

CATALOG & TECHNICAL GUIDE – INCH



TOOLING SYSTEMS



SOLUTIONS & SUPPORT

By choosing Seco, you get more than just a comprehensive portfolio of advanced metal-cutting solutions and expert services. You get a partnership based on trust, respect and communication and a team that is always ready to help you gain the competitive advantage.

Globally headquartered in Fagersta, Sweden and present in more than 50 countries, Seco develops cutting tools, processes and services for high productivity and profitability. Our team of over 5,000 dedicated employees maintains partnerships around the world to identify and overcome the challenges faced by today's manufacturers.

Our broad selection of milling, turning, holmaking and toolholding solutions include over 30,000 standard products, custom items for special applications and a team of metal-cutting experts who help customers identify and implement cost-effective solutions.

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The EPB TOOLING SYSTEMS catalog is part of the Seco MACHINING NAVIGATOR collection.

Here you will find the most recent spindle tooling products and guides to successfully equip your machine tools.

The EPB tooling systems product range is divided into 5 product families: MONOBLOC™ – COMBIMASTER™ – GRAFLEX® – SECO-CAPTO™ – ADDITIONAL EQUIPMENT.

Each product family catalog chapter contains:

- Guide pages with dedicated technical information and main operating instructions.
- Product pages with product Part Numbers and detailed dimensions.
- In the boring heads chapter only: Main operating instructions.

Monobloc

Solid holders with HSK 'hollow shank taper' (HSK-A, HSK-E) and SA 'steep angle' (DIN 69871, BT, CAT-V). Workpiece side types to hold milling, turning, drilling, tapping and reaming tools.

Notice the Steadyline® holders with shell mill, Combimaster, Shrinkfit machine sides, with built in damping feature, for long machining at high productivity.

Shrinkfit holders, ER HP collet chucks and hydraulic chucks form the HSM 'High Speed Machining' program of products within the MONOBLOC ranges.



Combimaster

A modern milling solution used as an alternative to side lock holders and collet chucks.

The cylinder-flange interface with central thread provides slimmer and easy access tooling, by improving rigidity, precision and balance.

Combimaster holders (arbors, intermediates and adapters) are shown in this catalog. Combimaster cutting heads are shown in the Milling catalog.



Graflex

The Graflex Modular System has a leading reputation for flexibility without weakness.

Customized tooling dimensions closest to the required machining operation can rapidly be built together from standard arbors, intermediates and toolholders. Graflex arbors and intermediates are also used to hold the whole range of boring heads, shown in the Holemaking catalog.



Seco-Capto

The Seco-Capto modular tooling range uses the PSC (Polygonal Shank Coupling), in accordance with the Norm ISO 26623.

More Seco-Capto tooling, clamping units and tools for turning are shown in the Turning catalog.



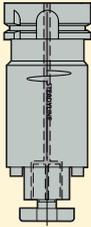
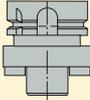
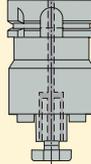
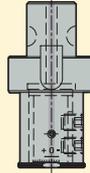
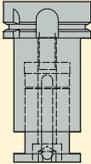
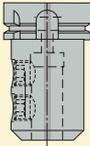
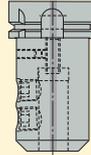
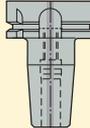
Additional Equipment

This shows the items to be used in conjunction with the main holders (e.g. pull studs, collets, tap adapters, Shrinkfit - collet chuck - tapping extensions, plus e.g. Tool Boy assembly supports, HSK locking units).

Note: Accessories and Spare parts shown in the sub-tables of the Product pages in any catalog chapter are items for handling or adapting the products shown on the page (e.g. spanners, stop screws, sealing nuts).

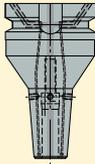
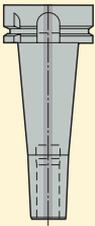
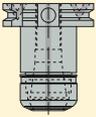
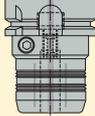
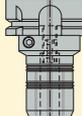
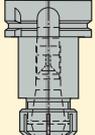


Monobloc™ and Graflex toolholders (overview page 1/4)

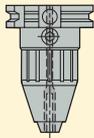
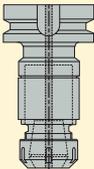
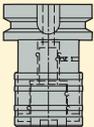
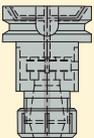
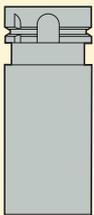
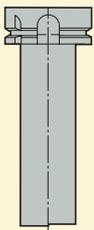
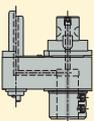
	Steadyline shell mill holders	Milling cutter holders, flange mounting	Shell mill holders (including Combi holders*...)	Adjustable drill holders
				
Guide pages:	page(s) 26-28	page(s) 30	page(s) 29	page(s) 45
Product pages:				
CAT	page(s) 48-49	page(s) 53	page(s) 50-52	–
HSK-A	page(s) 78-79	page(s) 84	page(s) 80-83	–
HSK-E	–	–	–	–
DIN 69871	page(s) 121	page(s) 125	page(s) 122-124	–
JIS (BT)	page(s) 149-150	page(s) 157-158	page(s) 151-156	–
Graflex	–	page(s) 248-249	page(s) 246-247	page(s) 250, 266-267
	Disc mill holders	Side lock holders, Weldon	Side lock holders, Whistle Notch	Shrinkfit holders, DIN type
				
Guide pages:	page(s) 30	page(s) 31	page(s) 31	page(s) 32-33
Product pages:				
CAT	page(s) 54	page(s) 55-59	–	page(s) 60-64
HSK-A	page(s) 85	page(s) 86-89	–	page(s) 90-95
HSK-E	–	–	–	page(s) 115-117
DIN 69871	page(s) 126	page(s) 127-129	–	page(s) 130-131
JIS (BT)	page(s) 159	page(s) 160-166	–	page(s) 167-173
Graflex	page(s) 250-N/A	page(s) 252-253	page(s) 254	page(s) 255

* Combi shell mill holders only available in Graflex

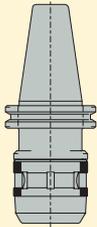
Monobloc™ and Graflex toolholders (overview page 2/4)

	Shrinkfit holders, reinforced	Shrinkfit holders, reinforced and with tool pull-out protection	Shrinkfit holders, Mold and Die type	High precision collet chucks
				
Guide pages:	page(s) 32, 34	page(s) 32, 35	page(s) 32, 36	page(s) 37-38
Product pages:				
CAT	page(s) 66-67	page(s) 68-69	–	page(s) 70-71
HSK-A	page(s) 96-98	page(s) 99-100	page(s) 101-102	page(s) 103
HSK-E	–	–	page(s) 118	page(s) 119
DIN 69871	page(s) 132-133	page(s) 134	page(s) 135	page(s) 136
JIS (BT)	page(s) 174-176	page(s) 177-178	page(s) 179	page(s) 180-182
Graflex	–	–	–	page(s) 256
	Hydraulic chucks, strong	Hydraulic chucks	ER collet chucks	OZ collet chucks
				
