

MACHINING CENTER TOOL HOLDERS AND ACCESSORIES



INTERNATIONAL MACHINE TOOLS AND EQUIPMENT INC

**IMTE**
www.imte.ca



INDEX

■	ANGLE HEAD	1
■	BACK LOCKING COLLET HOLDER	3
■	SHRINK FIT HOLDER	6
■	HSK HOLDER FOR TURNING MILLS	7
■	NBJ16	10
■	EBOR MICRO BORING HOLDER	15
■	BORING HEAD	18
■	BORING HOLDER	25
■	BORING ADAPTER (EXTENSION & REDUCTION)	30
■	QUICK CHANGE TAPPING CHUCK	31
■	SD PRECISION COLLET CHUCK	36
■	SD PRECISION COLLET CHUCKSPARE PART	40
■	EMC POWER MILLING CHUCK	42
■	EMC POWER MILLING CHUCK SPARE PART	47
■	ER COLLET CHUCK	48
■	ER COLLET CHUCK SPARE PART	58
■	OZ COLLET CHUCK	61
■	QUICK CHANGE TAPPING CHUCK	64
■	FACE MILL HOLDER	66
■	MTA TYPE MORSE TAPER HOLDER	76
■	MTB TYPE MOSE TAPER HOLDER	81
■	SIDE LOCK HOLDER	83
■	WER TAPPING CHUCK	88
■	KPU DRILL CHUCK	91
■	SIDE CUTTER HOLDER	95
■	DRILL CHUCK HOLDER	96
■	TESTING	97
■	SMALL MILLING CUTTER HOLDER	98
■	PULL STUD	103
■	HSK COOLANT PIPE	105
■	ACCESSORIES	106
■	KEYLESS DRILL CHUCK	111
■	TOOL CHECKING AND PRESETTING INSTRUMENTS	118
■	ER COLLET HOLDER SK-B	119

**NOT ALL THE MODELS ARE
AVAILABLE IN ALL COUNTRIES
DUE TO THE PATENT AND/OR
OTHER RESTRICTIONS.**

All trademarks used are for a reference purpose only
and are the property of their respective owners.

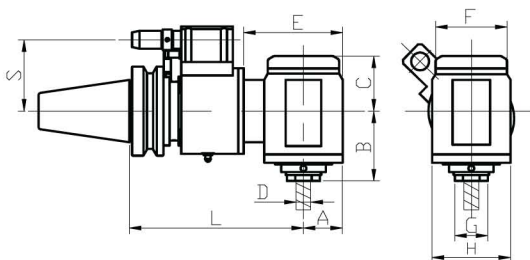




ANGLEHEAD



Model	Range	Ratio	Max.Speed
BT40-AHER32-185	Ø2~20	1:1	3000
BT50-AHER32-195	Ø2~20	1:1	3000



Caution:

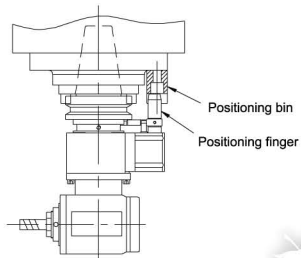
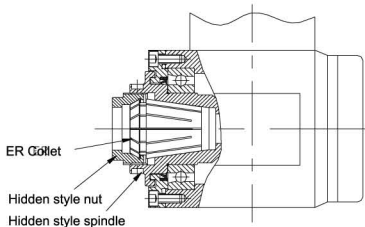
Please make sure that the angle head you order is the correct one for your machine.

- Spanner wrench included
- Holding position is adjustable
- Default is BT standard. Other standards by request.

Order Code	ØD	S	L	A	B	C	E	F	ØG	H
BT40-AHER32-185	2~20	60/65	185	44	78.2	62.8	113	80	36	88
BT50-AHER32-195	2~20	80/85/110	195	44	78.2	62.8	111	80	36	88

Concealed design, strong holding power, no interference

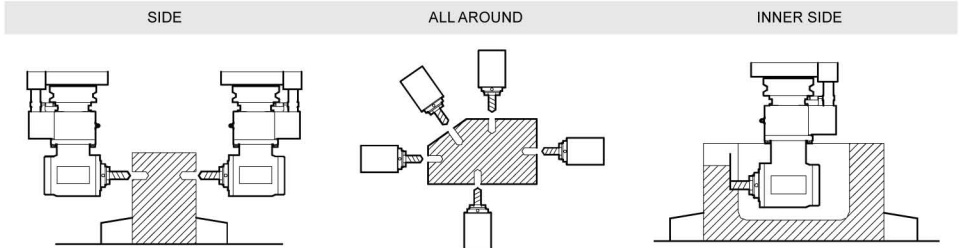
Typical installation diagram



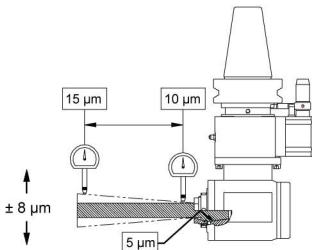


ANGLE HEAD

FREE WORKING ALL AROUND 360



HIGH ACCURACY

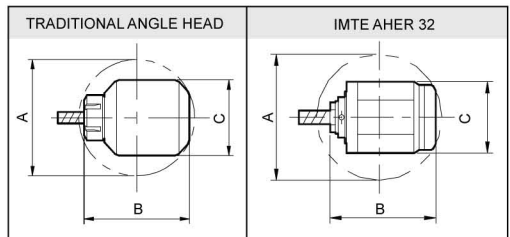


IMTE angle heads made in high precision CNC Machining Centers by using high quality materials.

TYPE	L
AHER11 AHER16 AHER20	40
AHER25 AHER32 AHER40	50

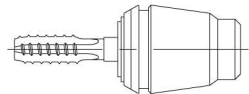
LESS INTERFERENCE

COMPARISON	A	B	C
Traditional angle head Max diameter	$\varnothing 171$	160	88
Max diameter AHER32	$\varnothing 155$	140	88



TAPPING

Can be used for tapping with ER collets taper
(See VDI Tool Holder catalogue)

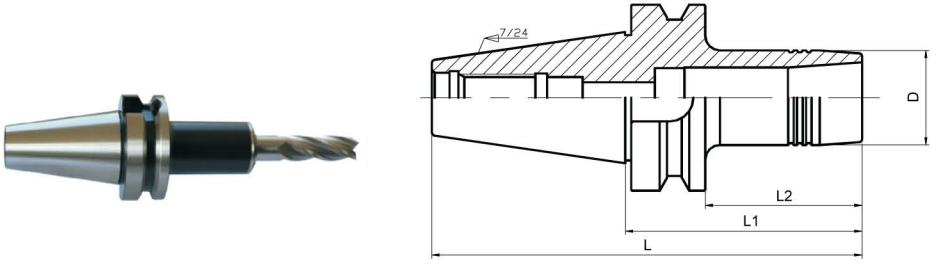




BACKLOCKING COLLET HOLDER

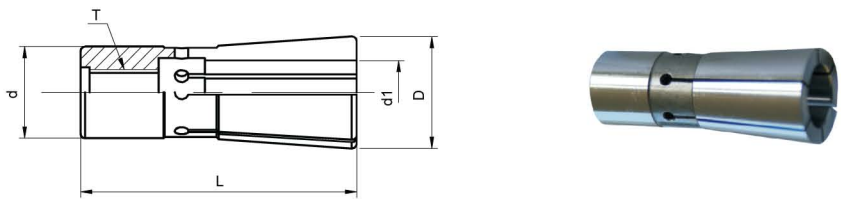
BACK LOCKING COLLET HOLDERS-BT

Advantage	<ul style="list-style-type: none"> • 8 degree design. Double holding force compared to ER collets • Small head, less interference • Concealed collets design. Stable, high accuracy (0.005mm) • Back locking, stable in high turning speed • Easy change • Balance up to G6.3 16000rpm
-----------	--



Order Code	L1	L2	L	ØD
BT40-BLC16-80	80	53	145.4	32
-120	120	93	185.4	
-150	150	123	215.4	

BACK LOCKING COLLECT



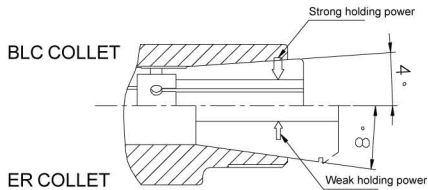
Order Code	Ød1	L	Ød	ØD	T
BLC16	6, 8, 10, 12, 14, 16	60	20	24.6	M10x1.5

• Diameter have to be the same as diameter of insert



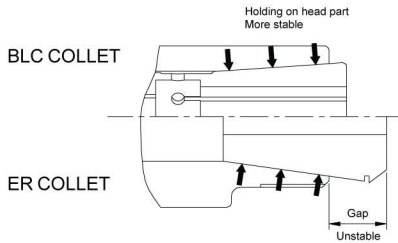
BACK LOCKING COLLET HOLDER

STRONG HOLDING POWER



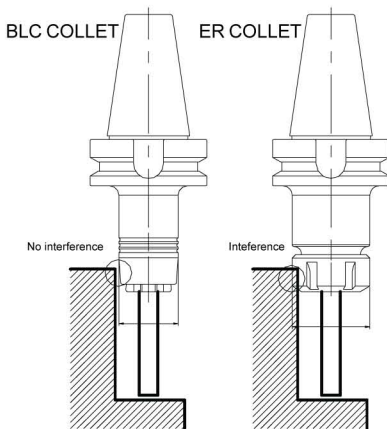
- 8 degree design, double holding force compared to ER collets

STABLE, HIGH ACCURACY



- There is gap between nut and front part of ER collets, holding positioning is on the rear part, unstable
- BLC collets use back locking method, holding positioning is on the head part, more stable, run-out is below 0.0005mm

LESS INTERFERENCE



- Small head reduces interference

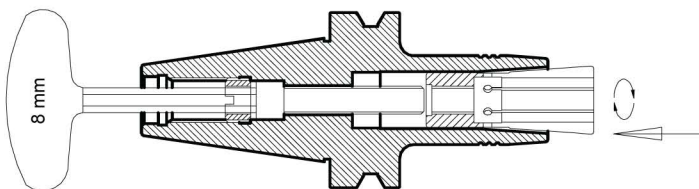
ER25	16	42
BLC16	16	32



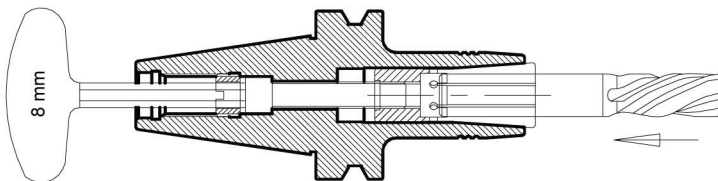
BACK LOCKING COLLET HOLDER

HOW TO INSTALL BLC COLLETS

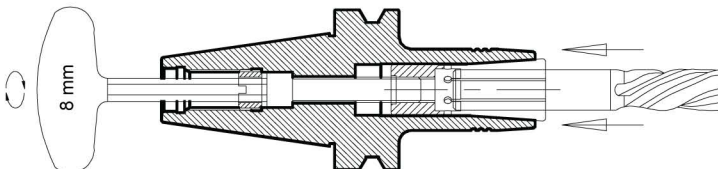
- Insert BLC collet into a holder, tight it in with pull stud



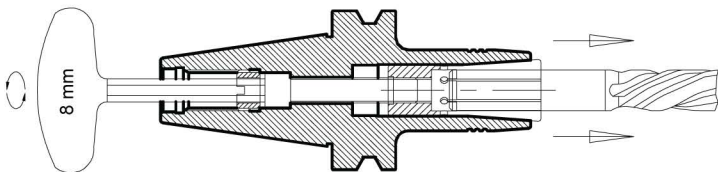
- Put in a tool shank



- Tight it the tool shank by turning pull stud to C.W.



- Take off the tool shank by turning pull stud to C. C.W.

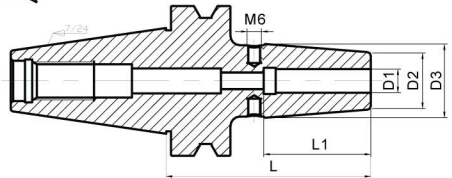




SHRINK FIT HOLDER

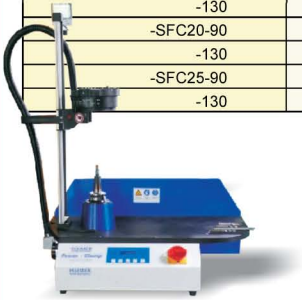
SHRINK FIT HOLDERS

- Shrink fit holders utilize the expansion and contraction properties of metal to provide extremely powerful tool holding. The bore is slightly smaller than the tool shank, and when heated it expands just enough to allow the tool to be inserted. When it cools down, the contraction of the metal holds the cutting tool with force.
- Using for high rigid shank only
- Made of specific metal to improve tool life
- Balance up to G6.3 16000rpm



Order Code	L	L1	Ø D1	Ø D2	Ø D3
BT40-SFC05-90	90	15	5	10	- -
-SFC06-90	90	36	6	21	27
-130	130				
-SFC08-90	90	36	8	21	27
-130	130				
-SFC10-90	90	42	10	24	32
-130	130				
-SFC12-90	90	47	12	24	32
-130	130				
-SFC16-90	90	50	16	27	34
-130	130				
-SFC20-90	90	52	20	33	42
-130	130				
-SFC25-90	90	58	25	44	53
-130	130				

• BT, SK, CAT, HSK
• Balance to G6.5 24000rpm by requests

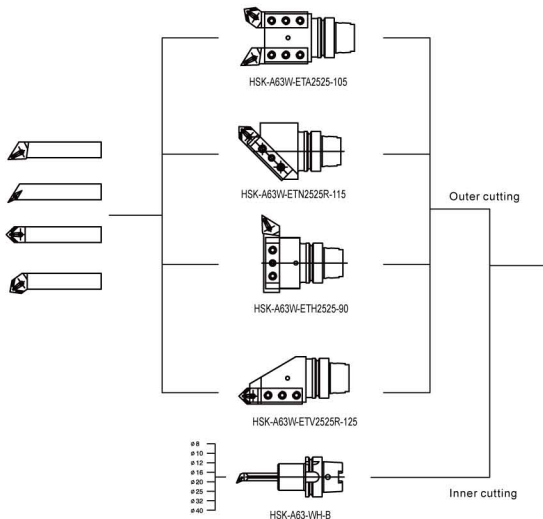


**SHRINK FIT HOLDERS
ARE NOT AVAILABLE IN
THE TERRITORY OF
CANADA AND USA**



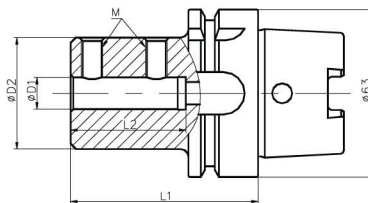
HSK HOLDER FOR TURNING MILLS

HSK HOLDER FOR TURNING MILLS



DIN69893-HSK-A63

TOOL HOLDER FOR INNER CUTTING

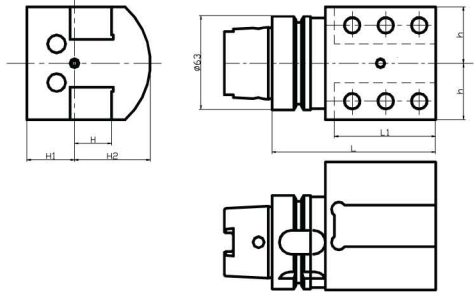


Order Code	ø D	ø D2	L1	L2	M
HSK-A63-WH-B08-65	28	8	65	40	M8
HSK-A63-WH-B10-70	35	10	70	45	M8
HSK-A63-WH-B12-70	42	12	70	45	M8
HSK-A63-WH-B16-75	48	16	75	50	M10
HSK-A63-WH-B20-75	52	20	75	50	M10
HSK-A63-WH-B25-83	62	25	83	58	M12
HSK-A63-WH-B32-87	62	32	87	62	M12
HSK-A63-WH-B40-97	65	40	97	72	M16

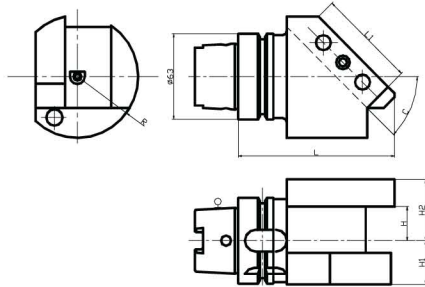


HSK HOLDER FOR TURNING MILLS

TOOL HOLDER FOR OUTER CUTTING

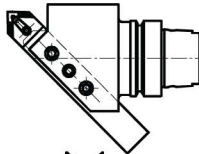
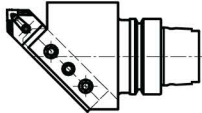


Order Code	L	L1	H	H1	H2	h
HSK-A63W-ETA2525-105	105	65	25	32	51	38



Order Code	L	L1	H	H1	H2	R	C
HSK-A63W-ETN2525R-115	115	70	25	32	45	45	45°

CAUTION



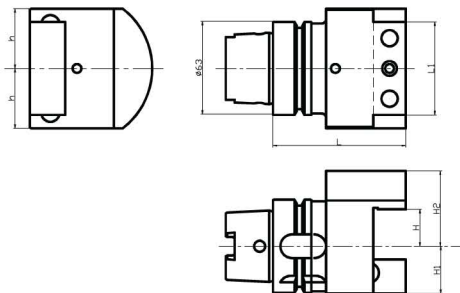
Extra shank length
prohibited to avoid
interference



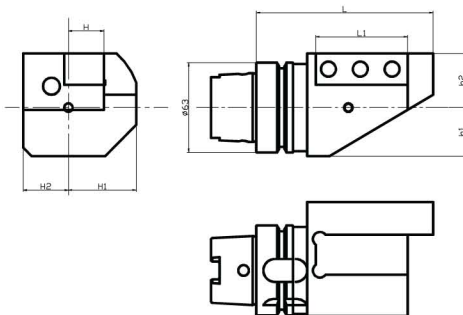


HSK HOLDER FOR TURNING MILLS

TOOL HOLDER FOR OUTER CUTTING

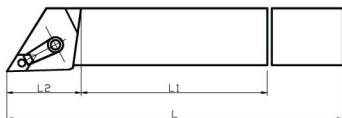


Order Code	L	L	1	H	H1	H2	h
HSK-A63W-ETH2525-90	90	63	25		32	51	40.5



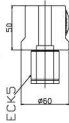
Order Code	L	L	1	H	H1	H2	h1	h2
HSK-A63W-ETV2525R-125	125	65	25		48	32	34	38

CAUTION



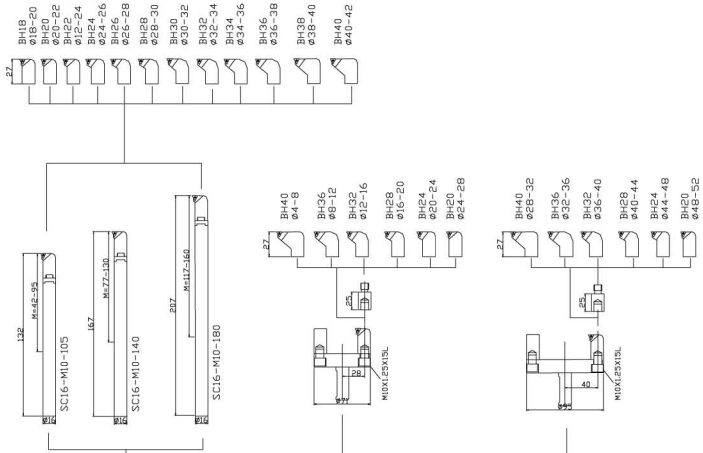
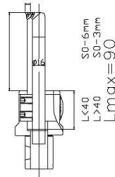
Shank length
 must be
 the same as L1

NBJ16 MICRO BORING BAR



For hole

For small hole



BH16 boring bar O6-O52, 12 pcs,
or O8-O50, 8 pcs

BCH-SUBRO6 #6-7.5

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9

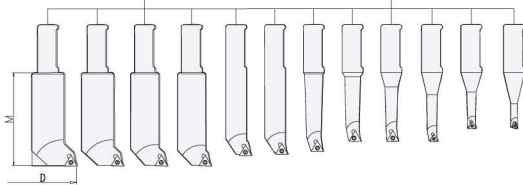
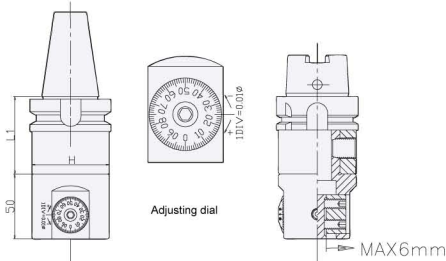
BCH-SUBRO6 #7-9

BCH-SUBRO6 #7-9



NBJ16 MICRO BORING HOLDER

NBJ16 MICRO BORING HOLDER



Order Code		Ø D	TOOL HOLDER TYPE	L1	H
8PCS/SET	BT40-NBJ16-8P	8-50	BT40-ECK5-60	60	60
	BT50-NBJ16-8P		BT50-ECK5-75	75	
	SK40-NBJ16-8P		SK40-ECK5-65	65	
	SK50-NBJ16-8P		SK50-ECK5-75	75	
	DIN2080-40-NBJ16-8P		DIN2080-40-ECK5-60	60	
	DIN2080-50-NBJ16-8P		DIN2080-50-ECK5-75	75	
	HSK-A63-NBJ16-8P		HSK-A63-ECK5-75	75	
	HSK-A100-NBJ16-8P		HSK-A100-ECK5-75	75	
12PCS/SET	BT40-NBJ16-12P	6-51	BT40-ECK5-60	60	60
	BT50-NBJ16-12P		BT50-ECK5-75	75	
	SK40-NBJ16-12P		SK40-ECK5-60	60	
	SK50-NBJ16-12P		SK50-ECK5-75	75	
	DIN2080-40-NBJ16-12P		DIN2080-40-ECK5-60	60	
	DIN2080-50-NBJ16-12P		DIN2080-50-ECK5-75	75	
	HSK-A63-NBJ16-12P		HSK-A63-ECK5-75	75	
	HSK-A100-NBJ16-12P		HSK-A100-ECK5-75	75	

* Special order by requests





NBJ16

BORING BAR (STANDARD)

Boring bar	Boring range ØD	Depth	Inserts	Bolts	Wrench	ap	F
BJ1606-20	6-9	20	WBG060102L	CSTB-2	T6	0.05-0.2	0.05-0.1
BJ1608-28*	8-11	28	TBGT060102L			0.05-0.2	0.05-0.1
BJ1610-36*	10-13	36	TBGT060104L			0.1-0.25	0.07-0.15
BJ1612-42*	12-15	42	TPGT090202L	CSTB-2 .5	T8	0.05-0.2	0.05-0.1
BJ1614-50	14-17	50					
BJ1616-60*	16-21	60					
BJ1620-63*	20-26	63					
BJ1624-64*	24-30	64	TPGT090204L	CSTB-2 .5	T8	0.1-0.25	0.07-0.15
BJ1630-72*	30-36	72					
BJ1635-72	35-41	72					
BJ1640-72*	40-46	72					
BJ1645-72	45-51	72					

BORING BAR (EXTENDED)

Boring bar	Boring range ØD	Depth	Inserts	Bolts	Wrench	ap	F
BJ1606-24L	6-9	24	WBG060102L	CSTB-2	T6	0.05-0.2	0.05-0.1
BJ1608-32L*	8-11	32	TBGT060102L			0.05-0.2	0.05-0.1
BJ1610-40L*	10-13	40	TBGT060104L			0.1-0.25	0.07-0.15
BJ1612-53L*	12-15	53	TPGT090202L	CSTB-2 .5	T8	0.05-0.2	0.05-0.1
BJ1614-60L	14-17	60					
BJ1616-68L*	16-21	68					
BJ1620-83L*	20-26	83					
BJ1624-90L*	24-30	90	TPGT090204L	CSTB-2 .5	T8	0.1-0.25	0.07-0.15
BJ1630-90L*	30-36	90					
BJ1635-90L	35-41	90					
BJ1640-90L*	40-46	90					
BJ1645-90L*	45-51	90					

