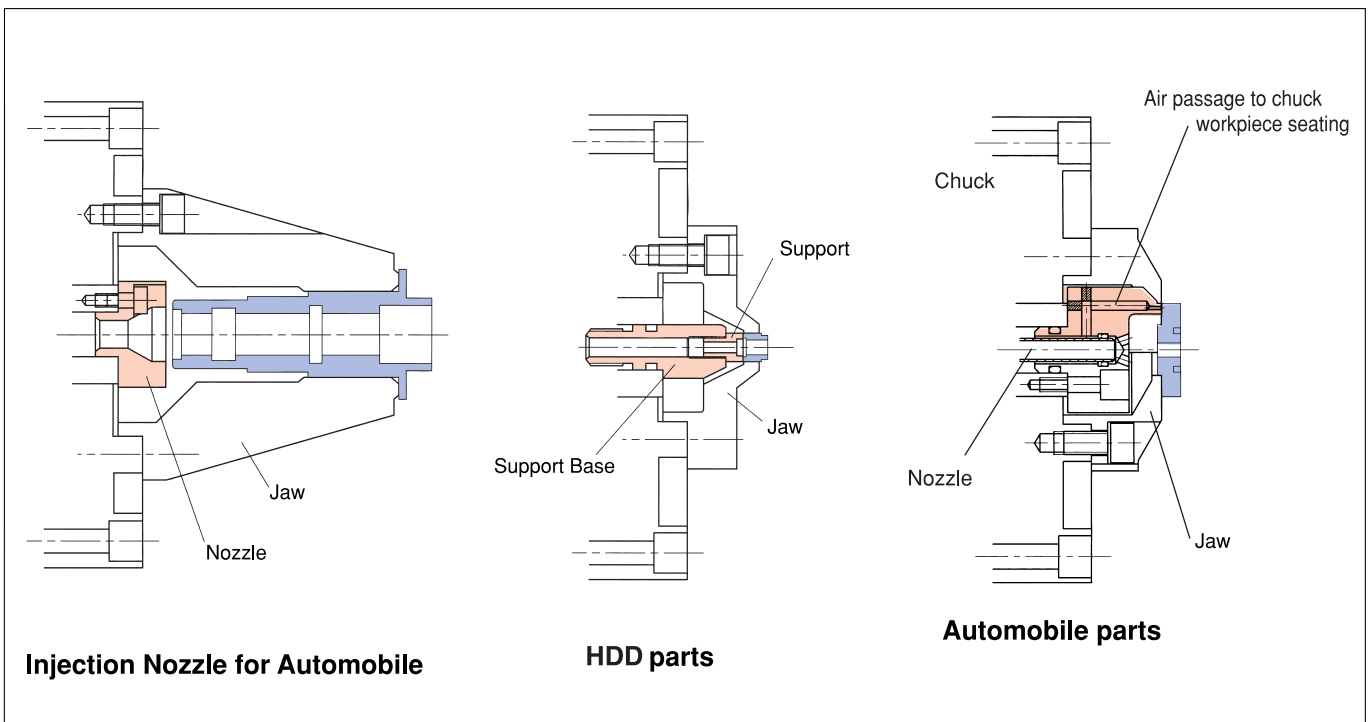
Roundness	3 μm
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Diaphragm Chuck 6"

Roundness	0.3 μm
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Example of Application



Injection Nozzle for Automobile

HDD parts

Automobile parts

* Please contact us for more detailed catalog. If you send us the drawing of a part with description of your problem and what you want to accomplish by our Diaphragm chuck, you will receive our suggestion for solving your problem within 5 working days.