Guide pages:	page(s) 39-40	page(s) 41	page(s) 42	page(s) 43
Product pages:				
CAT	–	page(s) 72	page(s) 73-74	–
HSK-A	page(s) 104	page(s) 105	page(s) 106	–
HSK-E	–	–	page(s) 120	–
DIN 69871	page(s) 137	page(s) 138	page(s) 139	page(s) 140
JIS (BT)	page(s) 183-184	page(s) 185	page(s) 186-188	page(s) 189
Graflex	–	page(s) 257	page(s) 258	page(s) 259

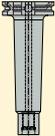
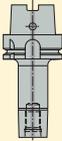
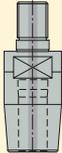
Monobloc™ and Graflex toolholders (overview page 3/4)

	Universal drill chucks 	Tapping chucks for synchronized tapping, with micro-compensation 	Quick change tapping chucks (with/ without compensation) 	ER tapping chucks (without compensation) 
Guide pages: Product pages: CAT HSK-A HSK-E DIN 69871 JIS (BT) Graflex	page(s) 43 – page(s) 107 – page(s) 141 page(s) 190 page(s) 260	page(s) 44 page(s) 76 page(s) 108 – page(s) 142 page(s) 191 –	page(s) 45 page(s) 75 page(s) 109-110 – page(s) 143 page(s) 192 page(s) 261-263	page(s) 45 – page(s) 111 – page(s) 144 page(s) 193 page(s) 264
	Taper adapters (SA/ HSK) 	Greenstock blanks 	Test/ Control bars 	Rotary coolant inducers 
Guide pages: Product pages: CAT HSK-A HSK-E DIN 69871 JIS (BT) Graflex	– – page(s) 145-146 – –	page(s) 46 – page(s) 112 – page(s) 147 page(s) 194 page(s) 265	page(s) 46 – page(s) 113 – page(s) 148 page(s) 195 –	page(s) 47 – – – – page(s) 268-270

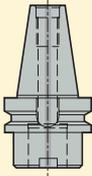
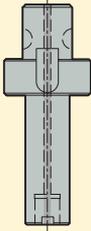
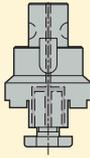
Monobloc™ and Graflex toolholders (overview page 4/4)

Universal series milling chucks	
	
Guide pages:	–
Product pages:	
CAT	page(s) 77
HSK-A	page(s) 114
HSK-E	–
DIN 69871	–
JIS (BT)	page(s) 196
Graflex	–

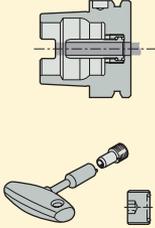
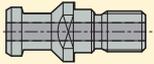
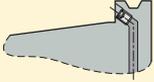
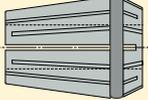
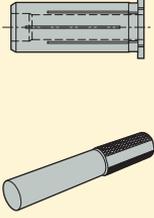
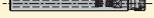
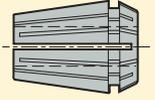
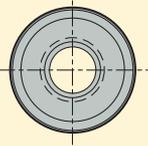
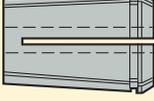
Combimaster holders (overview page 1/1)

	Steadyline vibration damping Combimaster holders	Combimaster arbors	Combimaster intermediates, extensions and reducers	Cylindrical, Weldon and Morse Taper adapters for Combimaster
				
Guide pages:	page(s) 198-199	page(s) 197	page(s) 197	page(s) 197
Product pages:				
CAT	page(s) 200-201	page(s) 202-203	-	-
HSK-A	page(s) 204	page(s) 205	-	-
HSK-E	-	page(s) 206	-	-
DIN 69871	page(s) 207	page(s) 208	-	-
JIS (BT)	page(s) 209	page(s) 210-211	-	-
Cylindrical	-	-	-	-
Weldon	-	-	-	page(s) 214-215
Extensions	-	-	page(s) 212	page(s) 216-217
Reducers	-	-	page(s) 213	-
	Graflex adapters for Combimaster	Combimaster Shrinkfit holders	Combimaster heads	
				
Guide pages:	page(s) 197	page(s) 197	See Machining Navigator Milling	
Product pages:		page(s) 219		
HSK-A	-			
HSK-E	-			
DIN 69871	-			
JIS (BT)	-			
Cylindrical	-			
Weldon	-			
Morse taper	-			
Extensions	-			
Reducers	-			
Graflex	page(s) 218			

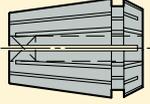
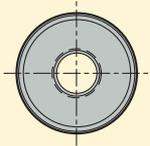
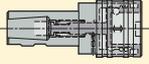
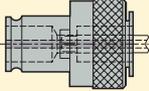
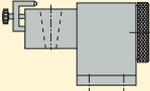
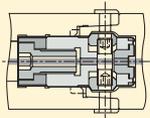
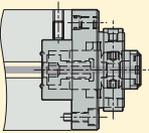
Graflex modular system (overview page 1/1)

	Arbors (HSK-A, HSK-E, DIN 69871, DIN/CAT, JIS BT DIN 2080, Adjustable, Flange mounts)	Intermediates (Extensions, Reducers, Enlargers, Cyl. extensions)	Tool holders (for details, see Monobloc and Graflex holders overview pages)	Accessories and spare parts for the Graflex connection
				
Guide pages:	page(s) 224	page(s) 225-226	page(s) 226	page(s) 223
Product pages:	page(s) 227-237	page(s) 238-245	page(s) 246-270	page(s) 271-272

Additional equipment (overview page 1/2)

<p>Guide pages:</p> <p>Product pages:</p>	<p>HSK coolant tubes and sealing plugs (incl. tube fitting keys)</p>  <p>page(s) 348</p> <p>page(s) 357</p>	<p>Pull studs</p>  <p>page(s) 358</p> <p>page(s) 359-360</p>	<p>Sealing plugs for ADB tapers (spare parts)</p>  <p>page(s) 348</p> <p>page(s) 361</p>	<p>Shrinkfit holders with cylindrical shank</p>  <p>page(s) 349</p> <p>page(s) 362-363</p>
<p>Guide pages:</p> <p>Product pages:</p>	<p>ER HP collets</p>  <p>page(s) 350</p> <p>page(s) 371-376</p>	<p>Reduction sleeves, control gauges for hydraulic chucks</p>  <p>page(s) 349</p> <p>page(s) 364-367</p>	<p>ER collet chucks with cylindrical shank</p>  <p>page(s) 351</p> <p>page(s) 377</p>	<p>ER collets (standard and high precision types)</p>  <p>page(s) 351</p> <p>page(s) 378-381</p>
<p>Guide pages:</p> <p>Product pages:</p>	<p>ER sealing rings</p>  <p>page(s) 352</p> <p>page(s) 382</p>	<p>OZ collets</p>  <p>page(s) 352-353</p> <p>page(s) 383</p>	<p>Tapping chucks for synchronized tapping, with micro-compensation with combined Weldon and Whistle Notch shank</p>  <p>–</p> <p>page(s) 384</p>	<p>Tapping chucks for synchronized tapping, with micro-compensation, cylindrical</p>  <p>–</p> <p>page(s) 385</p>

