

MILLING TOOLING SYSTEM



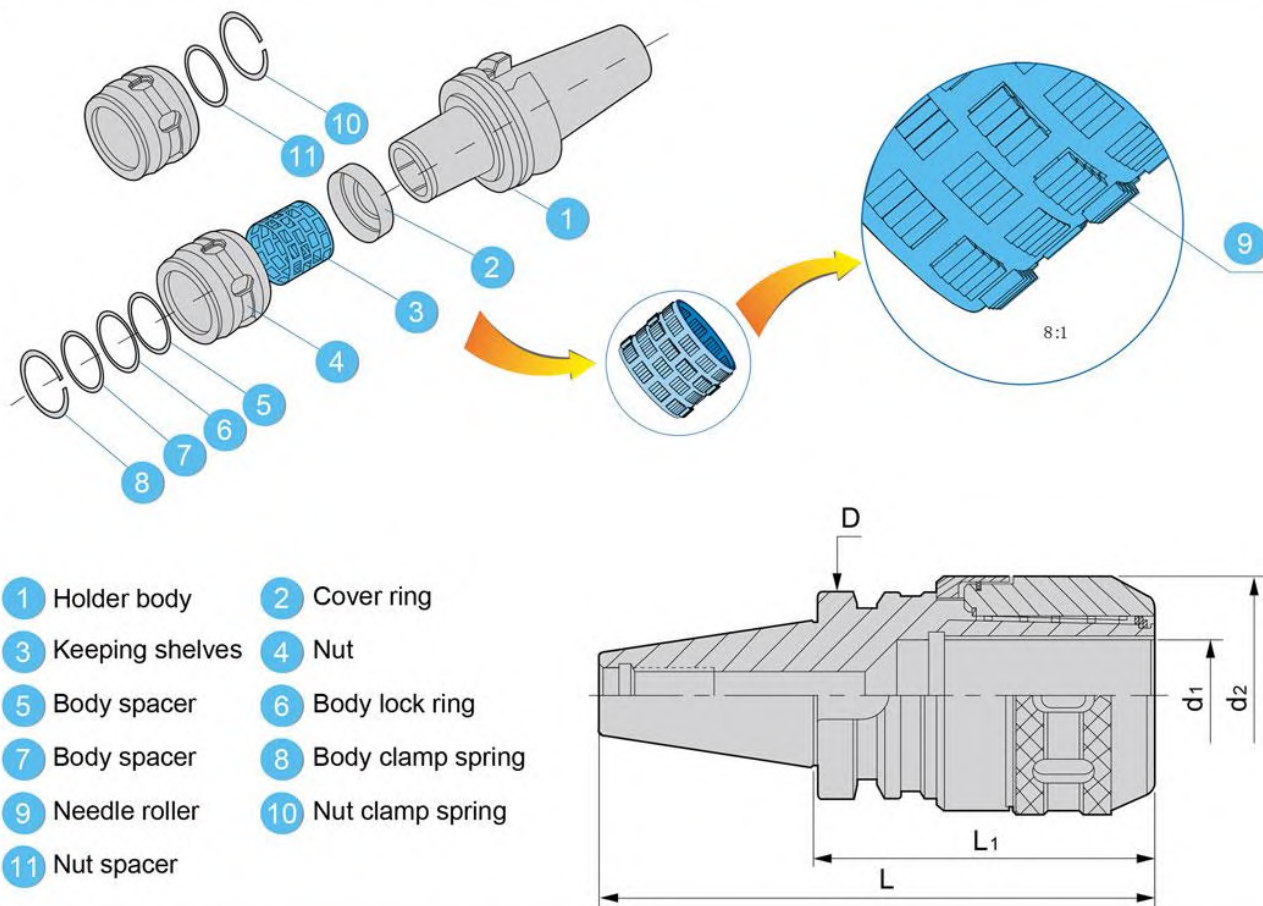


Milling Tooling System

POWER MILLING CHUCK

FEATURE

- This cover ring is connecting with the transfer screw cap by groove of hermetic circle.
 - This new power chuck mill is belongs to the hermetic set for CNC cutting tools.
 - The cover ring can prevent the water, dust and cutting scrap going to the spacing from chuck body and transfer cap.
- It can prolong the using time for the power milling chuck.



The shortcoming for the power milling chuck of standard type

- The standard milling chuck has the spacing between chuck body and transfer screw cap. It easily makes water with dust and cutting scrap into the spacing, and it also will be move to take the dust and cutting scrap together running, it not only fret the surface of chuck body and transfer screw cap, but also break the needle roller bearing. The holding precision will be falling, at last it lose holding capacity.



THE INSTRUCTION OF HEINER MACHINE HOLDER

- The category of taper hole in machine holders: the universal system with taper of 7:24.
- The standards of machine holder with 7:24 taper in different countries: BT standard which is the most common in Asia matches with MAS403 CNC machine; DAT Germany standard matches with DIN69871 CNC machine; American CAT standard matches with the ANSI B5.50 CNC machine.
- The precision of Heiner brand series 7:24 machine holder taper < AT3.
- The usual material of Heiner machine holder is low-carbon steel above SCM415 or SNCM22. The materials of the different kinds of machine holders are different based on the actual requirement.
- Heat treatment craftwork: Carburization. On the surface it has 0.8mm carburized layer which has around HRC56° of the rigidity which is close to the rigidity of the machine tool's principal axis. Under high rolling with the principal axis clamping the machine holder, the precision of the machine holder's facing surface remains the same and the surface will not be deformation. But the rigidity of the holder center still remain HRC40°. The character of that soft inside and hard outside makes the Heiner machine holder flexible and resistant. Our experience indicates that the finishing work piece surface processed by Heiner brand machine holder is much better than other common machine holders.
- Please inform us and mention specifically for the machine holders which requires standard dynamic balance with G6.3 or high precision dynamic balance with G2.5, which we need to quote specifically.
- If you want to know more of Heiner machine holder's precision, production date, and quality guarantee, etc, please find the inspection report in the product's packing box that you ordered. Each machine holder before leaving the factory is inspected more than three times. Please be rest assured with it.



Milling Tooling System - MAS403 BT System

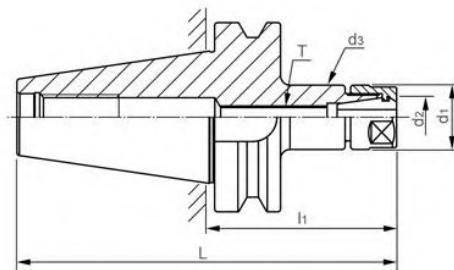
ER Spring Collet Chuck

Use

For clamping tools with cylindrical shank in Collets according to DIN 6499
 -Included in delivery: Clamping nut.
 -Please guarantee that the clamping the tool hangs extends is short

Feature

-Material: Case-hardened steel, process machine : CNC Turing center
 -Cone angle AT3, Tolerance: $8^{\circ}17'50'' \pm 5''$
 -Run out between cone and holing part < 0.005
 -Hardness: HRC56-62° Depth of case 1.0 ± 0.2
 -With through hole for internal and flange coolant (AD/B) design can be customized on demand



Code No.	Size(mm)				
	L1	L	d1	d2	d3
BT30-ER11-70	70	118.4	19	11	19
BT30-ER11-100	100	148.4	19	11	19
BT30-ER16-70	70	118.4	28	16	28
BT30-ER16-100	100	148.4			
BT30-ER20-70	70	118.4	34	20	34
BT30-ER20-100	100	148.4			
BT30-ER25-70	70	118.4	42	25	42
BT30-ER25-100	100	148.4			
BT30-ER32-70	70	118.4	50	32	50
BT30-ER32-100	100	148.4			
BT30-ER40-80	80	128.4	63	40	63
BT40-ER11-70	70	118.4	19	11	19
BT40-ER11-100	100	148.4	19	11	19
BT40-ER16-70	70	135.4	28	16	28
BT40-ER16-100	100	165.4			
BT40-ER16-150	150	215.4			
BT40-ER20-70	70	135.4	34	20	34
BT40-ER20-100	100	165.4			
BT40-ER20-150	150	215.4			
BT40-ER25-70	70	135.4	42	25	42
BT40-ER25-100	100	165.4			
BT40-ER25-150	150	215.4			
BT40-ER32-70	70	135.4	50	32	50
BT40-ER32-100	100	165.4			
BT40-ER32-150	150	215.4			
BT40-ER40-80	80	145.4	63	40	63
BT40-ER40-100	100	165.4			
BT40-ER40-150	150	215.4			



Milling Tooling System - MAS403 BT System

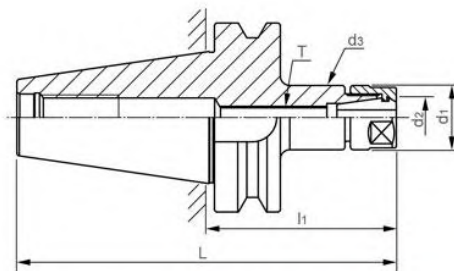
ER Spring Collet Chuck

Use

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- Included in delivery: Clamping nut.
- Please guarantee that the clamping the tool hangs extends is short

Feature

- Material: Case-hardened steel, process machine : CNC Turing center
- Cone angle AT3, Tolerance: $8^{\circ}17'50'' \pm 5''$
- Run out between cone and holing part < 0.005
- Hardness: HRC56-62° Depth of case 1.0 ± 0.2
- Pre-balanced by design (8000rpm/G6.3), Through tool holder coolant capability
- Fine balancing can be customized on demand (12000rpm/G6.3, 25000rpm/G2.5)
- With through hole for internal and flange coolant (AD/B) design can be customized on demand



Code No.	Size(mm)				
	L1	L	d1	d2	d3
BT50-ER16-100	100	201.8	28	16	28
BT50-ER16-150	150	251.8			
BT50-ER16-200	200	301.8			
BT50-ER20-100	100	201.8	63	40	63
BT50-ER20-150	150	251.8			
BT50-ER20-200	200	301.8			
BT50-ER25-100	100	201.8	42	25	42
BT50-ER25-150	150	251.8			
BT50-ER25-200	200	301.8			
BT50-ER32-100	100	201.8	50	32	50
BT50-ER32-150	150	251.8			
BT50-ER32-200	200	301.8			
BT50-ER32-250	250	351.8			
BT50-ER40-100	100	201.8	63	40	63
BT50-ER40-150	150	251.8			
BT50-ER40-200	200	301.8			
BT50-ER40-250	250	351.8	78	50	78
BT50-ER40-300	300	401.8			

Notice: Recommend the use of UP-grade ER Precision Collet. DIN69893 and DIN2080 specifications please specify contact.
Cold treatment option against extra fee.



Milling Tooling System - MAS403 BT System

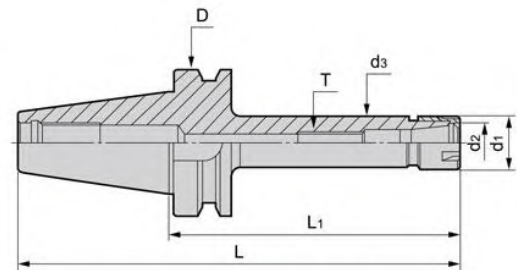
ER Spring Collet Chuck -M Type

Use

For clamping tools with cylindrical shank in Collets according to DIN 6499
 -Included in delivery: Clamping nut.
 -Please guarantee that the clamping the tool hangs extends is short

Feature

-Material: Case-hardened steel, process machine : CNC Turing center
 -Cone angle AT3, Tolerance: $8^{\circ}17'50'' \pm 5''$
 -Run out between cone and holing part < 0.005
 -Hardness: HRC56-62° Depth of case 1.0 ± 0.2
 -Pre-balanced by design (8000rpm/G6.3), Through tool holder coolant capability
 -Fine balancing can be customed on demand (12000rpm/G6.3, 25000rpm/G2.5)
 -With through hole for internal and flange coolant (AD/B) design can be customed on demand



Code No.	Size(mm)						T	Weight
	D	d1	d2	d3	L1	L		
BT30-ER11M-70	46	16	11	15	70	118.4	M8×1.25P	0.50
BT30-ER11M-100					100	148.4		0.60
BT30-ER11M-120					120	168.4		0.70
BT30-ER16M-70		23	16	22	70	118.4	M12×1.75P	0.55
BT30-ER16M-100					100	148.4		0.65
BT30-ER16M-120					120	168.4		0.76
BT30-ER20M-100		28	20	27	100	148.4		0.70
BT30-ER20M-120					120	168.4		0.80
BT30-ER20M-150					150	198.4		1.00
BT40-ER11M-70	63	16	11	15	70	135.4	M8×1.25P	1.10
BT40-ER11M-100					100	165.4		1.20
BT40-ER11M-125					125	190.4		1.40
BT40-ER11M-150					150	215.4		1.50
BT40-ER16M-70		23	16	22	70	135.4	M12×1.75P	1.20
BT40-ER16M-100					100	165.4		1.30
BT40-ER16M-125					125	190.4		1.50
BT40-ER16M-150					150	215.4		1.60
BT40-ER20M-70		28	20	27	70	135.4		1.20
BT40-ER20M-100					100	165.4		1.55
BT40-ER20M-125					125	190.4		1.70
BT40-ER20M-150					150	215.4		1.80
BT50-ER11M-70	100	16	11	15	70	171.8	M8×1.25P	3.80
BT50-ER11M-90					90	191.8		3.90
BT50-ER11M-105					105	206.8		4.00
BT50-ER11M-135					135	236.8		4.10
BT50-ER11M-165					165	266.8		4.20
BT50-ER16M-70		23	16	22	70	171.8	M12×1.75P	3.90
BT50-ER16M-90					90	191.8		4.00
BT50-ER16M-105					105	206.8		4.10
BT50-ER16M-135					135	236.8		4.20
BT50-ER16M-165					165	266.8		4.30
BT50-ER20M-90		28	20	27	90	191.8		4.10
BT50-ER20M-105					105	206.8		4.20
BT50-ER20M-135					135	236.8		4.40
BT50-ER20M-165					165	266.8		4.60

Notice: Recommend the use of UP-grade ER Precision Collet. DIN69893 and DIN2080 specifications please specify contact.
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Milling Tooling System - MAS403 BT System

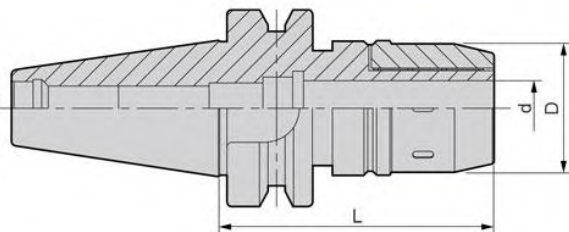
HPC High Speed Power Milling Chuck

Use

- It can be used in the process of drilling, milling, reaming, tapping and so on.
- It is suitable for high-speed and high precision cutting.
- Included in delivery: C-type Wrench

Feature

- Accuracy: T.I.R. <0.01mm
- Material: Case-hardened steel
- Dust-proof design, to extend tool holder life time
- Standard balanced by design (12000rpm/G6.3)
- Fine balancing can be customized on demand (25000rpm/G2.5)



Code No.	Range	Size(mm)				Weight
		D	d	L		
BT30-HPC16-70	3-16	46	16	70	C16	1.4
BT30-HPC20-75	4-20	53	20	75	C20	1.8
BT40-HPC16-70	3-16	46	16	70	C16	1.6
BT40-HPC16-105				105		1.8
BT40-HPC16-135				135		2.3
BT40-HPC20-80	4-20	53	20	80	C20	2.4
BT40-HPC20-105				105		2.5
BT40-HPC20-135				135		2.8
BT40-HPC32-105	6-32	68	32	105	C32	2.8
BT40-HPC32-135				135		3.0
BT50-HPC16-90	3-16	46	16	90	C16	3.9
BT50-HPC16-110				110		4.1
BT50-HPC16-135				135		4.3
BT50-HPC16-150				150		4.5
BT50-HPC20-105	4-20	53	20	105	C20	4.5
BT50-HPC20-135				135		4.7
BT50-HPC20-150				150		4.9
BT50-HPC32-110	6-32	68	32	110	C32	5.2
BT50-HPC32-135				135		5.9
BT50-HPC32-165				165		6.6

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.



Milling Tooling System - MAS403 BT System

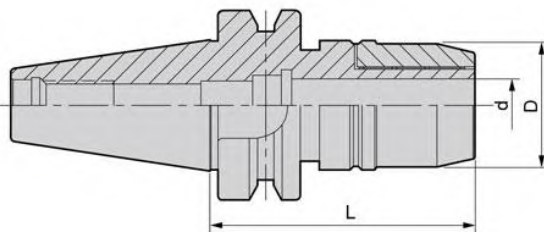
HPM High Speed Power Milling Chuck

Use

- It can be used in the process of drilling, milling, reaming, tapping and so on.
- It is suitable for high-speed and high precision cutting.
- Included in delivery: C-type Wrench

Feature

- Accuracy: T.I.R. <0.01mm
- Material: Case-hardened steel
- Dust-proof design, to extend tool holder life time
- Standard balanced by design (12000rpm/G6.3)
- Fine balancing can be customized on demand (25000rpm/G2.5)



Code No.	Range	Size(mm)			Suit Collet	Weight
		D	d	L		
BT30-HPM16-70	3-16	46	16	70	C16	1.4
BT30-HPM20-75	4-20	53	20	75	C20	1.8
BT40-HPM16-70	3-16	46	16	70	C16	1.6
BT40-HPM16-105				105		1.8
BT40-HPM16-135				135		2.3
BT40-HPM20-80	4-20	53	20	80	C20	2.4
BT40-HPM20-105				105		2.5
BT40-HPM20-135				135		2.8
BT40-HPM32-105	6-32	68	32	105	C32	2.8
BT40-HPM32-135				135		3.0
BT50-HPM16-90	3-16	46	16	90	C16	3.9
BT50-HPM16-110				110		4.1
BT50-HPM16-135				135		4.3
BT50-HPM16-150				150		4.5
BT50-HPM20-105	4-20	53	20	105	C20	4.5
BT50-HPM20-135				135		4.7
BT50-HPM20-150				150		4.9
BT50-HPM32-110	6-32	68	32	110	C32	5.2
BT50-HPM32-135				135		5.9
BT50-HPM32-165				165		6.6

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.



Milling Tooling System - MAS403 BT System

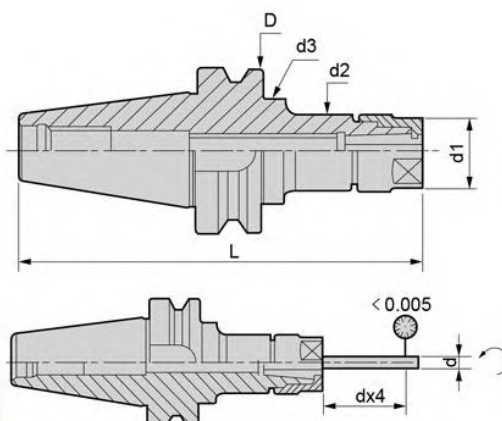
SK High Speed Precision Collet Chuck

Use

-It can be used in the process of drilling, milling, reaming, tapping and so on.

Feature

- Material: Case-hardened steel
- Process machine : CNC Turing center
- Standard balanced by designed(12000rpm/G6.3)
- Fine balancing can be customized on demand (25000rpm/G2.5)
- The 7/24 cone of the shank meet the standard ISO-AT3



Code No.	Range	Size(mm)					Suit Nut	Weight
		D	d1	d2	d3	L		
BT30-SK6A-70	0.7-6.0	46	19.5	20.5	20.5	118.4	SK6-A	0.9
BT30-SK6A-100					32	148.4		0.95
BT30-SK10A-70	1.75-10.0		27.5	29	29	118.4	SK10-A	0.95
BT30-SK10A-100						148.4		1.0
BT40-SK6A-70	0.7-6.0	63	19.5	20.5	20.5	135.4	SK6-A	1.1
BT40-SK6A-100					32	165.4		1.2
BT40-SK6A-120						185.4		1.4
BT40-SK10A-70	1.75-10.0	63	27.5	29	29	135.4	SK10-A	1.5
BT40-SK10A-100					40	165.4		1.6
BT40-SK10A-120						185.4		1.7
BT40-SK10A-150						215.4		1.8
BT50-SK10A-105						29		206.8
BT50-SK10A-135	32	236.8	4.6					
BT50-SK10A-165		266.8	4.7					
BT30-SK16M-100	2.75-16.0	46	40	41.9	41.9	148.4	SK16-M	1.1
BT30-SK16M-120						168.4		1.2
BT30-SK16M-150						198.4		1.3
BT30-SK25M-100	16.0-25.4	63	55	56.1	56.1	148.4	SK25-M	1.4
BT40-SK16M-70	2.75-16.0		40	41.9	41.9	135.4	SK16-M	1.6
BT40-SK16M-100						165.4		1.7
BT40-SK16M-120						185.4		1.8
BT40-SK16M-150						215.4		1.9
BT40-SK25M-100	16.0-25.4		55	56.1	56.1	165.4	SK25-M	1.7
BT40-SK25M-120						185.4		1.8
BT50-SK16M-100	2.75-16.0	100	40	41.9	41.9	SK16-M	4.6	
BT50-SK16M-125					226.8		4.5	
BT50-SK16M-150					50		251.8	4.7
BT50-SK16M-195					52		296.8	5.1
BT50-SK25M-100	16.0-25.4	100	55	56.1	56.1	201.8	SK25-M	4.5
BT50-SK25M-125						226.8		4.7
BT50-SK25M-150						251.8		4.9
BT50-SK25M-200						301.8		5.3

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.



Milling Tooling System - MAS403 BT System

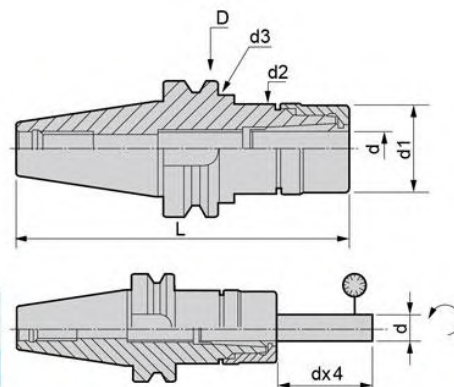
GSK High Speed Precision Collet Chuck

Use

-It can be used in the process of drilling, milling, reaming, tapping and so on.

