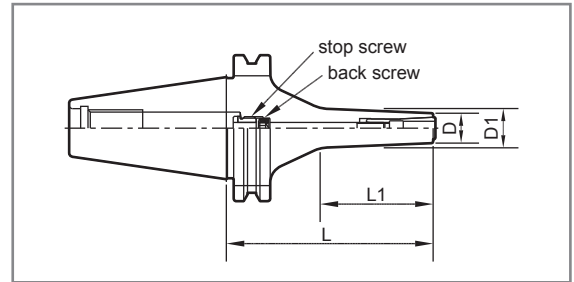


**DIN 69871 SK40**

**Features:**

- Runout: <math><5\mu\text{m}</math>(4xD)
- Smallest outside diameter  $\varnothing 13$
- Max speed: 20,000 r.p.m.; G2.5.
- Collet chuck designed without nut and with inner-holding collet. This can have strong stiffness rigidity and high stability.

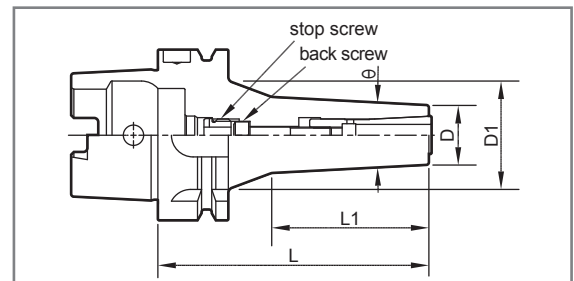


Ordering Code	Type of Holder	L	L1	$\varnothing D$	D1	Max r.p.m.	Hexagon Key	Back Screw	Stop Screw
0-342090-202	SK40-DC6-60	60	25	13	16	20,000	0-301940-642	M5 * L40	OP-M10
-204	SK40-DC6-90	90	48	13	18	20,000		M5 * L40	OP-M10
-206	SK40-DC6-120	120	62	13	19	20,000	0-301940-644	M5 * L40	OP-M10
-208	SK40-DC6-150	150	88	13	22	20,000		M5 * L95	OP-M10

**DIN 69893 HSK form A**

**Features:**

- Runout: <math><5\mu\text{m}</math>(4xD)
- Smallest outside diameter  $\varnothing 13$
- Max speed: 30,000 r.p.m.; G2.5.
- Collet chuck designed without nut and with inner-holding collet. This can have strong stiffness rigidity and high stability.



Ordering Code	Type of Holder	Gripping Range	L	L1	$\varnothing D$	D1	$\Theta$	Max r.p.m.	Hexagon Key	Back Screw	Stop Screw
0-306090-202	HSK63A-DC6-75	2~6	75	34	13	--	6°	30,000	0-301940-642	M5 * L20	OP-M10
-204	HSK63A-DC6-95	2~6	95	45	13	46	6°	30,000		M5 * L20	OP-M10
-206	HSK63A-DC6-120	2~6	120	53	13	48	6°	30,000		M5 * L40	OP-M10
-208	HSK63A-DC6-150	2~6	150	80	13	45	6°	30,000	0-301940-644	M5 * L80	OP-M10
-302	HSK63A-DC8-100	3~8	100	58	22	48	6°	30,000	0-301940-653	M6 * L25	OP-M12
-402	HSK63A-DC10-110	3~10	110	55	28	48	--	30,000	0-301940-663	M8 * L30	OP-M16
-502	HSK63A-DC12-120	3~12	120	55	34	50	--	30,000	0-301940-683	M10 * L35	OP-M18

## MAS/BT(JIS B 6339)

### Features:

- Runout: <math>< 5\mu\text{m}</math>(4xD)
- Smallest outside diameter  $\phi 13$
- Max speed: 30,000 r.p.m.; G2.5.
- Collet chuck designed without nut and with inner-holding collet. This can have strong stiffness rigidity and high stability.



Fig.1

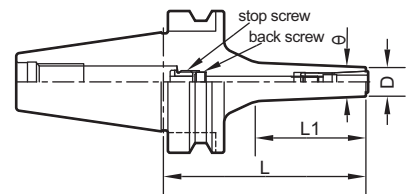
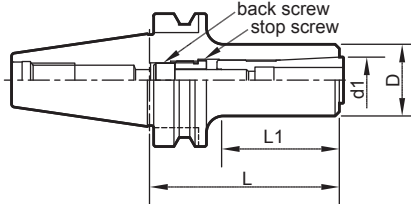


Fig.2

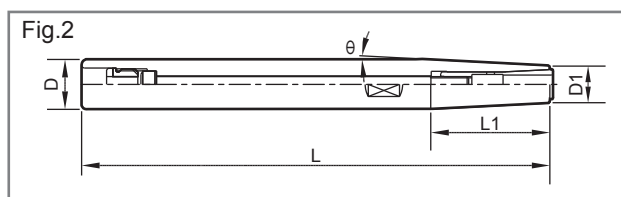
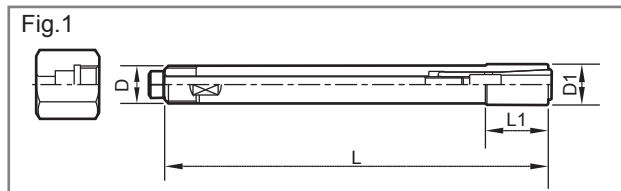


Ordering Code	Type of Holder	Gripping Range	L	L1	$\phi D$	$\theta$	Fig	Collet	Max r.p.m.	Hexagon Key	Back Screw	Stop Screw
0-330090-202	BT30-DC6-60	2~6	60	26	13	3°	1	DC6	30,000	0-301940-642	M5 * L40	OP-M10
-204	DC6-90	2~6	90	50	13	3°	1	DC6	30,000		M5 * L40	OP-M10
-502	DC12-70	3~12	70	45	34	--	2	DC12	30,000		0-301940-683	M10 * L35
0-340090-202	BT40-DC6-60	2~6	60	26	13	3°	1	DC6	30,000	0-301940-642	M5 * L40	OP-M10
-204	DC6-90	2~6	90	45	13	3°	1	DC6	30,000		M5 * L40	OP-M10
-206	DC6-120	2~6	120	60	13	3°	1	DC6	30,000		0-301940-644	M5 * L40
-208	DC6-150	2~6	150	76	13	3°	1	DC6	30,000	0-301940-653	M5 * L90	OP-M10
-302	DC8-90	3~8	90	53	22	3°	1	DC8	30,000		M6 * L25	OP-M12
-304	DC8-120	3~8	120	65	22	3°	1	DC8	30,000		M6 * L25	OP-M12
-402	DC10-90	3~10	90	51	28	--	2	DC10	30,000	0-301940-663	M8 * L30	OP-M16
-404	DC10-120	3~10	120	60	28	--	2	DC10	30,000		M8 * L30	OP-M16
-502	DC12-70	3~12	70	35	34	3°	2	DC12	30,000	0-301940-683	M10 * L35	OP-M18
-504	DC12-90	3~12	90	55	34	--	2	DC12	30,000		M10 * L35	OP-M18
-506	DC12-120	3~12	120	85	34	--	2	DC12	30,000		M10 * L35	OP-M18
-508	DC12-150	3~12	150	90	34	--	2	DC12	30,000		M10 * L35	OP-M18
0-350090-402	BT50-DC10-110	3~10	110	57	28	--	2	DC10	20,000		0-301940-663	M8 * L30
-404	DC10-150	3~10	150	75	28	--	2	DC10	20,000	0-301940-664	M8 * L30	OP-M16
-502	DC12-110	3~12	110	57	34	--	2	DC12	20,000	0-301940-683	M10 * L35	OP-M18
-504	DC12-150	3~12	150	70	34	--	2	DC12	20,000	0-301940-684	M10 * L35	OP-M18

Extension Adaptor

**Features:**

- Slim collet chuck designed without nut can get the smallest outside diameter of  $\varnothing 8.6\text{mm}$ . This can achieve the best effect on extended processing depth.
- Varies lengths of slim chuck provides different choices, the longest chuck is up to 300mm.



Ordering Code	Type of Holder	Fig	d	L	L1	$\varnothing D$	D1	$\theta$	Collet	Hexagon Key	Back Screw	Stop Screw	Stop Nut
0-329090-102	ST10-DC4-90	1	2~4	90	14.32	10	9	2°	DC4	0-301940~632	M4 * L70	--	TP-M8
-112	ST12-DC4-120	2	2~4	120	38	12	8.6	3°	DC4	0-301940~632	M4 * L85	OP-M8	--
0-329090-212	ST12-DC6-120	1	2~6	120	40	12	13	--	DC6	0-301940~642	M5 * L95	--	TP-M12
-222	ST16-DC6-150	2	2~6	150	38	16	13	3°	DC6		M5 * L100	OP-M10	--
-232	ST20-DC6-200	2	2~6	200	70	20	13	3°	DC6		M5 * L100	OP-M10	--
-242	ST25-DC6-250	2	2~6	250	115	25	13	3°	DC6	0-301940~643	M5 * L100	OP-M10	--
0-329090-312	ST20-DC8-150	2	3~8	150	28	20	19	2°	DC8	0-301940~652	M6 * L72	OP-M12	--
-322	ST20-DC8-200	2	3~8	200	28	20	19	2°	DC8		M6 * L120	OP-M12	--
0-329090-412	ST25-DC10-150	2	3~10	150	28	25	24	2°	DC10	0-301940~662	M8 * L80	OP-M16	--
-422	ST25-DC10-200	2	3~10	200	28	25	24	2°	DC10		M8 * L100	OP-M16	--
-432	ST25-DC10-250	2	3~10	250	28	25	24	2°	DC10		M8 * L150	OP-M16	--
0-329090-512	ST32-DC12-200	2	3~12	200	57	32	30	2°	DC12	0-301940~682	M10 * L120	OP-M18	--
-522	ST32-DC12-250	2	3~12	250	57	32	30	2°	DC12		M10 * L150	OP-M18	--
-532	ST32-DC12-300	2	3~12	300	57	32	30	2°	DC12		M10 * L150	OP-M18	--

always better

## Extension Adaptor



Fig.2  
Two Holders

Fig.1  
One Holder

## DC 4

Ordering Code	Type of Holder	Fig	Contains			
			Collet Chuck	Collet	Opener	Hexagon Key
0-329090-1123	SST12-DC4-120	1	ST12-DC4-120	DC4-2E x 1pc DC4-3E x 1pc DC4-4E x 1pc	0-301940~002	0-301940~632
-4123	SST10-DC4-90	1	ST10-DC4-90			
-5123	SST1012-DC4	2	ST10-DC4-90 ST12-DC4-120			

## DC 6

Ordering Code	Type of Holder	Fig	Contains			
			Collet Chuck	Collet	Opener	Hexagon Key
0-329090-0223	SST12-DC6-120	1	ST12-DC6-120	DC6-3E x 1pc DC6-4E x 1pc DC6-6E x 1pc	0-301940~002	0-301940~642
-1223	SST16-DC6-150	1	ST16-DC6-150			0-301940~642
-2223	SST20-DC6-200	1	ST20-DC6-200			0-301940~642
-3223	SST25-DC6-250	1	ST25-DC6-250			0-301940~643
-4223	SST1216-DC6	2	ST12-DC6-120 ST16-DC6-150			0-301940~642
-5223	SST2025-DC6	2	ST20-DC6-200 ST25-DC6-250			0-301940~642 0-301940~643

## DC 8

Ordering Code	Type of Holder	Fig	Contains			
			Collet Chuck	Collet	Opener	Hexagon Key
0-329090-1323	SST20-DC8-150	1	ST20-DC8-150	DC8-3E x 1pc DC8-4E x 1pc DC8-6E x 1pc DC8-8E x 1pc	0-301940~002	0-301940~652
-2323	SST20-DC8-200	1	ST20-DC8-200			

## DC 10

Ordering Code	Type of Holder	Fig	Contains			
			Collet Chuck	Collet	Opener	Hexagon Key
0-329090-1423	SST25-DC10-150	1	ST25-DC10-150	DC10-3E x 1pc DC10-4E x 1pc DC10-6E x 1pc DC10-8E x 1pc DC10-10E x 1pc	0-301940~002	0-301940~662
-2423	SST25-DC10-200	1	ST25-DC10-200			
-3423	SST25-DC10-250	1	ST25-DC10-250			

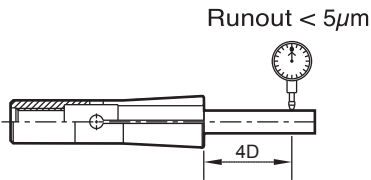
## DC 12

Ordering Code	Type of Holder	Fig	Contains			
			Collet Chuck	Collet	Opener	Hexagon Key
0-329090-1523	SST32-DC12-200	1	ST32-DC12-200	DC12-3E x 1pc DC12-4E x 1pc DC12-6E x 1pc DC12-8E x 1pc DC12-10E x 1pc DC12-12E x 1pc	0-301940~927	0-301940~682
-2523	SST32-DC12-250	1	ST32-DC12-250			
-3523	SST32-DC12-300	1	ST32-DC12-300			

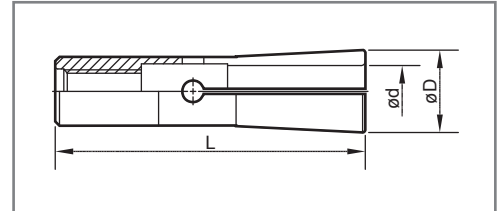
**DC-E Collet**

**Features:**

- The design of DC-E collets is emphasized on increasing the clamping force of end mills.