Additional equipment (overview page 2/2)

<p>Guide pages:</p> <p>Product pages:</p>	<p>ER tapping collets with square drive</p>  <p>page(s) 353</p> <p>page(s) 386</p>	<p>ER sealing rings for tapping chucks</p>  <p>page(s) 353</p> <p>page(s) 387</p>	<p>Quick change tapping chucks with combined Weldon and Whistle Notch shank (with compensation)</p>  <p>page(s) 354</p> <p>page(s) 388</p>	<p>Quick change tap adapters (with/ without torque limiter)</p>  <p>page(s) 354</p> <p>page(s) 389-392</p>
<p>Guide pages:</p> <p>Product pages:</p>	<p>Assembly supports, Tool Boy</p>  <p>page(s) 354</p> <p>page(s) 393</p>	<p>HSK locking units, TF</p>  <p>page(s) 355</p> <p>page(s) 394-395</p>	<p>HSK locking flange mounts, TF</p>  <p>page(s) 356</p> <p>page(s) 396-401</p>	<p>Reduction sleeves, for UMC milling chucks</p>  <p>page(s) 349</p> <p>page(s) 368-370</p>



Quality

The philosophy behind EPB products is based on total quality and is applied to each and every tool holder in the EPB range. Controls are carried out at all stages of the manufacturing process in accordance with ISO 9001.

- Material characteristics - classic SA and HSK tool holders = case hardened steels, surface hardness 58 ± 2 HRC - Shrinkfit and hydraulic holders = through hardened steels chosen for their superior performances, hardness 56 ± 2 HRC.
- Taper precision - SA tapers according to ISO 1947, tolerance class AT3 - HSK according to ISO 12164.
- Geometrical tolerances - direct run-out measured on the holder and/or run-out measured on a test gauge are in the catalog. Run-out controls are made by simulating a spindle fitting.
- Overall finish - deburred, black oxide or special surface treatment and laser marking.
- Traceability - individual product marking relates to the quality information that is available.
- Fine balancing or pre-balancing information is listed in this catalog for each holder. Residual unbalance controls are made by simulating a spindle fitting.



The balancing quality of each EPB holder is shown in its Product page balancing column:

1 = Fine-balanced, 2 = Pre-balanced.

1 = Fine balancing quality:

EPB holders suitable for HSM applications are balanced to $e = 3 \text{ g.mm/kg}$ maximum for holders with mass $M \geq 1 \text{ kg}$ or $U = 3 \text{ g.mm}$ maximum for holders $< 1 \text{ kg}$. Fine balanced HSK holders $\leq \text{HSK50}$ are balanced to $e = 1 \text{ g.mm/kg}$ maximum for holders with mass $M \geq 1 \text{ kg}$ or $U = 1 \text{ g.mm}$ maximum for holders $< 1 \text{ kg}$.

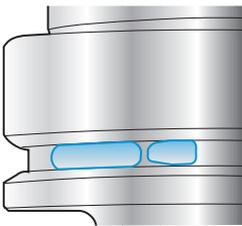
E.g.: Fine balancing a 2 kg holder BT 40 to $e = 3 \text{ g.mm/kg}$ max means that the permitted residual unbalance U can be 6 g.mm max.

Fine balancing a holder HSK-E40 weighing 0.7 kg means that U can be 1 g.mm max (meaning $e = 1/0.7 = 1.43 \text{ g.mm/kg}$ max).

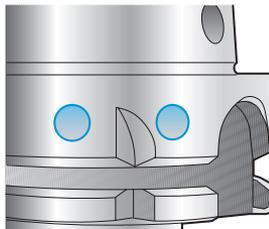
2 = Pre-balancing quality:

The majority of EPB holders are pre-balanced to $e = 30 \text{ g.mm/kg}$ maximum for holders with mass $M \geq 1 \text{ kg}$ or $U = 30 \text{ g.mm}$ maximum for holders $< 1 \text{ kg}$.

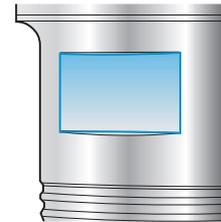
Most of the pre-balanced holders can be fine-balanced on request, please inquire.



1 = Fine balancing, individual operation



2 = Pre-balancing, standard operation



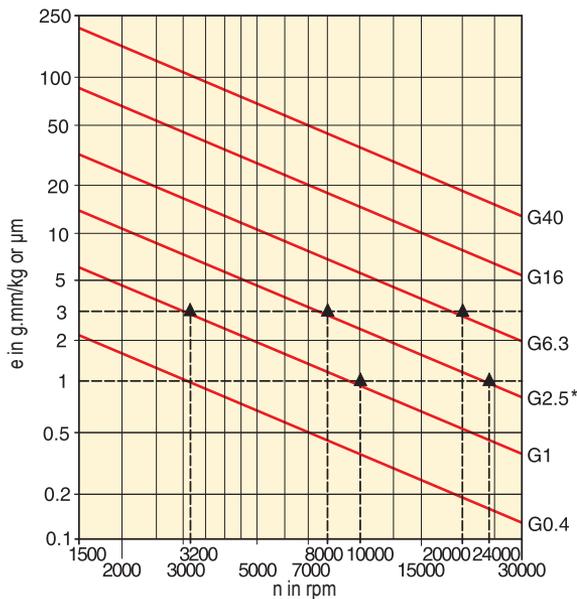
Balancing quality G:

Instead using e or U to define the balancing quality, it is possible to use G and n from the norm ISO 1940.

The relation between G and n in regard to e is shown on the chart taken from the norm ISO 1940.

See more information on next page.

ISO 1940



* Most machine tool builders require a G2.5 balance rating.

Residual unbalance U:

$$U = m \cdot r$$

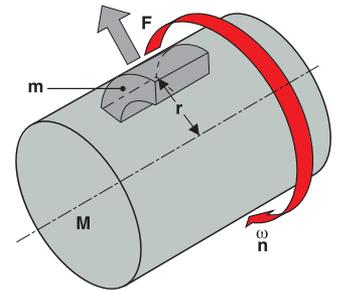
U [g.mm] is the product of the unbalance mass m [g] and its distance to the rotational axis r [mm]. Value and direction of the residual unbalance U are measured using a balancing machine.

Residual unbalance U causes a centrifugal force F [N] to act on the rotating parts. This force will have, for example, a negative effect on the useful life of the spindle bearings.

$$F = 10^{-6} \cdot U \cdot \omega^2$$

Balancing is the process which improves the distribution of the mass of a solid piece, in order to reduce U and its effect F to an acceptable level.

Balancing can be achieved by different methods: by adding weights (e.g. when balancing car wheels), removing material (EPB holders), or utilizing settable compensations (e.g. balancing rings on EPB boring heads).



Specific unbalance e:

$$e = U/M \Leftrightarrow U = e \cdot M$$

e is also called unbalance eccentricity: e [g.mm]/[kg] or [μm] is the distance to which the center of gravity is offset in regard to the holder's rotational axis.

Balancing reduces e, in other words, brings back the center of gravity as near as possible to the axis of rotation.