- (*) means 8pcs/set
 • Special order by request
 • Rapid steel or cast alloy steel for choices





NBJ16

CUTTING SPEED

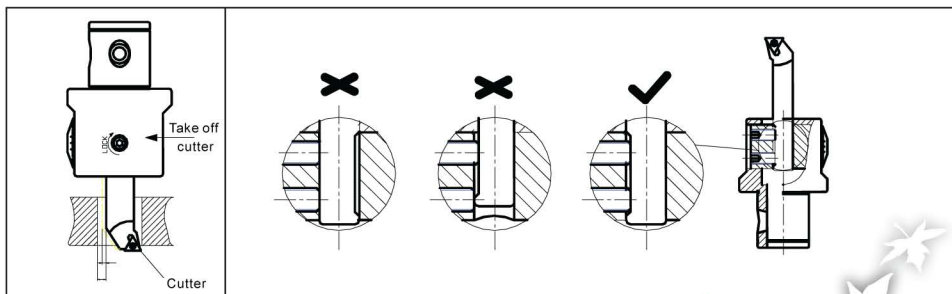
Material	Carbon steel	Stainless steel	Cast iron	Aluminum
Cutting speed VC(m/min)	100-200	70-140	70-140	100-300
<ul style="list-style-type: none"> $V_c = D \times \pi \times n / 1000$ $V_f = n \times F$ 		<ul style="list-style-type: none"> V_c: cutting speed D: working hole n: turning speed V_f: feed speed F: feeding amount per run ap: cut-in 		

ADJUSTING METHOD

1. Screw out "holding bolt"	2. Adjust "adjusting dial" (0.01mm per move)	3. Screw on "holding bolt"

CAUTION

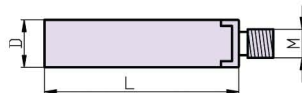
- Do not turn adjusting dial when holding bolt is fastened
- Subsidiary dial is only for reading, not for adjusting
- Watch for distance when taking off the cutter. $Q < A!$ (pic 1)
- Fix insert by pushing on flat side
- Pick up right cutter for boring.
- Avoid vibration while boring process
- Keep clean on boring bar





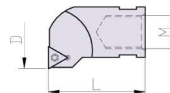
NBJ16 MICRO BORING HOLDER

TUNGSTEN STEEL MICRO BORING BAR



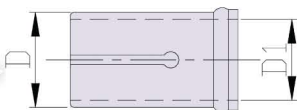
Order Code	Dimension (mm)			Boring head
	L	Ø D	M	
SC08-M5-115	115	8	M5x0.8	BH09, BH10.5
SC10-M6-115	115	10	M6x1.0	BH12
SC10-M6-135	135	10	M6x1.0	BH12
SC10-M6-160	160	10	M6x1.0	BH12
SC12-M6-115	115	12	M6x1.0	BH14, BH16
SC12-M6-135	135	12	M6x1.0	BH14, BH16
SC12-M6-165	165	12	M6x1.0	BH14, BH16
SC14-M6-160	160	14	M6x1.0	BH16
SC16-M10-105	105	16	M10x1.25	BH18, BH20, BH22, BH24
SC16-M10-140	140	16	M10x1.25	BH26, BH28, BH30, BH32
SC16-M10-180	180	16	M10x1.25	BH34, BH36, BH38, BH40

MODULAR BORING HEAD



Order Code	Dimension (mm)				Inserts	Bolts
	Ø D	Boring range	L	M		
BH09	9	9-10.5	18	M5x0.8	TPGT080204L	M2.2 T7
BH10.5	10.5	10.5-12				
BH12	12	12-14				
BH14	14	14-16	23	M6x1.0		
BH16	16	16-18				
BH18	18	18-20	27	M10x1.25		
BH20	20	20-22				
BH22	22	22-24				
BH24	24	24-26				
BH26	26	26-28				
BH28	28	28-30				
BH30	30	30-32				
BH32	32	32-34				
BH34	34	34-36				
BH36	36	36-38				
BH38	38	38-40				
BH40	40	40-42				

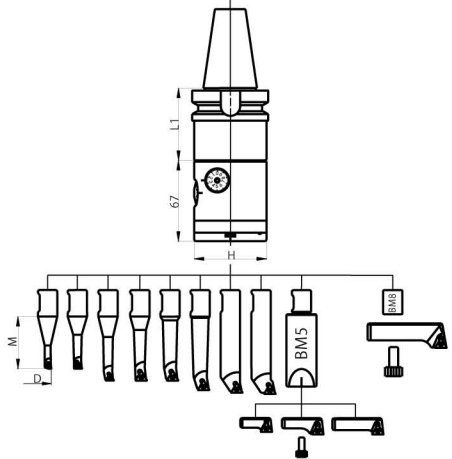
COLLET



Order Code	Dimensions (mm)	
	Ø D	Ø D1
CS1608	16	8
CS1610	16	10
CS1612	16	12
CS1614	16	14



EBOR MICRO BORING HOLDER EBOR48



Order Code	Boring range Ø D	Boring holders	L1	H
BT30-EBOR48	6-90	BT30-ECK4-45	45	48
BT40-EBOR48		BT40-ECK4-60	60	
BT50-EBOR48		BT50-ECK4-75	75	
SK40-EBOR48		SK40-ECK4-65	65	
SK50-EBOR48		SK50-ECK4-75	75	
DIN2080-40-EBOR48		DIN2080-40-ECK4-60	60	
DIN2080-50-EBOR48		DIN2080-50-ECK4-60	60	
HSK-A63-EBOR48		HSK-A63-ECK4-75	75	
HSK-A100-EBOR48		HSK-A100-ECK4-75	75	

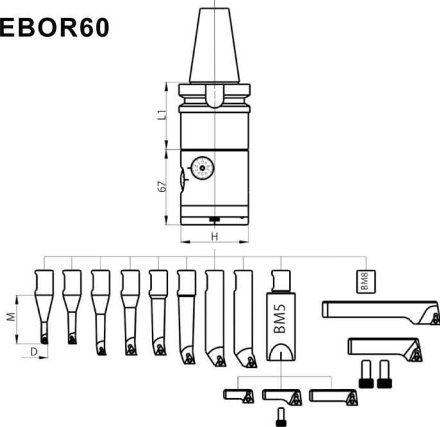
Boring bar	Boring range Ø D	Depth	Inserts	Insert size	Wrench	ap	F
BR1606-20	6-9	20	WBG060102L	CSTB-2	T6	0.05-0.2	0.05-0.1
BR1608-28	8-11	28	TBGT060102L			0.05-0.2	0.05-0.1
BR1610-36	10-13	36	TBGT060104L			0.1-0.25	0.07-0.15
BR1612-42	12-15	42	TPGT090202L	CSTB-2 .5	T8	0.05-0.2	0.05-0.1
BR1614-50	14-17	50				0.1-0.25	0.07-0.15
BR1616-60	16-20	60				0.05-0.2	0.05-0.1
BR1620-63	20-24	63	TPGT090204L	CSTB-2 .5	T8	0.1-0.25	0.07-0.15
BR1624-64	24-28	64				0.05-0.2	0.05-0.1
BM5		60+ SRTP2838/ SRTP3652/ SRTP4470	M5x15CAP	4	T8	0.05-0.2	0.05-0.1
SRTP2838	28-38	+10	TPGT090202L	CSTB-2 .5		0.1-0.25	0.07-0.15
SRTP3652	36-52	+12				0.05-0.2	0.05-0.1
SRTP4470	44-70	+12	TPGT090204L	M8x15CAP	6	0.1-0.25	0.07-0.15
BM8							
SRTP58-90	58-90	+20	TPGT090204L	CSTB-2 .5	T8		

* Special order by request



EBOR MICRO BORING HOLDER

EBOR60



Order Code	Boring range Ø D	Inserts	L1	H
BT40-EBOR60	6-150	BT40-ECK5-60	60	60
BT50-EBOR60		BT50-ECK5-75	75	
SK40-EBOR60		SK40-ECK5-65	65	
SK50-EBOR60		SK50-ECK5-75	75	
DIN2080-40- EBOR60		DIN2080-40-ECK5-60	60	
DIN2080-50- EBOR60		DIN2080-50-ECK5-75	75	
HSK-A63- EBOR60		HSK-A63-ECK5-75	75	
HSK-A100- EBOR60		HSK-A100-ECK5-75	75	

Boring bars	Boring range Ø D	Depth	Inserts	Bolts	Wrench	ap	F	
BR1606-20	6-9	20	WBGTO60102L	CSTB-2	T6	0.05-0.2	0.05-0.1	
BR1608-28	8-11	28	TBGT060102L			0.05-0.2	0.05-0.1	
BR1610-36	10-13	36	TBGT060104L			0.1-0.25	0.07-0.15	
BR1612-42	12-15	42	TPGT090202L	CSTB-2.5	T8	0.05-0.2	0.05-0.1	
BR1614-50	14-17	50				TPGT090204L	0.1-0.25	0.07-0.15
BR1616-60	16-20	60						
BR1620-63	20-24	63	60+ SRTP2838/ SRTP3652/ SRTP4470	M5x15CAP	4	0.05-0.2	0.05-0.1	
BR1624-64	24-28	64						
BM5								
SRTP2838	28-38	+10	TPGT090202L	CSTB-2.5	T8			
SRTP3652	36-52	+12						
SRTP4470	44-70	+12						TPGT090204L
BM8				M8x15CAP	6			
SRTP70110	70-110	+20	TPGT090202L	CSTB-2.5	T8	0.05-0.1		
SRTP110150	110-150	+20	TPGT090204L			0.1-0.25	0.07-0.15	

• Special order by request





CUTTING SPEED

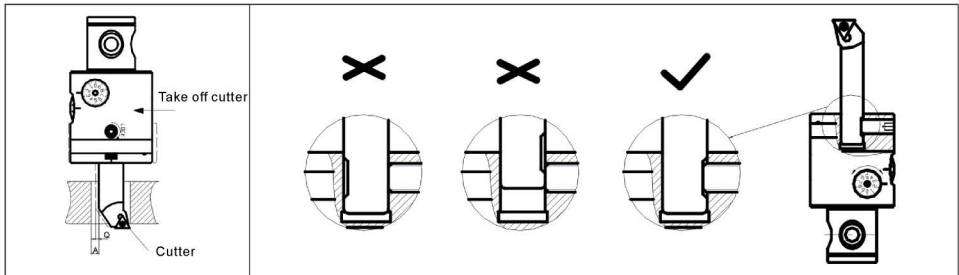
Material	Carbon steel	Stainless steel	Cast iron	Aluminum
Cutting speed VC(m/min)	100-200	70-140	70-140	150-300
<ul style="list-style-type: none"> • $V_c = D \times \pi \times n / 1000$ • $V_f = n \times F$ 		<ul style="list-style-type: none"> • V_c: cutting speed • D: working hole • n: turning speed • V_f: feed speed • F: Feeding amount per run • ap: cut-in 		

ADJUSTING METHOD

<ol style="list-style-type: none"> 1. Release "holding bolt" 2. Adjust "adjusting dial" 0.002mm per scale, 0.1 mm per full turn, subsidiary dial - 0.1mm per scale. Max boring range +2mm/-2mm (EBOR48), 4mm/-2mm (EBOR60) 3. Fasten "holding bolt" 	
--	--

CAUTION

<ol style="list-style-type: none"> 1. Don not turn adjusting dial when holding bolt is fastened 2. Subsidiary dial is only used for reading, not for adjusting 3. Watch for distance when taking off the cutter. $Q < A!$ (pic 1) 4. Fix insert by pushing on flat side 5. Pick up right cutter for boring 6. Avoid vibration while boring 7. Keep clean on boring bar

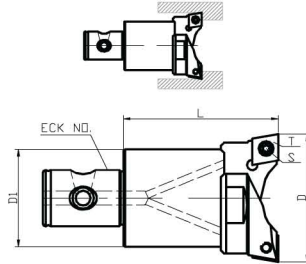


pic#1

pic#2

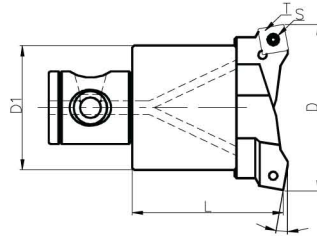


BORING HEAD DOUBLE CUTTER BORING HEAD (STANDARD)



Order Code	ECK No.	∅ D1	L	∅ D	T	S
ERB27-35	1	23	40	27-35	CCMT060204	CSTB-2.5
ERB34-44	2	29	45	34-44	CCMT060204	CSTB-2.5
ERB43-55	3	37	55	43-55	CCMT09T308	CSTB-4
ERB54-76	4	48	60	54-76	CCMT120408	CSTB-5
ERB75-105	5	60	75	75-105	CCMT120408	CSTB-5
ERB104-150	6	80	90	104-150	CCMT120408	CSTB-5

DOUBLE CUTTER BORING HEAD (10 ANGLE)



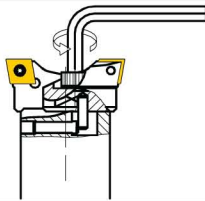
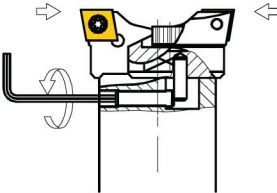
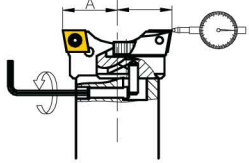
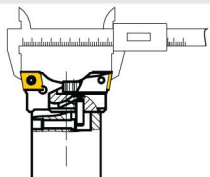
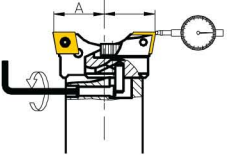
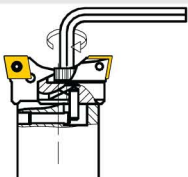
Order Code	ECK No	∅ D1	L	∅ D	T	S
ERB27-35A	1	23	38	27-35	SCMT070204	CSTB-3
ERB34-44A	2	29	43	34-44	SCMT070204	CSTB-3
ERB43-55A	3	37	53	43-55	SCMT09T308	CSTB-4
ERB54-76A	4	48	57	54-76	SCMT120408	CSTB-5
ERB75-105A	5	60	72	75-105	SCMT120408	CSTB-5
ERB104-150A	6	80	87	104-150	SCMT120408	CSTB-5





BORING HEAD

ADJUSTING METHOD

<p>Release 2 holding bolts</p> 	<p>Turn 2 adjusting bolts to get expectant diameter</p> 	<p>Make sure that A-B=±0.05mm</p> 
<p>Measure the diameter</p> 	<p>Adjust the diameter to expectant value</p> 	<p>Fasten the holding bolts</p> 

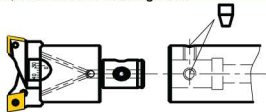
CUTTING PARAMETER

This data is only for reference

Standard	Material	Cutter's material	Cutter's model	Cutting speed m/min	Cutting amount mm/ Ø	Feeding speed mm/rev
ERB27-35	Carbon steel	KC850	CCMT060204	120	1-3	0.1-0.3
	Cast iron	KC950		150	1-4	0.1-0.3
ERB34-44	Carbon steel	KC850		120	1-3	0.1-0.3
	Cast iron	KC950		150	1-4	0.1-0.3
ERB43-55	Carbon steel	KC850	CCMT09T308	120	1-5	0.1-0.4
	Cast iron	KC950		150	1-6	0.1-0.4
ERB54-76	Carbon steel	KC850	CCMT120408	120	1-7	0.1-0.4
	Cast iron	KC950		150	1-10	0.1-0.5
ERB75-105	Carbon steel	KC850		120	1-7	0.1-0.4
	Cast iron	KC950		150	1-10	0.1-0.5
ERB104-150	Carbon steel	KC850	120	1-10	0.1-0.4	
	Cast iron	KC950	150	1-12	0.1-0.5	

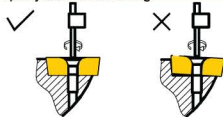
INSERT BORING HEAD INTO BORING BAR HOLDER

Release 2 holding bolts, put boring head into holder, then fasten 2 holding bolts



CAUTION

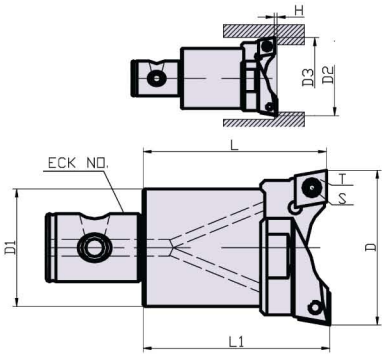
Keep surface clean. Put cutter on the surface properly before fastening.





BORING HEAD

**DOUBLE CUTTER BORING HEAD
 (2-STEPPED TYPE)**

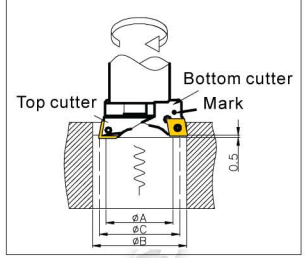


Order Code	ECK No.	∅D1	L	L1	Diameter ∅D	Cutter T	Bolts S
ERB27-35	1	23	38	40.5	27-35	CCMT060204	CSTB-2.5
ERB34-44	2	29	43	45.5	34-44	CCMT060204	CSTB-2.5
ERB43-55	3	37	53	55.5	43-55	CCMT09T308	CSTB-4
ERB54-76	4	48	57	60.5	54-76	CCMT120408	CSTB-5
ERB75-105	5	60	72	75.5	75-105	CCMT120408	CSTB-5
ERB104-150	6	80	87	90.5	104-150	CCMT120408	CSTB-5

ADJUSTING METHOD

Bottom cutter side marked by "•"

Working diameter of top cutter
 $\varnothing C = (\varnothing A + \varnothing B) / 2$



1 Release 2 holding bolts

2 turn adjusting bolt to make ∅C for top cutter, and ∅B for bottom cutter

Fasten the 2 holding bolts

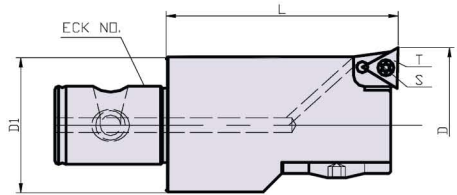
Testing and measuring





BORING HEAD

FINE BORING HEAD



Order Code	ECK No.	Ø D1	L	Diameter Ø D	Inserts T	Bolts S
EFB27-35.5	1	23	40	27-35	TPGT080202L	CSTB-2L
EFB34-44.5	2	29	45	34-44		
EFB43-55.5	3	37	55	43-55	TPGT090202L	CSTB-2.5
EFB54-76.5	4	48	60	54-76		
EFB75-105.5	5	60	75	75-105		
EFB104-150.5	6	80	90	104-150		

FINE BORING HEAD

	Order Code	Inserts	Bolts	Wrench	Boring head
 T Model	EFB1T	TPGT0802 L	CSTB-2L	T6	EFB27-35.5 EFB34-44.5
	EFB2T	TPGT0902 L	CSTB-2.5	T8	EFB43-55.5 EFB54-76.5 LEFB Full set
	EFB3T				EFB75-105.5 EFB104-150.5
 C Model	EFB1C	CCMT0602 L	CSTB-2.5	T8	EFB27-35.5 EFB34-44.5
	EFB2C				EFB43-55.5 EFB54-76.5 LEFB Full set
	EFB3C				EFB75-105.5 EFB104-150.5



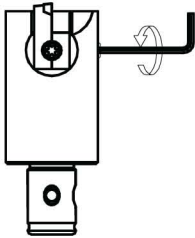
BORING HEADS

BORING HEAD

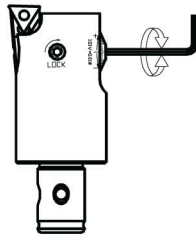
Standard	Material	Cutter's material	Cutter's model	Cutting speed m/min	Cutting amount mm/ Ø	Feeding speed mm/rev
EFB27-35.5	CarbonSteel	NS530	TPGT080202L	150	0.15-0.3	0.05-0.15
	CostIron	NS520		200	0.15-0.3	0.05-0.15
EFB34-44.5	CarbonSteel	NS530		150	0.15-0.3	0.05-0.15
	CostIron	NS520		200	0.15-0.3	0.05-0.15
EFB43-55.5	CarbonSteel	NS530	TPGT090202L	150	0.15-0.4	0.05-0.15
	CostIron	NS520		200	0.15-0.4	0.05-0.15
EFB54-76.5	CarbonSteel	NS530		150	0.15-0.4	0.05-0.15
	CostIron	NS520		200	0.15-0.4	0.05-0.15
EFB75-105.5	CarbonSteel	NS530	150	0.15-0.4	0.05-0.15	
	CostIron	NS520	200	0.15-0.4	0.05-0.15	
EFB104-150.5	CarbonSteel	NS530	150	0.15-0.4	0.05-0.15	
	CostIron	NS520	200	0.15-0.4	0.05-0.15	

Above data only for reference.