Type	DC4	DC6	DC8	DC10	DC12
D	7	9.6	15	19.1	22
L	31	36	45	52	60



DC4		DC6		DC8		DC10		DC12	
Ordering Code	Size (mm)	Ordering Code	Size (mm)	Ordering Code	Size (mm)	Ordering Code	Size (mm)	Ordering Code	Size (mm)
0-300090-102	2.0	0-300090-203	3.0	0-300090-303	3.0	0-300090-403	3.0	0-300090-503	3.0
0-300090-103	3.0	0-300090-204	4.0	0-300090-304	4.0	0-300090-404	4.0	0-300090-504	4.0
0-300090-104	4.0	0-300090-206	6.0	0-300090-306	6.0	0-300090-406	6.0	0-300090-506	6.0
				0-300090-308	8.0	0-300090-408	8.0	0-300090-508	8.0
						0-300090-410	10.0	0-300090-510	10.0
								0-300090-512	12.0

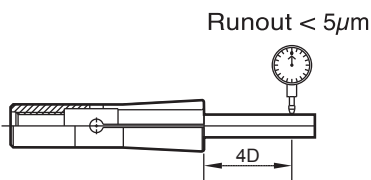
Size: DC4, DC6 diameter 3.175 is available on request.

Order example: 300090-102 DC4-2E

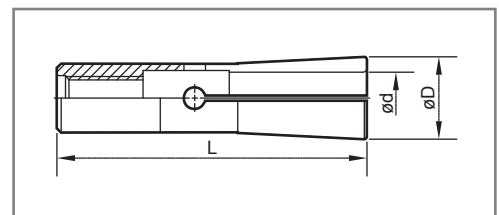
**DC Collet**

**Features:**

- DC6 collets can clamp any type of drills, reamers and taps below ø6mm.
- Gripping range of each type of collets is 0.25mm.



Type	DC6
D	9.8
L	36



DC6			
Ordering Code	Size (mm)	Ordering Code	Size (mm)
0-300092-200	2	0-300092-425	4.25
-225	2.25	-450	4.5
-250	2.5	-475	4.75
-275	2.75	-500	5
-300	3	-525	5.25
-325	3.25	-550	5.5
-350	3.5	-575	5.75
-375	3.75	-600	6
-400	4		



Ordering Code	Type	ød	Quantity
0-300090-0405	SDC10E-5	3, 4, 6, 8, 10	5pcs
-0506	SDC12E-6	3, 4, 6, 8, 10, 12	6pcs
-0217	SDC6-17	2~6	17pcs

## Opener



Ordering Code
0-301940-002

## Hexagon Key



Ordering Code	mm	L
0-301940-632	3	100
-642	4	100
-643	4	150
-652	5	100
-662	6	100
-682	8	100

## Back Screw



Ordering Code	Type	Thread	L
0-301940-0460	M4 * L60	M4	60
-0485	M4 * L85	M4	85
-0555	M5 * L55	M5	55
-0595	M5 * L95	M5	95
-05100	M5 * L100	M5	100
-0670	M6 * L70	M6	70
-06120	M6 * L120	M6	120
-0880	M8 * L80	M8	80
-08100	M8 * L100	M8	100
-08150	M8 * L150	M8	150
-10120	M10 * L120	M10	120
-10150	M10 * L150	M10	150

## Stop Screw



Ordering Code	Type	Thread
0-301940-OPM8	OP-M8	M8(L)
-OPM10	OP-M10	M10(L)
-OPM12	OP-M12	M12(L)
-OPM16	OP-M16	M16(L)
-OPM18	OP-M18	M18(L)

Thread of stop screw is left-hand thread.

## Stop Nut

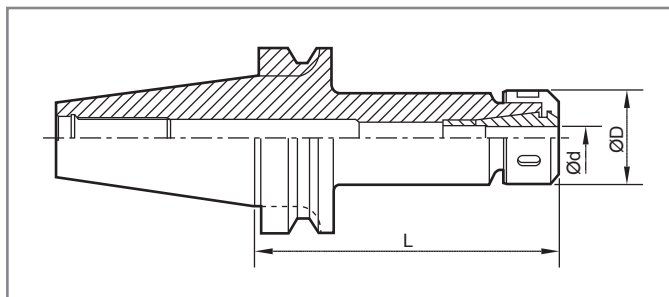


Ordering Code	Type	Thread
0-301940-TPM8	TP-M8	M8(L)
-TPM12A	TP-M12A	M12(L)
-TPM12	TP-M12	M12(L)

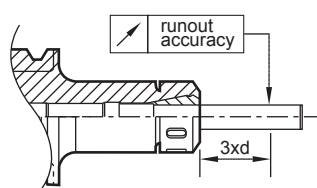
Thread of stop nut is left-hand thread.

High Precision Collet Chuck-LT series

The LT spring collet chuck is special designed for LT high precision collets. 3 degree taper is for high clamping force. The chuck nut is symmetrical to the rotating center for increasing running at higher spindle speed.



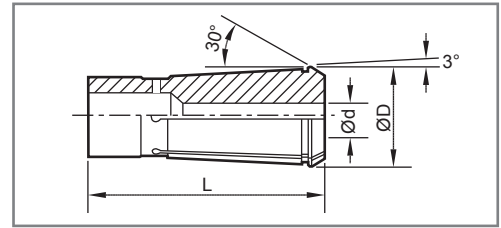
- Pre-balanced for high speed:  
 BT30- 30000 r.p.m. G2.5  
 BT40- 20000 r.p.m. G2.5  
 BT50- 10000 r.p.m. G2.5
- High concentricity accuracy:  
 0.004 mm at 3xd – LT6, LT10  
 0.005 mm at 3xd – LT16  
 0.006 mm at 3xd – LT 25



Taper Shank	Ordering Code	Type of Holder	L	D	d
BT30	330180-202	BT30-LT6-70	70	20	3-6
	-204	BT30-LT6-100	100	20	3-6
	-302	BT30-LT10-70	70	34	2-10
	-304	BT30-LT10-100	100	34	2-10
	-402	BT30-LT16-70	70	46	4-16
	-404	BT30-LT16-100	100	46	4-16
	-502	BT30-LT25-70	70	56	12-25
BT40	340180-202	BT40-LT6-70	70	20	3-6
	-204	BT40-LT6-100	100	20	3-6
	-302	BT40-LT10-70	70	34	2-10
	-304	BT40-LT10-100	100	34	2-10
	-306	BT40-LT10-125	125	34	2-10
	-308	BT40-LT10-150	150	34	2-10
	-402	BT40-LT16-70	70	46	4-16
	-404	BT40-LT16-100	100	46	4-16
	-406	BT40-LT16-125	125	46	4-16
	-408	BT40-LT16-150	150	46	4-16
	-504	BT40-LT25-100	100	56	12-25
	-506	BT40-LT25-125	125	56	12-25
	-508	BT40-LT25-150	150	56	12-25
BT50	350180-304	BT50-LT10-100	100	34	2-10
	-306	BT50-LT10-125	125	34	2-10
	-308	BT50-LT10-150	150	34	2-10
	-404	BT50-LT16-100	100	46	4-16
	-406	BT50-LT16-125	125	46	4-16
	-408	BT50-LT16-150	150	46	4-16
	-504	BT50-LT25-100	100	56	12-25
	-506	BT50-LT25-125	125	56	12-25
-508	BT50-LT25-150	150	56	12-25	

## High Precision Spring Collets-LT series

- Special diameter for clamping tap and drill for pre-bore of tapping is available on request.



Ordering Code	Type	d	L	D	Runout Accuracy
300180-203~206	LT6	3, 4, 5, 6	40.6	12.1	0.004
300180-303~310	LT10	3, 4, 5, 6, 7, 8, 9, 10	46.5	17.3	0.004
300180-404~416	LT16	4, 6, 8, 10, 12, 16	60	26.4	0.005
300180-512~525	LT25	12, 16, 20, 25	70	33.3	0.006

## LT Collet Chuck Nuts

### CNR Type

Cylindrical shape for running at high speed, ring-type spanner is required.

### CN Type

Economical type, hook spanner is required, for regular application.

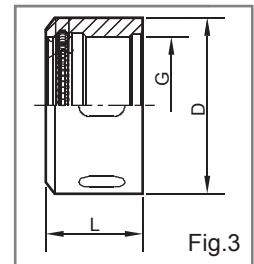
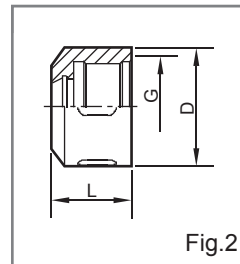
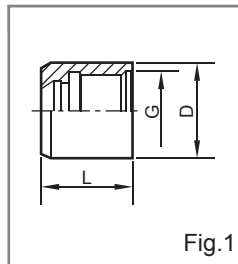
### CNK Type

With bearing type ring, higher clamping force for heavy cutting, hook spanner is required.

CNR

CN

CNK



Ordering Code	Fig.	Type	L	D	d	G
301180-202	1	CNR-LT6	19	20	18	M16X1.0P
-302	2	CN-LT10	30	34	24	M25X1.25P
-304	1	CNR-LT10	30	35	24	M25X1.25P
-402	2	CN-LT16	27	46	32	M36X1.5P
-502	3	CNK-LT25	32	58	50	M47X1.5P

## Spanner

### Hook type:

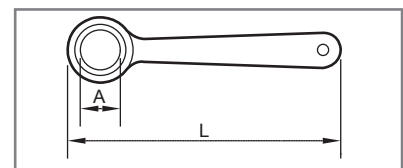
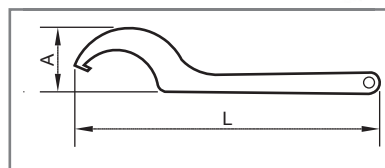
For CN and CNK Type nuts, made of hardened steel.

### Ring type:

For clamping CNR type nut, LT06 and LT10. The clamping mechanism is ratchet bearing.

Hook Type

Ring Type

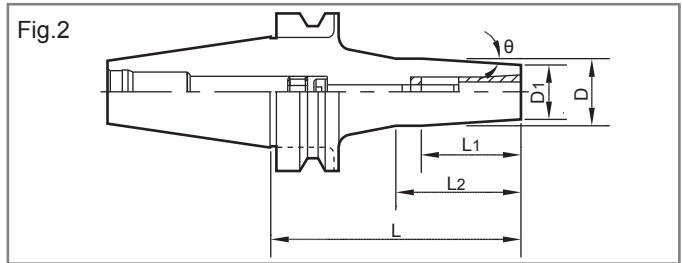
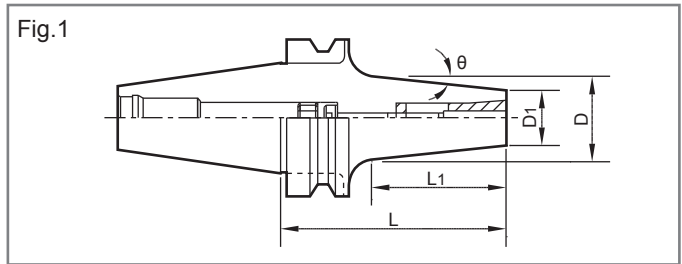


Ordering Code	Fig.	Type	A	L	For Nut
301180-312	Hook Type	SP-LT10	36	190	CN
-412	Hook Type	SP-LT16	22	235	CN
-512	Hook Type	SP-LT25	47	259	CNK
-212	Ring Type	SPB-LT6	20	160	CNR
-314	Ring Type	SPB-LT10	35	200	CNR



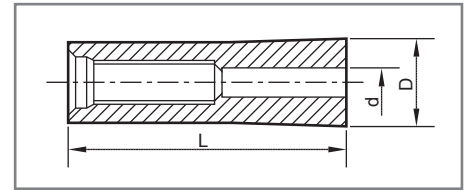
High Precision Collet Chuck-LB series

- The spring chuck is made of high alloy steel, sub-zero treatment for stable size and hardness, fully precision ground for high accuracy clamping.
- The collet chucks are pre-balanced for high speed:  
 BT30- 30000 r.p.m. G2.5  
 BT40- 20000 r.p.m. G2.5  
 BT50- 10000 r.p.m. G2.5



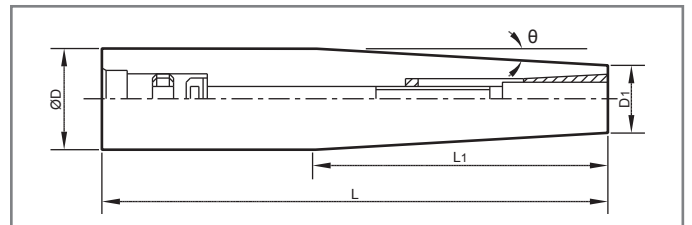
Taper Shank	Ordering Code	Type of Holder	Fig.	L	L1	D	D1	θ	Collet
BT30	330190-202H	BT30-LB6-70(H)	1	70	35	19	16	2°	LB06-3-6
	-202	BT30-LB6-70	1	70	35	17.5	14	3°	
	-204	BT30-LB6-100	2	100	50	17.5	14	2°	
BT30	330190-302	BT30-LB12-75	2	75	52	34	34	-	LB12-04~12
BT40	340190-202	BT40-LB6-70	1	70	35	17.5	14	3°	LB06-3-6
	-204	BT40-LB6-100	2	100	50	20	14	3°	
	-206	BT40-LB6-125	2	125	70	20	14	2°	
	-208	BT40-LB6-150	2	150	70	20	14	2°	
BT40	340190-302	BT40-LB12-75	2	75	40	40	34	4°	LB12-04~12
	-304	BT40-LB12-100	2	100	67	40	34	3°	
	-306	BT40-LB12-125	1	125	90	40	34	2°	
	-308	BT40-LB12-150	1	150	115	40	34	1°	
BT50	350190-204	BT50-LB6-100	1	100	50	20	14	3°	LB06-3-6
	-206	BT50-LB6-125	2	125	70	20	14	2°	
	-208	BT50-LB6-150	2	150	70	20	14	2°	

## High Precision Spring Collets-LB series



Ordering Code	Type	d	L	D
300190-203	LB6	3	38	10
300190-204	LB6	4	38	10
300190-205	LB6	5	38	10
300190-206	LB6	6	38	10
300190-304	LB12	4	64	22
300190-306	LB12	6	64	22
300190-308	LB12	8	64	22
300190-310	LB12	10	64	22
300190-312	LB12	12	64	22