Balancing quality G:

Norm ISO 1940 has established G as the unit of measurement for the balance quality of rotating parts. G is the tangential speed of the center of gravity in reference to the rotational axis.

$$G = \frac{e}{1000} \cdot \omega$$

$$G = \frac{U}{1000 \cdot M} \cdot \frac{2 \pi n}{60}$$

G = balance quality in mm/s

e = specific unbalance in g.mm/kg or μm

ω = speed in rad/s

U = residual unbalance, (U = e x M) in g.mm

M = mass of toolholder in kg

n = rpm

m = unbalance mass in g

r = distance between the unbalance mass and rotational axis in mm

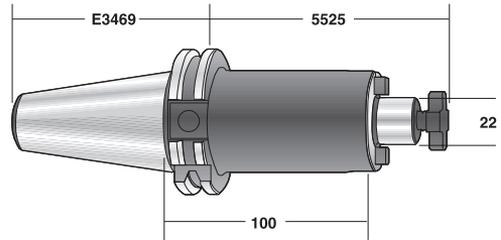
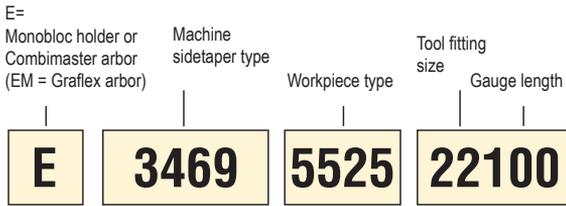
Note: G is depending on n, M, U: It is not possible to define G without referring to the rotational speed. For toolholders it is preferable to use e and U to define their balancing quality:

– e or U can be generalized for all holders, while G has to be expressed against a specific n.

– e can easily be calculated from U, given by a balancing machine, divided by the mass M of the holder.

See on previous page the chart ISO 1940 showing the relation between G and n in regard to e.

Code key



Workpiece side tool holding types

5555/5556	Steadyline shell mill holders
5525/5524	Shell mill holders with through coolant channels (5524 = small face)
552	Shell mill holders (small face)
553	Combi shell mill holders
569	Milling cutter holders, flange mounting
5656/5657	Disc mill holders
584	Side lock holders, Weldon
5842	Side lock holders, Weldon short
5843	Side lock holders, Whistle Notch
5603	Shrinkfit holders, DIN type
5600	Shrinkfit holders reinforced
5600 Safe-lock™	Shrinkfit holders reinforced with tool pull-out protection
5801	Shrinkfit holders, Mold and Die type
5672	High precision collet chucks
5835	Hydraulic chucks, strong
5834	Hydraulic chucks
5675	ER collet chucks
5450	ER collet chucks, with cylindrical shank
5873	OZ collet chucks
5085	Universal drill chucks
5867	Tapping chucks for synchronized tapping, with micro compensation
5283	Quick change tapping chucks with axial compensation
5260	Quick change tapping chucks for synchronized tapping
5865	ER tapping chucks for synchronized tapping
543	Taper adapters SA
5095	Taper adapters HSK
5023	Greenstock blanks
586	Test/Control bars
6100/6101	Adjustable drill holders
BSM	Rotary coolant inducers
K820/K821	Steadyline vibration damping Combimaster holders
5820/5821/5822	Combimaster arbors
401	Graflex arbors
C	Seco-Capto arbors

Note: DIN 69882 defines the overall dimensions of some HSK-A holder sizes for types 5525, 553, 584, 5843, 5603, 5834 and 5675. EPB holders that conform to DIN 69882 are marked in the Product pages with an asterisk.

Delivery contents

Each item is delivered with all components included, also shown in the product pages as spare parts (e.g. Weldon locking screw).

Accessories (e.g. ER sealing nut) and additional equipment (e.g. ER collet) are not included in the delivery content, please order separately.

Blind holes for data carriers

If not already available, blind holes for data carriers can be machined and data carriers fitted on request, please inquire.

Taper-Face (TF)

The new Taper-Face (TF) tooling range includes multiple front end options for CAT-V and BT Taper-Face spindle connections, allowing Seco to fully equip these machine tool types. The range for DIN taper face spindles consists of adapters to Seco-Capto™

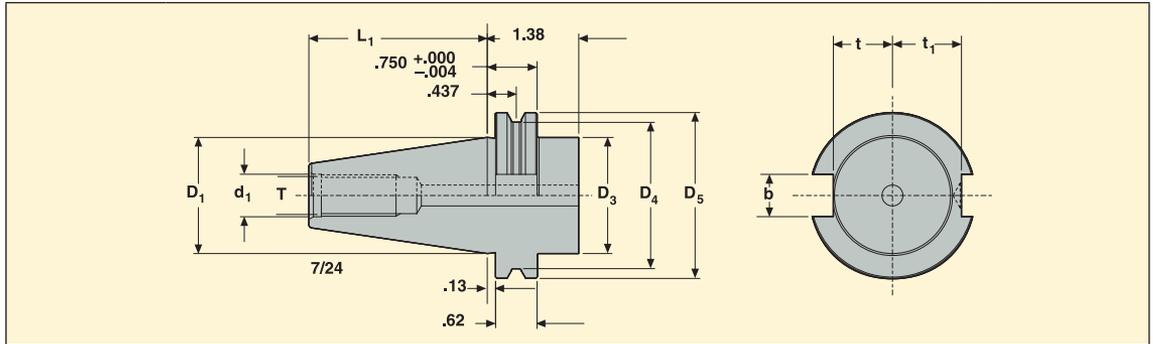
The Taper-Face spindle system :

- Taper-Face tooling used on Taper-Face spindles achieves additional contact between spindle's face and holder's flange (vs. face/flange clearance with conventional steep taper fittings).
- How it is obtained:
 - TF Tooling : longer (+half clearance) and high precision flange dimensions and geometry.
 - TF Spindles : longer (+half clearance) and high precise face dimensions and geometry.
 - Higher pulling forces (compared to classic spindles) achieve flange contact with pressure, complementary to the taper fitting.

Advantages:

- Higher rigidity particularly profitable to long tooling and machining in difficult materials.
- Higher run-out precision and axial (length) repeatability.
- Taper-Face tooling can be used on conventional steep taper spindles, but loses its face contact advantages.