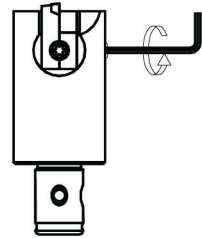
TO ADJUST BORING HEAD



1. Release holding bolt

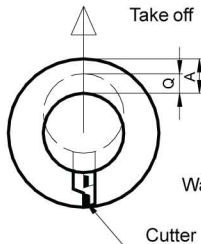


2. To reach expectant position
by turning adjusting bolt (Ø0.01 per scale)



Tighten holding bolts

CAUTION



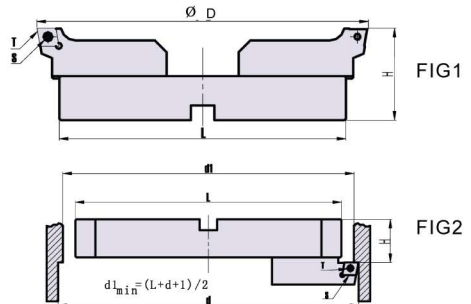
Watch for distance when taking off the cutter. $Q < A!$





BORING HEAD

LARGE DOUBLE CUTTER FINE BORING HEAD

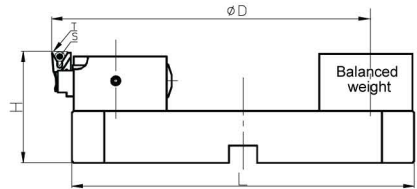


Order Code	ECK No .	L	H	Diameter Ø D	Inserts T	Bolts S	Pic #	Weight (Kg)
LERB150-205	7	145	65	150-205	CCMT120408	CSTB-5	FIG1	2.4
LERB200-255		195	65	200-255				3.2
LERB250-305		245	70	250-305				4.6
LERB300-355		295	70	300-355				5.4
LERB350-405		345	75	350-405				7.2
LERB400-455		395	75	400-455				8.1
LERB450-505		445	80	450-505				10.3
LERB150-205F	7	145	35	150-205	CCMT120408	CSTB-5	FIG2	2.0
LERB200-255F		195	35	200-255				2.8
LERB250-305F		245	40	250-305				4.2
LERB300-355F		295	40	300-355				4.9
LERB350-405F		345	45	350-405				6.8
LERB400-455F		395	45	400-455				7.7
LERB450-505F		445	50	450-505				9.9



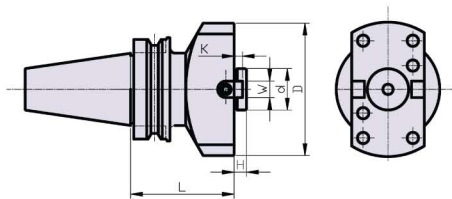
BORING HEAD

LARGE DOUBLE CUTTER FINE BORING HEADS



Order Code	ECK No .	L	H	Diameter ϕD	Inserts T	Bolts S	Weight (Kg)
LEFB150-205	7	145	65	150-205	TPGT090202	CSTB2.5	2.9
LEFB200-255		195	65	200-255			3.7
LEFB250-305		245	70	250-305			5.1
LEFB300-355		295	70	300-355			5.9
LEFB350-405		345	75	350-405			7.7
LEFB400-455		395	75	400-455			8.6
LEFB450-505		445	80	450-505			10.8

LARGE BORING HOLDERS



Order Code	ECK No .	L	H	W	K	ϕd	ϕD	Weight (Kg)
BT50-ECK7-100	7	100	12	8	8	40	128	7.3
-150		150						8.9
-200		200						10.4
SK50-ECK7-100		100						7.2
-150		150						8.6
-200		200						10
NT50-ECK7-100		100						7.2
-150	150	8.6						
-200	200	10						

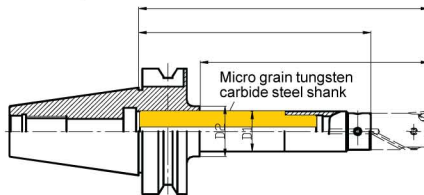




BORING HOLDER DEEP HOLE BORING HOLDER



Using quality material
Coolant through



Order Code	∅ D1	∅ D2	M	L	L1
BT40-ECK1-145	25	33	150	145	185
BT40-ECK2-190	32	42	192	190	235
BT50-ECK1-155	25	33	150	155	195
BT50-ECK2-185	32	42	195	185	230
BT50-ECK3-230	40	50	240	230	285
BT50-ECK4-295	50	60	300	295	355



WORKING SAMPLE

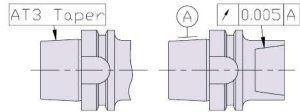
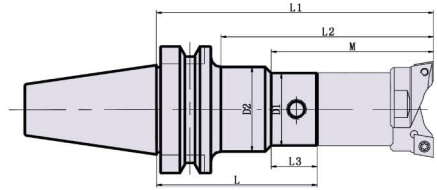
Working data:

Equipment: BT50 vertical center
Material of workpiece: 45#
Diameter of boring bar: 25
Length of boring bar: 150
Cutting speed: 200m/min
Turning speed: 2000rpm
Feed: 0.1mm/r
Feeding rate: 200
Roughness: Ra 0.93



BORING HOLDER

ECK - BT (MAS403)



All tool holders are made using high quality materials.

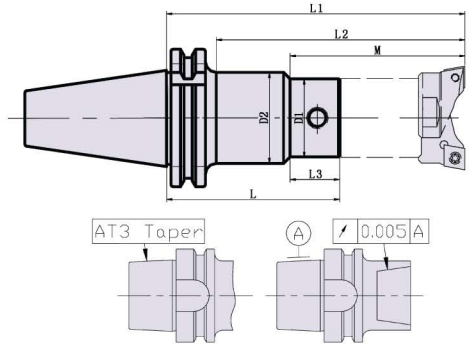
Order Code	Ø D1	Ø D2	M	L	L1	L2	L3
BT30-ECK1-60	29	—	73	60	100	73	—
-ECK2-100	23		118	100	145	118	
-ECK3-80	37		108	80	135	108	
ECK4-80	48		113	80	140	113	
BT40-ECK1-60	23	—	68	60	100	68	—
-80			88	80	120	88	
-100			36	100	100	140	
-ECK2-80	29	—	93	80	125	93	—
-100			113	100	145	113	
-125			40	121	125	170	
-ECK3-100	37	—	123	100	155	123	—
-125			148	125	180	148	
-ECK4-100	48	—	128	100	160	128	—
-125			153	125	185	153	
-ECK5-100	60	—	143	100	175	143	—
-125			168	125	200	168	
-ECK6-100	80	—	158	100	190	158	—
BT50-ECK1-100	23	—	97	100	140	97	—
-ECK2-100	29		102	100	145	102	
-125			127	125	170	127	
-ECK3-100	37		112	100	155	112	
-125			137	125	180	137	
-150			162	150	205	162	
-ECK4-100	48		117	100	160	117	
-150			167	150	210	167	
-200			217	200	260	217	
-ECK5-150	60		182	150	225	182	
-200			232	200	275	232	
-250			282	250	325	282	
-ECK6-150	80		197	150	240	197	
-200			247	200	290	247	
-250			297	250	340	297	





BORING HOLDER

ECK - SK (DIN69871-1)



Order Code	∅D1	∅D2	M	L	L1	L2	L3		
SK40-ECK1-60	23	—	76	60	100	76	—		
-80			96	80	120	96			
-100		36	100	100	140	116		60	
-ECK2-80	29	—	101	80	125	101	—		
-100			121	100	145	121			
-125			40	126	125	170		146	81
-ECK3-100	37	—	131	100	155	131	—		
-125	156		125	180	156				
-ECK4-100	48		136	100	160	136			
-125	60	—	161	125	185	161	—		
-ECK5-100			151	100	175	151			
-125			176	125	200	176			
-ECK6-100	80	—	166	100	190	166	—		
SK50-ECK1-125	23		36	100	125	165		141	60
-ECK2-100	29		—	121	100	145		121	—
-125	146	125		170	146				
-ECK3-100	37	131		100	155	131			
-125	48	—	156	125	180	156	—		
-150			181	150	205	181			
-ECK4-100			136	100	160	136			
-150	60	—	186	150	210	186	—		
-200			236	200	260	236			
-ECK5-150			201	150	225	201			
-200	80	—	251	200	275	251	—		
-250			301	250	325	301			
-ECK6-150			216	150	240	216			
-200	—	—	266	200	290	266	—		
-250			316	250	340	316			

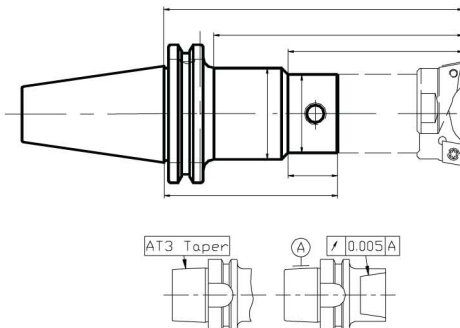
Boring heads and pull studs are not included.
 Boring heads: see page 18, pull studs: see page 103





BORING HOLDER

ECK - CAT



Order Code	Ø D1	Ø D2	M	L	L1	L2	L3
CAT40-ECK1-2.36"	0.906	—	2.992	2.36	3.937	2.992	—
-3.15"		—	3.780	3.15	4.724	3.780	—
-3.94"		1.417	3.937	3.94	5.512	4.173	2.362
-ECK2-3.15"	1.142	—	3.976	3.15	4.921	3.976	—
-3.94"		—	4.764	3.94	5.709	4.764	—
-4.92"		1.575	4.960	4.92	6.693	5.748	3.189
-ECK3-3.94"	1.457	—	5.157	3.94	6.102	5.157	—
-4.92"			6.142	4.92	7.087	6.142	
-ECK4-3.94"	1.900	—	5.354	3.94	6.299	5.354	—
-4.92"			6.339	4.92	7.283	6.339	
-ECK5-3.94"	2.362	—	5.945	3.94	6.900	5.945	—
-4.92"			6.929	4.92	7.874	6.929	
-ECK6-3.94"	3.150	—	6.535	3.94	7.480	6.535	—
CAT50-ECK1-4.92"	0.906	1.417	3.937	4.92	6.496	5.551	2.362
-ECK2-3.94"	1.142	—	4.764	3.94	5.709	4.764	—
-4.92"			5.748	4.92	6.693	5.748	
-ECK3-3.94"	1.457	—	5.157	3.94	6.102	5.157	—
-4.92"			6.142	4.92	7.087	6.142	
-5.91"			7.126	5.91	8.071	7.126	
-ECK4-3.94"	1.900	—	5.354	3.94	6.299	5.354	—
-5.91"			7.323	5.91	8.268	7.323	
-7.87"			9.291	7.87	10.236	9.291	
-ECK5-5.91"	2.362	—	7.913	5.91	8.858	7.913	—
-7.87"			9.882	7.87	10.827	9.882	
-9.84"			11.850	9.84	12.795	11.850	
-ECK6-5.91"	3.150	—	8.504	5.91	9.449	8.504	—
-7.87"			10.472	7.87	11.417	10.472	
-9.84"			12.441	9.84	13.386	12.441	

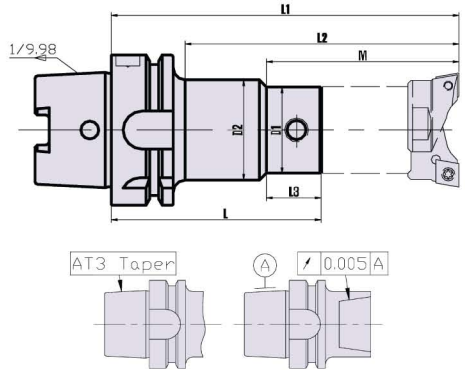
Boring heads and pull studs are not included.
Boring heads: see page 18, pull studs: see page 103





BORING HOLDER

ECK - HSK (DIN69893A)



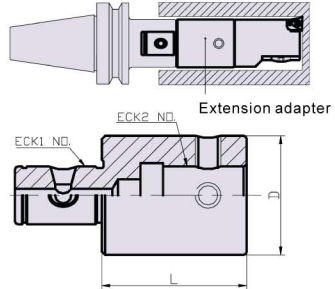
Order Code	Ø D1	Ø D2	M	L	L1	L2	L3
HSK-A63-ECK1-100	23	36	100	100	140	109	60
-ECK2-100	29	40	114	100	145	114	76
-125			121	125	170	139	
-ECK3-100	37	40	128	100	155	128	76
-125			149	125	180	149	
-ECK4-100	48	40	129	100	160	129	76
-125			153	125	185	153	
-ECK5-100	60	40	144	100	175	144	76
-125			169	125	200	169	
HSK-A100-ECK1-125	23	36	100	125	165	131	60
-ECK2-125	29	40	121	125	170	136	76
-150			121	150	195	161	
-ECK3-100	37	40	121	100	155	121	76
-125			146	125	180	146	
-150			171	150	205	171	
-ECK4-100	48	40	126	100	210	126	76
-150			176	150	210	176	
-200			226	200	260	226	
-ECK5-150	60	40	191	150	225	191	76
-200			241	200	275	241	
-250			291	250	325	291	
-ECK6-150	80	40	206	150	240	206	76
-200			256	200	290	256	
-250			306	250	340	306	

- Standard balance: 16000 rpm/G6.3. Balance 24000 rpm/G2.5 by request.
- Boring heads, pull studs and coolant pipes are not included.
- Boring heads: see page 18, pull studs: see page 103, coolant pipes: see page 105



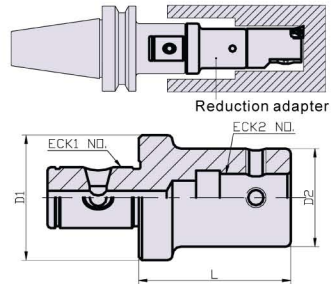
BORING ADAPTER (EXTENSION & REDUCTION)

EXTENSION



Order Code	ECK1 No .	ECK2 No .	L	Ø D
ECK1-1-45	1	1	45	23
ECK2-2-45	2	2	45	29
ECK3-3-45	3	3	45	37
ECK4-4-45	4	4	45	48
ECK5-5-75	5	5	75	60
ECK6-6-75	6	6	75	80

REDUCTION



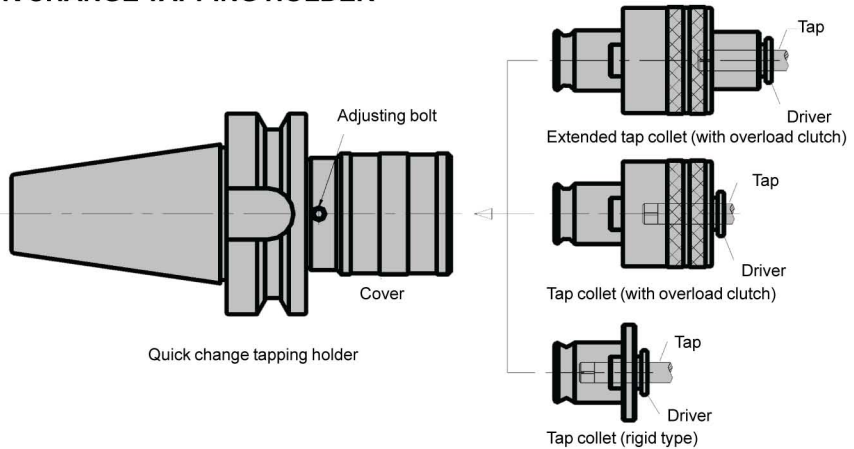
Order Code	ECK1 No .	ECK2 No .	L	Ø D1	Ø D2
ECK2-1-45	2	1	45	29	23
ECK3-1-45	3	1	45	37	23
ECK3-2-45		2			29
ECK4-2-45	4	2	45	48	29
ECK4-3-45		3			37
ECK5-3-75	5	3	75	60	37
ECK5-4-75		4			48
ECK6-4-100	6	4	100	80	48
ECK6-5-100		5			60





QUICK CHANGE TAPPING CHUCK

QUICK CHANGE TAPPING HOLDER



1. Quick change style
2. Tap holder and tap collets are separate
3. Installation
 - a. To install tap: push down the driver in the front of collet, insert the tap into collets, release the driver and then tap will be locked
 - b. To install tap collet: push down the cover in front of quick change tapping holder, insert the tap collets, release the cover then the tap collet will be locked
4. Holding force can be adjusted by adjusting bolt
5. When ordering, please specify the tap collet type.

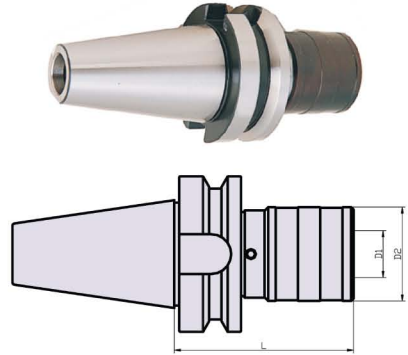
TORQUE

Standard	M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20
Torque /N.m	0.8	1.6	2.5	5	10	18	28	45	50	80	90



QUICK CHANGE TAPPING CHUCK

QUICK CHANGE TAPPING CHUCK



When ordering full set,
please specify collets sizes

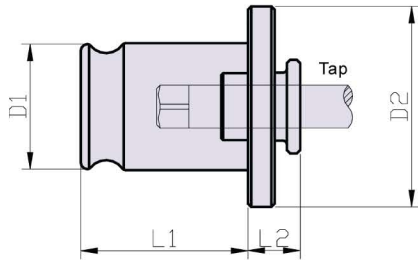
Order Code	Tapping range	L	Ø D1	Ø D2			Collets type		
					Tension	Compression			
BT30-WF12	M3-M12	67	19	39	7.5	7.5	TC312	TC312L	TC312R
-WF20	M14-M20	94	31	55	12.5	12.5	TC820	TC820L	TC820R
BT40-WF12	M3-M12	72	19	39	7.5	7.5	TC312	TC312L	TC312R
-WF20	M14-M20	94	31	55	12.5	12.5	TC820	TC820L	TC820R
BT50-WF12	M3-M12	83	19	39	7.5	7.5	TC312	TC312L	TC312R
-WF20	M14-M20	105	31	55	12.5	12.5	TC820	TC820L	TC820R
Set:									
BT30-WF12T	M3-M12	67	19	39	7.5	7.5	TC312	TC312L	TC312R
-WF20T	M14-M20	94	31	55	12.5	12.5	TC820	TC820L	TC820R
BT40-WF12T	M3-M12	72	19	39	7.5	7.5	TC312	TC312L	TC312R
-WF20T	M14-M20	94	31	55	12.5	12.5	TC820	TC820L	TC820R
BT50-WF12T	M3-M12	83	19	39	7.5	7.5	TC312	TC312L	TC312R
-WF20T	M14-M20	105	31	55	12.5	12.5	TC820	TC820L	TC820R





QUICK CHANGE TAPPING CHUCK

QUICK CHANGE TAP COLLET (rigid tapping type)



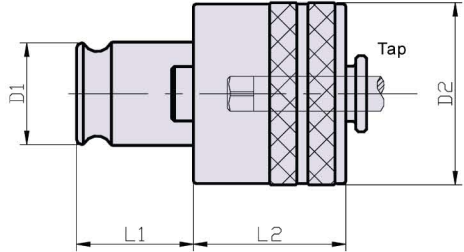
Order code	Tapping range	∅ D1	∅ D2	L1	L2
TC312R	M3-M12	19	30	21.5	7
TC820R	M14-M20	31	48	35	11

JIS tap				Shank		Collets	
				Shank diameter	Square size	TC312R	TC820R
M3		#5,#6		4	3.2	312R-3	
M4	M4.5	#8		5	4	312R-4	
M5	M5.5	#10		5.5	4.5	312R-5	
M6		UNC 1/4		6	4.5	312R-6	
		UNC 5/16		6.1	5	312R-7	
M8	M7			6.2	5	312R-8	
M10	M9	UNC 3/8		7	5.5	312R-10	
	M11	UNC 7/16	PT 1/8	8	6	312R-11	
M12				8.5	6.5	312R-12	
		UNC 1/2		9	7	312R-13	
M14	M15	UNC 9/16		10.5	8		820R-14
			PT 1/4	11	9		820R-14.5
		UNC 5/8		12	9		820R-15
M16				12.5	10		820R-16
M18		UNC 3/4	PT 3/8	14	11		820R-18
M20				15	12		820R-20



QUICK CHANGE TAPPING CHUCK

QUICK CHANGE TAP COLLET (with overload clutch)



Order code	Tapping range	∅ D1	∅ D2	L1	L2
TC312	M3-M12	19	33	21.5	28
TC820	M14-M20	31	51	35	33

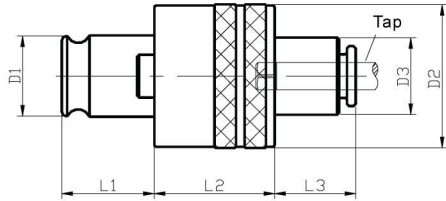
JIS tap				Shank		Collets	
				Shank diameter	Square size	TC312	TC820
M3		#5, #6		4	3.2	312-3	
M4	M4.5	#8		5	4	312-4	
M5	M5.5	#10		5.5	4.5	312-5	
M6		UNC 1/4		6	4.5	312-6	
		UNC 5/16		6.1	5	312-7	
M8	M7			6.2	5	312-8	
M10	M9	UNC 3/8		7	5.5	312-10	
	M11	UNC 7/16	PT 1/8	8	6	312-11	
M12				8.5	6.5	312-12	
		UNC 1/2		9	7	312-13	
M14	M15	UNC 9/16		10.5	8		820-14
			PT 1/4	11	9		820-14.5
		UNC 5/8		12	9		820-15
M16				12.5	10		820-16
M18		UNC 3/4	PT 3/8	14	11		820-18
M20				15	12		820-20





QUICK CHANGE TAPPING CHUCK

QUICK CHANGE TAP COLLET (with overload clutch)



Order code	Tapping range	∅ D1	∅ D2	∅ D3	L1	L2	L3
TC312L	M3	19	33	15	21.5	28	20
TC312L	M3-M12	19	33	18	21.5	28	20
TC820L	M14-M20	31	51	29	35	33	20

JIS tap				Shank		Collets	
				Shank diameter	Square size	TC312L	TC820L
M3		#5,#6		4	3.2	312L-3	
M4	M4.5	#8		5	4	312L-4	
M5	M5.5	#10		5.5	4.5	312L-5	
M6		UNC 1/4		6	4.5	312L-6	
		UNC 5/16		6.1	5	312L-7	
M8	M7			6.2	5	312L-8	
M10	M9	UNC 3/8		7	5.5	312L-10	
	M11	UNC 7/16	PT1/8	8	6	312L-11	
M12				8.5	6.5	312L-12	
		UNC 1/2		9	7	312L-13	
M14	M15	UNC 9/16		10.5	8		820L-14
			PT 1/4	11	9		820L-14.5
		UNC5/8		12	9		820L-15
M16				12.5	10		820L-16
M18		UNC3/4	PT3/8	14	11		820L-18
M20				15	12		820L-20



SD PRECISION COLLET CHUCK

μ STANDARD

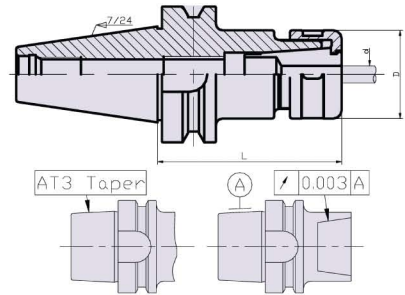
<p>RUN-OUT $< 5 \mu\text{m}$</p> <p>4ϕ</p>	<p>FEATURES: Runout $< 0.007\text{mm}$ (collet level :AA)</p>
<p>4° (SD COLLET) Strong clamping force</p> <p>Weak clamping force</p> <p>8° (ER COLLET)</p>	<p>FEATURES: SD collet designed with small angle 8° smaller than ER collet 16° Gripping Torque doubled.</p>
<p>Thick wall Short, more contact interface 4° (SD COLLET)</p> <p>Thin wall Long, less contact interface 8° (ER COLLET)</p>	<p>FEATURES: SD Inner hole uses thick-wall design. Thickness has strong ability to absorbed vibration and strong stiffness rigidity.</p>
<p>SD CHUCK ER CHUCK</p> <p>Better balance in high speed SD ↑ SD nut</p> <p>Worse balance in high speed ER ↑ ER nut</p>	<p>FEATURES: SD nuts have precision processing after heat treatment, which improves the banlance. High speed cutting will not caused vibration. Max speed :16000rpm/G6.3 For special required, balance can be up to 24000 rpm/G2.5</p>





SD PRECISION COLLET CHUCK

SD - BT (MAS403)



µ STANDARD

Order Code	L	ØD	Clamping range Ød
BT30-SD06-60	60	20	1.75~6.0
-90	90		
-SD10-60	60	29	1.75~10.0
-90	90		
-SD16-60	60	41	2.75~16
-90	90		
-SD20-60	60	50	4-20
-SD25-60	60		
BT40-SD06-60	60	20	1.75~6.0
-90	90		
-120	120	29	1.75~10.0
-SD10-60	60		
-90	90		
-120	120		
-150	150	41	2.75~16
-SD16-60	60		
-90	90		
-120	120		
-150	150	50	4-20
-SD20-60	60		
-90	90		
-120	120		
-150	150	55	6~25
-SD25-90	90		
-120	120		
-150	150		
BT50-SD06-100	100	20	1.75~6.0
-150	150		
-SD10-100	100	29	1.75~10.0
-150	150		

Spanner included
Collets and pull studs not included
SD nut: see page 41; SD collets: see page 40; spanner: see page 41, pull stud: see page 103

Continuing >>

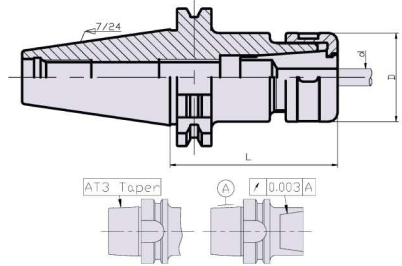


SD PRECISION COLLET CHUCK

SD - BT(MAS403)

Order Code	L	ØD	Holding range Ød
BT50-SD16-60	60	41	2.75~16
-90	90		
-120	120		
-SD20-60	60	50	4-20
-90	90		
-120	120		
SD25-100	100	55	6~25
-150	150		
-200	200		

SD - SK (DIN69871-1)



µ STANDARD

Order Code	L	ØD	Clamping range Ød
SK40-SD06-80	80	20	1.75~6.0
-SD10-80		29	1.75~10.0
-SD16-80		41	2.75~16
-SD20-80		50	4-20
SD25-80		55	6~25
SK50-SD06-100	100	20	1.75~6.0
-SD10-100		29	1.75~10.0
-SD16-100		41	2.75~16
-SD20-100		50	4-20
-SD25-100		55	6~25

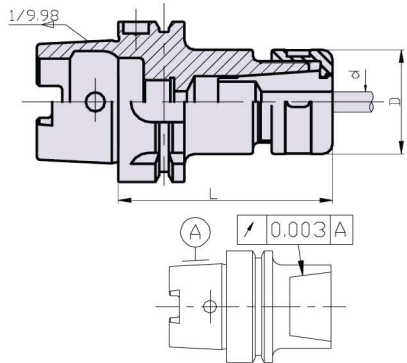
Spanner included
Collets and pull studs not included
SD nut: see page 41; SD collets: see page 40;
spanner: see page 41; pull stud: see page 103





SD PRECISION COLLET CHUCKS

SD - HSK (DIN 69893A)



μ STANDARD

Order Code	L	∅D	Clamping range ∅ d
HSK-A63-SD06-100	100	20	1.75~6
-150	150		
-SD10- 80	80		
-100	100	29	1.75~10
-150	150		
-SD16- 80	80		
-100	100	41	2.75~16
-150	150		
-SD20- 100	100		
-150	150	50	4-20
SD25-100	100		
-150	150		
HSK-A100-SD06-100	100	20	1.75~6
-150	150		
-SD10-100	100		
-150	150	29	1.75~10
SD16-100	100		
-150	150		
-SD20-100	100	41	2.75~16
-150	150		
-SD20-100	100		
-150	150	50	4-20
-SD25-100	100		
-150	150		
-SD25-100	100	55	6~25
-150	150		

Standard balance: 16000rpm/G6.3. Balance 24000rpm/G2.5 by request.