Feature

- Material: Case-hardened steel
- Process machine : CNC Turing center
- Standard balance 16000RPM/G6.3, optional balance 24000rpm/G2.5 (the highest dynamic balancing of this product can reach up to 24000rpm/G2.5)
- The 7/24 cone of the shank meet the standard ISO-AT3



Code No.	Range	Size(mm)					Suit Nut	Weight
		D	d1	d2	d3	L		
BT30-GSK6-70	0.7-6.0	40	19.5	20.5	20.5	117.8	-GSK6	0.9
BT30-GSK6-100				32	32	147.8		0.95
BT30-GSK10-70	1.75-10.0		27.5	29	29	117.8	-GSK10	0.95
BT30-GSK10-100					147.8	1.0		
BT30-GSK16-100	2.75-16.0		40	41.9	41.9	147.8	-GSK16	1.0
BT30-GSK16-120					167.8	1.1		
BT30-GSK16-150					197.8	1.2		
BT30-GSK25-100	16.0-25.4		55	56.1	56.1	147.8	-GSK25	1.1
BT40-GSK6-70	0.7-6.0	63	19.5	20.5	20.5	138.4	-GSK6	1.1
BT40-GSK6-100					32	168.4		1.2
BT40-GSK6-120						188.4		1.4
BT40-GSK10-70	1.75-10.0		27.5	29	29	138.4	-GSK10	1.5
BT40-GSK10-100					40	168.4		1.6
BT40-GSK10-120						188.4		1.7
BT40-GSK10-150						218.4		1.8
BT40-GSK16-70	2.75-16.0		40	41.9	41.9	138.4	-GSK16	1.6
BT40-GSK16-100						168.4		1.7
BT40-GSK16-120						188.4		1.8
BT40-GSK16-150						218.4		1.9
BT40-GSK25-100	16.0-25.4		55	56.1	56.1	168.4	-GSK25	1.7
BT40-GSK25-120						188.4		1.8
BT50-GSK10-100	1.75-10.0	100	27.5	29	29	201.75	-GSK10	4.0
BT50-GSK10-120					32	221.75		4.2
BT50-GSK10-150						251.75		4.5
BT50-GSK16-100	2.75-16.0		40	41.9	41.9	201.75	-GSK16	4.3
BT50-GSK16-120						221.75		4.5
BT50-GSK16-150					50	251.75		4.7
BT50-GSK16-200					52	301.75		5.1
BT50-GSK25-100	16.0-25.4		55	56.1	56.1	201.75	-GSK25	4.3
BT50-GSK25-120						221.75		4.5
BT50-GSK25-150						251.75		4.7
BT50-GSK25-200						301.75		5.1

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Milling Tooling System - MAS403 BT System

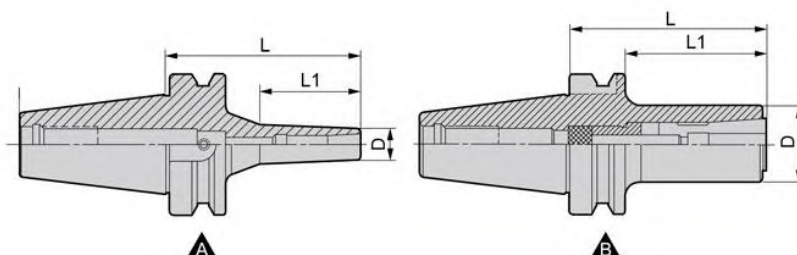
DC Precision Slim Collet Power Milling Chuck

Use

-It can be used in the process of drilling, milling, reaming, tapping and so on.

Feature

- Material: Case-hardened steel
- Process machine : CNC Turing center
- The small head diameter minimizes interference.
- It is easy to operate, for both assembling and disassembling, all you need is an ordinary hexagonal spanner.
- Accuracy: T.I.R. <0.005mm (Length 4D)
- Standard balanced by designed(12000rpm/G6.3)
- Fine balancing can be customized on demand (25000rpm/G2.5)



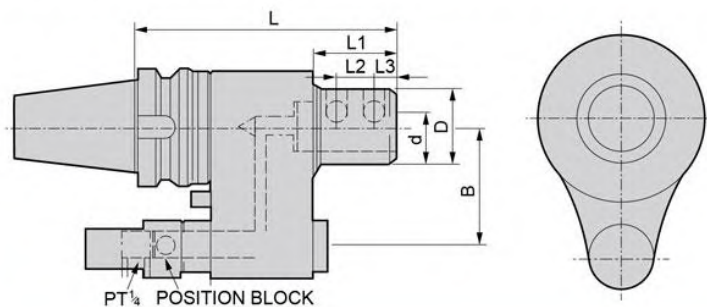
Code No.	Figure	Size(mm)			Suit Collet	Wrench
		D	L1	L		
BT30-DC6-60	A	13	26	60	-DC6	M4
BT30-DC6-90			50	90		
BT30-DC12-70	B	34	45	70	-DC12	M8
BT40-DC6-60	A	13	26	60	-DC6	M4
BT40-DC6-90			45	90		
BT40-DC6-120			60	120		
BT40-DC6-150			76	150		
BT40-DC8-90	A	22	53	90	-DC8	M5
BT40-DC8-120			65	120		
BT40-DC10-90	B	28	51	90	-DC10	M6
BT40-DC10-120	A		60	120		
BT40-DC12-70	B	34	35	70	-DC12	M8
BT40-DC12-90			55	90		
BT40-DC12-120			85	120		
BT40-DC12-150			90	150		
BT50-DC10-110	A	28	57	110	-DC10	M6
BT50-DC10-150	B		75	150		
BT50-DC12-110	A	34	57	110	-DC12	M8
BT50-DC12-150			80	150		

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.



Milling Tooling System - MAS403 BT System

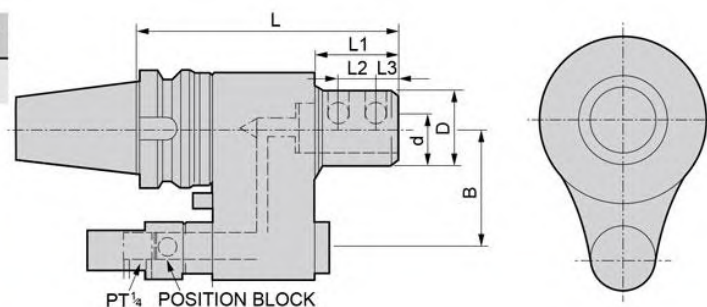
ER Collet Type Multi Oil Hole Holder



Code No.	Size(mm)				Weight
	D	d	L	B	
BT40-ERO32-145	50	4-20	145	60/65	4.4
BT40-ERO40-150	63	4-25	150		4.6
BT50-ERO32-160	50	4-20	155	80/82	7.3
BT50-ERO40-160	63	4-25	160		7.5

Notice: Must use ER coolant nut & ER coolant collet. When ordering, please specify the B part of oil-feed holder according to your machine.
 Quote including screw cap, collet, wrench and positioning block should order additional.
 DIN69893 and DIN2080 specifications please specify contact.
 Cold treatment option against extra fee.

C Straight Collet Type Multi Oil Hole Holder



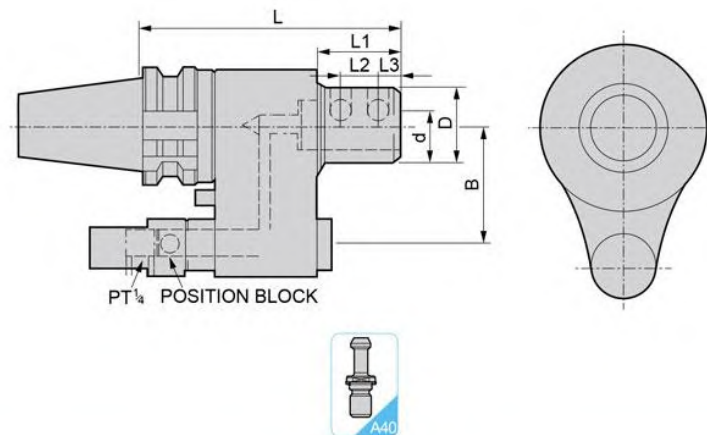
Code No.	Size(mm)				Weight
	D	D1	L	B	
BT40-CO20-145	52	20	150	60/65	3.6
BT40-CO32-160	69	32	165		4.4
BT50-CO20-160	52	20	160	80/82	7.0
BT50-CO32-170	69	32	170		7.1

Notice: When ordering, please specify the B part of oil-feed holder according to your machine. Collet, wrench and positioning block should order additional.
 DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.



Milling Tooling System - MAS403 BT System

SLO Side Lock Type Multi Oil Hole Holder



Code No.	Size(mm)							Weight
	D	d	L1	L2	L3	L	B	
BT40-SLO32-150	53	32	50	15	15	150	60/65	3.4
BT40-SLO40-150	70	40		18	19			3.8
BT50-SLO32-160	54	32		15	15	160	80/82	7.8
BT50-SLO40-160	54	40		18	19			8.7

Notice: When ordering, please specify the B part of OIL-FEED HOLDER according to your machine.

DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.



Milling Tooling System - MAS403 BT System

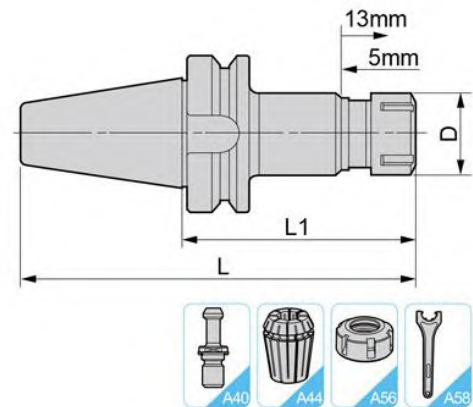
TER Flex Tapping Chuck

Use

For tapping preferably on CNC milling machines

Feature

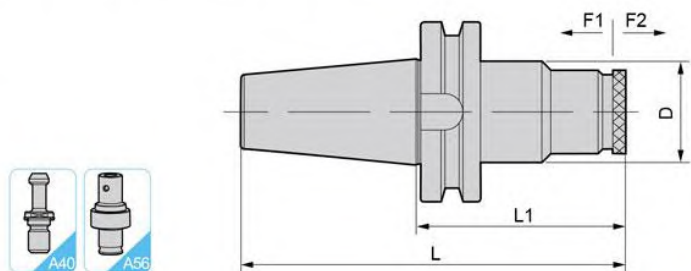
- Material: Case-hardened steel
- Tap is clamped by ER spring collets, minimizing the need to stock various collet sizes.
- Tap is clamped on a floating tap holder; the tapping torque is transmitted through a square shank on the floating tap holder.
- 0.1mm radius tolerance between floating tap holder and shank for compensation of the offset of tap and pre-drilled hole to increase tap tool life.
- Compression and extension movement of the floating tap holder is designed for compensating unsynchronization of the spindle speed and feed while tapping.
- Two set screws are added to prevent slipping of the taps while the tapping functions in taking place.



Code No.	Size(mm)			Suit Collet	Tapping Capacity	Weight
	D	L1	L			
BT30-TER16	28	80	128.4	ER16	M3-M12	0.75
BT30-TER20	34	90	138.4	ER20	M4-M16	0.80
BT40-TER16	28	77	145.4	ER16	M3-M12	1.65
BT40-TER20	32	86	154.4	ER20	M4-M16	1.70
BT40-TER25	42	90	158.4	ER25	M5-M20	1.80
BT40-TER32	50	94	162.4	ER32	M8-M27	2.10
BT40-TER40	63	98	166.4	ER40	M12-M35	2.40
BT50-TER16	28	80	181.8	ER16	M3-M12	4.20
BT50-TER20	34	99	200.8	ER20	M4-M16	4.30
BT50-TER25	42	97	198.8	ER25	M5-M20	4.50
BT50-TER32	50	95	196.8	ER32	M8-M27	4.70
BT50-TER40	63	117	218.8	ER40	M12-M35	4.90

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.

TPM Rigid Tap Holder



Code No.	Size(mm)					Suit Collet	Tapping Capacity	Weight
	D	F1	F2	L1	L			
BT30-TPM316	48	10	20	150	198.4	TPC316	M3-M16	0.75
BT30-TPM830	66		25	195	243.4	TPC830	M8-M30	0.80
BT40-TPM316	48	10	20	150	218.4	TPC316	M3-M16	1.65
BT40-TPM830	66		25	195	263.4	TPC830	M8-M30	1.80
BT50-TPM316	48	10	20	150	251.8	TPC316	M3-M16	4.30
BT50-TPM830	66		25(80)	195	296.8	TPC830	M8-M30	4.70

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.



Milling Tooling System - MAS403 BT System

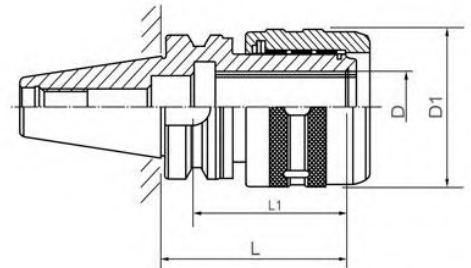
C Straight Collet Power Milling Chuck

Use

For clamping tools with cylindrical shank

Feature

- Material: Case-hardened steel
- Included in delivery: ball bearing locknut
- Enlarging of size L against extra charge
- The needle bearing has been arranged inclined to center of the chuck as thread that gives higher gripping power and smooth operation.
- The holding portion of the chuck is slotted with radius form and thickness of the holding portion is thicker to increase the rigidity of the chuck
- Thanks to the stainless sealing washer has been used at the front of the chucking, waterproof is confirmed.
- Accuracy: T.I.R. 0.005mm



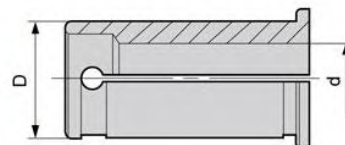
Code No.	Size(mm)				
	ØD	L	ØD1	L1	
				MIN	MAX
BT30-C20-80	20	80	53	45	70
BT40-C20-105	20	105	53	45	70
BT40-C32-105	32	105	70	50	76
BT40-C32-135		135			
BT50-C20-105	20	105	53	45	70
BT50-C32-105	32	105	74	60	95
BT50-C32-135		135			
BT50-C32-165		165			
BT50-C42-115	42	115	92	60	98
BT50-C42-135		135			
BT50-C42-165		165			

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.

C Straight Collet Power Milling Chuck Set

Code No.	Size(mm)		PCS/SET
	D	d	
BT40-C20-5PCS	20	6,8,10,12,16	5
BT40-C32-7PCS	32	6,8,10,12,16,20,25	7
BT40-C42-8PCS	42	6,8,10,12,16,20,25,32	8
BT50-C20-5PCS	20	6,8,10,12,16	5
BT50-C32-7PCS	32	6,8,10,12,16,20,25	7
BT50-C42-8PCS	42	6,8,10,12,16,20,25,32	8

Notice: Cold treatment option against extra fee.





Milling Tooling System - MAS403 BT System

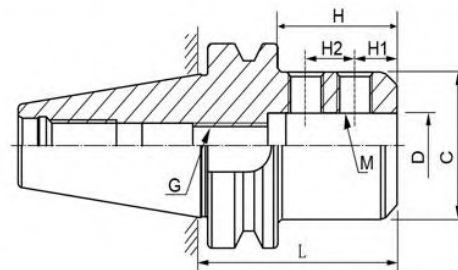
SLA Side Lock Holder

Use

For clamping tools with end mills
DIN1835-B
-Combined End Mills and Drills
-Included in delivery: tightening bolt

Feature

- Material: Case-hardened steel,
- Process machine: CNC Turning Center
- Accuracy: T.I.R. <0.005mm,
- Cone angle<AT 3, Tolerance: 8°17' 50"+/-5"
- Holder diameter ground up to H4
- Hardness: HRC60°+/-2°(HV700+/-50).
- Depth of case 0.8mm+/-0.2mm
- Standard balanced by (design 8000 rpm)
- Pre-balanced by design (8000rpm/G6.3), Through tool holder coolant capability
- Fine balancing can be customized on demand (12000rpm/G6.3, 25000rpm/G2.5)



Code No.	Size(mm)								
	ØD	L	ØC	H		H1	H2	M	G
				MIN	MAX				
BT30-SLA6-60	6	60	25	20	35	18	-	M5	M5
BT30-SLA8-60	8	60	28	20	35	18	-	M6	M6
BT30-SLA10-60	10	60	35	35	50	14	13	M8	M8
BT30-SLA12-60	12	60	40	35	50	14	13	M8	M8
BT30-SLA16-90	16	90	40	55	70	25	20	M10	M10
BT30-SLA20-90	20	90	50	55	70	25	20	M12	M12
BT30-SLA25-90	25	90	50	55	70	25	20	M12	M12
BT30-SLA25-105	25	105	60	65	80	25	25	M12	M12
BT40-SLA6-75	6	75	25	20	35	18	-	M5	M5
BT40-SLA8-75	8	75	28	20	35	18	-	M6	M6
BT40-SLA10-75	10	75	35	35	50	14	13	M8	M8
BT40-SLA12-75	12	75	40	35	50	14	13	M8	M8
BT40-SLA16-90	16	90	40	55	70	25	20	M10	M10
BT40-SLA20-90	20	90	50	55	70	25	20	M12	M12
BT40-SLA25-90	25	90	50	55	70	25	20	M12	M12
BT40-SLA32-105	32	105	60	65	80	25	25	M14	M14
BT40-SLA40-105	40	105	70	65	80	25	25	M16	M16
BT40-SLA42-105	42	105	70	65	80	25	25	M16	M16
BT50-SLA6-105	6	105	25	20	35	-	-	M5	M5
BT50-SLA8-105	8	105	28	20	35	-	-	M6	M6
BT50-SLA10-105	10	105	35	35	50	13	13	M8	M8
BT50-SLA12-105	12	105	40	35	50	13	13	M8	M8
BT50-SLA16-105	16	105	40	55	70	20	20	M10	M10
BT50-SLA20-105	20	105	50	55	70	20	20	M12	M12
BT50-SLA20-150	20	150	50	55	70	20	20	M12	M12
BT50-SLA20-200	20	200	50	55	70	20	20	M12	M12
BT50-SLA20-250	20	250	50	55	70	20	20	M12	M12
BT50-SLA25-105	25	105	50	55	70	20	20	M12	M12
BT50-SLA25-150	25	150	50	55	70	20	20	M12	M12
BT50-SLA25-200	25	200	50	55	70	20	20	M12	M12
BT50-SLA25-250	25	250	50	55	70	20	20	M12	M12
BT50-SLA32-105	32	105	60	65	80	25	25	M14	M12
BT50-SLA32-150	32	150	60	65	80	25	25	M14	M12
BT50-SLA32-200	32	200	60	65	80	25	25	M14	M12
BT50-SLA32-250	32	250	60	65	80	25	25	M14	M12
BT50-SLA40-105	40	105	70	65	80	25	25	M14	M12
BT50-SLA42-105	42	105	70	65	80	25	25	M14	M12
BT50-SLA42-150	42	150	70	65	80	25	25	M14	M12
BT50-SLA42-200	42	200	70	65	80	25	25	M14	M12
BT50-SLA42-250	42	250	70	65	80	25	25	M14	M12

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.



Milling Tooling System - MAS403 BT System

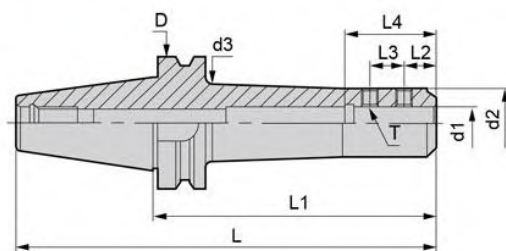
SLA-JIS Side Lock Holder

Use

For clamping tools with end mills
DIN1835-B
-Combined End Mills and Drills
-Included in delivery: tightening bolt

Feature

- Material: Case-hardened steel,
- Process machine: CNC Turning Center
- Accuracy: T.I.R. <0.005mm,
- Cone angle<AT 3, Tolerance: 8°17' 50"+/-5"
- Holder diameter ground up to H4
- Hardness: HRC60°+/-2°(HV700+/-50).
- Depth of case 0.8mm+/-0.2mm
- Standard balanced by (design 8000 rpm)
- Pre-balanced by design (8000rpm/G6.3), Through tool holder coolant capability
- Fine balancing can be customized on demand (12000rpm/G6.3, 25000rpm/G2.5)



Code No.	Size(mm)									T	Weight
	D	d1	d2	d3	L1	L2	L3	L4	L		
BT40-SLA6-75JIS	63	6	25	-	75	12	10	45	140.4	M6×1.0P	1.3
BT40-SLA6-150JIS				30	150				215.4		1.5
BT40-SLA8-75JIS		8	28	-	75	14	12	49	140.4	M8×1.25P	1.3
BT40-SLA8-150JIS				33	150				215.4		1.5
BT40-SLA10-75JIS		10	35	-	75	15	14	54	140.4	M10×1.5P	1.3
BT40-SLA10-150JIS				40	150				215.4		1.5
BT40-SLA12-75JIS		12	42	-	75	20	16	57	140.4		1.5
BT40-SLA12-150JIS				47	150				215.4		1.5
BT40-SLA16-75JIS		16	48	-	75	22	18	65	140.4	M12×1.75P	1.5
BT40-SLA16-150JIS				53	150				215.4		1.7
BT40-SLA20-90JIS		20	52	-	90	25	20	73	155.4		1.6
BT40-SLA20-150JIS				57	150				215.4		1.8
BT40-SLA25-90JIS		25	50	-	90	24	25	65	155.4	M16×2.0P	2.5
BT40-SLA32-100JIS		32	60		100		28	73	165.4		2.75
BT50-SLA6-75JIS	100	6	25	-	75	12	10	45	176.8	M6×1.0P	3.9
BT50-SLA8-75JIS		8	28			14	12			M8×1.25P	
BT50-SLA10-75JIS		10	35			15	14			49	
BT50-SLA12-90JIS		12	42		90	20	16	54	191.8	5	
BT50-SLA12-165JIS				47	165				266.8		
BT50-SLA16-90JIS		16	48	-	90	22	18	57	191.8	M10×1.5P	3.9
BT50-SLA16-165JIS				53	165				266.8		5
BT50-SLA20-90JIS		20	50	-	90	25	20	65	191.8	M12×1.75P	4.5
BT50-SLA20-165JIS				57	165				266.8		6
BT50-SLA20-210JIS				-	210				311.8		7
BT50-SLA25-100JIS		25		-	100	25	25	68	201.8		5.5
BT50-SLA25-165JIS				57	165				266.8		6
BT50-SLA25-210JIS				-	210				311.8		7
BT50-SLA32-105JIS		32	60	-	105	24	28	73	206.8	M16×2.0P	6.5
BT50-SLA32-165JIS				65	165				266.8		7
BT50-SLA32-210JIS				-	210				311.8		7.5
BT50-SLA32-250JIS				55	250				351.8		8
BT50-SLA42-210JIS		42	70	75	210	30	32	85	311.8	M20×2.0P	7.8
BT50-SLA50-120JIS	50	90	-	120	35	35	90	221.8			7.2
BT50-SLA50.8-120JIS	50.8				33	34.54					

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.