Taper	Part No. prefix	Though coolant form	Dimensions in inch									
			D ₁	D ₃ ±.005	D ₄	D ₅ ±.005	L ₁	T	d ₁	t	t ₁	b
CAT 40	2502...	ADB	1.75	1.75	2.22	2.50	2.69	5/8-11	0.64	0.89	0.99	0.65
CAT 50	2504...	ADB	2.75	2.75	3.59	3.88	4.00	1-8	1.03	1.39	1.49	1.02
CAT 40	2522...	AD	1.75	1.75	2.22	2.50	2.69	5/8-11	0.64	0.89	0.99	0.65
CAT 50	2524...	AD	2.75	2.75	3.59	3.88	4.00	1-8	1.03	1.39	1.49	1.02

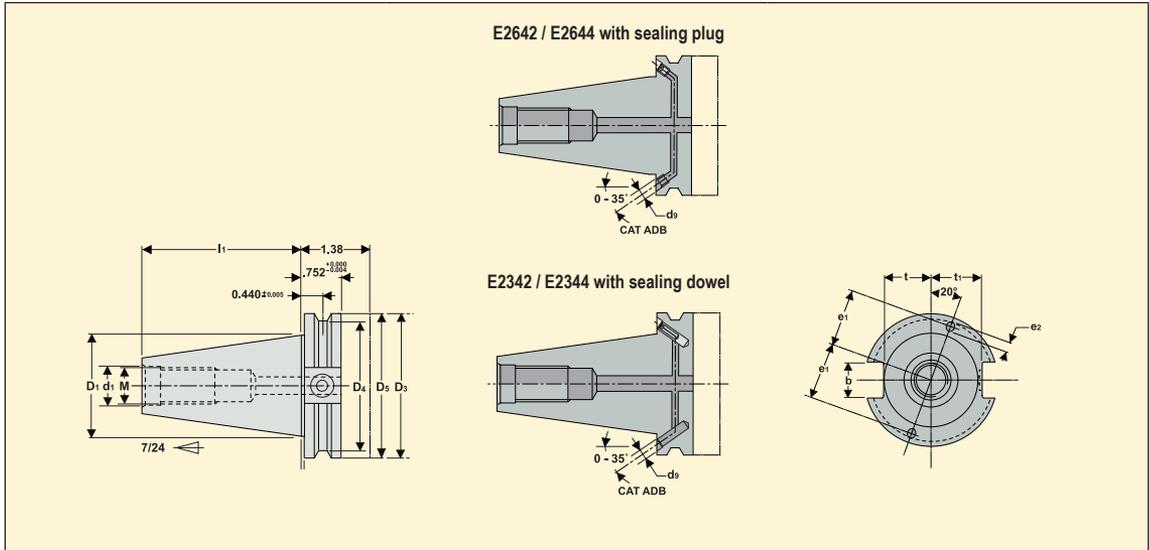
Taper cone tolerance is in accordance with ISO-1947.

Standard cone angle tolerance grade is AT-3.

Reference ASME B5.50-1994 "V" Flange Tool Shanks for Machining Centers with Automatic Tool Changers.

Reference ANSI Y14.5M-1982 for dimension symbols.

ASME B5.50-2009 with Taper-Face* tooling machine sides, dimensions



Taper	Machine side Part No.	Through coolant Form	Sealing plug or dowel **	Data carrier hole ***	Dimensions in inch													
					D ₁	D ₃ max	D ₄	D ₅	I ₁ ^{+0.015 -0.000}	M	d ₁ ^{+0.015 -0.000}	d ₉	e ₁	e ₂ max	t	t ₁	b	a
CAT TF40 ADB	E2642...	A/AD/B	Plug	Yes	1.75	2.50	2.219	2.50	2.69	5/8-11	0.64	0.157	1.062	0.196	0.890	0.985	0.645	0.039
CAT TF40 ADB	E2342...	A/AD/B	Dowel	No	1.75	2.50	2.219	2.50	2.69	5/8-11	0.64	0.157	1.062	0.196	0.890	0.985	0.645	0.039
CAT TF50 ADB	E2644...	A/AD/B	Plug	Yes	2.75	3.875	3.594	3.875	4.00	1/8	1.03	0.236	1.653	0.275	1.390	1.485	1.011	0.059
CAT TF50 ADB	E2344...	A/AD/B	Dowel	No	2.75	3.875	3.594	3.875	4.00	1/8	1.03	0.236	1.653	0.275	1.390	1.485	1.011	0.059

* ASME B5.50-2009 with Taper-Face tooling machine sides:

- conform to the ASME B5.50-2009 norm, a revision of ANSI/ASME B5.50-1985. The main difference is that 2009 allows a free, until a maximum, recess diameter D3 (ASME40 = max 2.50" ; ASME50 = max 3.875") while 1985 requires a fixed recess diameter D3 (ANSI/ASME40 = 1.75" ; ANSI/ASME50 = 2.75"). Users need to check if the tool changers and magazines accept the new D3.

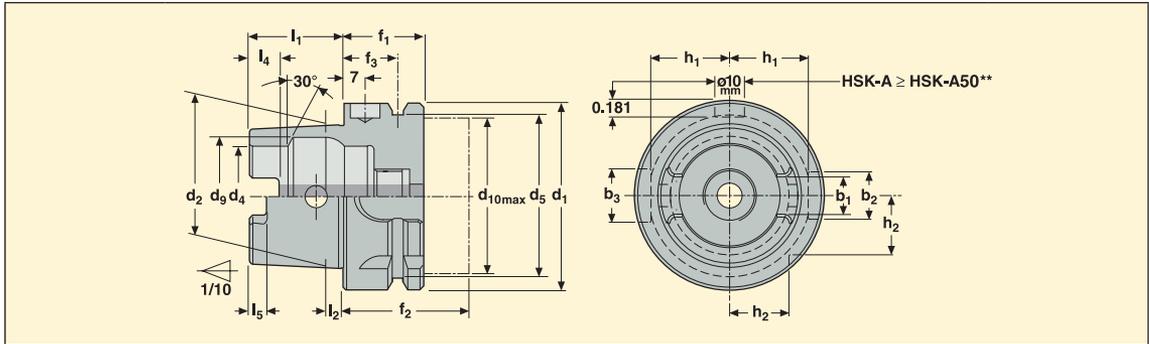
- have a larger flange towards machine side, with tight tolerances. This achieves taper and face contacts on machine spindles with Taper-Face dimensions. Taper-Face tooling is also usable on standard spindles, but a gap remains between spindle and flange faces.

** ADB type holders have two removable sealing plugs or sealing dowels in the flange, in order to allow through coolant types A, AD, or B. Sealing plugs and sealing dowels are available as spare parts.

*** The table above shows which tooling machine side types feature data carrier blind holes as standard. When not available and needed, blind holes for data carriers can be machined on request, please inquire. Data carriers can be fitted on request, please inquire.

HSK-A, norm dimensions

ISO 12164-1 Form A/ DIN 69893 Form A compatible



Taper	Machine side taper type	Dimensions in inch																	
		d_1	d_2	$d_{10\max}$	d_4	d_5	d_9	f_1	f_2	f_3	l_1	l_2	l_4	l_5	b_1	b_2	b_3	h_1	h_2
HSK-A32	E9301...	1.26	0.94	1.02	0.67	1.04	0.83	0.79	1.38	0.63	0.63	0.13	0.20	0.12	0.28	0.28	0.35	0.51	0.37
HSK-A40	E9302...	1.57	1.18	1.34	0.83	1.37	1.00	0.79	1.38	0.63	0.63	0.16	0.24	0.14	0.32	0.35	0.43	0.67	0.47
HSK-A50	E9303...	1.97	1.50	1.65	1.02	1.69	1.26	1.02	1.65	0.71	0.98	0.20	0.30	0.18	0.41	0.47	0.55	0.83	0.61
HSK-A63	E9304...	2.48	1.89	2.09	1.34	2.17	1.57	1.02	1.65	0.71	1.26	0.25	0.39	0.24	0.49	0.63	0.71	1.04	0.79
HSK-A80	E9305...	3.15	2.36	2.64	1.65	2.76	1.97	1.02	1.65	0.71	1.57	0.31	0.47	0.31	0.63	0.71	0.79	1.34	0.98
HSK-A100	E9306...	3.94	2.95	3.46*	2.09	3.62	2.48	1.14	1.77	0.79	1.97	0.39	0.59	0.39	0.79	0.79	0.87	1.73	1.24

EPB's holders HSK-A have a radial hole through the taper for manual clamping, compatible with HSK-C.