Air Chuck



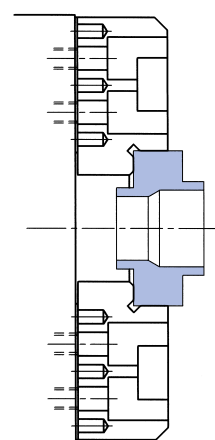
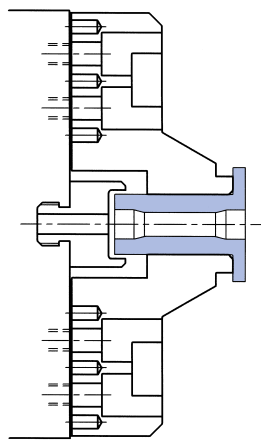
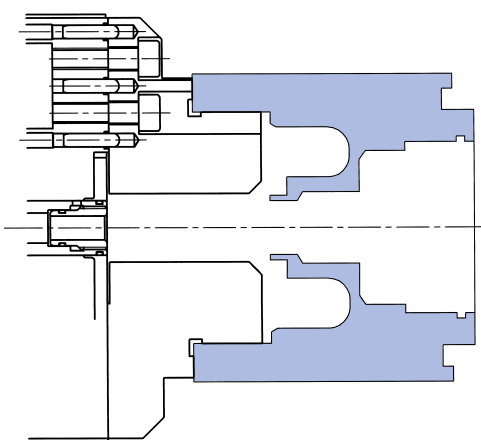
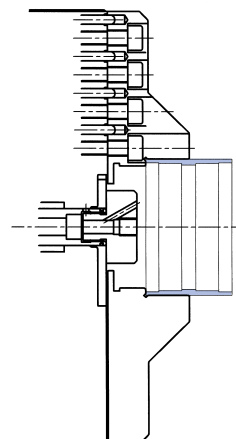
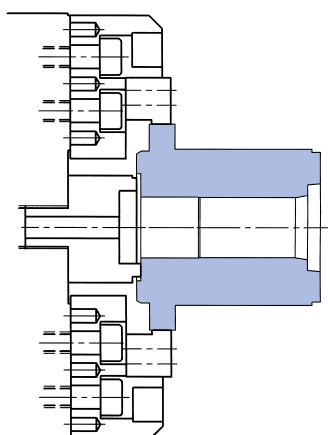
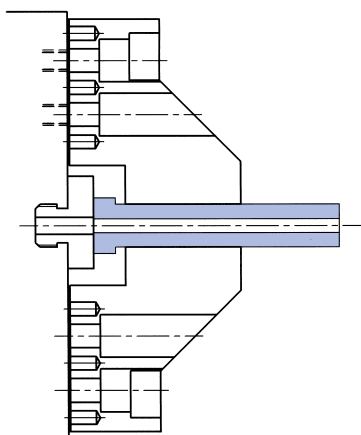
150-2-2.5



150-3-2.5

Example of Application

Automobile Parts. ( Work Piece)



* Please contact us for more detailed catalog. If you send us the drawing of a part with description of your problem and what you want to accomplish by our Diaphragm chuck, you will receive our suggestion for solving your problem within 5 working days.



Rotary Wiper

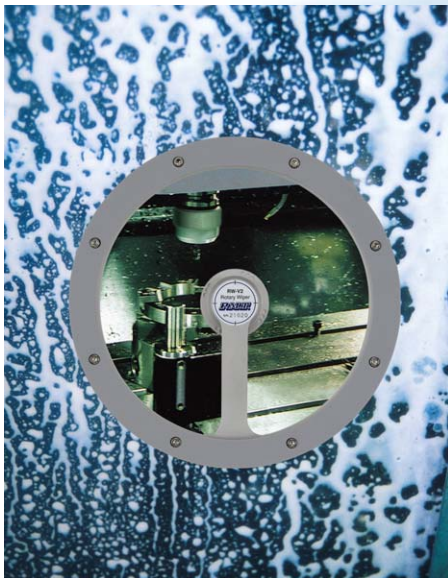


RW-V2

ROTARY WIPER makes it possible to view the production process clearly within the machine enclosure.

Window always gets dirty because of oils, coolants and chips.

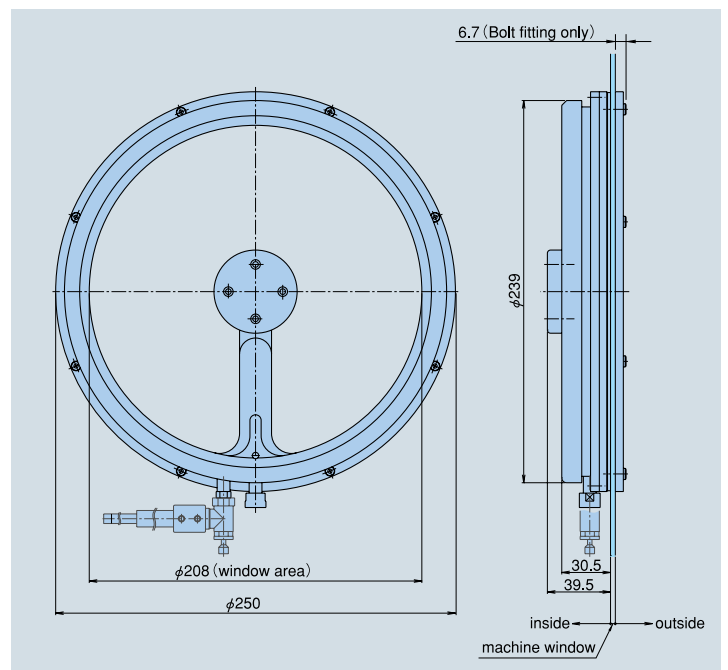
By installing Rotary Wiper, even large amount of coolants, etc., will not prevent an operator from being able to observe set-ups and production runs of all sorts.