Spanner included

Collets and coolant pipes not included

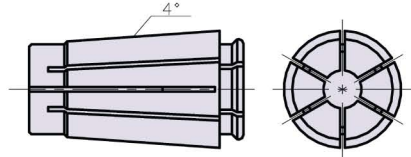
SD nut: see page 41; SD collets: see page 40; spanner: see page 41, coolant pipes: see page 105





SD PRECISION COLLET CHUCK SPARE PARTS

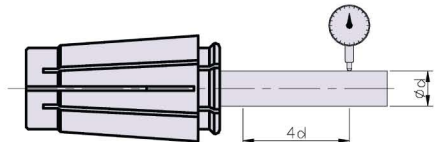
SD PRECISION COLLETS



SD06		SD10		SD16		SD20	
Order Code	Range	Order Code	Range	Order Code	Range	Order Code	∅ d
SD06-2	1.75-2.0	SD10-2	1.75-2.0	SD16-3	2.5-3.0	SD20-4	4
SD06-2.25	2.0-2.25	SD10-2.25	2.0-2.25	SD16-3.5	3.0-3.5	SD20-6	6
SD06-2.5	2.25-2.5	SD10-2.5	2.25-2.5	SD16-4	3.5-4.0	SD20-8	8
SD06-2.75	2.5-2.75	SD10-2.75	2.5-2.75	SD16-4.5	4.0-4.5	SD20-10	10
SD06-3	2.75-3.0	SD10-3	2.75-3.0	SD16-5	4.5-5.0	SD20-12	12
SD06-3.5	3.0-3.5	SD10-3.5	3.0-3.5	SD16-5.5	5.0-5.5	SD20-16	16
SD06-4	3.5-4.0	SD10-4	3.5-4.0	SD16-6	5.5-6.0	SD20-20	20
SD06-4.5	4.0-4.5	SD10-4.5	4.0-4.5	SD16-6.5	6.0-6.5		
SD06-5	4.5-5.0	SD10-5	4.5-5.0	SD16-7	6.5-7.0		
SD06-5.5	5.0-5.5	SD10-5.5	5.0-5.5	SD16-7.5	7.0-7.5		
SD06-6	5.5-6.0	SD10-6	5.5-6.0	SD16-8	7.5-8.0		
		SD10-6.5	6.0-6.5	SD16-8.5	8.0-8.5		
		SD10-7	6.5-7.0	SD16-9	8.5-9.0		
		SD10-7.5	7.0-7.5	SD16-9.5	9.0-9.5		
		SD10-8	7.5-8.0	SD16-10	9.5-10.0		
		SD10-8.5	8.0-8.5	SD16-10.5	10.0-10.5	SD25-6	6
		SD10-9	8.5-9.0	SD16-11	10.5-11.0	SD25-8	8
		SD10-9.5	9.0-9.5	SD16-11.5	11.0-11.5	SD25-10	10
		SD10-10	9.5-10.0	SD16-12	11.5-12.0	SD25-12	12
				SD16-12.5	12.0-12.5	SD25-16	16
				SD16-13	12.5-13.0	SD25-20	20
				SD16-13.5	13.0-13.5	SD25-25	25
				SD16-14	13.5-14.0		
				SD16-14.5	14.0-14.5		
				SD16-15	14.5-15.0		
				SD16-15.5	15.0-15.5		
				SD16-16	15.5-16.0		

ACCURACY

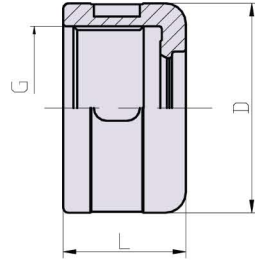
COLLET LEVEL	RUNOUT
AA	0.007
A	0.01





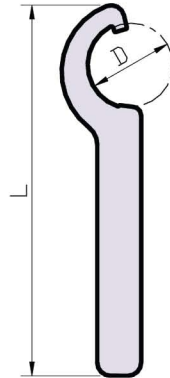
SD PRECISION COLLET CHUCK SPARE PARTS

SD CLAMPING NUTS



Order Code	Ø D	L	G
CN-SD06	20	15	M14 x 1.0
-SD10	29	17	M22 x 1.0
-SD16	41	24	M32 x 1.5
-SD20	50	25	M40 x 1.5
-SD25	55	28	M45 x 1.5

SD SPANNER WRENCH



Order Code	L	Ø D
SP-SD06	120	20
-SD10	150	29
-SD16	170	41
-SD20	180	50
-SD25	190	55



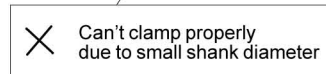
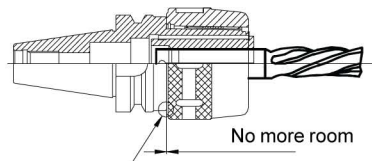
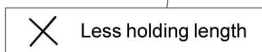
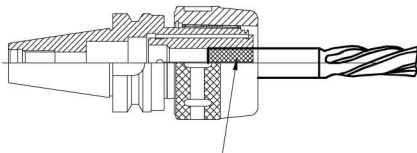
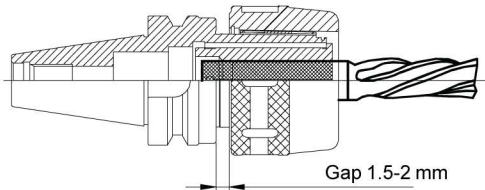
EMC POWER MILLING CHUCK



FEATURES:

- Tool holder uses best steel materials. These ensures the material stability during long-term use. Collet chucks are wear-resistant.
- The slot of inner hole with round trough design makes even elastic deformation keeps best accuracy and stability.
- Inner hole uses thick-wall design. Thickness reaches 6mm and has strong ability to absorb vibration. Cutters will not slip-out during heavy cutting.
- Best design for heavy cutting, with gripping torque over 2800 Nm.
- Runout < 0.01 mm

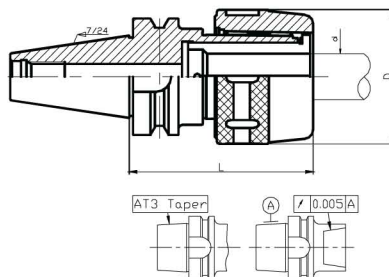
INSTRUCTION





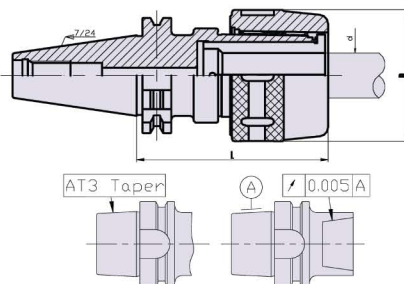
EMC POWER MILLING CHUCK

EMC - BT



Order Code	L	ØD	Clamping range ø d
BT30-EMC20-75	75	53.5	6-20
BT40-EMC20-80	80	53.5	6-20
-135	135		
BT40-EMC32-90	90	73.5	6-32
-120	120		
BT50-EMC32-105	105	73.5	6-32
-135	135		
-165	165		
-EMC42-115	115	87.5	6-42

EMC-SK (DIN69871-1)



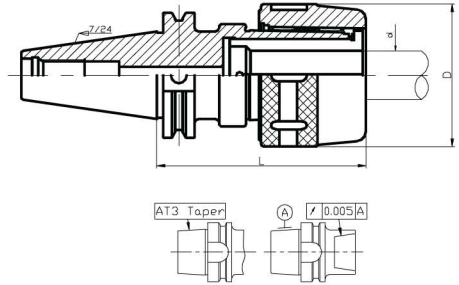
Order Code	L	ØD	Clamping range ø d
CAT40-EMC32-100	100	73.5	6-32
CAT50-EMC32-100	100	73.5	6-32

Collets and spanner are not included
 EMC collets: see page 47; spanner: see page 47



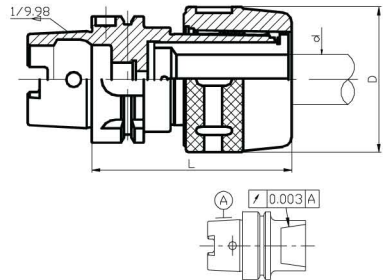
EMC POWER MILLING CHUCK

EMC - CAT



Order Code	Ø D	Clamping range Ø d	G
CAT40-EMC32-4.0"	4"	73.5	M16 x 2.0
CAT50-EMC32-4.0"	4"	6-32	M24 x 3.0

EMC-HSK(DIN69893A)



Order Code	L	Ø D	Clamping range Ø d
HSK-A63-EMC32-100	100	73.5	6-32
HSK-A100-EMC32-100	100	73.5	6-32

Standard balance: 16000 rpm/G6.3. Balance 24000rpm/G2.5 by request.

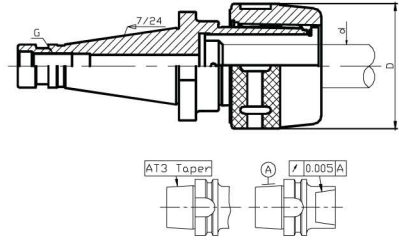
Collets and spanner are not included
 EMC collets: see page 47; spanner wrench: see page 47





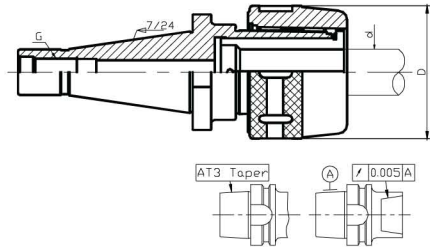
EMC POWER MILLING CHUCK

EMC-DIN2080



Order Code	ØD	Clamping range Ød	G
DIN2080-40-EMC32	73.5	6-32	M16 x 2.0
DIN2080-50-EMC32	73.5	6-32	M24 x 3.0

EMC-NT



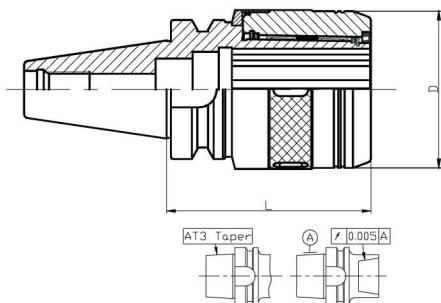
Order Code	ØD	Clamping range Ød	G (inch)
NT40-EMC32	73.5	6-32	5/8"-11UNC
NT50-EMC32	73.5	6-32	1"-8UNC

Collets and spanner are not included
 EMC collets: see page 47; spanner wrench: see page 47



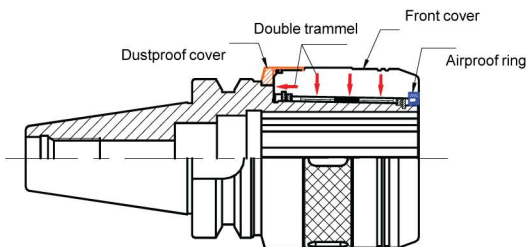
EMC POWER MILLING CHUCK

EMC - BT (MAS403)



Order Code	L	Ø D	Clamping range ø d
BT30-EMC20F-75	75	53.5	6-20
BT40-EMC20F-80	80		
-135	135	72	6-32
BT40-EMC32F-90	90		
-120	120	72	6-32
BT50-EMC32F-105	105		
-135	135		
-165	165	87.5	6-42
-EMC42F-115	115		

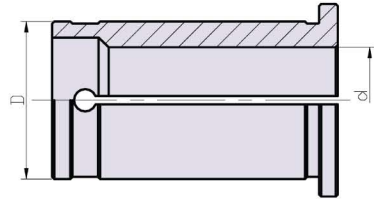
Double trammel design increases rigidity
Dustproof and airproof covering keeps best accuracy of tool holder





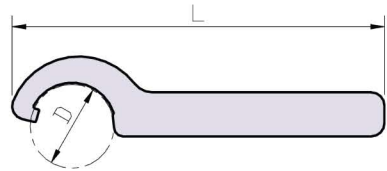
EMC POWER MILLING CHUCK SPARE PART

EMC MILLING COLLET



C20			C32			C42		
Order Code	Ø d	Ø D	Order Code	Ø d	Ø D	Order Code	Ø d	Ø D
C20-06	6	20	C32-06	6	32	C42-06	6	42
-08	8		-08	8		-08	8	
-10	10		-10	10		-10	10	
-12	12		-12	12		-12	12	
-16	16		-16	16		-16	16	
			-20	20		-20	20	
			-25	25		-25	25	
				-32	32			

EMC SPANNER WRENCH



Order Code	Ø D	L
SP-EMC20	51	215
-EMC32	70	265
-EMC42	86	270

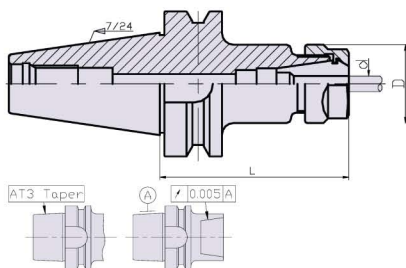


ER COLLET CHUCK

ER

Standard ISO-AT3, roughness RZ2.5
Runout less than 0.005mm
Standard balance 8000rpm/G6.3, higher balance by request
M model uses nut with small diameter, special material by request
No adjusting bolt
Special design allows nuts keeping tightly with collets

ER - BT (MAS403)



Order Code	L	ØD	Clamping range Ød
BT30-ER11-60	60	19	2.5-7
-100	100		
-ER16-45	45	30	2.0-10
-60	60		
-100	100		
-ER20-60	60	34	2.0-13
-100	100		
ER25-60	60	42	2.0-16
-100	100		
-135	135		
-ER32-60	60	50	2.0-20
-100	100		
BT40-ER11-60	60	19	2.5-7
-100	100		
-ER16-60	60	30	2.0-10
-100	100		
-150	150		
-ER20-60	60	34	2.0-13
-100	100		
-150	150		
-200	200		

Spanner, collets and pull studs not included
ER nut: see page 59; ER collets: see page 58;
spanner: see page 60; pull stud: see page 103

Continuing >>





ER COLLET CHUCK

ER - BT (MAS403)

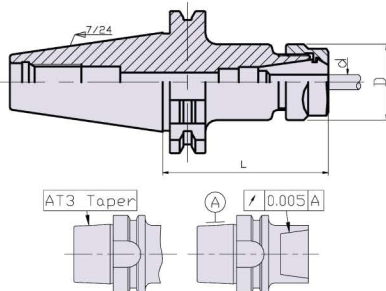
Order Code	L	ØD	Clamping range ø d
BT40-ER25-60	60	42	2.0-16
-100	100		
-135	135		
-150	150		
-200	200		
-ER32-60	60	50	2.0-20
-100	100		
-150	150		
-200	200		
-300	300		
-ER40-80	80	63	3.0-26
-100	100		
-150	150		
-200	200		
BT50-ER16-100	100	30	2.0-10
-150	150	34	2.0-13
-ER20-100	100		
-150	150	42	2.0-16
-ER25-100	100		
-150	150		
-ER32-100	100	50	2.0-20
-150	150		
-200	200		
-ER40-100	100	63	3.0-26
-150	150		
-200	200		
BT30-ER16-60M	60	23.5	2.0-10
-80M	80		
-100M	100		
-ER20-80M	80	28	2.0-13
-100M	100		
BT40-ER11-100M	100	17.5	2.5-7
-ER16-100M	100	23.5	2.0-10
-150M			
-ER20-100M		28	2.0-13

Spanner, collets and pull studs not included

ER nut: see page 59; ER collets: see page 58; spanner: see page 60, pull stud: see page 103



ER COLLET CHUCK ER - SK (DIN69871-1)



Order Code	L	$\varnothing D$	Clamping range $\varnothing d$
SK40-ER16-60	60	30	2.0-10
-100	100		
-150	150		
-ER20-60	60	34	2.0-13
-100	100		
-120	120		
-150	150		
-ER25-60	60	42	2.0-16
-100	100		
-150	150		
-ER32-70	70	50	2.0-20
-100	100		
-150	150		
-ER40-80	80	63	3.0-26
-100	100		
-150	150		
SK50-ER16-60	60	30	2.0-10
-100	100		
-150	150		
-ER20-100	100	34	2.0-13
-150	150		
-ER25-100	100	42	2.0-16
-150	150		
-ER32-100	100		
-150	150	50	2.0-20
-200	200		
-ER40-100	100		
-150	150	63	3.0-26

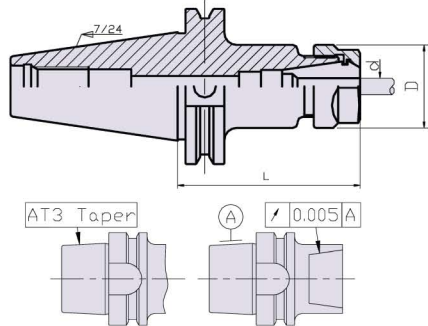
Spanner, collets and pull studs not included
ER nut: see page 59; ER collets: see page 58;
spanner: see page 60; pull stud: see page 103





ER COLLET CHUCK

ER - CAT



Order Code	L (inch)	ØD	Clamping range Ød
CAT40-ER16-2.5"	2.5"	30	0.097" ~0.0394"
-4.0"	4.0"		
-ER20-4.0"	4.0"	34	0.097" ~0.512"
-ER25-4.0"	4.0"	42	0.079" ~0.63"
-ER32-3.0"	3.0"	50	0.079" ~0.787"
-5.0"	5.0"		
-ER40-4.0"	4.0"	63	0.118" ~1.024"
CAT50-ER16-4.0"	4.0"	30	0.097" ~0.0394"
-6.0"	6.0"		
-ER20-4.0"	4.0"	34	0.097" ~0.512"
-6.0"	6.0"		
-ER25-4.0"	4.0"	42	0.079" ~0.63"
-ER32-4.0"	4.0"		
-6.0"	6.0"	50	0.079" ~0.787"
-ER40-4.0"	4.0"		
-6.0"	6.0"	63	0.118" ~1.024"
-ER40-4.0"	4.0"		
-6.0"	6.0"		

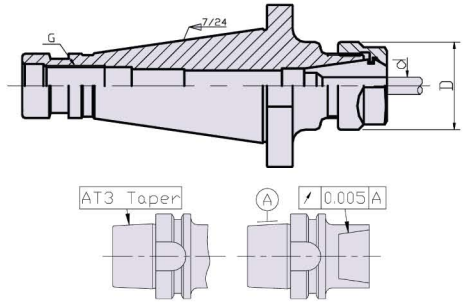
Spanner, collets and pull studs not included

ER nut: see page 59; ER collets: see page 58; spanner: see page 60; pull stud: see page 103



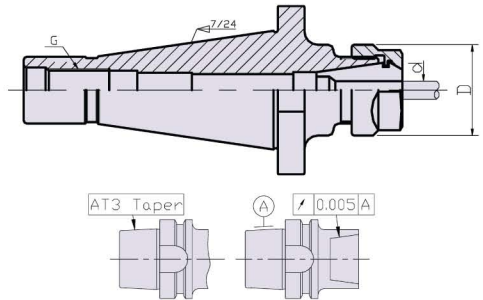
ER COLLET CHUCK

ER - DIN2080



Order Code	ØD	Clamping range ø d	G
DIN2080-30-ER32	50	2.0-20	M12
-ER40	63	3.0-26	
DIN2080-40-ER32	50	2.0-20	M16
-ER40	63	3.0-26	
DIN2080-50-ER32	50	2.0-20	M24
-ER40	63	3.0-26	

ER - NT



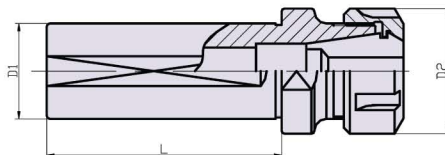
Order Code	ØD	Clamping range ø d	G (inch)
NT30-ER32(12)*	50	2.0-20	1/2 -12UNC
-ER32(13)*			1/2 -13UNC
NT40-ER32	50	2.0-20	5/8 -11UNC
-ER40	63	3.0-26	
NT50-ER32	50	2.0-20	1 -8UNC
-ER40	63	3.0-26	

Spanner, collets and pull studs not included
 ER nut: see page 59; ER collets: see page 58;
 spanner: see page 60; pull stud: see page 103





ER COLLET CHUCK SL - ER



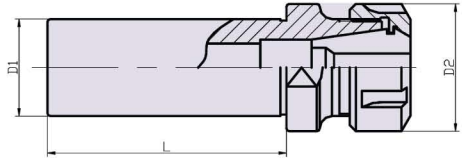
D mark means double ER head

Order Code	Ø D1	L	Ø D2	
SL16-ER11-70	16	70	19	
-ER16-70		70	30	
SL20-ER11-50D	20	50	19	
-ER11-70		70	19	
-ER16-70		70	30	
-100		100	30	
-120		120	30	
-ER20-80		80	34	
-100		100	34	
-120		120	34	
SL25-ER16-70		25	70	30
-ER20-70			70	34
-ER25-70	70		42	
-80	80		42	
-ER32-60	60		50	
-ER40-60	60		63	
SL32-ER20-80	32	80	34	
-ER25-70		70	42	
-80		80	42	
-ER32-80		80	50	
-130		130	50	
-ER40-80		80	63	
SL40-ER25-80	40	80	42	
-ER32-80		80	50	
-135		135	50	
-ER40-80		80	63	

Spanner, collets and pull studs not included
ER nut: see page 59; ER collets: see page 58;
spanner: see page 60; pull stud: see page 103