Note: The following norm dimensions are applied to all the holders shown in the Product pages.

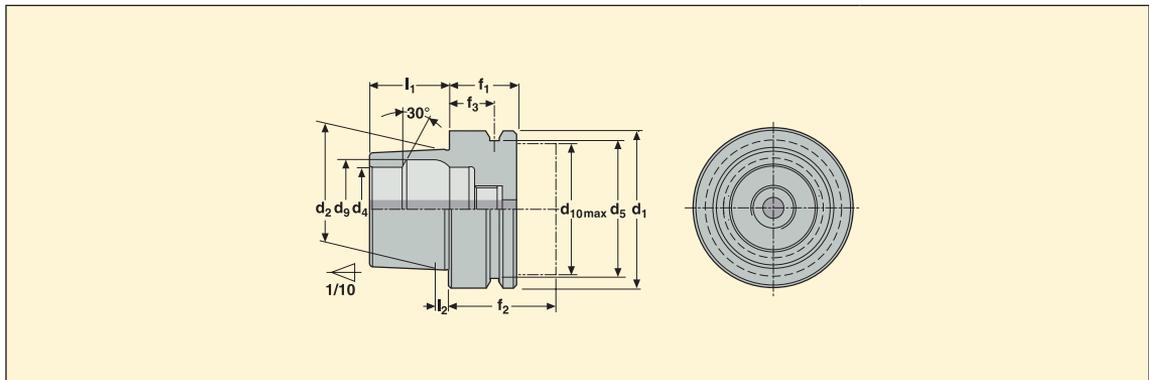
For HSK sealing plugs, coolant tubes and tube spanners, see page(s) 357.

* Note: HSK-A100 has $d_{10\max}$ 88 mm according to the latest norm ISO 12164.

** Data carrier blind hole location available as standard on all HSK-A50/63/80/100.

HSK-E, norm dimensions

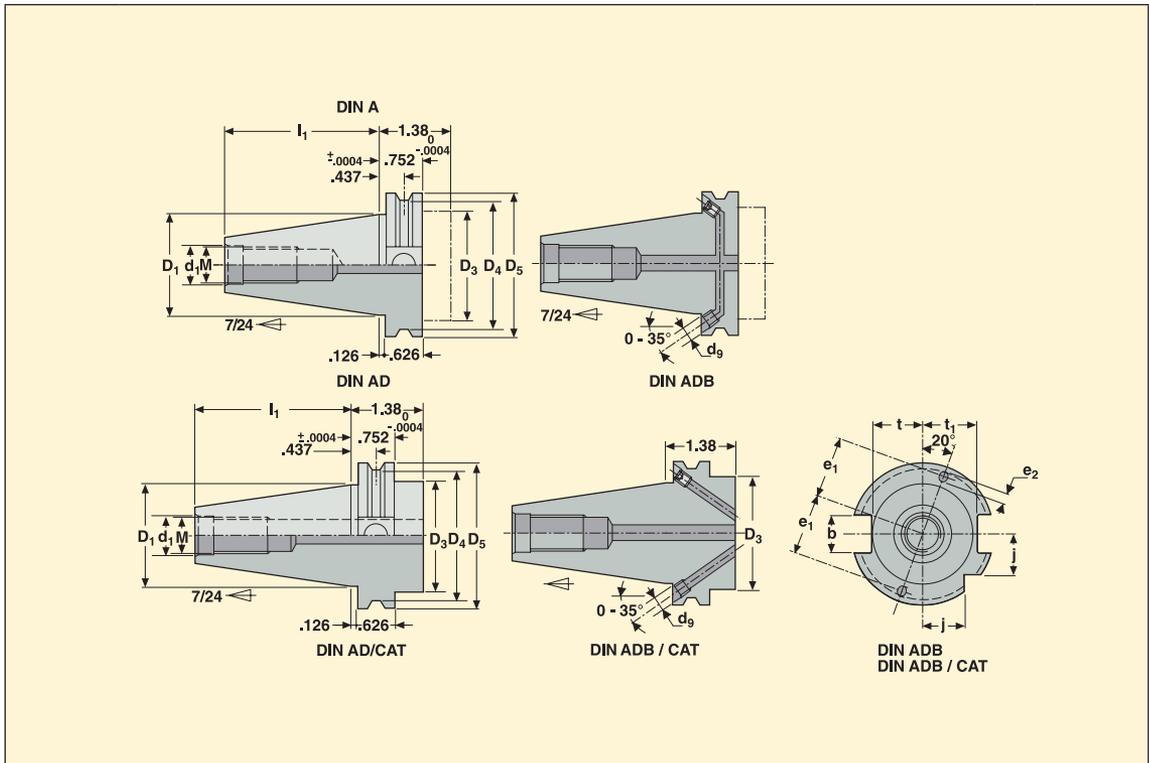
DIN 69893 Form E with additional thread for coolant tube



Taper	Machine side taper type	Dimensions in inch										
		d_1	d_2	d_4	d_5	d_9	$d_{10\max}$	f_1	f_2	f_3	l_1	l_2
HSK-E25	E9340...	0.96	0.75	0.55	0.87	0.65	0.79	0.39	0.79	0.18	0.51	0.10
HSK-E32	E9341...	1.26	0.94	0.67	1.04	0.83	1.02	0.79	1.38	0.63	0.63	0.13
HSK-E40	E9342...	1.57	1.18	0.83	1.37	1.00	1.34	0.79	1.38	0.63	0.79	0.16
HSK-E50	E9343...	1.97	1.50	1.02	1.69	1.26	1.65	1.02	1.65	0.71	0.98	0.20

Note: EPB's newest HSK-E design has a thread to fit coolant tubes or sealing plugs from the HSK-A type (delivered by FIFO rule).

For HSK sealing plugs, coolant tubes and tube spanners, see page(s) 357.