Features

- Improved Visibility
- Less Air Consumption & Lower Noise Level
- Easier Maintenance Work
- Improved Sealing Performance against Coolant

DIMENSIONAL DRAWING



TYPE

RW-V2-25	Bolt Fitting type (with 2.5m tube)
RW-V2-50	Bolt Fitting type (with 5.0m tube)
RW-V2-T25	Tape Fitting type (with 2.5m tube)
RW-V2-T50	Tape Fitting type (with 5.0m tube)



YUKIWA CNC Rotary Table



JNC series



- Available in 140, 170, 200 & 250mm.
- Strong clamping - 1.7 times more.
- Accurate Indexing.
- High durability.
- Water Protection structure - Auto-Air Purging System (PAT.)

JNCH series



- High-speed Indexing - Twice the indexing speed of JNC.
- Available in 140, 170, 200 & 250mm.
- Accurate Indexing
- High durability
- Water Protection structure - Auto-Air Purging System (PAT.)
- Interchangeable with JNC - Same Chuck Flanges & Tailstock for JNC.

YNC series



- Available in 170, 200 & 250mm.
- Rigid Bearing Structure - Table shaft supported by 2 large bearings.
- High Clamping Torque - Air hydraulic mechanism standard.
- High Indexing Accuracy - YNC250 within 20sec.
- Water Protection structure - Auto-Air Purging System (PAT.)

YNCP series



- Highest Clamping Torque in this class.
- Available in 170, 200 & 250mm.
- Rigid Bearing Structure - Table shaft supported by 2 large bearings.
- High Indexing Accuracy - YNC250 within 20sec.
- Water Protection structure - Auto-Air Purging System (PAT.)



TNT series - Tilting rotary tables



- Available in 100, 130 & 180mm.
- Compact size suitable for small size M/C.
- Fixed cables.
- High speed Indexing at 41.6min-1 in rotating axis.
- Water Protection structure - Auto-Air Purging System (PAT.)

TNT130-M2 - Multi spindle tables



- For High Productivity - Simultaneous machining of two 5-face work pieces.
- Compact body for application to a smaller M/C.
- Water Protection structure - Auto-Air Purging System (PAT.).

Controller - AC4/AC3 series



- Compact, Low cost.
- 100programs x 100 steps.
- M signale mode - 100 program., Binary mode - 16 programs.
- Closed structure for protection against oil mist.
- Showing the state with signal for maintenance in the panel.
- RS232C ready.

Accessories



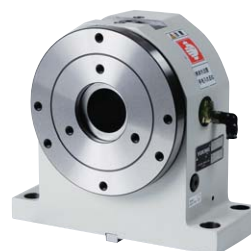
TPA/TPB series
Pneumatic type Tail Stock