Milling Tooling System - MAS403 BT System

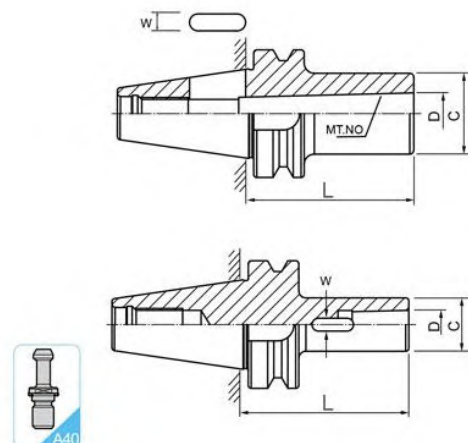
MTA Morse Taper Holder For Drill

Use

For holding tools with Morse tapers and tang according to DIN6383

Feature

- Material: Case-hardened steel
- Process machine: CNC Turning Center
- Accuracy: T.I.R. <0.005mm,
- Cone angle<AT 3, Tolerance: 8°17' 50"+/-5"
- Hole diameter according to DIN6383
- Hardness: HRC60°+/-2°(HV700+/-50).
- Depth of case 0.8mm+/-0.2mm
- Pre-balanced by design (8000rpm/G6.3), Through tool holder coolant capability
- Fine balancing can be customized on demand (12000rpm/G6.3, 25000rpm/G2.5)



Code No.	Size(mm)					
	MT.NO	D	W	L	C	Fig
BT30-MTA1-45	1	12.065	45	20	5.6	1
BT30-MTA2-45	2	17.780	45	30	6.6	1
BT30-MTA3-45	3	23.825	45	40	8.4	1
BT40-MTA1-45	1	12.065	45	25	5.6	1
BT40-MTA1-120			120			2
BT40-MTA2-45	2	17.780	45	32	6.6	1
BT40-MTA2-120			120			2
BT40-MTA3-70	3	23.825	75	40	8.4	1
BT40-MTA3-135			135			2
BT40-MTA4-90	4	31.065	90	50	12.4	1
BT40-MTA4-165			165			2
BT50-MTA1-45	1	12.065	45	25	5.6	1
BT50-MTA1-120			120			2
BT50-MTA1-180			180			
BT50-MTA2-45	2	17.780	45	25	6.6	1
BT50-MTA2-135			135			2
BT50-MTA2-180			180			
BT50-MTA3-45	3	23.835	45	40	8.4	1
BT50-MTA3-150			150			2
BT50-MTA3-180			180			
BT50-MTA4-75	4	44.399	75	50	12.4	1
BT50-MTA4-180			180			2
BT50-MTA4-105			105			1

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.



Milling Tooling System - MAS403 BT System

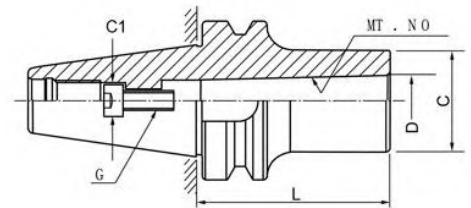
MTB Morse Taper Holder For Mill

Use

For holding tools with Morse tapers and tang according to DIN6364

Feature

- Material: Case-hardened steel
- Process machine: CNC Turning Center
- Accuracy: T.I.R. <0.005mm,
- Cone angle<AT 3, Tolerance: $8^{\circ}17'50'' \pm 5''$
- Hole diameter according to DIN6364
- Hardness: HRC60 $\pm$ 2 $^{\circ}$ (HV700 $\pm$ 50).
- Pre-balanced by design (8000rpm/G6.3), Through tool holder coolant capability
- Fine balancing can be customized on demand (12000rpm/G6.3, 25000rpm/G2.5)



Code No.	Size(mm)					
	MT.NO	D	L	C	C1	G
BT30-MTB1-45	1	12.065	45	25	10	M6×1.0P
BT40-MTB1-45	1	12.065	45	25	10	M6×1.0P
BT40-MTB2-45	2	17.780	45	32	13.5	M10×1.5P
BT40-MTB3-75	3	23.825	75	42	18	M12×1.75P
BT40-MTB4-75	4	31.267	75	50	20.5	M16×2P
BT50-MTB1-45	1	12.065	45	25	10	M6×1.0P
BT50-MTB2-45	2	17.780	45	32	16	M10×1.5P
BT50-MTB3-60	3	23.825	60	42	18	M12×1.75P
BT50-MTB4-75	4	31.267	75	50	20.5	M16×2P

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.



Milling Tooling System - MAS403 BT System

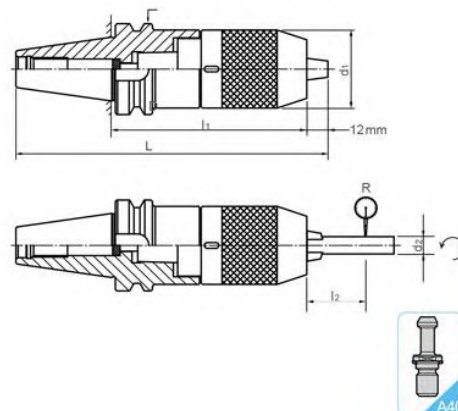
APU Drill Chuck

Use

For high-precise clamping of tools with cylindrical shank with newly developed collets. Very useful for high-speed machining

Feature

- Material: Case-hardened steel
- Process machine: CNC Turning Center
- Accuracy: T.I.R. <0.005mm,
- Cone angle<AT 3, Tolerance: 8°17' 50"/+/-5"
- Hardness: HRC60°+/-2°(HV700+/-50).
- Depth of case 0.8mm+/-0.2mm
- Pre-balanced by design (8000rpm/G6.3), Through tool holder coolant capability
- Fine balancing can be customized on demand (12000rpm/G6.3, 25000rpm/G2.5)
- With through hole for internal and flange coolant (AD/B) design can be customized on demand



Code No.	Size(mm)					
	L1	L	L2	D	d1	d2
BT30-APU8-80	80	137.4	55	46	37	6
BT30-APU13-110	110	170.4	75		50	13
BT40-APU8-85	85	159.4	55	63	37	6
BT40-APU13-110	110	187.4	75		50	13
BT40-APU16-130	130	212.4	80		57	16
BT50-APU13-120	120	223.4	75	100	50	13
BT50-APU13-180	180	293.4	75		57	16
BT50-APU16-130	130	248.4	80		57	16
BT50-APU16-190	190	308.8	80		57	16

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.



Milling Tooling System - MAS403 BT System

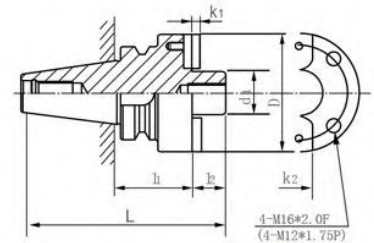
FMA Face Mill Holder(Straight Style)

Use

For clamping JIS B4113 ace milling cutter with inch size center
Include in delivery: tightening bolt, and feater key

Feature

- material: Case -hardened steel
- Process machine: CNC Turning Center
- Accuracy: T.I.R <0.005MM
- Cone angle<AT3, TOLERANCE:8°17' 50" +/-5"
- Hardness: HRC60°+/-2°(HV700+/-50)
- Depth of case 0.8mm+/-0.2mm
- Pre-balance by design (8000rpm/G6.3), Through tool holder coolant capacity
- Fine balancing can be customized on demand(12000rpm/G6.3,25000rpm/G2.5)
- With through hole for internal and flange coolant(AD/B) design can be customized on demand.



Code No.	Size(mm)							
	D	d1	d2	L1	L2	L	K1	K2
BT30-FMA25.4-45	50	25.40	31.5	45	20	113.4	4.52	9.52
BT30-FMA25.4-60				60		128.4		
BT30-FMA31.75-45	60	31.75	40	45	22	115.4	6.70	12.70
BT40-FMA25.4-45	50	25.40	31.5	45	20	130.4	4.52	9.52
BT40-FMA25.4-60				60		145.4		
BT40-FMA25.4-90				90		175.4		
BT40-FMA25.4-105				105		190.4		
BT40-FMA31.75-45	60	31.75	40	45	22	132.4	6.70	12.70
BT40-FMA38.1-60	75	38.10	50	60	25	150.4	8.87	15.87
BT40-FMA50.8-60	98	50.80	65		36	161.4	9.75	19.05
BT50-FMA25.4-45	50	25.40	31.5	45	20	166.8	4.52	9.52
BT50-FMA25.4-90				90		211.8		
BT50-FMA25.4-150				150		271.8		
BT50-FMA31.75-45	60	31.75	40	45	22	168.8	6.70	12.70
BT50-FMA31.75-105	98			105		228.8		
BT50-FMA38.1-45	50	38.10	50	45	25	171.8	8.87	15.87
BT50-FMA50.8-45	95	50.80	65	45	36	182.8	9.75	19.05
BT50-FMA50.8-75				75		212.8		
BT50-FMA47.62-75	128.75	47.625	-	75	32	208.8	12.50	25.40

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.



Milling Tooling System - MAS403 BT System

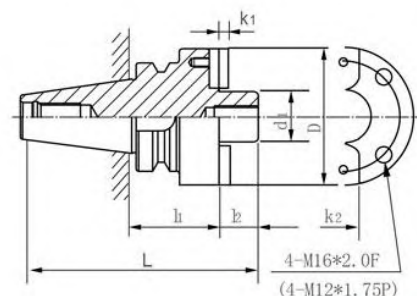
FMB Face Mill Holder(Straight Style)

Use

For clamping JIS B4113 ace milling cutter with metric size center
Include in delivery: tightening bolt, and feater key

Feature

- material: Case -hardened steel
- Process machine: CNC Turning Center
- Accuracy: T.I.R <0.005MM
- Cone angle<AT3, TOLERANCE:8°17' 50" +/-5"
- Hardness: HRC60°+/-2°(HV700+/-50)
- Depth of case 0.8mm+/-0.2mm
- Pre-balance by design (8000rpm/G6.3), Through tool holder coolant capacity
- Fine balancing can be customized on demand(12000rpm/G6.3,25000rpm/G2.5)
- With through hole for internal and flange coolant(AD/B) design can be customized on demand.



Code No.	Size(mm)							
	D	d1	d2	L1	L2	L	K1	K2
BT30-FMB22-45	48	22	26	45	18	111.4	4.8	10
BT30-FMB27-45	60	27	33	45	20	113.4	5.8	12
BT30-FMB32-45	78	32	40	45	22	115.4	6.8	15
BT40-FMB22-45	48	22	26	45	18	128.4	4.8	10
BT40-FMB22-60				60		143.4		
BT40-FMB22-90				70		173.4		
BT40-FMB22-150				150		128.4		
BT40-FMB22-200				200		143.4		
BT40-FMB22-250				250		173.4		
BT40-FMB27-45	60	27	33	45	20	130.4	5.8	12
BT40-FMB27-60				60				
BT40-FMB27-100				100				
BT40-FMB32-45	78	32	40	45	22	132.4	6.8	14
BT40-FMB32-60								
BT40-FMB40-45	80	40	50	45	25	135.4	8.3	16
BT50-FMB22-45	48	22	26	45	18	164.8	4.8	10
BT50-FMB22-100				100		219.8		
BT50-FMB22-150				150		269.8		
BT50-FMB22-250				250		369.8		
BT50-FMB22-300				300		369.8		
BT50-FMB27-75	60	27	33	75	20	141.8	5.8	12
BT50-FMB27-100								
BT50-FMB32-75	78	32	40	75	22	143.8	6.8	14
BT50-FMB40-75	85	40	50	75	25	145.8	8.3	16
BT50-FMB40F-75	110		-	75	26	202.8		

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.



Milling Tooling System - MAS403 BT System

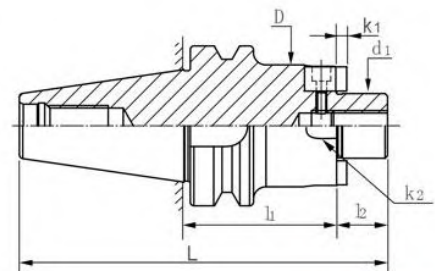
FMA Face Mill Holder(Lengthen&Pitch Style)

Use

For clamping JIS B4113 ace milling cutter with inch size center
Include in delivery: tightening bolt, and feater key

Feature

- material: Case -hardened steel
- Process machine: CNC Turning Center
- Accuracy: T.I.R <0.005MM
- Cone angle<AT3, TOLERANCE:8°17' 50" +/-5"
- Hardness: HRC60°+/-2°(HV700+/-50)
- Depth of case 0.8mm+/-0.2mm
- Pre-balance by design (8000rpm/G6.3), Through tool holder coolant capacity
- Fine balancing can be customized on demand(12000rpm/G6.3,25000rpm/G2.5)
- With through hole for internal and flange coolant(AD/B) design can be customized on demand.



Code No.	Size(mm)								
	D	d1	d2	d3	L1	L2	L	K1	K2
BT50-FMA25.4-150BG	48	25.4	31.5	60	150	20	271.8	4.25	9.52
BT50-FMA25.4-200BG	58			63	200		321.8		
BT50-FMA25.4-250BG					250		371.8		
BT50-FMA25.4-300BG					300		421.8		
BT50-FMA25.4-350BG				66	350		471.8		
BT50-FMA25.4-400BG					400		521.8		
BT50-FMA31.75-150BG	70	31.75	40	75	22	273.8	6.7	12.7	
BT50-FMA31.75-175BG						298.8			
BT50-FMA31.75-200BG						323.8			
BT50-FMA31.75-250BG						373.8			
BT50-FMA31.75-300BG						423.8			
BT50-FMA31.75-350BG						473.8			

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.



Milling Tooling System - MAS403 BT System

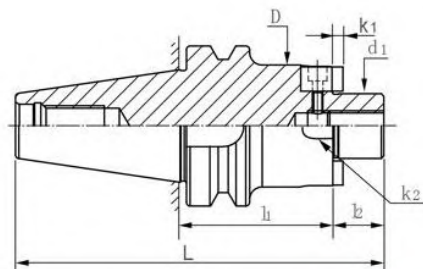
FMB Face Mill Holder(Lengthen&Pitch Style)

Use

For clamping JIS B4113 ace milling cutter with metric size center
Include in delivery: tightening bolt, and feater key

Feature

- material: Case -hardened steel
- Process machine: CNC Turning Center
- Accuracy: T.I.R <0.005MM
- Cone angle<AT3, TOLERANCE:8°17' 50" +/-5"
- Hardness: HRC60°+/-2°(HV700+/-50)
- Depth of case 0.8mm+/-0.2mm
- Pre-balance by design (8000rpm/G6.3), Through tool holder coolant capacity
- Fine balancing can be customized on demand(12000rpm/G6.3,25000rpm/G2.5)
- With through hole for internal and flange coolant(AD/B) design can be customized on demand.



Code No.	Size(mm)									Weight
	D	d1	d2	d3	L1	L2	L	K1	K2	
BT40-FMB22-150BG	48	22	26	50	150	18	233.4	4.8	10	3.1
BT40-FMB22-200BG					200		283.4			4.0
BT40-FMB22-250BG					250		333.4			4.9
BT50-FMB22-150BG	58	22	26	63	150	18	269.8	4.8	10	6.8
BT50-FMB22-200BG					200		319.8			8.4
BT50-FMB22-250BG					250		369.8			9.4
BT50-FMB22-300BG				66	300		419.8			10.4
BT50-FMB22-350BG					350		469.8			11.4
BT50-FMB22-400BG					400		519.8			12.4
BT50-FMB22-450BG					450		569.8			13.4
BT50-FMB22-500BG					500		619.8			15.3

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.



Milling Tooling System - DIN69871 DAT System

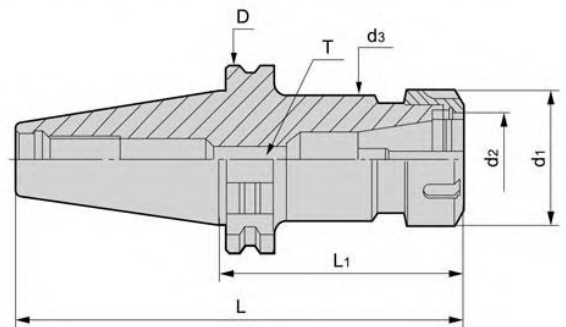
ER Spring Collet Chuck

Use

For clamping tools with cylindrical shank in collects according to DIN 6499
 -Included in delivery: Clamping nut.
 -Please guarantee that the clamping the tool hangs extends is short

Feature

-Material: Case-hardened steel, process machine : CNC Turing center
 -Cone angle AT3, Tolerance: $8^{\circ}17'50'' \pm 5''$
 -Run out between cone and holing part < 0.005
 -Hardness: HRC56-62° Depth of case 1.0 ± 0.2
 -re-balanced by design (8000rpm/G6.3), Through tool holder coolant capability.
 Fine balancing can be customized on demand (12000rpm/G6.3, 25000rpm/G2.5
 - With through hole for internal and flange coolant (AD/B) design can be customized on demand



Code No.	Size(mm)						T	Weight
	D	d1	d2	d3	L1	L		
DAT30-ER11-60	50	19	11	19	79.4	127.8	M10×1.5P	0.60
DAT30-ER16-63		28	16	28	62.4	110.8		0.70
DAT30-ER16-120					119.4	167.8		0.85
DAT30-ER20-63		34	20	34	62.4	110.8	M12×1.75P	0.80
DAT30-ER20-120					119.4	167.8		1.05
DAT30-ER25-63		42	25	42	62.4	110.8	M16×2.0P	0.85
DAT30-ER32-63		50	32	50	62.4	110.8		0.90
DAT40-ER11-80	63.55	19	11	19	80	148.4	M10×1.5P	1.05
DAT40-ER11-125					125	193.4		1.15
DAT40-ER16-70		28	16	28	69.6	138.4		1.30
DAT40-ER16-100					100	168.4		1.40
DAT40-ER16-125					125	193.4		1.60
DAT40-ER16-150					150	218.4		1.65
DAT40-ER16-180					180	248.4		1.85
DAT40-ER20-70		34	20	34	70	138.4	M12×1.75P	1.40
DAT40-ER20-100					100	168.4		1.50
DAT40-ER20-135					135	203.4		1.95
DAT40-ER20-160					160	228.4		2.20
DAT40-ER25-70		42	25	42	70	138.4	M16×2.0P	1.60
DAT40-ER25-100					100	168.4		1.85
DAT40-ER25-150					150	218.4		2.25
DAT40-ER25-180					180	248.4		2.45
DAT40-ER25-200					200	268.4		2.55
DAT40-ER32-70		50	32	50	70	138.4		1.60
DAT40-ER32-100					100	168.4		2.00
DAT40-ER32-135					135	203.4		2.15
DAT40-ER32-150					150	218.4		2.65
DAT40-ER40-70		63	40	63	70	138.4	M20×2.0P	1.50
DAT40-ER40-100					100	168.4		2.00
DAT40-ER40-135					150	218.4		3.30
DAT40-ER50-100		78	50	78	66.6	168.4		1.70
DAT50-ER16-100	97.5	28	16	28	99.65	201.75	M10×1.5P	3.20
DAT50-ER16-135					134.95	236.75		4.30
DAT50-ER16-160					159.95	261.75		4.50
DAT50-ER16-180					179.95	281.75		4.80
DAT50-ER20-100		34	20	34	99.95	201.75	M12×1.75P	3.40
DAT50-ER20-135					134.95	236.75		3.60
DAT50-ER20-160					159.95	261.75		3.80

Notice: Recommend the use of UP-grade ER Precision Collet. DIN69893 and DIN2080 specifications please specify contact.
 Cold treatment option against extra fee.



Milling Tooling System - DIN69871 DAT System

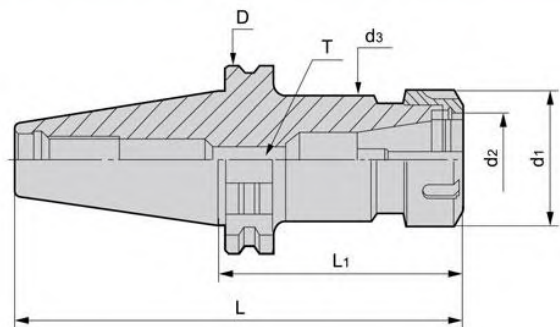
ER Spring Collet Chuck

Use

For clamping tools with cylindrical shank in collects according to DIN 6499
 -Included in delivery: Clamping nut.
 -Please guarantee that the clamping the tool hangs extends is short

Feature

-Material: Case-hardened steel, process machine : CNC Turing center
 -Cone angle AT3, Tolerance: $8^{\circ}17'50'' \pm 5''$
 -Run out between cone and holing part < 0.005
 -Hardness: HRC56-62° Depth of case 1.0 ± 0.2
 -re-balanced by design (8000rpm/G6.3), Through tool holder coolant capability.
 Fine balancing can be customized on demand (12000rpm/G6.3, 25000rpm/G2.5
 - With through hole for internal and flange coolant (AD/B) design can be customized on demand



Code No.	Size(mm)						T	Weight
	D	d1	d2	d3	L1	L		
DAT50-ER25-70	97.5	42	25	42	69.95	171.75	M16×2.0P	3.40
DAT50-ER25-100					99.95	201.75		4.15
DAT50-ER25-150					149.95	251.75		4.50
DAT50-ER25-200					199.95	301.75		4.70
DAT50-ER32-80		50	32	50	79.95	181.75		3.60
DAT50-ER32-120					119.95	221.75		4.60
DAT50-ER32-160					159.95	261.75		4.75
DAT50-ER32-200					199.95	301.75		4.90
DAT50-ER40-80		63	40	63	79.95	181.75	M20×2.0P	3.65
DAT50-ER40-120					119.95	221.75		4.80
DAT50-ER40-160					159.95	261.75		5.20
DAT50-ER40-200					199.95	301.75		5.40
DAT50-ER50-80		78	50	78	79.95	181.75	M24×2.0P	4.85
DAT50-ER50-120					119.95	221.75		5.45
DAT50-ER50-160					159.95	261.75		5.55
DAT50-ER50-200					199.95	301.75		5.70

Notice: Recommend the use of UP-grade ER Precision Collet. DIN69893 and DIN2080 specifications please specify contact.
 Cold treatment option against extra fee.