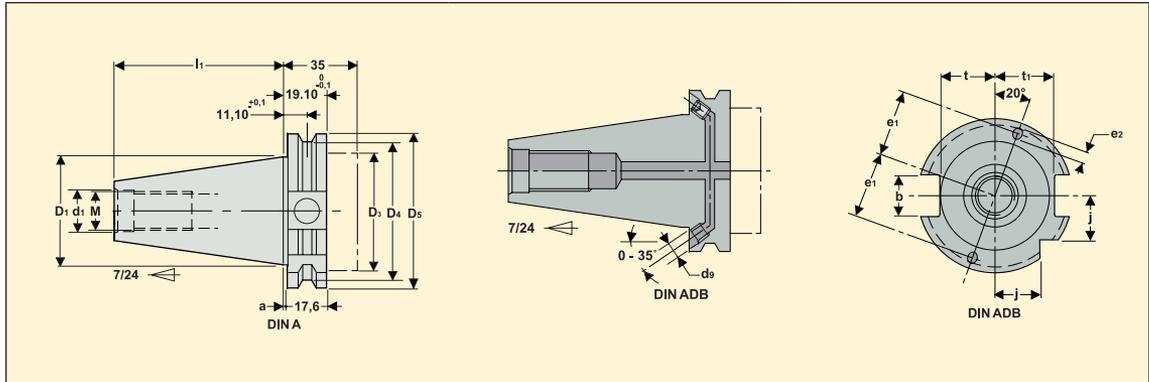


Taper	Through coolant Form	Machine side taper type	Dimensions in inch													
			D ₁	D ₃	D ₄	D ₅	I ₁ ^{-0,20}	M	d ₁ ^{H7}	d ₉	e ₁	e ₂ max	t	t ₁	b	j
DIN30	A/AD	E4464...	1.25	1.77 max	1.744	1.968	1.882	M12	0.512	-	-	-	0.646	0.748	0.6334	0.591
DIN40	A/AD	E4469...	1.75	1.97 max	2.215	2.502	2.693	M16	0.669	-	-	-	0.898	0.984	0.6334	0.728
DIN40 AD/CAT40	A/AD	E4466...	1.75	1.75	2.215	2.502	2.693	M16	0.669	-	-	-	0.898	0.984	0.6334	0.728
DIN40 ADB	A/AD/B	E3469...	1.75	1.97 max	2.215	2.502	2.693	M16	0.669	0.157	1.063	0.197	0.898	0.984	0.6334	0.728
DIN40 ADB/CAT 40	A/AD/B	E3476...	1.75	1.75	2.215	2.502	2.693	M16	0.669	0.157	1.063	0.197	0.898	0.984	0.6334	0.728
DIN45	A/AD	E4470...	2.25	2.48 max	2.953	3.250	3.256	M20	0.827	-	-	-	0.115	1.232	0.760	0.945
DIN50	A/AD	E4471...	2.75	3.15 max	3.593	3.839	4.006	M24	0.984	-	-	-	1.398	1.484	1.012	1.181
DIN50 AD/CAT50	A/AD	E4468...	2.75	2.75	3.593	3.839	4.006	M24	0.984	-	-	-	1.398	1.484	1.012	1.181
DIN50 ADB	A/AD/B	E3471...	2.75	3.15 max	3.593	3.839	4.006	M24	0.984	0.236	1.654	0.276	1.398	1.484	1.012	1.181
DIN50 ADB/CAT50	A/AD/B	E3478...	2.75	2.75	3.593	3.839	4.006	M24	0.984	0.236	1.654	0.276	1.398	1.484	1.012	1.181

ADB type holders have two removable sealing plugs in the flange, in order to realize all through coolant types A, AD, or B. For spare plugs and pull studs, see page(s) 358-361.

DIN/ CAT indicate these holders of the DIN 69871 range feature the controlled diameter D3 of the CAT norm (CATERPILLAR ANSI B5 50 compatible only. Full ANSI-CAT conformity restricted by timing notch inclusion and metric pull-stud thread).

DIN for Taper-Face*, dimensions



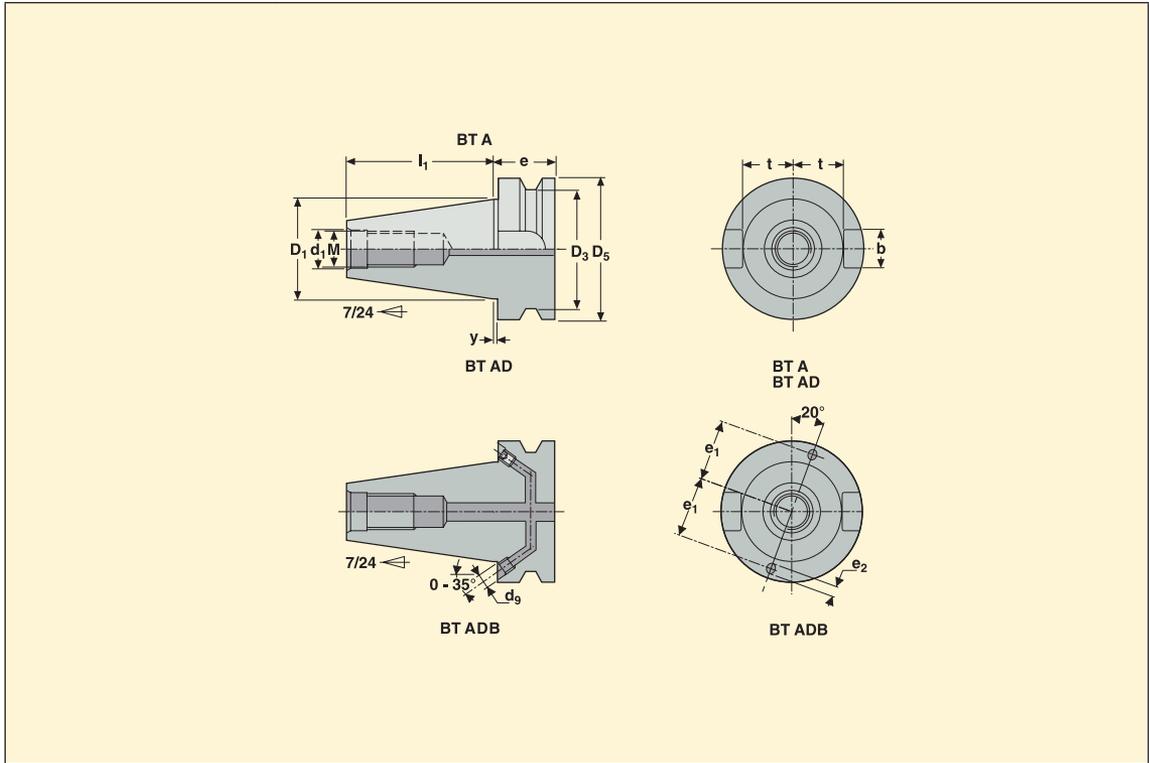
Taper	Machine side Part No.	Through coolant Form	Dimensions in inch														
			D ₁	D ₃	D ₄	D ₅ **	l ₁ ^{-0,2/0}	M	d ₁ ^{H7}	d ₉	e ₁	e ₂ max	t	t ₁	b	j	a
DIN TF40 ADB	E3269...	A/AD/B	1.75	1.97 max	2.215	2.502	2.693	M16	0.697	0.157	1.063	0.197	0.898	0.984	0.634	0.728	0.039
DIN TF50 ADB	E3271...	A/AD/B	2.75	3.15 max	3.593	3.839	4.006	M24	0.984	0.236	1.654	0.276	1.398	1.484	1.018	1.181	0.059

The B through coolant design of ADB holders is made according to DIN 69871 Form B.

ADB type holders have two removable sealing plugs in the flange, in order to realize all through coolant types A, AD, or B. Sealing plugs are available as spare parts.

** EPB DIN holders with a front end diameter in excess of diameter D₅, are produced with the following clearance diameters: DIN40 = \varnothing 2.440 in max x 0.315 in; DIN50 = \varnothing 3.858 in max x 0.472 in. This is compatible with the DIN norm which permits free dimensions on workpiece side.