TSA/TB series
Manual type Tail Stock



SS series
Side Spindle



ST series
Side Table



Aegis-600 High Speed Spindle

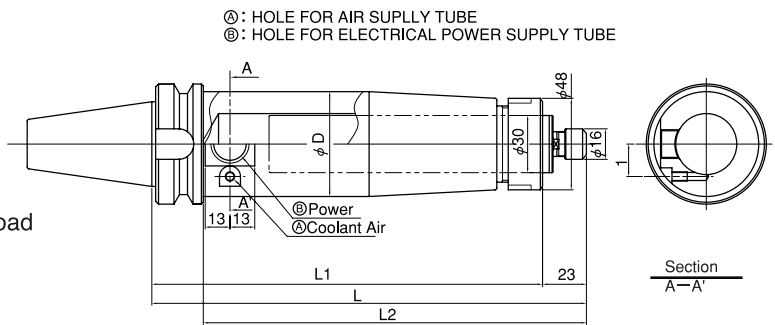
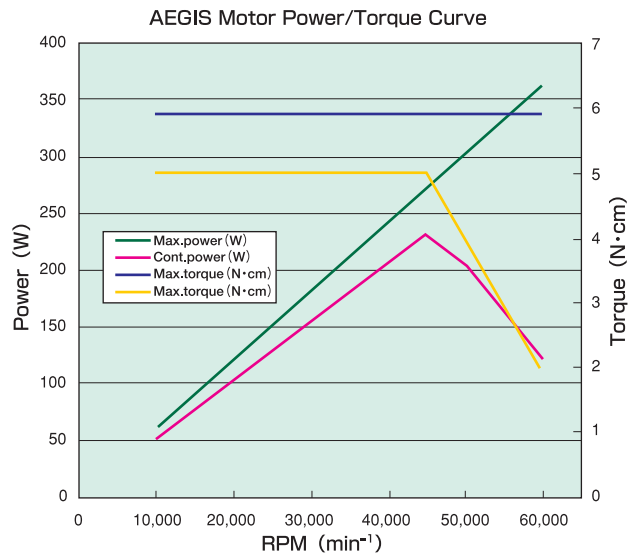
Lexus

Ultra Precision
Ultra High speed
Micro-Finish Machining



Aegis-600-BT50

- **Max. speed 60000rpm**
Ceramic bearing with air-cooling enables 60,000rpm high speed machining, allowing for unsurpassed finish even with end mill 1mm dia. or smaller.
 - **Flat torque up to 60,000rpm**
 - **Ultra Precision Spindle 0.001mm TIR**
 - **Gearless spindle generates minimal vibration and heat.**
Built-in brushless motor eliminates need for gear system. AEGIS generates less vibration and heat than conventional gear-driven spindle speeders.
 - **Ceramic bearings and direct air cooling**
Ceramic back-back double bearings and direct air-cooling of bearing area keeps heat generation to minimum.
 - **370W high torque motor**
 - **Full protection against coolant**
Air-purge, labyrinth seal and sealing by three (3) O-rings work together to effectively keep coolant from coming inside the unit.
 - **Compact Power Supply Unit**
Control unit is housed in a compact 220W x 220D x 42mmH box and is powered by AC100V, 50/60Hz.
 - **Safety Features**
Spindle rotation is automatically stopped when over-load condition exists, the spindle speeds reaches over 60,000rpm, or cooling air is accidentally blocked off.
- * Please contact us for more details.



Detailed dimensions subject to change without prior notice.



Aegis Controller

Taper	Part Number	L	L1	L2	D
BT30	Aegis-600-BT30	215	192	164	50
BT40	Aegis-600-BT40	228	205	172	55
BT50	Aegis-600-BT50	208	185	144	55
SK30	Aegis-600-SK30	215	192	164	50
SK40	Aegis-600-SK40	228	205	172	55
SK50	Aegis-600-SK50	208	185	144	55
HSK63	Aegis-600-HSK53A	208	185	142	55



3D Point Finder

Nissin

Non-Magnetized Stylus with Tungsten Carbide ball

The best edge finder in the market today.

The all new Pioneer edge finder has an improved light source for better visibility, with a 500 times more sensitive built-in electronic circuit over other conventional edge finders. This is the best 3-dimensional edge finder you can find in the market today.

Magnet-free Stylus

- No measuring error due to magnetized stylus and work piece.
- Chips will not stick to the stylus ball.
- No need for demagnetizing and replacement of magnetized stylus.

Tungsten carbide 6mm ϕ steel ball

- Tungsten carbide has nearly 70% less resistance than conventional steel ball, improving light visibility.