## LB Cylindrical shank

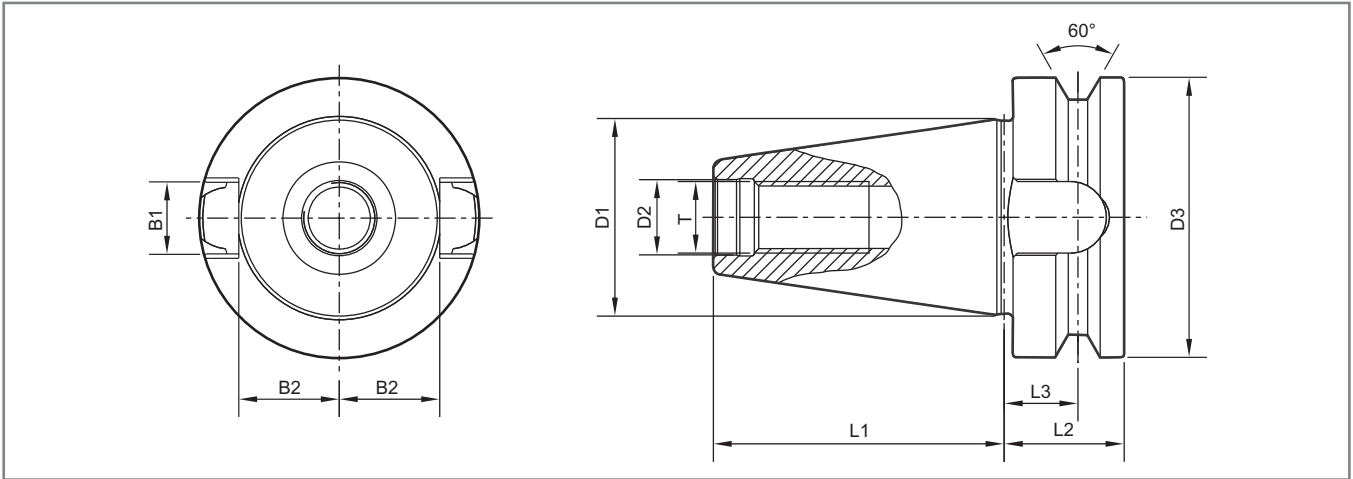


Ordering Code	Type of Holder	L	L1	D	D1	θ
329190-202	C16-LB6-150	150	30	16	14	2°
-302	C20-LB6-200	200	70	20	14	2°
-402	C25-LB6-250	250	100	25	14	3°

Specifications of JIS B6339 BT30, BT40, BT50

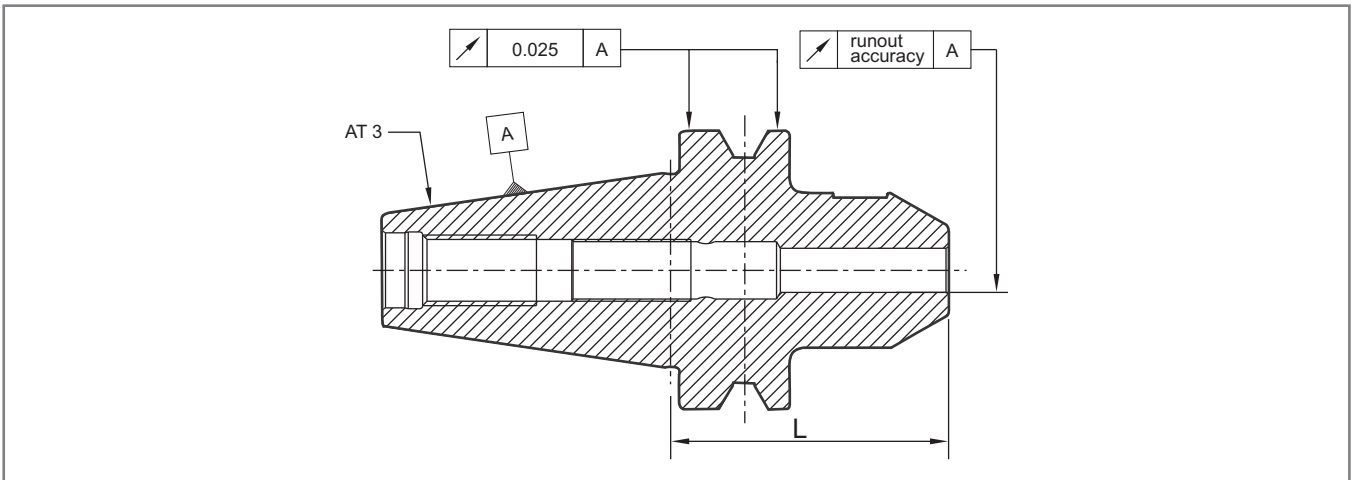
Features:

- Toolholders case-hardened 60 – 2 HRC
- Tensile strength in the core at least 950 N/mm<sup>2</sup>
- Taper in tolerance quality AT 3



Length [mm]	D1	D2	D3	L1	L2	L3	T	B1	B2
BT30	31.75	12.5	46	48.4	22	20	M12	16.1	16.3
BT40	44.45	17	63	65.4	27	25	M16	16.1	22.6
BT50	69.75	25	100	101.8	38	35	M24	25.7	35.4

Runout Accuracy

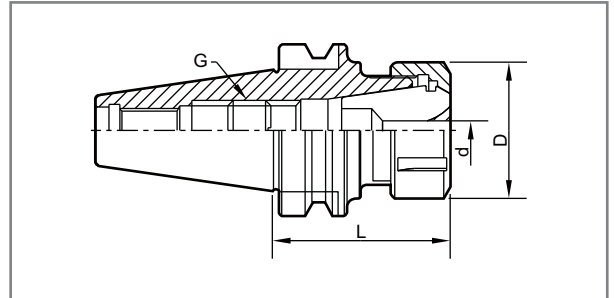


Gage length	L < 160	L ≥ 160
<b>max. runout tolerance in mm</b>		
Shrink fit chuck	0.003	0.004
Collet chuck ER	0.003	0.004
KCH spring collet chuck	0.003	0.005
Side lock holder	0.003	0.004
Collet chuck OZ	0.003	0.004
Face mill arbor	0.006	0.006
Combination shell end mill arbor	0.006	0.006
Morse taper adapter	0.008	-
Jacob drill chuck adapter	0.005	-
NC drill chuck	0.050	-
Power drill chuck	0.050	-

## ER Spring Collet Chuck

### Features:

- The most popular collet chucks. One chuck can be used for end mills, drills, reamers and taps.
- Thread of the spring collet chuck and internal taper are precision ground. Thread of clamping nut is hardened and turned for achieving high clamping power.
- Backup screw is not included, please order as optional item.
- Chuck body is pre-balanced G6.3/8000 r.p.m. (standard grade)



- Higher pre-balanced grade is available on request, the additional charge is needed.

Optional Pre. balanced	
G2.5	18000 r.p.m.
G2.5	25000 r.p.m.

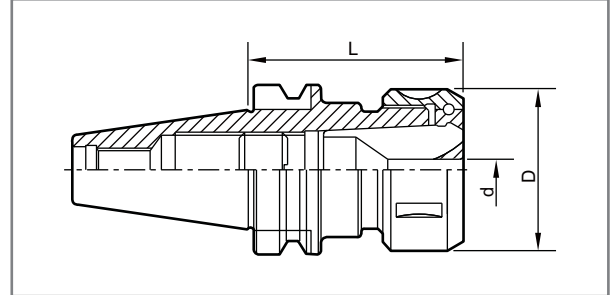


Taper Shank	Ordering Code	Type of Holder	L	D	d	Backup Screw G
BT30	330100-302	BT30-ER16-70	70	28	0.5-10	M10x1.5
	-402	-ER20-70	70	34	1-13	M12x1.75
	-602	-ER32-60	60	50	2-20	M12x1.75
	-702	-ER40-80	80	63	3-26	M12x1.75
BT40	340100-302	BT40-ER16-70	70	28	0.5-10	M10x1.5
	-304	-ER16-100	100			
	-402	-ER20-70	70	34	1-13	M14x2.0
	-404	-ER20-100	100			
	-501	-ER25-70	70	42	1-16	M12x1.75
	-504	-ER25-100	100			
	-506	-ER25-150	150	50	2-20	M16x2.0
	-602	-ER32-70	70			
-604	-ER32-100	100	63	3-26	M16x2.0	
-702	-ER40-80	80				
BT50	350100-302	BT50-ER16-100	100	28	0.5-10	M10x1.5
	-304	-ER16-150	150			
	-402	-ER20-100	100	34	1-13	M12x1.75
	-404	-ER20-150	150			
	-502	-ER25-100	100	42	1-16	M16x2.0
	-504	-ER25-150	150			
	-602	-ER32-100	100	50	2-20	M20x2.5
	-604	-ER32-150	150			
	-606	-ER32-200	200	63	3-26	M20x2.5
	-702	-ER40-80	80			
	-704	-ER40-100	100	63	3-26	M20x2.5
	-706	-ER40-150	150			
-708	-ER40-200	200				

**OZ Spring Collet Chuck**

**Features:**

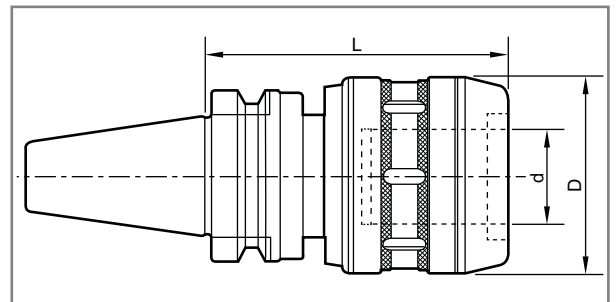
- Supplied with backup screw and clamp nut.
- Spanner is optional.
- Please refer to page 40 for OZ collets.



Taper Shank	Ordering Code	Type of Holder	L	D	d
BT40	340110-252	BT40-OZ25-80	80	60	6-25
	-322	-OZ32-90	90	78	6-32
BT50	350110-252	BT50-OZ25-90	90	60	6-25
	-322	-OZ32-100	100	78	6-32

**KCH Spring Collet Chuck**

- Supplied with a spanner.
- Please refer to page 43 for KCH collets.
- DIN 69871 type chuck, see page 26.

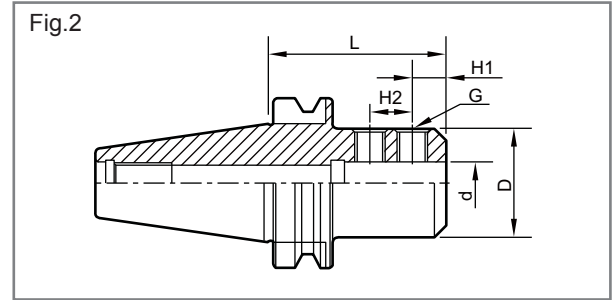
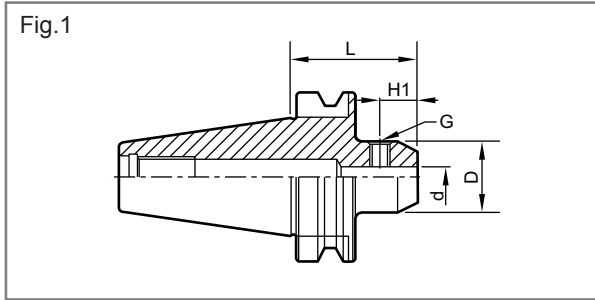


Taper Shank	Ordering Code	Type of Holder	Clamping Range	L	D	d	Collet
BT30	330150-202	BT30-KCH20-80	Ø6 - Ø20	80	54	20	C20
BT40	340150-202	BT40-KCH20-75	Ø6 - Ø20	75	54	20	
	-204	-KCH20-105	Ø6 - Ø20	105	54	20	
	-206	-KCH20-135	Ø6 - Ø20	135	54	20	
	-402	BT40-KCH32-105	Ø6 - Ø32	105	68	32	
	-404	-KCH32-135	Ø6 - Ø32	135	68	32	
BT50	350150-204	BT50-KCH20-105	Ø6 - Ø20	105	54	20	C20
	-206	-KCH20-135	Ø6 - Ø20	135	54	20	
	-208	-KCH20-165	Ø6 - Ø20	165	54	20	
	-402	BT50-KCH32-105	Ø6 - Ø32	105	68	32	C32
	-404	-KCH32-135	Ø6 - Ø32	135	68	32	
	-406	-KCH32-165	Ø6 - Ø32	165	68	32	
	-602	BT50-KCH42-105	Ø6 - Ø42	105	87	42	

## Side Lock Holder

### Features:

- For clamping the End Mill with DIN 1835 Form B shank.
- The End Mill Holders are supplied with set screws which are made according to DIN 1835 B-M14x16.