ER COLLET CHUCK BC - ER



M mark means ER nut with small diameter

Order Code	Ø D1	L	Ø D2	
BC16-ER11-100	16	100	19	
-130		130		
-ER16-130			30	
BC20-ER16-120	20	120	30	
-180 *		180		
-ER20-120				120
-150			150	
-170 *		170		
-ER25-120				120
-170 *			170	
-ER32-100		100		
BC25-ER16-130				25
-170 *	170			
-ER20-130		130	34	
-170 *	170			
-ER25-130		130	42	
-170 *	170			
BC32-ER25-130		32	130	42
-170 *	170			
-ER32-80			80	50
-130	130			
-170 *				

Note: can not be used for cutting horizontally when L>150

Spanner and collets not included
 ER nut: see page 59; ER collets: see page 58;
 spanner: see page 60

Continuing >>





ER COLLET CHUCK BC - ER

Following items use ER nut with small diameter

Order Code	Ø D1	L	Ø D2
BC16-ER11-120M	16	120	17.5
-ER16-120M			23.5
BC20-ER16-100M	20	100	23.5
-120M		120	
-150M		150	
-ER20-100M		100	28
-120M		120	
-150M		150	
-170M *		170	
BC25-ER16-120M	25	120	23.5
-170M *		170	
-ER20-120M		120	28
-170M *		170	
-ER25-120M		120	35
-170M *		170	
-210M *		210	

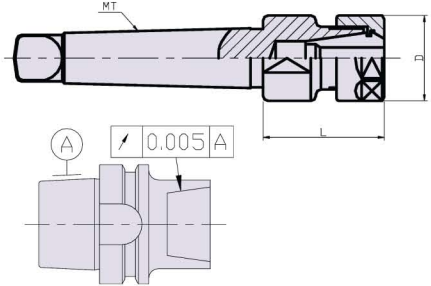
Note: can not be used for cutting horizontally when L>150

Spanner and collets not included
 ER nut: see page 59; ER collets: see page 58;
 spanner: see page 60



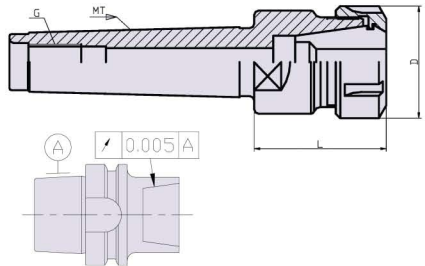
ER COLLET CHUCK

MTA - ER



Order Code	Ø D1	L	MT No .
MTA2-ER16-40	30	40	2
MTA3-ER20-50	34	50	3
MTA4-ER25-60	42	60	4

MTB-ER



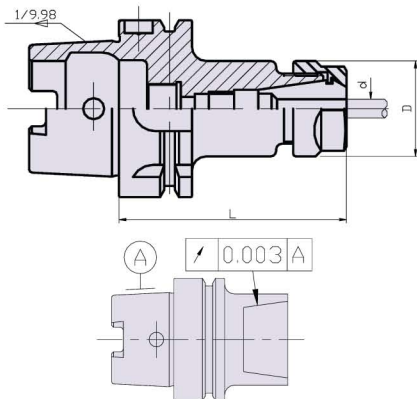
Order Code	Ø D1	L	MT No .	G
MTB3-ER32-65	50	65	3	M12
MTB4-ER32-65	50	65	4	M16
-ER40-80	63	80		
MTB5-ER40-80	63	80	5	M20

Spanner and collets not included
 ER nut: see page 59; ER collets: see page 58;
 spanner: see page 60





ER COLLET CHUCK ER - HSK (DIN69893A)



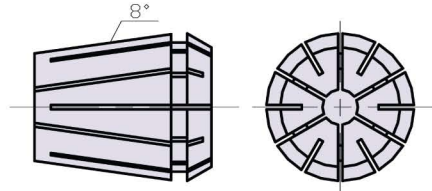
Order Code	L	Ø D1	Clamping range Ø d
HSK-A63-ER16-100	100	30	0.5~10
-150	150		
-ER20-100	100	35	1.0~13
-150	150		
-ER25-100	100	42	1.0~16
-150	150		
-ER32-100	100	50	2.0~20
-150	150		
-ER40-100	100	63	3.0~26
-150	150		
HSK-A100-ER16-100	100	30	0.5~10
-150	150		
-ER20-100	100	35	1.0~13
-150	150		
-ER25-100	100	42	1.0~16
-150	150		
-ER32-100	100	50	2.0~20
-150	150		
-ER40-100	100	63	3.0~26
-150	150		

Standard balance: 16000rpm/G6.3. Balance 24000rpm/G2.5 by request.

Spanner, collets and coolant pipes not included
ER nut: see page 59; ER collets: see page 58;
spanner: see page 60; coolant pipes: see page 105



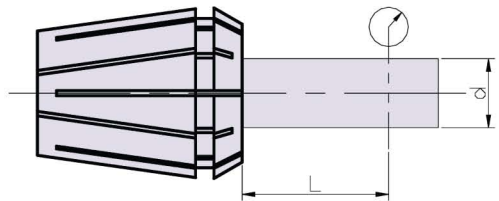
ER COLLET CHUCK SPARE PART ER SPRING COLLET



ER11		ER20		ER25		ER32		ER 40	
Ordercode	Range	Ordercode	Range	Ordercode	Range	Ordercode	Range	Ordercode	Range
ER11-3	3.0-2.5	ER20-3	3-2	ER25-3	3-2	ER32-3	3-2	ER40-4	4-3
-3.5	3.5-3.0	-4	4-3	-4	4-3	-4	4-3	-5	5-4
-4	4.0-3.5	-5	5-4	-5	5-4	-5	5-4	-6	6-5
-4.5	4.5-4.0	-6	6-5	-6	6-5	-6	6-5	-7	7-6
-5	5.0-4.5	-7	7-6	-7	7-6	-7	7-6	-8	8-7
-5.5	5.5-5.0	-8	8-7	-8	8-7	-8	8-7	-9	9-8
-6	6.0-5.5	-9	9-8	-9	9-8	-9	9-8	-10	10-9
-6.5	6.5-6.0	-10	10-9	-10	10-9	-10	10-9	-11	11-10
-7	7.0-6.5	-11	11-10	-11	11-10	-11	11-10	-12	12-11
		-12	12-11	-12	12-11	-12	12-11	-13	13-12
		-13	13-12	-13	13-12	-13	13-12	-14	14-13
				-14	14-13	-14	14-13	-15	15-14
				-15	15-14	-15	15-14	-16	16-15
				-16	16-15	-16	16-15	-17	17-16
ER 16								-17	17-16
Ordercode	Range							-18	18-17
ER16-3	3-2							-18	18-17
-4	4-3							-19	19-18
-5	5-4							-20	20-19
-6	6-5							-21	21-20
-7	7-6							-22	22-21
-8	8-7							-23	23-22
-9	9-8							-24	24-23
-10	10-9							-25	25-24
								-26	26-25

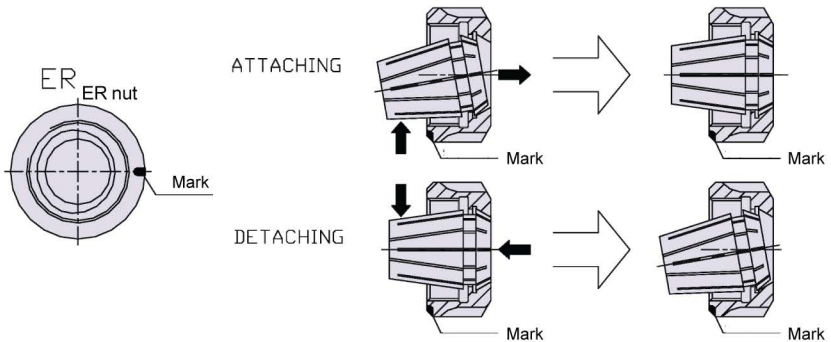
ACCURACY OF ER SPRING COLLET

Clamping range ød	Testing point L	Run-out
1.0~1.6	6	0.015
1.6~3.0	10	0.015
3.0~6.0	16	0.015
6.0~10.0	25	0.015
10.0~18.0	40	0.020
18.0~26.0	50	0.020
26.0~34.0	60	0.020





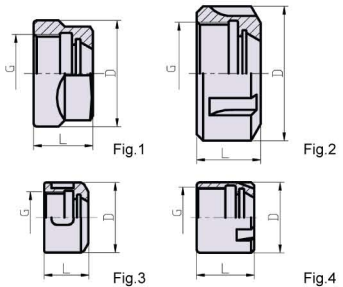
ER COLLET CHUCK SPARE PARTS ATTACHING AND DETACHING ER COLLET



ER CLAMPING NUT



Note: do not overtighten the nut



Order Code	FIG	ØD	L	G	Clamping Torque
CN-ER11	3	19	12	M14 x 0.75	5
-ER16	1	30	17	M22 x 1.0	7
-ER20		34	19	M25 x 1.5	12
-ER25	2	42	20	M32 x 1.5	20
-ER32		50	23	M40 x 1.5	22
-ER40		63	25	M50 x 1.5	25
-ER11M	4	17.5	12	M13 x 0.75	3
-ER16M		23.5	18	M19 x 1.0	4
-ER20M		28	19	M24 x 1.0	8





ER COLLET CHUCK SPARE PART ER SPANNER WRENCH

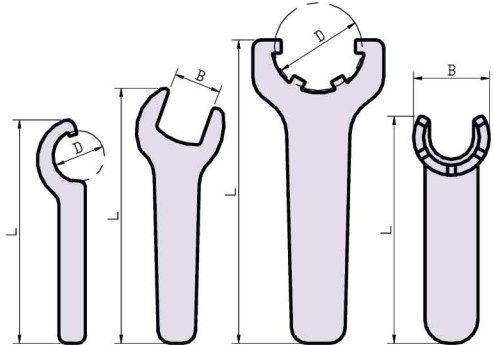


Fig.1

Fig.2

Fig.3

Fig.4

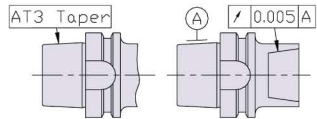
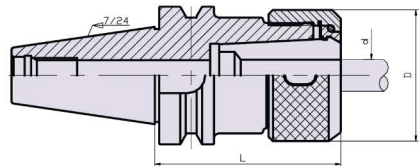
Order Code	FIG	L	B	ØD
SP-ER11	1	120	—	19
SP-ER16	2	140	27	—
SP-ER20		170	30	—
SP-ER25	3	210	—	42
SP-ER32		250	—	50
SP-ER40		290	—	63
SP-ER11M	4	95	17	—
SP-ER16M		118	22	—
SP-ER20M		130	28	—





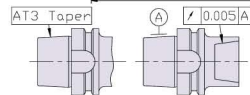
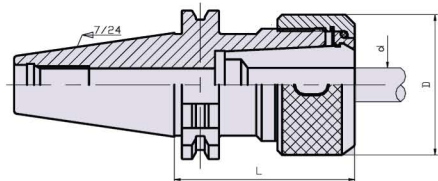
OZ COLLET CHUCK

OZ - BT (MAS403)



Order Code	L	Ø D	Clamping range Ø d
BT30-OZ25-70	70	60	6~25
BT40-OZ25-80	80	60	6~25
-100	100		
-OZ32-80	80	78	6~32
BT50-OZ25-90	90	60	6~25
-150	150		
-OZ32-90	90	78	6~32

OZ - SK (DIN69871-1)



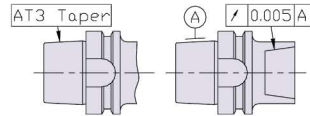
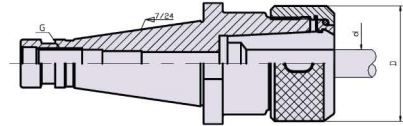
Order Code	L	Ø D	Clamping range Ø d
SK40-OZ25-70	70	60	6~25
-OZ32-70		78	6~32
SK50-OZ25-80	80	60	6~25
-OZ32-80		78	6~32

Spanner and collets not included
 OZ nut: see page 65; OZ collets: see page 64;
 spanner: see page 65



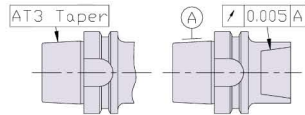
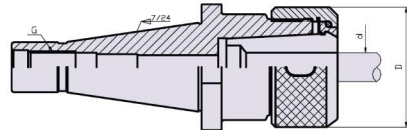
OZ COLLET CHUCK

OZ - DIN2080



Order Code	Ø D	Clamping range Ød	G
DIN2080-30-OZ25	60	6~25	M12 x 1.75
DIN2080-40-OZ25	60	6~25	M16 x 2.0
-OZ32	78	6~32	
DIN2080-50-OZ25	60	6~25	M24 x 3.0
-OZ32	78	6~32	

OZ - NT



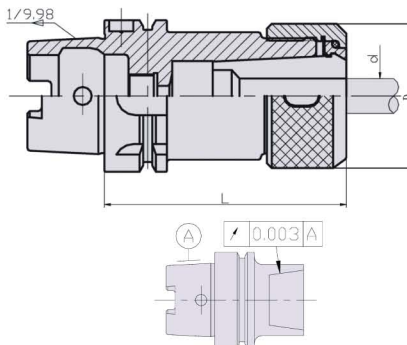
Order Code	Ø D	Clamping range Ød	G(inch)
NT30-OZ25(12)*	60	6~25	1/2" - 12UNC
-OZ25(13)*			1/2" - 13UNC
NT40-OZ25	60	6~25	5/8" - 11UNC
-OZ32	78	6~32	
NT50-OZ25	60	6~25	1" - 8UNC
-OZ32	78	6~32	

Spanner and collets are not included
OZ nut: see page 65; OZ collets: see page 64;
spanner: see page 65





OZ COLLET CHUCK OZ -HSK(DIN69893A)



Order Code	L	Ø D	Clamping range Ød
HSK-A63-OZ25-100	100	60	6~25
-OZ32-120	120	78	6~32
HSK-A100-OZ25-100	100	60	6~25
-OZ32-120	120	78	6~32

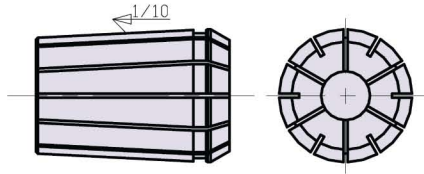
Standard balance: 16000rpm/G6.3. Balance 24000rpm/G2.5 by request.

Spanner, collets and coolant pipes not included
OZ nut: see page 65; OZ collets: see page 64;
spanner: see page 65; coolant pipes: see page 105



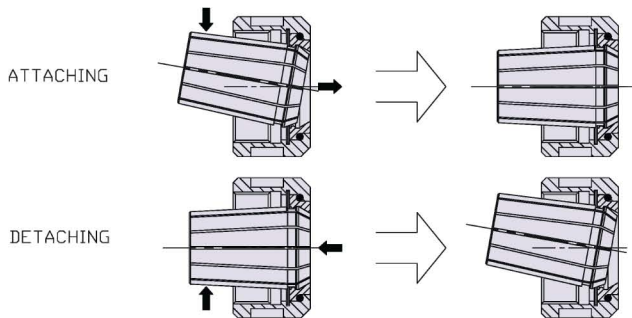
QUICK CHANGE TAPPING CHUCK

OZ SPRING COLLET



OZ 25				OZ 32			
Order Code	Size	Order Code	Size	Order Code	Size	Order Code	Size
OZ25-6	Ø 6	OZ25-21	Ø 21	OZ32-6	Ø 6	OZ32-21	Ø 21
-7	Ø 7	-22	Ø 22	-7	Ø 7	-22	Ø 22
-8	Ø 8	-23	Ø 23	-8	Ø 8	-23	Ø 23
-9	Ø 9	-24	Ø 24	-9	Ø 9	-24	Ø 24
-10	Ø 10	-25	Ø 25	-10	Ø 10	-25	Ø 25
-11	Ø 11			-11	Ø 11	-26	Ø 26
-12	Ø 12			-12	Ø 12	-27	Ø 27
-13	Ø 13			-13	Ø 13	-28	Ø 28
-14	Ø 14			-14	Ø 14	-29	Ø 29
-15	Ø 15			-15	Ø 15	-30	Ø 30
-16	Ø 16			-16	Ø 16	-31	Ø 31
-17	Ø 17			-17	Ø 17	-32	Ø 32
-18	Ø 18			-18	Ø 18		
-19	Ø 19			-19	Ø 19		
-20	Ø 20			-20	Ø 20		

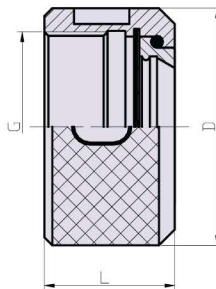
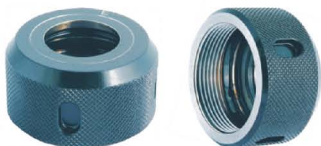
ATTACHING AND DETACHING OZ COLLET





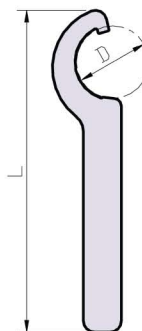
QUICK CHANGE TAPPING CHUCK

OZ CLAMPING NUT



Order Code	ØD	L	G
CN-OZ25	60	33	M48 x 2.0
-OZ32	78	40	M60 x 2.5

OZ SPANNER WRENCH

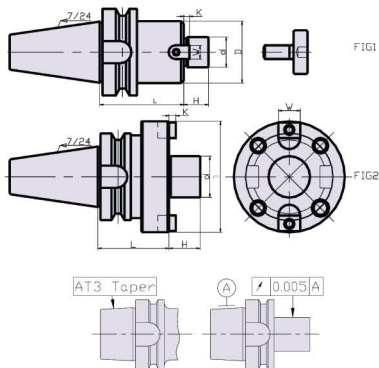


Order Code	ØD	L
SP-OZ25	60	260
-OZ32	78	272



FACE MILL HOLDER

FMA - BT (MAS403)



Items marked by "*" are not standard , order by special request

Order Code	FIG	L	∅ d(h6)	∅ D	H	K	W					
BT30-FMA25.4-45	1	45	25.4	50	20	5	9.5					
FMA38.1-60		60	38.1	80	25	9	15.9					
BT40-FMA25.4-45	1	45	25.4	50	20	5	9.5					
-60		60										
-105		105										
-150		150										
-200		200										
-250 *		250										
-FMA31.75-45		45						31.75	60	22	7	12.7
-60		60										
-90		90										
-FMA38.1-60		60						38.1	80	25	9	15.9
BT50-FMA25.4-45	1	45	25.4	50	20	5	9.5					
-90		90										
-105		105										
-150		150										
-200		200										
-250 *		250										
-FMA31.75-45		45						31.75	60	22	7	12.7
-75		75										
-105		105										
-150		150										
-200		200										



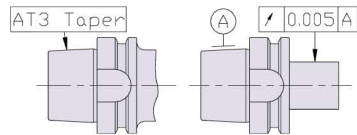
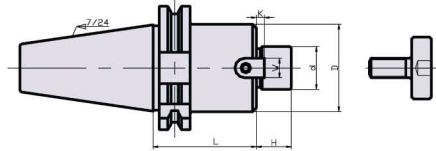


FACE MILL HOLDER

FMA - BT (MAS403)

Order Code	FIG	L	$\varnothing d(h6)$	$\varnothing D$	H	K	W
BT50-FMA38.1-45	1	45	38.1	80	25	9	15.9
-75		75					
-FMA50.8-45		45	50.8	100	28	12	
-FMA47.625-75	2	75	47.625	128	32	12.5	25.4

FMA - SK (DIN69871-1)



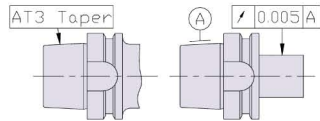
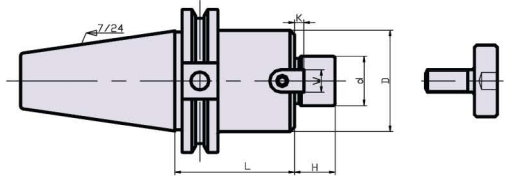
Order Code	L	$\varnothing d(h6)$	$\varnothing D$	H	K	W
SK40-FMA25.4-60	60	25.4	50	20	5	9.5
-90	90					
-FMA31.75-60	60	31.75	60	22	7	12.7
-90	90					
-FMA38.1-60	60	38.1	80	25	9	15.9
-90	90					
SK50-FMA25.4-60	60	25.4	50	20	5	9.5
-100	100					
-FMA31.75-60	60	31.75	60	22	7	12.7
-100	100					
-FMA38.1-60	60	38.1	80	25	9	15.9
-100	100					
-FMA50.8-60	60	50.8	100	28	12	
-100	100					





FACE MILL HOLDER

FMA - CAT



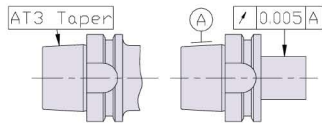
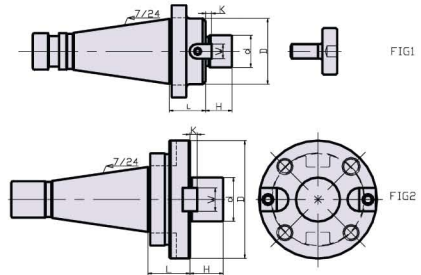
Order Code	L(inch)	∅ d(h6)	∅ D	H	K	W
CAT40-FMA25.4-2.0"	2"	25.4	50	20	5	9.5
-FMA31.75-2.25"	2.25"	31.75	60	22	7	12.7
-FMA38.1-2.4"	2.4"	38.1	80	25	9	15.9
CAT50-FMA25.4-2.0"	2"	25.4	50	20	5	9.5
-FMA31.75-1.5"	1.5"	31.75	60	22	7	12.7
-FMA38.1-2.4"	2.4"	38.1	80	25	9	15.9
-FMA50.8-2.4"	2.4"	50.8	100	28	12	





FACE MILL HOLDER

FMA DIN2080



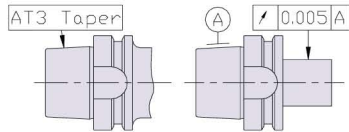
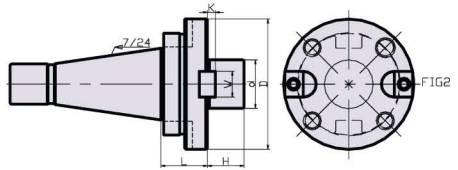
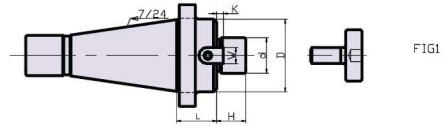
Order Code	FIG	L	∅ d(h6)	∅ D	H	K	W
DIN2080-30-FMA25.4-20	1	20	25.4	50	20	5	9.5
-FMA31.75-25		25	31.75	60	22	7	12.7
-FMA38.1-30		30	38.1	80	25	9	15.9
DIN2080-40-FMA25.4-25	1	25	25.4	50	20	5	9.5
-FMA31.75-25			31.75	60	22	7	12.7
-FMA38.1-30		30	38.1	80	25	9	15.9
-FMA50.8-35		35	50.8	100	28	12	
DIN2080-50-FMA25.4-35	1	35	25.4	50	20	5	9.5
-FMA31.75-35			31.75	60	22	7	12.7
-FMA38.1-35			38.1	80	25	9	15.9
-FMA50.8-35			50.8	100	28	12	
-FMA47.625-45		2	45	47.625	128	32	12.5





FACE MILL HOLDER

FMA -NT



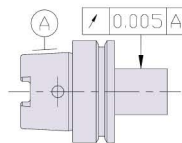
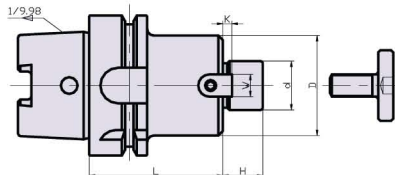
Order Code	FIG	L	ø d(h6)	ø D	H	K	W
NT30-FMA25.4-20	1	20	25.4	50	20	5	9.5
-FMA31.75-25		25	31.75	60	22	7	12.7
-FMA38.1-30		30	38.1	80	25	9	15.9
NT40-FMA25.4-25	1	25	25.4	50	20	5	9.5
-FMA31.75-25			31.75	60	22	7	12.7
-FMA38.1-30		30	38.1	80	25	9	15.9
-FMA50.8-35		35	50.8	100	28	12	
NT50-FMA25.4-35	1	35	25.4	50	20	5	9.5
-FMA31.75-35			31.75	60	22	7	12.7
-FMA38.1-35			38.1	80	25	9	15.9
-FMA50.8-35			50.8	100	28	12	
-FMA47.625-45		2	45	47.625	128	32	12.5





FACE MILL HOLDER

FMA- HSK(DIN69893A)



Order Code	L	ø d(h6)	ø D	H	K	W
HSK-A63-FMA25.4-60	60	25.4	50	20	5	9.5
-120	120					
-FMA31.75-60	60	31.75	60	22	7	12.7
-120	120					
-FMA38.1-60	60	38.1	80	25	9	15.9
-120	120					
HSK-A100-FMA25.4-60	50	25.4	50	20	5	9.5
-120	120					
-FMA31.75-60	60	31.75	60	22	7	12.7
-120	120					
-FMA31.8-60	60	38.1	80	25	9	15.9
-120	120					
-FMA50.8-60	60	50.8	100	28	12	
-120	120					

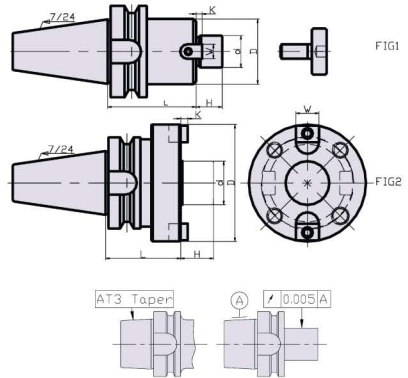
Standard balance: 16000rpm/G6.3. Balance 24000rpm/G2.5 by request.