Milling Tooling System - DIN69871 DAT System

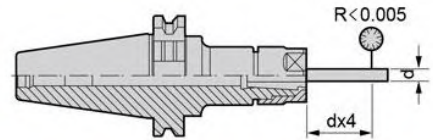
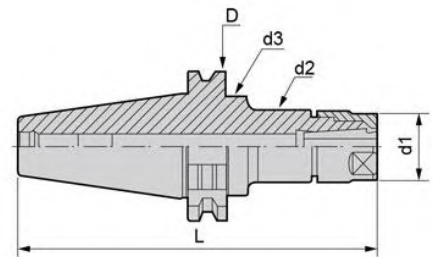
SK High Speed Precision Collet Chuck

Use

-It can be used in the process of drilling, milling, reaming, tapping and so on.

Feature

- Material: Case-hardened steel
- Process machine : CNC Turing center
- Standard balanced by designed(12000rpm/G6.3)
- Fine balancing can be customized on demand (25000rpm/G2.5)
- The 7/24 cone of the shank meet the standard ISO-AT3



Code No.	Range	Size(mm)					Suit Nut	Weight
		D	d1	d2	d3	L		
DAT30-SK6A-70	0.7-6.0	46	19.5	20.5	20.5	117.8	-SK-A	0.9
DAT30-SK6A-100					32	147.8		0.95
DAT30-SK10A-70	1.75-10.0		27.5	29	29	117.8	-SK-A	0.95
DAT30-SK10A-100						147.8		1.0
DAT40-SK6A-70	0.7-6.0	63	19.5	20.5	20.5	138.4	-SK-A	1.1
DAT40-SK6A-100					32	168.4		1.2
DAT40-SK6A-120						188.4		1.4
DAT40-SK10A-70	1.75-10.0	63	27.5	29	29	138.4	-SK-A	1.5
DAT40-SK10A-100					40	168.4		1.6
DAT40-SK10A-120						188.4		1.7
DAT40-SK10A-150						218.4		1.8
DAT50-SK10A-105						29		201.75
DAT50-SK10A-135	32	226.75	4.6					
DAT50-SK10A-150		251.75	4.7					
DAT30-SK16M-100	2.75-16.0	46	40	41.9	41.9	147.8	-SK-M	1.1
DAT30-SK16M-120						167.8		1.2
DAT30-SK16M-150						197.8		1.3
DAT30-SK25M-100	16.0-25.4			55	56.1	56.1	147.8	-SK-M
DAT40-SK16M-70	2.75-16.0	63	40	41.9	41.9	138.4	-SK-M	1.6
DAT40-SK16M-100						168.4		1.7
DAT40-SK16M-120						188.4		1.8
DAT40-SK16M-150						218.4		1.9
DAT40-SK25M-100	16.0-25.4		55	56.1	56.1	168.4	-SK-M	1.7
DAT40-SK25M-120						188.4		1.8
DAT50-SK16M-100	2.75-16.0	100	40	41.9	41.9	201.75	-SK-M	4.3
DAT50-SK16M-125						226.75		4.5
DAT50-SK16M-150					50	251.75		4.7
DAT50-SK16M-200						52		301.75
DAT50-SK25M-100	16.0-25.4	100	55	56.1	56.1	201.75	-SK-M	4.5
DAT50-SK25M-125						226.75		4.7
DAT50-SK25M-150						251.75		4.9
DAT50-SK25M-200						301.75		5.3

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.



Milling Tooling System - DIN69871 DAT System

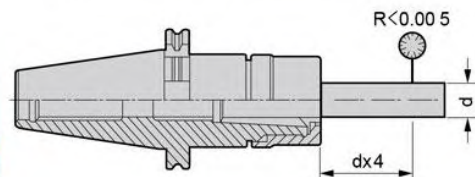
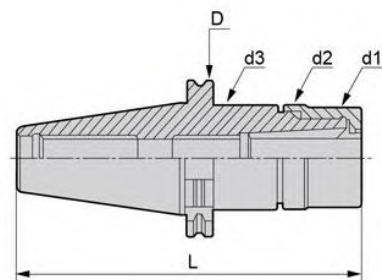
GSK High Speed Precision Collet Chuck

Use

-It can be used in the process of drilling, milling, reaming, tapping and so on.

Feature

- Material: Case-hardened steel
- Process machine : CNC Taring center
- Standard balanced by designed(12000rpm/G6.3)
- Fine balancing can be customed on demand (25000rpm/G2.5)
- The 7/24 cone of the shank meet the standard ISO-AT3



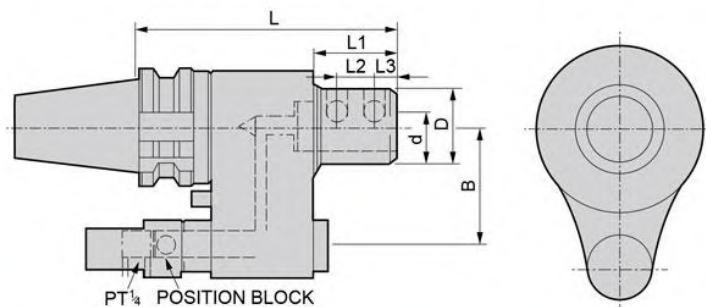
Code No.	Range	Size(mm)					Suit Nut	Weight	
		D	d1	d2	d3	L			
DAT30-GSK6-70	0.7-6.0	46	19.5	20.5	20.5	117.8	-GSK6	0.9	
DAT30-GSK6-100					32	147.8		0.95	
DAT30-GSK10-70	1.75-10.0		27.5	29	29	117.8	-GSK10		1.0
DAT30-GSK10-100					147.8				
DAT30-GSK16-100	2.75-16.0		40	41.9	41.9	167.8	-GSK16	1.1	
DAT30-GSK16-120						197.8		1.2	
DAT30-GSK16-150									
DAT30-GSK25-100	16.0-25.4			55	56.1	56.1	147.8	-GSK25	1.1
DAT40-GSK6-70	0.7-6.0	63	19.5	20.5	20.5	138.4	-GSK6	1.1	
DAT40-GSK6-100					32	168.4		1.2	
DAT40-GSK6-120						188.4		1.4	
DAT40-GSK10-70	27.5		29	29	138.4	-GSK10	1.5		
DAT40-GSK10-100				40	168.4		1.6		
DAT40-GSK10-120					188.4		1.7		
DAT40-GSK10-150					218.4		1.8		
DAT40-GSK16-70	2.75-16.0		40	41.9	41.9	138.4	-GSK16	1.6	
DAT40-GSK16-100						168.4		1.7	
DAT40-GSK16-120						188.4		1.8	
DAT40-GSK16-150						218.4		1.9	
DAT40-GSK25-100	16.0-25.4		55	56.1	56.1	168.4	-GSK25	1.7	
DAT40-GSK25-120						188.4		1.8	
DAT50-GSK10-100	1.75-10.0		100	27.5	29	29	201.75	-GSK10	4.0
DAT50-GSK10-120						32	221.75		4.2
DAT50-GSK10-150							251.75		4.5
DAT50-GSK16-100	2.75-16.0	40		41.9	41.9	201.75	-GSK16	4.3	
DAT50-GSK16-120					50	221.75		4.5	
DAT50-GSK16-150						251.75		4.7	
DAT50-GSK16-200						301.75		5.1	
DAT50-GSK25-100	16.0-25.4	55		56.1	56.1	201.75	-GSK25	4.3	
DAT50-GSK25-120						221.75		4.5	
DAT50-GSK25-150						251.75		4.7	
DAT50-GSK25- 200						301.75		5.1	

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.



Milling Tooling System - DIN69871 DAT System

ER Collet Type Multi Oil Hole Holder



Code No.	Size(mm)				Weight
	D	d	L	B	
DAT40-ERO32-145	50	4-20	145	60/65	4.4
DAT40-ERO40-150	63	4-25	150		4.6
DAT50-ERO32-160	50	4-20	155	80/82	7.3
DAT50-ERO40-160	63	4-25	160		7.5

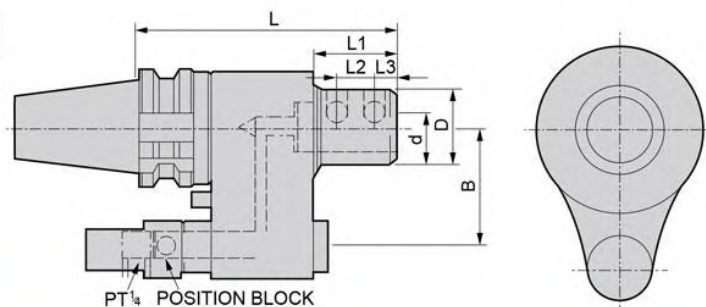
Notice: Must use ER coolant nut & ER coolant collet. When ordering, please specify the B part of oil-feed holder according to your machine.

Quote including screw cap, collet, wrench and positioning block should order additional.

DIN69893 and DIN2080 specifications please specify contact.

Cold treatment option against extra fee.

C Power Collet Type Multi Oil Hole Holder



Code No.	Size(mm)				Weight
	D	D1	L	B	
DAT40-CO20-145	52	20	150	60/65	3.6
DAT40-CO32-160	69	32	165		4.4
DAT50-CO20-160	52	20	160	80/82	7.0
DAT50-CO32-170	69	32	170		7.1

Notice: When ordering, please specify the B part of oil-feed holder according to your machine. Collet, wrench and positioning block should order additional.

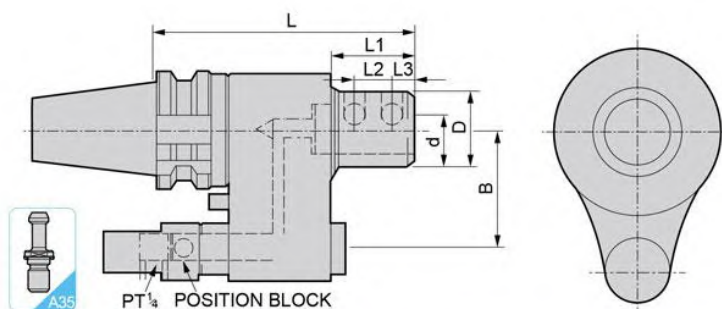
DIN69893 and DIN2080 specifications please specify contact.

Cold treatment option against extra fee.



Milling Tooling System - DIN69871 DAT System

SLO Side Lock Type Multi Oil Hole Holder



Code No.	Size(mm)							Weight
	D	d	L1	L2	L3	L	B	
DAT40-SLO32-150	53	32	50	15	15	150	60/65	3.4
DAT40-SLO40-150	70	40		18	19	150	60/65	3.8
DAT50-SLO32-160	54	32		15	15	160	80/82	7.8
DAT50-SLO40-160	54	40		18	19	160	80/82	8.7

Notice: When ordering, please specify the B part of OIL-FEED HOLDER according to your machine.
DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.

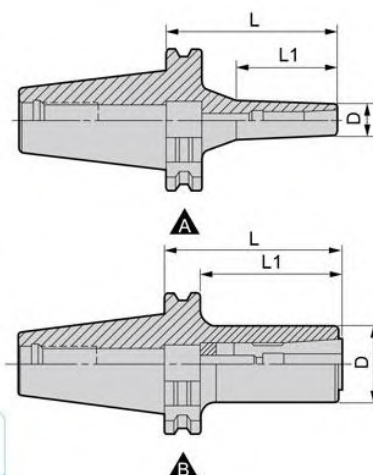
DC Precision Slim Collet Power Milling Chuck

Use

-It can be used in the process of drilling, milling, reaming, tapping and so on.

Feature

- Material: Case-hardened steel
- process machine : CNC Turing center
- The small head diameter minimizes interference.
- It is easy to operate, for both assembling and disassembling, all you need is an ordinary hexagonal spanner.
- Accuracy: T.I.R. <0.005mm (Length 4D)
- Standard balanced by designed(12000rpm/G6.3)
- Fine balancing can be customized on demand (25000rpm/G2.5)



Code No.	Figure	Size(mm)			Suit Collet	Wrench
		D	L1	L		
DAT40-DC6-90	A	13	45	90	-DC6	M4
DAT40-DC8-90		22	53		-DC8	M5
DAT40-DC10-90	B	28	51		-DC10	M6
DAT40-DC12-90		34	55		-DC12	M8
DAT50-DC10-110	A	28	57	110	-DC10	M6
DAT50-DC12-110	B	34			-DC12	M8

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.



Milling Tooling System - DIN69871 DAT System

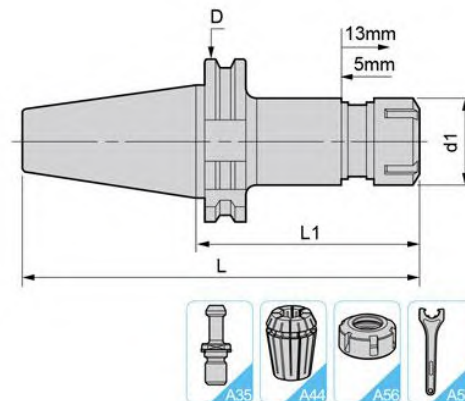
TER Flex Tapping Chuck

Use

For tapping preferably on CNC milling machines
-Material: Case-hardened steel

Feature

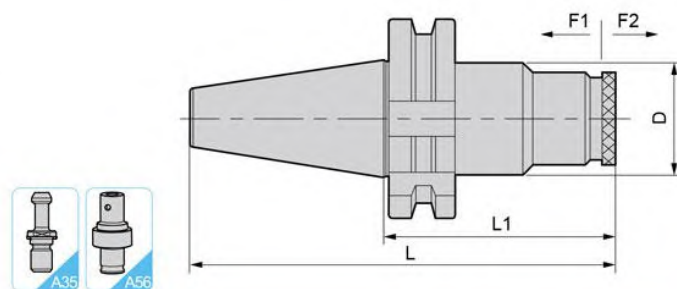
- Tap is clamped by ER spring collets, minimizing the need to stock various collet sizes.
- Tap is clamped on a floating tap holder; the tapping torque is transmitted through a square shank on the floating tap holder.
- 0.1mm radius tolerance between floating tap holder and shank for compensation of the offset of tap and pre-drilled hole to increase tap tool life.
- Compression and extension movement of the floating tap holder is designed for compensating unsynchronization of the spindle speed and feed while tapping.
- Two set screws are added to prevent slipping of the taps while the tapping functions in taking place.



Code No.	Size(mm)				Suit Collet	Tapping Capacity	Weight
	D	d1	L1	L			
DAT40-TER16A-120	63.55	28	120	188.4	ER16	M3-M10	1.65
DAT40-TER16A-150			150	218.4			1.85
DAT40-TER20A-100		34	100	168.4	ER20	M3-M16	1.65
DAT40-TER20A-150			150	218.4			1.90
DAT40-TER20M-200		28	200	268.4	ER32	M3-M27	2.15
DAT40-TER32-120		50	120	188.4			2.10
DAT50-TER16A-120	97.50	28	120	221.75	ER16	M3-M10	4.30
DAT50-TER16A-150			150	251.75			4.50
DAT50-TER20A-100		34	100	201.75	ER20	M3-M16	4.30
DAT50-TER20A-150			150	251.75			4.60
DAT50-TER20M-200		28	200	301.75	ER32	M3-M27	4.70
DAT50-TER32-120		80	120	221.75			4.65

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.

TPM Rigid Tap Holder



Code No.	Size(mm)					Suit Collet	Tapping Capacity	Weight
	D	F1	F2	L1	L			
DAT40-TPM316	48	10	20	145	213.4	TPC316	M3-M16	1.65
DAT40-TPM830	66		25	190	291.8	TPC830	M8-M30	1.80
DAT50-TPM316	48	10	20	190	291.8	TPC316	M3-M16	4.30
DAT50-TPM830	66		25(80)			TPC830	M8-M30	4.70

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.



Milling Tooling System - DIN69871 DAT System

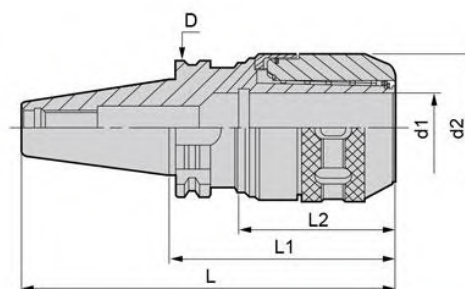
C Straight Collet Power Milling Chuck

Use

For clamping tools with cylindrical shank

Feature

- Material: Case-hardened steel
- Included in delivery: ball bearing locknut
- Enlarging of size L against extra charge
- The needle bearing has been arranged inclined to center of the chuck as thread that gives higher gripping power and smooth operation.
- The holding portion of the chuck is slotted with radius form and thickness of the holding portion is thicker to increase the rigidity of the chuck
- Thanks to the stainless sealing washer has been used at the front of the chucking, waterproof is confirmed.
- Accuracy: T.I.R. 0.005mm



Code No.	Size(mm)						Weight
	D	d1	d2	L1	L2	L	
DAT30-C20-75	50	20	55	85	70	132.80	1.9
DAT30-C20-100				100		147.80	2.1
DAT30-C32-135		32	73	135	75	203.40	3.0
DAT40-C20-80	63.55	20	55	80	70	153.40	2.4
DAT40-C20-100				100		168.40	2.5
DAT40-C20-135				135		203.40	2.8
DAT40-C32-105		32	73	95	75	173.40	2.7
DAT50-C20-105	97.5	20	55	105	70	206.75	4.5
DAT50-C20-150				150		251.80	4.9
DAT50-C32-105		32	73	105	75	206.75	5.1
DAT50-C32-110				110		211.75	5.2
DAT50-C32-135				135		236.75	5.9
DAT50-C42-110		42	95	110	90	211.75	6.0
DAT50-C42-165				165		266.75	7.4

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.



Milling Tooling System - DIN69871 DAT System

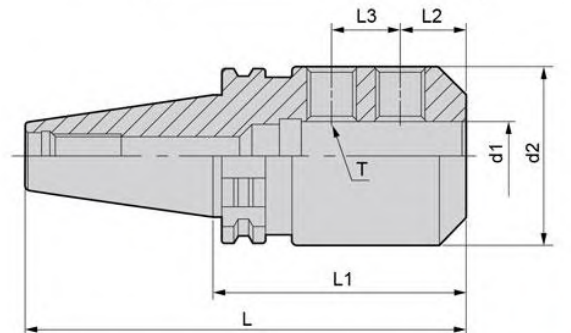
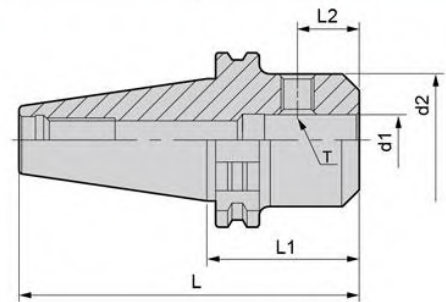
SLA Side Lock Holder

Use

For clamping tools with end mills
 DIN1835-B
 -Combined End Mills and Drills
 -Included in delivery: tightening bolt

Feature

- Material: Case-hardened steel,
- Process machine: CNC Turning Center
- Accuracy: T.I.R. <0.005mm,
- Cone angle<AT 3, Tolerance: 8°17' 50"±/-5"
- Holder diameter ground up to H4
- Hardness: HRC60°±/-2°(HV700±/-50).
- Depth of case 0.8mm±/-0.2mm
- Pre-balanced by design (8000rpm/G6.3), Through tool holder coolant capability
- Fine balancing can be customized on demand (12000rpm/G6.3, 25000rpm/G2.5)
- With through hole for internal and flange coolant (AD/B) design can be customized on demand



Code No.	Size(mm)						T	Weight	
	d1	d2	L1	L2	L3	L			
DAT30-SLA6-50	6	25	50	18	-	97.8	M6×1.0P	0.73	
DAT30-SLA8-50	8	28		20			M8×1.25P	0.80	
DAT30-SLA10-50	10	35		22.5			M10×1.5P	0.90	
DAT30-SLA12-50	12	42		24			M12×1.75P		
DAT30-SLA16-63	16	48	63	24		110.8	M14×2.0P	1.10	
DAT40-SLA6-50	6	25	50	18	-	118.4	M6×1.0P	0.85	
DAT40-SLA8-50	8	28		20			M8×1.25P	1.00	
DAT40-SLA10-50	10	35		22.5			M10×1.5P	1.10	
DAT40-SLA12-50	12	42		24			M12×1.75P	1.15	
DAT40-SLA16-63	16	48	63	24		161.4	M14×2.0P	1.40	
DAT40-SLA20-63	20	52		25			M16×2.0P	1.30	
DAT40-SLA25-100	25	65	100	24	25	168.4	M18×2.0P	2.40	
DAT40-SLA32-100	32	72		28	M20×2.0P		2.70		
DAT50-SLA6-63	6	25	63	18	-	164.75	M6×1.0P	3.10	
DAT50-SLA8-63	8	28		20			M8×1.25P		
DAT50-SLA10-63	10	35		22.5			M10×1.5P	3.30	
DAT50-SLA12-63	12	42		24			M12×1.75P	3.50	
DAT50-SLA16-63	16	48		25			M14×2.0P	3.45	
DAT50-SLA20-63	20	52					M16×2.0P	3.50	
DAT50-SLA25-80	25	65	80	24	25	181.75	M18×2.0P	4.20	
DAT50-SLA32-100	32	72	100	30	32	201.75	M20×2.0P	5.00	
DAT50-SLA40-100	40	90		35	35			226.75	5.60
DAT50-SLA42-100	42								5.70
DAT50-SLA50-125	50								5.90
DAT50-SLA63-150	63	125	150			40			251.75
DAT50-SLA63-150				24					

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.