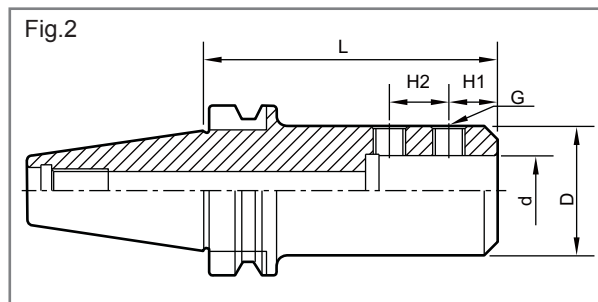
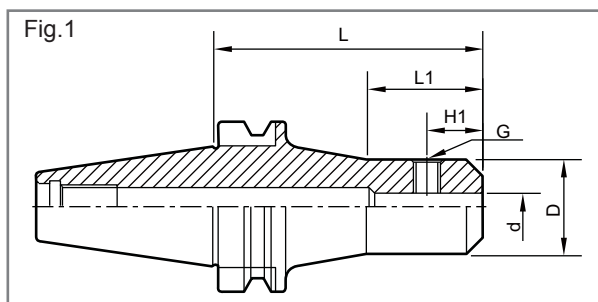


Taper Shank	Ordering Code	Type of Holder	Fig.	d	L	D	H1	H2	G
BT30	330160-062	BT30-SL6-60	1	6	60	25	18	-	M6
	-082	-SL8-60		8		28	18		M8
	-102	-SL10-60		10		35	20		M10
	-122	-SL12-60		12		42	22.5		M12
	-161	-SL16-70		16	75	48	24		M14
	-202	-SL20-75		20		52	25		M16
BT40	340160-062	BT40-SL6-75	1	6	75	25	18	-	M6
	-082	-SL8-75		8		28	18		M8
	-102	-SL10-75		10		35	20		M10
	-122	-SL12-75		12		42	22.5		M12
	-162	-SL16-75		16		48	24		M14
	-202	-SL20-75		20		52	25		M16
	-252	-SL25-90	2	25	90	60	24	25	M16
	-322	-SL32-90		32				28	M16
BT50	350160-062	BT50-SL6-105	1	6	105	25	18	-	M6
	-082	-SL8-105		8		28	18		M8
	-102	-SL10-105		10		35	20		M10
	-122	-SL12-105		12		42	22.5		M12
	-162	-SL16-105		16		48	24		M14
	-202	-SL20-105		20		52	25		M16
	-252	-SL25-105	2	25	105	60	24	25	M16
	-322	-SL32-105		32				72	28
	-402	-SL40-120		40	120	80	27	32	
	-422	-SL42-120		42					30

**Side Lock Holder**

**Features:**

- Extra-length extension design.
- For clamping the End Mill with DIN 1835 Form B shank.
- The End Mill Holders are supplied with set screws which are made according to DIN 1835 B-M14x16.

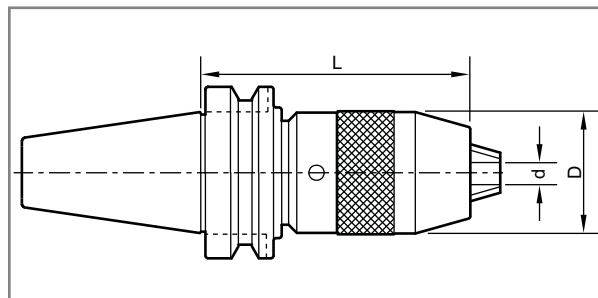


Taper Shank	Ordering Code	Type of Holder	Fig.	dh6	L	D	H1	H2	G
BT40	340160-066	BT40-SL6-120	1	6	120	25	18	-	M6
	-086	-SL8-120		8		28			
	-106	-SL10-120		10		35	20		M10
	-126	-SL12-120		12		42	22.5		
BT50	350160-126	BT50-SL12-150	1	12	150	42	22.5	-	M12
	-166	-SL16-150		16		48	24		M14
	-206	-SL20-150	2	20	200	52	25	-	M16
	-207	-SL20-200							
	-208	-SL20-250	25	150	200	60	24	25	M16
	-256	-SL25-150							
	-257	-SL25-200	32	150	200	72	28	28	M20
	-258	-SL25-250							
	-326	-SL32-150	42	150	200	80	30	32	M20
	-327	-SL32-200							
	-328	-SL32-250							
	-427	-SL42-200							

- Low stock item.

**NC Drill Chuck**
**Features:**

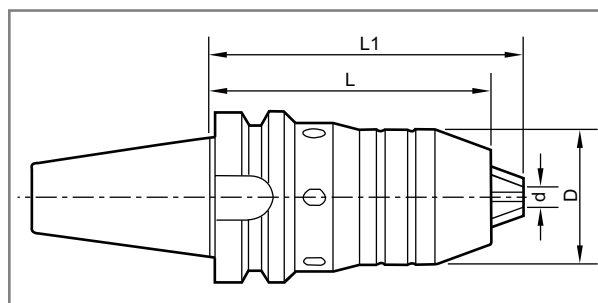
- Supplied with a spanner.



Taper Shank	Ordering Code	Type of Holder	d Capacity	D	L
BT30	330190-103	BT30-APU08-90	0-8	36.6	90
	-202	-APU13-105	1-13	51.5	105
BT40	340190-102	BT40-APU08-90	0-8	36.3	90
	-202	-APU13-90	1-13	51.5	90
	-302	-APU16-115	3-16	58	115
BT50	350190-202	BT50-APU13-125	1-13	51.5	125
	-302	-APU16-135	3-16	58	135

**Power Drill Chuck**
**Features:**

- For Clockwise and Counter clockwise rotation of cutting tools.
- High clamping power, high accuracy.
- Supplied with a spanner.

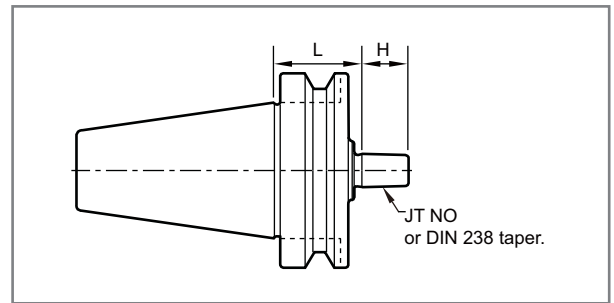


Taper Shank	Ordering Code	Type of Holder	d Capacity	D	L	L1
BT30	330192-102	BT30-SPH08-83	0-8	37.5	83	92/83
	-202	-SPH13-102	0-13	50	102	115/102
BT40	340192-102	BT40-SPH08-87	0-8	37.5	87	96/87
	-202	-SPH13-102	0-13	50	102	115/102
	-302	-SPH16-108.5	3-16	57	108.5	121.5/108.5
BT50	350192-102	BT50-SPH08-98	0-8	37.5	98	106/98
	-202	-SPH13-115.5	0-13	50	115.5	126.2/115.5
	-302	-SPH16-119.5	3-16	57	119.5	132.2/119.5



### Drill Chuck Adaptor

- JACOBS taper and DIN 238 taper

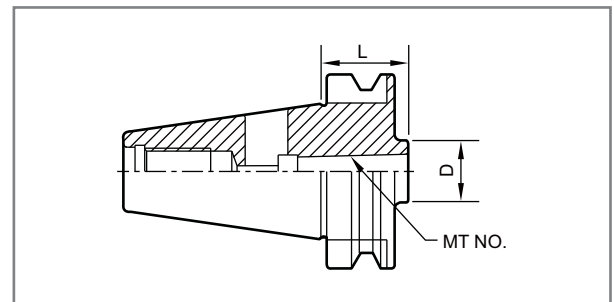


Taper Shank	Ordering Code	Type of Holder	Taper No.	H	L
BT30	330200-602	BT30-JTA6-45	JT6	24	45
BT40	340200-602	BT40-JTA6-45	JT6	24	45
BT50	350200-602	BT50-JTA6-45	JT6	24	45
	-604	-JTA6-105	JT6	24	105

### Morse Taper Adaptor

**Features:**

- For adapting drills with Morse Taper Shank (DIN 228 Form B).

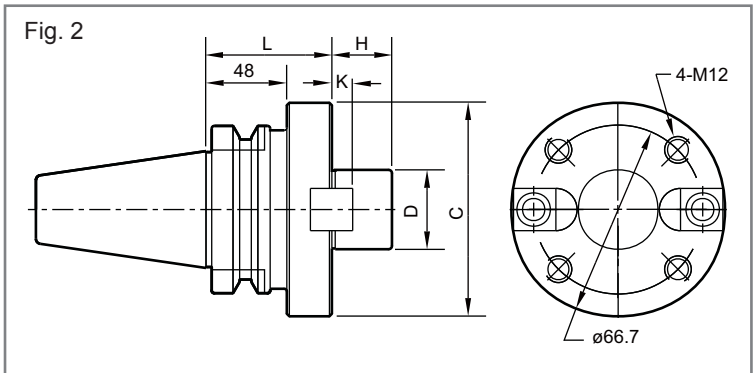
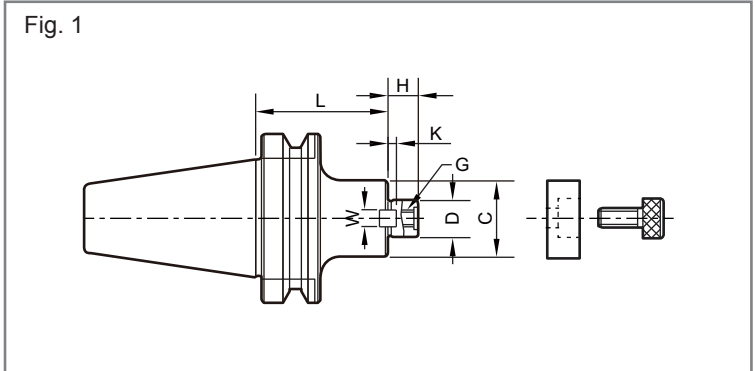


Taper Shank	Ordering Code	Type of Holder	MT No.	L	D
BT30	330210-102	BT30-MTA1-45	1	45	25
	-202	-MTA2-60	2	60	32
	-302	-MTA3-80	3	80	40
BT40	340210-102	BT40-MTA1-45	1	45	25
	-104	-MTA1-120		120	
	-202	-MTA2-45	2	45	32
	-204	-MTA2-120		120	
	-302	-MTA3-75	3	75	40
	-304	-MTA3-135		135	
BT50	-402	-MTA4-90	4	90	50
	350210-102	BT50-MTA1-45	1	45	25
	-104	-MTA1-120		120	
	-106	-MTA1-180		180	
	-202	-MTA2-45	2	45	32
	-204	-MTA2-135		135	
	-206	-MTA2-180	3	180	40
	-302	-MTA3-60		60	
	-304	-MTA3-150		150	
	-306	-MTA3-180	4	180	50
	-402	-MTA4-75		75	
-404	-MTA4-180	5	180	65	
-502	-MTA5-105		105		
-504	-MTA5-210		210		

- MTB adapter is available on request.

**Face Mill Arbor**
**Features:**

- All arbors are supplied with drive key and clamp screw.
- For Inch bore Face Milling Cutters.



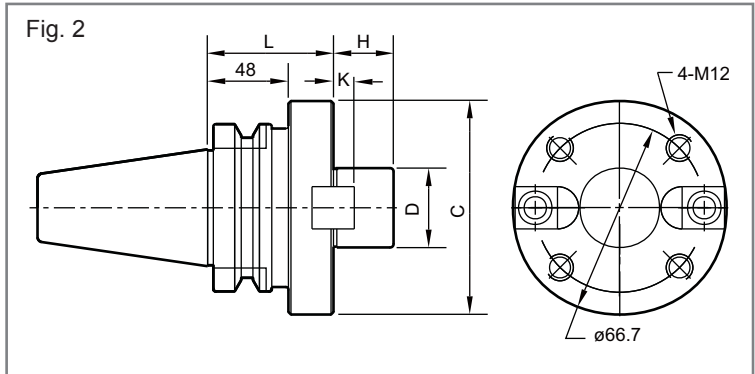
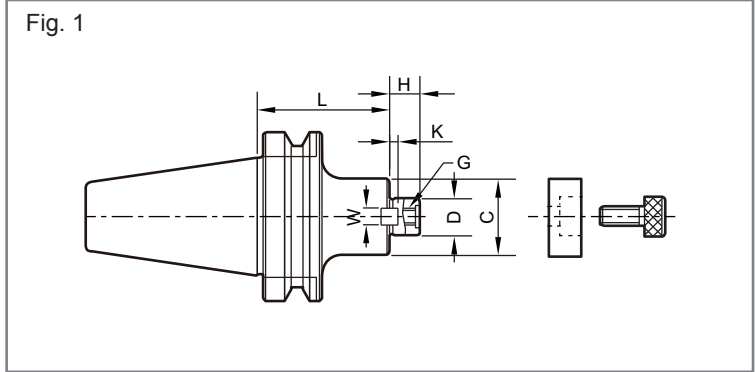
Taper Shank	Dia. of Cutter	D	Oredring Code	Type of Holder	Fig.	C	H	W	G	L	
BT30	Ø76	25.4	330300-302	BT30-FMA25.4-45	1	45				45	
	Ø76	25.4	-304	-FMA25.4-60						60	
BT40	Ø76	25.4	340300-302	BT40-FMA25.4-45	1	55	20	9.5	M12	45	
	Ø76	25.4	-304	-FMA25.4-60	2					60	
	Ø76	25.4	-306	-FMA25.4-105						105	
	BT40	Ø102	31.75	-402	-FMA31.75-45	1	60	22	12.7		45
		Ø102	31.75	-404	-FMA31.75-75						75
		Ø102	31.75	-406	-FMA31.75-105	2					105
		Ø127	38.1	-502	-FMA38.1-60	1	78	23	15.9	M16	60
BT50	Ø76(80)	25.4	350300-302	BT50-FMA25.4-45	1	63	20	9.5	M12	45	
	Ø76(80)	25.4	-304	-FMA25.4-75		75					
	Ø76(80)	25.4	-306	-FMA25.4-105		105					
	Ø76(80)	25.4	-308	-FMA25.4-125	2					125	
	Ø100(102)	31.75	-402	-FMA31.75-45	1	70	22	12.7		45	
	Ø100(102)	31.75	-404	-FMA31.75-75						75	
	Ø100(102)	31.75	-406	-FMA31.75-105	2					105	
	Ø100(102)	31.75	-408	-FMA31.75-150		150					
	BT50	Ø125	38.1	-502	-FMA38.1-45	1	82	23	15.9		45
		Ø125	38.1	-504	-FMA38.1-75		80				75
		Ø152	50.8	-602	-FMA50.8-45		95	24	19.05		45
		Ø152	50.8	-604	-FMA50.8-75						75

- Low stock item.

**Face Mill Arbor**

**Features:**

- All arbors are supplied with drive key and clamp screw.
- For Metric bore Face Milling Cutters.