+/- 0.001mm detecting accuracy

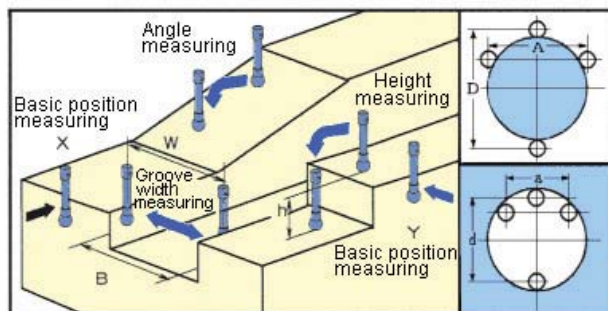
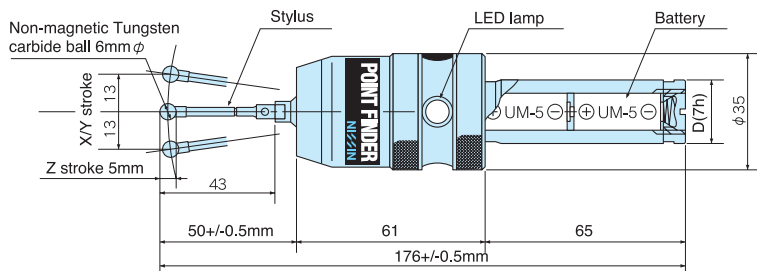
+/- 0.0005mm repeatability

Ferrous or non-Ferrous material

Pioneer 3D Point finder can be used for non-ferrous material with the use of an electric conduction spray or gold leaf.

Other features

- Ample over-travel safety stroke ± 13 mm on X/Y and +5mm on Z axis. These safety strokes are twice as much as other conventional edge finders.
- LED emits light in 4 directions.
- Battery life is approx. one year, subject to the condition of use.
- Screw type stylus for easy replacement.



PART NUMBER	SHANK SIZE D	BATTERY
PTN-20	20mm	Manganese UM-5 (2 pcs)
PTN-32	32mm	Manganese UM-5 (2 pcs)

PTN-i for plastics, ceramics, wood, etc.

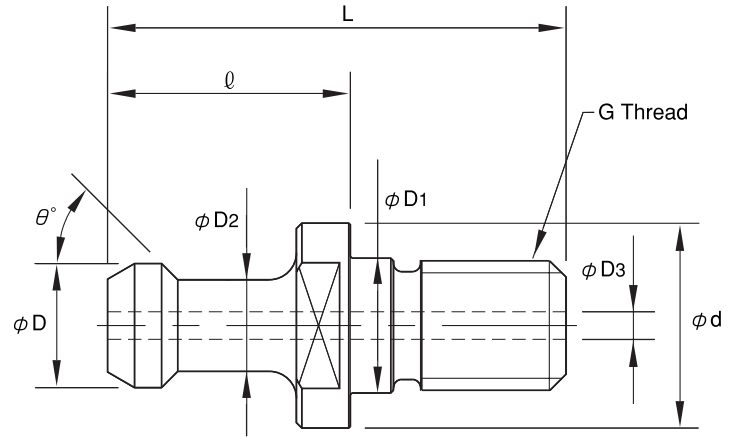
Point Finder i series Model PNT-i is also available. It has internal contact point and can be used on machines with ceramic spindles, for edge-finding on non-ferrous material, wood, glass, plastic, ceramics, etc.

* Please contact us for details on PTN-i.



Pull Studs

Anzugsbolzen
Tirant de Rappel
Codolo di Aggancio



Spindle	Order No.	ϕD	L	l	D2	D1	G	θ°	D3	Note
BT30	HPS-16	11	43	23	7	12.5	M12	45	-	MAS P30T-1
	HPS-17	11	43	23	7	12.5	M12	60	-	MAS P30T-2
BT35	HPS-U2	13.7	53	28	8.9	13	M12	60	-	Matsuura Type
BT40	HPS- 1	15	60	35	10	17	M16	45	-	MAS P40T-1
	HPS- 2	15	60	35	10	17	M16	60	-	MAS P40T-2
	HPS-806-1	19	54	29	14	17	M16	75	6	JIS B6339. Coolant
	HPS-G51	18.796	44.106	19.106	12.446	17	M16	45	7	Mazak type. Coolant
	HPS-O8	15	60	35	10	17	M16	90	-	90 degree angle type
BT50	HPS- 5	23	85	45	17	25	M24	45	-	MAS P50T-1
	HPS- 6	23	85	45	17	25	M24	60	-	MAS P50T-2
SK30	HPS-122	13	44	24	9	13	M12	75	-	DIN69872 SK30 FORM A
SK40	HPS-302	19	54	26	14	17	M16	75	-	DIN69872 SK40 FORM A
	HPS-309	19	54	26	14	17	M16	75	7	DIN69872 SK40 FORM A Coolant
	HPS-309C	19	54	26	14	17	M16	75	7	DIN69872 SK40 FORM B
	HPS-A1	19	54	26	14	17	M16	75	7	ISO-7388/2-1984-A
	HPS-A4	18.95	44.5	16.4	12.95	17	M16	45	7.35	ISO-7388/2-1984-B
SK50	HPS-581	28	74	34	21	25	M24	75	-	DIN69872 SK50 FORM A
	HPS-512	28	74	34	21	25	M24	75	11.5	DIN69872 SK50 FORM A Coolant
	HPS-512B	28	74	34	21	25	M24	75	11.5	DIN69872 SK50 FORM B
	HPS-A3	28	74	34	21	25	M24	75	11.5	ISO-7388/2-1984-A
	HPS-A6	29.1	65.5	25.55	19.6	25	M24	45	11.55	ISO-7388/2-1984-B