FACE MILL HOLDER

FMB(C) - BT (MBS403)



Order Code	FIG	L	∅ d(h6)	∅ D	H	K	W
BT30-FMB (C) 22-45	1	45	22	48	18	5	10
-100		100					
-FMB (C) 27-60		60	27	60	20	6	12
-FMB (C) 32-60			32	72	22	7	14
BT40-FMB (C) 22-45	1	45	22	48	18	5	10
-60		60					
-90		90					
-105		105					
-150		150					
-200		200					
-FMB (C) 27-45		45	27	60	20	6	12
-60			60				
-105			105				
-FMB (C) 32-45		45	32	72	22	7	14
-60	60						
-FMB (C) 40-70	70		40	80	25	8	16
BT50-FMB (C) 22-60	1	60	22	48	18	5	10
-105		105					
-150		150					
-200		200					
-250*		250					
-300*		300					
-350*		350					

Continuing >>





FACE MILL HOLDER

FMB(C) - BT (MBS403)

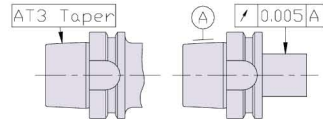
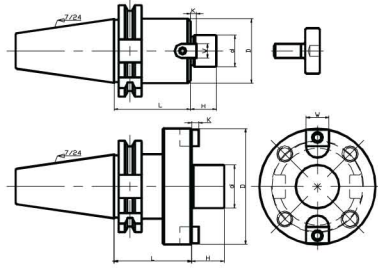
Order Code	FIG	L	$\varnothing d(h6)$	$\varnothing D$	H	K	W
BT50--FMB (C) 27-45	1	45	27	60	20	6	12
-90		90					
-105		105					
-FMB (C) 32-45		45	32	72	22	7	14
-75		75					
-105		105					
-150		150					
-FMB (C) 40-45		45	40	80	25	8	16
-70		70					
-105	105						
-FMB (C) 40F-75	2	75	40	110	25	8	16
-FMB (C) 60-75	2	75	60	140	25	12.5	25.4





FACE MILL HOLDER

FMB(C) - SK (DIN69871-1)



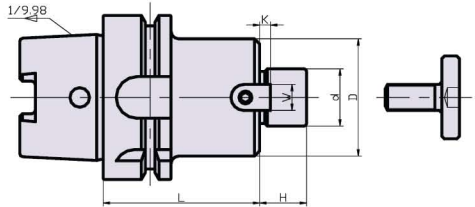
Note: B model requires big head locking bolt,
 C model requires small head locking bolt

Order Code	FIG	L	$\varnothing d(h6)$	$\varnothing D$	H	K	W
SK40-FMB(C)22-60	1	60	22	48	18	5	10
-105		105					
-200		200					
-FMB(C)27-60	1	60	27	60	20	6	12
-120		120					
-FMB(C)32-45		45					
-60	1	60	32	72	22	7	14
-90		90					
-FMB(C)40-60		60					
SK50-FMB(C)22-60	1	60	22	48	18	5	10
-FMB(C)27-60			27	60	20	6	12
-FMB(C)32-60			32	72	22	7	14
-FMB(C)40-60			40	80	25	8	16
-FMB(C)40F-75	2	75	40	110	25	8	16

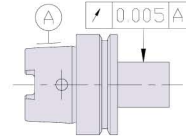




FACE MILL HOLDER FMB- HSK(DIN69893A)



Note: B model requires big head locking bolt,
 C model requires small head locking bolt



B model requires big head locking bolt. C model requires small head locking bolt

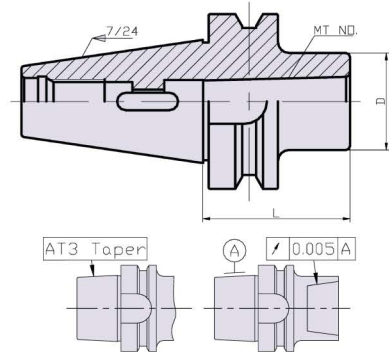
Order Code	L	∅ d (h6)	∅ D	H	K	W
HSK-A63-FMB(C)22-50	50	22	48	18	5	10
-120	120					
-FMB(C)27-60	60	27	60	20	6	12
-120	120					
-FMB(C)32-60	60	32	72	22	7	14
-120	120					
-FMB(C)40-60	60	40	80	25	8	16
-120	120					
HSK-A100-FMB(C)22-50	50	22	48	18	5	10
-120	120					
-FMB(C)27-60	60	27	60	20	6	12
-120	120					
-FMB(C)32-60	60	32	72	22	7	14
-120	120					
-FMB(C)40-60	60	40	80	25	8	16
-120	120					

Standard balance: 16000rpm/G6.3.
 Balance 24000rpm/G2.5 by request.



MTA TYPE MORSE TAPER HOLDER

MTA - BT (MAS403)



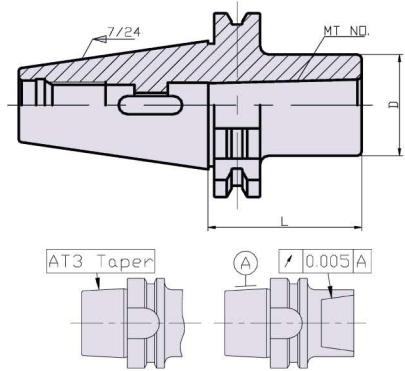
Order Code	MT No .	L	∅D
BT30-MTA1-45	1	45	25
-MTA2-60	2	60	32
-MTA3-80	3	80	40
BT40-MTA1-45	1	45	25
-120		120	
-MTA2-60	2	60	32
-120		120	
-MTA3-75	3	75	40
-135		135	
-MTA4-90	4	90	50
BT50-MTA1-45	1	45	25
-120		120	
-MTA2-45	2	45	32
-135		135	
-MTA3-45	3	45	40
-150		150	
-MTA4-75	4	75	50
-180		180	
-MTA5-105	5	105	65





MTA TYPE MORSE TAPER HOLDER

MTA - SK (DIN69871-1)

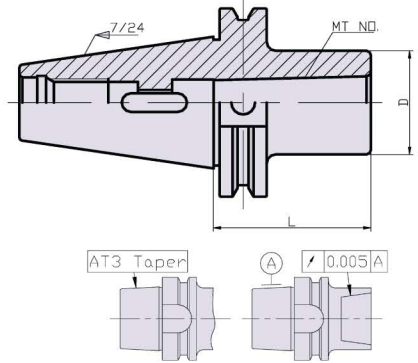


Order Code	MT No .	L	øD
SK30-MTA1-45	1	45	25
-MTA2-60	2	60	32
-MTA3-80	3	80	40
SK40-MTA1-45	1	45	25
-120		120	
-MTA2-60	2	60	32
-120		120	
-MTA3-75	3	75	40
-135		135	
-MTA4-90	4	90	50
SK50-MTA1-45	1	45	25
-120		120	
-MTA2-45	2	45	32
-135		135	
-MTA3-45	3	45	40
-150		150	
-MTA4-75	4	75	50
-180		180	
-MTA5-105	5	105	65
-190		190	



MTA TYPE MORSE TAPER HOLDER

MTA - CAT



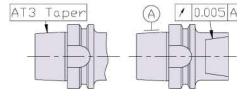
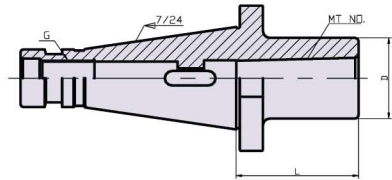
Order Code	MT NO .	L	ØD
CAT30-MTA1-45	1	45	25
-MTA2-60	2	60	32
-MTA3-80	3	80	40
CAT40-MTA1-45	1	45	25
-120		120	
-MTA2-60	2	60	32
-120		120	
-MTA3-75	3	75	40
-135		135	
-MTA4-90	4	90	50
CAT50-MTA1-45	1	45	25
-120		120	
-MTA2-45	2	45	32
-135		135	
-MTA3-45	3	45	40
-150		150	
-MTA4-75	4	75	50
-180		180	
-MTA5-105	5	105	





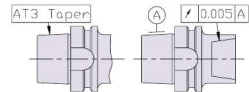
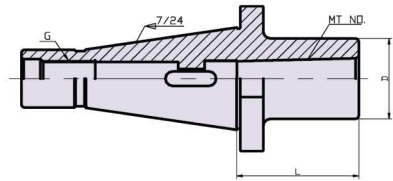
MTA TYPE MORSE TAPER HOLDER

MTA-DIN2080



Order Code	MT NO .	L	∅ D	G
DIN2080-40-MTA2-45	2	45	32	M16x2.0
-MTA3-75	3	75	40	
DIN2080-50-MTA2-45	2	45	32	M24x3.0
-MTA3-45	3		40	
-MTA4-75	4	75	50	

MTA-NT



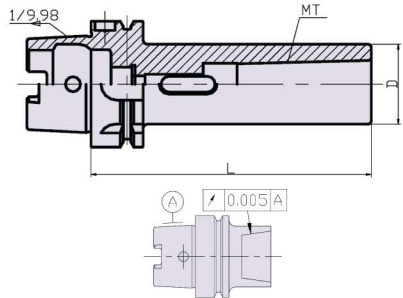
Order Code	MT NO .	L	∅ D	G
NT50-MTA1-45	1	45	25	1" - 8UNC
-120		120		
-MTA2-45	2	45	32	
-135		135		
-MTA3-45	3	45	40	
-150		150		
-MTA4-75	4	75	50	
-190		190		





MTA TYPE MORSE TAPER HOLDER

MTA-HSK(DIN69893A)



Order Code	MT NO .	L	Ø D
HSK-A63-MTA1-100	1	100	25
-MTA2-120	2	120	35
-MTA3-140	3	140	40
-MTA4-160	4	160	50
HSK-A100-MTA1-110	1	110	25
-MTA2-120	2	120	35
-MTA3-150	3	150	40
-MTA4-170	4	170	50
-MTA5-200	5	200	65

Standard balance: 16000rpm/G6.3. Balance 24000rpm/G2.5 by request.

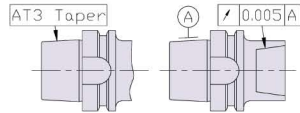
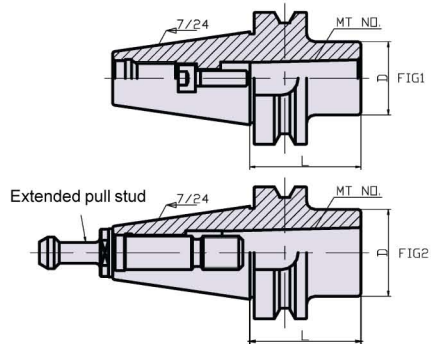
Coolant pipes not included
 Coolant pipes: see page 105





MTB TYPE MORSE TAPER HOLDER

MTB - BT (MAS403)



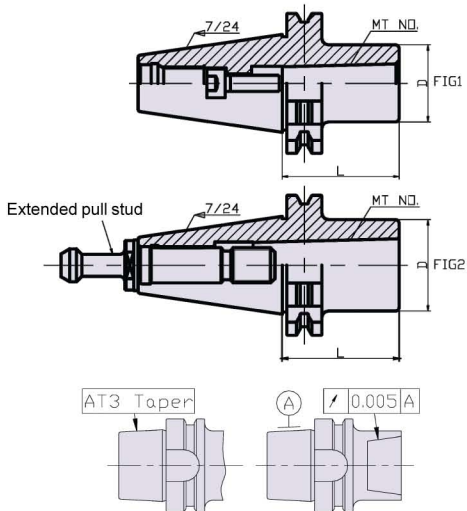
Order Code	FIG	MT NO .	L	Ø D
BT40-MTB1-45	1	1	45	25
-MTB2-60		2	60	32
-MTB3-75		3	75	40
-MTB4-90*	2	4	90	50
BT50-MTB1-45	1	1	45	25
-120			120	
-MTB2-45		2	45	32
-135			135	
-MTB3-60		3	60	40
-150			150	
-MTB4-75		4	75	50
-MTB5-120		5	120	65

* BT40-MTB4-90 includes a pull stud
 MTB pull stud: see page 104



MTB TYPE MORSE TAPER HOLDER

MTB - SK (DIN69871-1)



Order Code	FIG	MT NO .	L	Ø D
SK40-MTB2-50	1	2	50	32
-MTB3-75		3	75	40
-MTB4-90*		4	90	50
SK50-MTB1-45	2	1	45	25
-MTB2-45	1	2	45	32
-135			135	
-MTB3-60		3	60	40
-150			150	
-MTB4-75			75	
-150	4	150	50	
-MTB5-120		120		65

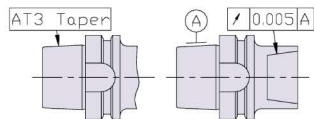
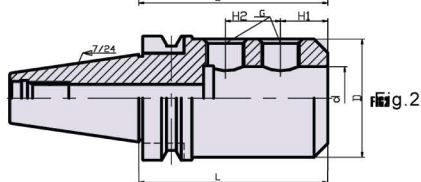
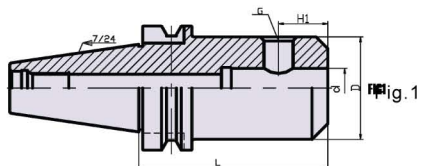
SK40-MTB4-90 includes a pull stud
MTB pull stud: see page 104





SIDE LOCK HOLDER

SL - BT (MAS403)



Order Code	FIG	L	Ød	ØD	H1	H2	G
BT30-SL20-75	1	75	20	52	25	—	M16x1.5
-SL25-90	2	90	25	64	24	25	M18x2.0
BT40-SL08-75	1	75	8	28	18	—	M8x1.0
-SL10-75			10	35	20		M10x1.0
-SL12-75			12	42	22.5		M12x1.5
-SL16-60		60	16	48	24		M14x1.5
-75		75	20	52	25		M16x1.5
-SL20-75	2	90	25	62	24	25	M18x2.0
-SL25-90			32	63	28	M20x2.0	
-SL32-90		100	40	64	30	32	
-SL40-100							

Continuing >>



SIDE LOCK HOLDER

SL - BT (MAS403)

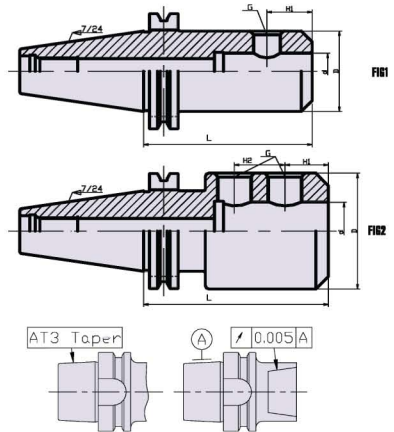
Order Code	FIG	L	Ød	ØD	H1	H2	G	
BT50-SL08-75	1	75	8	28	18		M8x1.0	
-SL10-75			10	35	20		M10x1.0	
-SL12-75			12	42	22.5		M12x1.5	
-SL16-75			16	48	24		M14x1.5	
-SL20-90		90	20	52	25		M16x1.5	
-105		105						
-150		150						
-200		200						
-SL25-105		105	25	64	24	25	M18x2.0	
-150		150						
-200		200						
-SL32-105		2	105	32	72	24	28	M20x2.0
-150			150					
-200			200					
-300			300					
-SL40-120			120	40	80	30	32	
-SL42-120	42							
-SL50-120	50			95				





SIDE LOCK HOLDER

SL - SK (DIN69871-1)



Order Code	FIG	L	Ød	ØD	H1	H2	G
SK40-SL08-50	1	50	8	28	18	—	M8x1.0
-100		100					
-130		130					
-SL10-50		50	10	35	20		M10x1.0
-SL12-50		50	12	42	22.5		
-100		100					
-SL16-60		60	16	48	24		M14x1.5
-SL20-70		70	20	48	25		M16x1.5
-130		130					
-SL25-100	2	100	25	62	24	25	M18x2.0
-SL32-100		100	32	63	24	28	M20x2.0
SK50-SL08-63	1	63	8	28	18	—	M8x1.0
-SL10-63			10	35	20		M10x1.0
-SL12-63			12	42			M12x1.5
-SL16-63			16	48	24		M14x1.5
-SL20-63			20	52	25		M16x1.5
-SL25-80	2	80	25	65	24	25	M18x2.0
-SL32-100		100	32	72		28	M20x2.0
-SL40-120		120	40	90	30	32	



SIDE LOCK HOLDER

SL - CAT

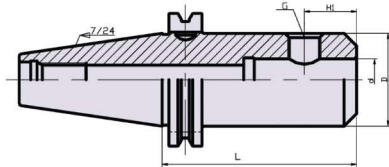


Fig.1

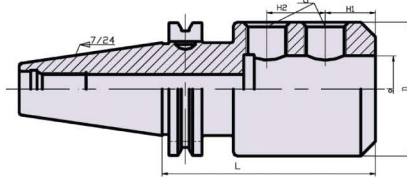
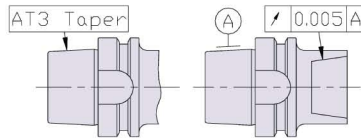


Fig.2

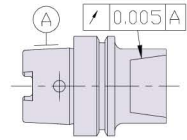
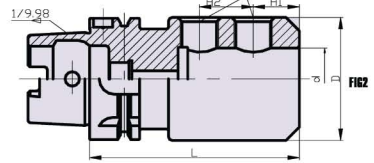
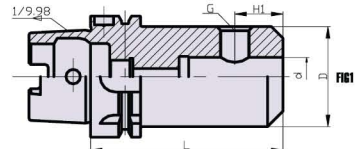


Order Code	FIG	L	∅d	∅D	H1	H2	G
CAT40-SL08-2.50"	1	2.5"	8	28	18	—	M8x1.0
-SL10-2.50"			10	35	20		M10x1.0
-SL12-2.62"		2.62"	12	42	22.5		M12x1.5
-SL16-2.75"		2.75"	16	48	24		M14x1.5
-SL20-3.50"		3.5"	20	48	25		M16x1.5
-SL25-4.00"	2	4"	25	62	24	25	M18x2.0
-SL32-4.00"			32	63		28	M20x2.0
CAT50-SL08-2.50"			1	2.5"	8	28	18
-SL10-2.50"	10	35			20	M10x1.0	
-SL12-2.62"	2.62"	12		42	22.5	M12x1.5	
-SL16-2.75"	2.75"	16		48	24	M14x1.5	
-SL20-3.50"	3.5"	20		52	25	M16x1.5	
-SL25-4.00"	2	4"	25	65	24	25	M18x2.0
-SL32-4.00"			32	72		28	M20x2.0
-SL40-4.70"			4.7"	40	90	30	





SIDE LOCK HOLDER SL-HSK(DIN69893A)



Order Code	FIG	L	ød	øD	H1	H2	G		
HSK-A63-SL10-80	1	80	10	35	20	—	M10x1.0		
-SL12-90		90	12	42	22.5		M12x1.5		
SL14-90		90	14	45	23		M14x1.5		
-SL16-100		100	16	48	24		M16x1.5		
-SL18-100		100	18	50			M18x2.0		
-SL20-100		100	20	52	25		M20x2.0		
-SL25-110	2	110	25	62	24	25	M18x2.0		
-SL32-110		110	32	63		28	M20x2.0		
HSK-A100-SL10-80	1	80	10	35	20	—	M10x1.0		
-SL12-90		90	12	42	22.5		M12x1.5		
-SL16-100		100	16	48	24		M14x1.5		
-SL20-100		100	20	52	25		M16x1.5		
-SL25-110		2	110	25	64		24	25	M18x2.0
-SL32-110			110	32	72			28	M20x2.0
-SL40-120		120	40	80	30	32			

Standard balance: 16000rpm/G6.3. Balance 24000rpm/G2.5 by request.

Coolant pipes not included
 Coolant pipes: see page 105

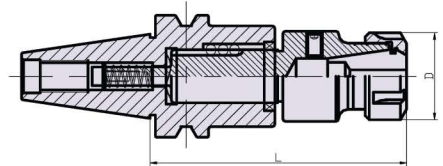


WER TAPPING CHUCK

FEATURES

- Tap is clamped by ER spring collet, minimizing the need to stock various collets sizes.
- Tap is clamped on a floating tap holder by ER toilet chuck, tapping torque is transmitted through the ball inside the floating tap holder.
- 0.1 mm 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.