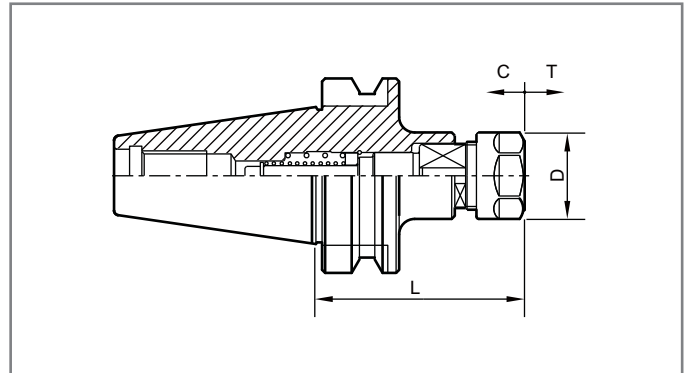
Taper Shank	Dia. of Cutter	D	Ordering Code	Type of Holder	Fig.	C	H	W	G	L
BT30	Ø50,Ø63	22	330310-202	BT30-FMB22-45	1	45	18	10	M10	45
	Ø80	27	-302	-FMB27-60		70	20	12	M12	60
BT40	Ø50,Ø63	22	340310-202	BT40-FMB22-60	1	45	18	10	M10	60
			-204	-FMB22-105						105
	Ø80	27	-302	-FMB27-60		60				
			-304	-FMB27-105		105				
			-402	-FMB32-60		60				
Ø100	32	-402	-FMB32-60	85	22	14	M16	60		
BT50	Ø50,Ø63	22	350310-202	BT50-FMB22-60	1	45	18	10	M10	60
			-204	-FMB22-105						105
			-206	-FMB22-150						150
			-208	-FMB22-200						200
			-210	-FMB22-250						250
	Ø80	27	-302	-FMB27-60		60				
			-304	-FMB27-105		105				
			-305	-FMB27-125		125				
			-306	-FMB27-150		150				
	Ø100	32	-402	-FMB32-60		60				
			-404	-FMB32-105		105				
			-406	-FMB32-150		150				
	Ø125	40	-502	-FMB40-60		60				
			-504	-FMB40-105		105				
	Ø160-360	60	-602	-FMB60-75		2	90	26	16	M20

• Low stock item.

## TER Tapping system

### Features:

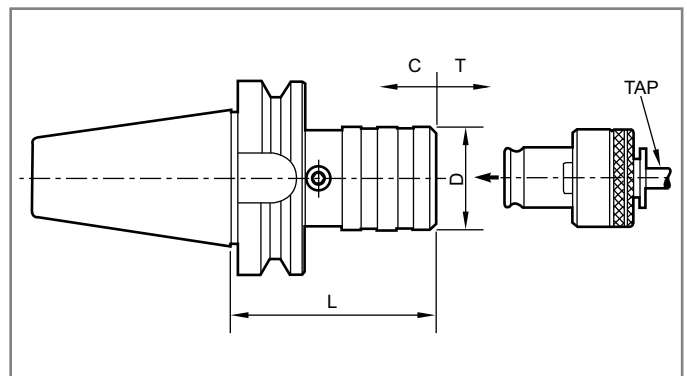
- For tapping on Machining Centers and CNC Milling Machine with or without rigid-tap function.



Taper Shank	Ordering Code	Type of Holder	Tapping Capacity	D	L	T	C
BT30	330290-302	BT30-TER16-75	M3-M10	28	75	8	4
	-402	-TER20-100	M4-M16	34	100		
BT40	340290-303	BT40-TER16-75	M3-M10	28	75	8	4
	-304	-TER16-100	M3-M12	28	100		
	-402	-TER20-80	M4-M16	34	80		
	-404	-TER20-100	M4-M16	34	100		
	-602	-TER32-100	M8-M27	50	100	10	
BT50	350290-302	BT50-TER16-100	M3-M12	28	100	8	4
	-304	-TER16-150	M3-M10	28	150		
	-402	-TER20-120	M4-M16	34	120		
	-404	-TER20-150	M4-M16	34	150	10	
	-602	-TER32-100	M8-M27	50	100		
	-604	-TER32-150	M8-M27	50	150		

## THLK Quick Change Tapping System

- With length compensation on compression and extension.
- Please refer to page 57, 58 for tapping adapters.

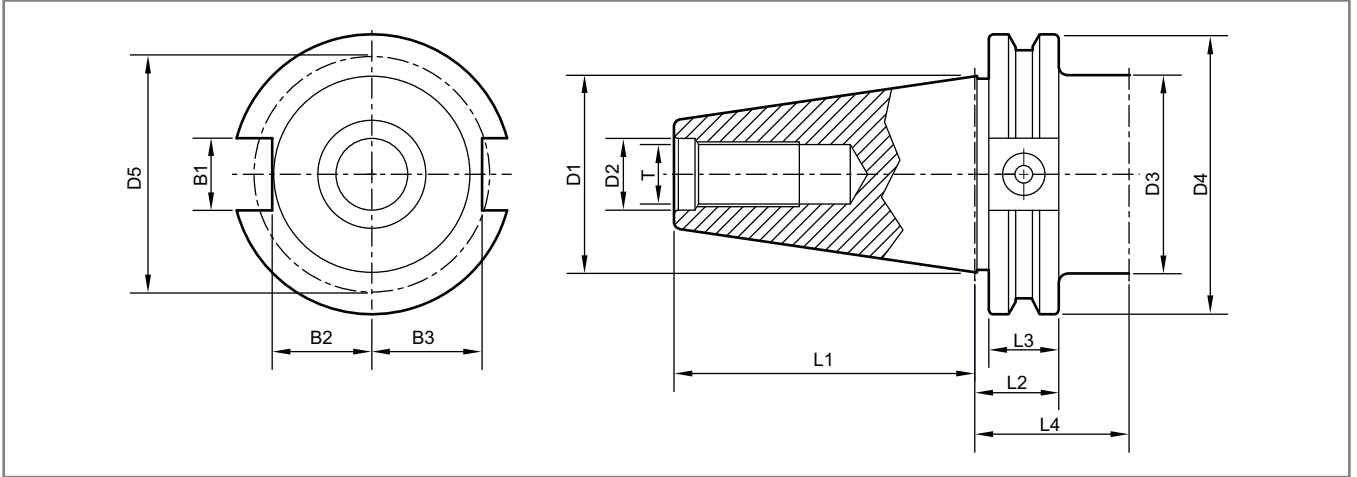


Taper Shank	Ordering Code	Type of Holder	Size of Tap Collet	Tapping Capacity	D	L	C	T
BT30	330710-102	BT30-THLK115	1	M3-M12	36	57	6	12
	-202	-THLK225	2	M8-M22	53	95	12.5	12.5
BT40	340710-102	BT40-THLK115	1	M3-M12	36	62	6	12
	-202	-THLK225	2	M8-M22	53	93.5	12.5	12.5
	-302	-THLK340	3	M16-38	78	164	20	20
BT50	350710-102	BT50-THLK115	1	M3-M12	36	71	6	12
	-202	-THLK225	2	M8-M22	53	102.5	12.5	12.5
	-302	-THLK340	3	M16-M38	78	142	20	20

Specifications of ANSI B5.50 (inch)

**Features:**

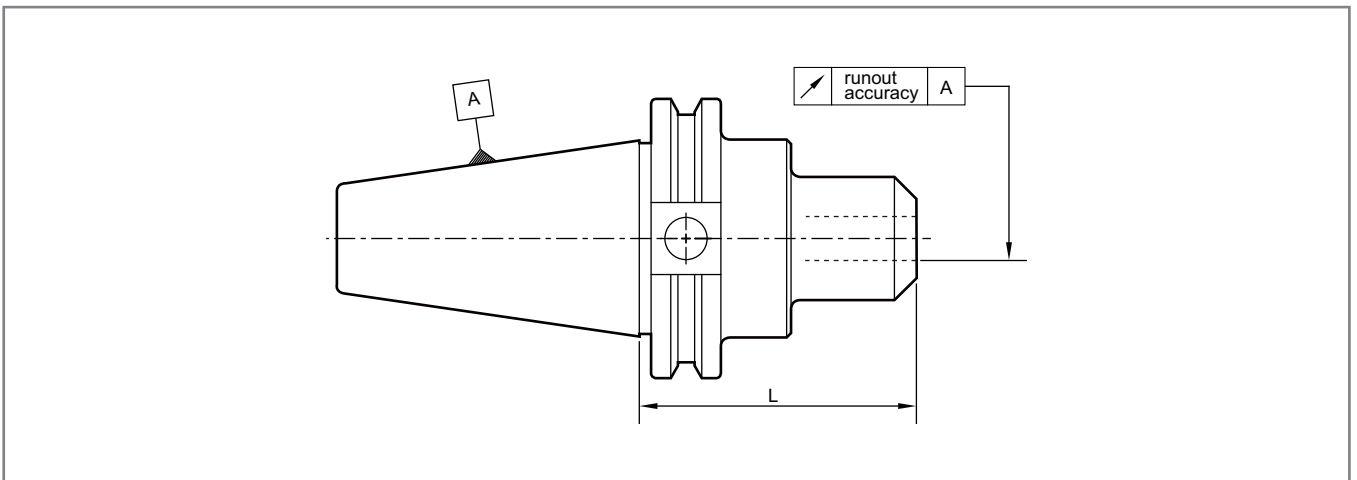
- Toolholders case-hardened 60 – 2 HRC
- Tensile strength in the core at least 950 N/mm<sup>2</sup>
- Taper in tolerance quality AT 3



INCH

Taper Size	D1	D2	D3 <sub>max.</sub>	D4	D5	L1	L2	L3	L4 <sub>min.</sub>	T	B1	B2	B3
CAT40	1.75	0.669	1.71	2.5	2.126	2.687	0.75	0.625	1.38	5/8"-11	0.646	0.89	0.894
CAT50	2.75	1.063	2.71	3.875	3.307	4.0	0.75	0.625	1.38	1"-8	1.02	1.39	1.484

Runout Accuracy

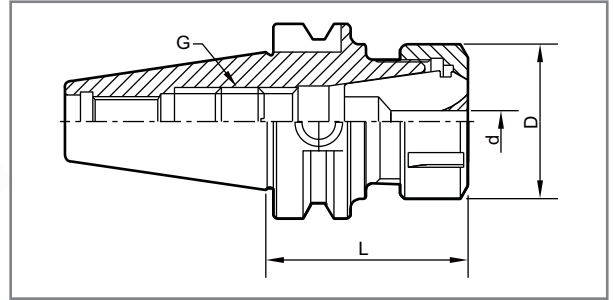


INCH

Gage Length A (inch)	L < 6.3"	L ≥ 6.3"
Collet chuck type ER	0.00012"	0.00016"
Face mill holder	0.00024"	0.00024"
Side lock holder	0.00012"	0.00016"

**ER Collet Chuck**
**Features:**

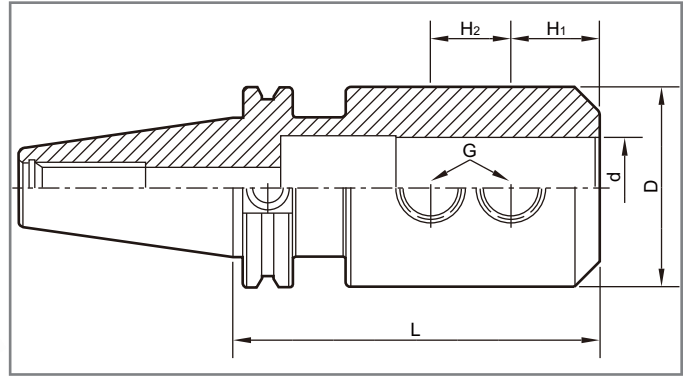
- The most popular collet chucks.
- One chuck can be used for end mills, drills, reamers and taps.
- Thread of the spring collet chuck and internal taper are precision ground.
- Thread of clamping nut is hardened and turned for achieving high clamping power.
- Back up screw is not included, please order as optional item.
- Pre-balanced G6.3 / 8000 r.p.m.


**INCH**

Taper Shank	Ordering Code	Type of Holder	L	D	d	G
CAT40	341100-3020	CAT40-ER16-2.76"	2.76"	1.102"	0.02"-0.40"	M10 x 1.5P
	-3040	-ER16-4"	4.00"			
	-4020	-ER20-2.76"	2.76"	1.339"	0.04"-0.51"	M12 x 1.75P
	-4040	-ER20-4"	4.00"			
	-5020	-ER25-2.76"	2.76"	1.654"	0.04"-0.63"	M16 x 2.0P
	-5040	-ER25-4"	4.00"			
	-6020	-ER32-2.76"	2.76"	1.969"	0.08"-0.79"	M16 x 2.0P
	-6040	-ER32-4"	4.00"			
	-7020	-ER40-3.15"	3.15"	2.480"	0.12"-1.02"	M20 x 2.0P
-7040	-ER40-4"	4.00"				
CAT50	351100-3020	CAT50-ER16-4"	4.00"	1.102"	0.02"-0.40"	M10 x 1.5P
	-3040	-ER16-6"	6.00"			
	-4020	-ER20-4"	4.00"	1.339"	0.04"-0.51"	M12 x 1.75P
	-4040	-ER20-6"	6.00"			
	-5020	-ER25-4"	4.00"	1.654"	0.04"-0.63"	M16 x 2.0P
	-5040	-ER25-6"	6.00"			
	-6020	-ER32-4"	4.00"	1.969"	0.08"-0.79"	M16 x 2.0P
	-6040	-ER32-6"	6.00"			
	-7020	-ER40-4"	4.00"	2.480"	0.12"-1.02"	M20 x 2.0P
-7040	-ER40-6"	6.00"				

## Side Lock Holder

- Pre-balanced G6.3 / 8000 r.p.m.