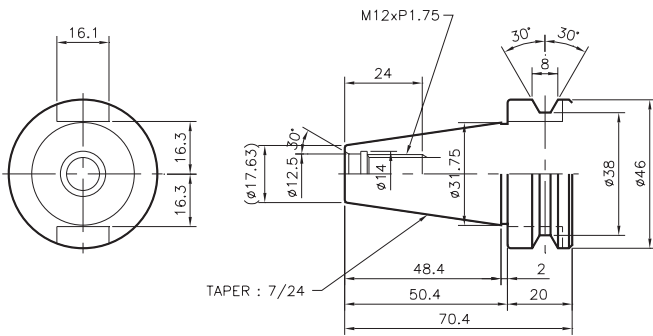
* Other Pull Stud are available upon request.



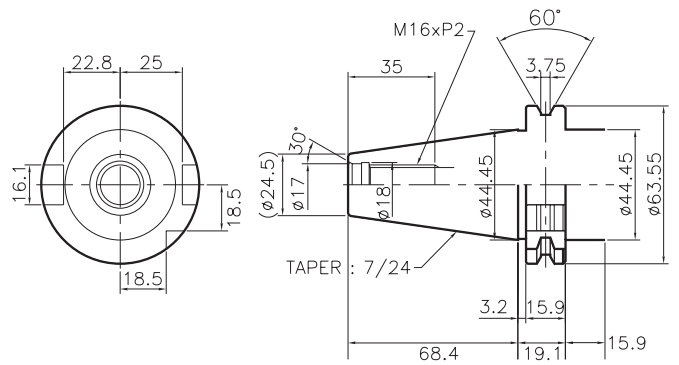
Tool Shank (MAS BT & ISO DIN)

65-66
PAGE
Pull Studs

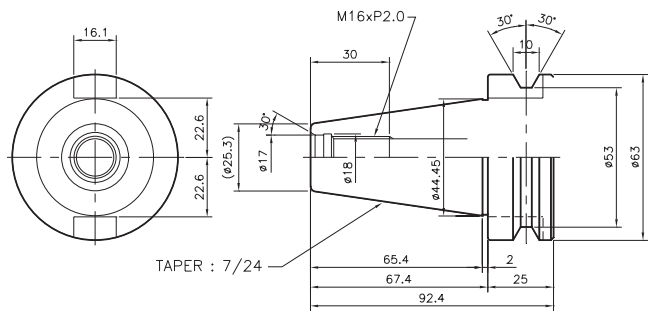
BT30



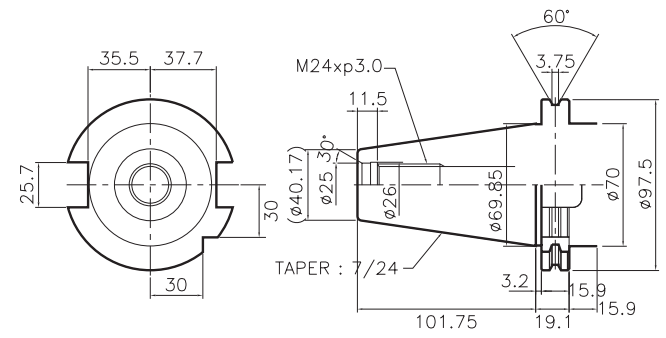
SK40(ISO DIN 69871-85)