WER-BT (MAS403)



Note: do not overtighten the nut

Order Code	L	Ø D	Collet Type
BT30-WER16-90	90	30	ER16
-WER20-100	100	34	ER20
BT40-WER16-90	90	30	ER16
-WER20-100	100	34	ER20
-WER25-110	110	42	ER25
-WER32-120	120	50	ER32
BT50-WER16-90	90	30	ER16
-WER20-100	100	34	ER20
-WER25-110	110	42	ER25
-WER32-120	120	50	ER32

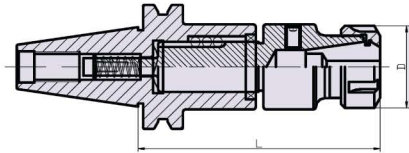
Spanner, collets and pull studs not included
ER nut: see page 59; ER collets: see page 58;
spanner: see page 60; pull stud: see page 103





WER TAPPING CHUCK

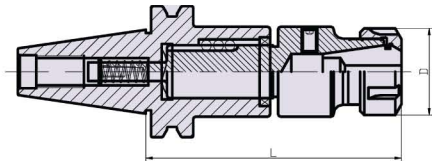
WER-SK(DIN69871-1)



Note: do not overtighten the nut

Order Code	L	Ø D	Collet Type
SK40-WER16-70	70	30	ER16
-WER20-90	90	34	ER20
-WER25-100	100	42	ER25
-WER32-110	110	50	ER32
SK50-WER16-90	90	30	ER16
-WER20-90		34	ER20
-WER25-90		42	ER25
-WER32-100		50	ER32

WER-CAT



Note: do not overtighten the nut

Order Code	L	Ø D	Collet Type
CAT40-WER16-70	70	30	ER16
-WER20-90	90	34	ER20
-WER25-100	100	42	ER25
-WER32-110	110	50	ER32
CAT50-WER16-90	90	30	ER16
-WER20-90		34	ER20
-WER25-90		42	ER25
-WER32-100		50	ER32

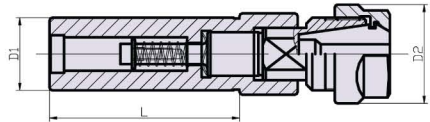
Spanner, collets and pull studs not included
 ER nut: see page 59; ER collets: see page 58;
 spanner: see page 60; pull stud: see page 103





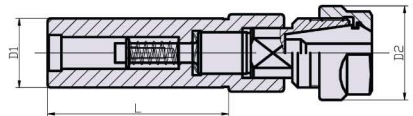
WER TAPPING CHUCK

WER-SL



Order Code	Ø D1	L	Ø D2	Collet Type
SL20-WER16-80	20	80	30	ER16
-WER20-80			34	ER20
SL25-WER16-80	25	80	30	ER16
-WER20-80			34	ER20
-WER25-80			42	ER25
SL32-WER25-80	32	80	42	ER25
-WER32-80			50	ER32

WER-BC



Order Code	Ø D1	L	Ø D2	Collet Type
BC20-WER16-130	20	130	30	ER16
-WER20-130			34	ER20
BC25-WER16-130	25	130	30	ER16
-WER20-130			34	ER20
-WER25-130			42	ER25
BC32-WER25-130	32	130	42	ER25
-WER32-130			50	ER32





KPU DRILL CHUCK

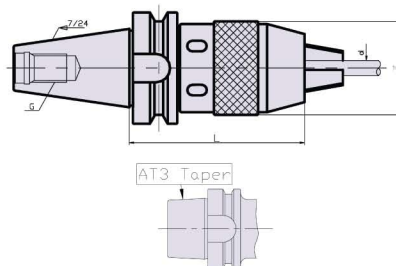
KPU DRILL CHUCK HOLDER



FEATURES:

- The Shank and keyless drill chuck are combined as one body, so that the drill chuck will not fall/slip out while heavy cutting.
- The run-out is within 0.05mm and high precision can be assured over a long period of time.
- Short and compact design.

KPU - BT (MAS403)

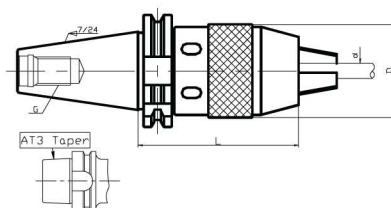


Order Code	L	Ø D	Clamping range Ø	G
BT30-KPU08	75	36	0.5-8	M12
-KPU13	91	50	0.5-13	
BT40-KPU08	80	36	0.5-8	
-KPU13	95	50	0.5-13	M16
-KPU16	113	57	3-16	
BT50-KPU13	105	50	0.5-13	M24
-KPU16	110	57	3-16	



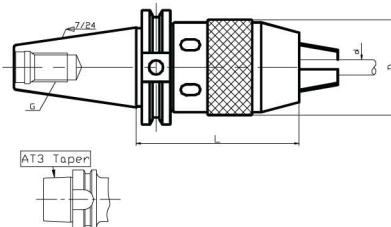
KPU DRILL CHUCK

KPU - SK (DIN69871-1)



Order Code	L	ØD	Clamping range Ød	G
SK30-KPU08	70	36	0.5-8	M12
-KPU13	82	50	0.5-13	
SK40-KPU08	70	36	0.5-8	M16
-KPU13	82	50	0.5-13	
-KPU16	105	57	3-16	
SK50-KPU13	85	50	0.5-13	M24
-KPU16	90	57	3-16	

KPU - CAT



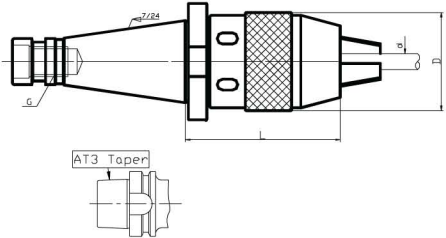
Order Code	L	ØD	Clamping range Ød	G
CAT30-KPU08	102	36	0.5-8	1/2E-12UNC
-KPU13	82	50	0.5-13	
CAT40-KPU08	82	36	0.5-8	5/8E-11UNC
-KPU13	100	50	0.5-13	
-KPU16	125	57	3-16	
CAT50-KPU13	100	50	0.5-13	1E-8UNC
-KPU16	105	57	3-16	





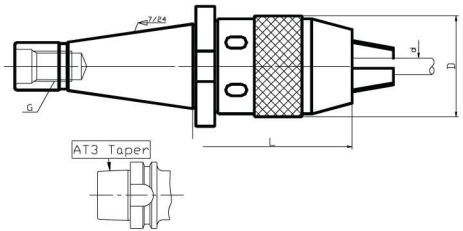
KPU DRILL CHUCK

KPU-DIN2080



Order Code	L	ØD	Clamping range Ød	Inch
DIN2080-30-KPU08	70	36	0.5-8	M12
-KPU13	85.5	50	0.5-13	
DIN2080-40-KPU08	70	36	0.5-8	M16
-KPU13	85	50	0.5-13	
-KPU16	105	57	3-16	
DIN2080-50-KPU13	95	50	0.5-13	M24
-KPU16	100	57	3-16	

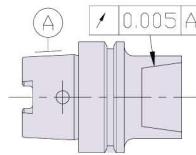
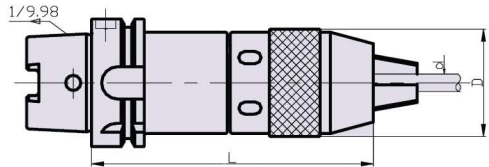
KPU-NT



Order Code	L	ØD	Clamping range Ød	Inch
NT30-KPU08	70	36	0.5-8	1/2"-12UNC
-KPU13	85.5	50	0.5-13	
NT40-KPU08	70	36	0.5-8	5/8"-11UNC
-KPU13	85	50	0.5-13	
-KPU16	105	57	3-16	
NT50-KPU13	95	50	0.5-13	1"-8UNC
-KPU16	100	57	3-16	



KPU DRILL CHUCK KPU-HSK(DIN69893A)



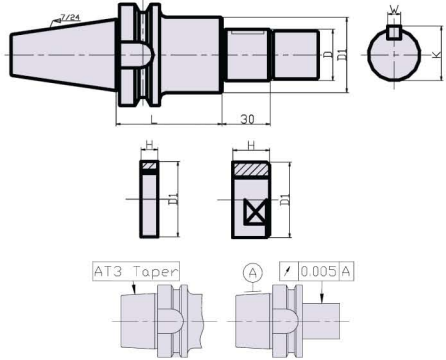
Order Code	L	ØD	Clamping range Ød
HSK-A63-KPU13	135	45	0.5~13
HSK-A100-KPU13	140	45	0.5~13





SIDE CUTTER HOLDER

SCA - BT (MAS403)

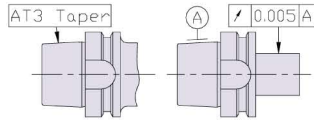
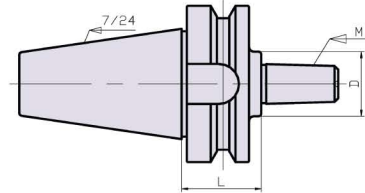


Order Code	ØD(h6)	L	ØD1	H	K	W
BT40-SCA16-90	16	90	26	5/10/20	17.2	4
BT40-SCA22-75	22	75	34		23.6	6
-120		120				
-SCA27-75	27	75	40		29	7
-120		120				
-SCA32-90	32	90	46		34	8
-SCA40-90	40	90	55		42.5	10
-SCA25.4-75	25.4	75	40		27.78	6.35
-120		120				
BT50-SCA22-90	22	90	34		5/10/20	23.6
-135		135				
-SCA27-90	27	90	40	29		7
-135		135				
-SCA32-135	32	135	46	34		8
-SCA25.4-90	25.4	90	40	27.78		6.35
-135		135				



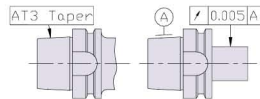
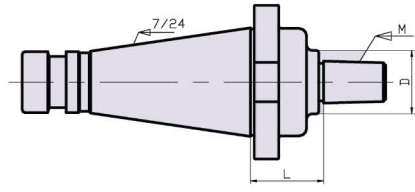
DRILL CHUCK HOLDER

DRILL CHUCK HOLDER/B&JTA-BT



Order Code	M	L	Ø D
BT40-B16-35	B16	35	26
-JT6-45	JT6	45	
BT50-B16-45	B16	45	26
-105		105	

DRILL CHUCK HOLDER/JTA-DIN2080



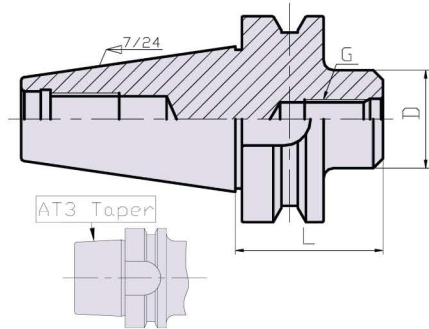
Order Code	M	L	Ø D
DIN2080-40-JT6	JT6	30	26
DIN2080-50-JT6	JT6	38	26





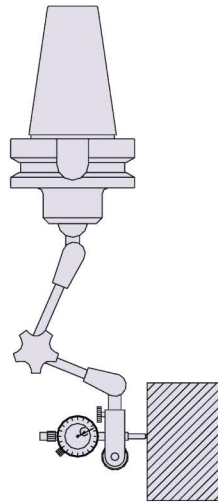
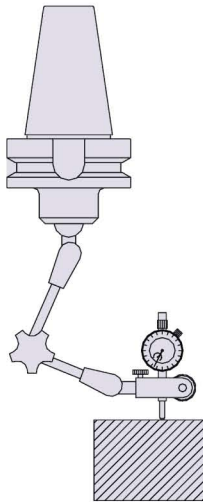
TESTING

TESTING HOLDER



Arm and watch not included

Order Code	L	ØD	G
BT40-M8	47	30	M8
BT50-M8	58	30	M8

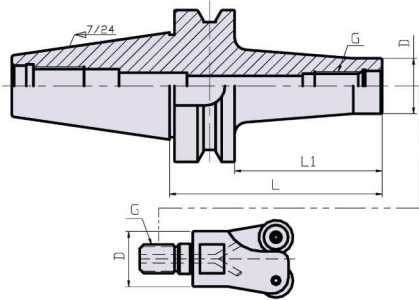




SMALL MILLING CUTTER HOLDER

Deep cutting design less interference
 Stable cutting on high speed
 Compatible with different kind of small milling cutters

EM- BT (MAS403)



Order Code	L	L1	ØD	G
BT40-EM08-80	80	53	13.8	M8
-100	100	73		
-EM10-80	80	53	18.5	M10
-100	100	73		
-EM12-80	80	53	23	M12
-100	100	73		
-EM16-80	80	53	30	M16
-100	100	73		
BT50-EM08-100	100	62	13.8	M8
-150	150	112		
-EM10-100	100	62	18.5	M10
-150	150	112		
-EM12-100	100	62	23	M12
-150	150	112		
-EM16-100	100	62	30	M16
-150	150	112		

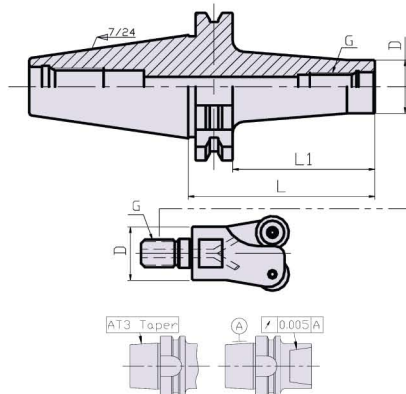
Milling cutters not included
 Small milling cutter: see page 101





SMALL MILLING CUTTER HOLDER

EM - SK (DIN69871-1)

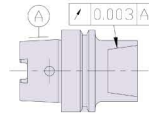
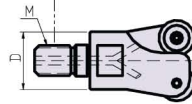
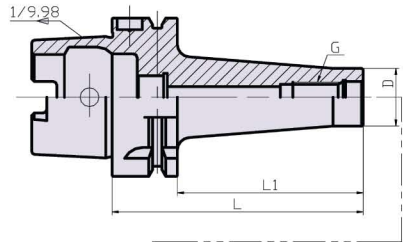


Order Code	L	L1	ØD	G
SK40-EM08-80	80	60.9	13.8	M8
-100	100	80.9		
-EM10-80	80	60.9	18.5	M10
-100	100	80.9		
-EM12-80	80	60.9	23	M12
-100	100	80.9		
-EM16-80	80	60.9	30	M16
-100	100	80.9		
SK50-EM08-100	100	80.9	13.8	M8
-150	150	130.9		
-EM10-100	100	80.9	18.5	M10
-150	150	130.9		
-EM12-100	100	80.9	23	M12
-150	150	130.9		
-EM16-100	100	80.9	30	M16
-150	150	130.9		



SMALL MILLING CUTTER HOLDER

EM HSK(DIN69893A)



Order Code	L	L1	ØD	G
HSK-A63-EM08-100	100	74		
-150	150	124		
-EM10-100	100	74		
-150	150	124		
-EM12-100	100	74		
-150	150	124		
-EM16-100	100	74		
-150	150	124		
HSK-A100-EM08-100	100	71		
-150	150	121		
-EM10-100	100	71		
-150	150	121		
-EM12-100	100	71		
150	150	121		
-EM16-100	100	71		
-150	150	121		

Standard balance: 16000rpm/G6.3. Balance 24000rpm/G2.5 by request.

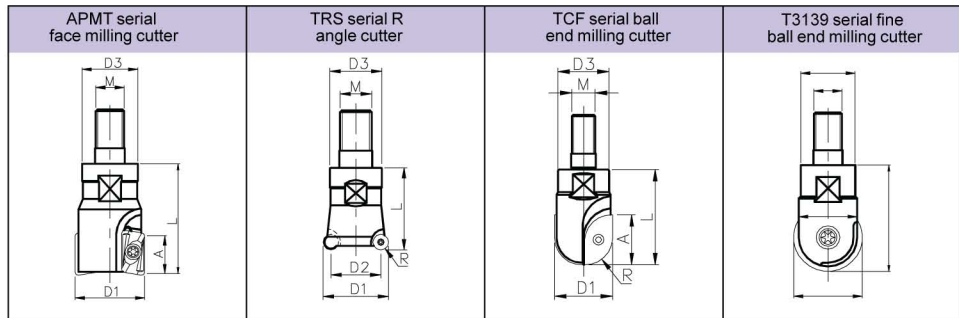
Small milling cutters and coolant pipes not included
 Small milling cutter: see page 101, coolant pipes: see page 105





SMALL MILLING CUTTER

SMALL MILLING CUTTER

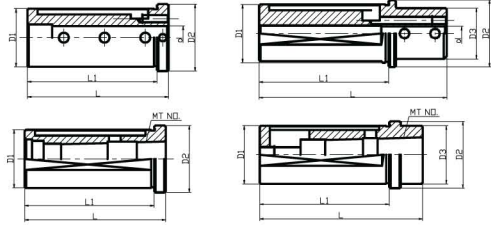


Order Code	ØD1	ØD2	ØD3	A	L	M	Number of cutters	Insert	Screw	Spanner
APMT serial face milling cutter										
APMT-16	16	--	13.5	7	35	M8	2	APMT090308R	CAP2.5	T8
APMT-20	20	--	18	7	35	M10	2		CAP2.5	T8
APMT-25	25	--	21.5	13	40	M12	2	APMT15T3PDR	CAP4	T15
APMT-32	32	--	30	13	40	M16	3		CAP4	T15
TRS serial R angle cutter										
TRS-4R25	25	21	21.5	--	30	M12	3	RDMT0802MO 8Ø(4R)	CRS3	T8
TRS-4R32	32	28	30	--	30	M16	4		CRS3	T8
TCF serial ball end milling cutter										
TCFM-10R	20	--	18	18	38	M10	2	ZCEW100CE ZCEW100SE	BR10	T10
TCFM-12.5R	25	--	21.5	23	38	M12	2	ZCEW125CE ZCEW125SE	BR12.5	T15
TCFM-15R	30	--	30	28	47	M16	2	ZCEW150CE ZCEW150SE	BR15	T20
T3139 serial fine ball end milling cutter										
T2139M-6R	12	10	13.5	--	38	M8	1	P3200D12	CR6	T20
T2139M-8R	16	14	13.5	--	38	M8	1	P3200D16	CR8	T20
T2139M-10R	20	18	18	--	38	M10	1	P3200D20	CR10	T20
T2139M-12.5R	25	23	21.5	--	35	M12	1	P3200D25	CR12	T20





REDUCING SLEEVE REDUCING SLEEVE

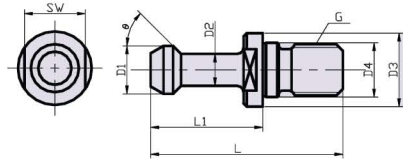


Order Code	FIG	ØD1	ØD2	ØD3	Ø d	MT No .	L1	L
V25-6	1	25	33.5	--	6	--	58	64
-8					8			
-10					10			
-12					12			
-16					16			
V32-8	2	32	38	32	8	--	78	118
-10					10			
-12					12			
-16	1	32	38	--	16	--	78	86
-20					20			
-25					25			
-MTA1	3	32	38	--	1	--	78	90
-MTA2	2							
-MTA3	4				3			
V40-8	2	40	46	35	8	--	89	129
-10					10			
-12					12			
-16	1	40	46	--	16	--	89	97
-20					20			
-25					25			
-32					32			
-MTA1	3	40	46	--	1	--	83	112
-MTA2	2							
-MTA3	4				3			
-MTA4	4				4			





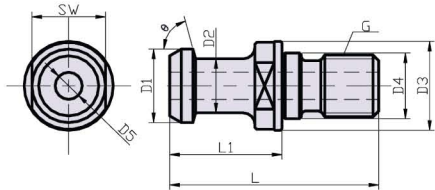
PULL STUD PS-BT(MAS403)



Order Code	L	L1	ØD1	ØD2	ØD3	ØD4	θ	G	SW
BT30-45°	43	23	11	7	16.5	12.5	45°	M12	13
-60°							60°		
BT40-45°	60	35	15	10	23	17	45°	M16	19
-60°							60°		
-90°							90°		
BT50-45°	85	45	23	17	38	25	45°	M24	30
-60°							60°		
-90°							90°		

MAS pull studs can be supplied with through coolant as optional ,please contact with us for quotation.

PS-JIS B6339



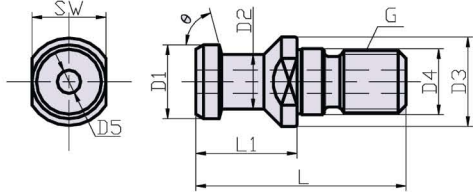
Type P is for standard MAS BT tool holders; Type PA&PB is for SK(DIN69871) tool holders.

Order Code	L	L1	ØD1	ØD2	ØD3	ØD4	ØD5	θ	G	SW
JISB6339-40P	54	29	19	14	23	17	7.0	75°	M16	19
-50P	74	34	28	21	38	25	10		M24	30
-40PA	54	26	19	14	23	17	7.0		M16	19
-50PA	74	34	28	21	36	25	11.5		M24	30
-40PB	44.5	16.4	18.95	12.95	22.5	17	7.35	45°	M16	18
-50PB	65.5	25.55	29.1	19.6	37	25	11.55		M24	30



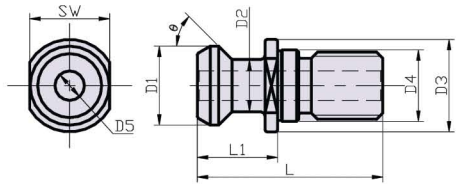
PULL STUD

PS-SK(DIN69872)



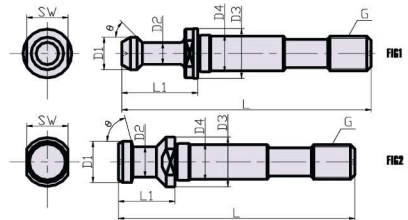
Order Code	L	L1	ØD1	ØD2	ØD3	ØD4	ØD5	θ	G	SW
DIN69872A-SK40	54	26	19	14	23	17	7	75°	M16	19
-SK50	74	34	28	21	36	25	11.5		M24	30

PS-MAZAK-BT



Order Code	L	L1	ØD1	ØD2	ØD3	ØD4	ØD5	θ	G	SW
MAZAK-BT40	44.1	19.1	18.8	12.45	22	17	7	45°	M16	19
-BT50	65.2	25.2	28.96	20.83	37	25	10	75°	M24	30

PS-MTB

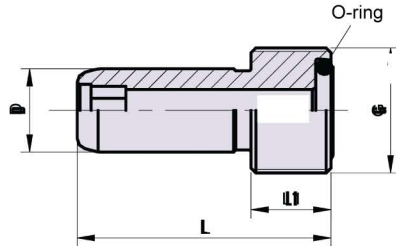


Order Code	FIG	L	L1	ØD1	ØD2	ØD3	ØD4	θ	G	SW
MTB-BT30	1	86	23	11	7	16.5	12.5	45°	M12	13
-BT40		115	35	15	10	23	17	45°	M16	19
-SK40	2	109	26	19	14	23	17	75°	M16	19



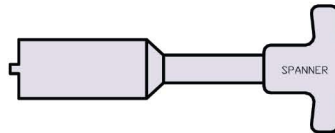
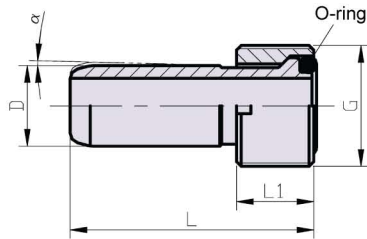
HSK COOLANT PIPE

CP-HSK-I



Order Code	Ø D	L	L1	G
CP-63I	12	36.5	11.5	M18
CP-100I	16	44	15.5	M24

CP-HSK-A



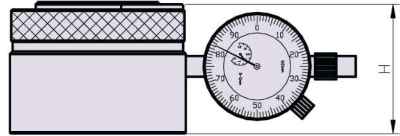
Order Code	Ø D	α	L	L1	G
CP-63A	12	1.3°	36.5	11.5	M18
CP-100A	16	1.4°	44	15.5	M24

Spanner not included



ACCESSORIES

Z-ZERO SETTER

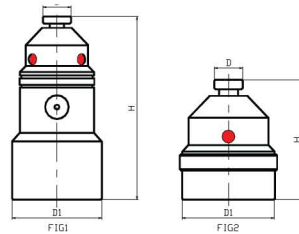


FEATURES:

- Large measuring surface and easy to use.
- Low spring force to avoid breakage of small end mill and drill.
- Easy to calibrate by a ground parallel or gauge block.

Order Code	Height
Z-50	50.00+0.005

ELECTRONIC TOOL LENGTH SETTER



FEATURES:

- Housing is made by stainless steel, 100% rustproof.
- Can be used in horizontal and vertical position (magnetic base).
- Can be used on machining center and CNC lathe.