Milling Tooling System - DIN69871 DAT System

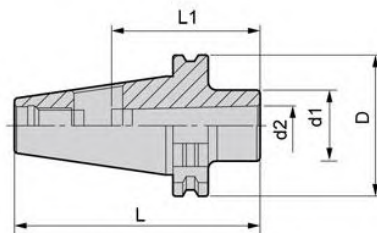
MTB Morse Taper Holder For Mill(Screw Lockup)

Use

For holding tools with Morse tapers and tang according to DIN6364

Feature

- Material: Case-hardened steel
- Process machine: CNC Turning Center
- Accuracy: T.I.R. <0.005mm,
- Cone angle<AT 3, Tolerance: 8°17' 50"/+/-5"
- Hole diameter according to DIN6364
- Hardness: HRC60°+/-2°(HV700+/-50).
- Depth of case 0.8mm+/-0.2mm
- Pre-balanced by design (8000rpm/G6.3), Through tool holder coolant capability
- Fine balancing can be customized on demand (12000rpm/G6.3, 25000rpm/G2.5)
- With through hole for internal and flange coolant (AD/B) design can be customized on demand



Code No.	Size(mm)					Weight
	D	d1	d2	L1	L	
DAT30-MTB1-50	50	25	12.065	59	97.8	0.55
DAT30-MTB2-60		32	17.780	67	107.8	0.80
DAT30-MTB3-75		40	23.825	84	122.8	1.00
DAT40-MTB1-50	63.55	25	12.065	59	118.4	1.00
DAT40-MTB2-50		32	17.780	67		1.10
DAT40-MTB3-70		40	23.825	84		1.20
DAT50-MTB4-95	63.55	48	31.267	107	163.4	1.35
DAT50-MTB1-45	97.50	23	12.065	59	146.75	3.00
DAT50-MTB2-60		32	17.780	67	161.75	3.10
DAT50-MTB3-65		40	23.825	84	166.75	3.20
DAT50-MTB4-95		48	31.267	107	196.75	3.40
DAT50-MTB5-105		63	44.399	133	206.75	3.60

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.

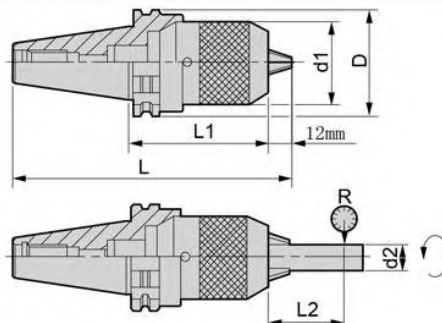
APU Drill Chuck

Use

For high-precise clamping of tools with cylindrical shank with newly developed collets. Very useful for high-speed machining

Feature

- Material: Case-hardened steel
- Process machine: CNC Turning Center
- Accuracy: T.I.R. <0.005mm,
- Cone angle<AT 3, Tolerance: 8°17' 50"/+/-5"
- Hardness: HRC60°+/-2°(HV700+/-50).
- Depth of case 0.8mm+/-0.2mm
- Standard balanced by (design 8000 rpm)
- Fine balancing can be customized on demand (25000rpm/G2.5)
- With through hole for internal and flange coolant (AD/B) design can be customized on demand



Code No.	Size(mm)						Precision R	Weight
	D	d1	d2	L1	L2	L		
DAT30-APU8-80	50	37	6	80	55	136.8	0.04	0.60
DAT30-APU13-120		50	13	120	75	179.8		1.45
DAT30-APU16-125		57	16	125	80	189.8		1.78
DAT40-APU8-75	63.55	37	6	75	55	152.4	0.04	1.46
DAT40-APU13-100		50	13	100	75	180.4		2.00
DAT40-APU16-105		57	16	105	80	190.4		2.33
DAT50-APU8-75	97.50	37	6	75	55	185.75	0.04	3.86
DAT50-APU13-100		50	13	100	75	216.75		4.40
DAT50-APU16-105]		57	16	105	80	218.75		4.73

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.



Milling Tooling System - DIN69871 DAT System

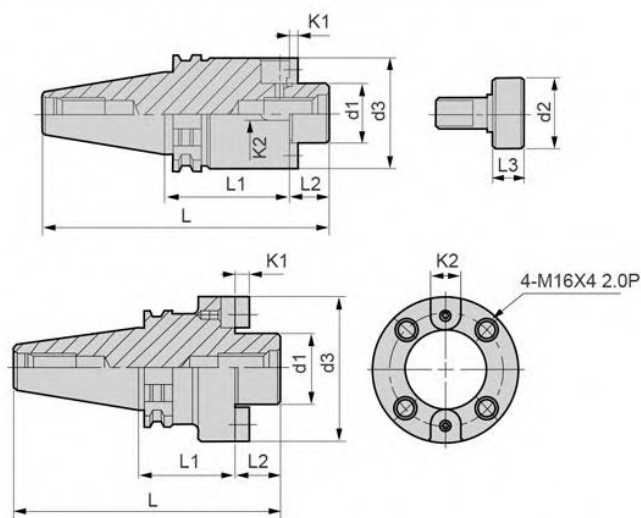
FMB Face Milling Holder

Use

For clamping JIS B4113 ace milling cutter with metric size center
Include in delivery: tightening bolt, and feater key

Feature

- material: Case -hardened steel
- Process machine: CNC Turning Center
- Accuracy: T.I.R <0.005MM
- Cone angle<AT3, TOLERANCE:8°17' 50" +/-5"
- Hardness: HRC60°+/-2°(HV700+/-50)
- Depth of case 0.8mm+/-0.2mm
- Pre-balance by design (8000rpm/G6.3), Through tool holder coolant capacity
- Fine balancing can be customized on demand(12000rpm/G6.3,25000rpm/G2.5)
- With through hole for internal and flange coolant(AD/B) design can be customized on demand.



Code No.	Size(mm)									Weight
	d1	d2	d3	L1	L2	L3	L	K1	K2	
DAT30-FMB22-35	22	26	47	35	18	14	100.8	4.8	10	1.00
DAT30-FMB27-35	27	33	58		20	16	102.8	5.8	12	1.05
DAT40-FMB22-35	22	26	47	35	18	14	121.4	4.8	10	1.20
DAT40-FMB27-60	27	33	58	60	20	16	148.4	5.8	12	1.80
DAT40-FMB32-60	32	40	66		22		150.4	6.8	14	2.30
DAT40-FMB40-60	40	50	82		25	20.5	153.4		16	2.80
DAT40-FMB40-60		M12	89		30	66.7	158.4		15.9	2.90
DAT40-FS40-60		50	110		26		154.4	8.3	16	3.20
DAT50-FMB22-35	22	26	47	35	18	14	154.75	4.8	10	3.40
DAT50-FMB27-35	27	33	58		20	16	156.75	5.8	12	3.50
DAT50-FMB32-35	32	40	66		22	16	158.75	6.8	14	3.70
DAT50-FMB40-50	40	50	82	50	25	20.5	189.75	8.3	16	4.70
DAT50-FMB50-60	50	68	95	60	30	25	211.75	9.7	19	5.80
DAT50-FMB40F-70	40	M12	89	70	30	66.7	201.75	8.3	15.9	5.50
DAT50-FMB60F-70	60	M16	129		40	101.6	211.75	12.5	25.4	5.70
DAT50-FS40-70	40	20	110		26	66.7		8.3	16	
DAT50-FS60-70	60	M16	140		25	101.6	196.75	12.5	25.4	5.50

Notice: DIN69893 and DIN2080 specifications please specify contact. Cold treatment option against extra fee.



Milling Tooling System - Accessories

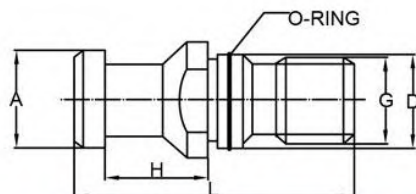
PULL STUDS

Feature

- It was made of 20CrMnTi.
- Vacuum carburizing heat treatment, carburizing depth 1 to 1.2 millimeter.
- Surface hardness 56 ~ 60 °

PULL STUDS DIN69872

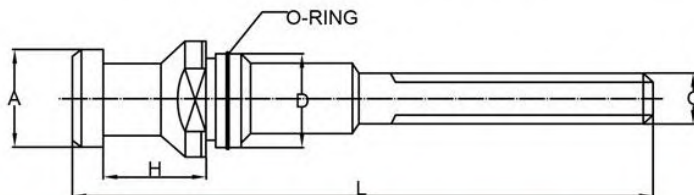
-WITHOUT COOLANT BORE(SOLID)



Code No.	With O-ring	G	L	H	A	D	Tool Shank	Weight
PS-DIN30SF	NO	M12	44	19	13	13	DIN30	
PS-DIN40SF	NO	M16	54	20	19	17	DIN40	
PS-DIN40SF-O	YES	M16	54	20	19	17	DIN40	
PS-DIN50SF	NO	M24	74	25	28	25	DIN50	
PS-DIN50SF-O	YES	M24	74	25	28	25	DIN50	

PULL STUDS DIN69872

-EXTENDED FOR MT SLEEVES

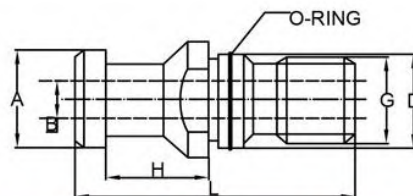


Code No.	Morse	G	D	A	H	L	Tool Shank
PSL-DIN40-M10	2	M10	17	19	20	85	DIN40
PSL-DIN40-M12	3	M12	17	19	20	90	DIN40
PSL-DIN40-M16	4	M16	17	19	20	95	DIN40

The extended pull studs for DIN50 sleeves are available upon request.

PULL STUDS DIN69872 FORM A

-WITH COOLANT BORE (HOLLOW)

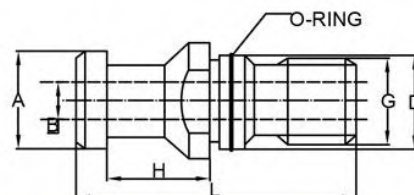


Code No.	With O-ring	G	L	H	A	D	B	Tool Shank	Weight
PS-DIN30SF	NO	M12	44	19	13	13	3.0	DIN30	
PS-DIN40SF	NO	M16	54	20	19	17	7.0	DIN40	
PS-DIN40SF-O	YES	M16	54	20	19	17	7.0	DIN40	
PS-DIN50SF	NO	M24	74	25	28	25	11.5	DIN50	
PS-DIN50SF-O	YES	M24	74	25	28	25	11.5	DIN50	

Sealed pull studs with Double O-RING for high pressure coolant, are available on request.

PULL STUDS DIN69872 FORM A EXTENDED BY 3MM

-WITH COOLANT BORE (HOLLOW)



Code No.	With O-ring	G	L	H	A	D	B	Tool Shank	Weight
PS-DIN40A-3-O	YES	M16	57	23	19	17	7.0	DIN40	

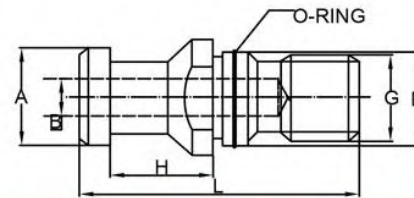
The Extended pull studs for DIN50 sleeves are available upon request.



Milling Tooling System - Accessories

PULL STUDS DIN69872 FORM B

-WITH HALF BORE

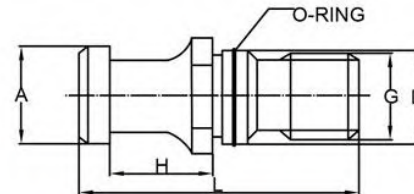


Code No.	With O-ring	G	L	H	A	D	Tool Shank	Weight
PS-DIN40B-O	YES	M16	54	20	19	17	DIN40	
PS-DIN50B-O	YES	M24	74	25	28	25	DIN50	

Interchangeable with DIN40 and DIN50 SF

PULL STUDS ISO7388/2 FORM A

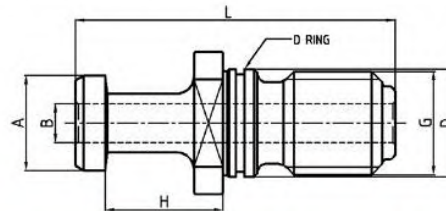
-WITHOUT COOLANT BORE (SOLID)



Code No.	With O-ring	G	L	H	A	D	Tool Shank	Weight
PS-TC30A-SF	NO	M12	44	19	12	13	DIN30	
PS-TC40A-SF	NO	M16	54	20	19	17	DIN40	
PS-TC40A-SF-O	YES	M16	54	20	19	17	DIN40	
PS-TC50A-SF	NO	M24	74	25	28	25	DIN50	
PS-TC50A-SF-O	YES	M24	74	25	28	25	DIN50	

PULL STUDS ISO7388/2 FORM A

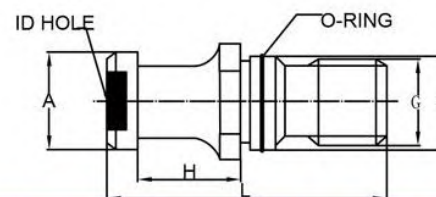
-WITH COOLANT BORE (HOLLOW)



Code No.	With O-ring	G	L	H	A	D	B	Tool Shank	Weight
PS-TC30A	NO	M12	44	19	13	13	3.0	DIN30	
PS-TC40A	NO	M16	54	20	19	17	7.0	DIN40	
PS-TC40A-O	YES	M16	54	20	19	17	7.0	DIN40	
PS-TC50A	NO	M24	74	25	28	25	11.5	DIN50	
PS-TC50A-O	YES	M24	74	25	28	25	11.5	DIN50	

PULL STUDS ISO 7388/2 FORM A

-WITH ID-HOLE



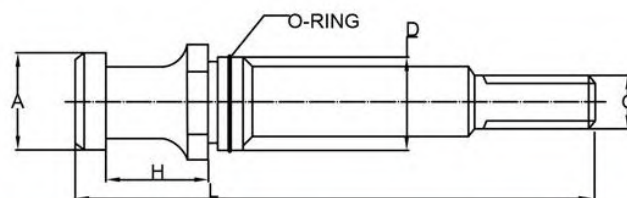
Code No.	G	D	A	ID Hole	H	L	Tool Shank	Weight
PS-TC40-BF	M16	17	19	10×4.7	20	54	DIN40	
PS-TC50-BF	M24	25	28	10×4.7	25	74	DIN50	
PS-TC50-BF1	M24	25	28	10×4.7	25	74	DIN50	



Milling Tooling System - Accessories

PULL STUDS ISO7388/2 FORM A

- EXTENDED FOR MT SLEEVES

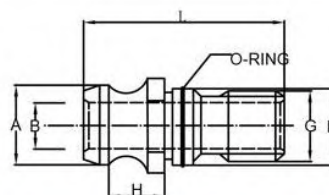


Code No.	Morse	G	D	A	H	L	Tool Shank
PSL-TC40-M10	2	M10	17	19	20	85	DIN40
PSL-TC40-M12	3	M12	17	19	20	90	DIN40
PSL-TC40-M16	4	M16	17	19	20	95	DIN40

The extended pull studs for DIN50 sleeves are available upon request.

PULL STUDS ISO7388/2 FORM B

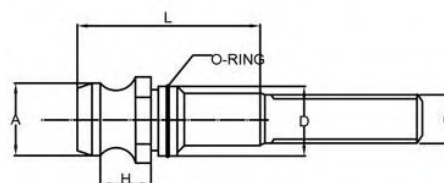
-WITH COOLANT BORE (HOLLOW)



Code No.	With O-ring	G	L	H	A	D	B	Tool Shank	Weight
PS-TC40A	YES	M16	44.5	11.15	18.95	17	7.0	DIN40	
PS-TC50A	YES	M24	65.5	17.95	29.10	25	11.55	DIN50	

PULL STUDS ISO7388/2 FORM B

- EXTENDED FOR MT SLEEVES

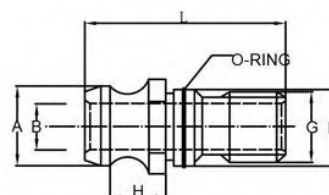


Code No.	Morse	G	D	A	H	L	Tool Shank
PSL-CAT40-M10	2	M10	17	18.95	11.15	85	DIN40
PSL-CAT40-M12	3	M12	17	18.95	11.15	90	DIN40
PSL-CAT40-M16	4	M16	17	18.95	11.15	95	DIN40

The extended pull studs for DIN50 sleeves are available upon request.

PULL STUDS ISO7388/2 FORM B EXTENDED BY 3MM

-WITH COOLANT BORE (HOLLOW)



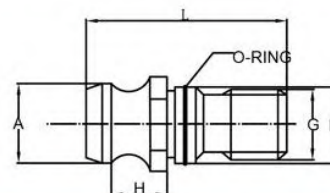
Code No.	With O-ring	G	L	H	A	D	B	Tool Shank	Weight
PS-CAT40-3-O	YES	M16	47.50	214.15	18.95	17	7.3	DIN40	

The Extended pull studs for DIN50 sleeves are available upon request.



Milling Tooling System - Accessories

PULL STUDS ISO7388/2 FORM B

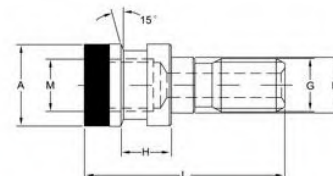


-WITHOUT COOLANT BORE(SOLID)

Code No.	With O-ring	G	L	H	A	D	Tool Shank	Weight
PS-CAT30A-SF	NO	M12	34	8.15	13.35	12.5	DIN30	
PS-CAT40A-SF	NO	M16	44.5	11.15	18.95	17	DIN40	
PS-CAT40A-SF-O	YES	M16	44.5	11.15	18.95	17	DIN40	
PS-CAT50A-SF	NO	M24	65.5	17.95	29.10	25	DIN50	
PS-CAT50A-SF-O	YES	M24	65.5	17.95	29.10	25	DIN50	
PS-CAT40-3-O	YES	M16	47.50	214.15	18.95	17	DIN40	

The Extended pull studs for DIN50 sleeves are available upon request.

PULL STUDS OTT/TC FOR DIN2080 TOOL HOLDERS



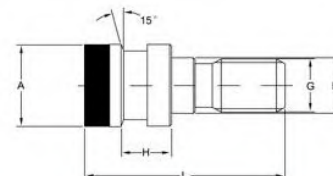
- WITH INTERNAL THREAD AND COOLANT BORE(HOLLOW)

Code No.	Morse	G	D	A	H	L	Tool Shank
PS-OTT40TC	M16	M16	17	25	13.6	53.0	DIN40
PS-OTT50TC	M24	M24	25	39.6	13.3	65.1	DIN50

Pull studs PS-OTT40TC and PS-OTT50TC are correspond with DIN69871 and DIN2080 tool holder

With protection ring

PULL STUDS OTT/TC FOR DIN2080 TOOL HOLDERS



- WITHOUT COOLANT BORE(SOLID)

Code No.	Morse	G	D	A	H	L	Tool Shank
PS-OTT40TC-SF	M16	M16	17	25	14	53.0	DIN40
PS-OTT50TC-SF	M24	M24	25	39.6	13	65.0	DIN50

Pull studs PS-OTT40TC and PS-OTT50TC are correspond with DIN69871 and DIN2080 tool holder

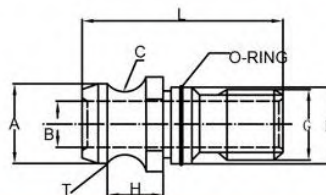
With protection ring



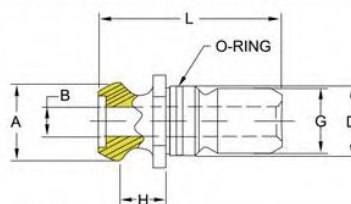
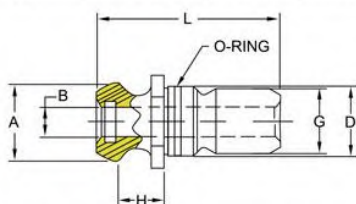
Milling Tooling System - Accessories

PULL STUDS CAT - METRIC

-WITH COOLANT BORE (HOLLOW)



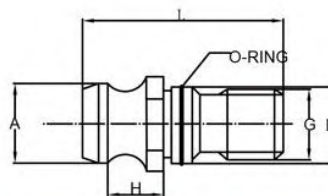
Code No.	With O-ring	Coni Taper	G	L	H	A	D	B	MAZAK CODE	Tool Shank
PS-CAT40-MZ1	YES	CAT-METRIC	M16	41.26	11.18	18.8	17	7	349319 00 660	DIN40
PS-CAT40-MZ2	YES	BT	M16	44.1	14.02	18.8	17	7	349319 00 680	BT40
PS-CAT40-MZ3	YES	CAT-ANSI	5/8"-11	51.25	11.18	18.8	16.27	7	349319 00 670	CAT40
PS-CAT50-MZ3	YES	BT	M24	65.2	17.58	28.95	25	10	448319 01 160	BT50
PS-CAT50-MZ4	YES	CAT-METRIC	M24	65.4	17.8	28.95	25	11.5	448319 01 180	DIN50
PS-CAT50-MZ5	YES	CAT-ANSI	1"x8	58.5	17.8	28.95	26.16	10	448319 01 170	CAT50



Sealed pull studs with DOUBLE O-RING for high pressure coolant, are available on request

PULL STUDS CAT - METRIC

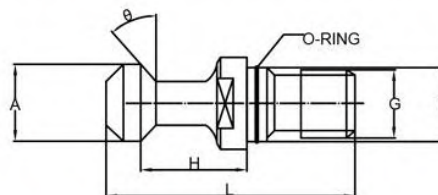
-WITHOUT COOLANT BORE(SOLID)



Code No.	With O-ring	Coni Taper	G	L	H	A	D	B	MAZAK CODE	Tool Shank
PS-CAT40-MZ1-SF	YES	CAT-METRIC	M16	41.26	11.18	18.8	17	7	349319 00 660	DIN40
PS-CAT40-MZ2-SF	YES	BT	M16	44.1	14.02	18.8	17	7	349319 00 680	BT40

PULL STUDS MAS 403BT

-WITHOUT COOLANT BORE(SOLID)



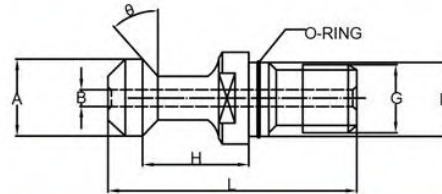
Code No.	With O-ring	θ	G	D	A	H	L	Tool Shank	Weight
PS-BT30-SF-45	NO	45°	M12	12.5	11	18	43	BT30	
PS-BT30-SF-60	NO	60°	M12	12.5	11	18	43	BT30	
PS-BT40-SF-45	NO	45°	M16	17	15	28	60	BT40	
PS-BT40-SF-O-45	YES	45°	M16	17	15	28	60	BT40	
PS-BT40-SF-60	NO	60°	M16	17	15	28	60	BT40	
PS-BT40-SF-O-60	YES	60°	M16	17	15	28	60	BT40	
PS-BT40-SF-90	NO	90°	M16	17	15	28	60	BT40	
PS-BT40-SF-O-90	YES	90°	M16	17	15	28	60	BT40	
PS-BT50-SF-45	NO	45°	M24	25	23	35	85	BT50	
PS-BT50-SF-O-45	YES	45°	M24	25	23	35	85	BT50	
PS-BT50-SF-60	NO	60°	M24	25	23	35	85	BT50	
PS-BT50-SF-O-60	YES	60°	M24	25	23	35	85	BT50	
PS-BT50-SF-90	NO	90°	M24	25	23	35	85	BT50	
PS-BT50-SF-O-90	YES	90°	M24	25	23	35	85	BT50	



Milling Tooling System - Accessories

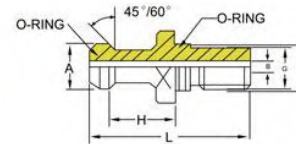
PULL STUDS MAS 403BT

-WITH COOLANT BORE(HOLLOW)



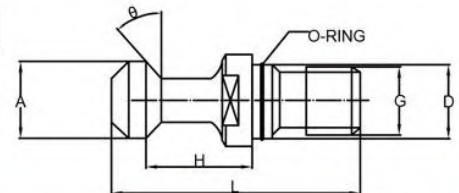
Code No.	With O-ring	θ	G	D	A	H	L	B	Tool Shank	Weight
PS-BT30-SF-45	NO	45°	M12	12.5	11	18	43	2.5	BT30	
PS-BT30-SF-60	NO	60°	M12	12.5	11	18	43	2.5	BT30	
PS-BT40-SF-45	NO	45°	M16	17	15	28	60	4.0	BT40	
PS-BT40-SF-O-45	YES	45°	M16	17	15	28	60	4.0	BT40	
PS-BT40-SF-60	NO	60°	M16	17	15	28	60	4.0	BT40	
PS-BT40-SF-O-60	YES	60°	M16	17	15	28	60	4.0	BT40	
PS-BT40-SF-90	NO	90°	M16	17	15	28	60	4.0	BT40	
PS-BT40-SF-O-90	YES	90°	M16	17	15	28	60	4.0	BT40	
PS-BT50-SF-45	NO	45°	M24	25	23	35	85	6.0	BT50	
PS-BT50-SF-O-45	YES	45°	M24	25	23	35	85	6.0	BT50	
PS-BT50-SF-60	NO	60°	M24	25	23	35	85	6.0	BT50	
PS-BT50-SF-O-60	YES	60°	M24	25	23	35	85	6.0	BT50	
PS-BT50-SF-90	NO	90°	M24	25	23	35	85	6.0	BT50	
PS-BT50-SF-O-90	YES	90°	M24	25	23	35	85	6.0	BT50	

Sealed pull studs with Double O-RING for high pressure coolant, are available on request.