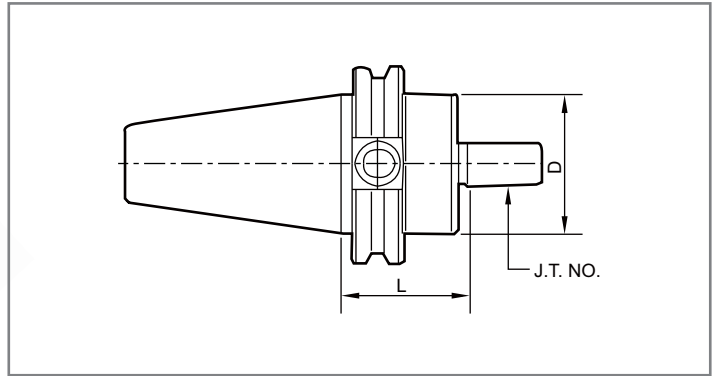


INCH

Taper Shank	Ordering Code	Type of Holder	d	L	D	H1	H2	G
CAT40	341160-0420	CAT40-SL 1/4"- 3"	1/4"	3.00"	0.78"	0.630"	-	1/4-28
	-0520	-SL 5/16"- 3"	5/16"	3.00"	0.88"	0.630"	-	5/16-24
	-0620	-SL 3/8"- 3"	3/8"	3.00"	1.00"	0.750"	-	3/8-24
	-0820	-SL 1/2"- 3"	1/2"	3.00"	1.25"	0.875"	-	7/16-20
	-1020	-SL 5/8"- 3"	5/8"	3.00"	1.50"	0.937"	0.875"	1/2-20
	-1220	-SL 3/4"- 3"	3/4"	3.00"	1.75"	1.000"	1"	5/8-18
	-1620	-SL 1"- 4"	1"	4.00"	2.00"	1.125"	1"	3/4-16
	-1820	-SL 1"-1/4"- 4.6"	1-1/4"	4.60"	2.50"	1.125"	-	3/4-16
CAT50	351160-0620	CAT50-SL 3/8"- 4"	3/8"	4.00"	1.00"	0.781"	-	3/8-24
	-0820	-SL 1/2"- 4"	1/2"	4.00"	1.25"	0.875"	-	7/16-20
	-1020	-SL 5/8"- 4"	5/8"	4.00"	1.50"	0.937"	-	1/2-20
	-1220	-SL 3/4"- 4"	3/4"	4.00"	1.75"	1.000"	-	5/8-18
	-1620	-SL 1"- 4"	1"	4.00"	2.00"	1.125"	1"	3/4-16
	-1820	-SL 1"-1/4"- 4"	1-1/4"	4.00"	2.50"	1.125"	1"	3/4-16

## Jacob Drill Chuck Adaptor

- Pre-balanced G6.3 / 8000 r.p.m.

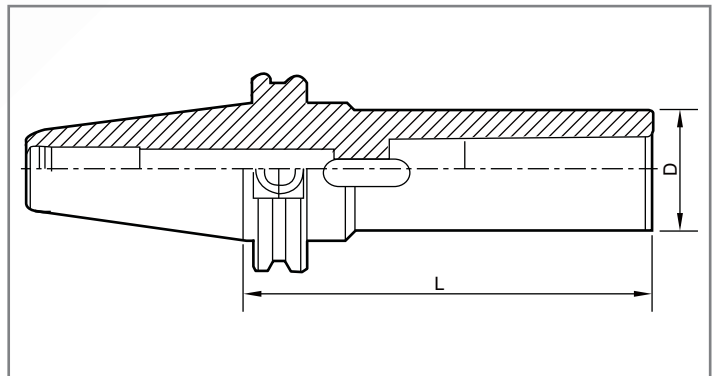
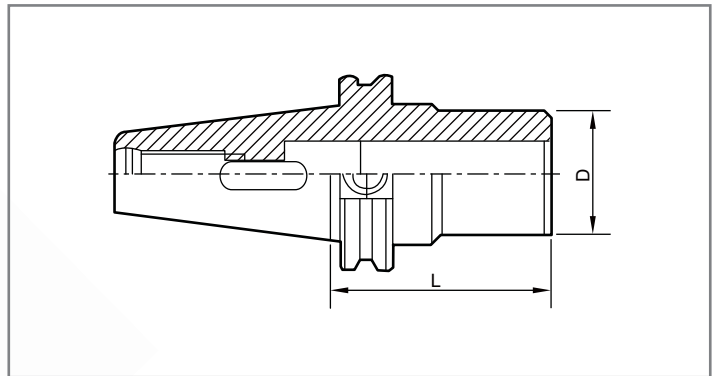


INCH

Taper Shank	Ordering Code	Type of Holder	Taper No.	L	D
CAT40	341200-220	CAT40-JTA2-1.57"	JT2	1.57"	1.75"
	-620	-JTA6-1.57"	JT6	1.57"	
	-3320	-JTA33-1.57"	JT33	1.57"	
CAT50	351200-220	CAT50-JTA2-1.57"	JT2	1.57"	2.75"
	-620	-JTA6-1.57"	JT6	1.57"	
	-3320	-JTA33-1.57"	JT33		

## Morse Taper Adaptor

- Concentricity is 0.015mm.



INCH

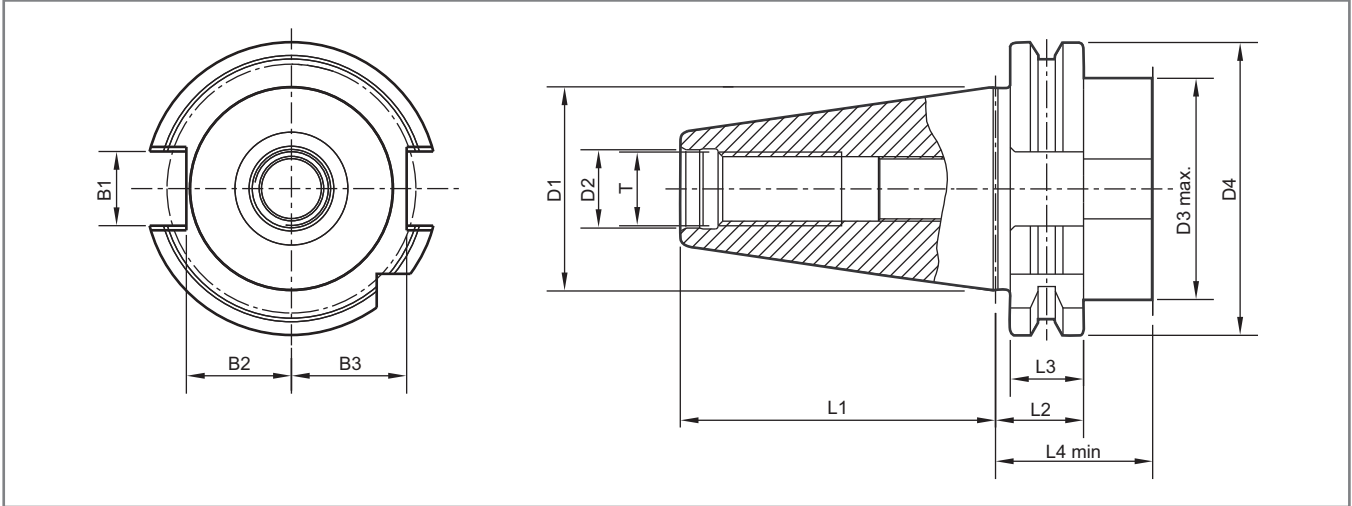
Taper Shank	Ordering Code	Type of Holder	MT No.	L	D
CAT40	341210-102	CAT40-MTA1-1.60"	1	1.60"	1.00"
	-202	-MTA2-2.00"	2	2.00"	1.25"
	-302	-MTA3-2.75"	3	2.75"	1.55"
	-402	-MTA4-3.75"	4	3.75"	1.75"
CAT50	351210-102	CAT50-MTA1-2.00"	1	2.00"	1.00"
	-202	-MTA2-2.00"	2	2.00"	1.25"
	-302	-MTA3-2.50"	2	2.50"	1.55"
	-402	-MTA4-3.30"	3	3.30"	1.75"
	-502	-MTA5-4.10"	4	4.10"	2.48"



Specifications of DIN 69871-1

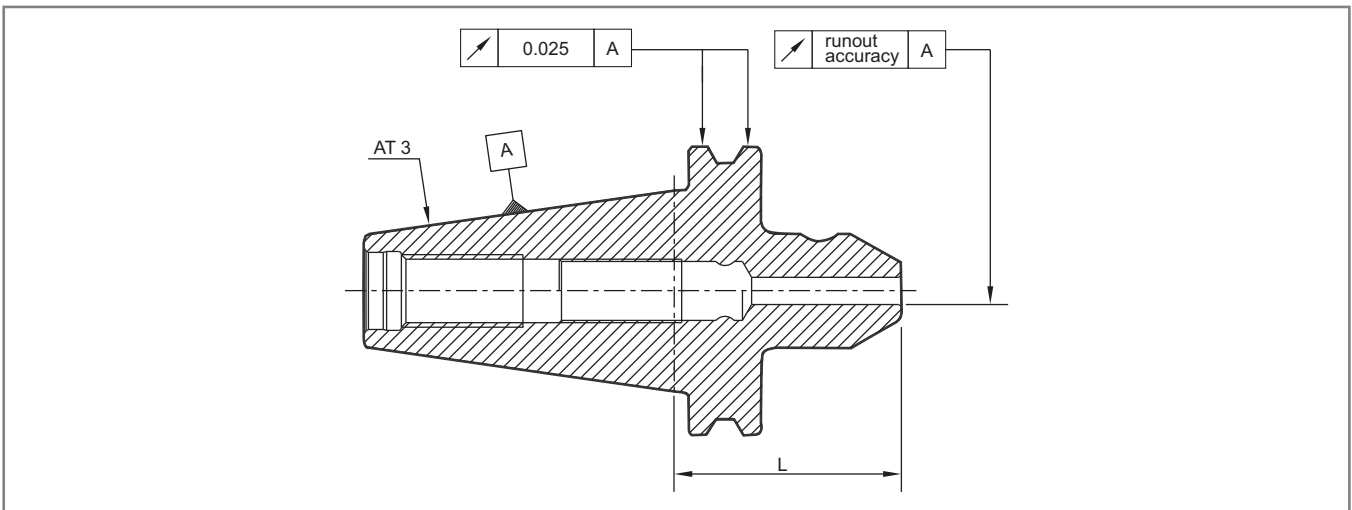
**Features:**

- Toolholders case-hardened 60 – 2 HRC
- Tensile strength in the core at least 950 N/mm<sup>2</sup>
- Taper in tolerance quality AT 3, DIN 2080.
- Form AD: interior coolant supply through centre (form AD), form B is optional on request.



Taper Shank	D1	D2	D3 <sub>max.</sub>	D4	L1	L2	L3	L4 <sub>min.</sub>	T	B1	B2	B3
SK40	44.45	17	48	63.55	68.4	19.1	15.9	35	M16	16.1	22.8	25
SK50	69.85	25	78	97.5	101.75	19.1	15.9	35.1	M24	25.7	35.5	37.7

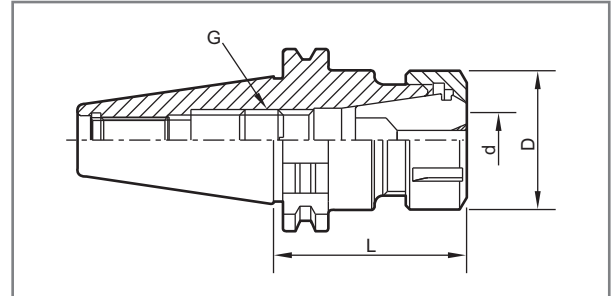
Runout Accuracy



Gage length	L < 160
<b>max. runout tolerance in mm</b>	
Collet chuck ER	0.003
KCH spring collet chuck	0.003
Side lock holder	0.003
Collet chuck OZ	0.003
Face mill arbor	0.006
Adapter for morse taper	0.008
Drill chuck adapter	0.005
NC drill chuck	0.060

**ER Spring Collet Chuck**
**Features:**

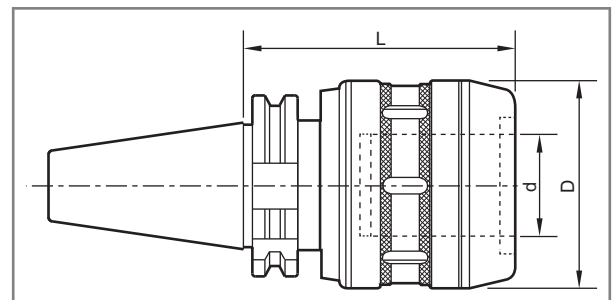
- The most popular collet chucks, one chuck can be used for end mills, drills, reamers and taps.
- Thread of the spring collet chuck and internal taper are precise ground.
- Supplied with standard clamp nut, backup screw is optional.
- Pre-balanced G6.3 / 8000 r.p.m. (standard grade)
- Higher pre-balanced grade are on request, additional charge is needed.



Taper Shank	Ordering Code	Type of Holder	L	D	d	G
SK40	342100-302	SK40-ER16-70	70	28	0.5-10	M10x1.5
	-304	-ER16-100	100			
	-402	-ER20-100	100	34	1-13	M12x1.75
	-502	-ER25-100	100	42	1-16	M16x2.0
	-602	-ER32-100	100	50	2-20	
	-702	-ER40-100	100	63	3-26	
SK50	352100-302	SK50-ER16-100	100	28	0.5-10	M10x1.5
	-402	-ER20-100	100	34	1-13	M12x1.75
	-502	-ER25-100	100	42	1-16	M12x1.75
	-602	-ER32-100	100	50	2-20	M16x2.0
	-702	-ER40-100	100	63	3-26	

**KCH Spring Collet Chuck**
**Features:**

- Supplied with a spanner.
- Please refer to page 43 for KCH collets.