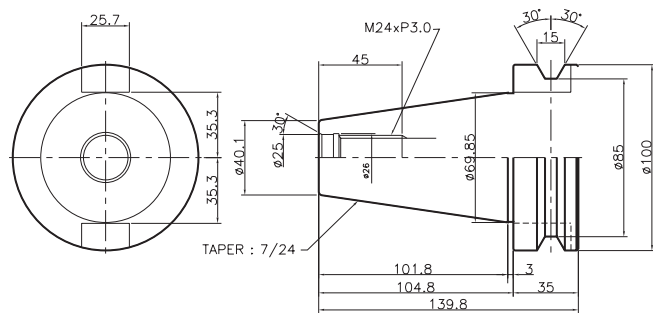
BT40



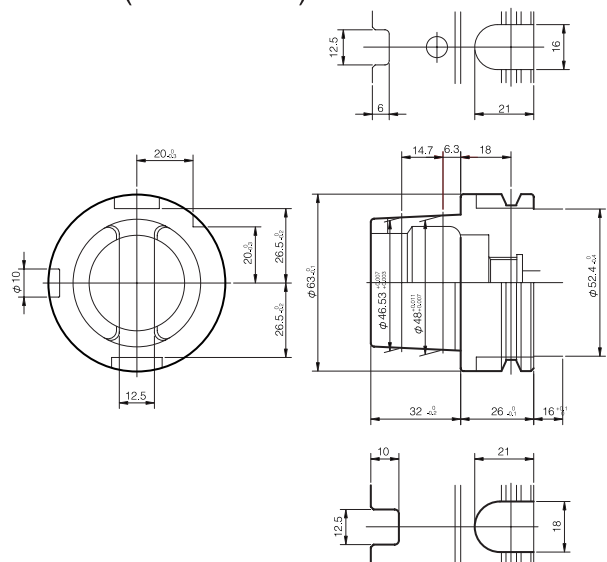
SK50(ISO DIN 69871-85)



BT50



HSK 63A(DIN69893-1)





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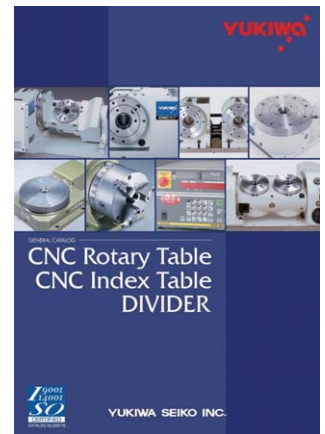
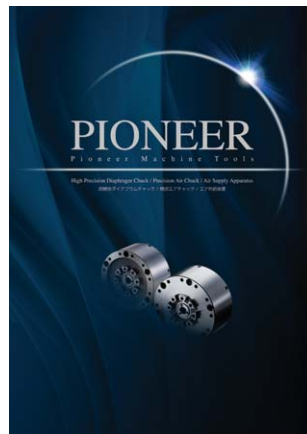
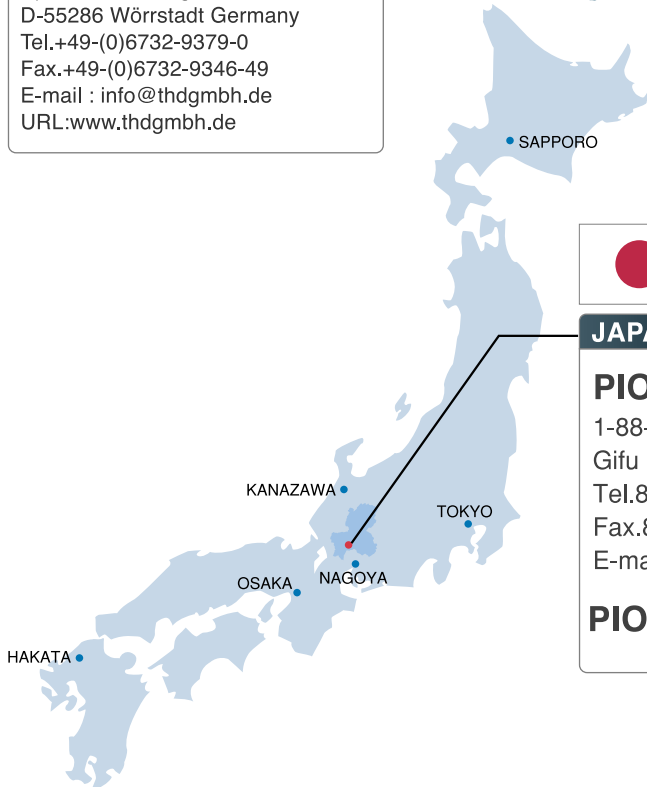
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