PULL STUDS MAS 403BT SHORTENED 3MM

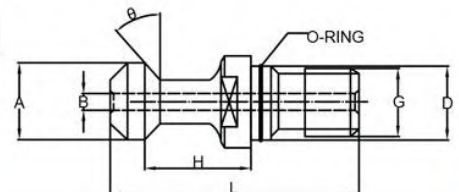
-WITHOUT COOLANT BORE(SOLID)



Code No.	With O-ring	θ	G	D	A	H	L	Tool Shank	Weight
SPS-BT40-SF-O-45	YES	45°	M16	17	15	25	57	BT40	
SPS-BT40-SF-O-60	YES	60°	M16	17	15	25	57	BT40	
SPS-BT40-SF-O-90	YES	90°	M16	17	15	25	57	BT40	

PULL STUDS MAS 403BT SHORTENED 3MM

-WITH COOLANT BORE(HOLLOW)



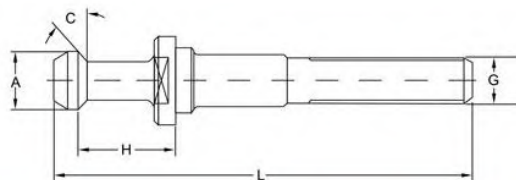
Code No.	With O-ring	θ	G	D	A	H	L	Tool Shank	Weight
SPS-BT40-SF-O-45	YES	45°	M16	17	15	25	57	BT40	
SPS-BT40-SF-O-60	YES	60°	M16	17	15	25	57	BT40	
SPS-BT40-SF-O-90	YES	90°	M16	17	15	25	57	BT40	



Milling Tooling System - Accessories

PULL STUDS MAS 403BT

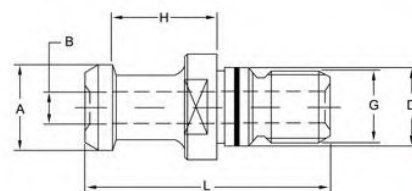
-EXTENDED FOR MT SLEEVES



Code No.	Angle C	Morse	G	D	A	H	L	Tool Shank	Weight
PSL-BT40-1M10	45°	2	M10	17	15	28	85	BT40	
PSL-BT40-1M12	45°	3	M12	17	15	28	85	BT40	
PSL-BT40-1M16	45°	4	M16	17	15	28	90	BT40	
PSL-BT40-1M10	60°	2	M10	17	15	28	85	BT40	
PSL-BT40-1M12	60°	3	M12	17	15	28	85	BT40	
PSL-BT40-1M16	60°	4	M16	17	15	28	90	BT40	
PSL-BT40-1M10	90°	2	M10	17	15	28	85	BT40	
PSL-BT40-1M12	90°	3	M12	17	15	28	85	BT40	
PSL-BT40-1M16	90°	4	M16	17	15	28	90	BT40	

PULL STUDS JS-B 6339

-WITH COOLANT BORE (HOLLOW)



Code No.	With O-ring	G	D	A	H	L	B	Tool Shank	Weight
PS-JS30	NO	M12	12.5	12	18.4	43	3	BT30	
PS-JS401	NO	M16	17	19	23	54	7	BT40	
PS-JS401-O	YES	M16	17	19	23	54	7	BT40	
PS-JS402	NO	M16	17	19	23	54	5.5	BT40	
PS-JS402-O	YES	M16	17	19	23	54	5.5	BT40	
PS-JS403	NO	M16	17	19	23	54	5.5-4	BT40	
PS-JS403-O	YES	M16	17	19	23	54	5.5-4	BT40	
PS-JS40-OKU	NO	M16	17	19	23	54	5.5-4	BT40	
PS-JS50	NO	M24	25	28	25	75	10	BT50	
PS-JS50-O	YES	M24	25	28	25	75	10	BT50	

Note: PS-JS40-OKU -the head flat is ground

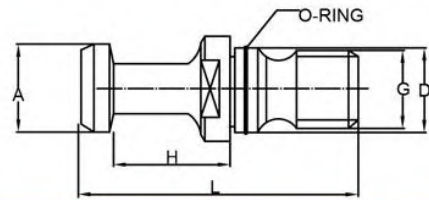
Sealed pull studs with DOUBLE O-RING for high pressure coolant, are available on request



Milling Tooling System - Accessories

PULL STUDS JS-B 6339

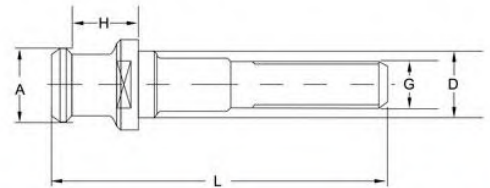
-WITHOUT COOLANT BORE(SOLID)



Code No.	With O-ring	G	D	A	H	L	Tool Shank	Weight
PS-JS30SF	NO	M12	12.5	12	18.4	43	BT30	
PS-JS40SF	NO	M16	17	19	23	54	BT40	
PS-JS40SF-O	YES	M16	17	19	23	54	BT40	
PS-JS50SF	NO	M24	25	28	25	74	BT50	
PS-JS50SF-O	YES	M24	25	28	25	74	BT50	

PULL STUDS JS-B 6339

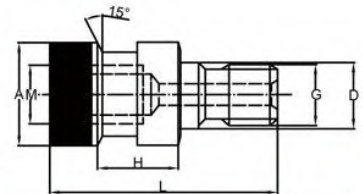
- EXTENDED FOR MT SLEEVES



Code No.	Morse	G	D	A	H	L	Tool Shank	Weight
PSL-JS40-M10	2	M10	17	19	23	85	BT40	
PSL-JS40-M12	3	M12	17	19	23	85	BT40	
PSL-JS40-M16	4	M16	17	19	23	90	BT40	

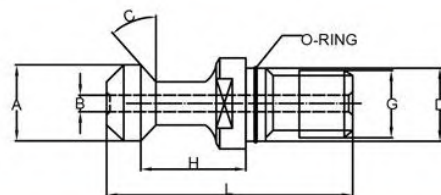
PULL STUDS OTT/TC FOR MAS403 TOOL HOLDERS

- WITH INTERNAL THREAD AND COOLANT BORE(HOLLOW)



Code No.	Morse	G	D	A	H	L	Tool Shank
PS-OTT40BT	M16	M16	17	25	16.35	53.0	DIN40
PS-OTT50BT	M24	M24	25	39.6	13.35	65.0	DIN50

PULL STUDS HURCO TYPE

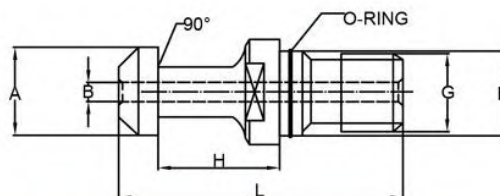


Code No.	Coolant hole	Angle C	G	D	A	H	L	Tool Shank
PS-BT40-11	-	45°	M16	17	15	25.15	57.15	BT40
PS-BT40-11F	3	45°	M16	17	15	25.15	57.15	BT40
PS-BT40-12	-	90°	M16	17	15	25.15	57.15	BT40



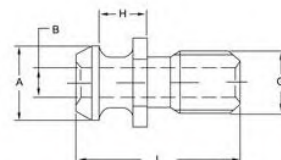
Milling Tooling System - Accessories

PULL STUDS MITSUI TYPE



Code No.	Coolant hole	Angle C	G	D	A	H	L	Tool Shank
PS-BT40-31	-	90°	M16	17	15	18	50	BT40
PS-BT40-31	-	90°	M24	25	24	23	71	BT50
PS-BT40-31F	8	90°	M24	25	24	23	71	BT50

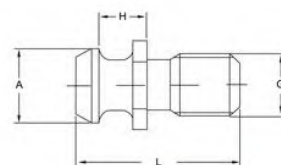
PULL STUDS ANSI B5.50/CAT (INCH-SIZES)



- WITH COOLANT BORE(HOLLOW)

Code No.	G	A	H	L	B	Tool Shank	Weight
PS-ANSI40	5/8-11	0.74	0.438	1.50	0.281	CAT40	
PS-ANSI40M	M16	0.74	0.438	1.50	0.281	CAT40M	
PS-ANSI50	1"x8	1.14	0.700	2.30	0.460	CAT50	
PS-ANSI50M	M24	1.14	0.700	2.30	0.460	CAT50M	

PULL STUDS ANSI B5.50/CAT (INCH-SIZES)



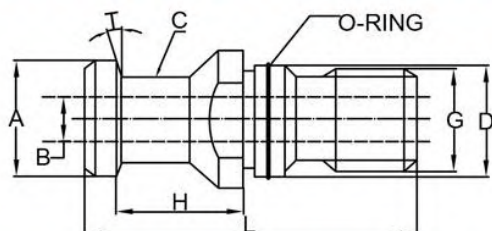
- WITHOUT COOLANT BORE(SOLID)

Code No.	G	A	H	L	Tool Shank	Weight
PS-ANSI40SF	5/8-11	0.74	0.438	1.50	CAT40	
PS-ANSI50SF	1"x8	1.14	0.700	2.30	CAT50	



RETENTION KNOB REQUEST SHEET

If required KNOB is not shown in the previous pages, please select the most similar design and specify dimensions.



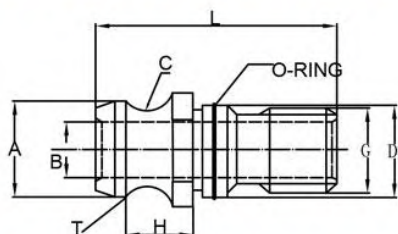
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D = T =

L = C =

H = B =

MACHINE TYPE



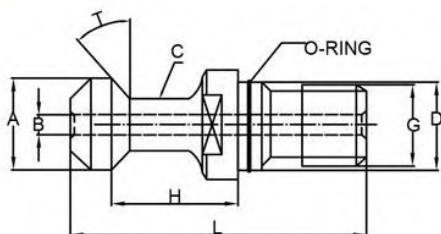
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MACHINE TYPE



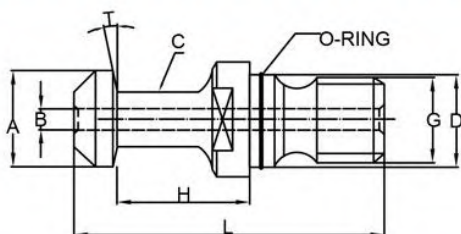
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MACHINE TYPE



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MACHINE TYPE

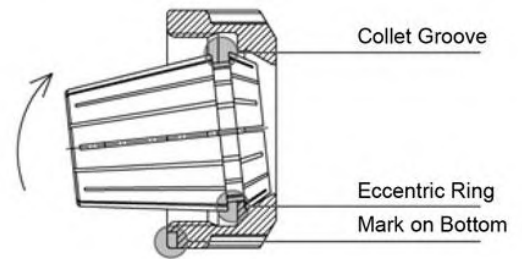


ER Collet

-MOUNTING INSTRUCTION FOR ER COLLETS PER DIN STD 6499

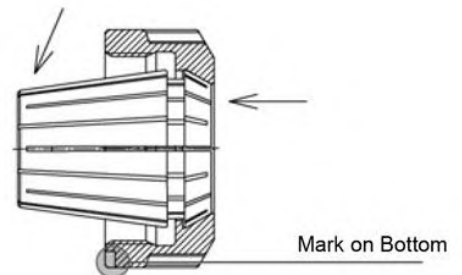
Assembling Instructions

Insert groove of collet into eccentric ring of the clamping nut at the mark on the bottom of the nut. Push collet in the direction of the arrow until it clicks in place. Screw nut with collet onto toolholder. We recommend to tighten the nut with a torque wrench.



Disassembly Instructions

After the nut is unscrewed from the toolholder, press on the face of the collet while simultaneously pushing sideways on the back of the collet opposite the mark until it disengages from the clamping nut.



Improper assembly can permanently damage the concentricity of the collet and may result in the destruction of the clamping nut.

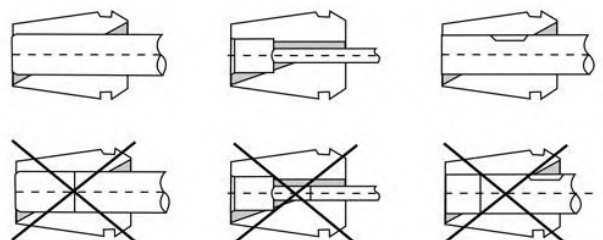
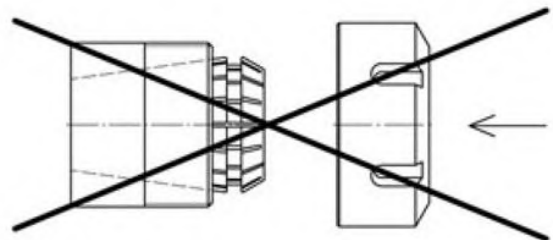
NOTE:

- **Only mount clamping nuts with correctly assembled collets!** Never place the collet into the holder without first assembling it into the nut.

- **Never clamp oversize tool shafts!**

E.g. never use a $\varnothing 12-11$ mm collet to clamp a $\varnothing 12.2$ mm shank. Rather use the next bigger collet (here $\varnothing 12.5-11.5$ mm or $13-12$ mm collet).

- **Insert tool to the full length of the collet for best results if possible. However never insert the tool less than 2/3 of the collet bore length. Improper tool insertion can permanently deform the collet and will result in poor runout.**



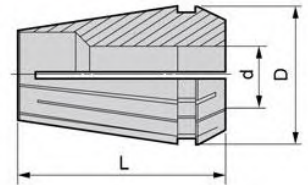


Milling Tooling System - Accessories

ER-S Collet (Standard)

Feature

- Average T.I.R. 0.02mm (0.00079")
- Clamping range from 3.0mm(0.1181") up to 26mm(1.0236")
- Material: made of SUJ2
- Vacuum carburizing heat



Metric Size

Code No.	D	L	d
S-ER11	11.5	18	3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7
S-ER16	17	27	3, 4, 5, 6, 7, 8, 9, 10
S-ER20	21	31	3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
S-ER25	26	35	3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16
S-ER32	33	40	3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
S-ER40	41	46	4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26

Inch Size

Code No.	D	L	d
S-ER11	11.5	18	1/8, 3/16, 7/32, 1/4
S-ER16	17	27	1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8
S-ER20	21	31	1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8, 13/32, 7/16, 1/2
S-ER25	26	35	1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8, 13/32, 7/16, 1/2, 17/32, 9/16, 5/8
S-ER32	33	40	1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8, 13/32, 7/16, 1/2, 17/32, 9/16, 5/8, 21/32, 11/16, 3/4, 25/32
S-ER40	41	46	1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8, 13/32, 7/16, 1/2, 17/32, 9/16, 5/8, 21/32, 11/16, 3/4, 25/32, 13/16, 27/32, 7/8, 15/16, 31/32, 1

ER11		ER16		ER20		ER25		ER32		ER40	
SET NO.	RANGE mm	SET NO.	RANGE mm	SET NO.	RANGE mm	SET NO.	RANGE mm	SET NO.	RANGE mm	SET NO.	RANGE mm
S-ER11-3	3.0-2.5	S-ER16-3	3.0-2.0	S-ER20-3	3.0-2.0	S-ER25-3	3.0-2.0	S-ER32-3	3.0-2.0	S-ER40-3	3.0-2.0
S-ER11-3.5	3.5-3.0	S-ER16-4	4.0-3.0	S-ER20-4	4.0-3.0	S-ER25-4	4.0-3.0	S-ER32-4	4.0-3.0	S-ER40-4	4.0-3.0
S-ER11-4	4.0-3.5	S-ER16-5	5.0-4.0	S-ER20-5	5.0-4.0	S-ER25-5	5.0-4.0	S-ER32-5	5.0-4.0	S-ER40-5	5.0-4.0
S-ER11-4.5	4.5-4.0	S-ER16-6	6.0-5.0	S-ER20-6	6.0-5.0	S-ER25-6	6.0-5.0	S-ER32-6	6.0-5.0	S-ER40-6	6.0-5.0
S-ER11-5	5.0-4.5	S-ER16-7	7.0-6.0	S-ER20-7	7.0-6.0	S-ER25-7	7.0-6.0	S-ER32-7	7.0-6.0	S-ER40-7	7.0-6.0
S-ER11-5.5	5.5-5.0	S-ER16-8	8.0-7.0	S-ER20-8	8.0-7.0	S-ER25-8	8.0-7.0	S-ER32-8	8.0-7.0	S-ER40-8	8.0-7.0
S-ER11-6	6.0-5.5	S-ER16-9	9.0-8.0	S-ER20-9	9.0-8.0	S-ER25-9	9.0-8.0	S-ER32-9	9.0-8.0	S-ER40-9	9.0-8.0
S-ER11-6.5	6.5-6.0	S-ER16-10	10-9.0	S-ER20-10	10-9.0	S-ER25-10	10-9.0	S-ER32-10	10-9.0	S-ER40-10	10-9.0
S-ER11-7	7.0-6.5			S-ER20-11	11-10	S-ER25-11	11-10	S-ER32-11	11-10	S-ER40-11	11-10
				S-ER20-12	12-11	S-ER25-12	12-11	S-ER32-12	12-11	S-ER40-12	12-11
				S-ER20-13	13-12	S-ER25-13	13-12	S-ER32-13	13-12	S-ER40-13	13-12
						S-ER25-14	14-13	S-ER32-14	14-13	S-ER40-14	14-13
						S-ER25-15	15-14	S-ER32-15	15-14	S-ER40-15	15-14
						S-ER25-16	16-15	S-ER32-16	16-15	S-ER40-16	16-15
								S-ER32-17	17-16	S-ER40-17	17-16
								S-ER32-18	18-17	S-ER40-18	18-17
								S-ER32-19	19-18	S-ER40-19	19-18
								S-ER32-20	20-19	S-ER40-20	20-19
										S-ER40-21	21-20
										S-ER40-22	22-21
										S-ER40-23	23-22
										S-ER40-24	24-23
										S-ER40-25	25-24
										S-ER40-26	26-25

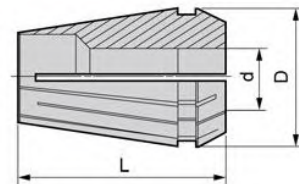


Milling Tooling System - Accessories

ER-A Collet (Precision)

Feature

- Average T.I.R. 0.01mm (0.0004")
- Clamping range from 3.0mm(0.1181") up to 26mm(1.0236")
- Material: made of SUJ2
- Vacuum carburizing heat



Metric Size

Code No.	D	L	d
A-ER11	11.5	18	3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7
A-ER16	17	27	3, 4, 5, 6, 7, 8, 9, 10
A-ER20	21	31	3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
A-ER25	26	35	3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16
A-ER32	33	40	3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
A-ER40	41	46	4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26

Inch Size

Code No.	D	L	d
A-ER11	11.5	18	1/8, 3/16, 7/32, 1/4
A-ER16	17	27	1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8
A-ER20	21	31	1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8, 13/32, 7/16, 1/2
A-ER25	26	35	1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8, 13/32, 7/16, 1/2, 17/32, 9/16, 5/8
A-ER32	33	40	1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8, 13/32, 7/16, 1/2, 17/32, 9/16, 5/8, 21/32, 11/16, 3/4, 25/32
A-ER40	41	46	1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8, 13/32, 7/16, 1/2, 17/32, 9/16, 5/8, 21/32, 11/16, 3/4, 25/32, 13/16, 27/32, 7/8, 15/16, 31/32, 1