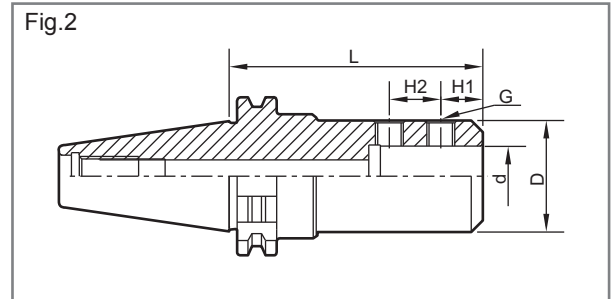
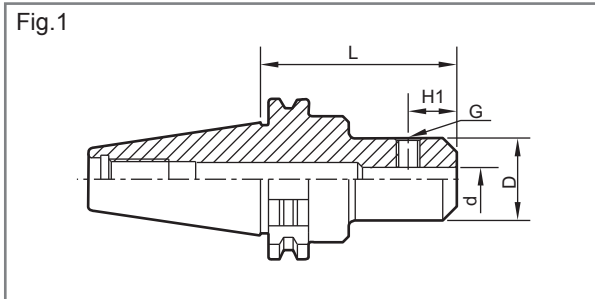


Taper Shank	Ordering Code	Type of holder	Clamping Range	L	D	d	Collet
SK40	342150-202	SK40-KCH20-80	Ø6-Ø20	80	54	20	C20
	342150-402	-KCH32-105	Ø6-Ø32	105		32	C32
SK50	352150-401	SK50-KCH32-100	Ø6-Ø32	100		32	C32
	352150-602	-KCH42-105	Ø6-Ø42	105		40	C42

**Side Lock Holder**

**Features:**

- According to DIN 6359 for End Mills with shank of DIN1835 Form B.
- Set screw is included.

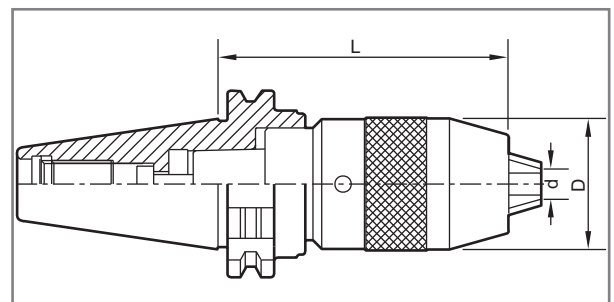
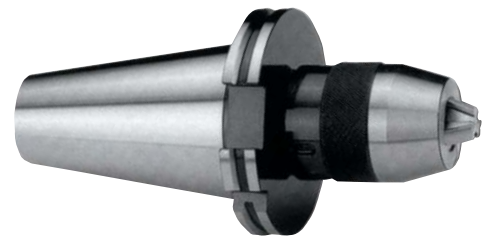


Taper Shank	Ordering Code	Type of Holder	Fig.	L	d	D	H1	H2	G		
SK40	342160-062	SK40-SL6-50	1	50	6	25	18	-	M 6		
	-082	-SL8-50			8	28			M 8		
	-102	-SL10-50			10	35			M10		
	-122	-SL12-50			12	42			22.5	M12	
	-162	-SL16-63	2	63	16	48	24	-	M14		
	-202	-SL20-63			20		25		M16		
	-252	-SL25-100			25		60		24	25	M16
	-322	-SL32-100			32		72		28	M20	
SK50	352160-122	SK50-SL12-63	1	63	12	42	22.5	-	M12		
	-162	-SL16-63			16	48	24		M14		
	-202	-SL20-63			20	52	25		M16		
	-252	-SL25-80	2	80	25	60	24	25	M16		
	-322	-SL32-100			100	72	28	M20			
	-402	-SL40-100			100	40	80	30	32		

**NC Drill Chuck**

**Features:**

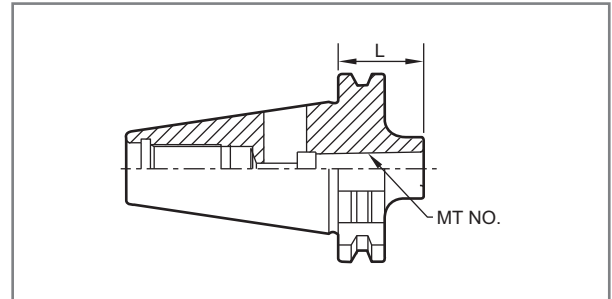
- Supplied with a spanner.



Taper Shank	Ordering Code	Type of Holder	d Capacity	D	L
SK40	342190-082	SK40-APU08-80	0-8	36.3	80
	-132	-APU13-100	1-13	51.5	100
SK50	352190-162	SK50-APU16-110	3-16	58	110

**Morse Taper Adaptor**
**Features:**

- For tools with morse taper shank according to DIN 228 form B.

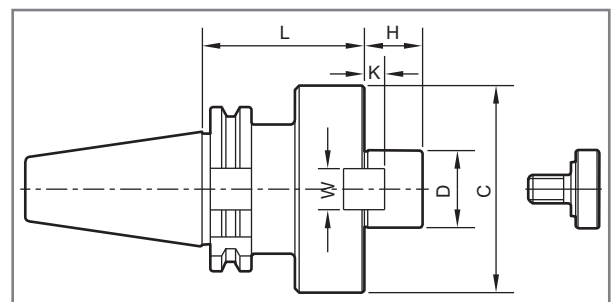


Taper Shank	Ordering Code	Type of Holder	MT No.	D	L	G
SK40	342210-102	SK40-MT1-45	1	25	45	M6
	-202	-MT2-50	2	32	50	M10
	-302	-MT3-70	3	40	70	M12
	-402	-MT4-95	4	48	95	M16

- Low stock item.

**Face Mill Arbor**
**Features:**

- Supplied with arbor screw and driving key.
- D tolerance : h6



Taper Shank	Ordering Code	Type of Holder	D	L	C	H	K	W
SK40	342300-201	SK40-FMB22-40	22	40	47	18	5	10
	-302	-FMB27-55	27	55	58	20	6	12
	-402	-FMB32-60	32	60	66	22	7	14
	-502	-FMB40-60	40	60	80	25	8	16

- Low stock item.

**Specifications of DIN 69893-1**

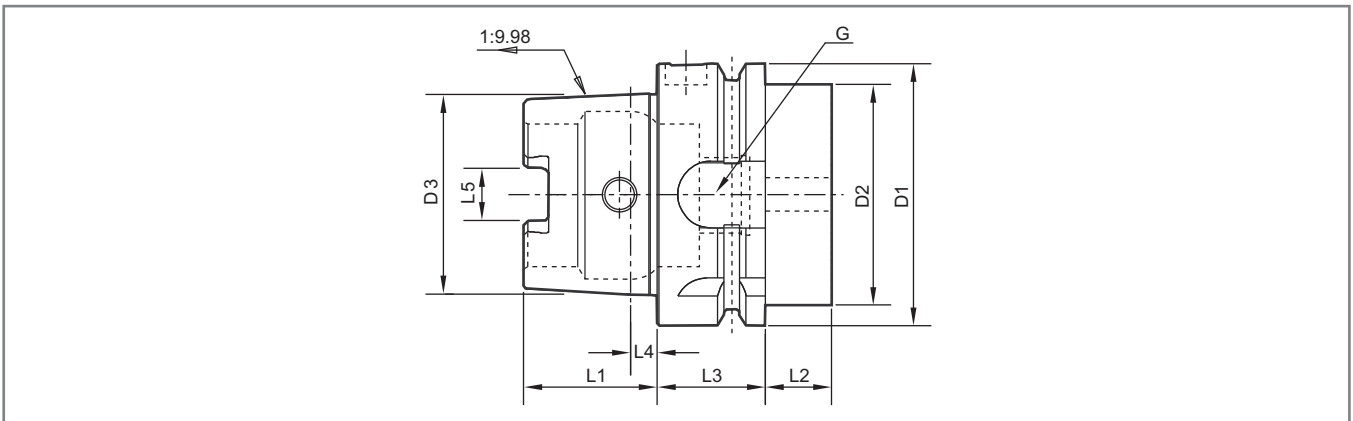
**Features:**

Compared to the steep taper, the HSK has the following advantages:

- High repetition accuracy when clamping tools into spindle
- Fix axial positioning by flat contact surface
- Suitable for high speed cutting
- No pull stud necessary

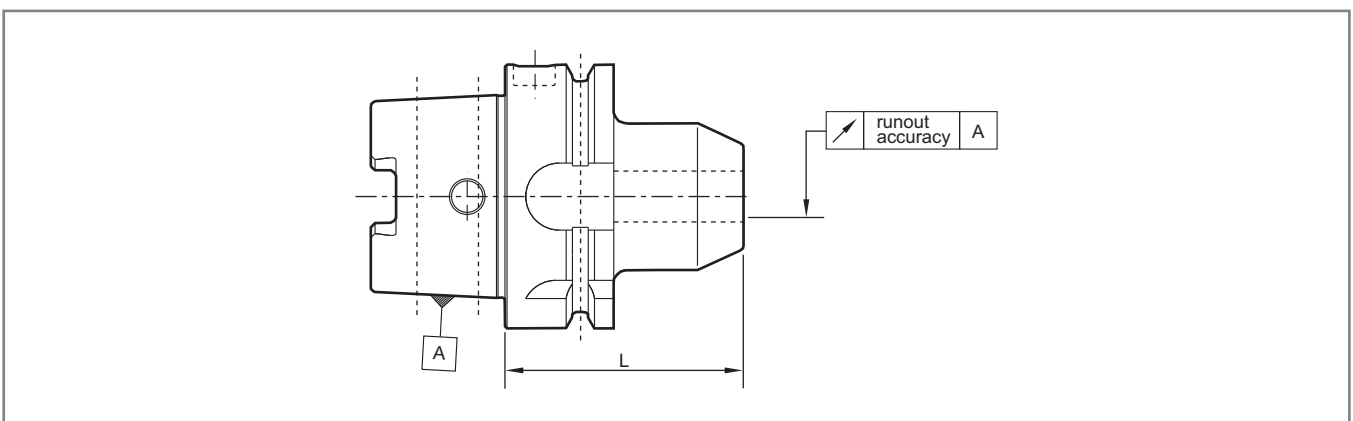
**Material:**

- Special case-hardening steel for highly stressed parts
- Surface hardness: 58° – 2° HRC
- Tensile strength in core min. 1000 N/mm<sup>2</sup>



Length [mm]	D1	D2 <sub>max.</sub>	D3	L1	L2 <sub>min.</sub>	L3	L4	L5	G
HSK-A/E 32	32	26	24.007	16	15	20	3.2	7.05	M10x1
-A/E 40	40	34	30.007	20	15	20	4	8.05	M12x1
-A/E 50	50	42	38.009	25	16	26	5	10.54	M16x1
-A/E 63	63	53	48.010	32	16	26	6.3	12.54	M18x1
-A/E 80	80	68	60.012	40	16	26	8	16.04	M20x1.5
-A/E 100	100	88	75.013	50	16	29	10	20.02	M24x1.5

**Runout Accuracy**

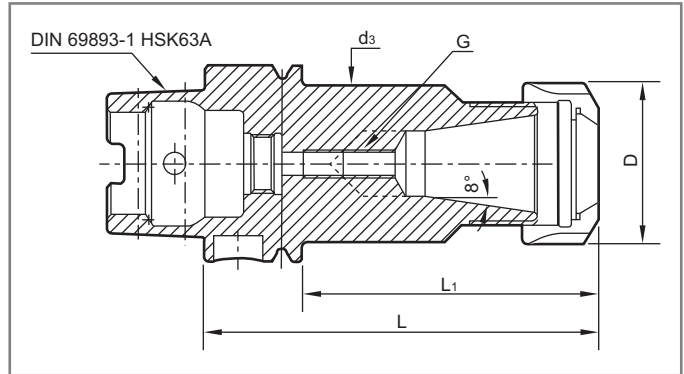


Gage length	L < 160
<b>max. runout tolerance in mm</b>	
Collet chuck ER	0.003
Side lock holder	0.003
Face mill arbor	0.005
Combination shell end mill arbor	0.005
NC drill chuck	0.050

**ER Spring Collet Chuck**    DIN 69882-6:2005-06

**Features:**

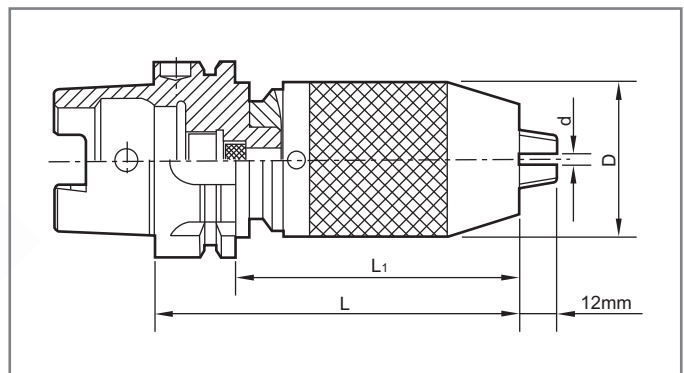
- Spring collet chuck for ER spring collets.
- Thread of the spring collect chuck and internal taper are precision ground.
- Pre-balanced G2.5 / 10,000 r.p.m. as standard, and option for G2.5 / 20,000 r.p.m.
- Backup screw is not included; please order as optional item.



Order Code	Type	d	L	D	L1	Collet	d3 MAX.	Backup Screw G
4250100-302	HSK63A-ER16A-80	0.5-10	80	28	54	ER16	53	M10 X 1.5P
-304	-ER16A-100		100		74			
-306	-ER16A-120		120		94			
-402	-ER20A-80	2-13	80	34	54	ER20		M12 X 1.75P
-404	-ER20A-100		100		74			
-502	-ER25-80	1-16	80	42	54	ER25		M16 X 2.0P
-504	-ER25-100		100		74			
-602	-ER32-80	2-20	80	50	54	ER32		M16 X 2.0P
-604	-ER32-100		100		74			
-606	-ER32-145		145		119			
-702	-ER40-80	3-26	80	63	54	ER40	M20 X 2.0P	
-704	-ER40-100		100		74			

**NC Drill Chuck**
**Features:**

- Pre-balance G6.3 / 8,000 r.p.m.