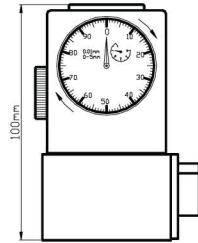
Order Code	Fig	Ø D1	H	Ø D	Battery	Beep
EZ-5000	2	40	50	16	(LR44)1.5Vx2	No
EZ-1001	1	48	100	16	(23A)12Vx1	Yes
EZ-2000	2	1.58 _j	2.00"	0.63"	(LR44)1.5x2	No
EZ-4001	1	1.89 _j	4.00"	0.63"	(23A)12Vx1	Yes





ACCESSORIES

Z-ZERO SETTER(MAGNETIC)



FEATURES:

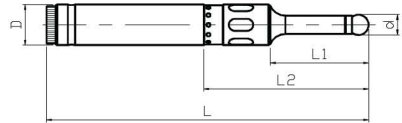
- Height 100mm.
- Measuring range 2mm.
- Indicator of 0.01mm dial gauge.

Order Code	Hight
Z-100	100.00+0.005



ACCESSORIES

ELECTRONIC EDGE FINDER-WITH LED AND BEEP



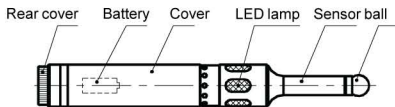
FEATURES:

- Accuracy $\pm 0.001\text{mm}$.
- Concentricity of ball-probe and shank: 0.005mm .
- Loaded ball-probe for preventing damage of probe.

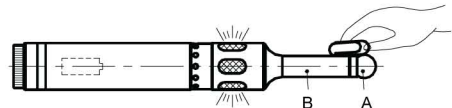
Order Code	$\varnothing D$	$\varnothing d$	L	L1	L2
EEF-2010	20	10	158	49	81
EEF-3404	7/8"	0.4"	6.2"	1.9"	3.2"

USER GUIDE

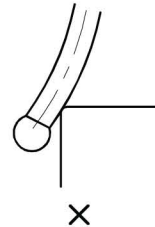
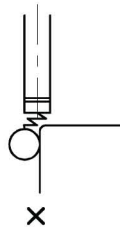
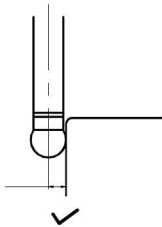
Insert a battery
Battery: 23AE-12V



Testing the edge finder
Using metal bar touch part A and B, the finder will beep and LED light will come on.



Measuring method



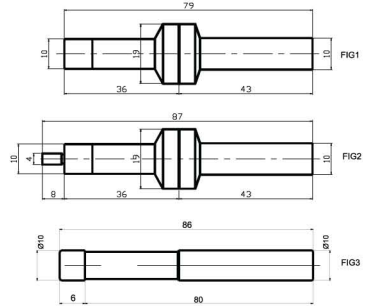
Caution:

Do not use fingers to touch testing ball. Take off battery when not in use for long time. Avoid liquids.



ACCESSORIES

ROTARY-EDGE FINDER

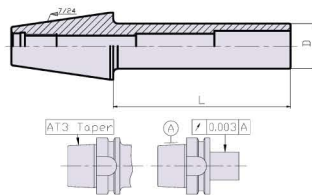


FEATURES:

- For setting work coordinate on machining center and milling machine.
- Repeatability on X and Y axes: within $\pm 2\mu$.
- Spindle runs about 500rpm.

Order Code	Fig	Material	Antimagnetic	Hardness
CR101	1	Stainless steel	NO	HRC60° \pm 2°
CR301	1	Alloy steel	NO	HRC60° \pm 2°
CR303	2	Alloy steel	NO	HRC60° \pm 2°
CR401	3	Alloy steel& Ceramics	YES	HRC60° \pm 2°

TESTING

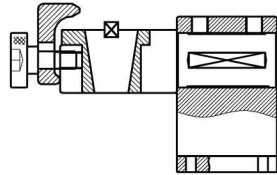


Order Code	\varnothing D	L	Accuracy
BT30-230	30	230	0.003
BT40-300	40	300	0.003
BT50-300	50	300	0.003
HSK-A63-200	40	200	0.003
HSK-A100-200	60	200	0.003



ACCESSORIES

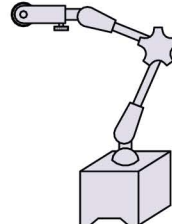
TOOL LOCKING FIXTURE



Different adapters for BT, SK, CAT standard tool holders

Order Code	Adapter type	Order Code	Adapter type
ETL-30	BT30	ETL- HSK63	HSK63
ETL-40	BT40, SK40, CAT40	ETL-HSK100	HSK100
ETL-50	BT50, SK50, CAT50		

MAGNETIC BASE



FEATURES:

- Precision hidden design with stable hydraulic fixed lock.
- Pressure gauge displays interior pressure directly to prolong the life of the hydraulic universal magnetic base.
- Auto oil refill is added to the hydraulic universal magnetic base to improve the problem of oil leaking and difficulty of lockup.
- Universal arms can be adjusted at your own choice.
- Swing lever with fine tuning device:6mm &8mm dovetailed clips suitable for all kinds of gauge, and lever observation.

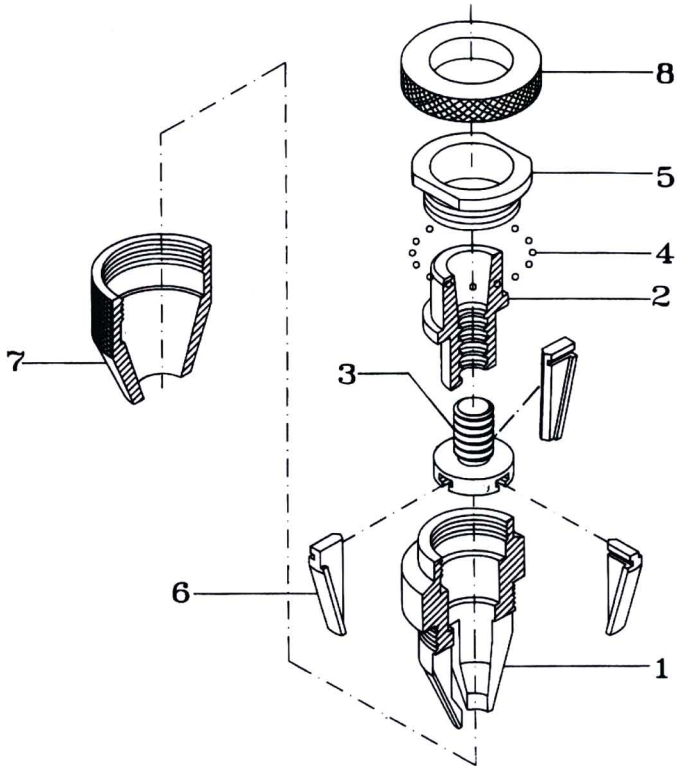
Order Code	Holding Power	Arm Length	Base Dimension			(Kg) N.W	Comment
			L	W	H		
JY-1202	100	380	75	50	55	1.8	Hydraulic
JY-1202L	100	490	75	50	55	1.8	Hydraulic extended
JY-1203	60	390	63	50	55	1.6	Mechanical extended
JY-1204	60	325	63	50	55	1.5	Mechanical
JY-1205	20	185	Magnetic base			0.4	Magnetic
JY-1258	100	380	75	50	55	2.0	Hydraulic





KEYLESS DRILL CHUCK

KEYLESS DRILL CHUCKS SECTION DRAWING



Parts No..	Part Name	Material	Heat-Treatment
1	Body	JIS G4051(SAE1045)	
2	Hollow Shaft	JIS SCM415(SAE4115)	HRC60° ±2°
3	Driver	JIS SNCM439(SAE4340)	HRC52° ±2°
4	Ball		
5	Locking Nut	JIS SCM435(SAE4135)	HRC54° ±2°
6	Jaws	JIS SNCM439(SAE4340)	HRC61° ±2°
7	Conical Sleeve	JIS SCM415(SAE4115)	HRC50° ±2°
8	Retaining Ring	JIS G4051(SAE1045)	





KEYLESS DRILL CHUCK INTEGRATED KEYLESS DRILL CHUCKS

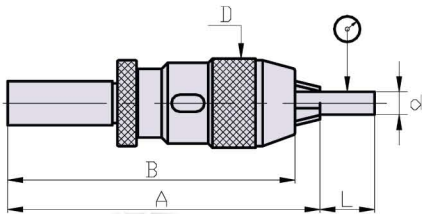


The main shaft is of integrated type, which is much more superior than the traditional design. The major features are as follows.

- Extremely rigid construction.
- The accumulative tolerances can be reduced to a minimum, since the traditional mechanism requiring an ARBOR to connect the Drill Chucks which will generate the accumulative tolerances. The Integrated type keyless drill chuck is designed to solve this problem completely.
- Prevent the Drill Chucks from falling out.
- Extremely safe in operation.

Type	Clamping Capacity	Female Taper	ØD	A	B	WT(g)	QTY Pcs/Cu-Ft	NW/GW Kgs
INT-3	0.5-3.175 1/64"-1/8"	MT1	25	127.5	122.5	160	20/0.83	4/5
		JC 1/2"		107	102	150		
		JC12						
INT-8	0.5-8 1/64"-5/16"	MT2	35	157	149	520	20/0.83	11/12
		JC20		141	133	500		10/11
		JC 3/4"						
INT-13	0.5-13 1/64"-1/2"	R8	50.5	207	196	1500	20/0.83	30/31
		MT2		184	172	1100		22/23
		MT3		201	190	1250		25/26
		MT4		227	216	1580		32/33
		JC20		164	153	1100		22/23
		JC 3/4"						
		JC25		174	163	1250		25/26
		JC1						
		JC32		185	173	1450		29/30
		JC 1						
INT-16	3-16 1/8"-5/8"	R8	56	211	198	1850	20/0.83	37/38
		MT3		207	194	1520		30/31
		MT4		232	219	1850		37/38
		JC20		165	152	1450		29/30
		JC 3/4"						
		JC25		175	162	1500		30/31
		JC1						
		JC32		197	184	1720		35/36
		JC1						

RUN-OUT ACCURACY & TORQUE



Type	ØD	L	Max Run-out	Torque (kgf/cm)
INT-3	3	35	0.05	45
	3	35		
INT-8	6	35	0.05	160
	8	50		
INT-13	5	55	0.05	400
	10	75		
INT-16	5	55	0.05	480
	10			
	16	80		





KEYLESS DRILL CHUCK

KPU TYPE KEYLESS DRILL CHUCK

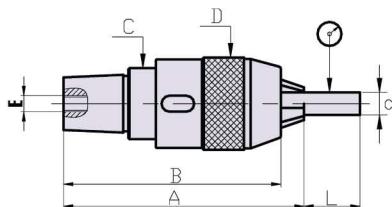


- Special design & manufacture for super heavy torque (Clamping capacity).
- Owing to inspecting strictly & with excellent RUN-OUT accuracy and quality guaranteed the gripping power is doubled compared to a general brand.
- Avoid the drill dropp out when rotation direction changes and equipped with spanner for tightening safety.
- Especially suitable for CNC machining center & milling machine use.

Type	Clamping Capacity	Female Taper	A	B	ØC	ØD	E	WT(g)	QTY Pcs/Cu-Ft	NW/GW Kgs
KPU-8	0.5-8	Mt2	90	82.5	30	35	M6x1.0	360	40/0.6	15/16
KPU-13	0.5-13 1/64"-1/2"	Mt2	101	76	30	56	M8x1.25	1000	30/0.6	30/31
		Mt3	118	106	38					
KPU-16	3-16	Mt3	128	115	43	56	M8x1.25	1300	18/0.6	24/25

RUN-OUT ACCURACY&TORQUE

Type	Ø D	L	Max Run-out	Torque (kgf/cm)
KPU-8	3	35	0.05	160
	6	50		
	8			
KPU-13	5	55	0.05	320
	10	75		
	13			
KPU-16	5	55	0.05	480
	10	80		
	16			





KEYLESS DRILL CHUCK

XHSP TYPE KEYLESS DRILL CHUCK

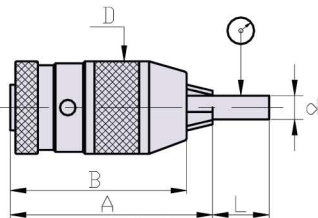


These chuck heads are specially designed for highest engineering standards. The female thread inside the short type MORSE TAPER SHANK makes it possible to firmly screw together with CNC TOOL SHANK and become an INTEGRAL CNC DRILL CHUCK.

- Being an integral design, the drill chuck heads once screwed together with TOOL HOLDER shank, the drill chucks will never be disengaged from the tool Holder Shanks.
- Very high rigidity due to the special design.
- Excellent performance and reliability.
- High durability and easy to operate.
- Superb accuracy is guaranteed because of 100% inspection and strict quality control.

Type	Clamping Capacity	Female Taper	Ø D	A	B	WT(g)	QTY Pcs/Cu-Ft	NW/GW Kgs
6XHSP	0.5-6.5 1/64"-1/4"	B12	34	69	61	320	8/0.6	26/27
		J1						
		B10						
8XHSP	0.5-8 1/64"-5/16"	J2S	34	69	61	320	40/0.6	13/14
		B10						
		J1						
		B12						
10XHSP	0.5-10 1/64"-3/8"	J33	43	92	81	700	40/0.6	28/29
		J2						
		J2S						
		B12						
13XHSP	0.5-13 1/64"-1/2"	B16	51.5	103	92	1030	30/0.6	31/32
		J2				1035		
		J33				1030		
		B16						
16XHSP	3-16 1/8"-5/8"	J6	58	108	95	1450	24/0.6	35/36
		J33						
		B16						
		B18						
		J3						
SP-8XHSP	Spanner Wrench							
SP-10XHSP	Spanner Wrench							
SP-13XHSP	Spanner Wrench							
SP-16XHSP	Spanner Wrench							

RUN-OUT ACCURACY&TORQUE



Type	Ø D	L	Max Run-out	Torque (kgf/cm)
6XHSP	3	35	0.05	80
	6			
8XHSP	3	35	0.05	160
	8	50		
10XHSP	3	35	0.05	260
	10	60		
	5	55		
13XHSP	10	75	0.05	400
	13			
	5			
16XHSP	10	80	0.05	480
	16			
	5			



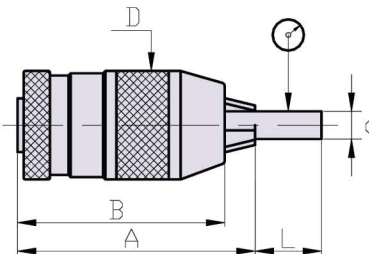
KEYLESS DRILL CHUCK XH TYPE KEYLESS DRILL CHUCK

- Suitable for use on heavy duty & extra heavy duty.
- Excellent performance and reliability
- High torque.



Type	Clamping Capacity	Female Taper	Ø D	A	B	WT(g)	Pcs/Cu-Ft	NW/GW Kgs
6XH	0.5-6.5 1/64" - 1/4"	J1	34	69	61	320	8/0.6	26/27
		B10						
		B12						
8XH	0.5-8 1/64" - 5/16"	J1	34	69	61	340	40/0.6	14/15
		J2S						
		B10						
10XH	0.5-10 1/64" - 3/8"	B12	43	92	81	700	40/0.6	28/29
		J2S						
		J2						
		J33						
13XH	0.5-13 1/64" - 1/2"	B12	51.5	103	92	1030	30/0.6	31/32
		B16						
		J2						
		J6				1035		
		J33						
		B16						
16XH	3-16 1/8" - 5/8"	J6	58	108	95	1307	24/0.6	33/34
		B16						
		B18						
		J3						
		J33						

RUN-OUT ACCURACY&TORQUE



Type	Ø D	L	Max Run-out	Torque (kgf/cm)
6XH	3	35	0.05	80
	6			
8XH	3	35	0.05	160
	8			
10XH	3	35	0.05	260
	10			
	5			
13XH	10	75	0.05	400
	13			
16XH	5	55	0.05	480
	10			
	16			



KEYLESS DRILL CHUCK

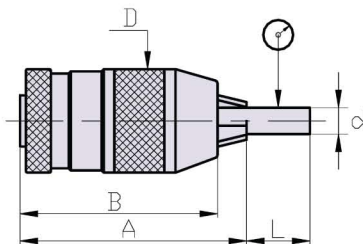
H TYPE KEYLESS DRILL CHUCK

- Suitable for use on middle lever duty
- Suitable for milling machine
- Sample for operation.



Type	Clamping Capacity	Female Taper	Ø D	A	B	WT(g)	QTY Pcs/Cu-Ft	NW/GW Kgs
6H	0.5-6.5 1/64"-1/4"	J1	34	69	61	320	80/0.6	26/27
		B10						
		B12						
8H	0.5-8 1/64"-5/16"	J1	34	69	61	340	80/0.6	28/29
		J2			71			
		B10						
		B12						
10H	0.5-10 1/64"-3/8"	J2S	42.5	92	81	700	40/0.6	28/29
		J2						
		J33						
		B12						
		B16						
13H	0.5-13 1/64"-1/2"	J6	50.5	103	92	1030	30/0.6	31/32
		J33				1035		
		B16				1030		
16H	3-16 1/8"-5/8"	J6	50.5	103	92	1030	30/0.6	31/32
		B16				1040		
		B18						
						97		

RUN-OUT ACCURACY & TORQUE



Type	Ø D	L	Max Run-out	Torque (kgf/cm)
6H	3	35	0.08	75
	6			
8H	8	50	0.08	75
10H	3	35	0.08	115
	6			
	10	58		
13H	5	55	0.08	175
	10			
	13	75		
16H	5	55	0.08	300
	10			
	16	80		





KEYLESS DRILL CHUCK

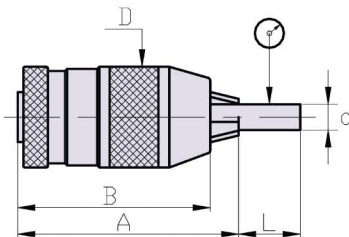
EL TYPE KEYLESS DRILL CHUCK

- The model is specially designed for the features of impact electric drill & electric drill, super gripping power.
- For quick releasing of drill bits and not slip when drilling cement material.
- The jaws are made of alloy steel durable for impact and wear.



Type	Clamping Capacity	Female Taper	Ø D	A	B	WT(g)	QTY Pcs/Cu-Ft	NW/GW Kgs	
6EL	0.5-6.5 1/64" - 1/4"	J1	34	69	61	320	80/0.6	26/27	
		B10							
		B12							
8EL	0.5-8 1/64" - 5/16"	J1	34	69	61	320	40/0.6	13/14	
		B10							
		3/8" - 24							
10EL	0.5-10 1/64" - 3/8"	1/2" - 20	34	69	61	320	30/0.6	13/14	
		3/8" - 24		74	66				
		J2S		69	61				
		B12							
13EL	0.5-13 1/64" - 1/2"	3/8" - 24	42.5	92	81	700	30/0.6	21/22	
		1/2" - 20							
		B16							86
		J2S							
		J6							
J33		81							
16EL	3-16 1/8" - 5/8"	1/2" - 20	50.54	108	97	1040	30/0.6	31/32	
		5/8" - 16							
		J6		103	92				
		B16							
		B18		108	97				

RUN-OUT ACCURACY & TORQUE



Type	Ø D	L	Max Run-out	(kgf/cm)
6EL	3	35	0.12	80
	6			
8EL	8	50	0.12	80
	3			
10EL	6	35	0.12	90
	10			
	58			
13EL	5	55	0.12	160
	10			
	13			
16EL	5	55	0.12	250
	10			
	16			
		80		



TOOL CHECKING AND PRESETTING INSTRUMENT

PRESETTER

TPR401/402 type tool presetter is versatile instrument insures accurate CNC tool presetting for the most demanding manufacturing tolerances.

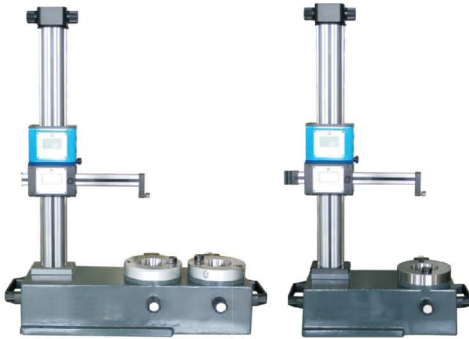
Two linear motion guides on the two axes allows for rapid traverse and micrometric positioning.

Integrated display allows to show measuring data separately.

The precision spindle system is fully interchangeable with ISO/DIN taper, and so with VDI and HSK taper by using sleeves (or directly use VDI/HSK tape spindle).

Two models for choice

- TPR401: Measuring range: diameter max 150mm (6") on X-axis, 400 mm (16") on Z-axis
- TPR402: Measuring range: diameter max 300mm (12") on X-axis, 400 mm (16") on Z-axis



Measuring range on Z-axis can be reached to 1000mm (16") by request.

Measuring for different taper models
Easy to operate
Direct RS-232 output to connect with computer or printer
Battery can be changed

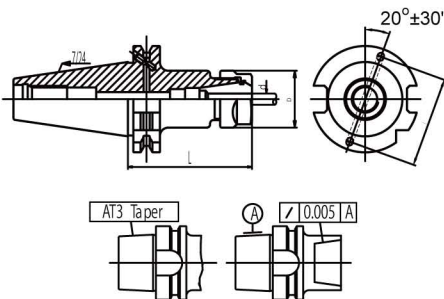
Standard accessories
Standard arbor, battery x 2 pcs,
dustproof cover, guide manual,
inspection report

Model	TPR401	TPR402
ISO Taper	30, 40, 50	
Coordinate range	X: 150mm/6" Z: 400mm/16"	X: 300mm/12" Z: 400mm/16"
Resolution	0.01/0.001mm or 0.0005"/0.00005"	
Accuracy	X: 0.01mm Z: 0.025mm	
Coordinate accuracy	0.005mm	
Centering error	0.025/400mm	
Verticality	0.02/400mm	
Max moving speed	1M/Sec	
Measuring pressure	X: 1N Z: 1N	
Measuring system	Patented SYLVAC Capacitor	
Display	LCD 6 digits, Height 8.5mm	
Battery	CR2032x2 (3 2000h, 190mah)	
Battery durability	Li-ion battery	
Working temperature	5-40 °C	
Output type	RS232C	
Weight	43Kg	63Kg



ER COLLET HOLDER SK-B

ER COLLET HOLDER SK-B



DIN 69871

B model: with coolant through

Order Code	L	ØD	E	Clamping range Ød			
SK40B-ER16-60	60	30	54	2.0-10			
-100	100						
-150	150						
-ER20-60	60	34		54	2.0-13		
-100	100						
-120	120						
-150	150	42			54	2.0-16	
-ER25-60	60						
-100	100						
-150	150	50				54	2.0-20
-ER32-70	70						
-100	100						
-150	150	63	54				3.0-26
-ER40-80	80						
-100	100						
-150	150	30		84			2.0-10
SK50B-ER16-60	60						
-100	100						
-150	150	34			84		2.0-13
-ER20-100	100						
-150	150						
-ER25-100	100	42				84	2.0-16
-150	150						
-ER32-100	100						
-150	150	50	84				2.0-20
-200	200						
-ER40-100	100						
-150	150	63		84			3.0-26
-150	150						

Spanner, collets and pull studs not included
ER nut: see page 59; ER collets: see page 58;
spanner: see page 60; pull stud: see page 103

CATALOGUE No 2009 0501CNC

MACHINING CENTER TOOL HOLDERS AND ACCESSORIES



INTERNATIONAL MACHINE TOOLS AND EQUIPMENT INC
400-3601 HWY 7 East, Markham, ON, L3R 0M3
t.: 905-479-6772 f.: 905-479-9371 e.: imte@imte.ca

**IMTE**