ER11		ER16		ER20		ER25		ER32		ER40	
SET NO.	RANGE mm	SET NO.	RANGE mm	SET NO.	RANGE mm	SET NO.	RANGE mm	SET NO.	RANGE mm	SET NO.	RANGE mm
A-ER11-3	3.0-2.5	A-ER16-3	3.0-2.0	A-ER20-3	3.0-2.0	A-ER25-3	3.0-2.0	A-ER32-3	3.0-2.0	A-ER40-3	3.0-2.0
A-ER11-3.5	3.5-3.0	A-ER16-4	4.0-3.0	A-ER20-4	4.0-3.0	A-ER25-4	4.0-3.0	A-ER32-4	4.0-3.0	A-ER40-4	4.0-3.0
A-ER11-4	4.0-3.5	A-ER16-5	5.0-4.0	A-ER20-5	5.0-4.0	A-ER25-5	5.0-4.0	A-ER32-5	5.0-4.0	A-ER40-5	5.0-4.0
A-ER11-4.5	4.5-4.0	A-ER16-6	6.0-5.0	A-ER20-6	6.0-5.0	A-ER25-6	6.0-5.0	A-ER32-6	6.0-5.0	A-ER40-6	6.0-5.0
A-ER11-5	5.0-4.5	A-ER16-7	7.0-6.0	A-ER20-7	7.0-6.0	A-ER25-7	7.0-6.0	A-ER32-7	7.0-6.0	A-ER40-7	7.0-6.0
A-ER11-5.5	5.5-5.0	A-ER16-8	8.0-7.0	A-ER20-8	8.0-7.0	A-ER25-8	8.0-7.0	A-ER32-8	8.0-7.0	A-ER40-8	8.0-7.0
A-ER11-6	6.0-5.5	A-ER16-9	9.0-8.0	A-ER20-9	9.0-8.0	A-ER25-9	9.0-8.0	A-ER32-9	9.0-8.0	A-ER40-9	9.0-8.0
A-ER11-6.5	6.5-6.0	A-ER16-10	10-9.0	A-ER20-10	10-9.0	A-ER25-10	10-9.0	A-ER32-10	10-9.0	A-ER40-10	10-9.0
A-ER11-7	7.0-6.5			A-ER20-11	11-10	A-ER25-11	11-10	A-ER32-11	11-10	A-ER40-11	11-10
				A-ER20-12	12-11	A-ER25-12	12-11	A-ER32-12	12-11	A-ER40-12	12-11
				A-ER20-13	13-12	A-ER25-13	13-12	A-ER32-13	13-12	A-ER40-13	13-12
						A-ER25-14	14-13	A-ER32-14	14-13	A-ER40-14	14-13
						A-ER25-15	15-14	A-ER32-15	15-14	A-ER40-15	15-14
						A-ER25-16	16-15	A-ER32-16	16-15	A-ER40-16	16-15
								A-ER32-17	17-16	A-ER40-17	17-16
								A-ER32-18	18-17	A-ER40-18	18-17
								A-ER32-19	19-18	A-ER40-19	19-18
								A-ER32-20	20-19	A-ER40-20	20-19
										A-ER40-21	21-20
										A-ER40-22	22-21
										A-ER40-23	23-22
										A-ER40-24	24-23
										A-ER40-25	25-24
										A-ER40-26	26-25

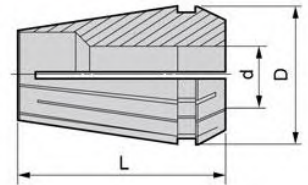


Milling Tooling System - Accessories

ER-UP Collet (Ultra Precision)

Feature

- Average T.I.R. 0.005mm (0.0002")
- Clamping range from 3.0mm(0.1181") up to 26mm(1.0236")
- Material: made of SUJ2
- Vacuum carburizing heat



Metric Size

Code No.	D	L	d
UP-ER11	11.5	18	3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7
UP-ER16	17	27	3, 4, 5, 6, 7, 8, 9, 10
UP-ER20	21	31	3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
UP-ER25	26	35	3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16
UP-ER32	33	40	3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
UP-ER40	41	46	4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26

Inch Size

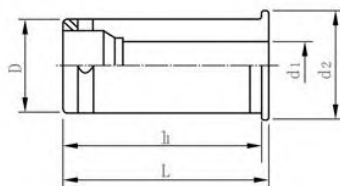
Code No.	D	L	d
UP-ER11	11.5	18	1/8, 3/16, 7/32, 1/4
UP-ER16	17	27	1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8
UP-ER20	21	31	1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8, 13/32, 7/16, 1/2
UP-ER25	26	35	1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8, 13/32, 7/16, 1/2, 17/32, 9/16, 5/8
UP-ER32	33	40	1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8, 13/32, 7/16, 1/2, 17/32, 9/16, 5/8, 21/32, 11/16, 3/4, 25/32
UP-ER40	41	46	1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8, 13/32, 7/16, 1/2, 17/32, 9/16, 5/8, 21/32, 11/16, 3/4, 25/32, 13/16, 27/32, 7/8, 15/16, 31/32, 1

ER11		ER16		ER20		ER25		ER32		ER40	
SET NO.	RANGE mm	SET NO.	RANGE mm	SET NO.	RANGE mm	SET NO.	RANGE mm	SET NO.	RANGE mm	SET NO.	RANGE mm
UP-ER11-3	3.0-2.5	UP-ER16-3	3.0-2.0	UP-ER20-3	3.0-2.0	UP-ER25-3	3.0-2.0	UP-ER32-3	3.0-2.0	UP-ER40-3	3.0-2.0
UP-ER11-3.5	3.5-3.0	UP-ER16-4	4.0-3.0	UP-ER20-4	4.0-3.0	UP-ER25-4	4.0-3.0	UP-ER32-4	4.0-3.0	UP-ER40-4	4.0-3.0
UP-ER11-4	4.0-3.5	UP-ER16-5	5.0-4.0	UP-ER20-5	5.0-4.0	UP-ER25-5	5.0-4.0	UP-ER32-5	5.0-4.0	UP-ER40-5	5.0-4.0
UP-ER11-4.5	4.5-4.0	UP-ER16-6	6.0-5.0	UP-ER20-6	6.0-5.0	UP-ER25-6	6.0-5.0	UP-ER32-6	6.0-5.0	UP-ER40-6	6.0-5.0
UP-ER11-5	5.0-4.5	UP-ER16-7	7.0-6.0	UP-ER20-7	7.0-6.0	UP-ER25-7	7.0-6.0	UP-ER32-7	7.0-6.0	UP-ER40-7	7.0-6.0
UP-ER11-5.5	5.5-5.0	UP-ER16-8	8.0-7.0	UP-ER20-8	8.0-7.0	UP-ER25-8	8.0-7.0	UP-ER32-8	8.0-7.0	UP-ER40-8	8.0-7.0
UP-ER11-6	6.0-5.5	UP-ER16-9	9.0-8.0	UP-ER20-9	9.0-8.0	UP-ER25-9	9.0-8.0	UP-ER32-9	9.0-8.0	UP-ER40-9	9.0-8.0
UP-ER11-6.5	6.5-6.0	UP-ER16-10	10-9.0	UP-ER20-10	10-9.0	UP-ER25-10	10-9.0	UP-ER32-10	10-9.0	UP-ER40-10	10-9.0
UP-ER11-7	7.0-6.5			UP-ER20-11	11-10	UP-ER25-11	11-10	UP-ER32-11	11-10	UP-ER40-11	11-10
				UP-ER20-12	12-11	UP-ER25-12	12-11	UP-ER32-12	12-11	UP-ER40-12	12-11
				UP-ER20-13	13-12	UP-ER25-13	13-12	UP-ER32-13	13-12	UP-ER40-13	13-12
						UP-ER25-14	14-13	UP-ER32-14	14-13	UP-ER40-14	14-13
						UP-ER25-15	15-14	UP-ER32-15	15-14	UP-ER40-15	15-14
						UP-ER25-16	16-15	UP-ER32-16	16-15	UP-ER40-16	16-15
								UP-ER32-17	17-16	UP-ER40-17	17-16
								UP-ER32-18	18-17	UP-ER40-18	18-17
								UP-ER32-19	19-18	UP-ER40-19	19-18
								UP-ER32-20	20-19	UP-ER40-20	20-19
										UP-ER40-21	21-20
										UP-ER40-22	22-21
										UP-ER40-23	23-22
										UP-ER40-24	24-23
										UP-ER40-25	25-24
										UP-ER40-26	26-25



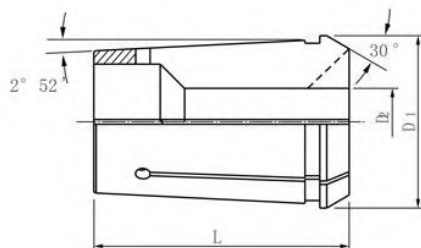
Milling Tooling System - Accessories

Power Milling Collets



Taper	Code No.	Size(mm)			
		D	d2	L	L1
C20	6,8,10,12,16	20	25	52.5	49
C32	6,8,10,12,16,20,25	32	37.5	65	67.4
C32	1/4,5/6,3/8,1/2,3/4,5/8,1"	32	37.5	65	67.4
C42	6,8,10,12,16,20,25,32	42	47	80	76
C42	1/4,5/6,3/8,1/2,3/4,5/8,1"	42	47	80	76

OZ Spring Collets



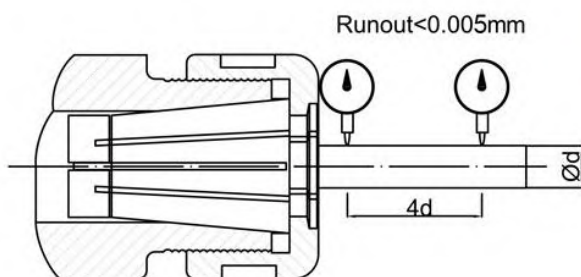
Taper	Code No.
OZ-25	6,8,10,12,16,20,25MM
	3,4,5,7,9,11,13,18MM
OZ-32	1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16"
	5/8", 11/16", 3/4", 13/16", 7/8", 15/16", 1"



Milling Tooling System - Accessories

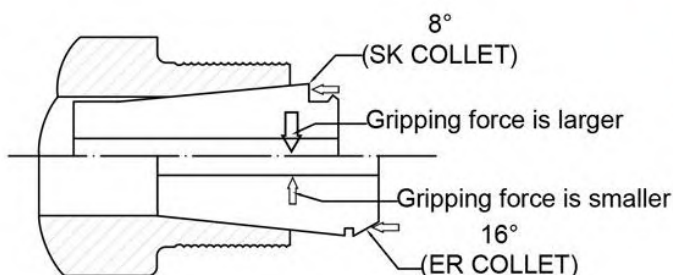
SK Precision Collet Holders

UP



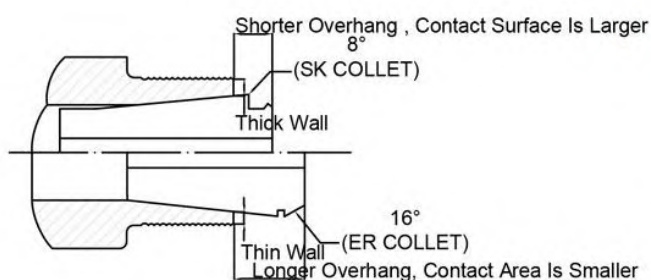
Feature

-Runout<0.005mm(collet grade:UP)



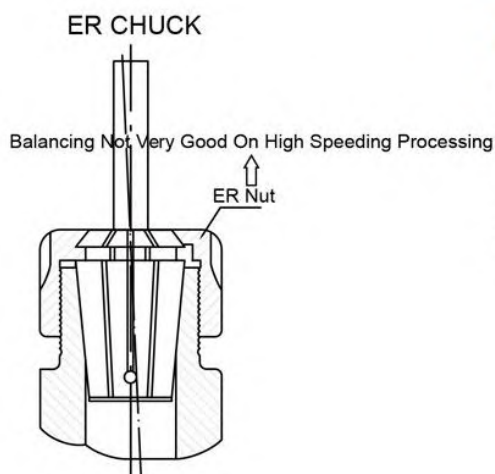
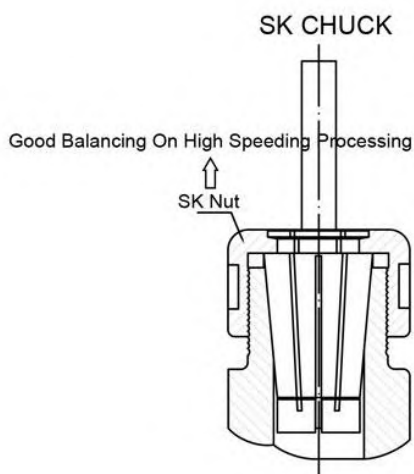
Feature

-SK collet designed with 8 degree cone angle,the gripping force is two times larger than ordinary collet with 16 degree.



Feature

-SK inner hole uses thick-wall design,which provide a strong ability to absorb vibration and robust rigidity.



Feature

-SK nuts have been precisely ground after heat treatment,they can improve the banlancing value and minimize vibration during high speed cutting.
-Max speed:16000rpm/G6.3
-Balancing value up to 24000rpm/G2.5 is available on special request.

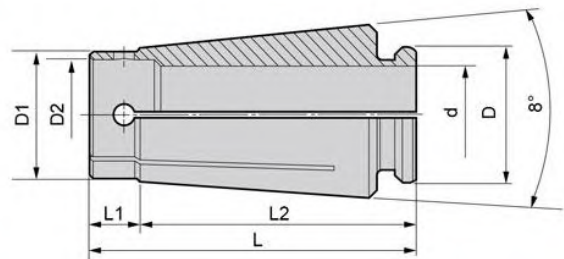


Milling Tooling System - Accessories

SK-S Precision Collet (Standard)

Feature

- It is ideal for a variety of machining applications including boring, milling, reaming, tapping and grinding.
- Material: SUJ2
- HRC46 degree
- SK Collet designed with 8 degree cone angle which shortens the suspended length of a collet, -therefore, the clamping power is huge.
- The nut is completely balanced, it can improve the performance of dynamic balancing.
- the tolerance of the clamping tool is limited during H7
- the hollow diameter is smaller than 3mm, its elastic contract is 0.25mm
- the hollow diameter is larger than 3mm, its elastic contract is 0.5mm
- Accuracy: T.I.R. <0.02mm S Grade.



Code No.	D	Clamping Range
S-SK6-2	10.4	1.8-2.0
S-SK6-2.25		2.05-2.25
S-SK6-2.5		2.3-2.5
S-SK6-2.75		2.55-2.75
S-SK6-3		2.8-3.0
S-SK6-3.5		3.0-3.5
S-SK6-4		3.5-4.0
S-SK6-4.5		4.0-4.5
S-SK6-5		4.5-5.0
S-SK6-5.5		5.0-5.5
S-SK6-6		5.5-6.0

Code No.	D	Clamping Range
S-SK16-3	24.63	2.75-3.0
S-SK16-3.5		3.0-3.5
S-SK16-4		3.5-4.0
S-SK16-4.5		4.0-4.5
S-SK16-5		4.5-5.0
S-SK16-5.5		5.0-5.5
S-SK16-6		5.5-6.0
S-SK16-6.5		6.0-6.5
S-SK16-7		6.5-7.0
S-SK16-7.5		7.0-7.5
S-SK16-8		7.5-8.0
S-SK16-8.5		8.0-8.5
S-SK16-9		8.5-9.0
S-SK16-9.5		9.0-9.5
S-SK16-10		9.5-10.0
S-SK16-10.5		10.0-10.5
S-SK16-11		10.5-11.0
S-SK16-11.5		11.0-11.5
S-SK16-12		11.5-12.0
S-SK16-12.5		12.0-12.5
S-SK16-13		12.5-13.0
S-SK16-13.5		13.0-13.5
S-SK16-14		13.5-14.0
S-SK16-14.5		14.0-14.5
S-SK16-15		14.5-15.0
S-SK16-15.5		15.0-15.5
S-SK16-16		15.5-16.0

Code No.	Size(mm)					
	D1	D2	d	L	L1	L2
S-SK6	10.5	7.5	5.8	25	4	17.4
S-SK10	15.5	12	9.8	30.5	5	21.3
S-SK16	24.6	18.8	15.75	45	8	32
S-SK25	35.6	28.9	25.4	57	8.5	43

Code No.	D	Clamping Range
S-SK10-2	15.6	1.75-2.0
S-SK10-2.25		2.0-2.25
S-SK10-2.75		2.5-2.75
S-SK10-3		2.75-3.0
S-SK10-3.5		3.0-3.5
S-SK10-4		3.5-4.0
S-SK10-4.5		4.0-4.5
S-SK10-5		4.5-5.0
S-SK10-5.5		5.0-5.5
S-SK10-6		5.5-6.0
S-SK10-6.5		6.0-6.5
S-SK10-7		6.5-7.0
S-SK10-7.5		7.0-7.5
S-SK10-8		7.5-8.0
S-SK10-8.5		8.0-8.5
S-SK10-9		8.5-9.0
S-SK10-9.5		9.0-9.5
S-SK10-10		9.5-10.0

Code No.	D	Clamping Range
S-SK25-16.5	35.7	16.0-16.5
S-SK25-17		16.5-17.0
S-SK25-17.5		17.0-17.5
S-SK25-18		17.5-18.0
S-SK25-18.5		18.0-18.5
S-SK25-19		18.5-19.0
S-SK25-19.5		19.0-19.5
S-SK25-20		19.5-20.0
S-SK25-20.5		20.0-20.5
S-SK25-21		20.5-21.0
S-SK25-21.5		21.0-21.5
S-SK25-22		21.5-22.0
S-SK25-22.5		22.0-22.5
S-SK25-23		22.5-23.0
S-SK25-23.5		23.0-23.5
S-SK25-24		23.5-24.0
S-SK25-24.5		24.0-24.5
S-SK25-25		24.5-25.0
S-SK25-25.4		25.0-25.4

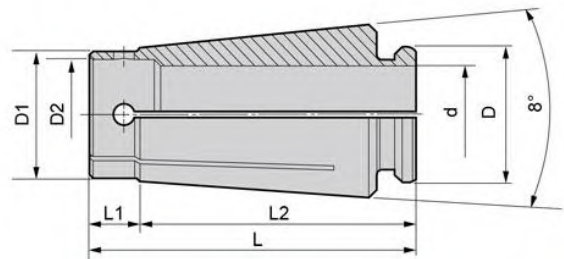


Milling Tooling System - Accessories

SK-A Precision Collet (Precision)

Feature

- It is ideal for a variety of machining applications including boring milling , reaming, tapping and grinding.
- Material: SUJ2
- HRC46 degree
- SK Collet designed with 8 degree cone angle which shortens the suspended length of a collet , -therefore , the clamping power is huge.
- The nut is completely balanced, it can improve the performance of dynamic balancing.
- the tolerance of the clamping tool is limited during H7
- the hollow diameter is smaller than 3mm, its elastic contract is 0.25mm
- the hollow diameter is larger than 3mm, its elastic contract is 0.5mm
- Accuracy: T.I.R. <0.01mm A Grade.



Code No.	D	Clamping Range
A-SK6-2	10.4	1.8-2.0
A-SK6-2.25		2.05-2.25
A-SK6-2.5		2.3-2.5
A-SK6-2.75		2.55-2.75
A-SK6-3		2.8-3.0
A-SK6-3.5		3.0-3.5
A-SK6-4		3.5-4.0
A-SK6-4.5		4.0-4.5
A-SK6-5		4.5-5.0
A-SK6-5.5		5.0-5.5
A-SK6-6		5.5-6.0

Code No.	D	Clamping Range
A-SK16-3	24.63	2.75-3.0
A-SK16-3.5		3.0-3.5
A-SK16-4		3.5-4.0
A-SK16-4.5		4.0-4.5
A-SK16-5		4.5-5.0
A-SK16-5.5		5.0-5.5
A-SK16-6		5.5-6.0
A-SK16-6.5		6.0-6.5
A-SK16-7		6.5-7.0
A-SK16-7.5		7.0-7.5
A-SK16-8		7.5-8.0
A-SK16-8.5		8.0-8.5
A-SK16-9		8.5-9.0
A-SK16-9.5		9.0-9.5
A-SK16-10		9.5-10.0
A-SK16-10.5		10.0-10.5
A-SK16-11		10.5-11.0
A-SK16-11.5		11.0-11.5
A-SK16-12		11.5-12.0
A-SK16-12.5		12.0-12.5
A-SK16-13		12.5-13.0
A-SK16-13.5		13.0-13.5
A-SK16-14		13.5-14.0
A-SK16-14.5		14.0-14.5
A-SK16-15		14.5-15.0
A-SK16-15.5		15.0-15.5
A-SK16-16		15.5-16.0

Code No.	Size(mm)					
	D1	D2	d	L	L1	L2
A-SK6	10.5	7.5	5.8	25	4	17.4
A-SK10	15.5	12	9.8	30.5	5	21.3
A-SK16	24.6	18.8	15.75	45	8	32
A-SK25	35.6	28.9	25.4	57	8.5	43

Code No.	D	Clamping Range
A-SK10-2	15.6	1.75-2.0
A-SK10-2.25		2.0-2.25
A-SK10-2.75		2.5-2.75
A-SK10-3		2.75-3.0
A-SK10-3.5		3.0-3.5
A-SK10-4		3.5-4.0
A-SK10-4.5		4.0-4.5
A-SK10-5		4.5-5.0
A-SK10-5.5		5.0-5.5
A-SK10-6		5.5-6.0
A-SK10-6.5		6.0-6.5
A-SK10-7		6.5-7.0
A-SK10-7.5		7.0-7.5
A-SK10-8		7.5-8.0
A-SK10-8.5		8.0-8.5
A-SK10-9		8.5-9.0
A-SK10-9.5		9.0-9.5
A-SK10-10		9.5-10.0

Code No.	D	Clamping Range
A-SK25-16.5	35.7	16.0-16.5
A-SK25-17		16.5-17.0
A-SK25-17.5		17.0-17.5
A-SK25-18		17.5-18.0
A-SK25-18.5		18.0-18.5
A-SK25-19		18.5-19.0
A-SK25-19.5		19.0-19.5
A-SK25-20		19.5-20.0
A-SK25-20.5		20.0-20.5
A-SK25-21		20.5-21.0
A-SK25-21.5		21.0-21.5
A-SK25-22		21.5-22.0
A-SK25-22.5		22.0-22.5
A-SK25-23		22.5-23.0
A-SK25-23.5		23.0-23.5
A-SK25-24		23.5-24.0
A-SK25-24.5		24.0-24.5
A-SK25-25		24.5-25.0
A-SK25-25.4		25.0-25.4

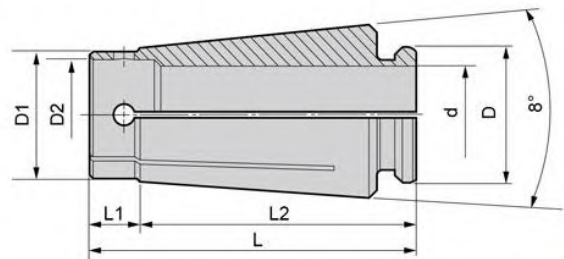


Milling Tooling System - Accessories

SK-UP Precision Collet(Ultra Precision)

Feature

- It is ideal for a variety of machining applications including boring milling , reaming, tapping and grinding.
- Material: SUJ2
- HRC46 degree
- SK Collet designed with 8 degree cone angle which shortens the suspended length of a collet , -therefore , the clamping power is huge.
- the tolerance of the clamping tool is limited during H7
- the hollow diameter is smaller than 3mm, its elastic contract is 0.25mm
- the hollow diameter is larger than 3mm, its elastic contract is 0.5mm
- Accuracy: T.I.R. <0.005mm UP grade.