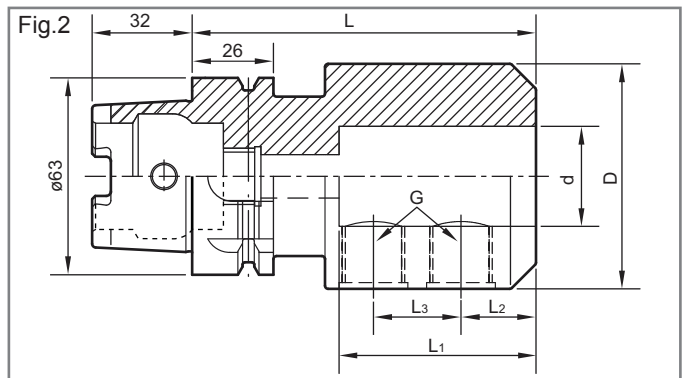
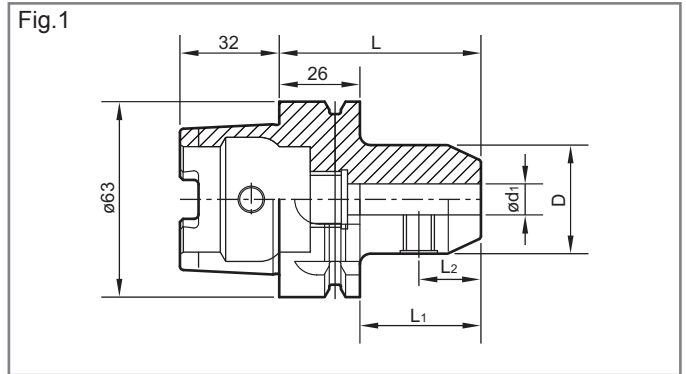


Order Code	Type	d	L	D	L1
4250190-202	HSK 63A-SPU13-110	1-13	110	50	84

**Side Lock Holder** DIN 69882-4:2005-06

**Features:**

- The tool holder with hollow taper shanks according to DIN69893-1.
- For clamping end mills shank of DIN 1835-B, maximum tolerance of the shank is h7, according to DIN69882-4.
- Tolerance of the bore d1 is H5.
- Pre-balanced according to G2.5 / 10,000 r.p.m. as standard, and option for G2.5 / 20,000 r.p.m.

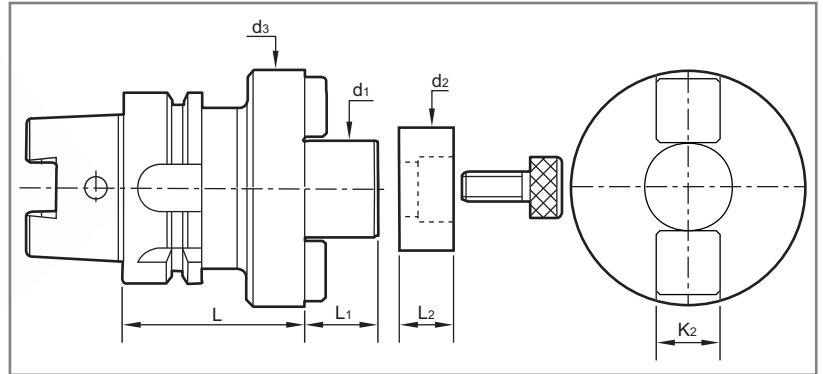
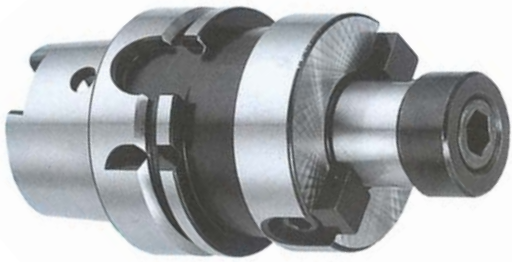


Order Code	Type	Fig.	d	L	D	L1	L2	L3	G
4250160-062	HSK 63A-SLN06-65	1	6	65	25	39	18	-	M6 X 1.0P
-082	-SLN08-65		8	65	28	39	18	-	M8 X 1.25P
-102	-SLN10-65		10	65	35	39	20	-	M10 X 1.5P
-122	-SLN12-80		12	80	42	54	22.5	-	M12 X 1.75P
-142	-SLN14-80		14	80	44	54	22.5	-	M12 X 1.75P
-162	-SLN16-80		16	80	48	54	24	-	M14 X 2.0P
-182	-SLN18-80		18	80	50	54	24	-	M14 X 2.0P
-202	-SLN20-80		20	80	52	54	25	-	M16 X 2.0P
-252	-SLN25-110		2	25	110	65	84	24	25
-322	-SLN32-110	32		110	72	84	24	28	M20 X 2.0P

**Face Mill Arbor** DIN 69882-3:2005-06

**Features:**

- d1 tolerance : h6.
- Pre-balance G6.3 / 8,000 r.p.m.

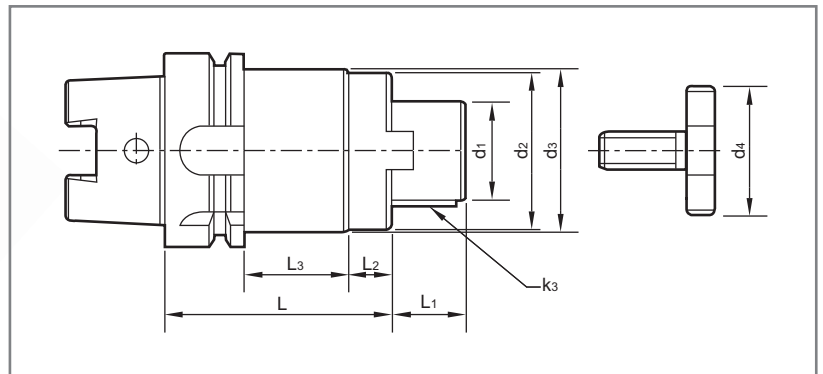
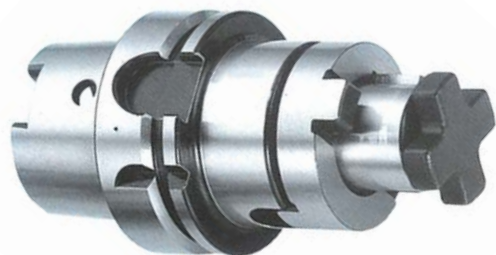


Order Code	Type	d1	L	L1	L2	d2	d3	K2
4250310-102	HSK 63A-FMB16-50	16	50	17	-	-	40	8
-202	-FMB22-50	22	50	19	14	26	48	10
-302	-FMB27-60	27	60	21	16	31.5	60	12
-402	-FMB32-60	32	60	24	16	41	78	14
-502	-FMB40-60	40	60	27	20.5	48	89	16

**Combination Shell end mill arbor** DIN 69882-2

**Features:**

- For clamping shell end mill DIN841 and DIN1880 as well as milling cutter DIN842 and DIN1830 according to DIN6358.
- Shank included removable ring, nut and spanner.
- Can purchase removable ring, nut, & spanner separately.
- Pre-balance G6.3 / 8,000 r.p.m.



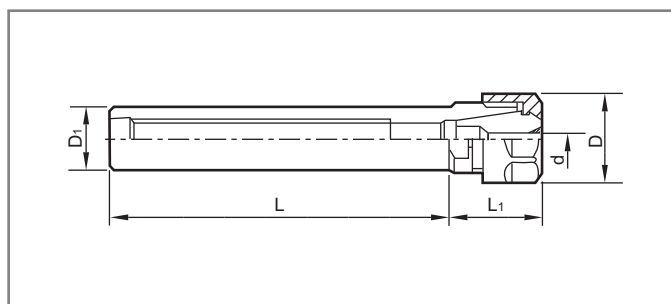
Order Code	Type	d1	L	L1	L2	L3	d2	d3	d4	K3
4250340-102	HSK 63A-CSR16-60	16	60	17	10	24	32	53	20	4
-202	-CSR22-60	22	60	19	12	22	40		28	6
-302	-CSR27-60	27	60	21	12	22	46		35	7
-402	-CSR32-60	32	60	24	14	20	55		42	8
-502	-CSR40-70	40	70	27	14	30	68		52	10



## Cylindrical Shank Extension bar

### Features:

- All short version L=50 are designed with side lock flat.

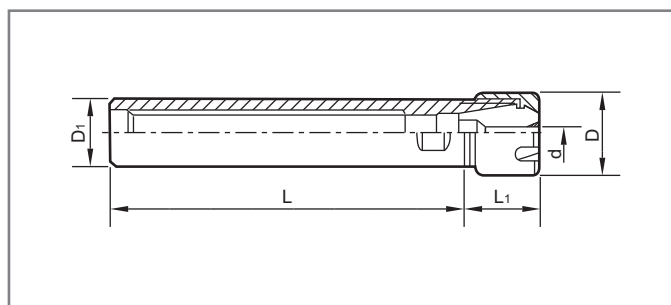


D1	Ordering Code	Type of Holder	L	L1	D	d	Collets
16	329100-2120	SL16-ER11-50(flat)	50	21	19	0.5-7	ER11
	-2140	BC16-ER11-100	100				
20	-3220	SL20-ER16-50(flat)	50	30	28	0.5-10	ER16
	-3240	BC20-ER16-100	100				
	-3260	-ER16-150	150				
25	-3320	SL25-ER16-50(flat)	50	36	34	2-13	ER20
	-3340	-ER16-100(flat)	100				
	-3360	BC25-ER16-150	150				
20	-4220	SL20-ER20-50(flat)	50	36	34	2-13	ER20
	-4240	BC20-ER20-100	100				
	-4260	-ER20-150	150				
25	-4320	SL25-ER20-50(flat)	50	36	34	2-13	ER20
	-4340	-ER20-100(flat)	100				
	-4360	BC25-ER20-150	150				

## Cylindrical Shank Extension bar-mini

### Features:

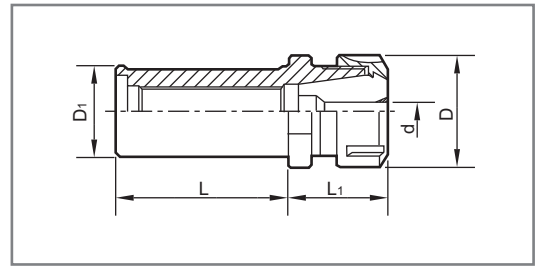
- Supplied with mini type clamping nut.
- All short version L=50 are designed with side lock flat.



D1	Ordering Code	Type of Holder	L	L1	D	d	Collets
16	329100-2122	SL16-ER11M-50(flat)	50	22	16	0.5-7	ER11
	-2142	BC16-ER11M-100	100				
	-3142	-ER16M-100	100				
20	-3222	SL20-ER16M-50(flat)	50	32	22	0.5-10	ER16
	-3242	BC20-ER16M-100	100				
25	-3262	-ER16M-150	150	35	28	2-13	ER20
	-3342	BC25-ER16M-100	100				
20	-3362	-ER16M-150	150	35	28	2-13	ER20
	-4222	SL20-ER20M-50(flat)	50				
	-4242	BC20-ER20M-100	100				
25	-4262	-ER20M-150	150	35	28	2-13	ER20
	-4342	BC25-ER20M-100	50				
25	-4362	-ER20M-150	150				

## Cylindrical Shank

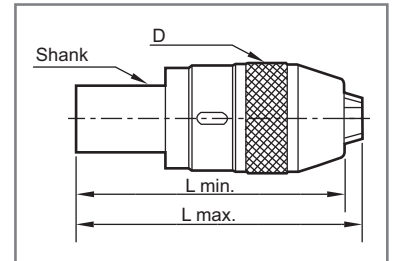
- With Cylindrical and side-lock flat types.



D1	Ordering Code	Type of Holder	L	L1	D	d	Collets
20	328100-5240	BC20-ER25-100	100	46	42	0.5-10	ER25
	-5260	-ER25-150	150				
25	-5320	SL25-ER25-100(flat)	100				
	-5340	BC25-ER25-150	150				
32	-5420	SL32-ER25-60(flat)	60	54	50	2-20	ER32
25	-6320	SL25-ER32-80(flat)	80				
32	-6440	SL32-ER32-100(flat)	100				
	-6460	BC32-ER32-150	150				
1"	-6720	BC1"-ER32-3"	3"	55	63	3-26	ER40
32	-7420	SL32-ER40-100(flat)	100				
40	-7520	SL40-ER40-100(flat)	100				
1 1/4"	-7920	BC 1-1/4"-ER40-3"	3"				

## Taper and Cylindrical Shank Keyless Drill Chucks

- Integrated Keyless Drill Chuck
- Cylindrical shank, Morse Taper Shank and R8
- Morse taper shank is according to DIN 228 From B.



Shank	Ordering Code	Type of Holder	Clamping Range	D	Lmin.	Lmax.
MT2	362190-102	MT2-INT 8	0 - 8	35	149	157
	-202	-INT13	0 - 13	50.5	172	184
MT3	363190-202	MT3-INT13	0 - 13	50.5	190	201
	-302	-INT16	3 - 16	56	194	207
MT4	364190-202	MT4-INT13	0 - 13	50.5	216	227
	-302	-INT16	3 - 16	56	219	232
BC20	329190-201	BC20-INT 8	0 - 8	35	133	141
	-202	-INT13	0 - 13	50.5	153	164
BC25	-252	BC25-INT13	0 - 13	50.5	163	174
	-253	-INT16	3 - 16	56	162	175
BC32	-322	BC32-INT13	0 - 13	50.5	173	185
	-323	-INT16	3 - 16	56	184	197
R8	359190-202	R8-INT13	0 - 13	50.5	196	207
	-302	-INT16	3 - 16	56	198	211