Code No.	D	Clamping Range
UP-SK6-2	10.4	1.8-2.0
UP-SK6-2.25		2.05-2.25
UP-SK6-2.5		2.3-2.5
UP-SK6-2.75		2.55-2.75
UP-SK6-3		2.8-3.0
UP-SK6-3.5		3.0-3.5
UP-SK6-4		3.5-4.0
UP-SK6-4.5		4.0-4.5
UP-SK6-5		4.5-5.0
UP-SK6-5.5		5.0-5.5
UP-SK6-6		5.5-6.0

Code No.	D	Clamping Range
UP-SK16-3	24.63	2.75-3.0
UP-SK16-3.5		3.0-3.5
UP-SK16-4		3.5-4.0
UP-SK16-4.5		4.0-4.5
UP-SK16-5		4.5-5.0
UP-SK16-5.5		5.0-5.5
UP-SK16-6		5.5-6.0
UP-SK16-6.5		6.0-6.5
UP-SK16-7		6.5-7.0
UP-SK16-7.5		7.0-7.5
UP-SK16-8		7.5-8.0
UP-SK16-8.5		8.0-8.5
UP-SK16-9		8.5-9.0
UP-SK16-9.5		9.0-9.5
UP-SK16-10		9.5-10.0
UP-SK16-10.5		10.0-10.5
UP-SK16-11		10.5-11.0
UP-SK16-11.5		11.0-11.5
UP-SK16-12		11.5-12.0
UP-SK16-12.5		12.0-12.5
UP-SK16-13		12.5-13.0
UP-SK16-13.5		13.0-13.5
UP-SK16-14		13.5-14.0
UP-SK16-14.5		14.0-14.5
UP-SK16-15		14.5-15.0
UP-SK16-15.5		15.0-15.5
UP-SK16-16		15.5-16.0

Code No.	Size(mm)					
	D1	D2	d	L	L1	L2
UP-SK6	10.5	7.5	5.8	25	4	17.4
UP-SK10	15.5	12	9.8	30.5	5	21.3
UP-SK16	24.6	18.8	15.75	45	8	32
UP-SK25	35.6	28.9	25.4	57	8.5	43

Code No.	D	Clamping Range
UP-SK10-2	15.6	1.75-2.0
UP-SK10-2.25		2.0-2.25
UP-SK10-2.75		2.5-2.75
UP-SK10-3		2.75-3.0
UP-SK10-3.5		3.0-3.5
UP-SK10-4		3.5-4.0
UP-SK10-4.5		4.0-4.5
UP-SK10-5		4.5-5.0
UP-SK10-5.5		5.0-5.5
UP-SK10-6		5.5-6.0
UP-SK10-6.5		6.0-6.5
UP-SK10-7		6.5-7.0
UP-SK10-7.5		7.0-7.5
UP-SK10-8		7.5-8.0
UP-SK10-8.5		8.0-8.5
UP-SK10-9		8.5-9.0
UP-SK10-9.5		9.0-9.5
UP-SK10-10		9.5-10.0

Code No.	D	Clamping Range
UP-SK25-16.5	35.7	16.0-16.5
UP-SK25-17		16.5-17.0
UP-SK25-17.5		17.0-17.5
UP-SK25-18		17.5-18.0
UP-SK25-18.5		18.0-18.5
UP-SK25-19		18.5-19.0
UP-SK25-19.5		19.0-19.5
UP-SK25-20		19.5-20.0
UP-SK25-20.5		20.0-20.5
UP-SK25-21		20.5-21.0
UP-SK25-21.5		21.0-21.5
UP-SK25-22		21.5-22.0
UP-SK25-22.5		22.0-22.5
UP-SK25-23		22.5-23.0
UP-SK25-23.5		23.0-23.5
UP-SK25-24		23.5-24.0
UP-SK25-24.5		24.0-24.5
UP-SK25-25		24.5-25.0
UP-SK25-25.4		25.0-25.4

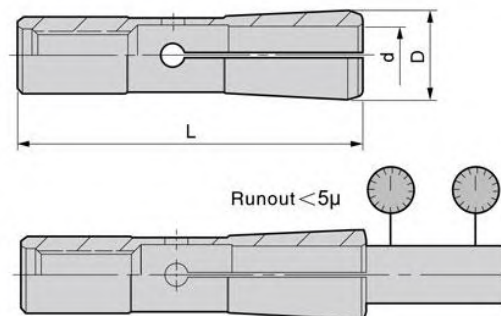


Milling Tooling System - Accessories

DC Slim Collet

Feature

- Material: SUJ2
- Powerful Clamping
- Clamping precision is high
- 5.72 degree cone angle design, the clamping power is up to 2 times than ordinary ER Collet
- the built-in collet design, and the clamping action is on the head of collet, both contributing to the stable clamping and high precision clamping(0.005mm)
- The locking system is directly tightened at the bottom, it is more suitable for the high speed processing than use a nut for locking.
- The EC collet uses a direct connection at the bottom and the clamping action is on the head of the collet . So clamping is more stable than on traditional ER collets and the accuracy can be maintained within 0.005mm.



Code No.	Size(mm)	
	D	L
DC4	7	31
DC6	9.6	36
DC8	14	45
DC10	18	62
DC12	22	60

Code No.	Range
	d
DC4-2E	2
DC4-3E	3
DC4-4E	4
DC4-3.175E	3.175

Code No.	Range
	d
DC6-3E	3
DC6-4E	4
DC6-6E	6
DC6-3.175E	3.175
DC6-6.35E	6.35

Code No.	Range
	d
DC8-3E	2
DC8-4E	3
DC8-6E	6
DC8-8E	8

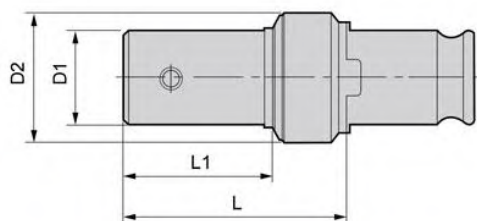
Code No.	Range
	d
DC10-3E	3
DC10-4E	4
DC10-6E	6
DC10-8E	8
DC10-10E	10

Code No.	Range
	d
DC12-3E	3
DC12-4E	4
DC12-6E	6
DC12-8E	8
DC12-10E	10
DC12-12E	12



Milling Tooling System - Accessories

TPC Tap Collet



Code No.	TAP Diameter	Size(mm)				Weight
		D1	D2	L1	L	
TPC316	M3,M4,M5,M6,M8,M10,M12,M14,M16	33	20	27	47	TPM316
	W1/8",W3/16",W1/4",W5/16",W3/8",W7/16"					
TPC830	M8,M10,M12,M14,M16,M18,M20,M22,M24,M27,M30	50	30	43	62	TPM830
	W5/16",W3/4",W7/16",W1/2",W5/8",					
	W5/16",W3/4",W7/16",W1/2",W5/8",W3/4",W7/8",W1"					
	PT1/8,PT3/8,PT1/4,PT1/2,PT5/8,PT3/4					

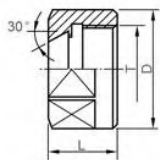


Milling Tooling System - Accessories

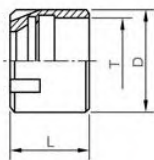
ER Clamping Nut

Feature

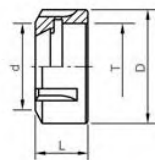
-Material: 40Cr.
-HRC : 45-48°



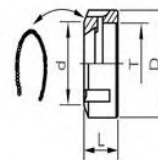
A Type



M Type



UM/RD Type



KM/RD Type

Type	Code No.	D	d	L	L1
A	ER11	19	17	11.3	M14×0.75P
	ER16	28	25	17.5	M22×1.5P
	ER20	34	30	19	M25×1.5P
M	ER8	12	-	10.8	M10×0.75P
	ER11	16	-	12	M13×0.75P
	ER16	22	-	18	M19×1.0P
	ER20	28	-	19	M24×1.0P
	ER25	35	-	20	M30×1.0P
UM/RD	ER25	42	29	20	M32×1.5P
	ER32	50	38.5	22.5	M40×1.5P
	ER40	63	48.3	22.5	M50×1.5P
	ER50	78	59	35.5	M64×2.0P
KM/RD	ER25	42	29	22.5	M32×1.5P
	ER32	50	38.5	26	M40×1.5P
	ER40	63	48.3	29	M50×1.5P
	ER50	78	59	40	M64×2.0P

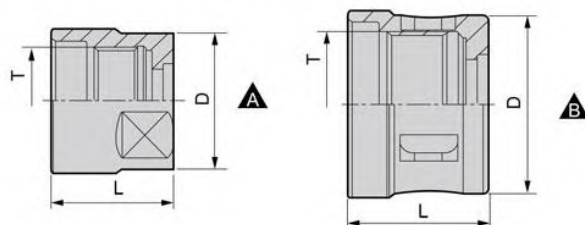


Milling Tooling System - Accessories

SK Collet Nut For High Speed Milling Chuck

Feature

-The nut is completely balanced, it can improve the performance of dynamic balancing.



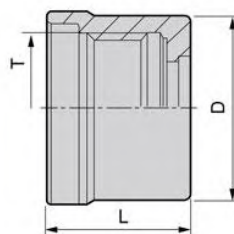
Code No.	Figure	Size(mm)			T
		D	D	L	
SK6-A	A	18	-	21	M15.5×1.0P
SK10-A		26		24	M21.5×1.0P
SK16-M	B	-	40	31	M32×1.5P
SK25-M			50	37	M45×1.5P

GSK Collet Nut For High Speed Milling Chuck

Feature

-The nut is completely balanced, it can improve the performance of dynamic balancing.

Code No.	Size(mm)		T
	D	L	
GSK6	19.5	21	M15.5×1.0P
GSK10	27.5	24	M21.5×1.0P
GSK16	40	31	M32×1.5P
GSK25	55	37	M45×1.5P





Milling Tooling System - Accessories

ER Wrench

Feature

- Material: 40Cr special elastic steel.
- HRC : 38-44°.
- For clamping nuts ER-system.

CODE NO	D	L	N
A-ER11	ER11	32.0	95
A-ER16	ER16	44.0	144
A-ER20	ER20	52.5	144

CODE NO	MODEL	A	B
UM-ER25	ER25	65	210
UM-ER32	ER32	76	250
UM-ER40	ER40	90	290
UM-ER50	ER50	110	350

CODE NO	MODEL	A	B
ER-8M	ER8	12.0	90
ER-11M	ER11	16.8	90
ER-16M	ER16	22.5	110
ER-20M	ER20	29.0	120
ER-25M	ER25	36.0	130



C Wrench

Code No.	Range of Application	L	B	C	I
C20	50-55	260	46	50-55	52
C32	80-90	272	64	80-90	67
C42	92-98	285	65	92-98	90

OZ Wrench



Code No.	D1	Taper
OZ25	60	OZ25
OZ32	76	OZ32

OZ Collets with slits from both sides. For cylindrical shanks with tolerance h10



Milling Tooling System - Accessories

HPM Power Wrench For Sleeve

Code No.	Applicable for holder
WHPM16	HPM16
WHPM20	HPM20
WHPM32	HPM32



GSK Wrench For Sleeve

Code No.	Applicable Clamping Nut
WGSK06	GSK06
WGSK10	GSK10
WGSK16	GSK16
WGSK25	GSK25



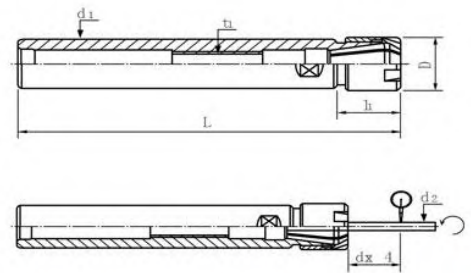


Milling Tooling System - Accessories

Straight Shank ER Collet Chuck Holder (M/UM Type)

Feature

- Material: SCM415.
- HRC : 58-60 °.
- For mounting straight-shank tools in collets.



Code No.	L	L1	D	d1	t1
C10-ER8M-100	115.5	15.5	12	10	M4×0.7P
C10-ER8M-150	165.5	15.5	12	10	M4×0.7P
C12-ER11M-100	130.5	20.5	16	12	M8×1.5P
C12-ER11M-150	180.5	20.5	16	12	M8×1.5P
C16-ER16M-100	139.5	39.5	22	16	M12×1.75P
C16-ER16M-150	189.5	39.5	22	16	M12×1.75P
C16-ER16M-200	239.5	39.5	22	16	M12×1.75P
C20-ER16M-100	139.5	39.5	22	20	M12×1.75P
C20-ER16M-150	189.5	39.5	22	20	M12×1.75P
C20-ER16M-200	239.5	39.5	22	20	M12×1.75P
C20-ER20M-100	144.5	44.5	28	20	M12×1.75P
C20-ER20M-150	194.5	44.5	28	20	M12×1.75P
C20-ER20M-200	244.5	44.5	28	20	M12×1.75P
C20-ER25UM-120	172	52	42	20	M12×1.75P
C20-ER25UM-150	202	52	42	20	M12×1.75P
C32-ER25UM-120	172	52	42	32	M12×1.75P
C32-ER25UM-150	202	52	42	32	M12×1.75P
C32-ER32UM-120	175	55	50	32	M16×2.0P
C32-ER32UM-150	205	55	50	32	M16×2.0P

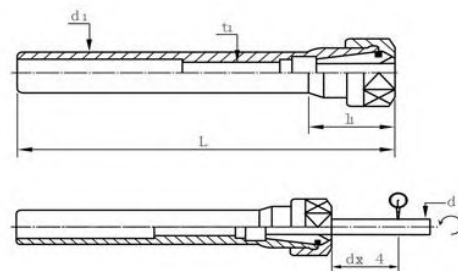


Milling Tooling System - Accessories

Straight Shank ER Collet Chuck Holder (A Type For Milling)

Feature

- Material: SCM415.
- HRC : 58-60 °.
- For mounting straight-shank tools in collets.

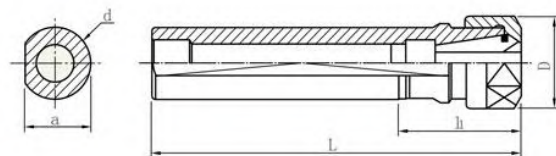


Code No.	L	L1	d1	t1	
ER11A-100-C16	121.6	21.6	C16	M6×1.0P	
ER11A-150-C16	171.6				
ER16A-100-C16	135.1	35.1		C20	M10×1.5P
ER16A-150-C16	185.1				
ER16A-100-C20	135.1				
ER16A-150-C20	185.1				
ER16A-200-C20	234.1				
ER20A-100-C20	140.5	40.5		M12×1.75P	
ER20A-150-C20	190.5				
ER20A-200-C20	240.5				

Straight Shank ER Collet Chuck Holder (B Type For Lathe)

Feature

- Material: SCM415.
- HRC : 58-60 °.
- For mounting straight-shank tools in collets.



Code No.	L	L1	a	D	d
ER16A-100-C20B	100	29	19	28	20
ER20A-100-C20B	100	33	19	34	20
ER20A-100-C25B	100	33	24	34	25

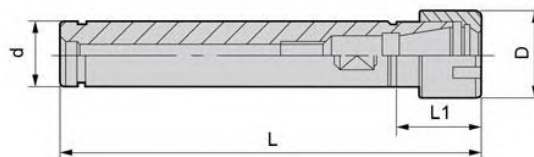


Milling Tooling System - Accessories

Mini Type Straight Shank ER Collet Chuck Holder

Feature

- Material: SCM415.
- HRC : 58-60 °.
- For mounting straight-shank tools in collets.



Code No.	Size(mm)			
	D	d	L1	L
C8ER8M-55	12	8	24	79
C10ER8M-180	12	10	17	197
C12ER8M-55	12	12	17	72
C12ER8M-120	12	12	17	137
C12ER8M-180				197
C12ER11M-80	16	16	26.5	106.5
C16ER11M-50	16		18.5	68.5
C16ER11M-100				118.5
C16ER11M-140				158.5
C16ER16M-80	23	37	117	
C20ER16M-100	23	20	25	125
C20ER16M-140				165
C20ER16M-160				185
C20ER20M-60	28	20	40	100
C20ER20M-100				140
C20ER20M-120	28	20	40	160
C20ER20M-150				190
C20ER20M-180				220
C25ER20M-140	28	25	28	168
C20ER25M-100	35	20	40	140

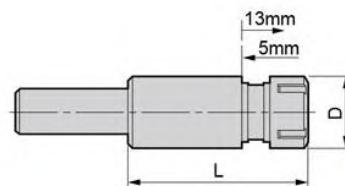


Milling Tooling System - Accessories

C-TER Flex Tapping Chucks With Straight Shank

Feature

- Material: SCM415.
- HRC : 58-60 °.
- For mounting straight-shank tools in collets.

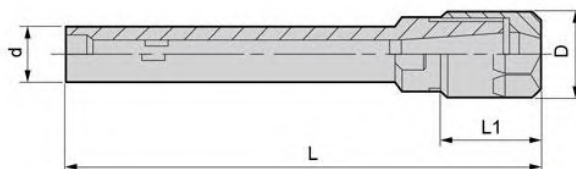


Code No.	Size(mm)		Suit Collet	Tapping Capacity
	D	L		
C20-TER16	28	75	ER16	M3-M12
C20-TER20	34	80	ER20	M4-M16
C20-TER25	42		ER25	M5-M20
C25-TER16	28	75	ER16	M3-M12
C25-TER20	32	80	ER20	M4-M16
C25-TER25	42		ER25	M5-M20
C25-TER32	50		ER32	M8-M27
C32-TER16	28	75	ER16	M3-M12
C32-TER20	32	80	ER20	M4-M16
C32-TER25	42		ER25	M5-M20
C32-TER32	50		ER32	M8-M27
C40-TER16	28	75	ER16	M3-M12
C40-TER20	32	80	ER20	M4-M16
C40-TER25	42		ER25	M5-M20
C40-TER32	50		ER32	M8-M27

SK Straight Shank Collet Chuck Holder

Feature

- Material: SCM415.
- HRC : 58-60 °.
- For mounting straight-shank tools in collets.



Code No.	Size(mm)			
	D	d	L1	L
C20-SK6-120	20	20	20	120
C20-SK6-150				150
C20-SK6-180				180
C20-SK10-120	29		28	120
C20-SK10-150				150
C20-SK10-180				180

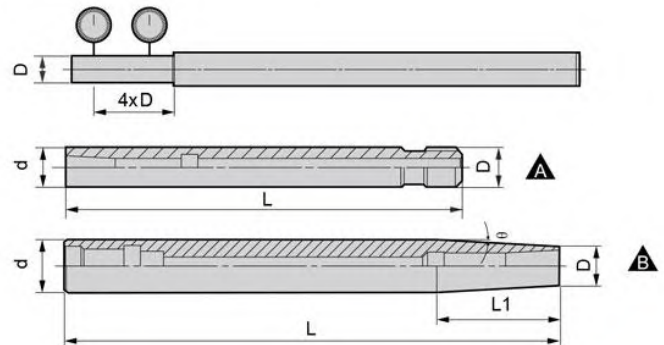


Milling Tooling System - Accessories

Cylindrical Shank Of DC Slim Chuck

Feature

- DC Collet designed without cap, the outer diameter can reach 8.6mm.It represent well performance in deep machining.
- We offer different length of Collet holder, the maximum can be 300mm.
- Runout:<0.005(4XD).

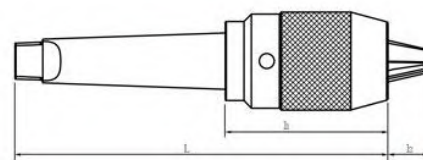


Code No.	Figure	Size(mm)					Suit Collet	Wrench
		D	d	L1	L	θ		
C08-DC4-80	A	-	8	-	80	-	DC4	2-4
C12-DC4-120	B		12		120			
C12-DC6-120	A							
C16-DC6-150	B	12	16	38	150	3°	DC6	2-6
C20-DC6-200			20	76	200			
C25-DC6-250			25	124	250			
C20-DC8-150		19	20	150	2°	DC8	3-8	
C20-DC8-200				200				
C25-DC10-150		24	25	28	150	DC10	3-10	
C25-DC10-200				200				
C25-DC10-250				250				
C32-DC12-200		30	32	57	200	DC12	3-12	
C32-DC12-250					250			
C32-DC12-300					300			



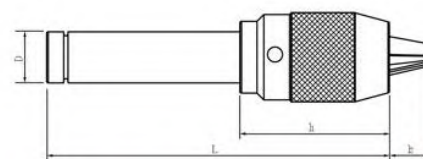
Milling Tooling System - Accessories

MT-APU Integrated Keyless Drill Chuck



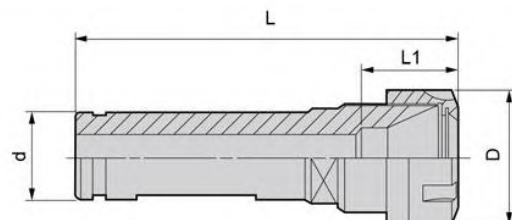
Code No.	L	I1	I2
MT2-APU8	164	70	10
MT2-APU13	174	80	10
MT3-APU13	179	80	10
MT3-APU16	184	85	12
MT4-APU13	202	80	10
MT4-APU16	207	85	12

C-APU Integrated Keyless Drill Chuck



Code No.	D	L	I1	I2
C20-APU8	20	120	70	10
C20-APU13	20	140	80	10
C20-APU16	20	150	80	10
C25-APU13	25	161	80	10
C25-APU16	25	165	80	12
C32-APU13	32	165	85	10
C32-APU16	32	165	85	12

NC-ER Chuck Holder



Code No.	Size(mm)			
	D	d	L1	L
C20NC/ER16	28	20	32	92
C25NC/ER16		25		97
C25NC/ER25	42			
C32NC/ER20	34	32		
C32NC/ER25	42		38	
C32NC/ER32	50	108		



Milling Tooling System - Accessories

Positioning Block



Notice: In using OIL-FEED holder, positioning block illustrated here is necessary. The positioning block can be mounted to the interfere with ATC arm, etc. of the machine. Therefore, as the mounting differs with different machines, it is necessary to consult the machine manufacturer about the proper mounting.