* Taper-Face (TF) holders DIN are conform to the DIN 69871/ NF-E 62 540 and ISO 7388-1 norm, except that they have a larger flange towards machine side, with tight tolerances: They achieve taper and face contacts on machine spindles with Taper-Face dimensions. They are also usable on standard spindles, however a gap remains between spindle and flange faces.



Taper	Through coolant Form	Machine side taper type	Dimensions in inch												
			D ₁	D ₃	D ₅ *	l ₁	M	d _g	e ₁	e ₂ max	e	d _i	t	b	y
BT30	A/AD	E4040...	1.25	1.496	1.811	1.905	M12	-	-	-	0.866	0.492	0.642	0.633	0.078
BT40	A/AD	E4041...	1.75	2.086	2.480	2.575	M16	-	-	-	1.063	0.669	0.885	0.633	0.078
BT40 ADB	A/AD/B	E3414...	1.75	2.086	2.480	2.575	M16	0.157	1.063	0.197	1.063	0.669	0.885	0.633	0.078
BT50	A/AD	E5766...	2.75	3.346	3.937	4.007	M24	-	-	-	1.496	0.984	1.393	1.011	0.188
BT50 ADB	A/AD/B	E3416...	2.75	3.346	3.937	4.007	M24	0.236	1.653	0.275	1.496	0.984	1.393	1.011	0.188

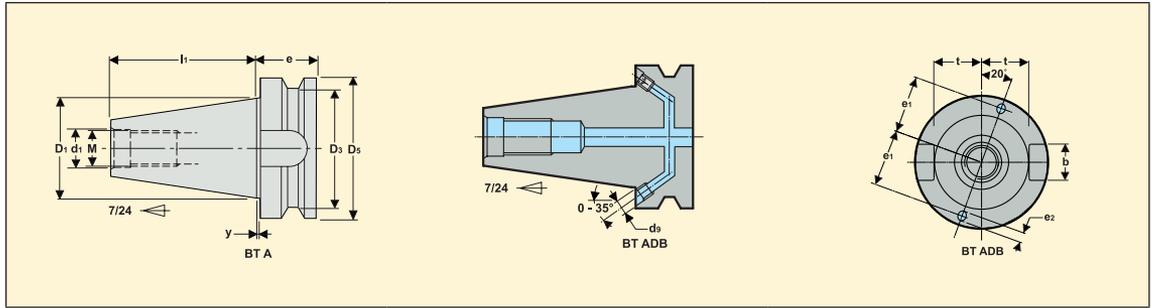
The B through coolant design of ADB holders is made according to DIN 69871 Form B.

ADB type holders have two removable sealing plugs in the flange, in order to realize all through coolant types A, AD or B. For spare plugs and pull studs, see page(s) 358-361.

* EPB BT holders with a front end diameter in excess of diameter D5, are produced with a flange clearance length: BT30 = \varnothing 1.772" x 0.118"; BT40 = \varnothing 2.441" x 0.315"; BT50 = \varnothing 3.858" x 0.472". This is compatible with the BT JIS norm which permits free dimensions in front of the taper.

BT JIS-ADB for Taper-Face*, norm dimensions

JIS B 6339/ BT Form ADB/ ISO 7388-2



Taper	Through coolant Form	Machine side taper type	Dimensions in inch												
			D ₁	D ₃	D ₅ **	l ₁	M	d ₉	e ₁	e ₂ max	e	d ₁	t	b	y
BT40 ADB	A/AD/B	E3214...	1.75	2.087	2.480	2.575	M16	0.157	1.063	0.197	1.063	0.669	0.886	0.634	0.039
BT50 ADB	A/AD/B	E3216...	2.75	3.346	3.937	4.008	M24	0.236	1.654	0.276	1.496	0.984	1.394	1.012	0.059

The B through coolant design of ADB holders is made according to DIN 69871 Form B.

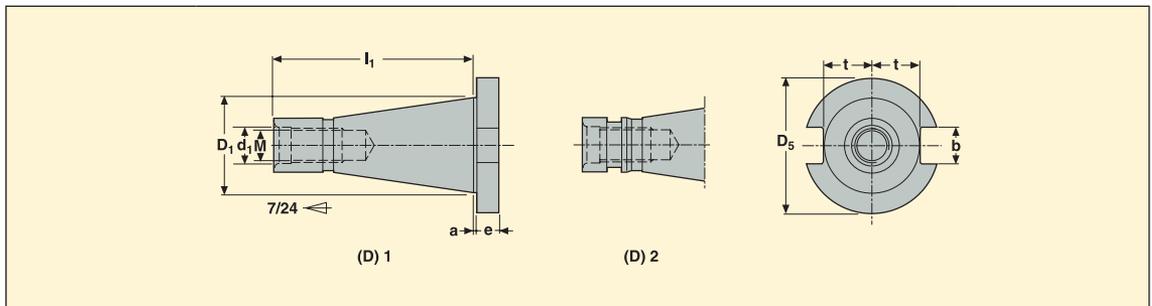
ADB type holders have two removable sealing plugs in the flange, in order to realize all through coolant types A, AD, or B. For spare plugs and pull studs, see page(s) 358-361.

** EPB BT holders with a front end diameter in excess of diameter D5, are produced with the following clearance diameters: BT40 = \varnothing 2.441" max x 8 mm; BT50 = \varnothing 3.858" max x 0.472". This is compatible with the BT JIS norm which permits free dimensions in front of the taper.

* Taper-Face (TF) holders BT are conform to the BT JIS Form ADB norm, except that they have a larger flange towards machine side, with tight tolerances: They achieve taper and face contacts on machine spindles with Taper-Face dimensions. They are also usable on standard spindles, however a gap remains between spindle and flange faces.

DIN 2080, norm dimensions

DIN 2080/ NF-E-60-024/ ISO 297



Taper	Machine side taper type	Design (D)	Dimensions in inch								
			D ₁	D ₅	l ₁	M	e	d ₁	t	b	a
DIN(2080) 40	E0040...	2	1.75	2.480	3.677	M16	0.394	0.669	0.886	0.634	0.063
DIN(2080) 50	E0050...	1	2.75	3.839	4.992	M24	0.472	1.024	1.390	1.012	0.126

DIN 2080 only available as Graflex arbors.

Note: For pull studs to convert DIN 69871 and BT holders to DIN 2080 holders, see page(s) 358-360.

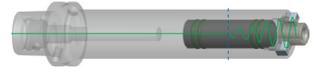
Steadyline® damping system, general information

The patented Steadyline damping system

A built-in vibration absorber dampens the vibrations as soon as they are transmitted by the cutting tool to the body of the holder. It prevents them from spreading along the bar, thus limiting the deflection of the milling assembly.

As a result, Steadyline vibration damping holders offer up to three times greater dynamic rigidity than equivalent solid holders.

The holders are ready to use, and offer the damping advantages regardless the type of rotating or static machining operation, the number of teeth in the cutter or the workpiece material.



Productivity booster

The Steadyline vibration damping system allow longer assemblies, much higher cutting conditions, with quieter operation and optimum stability. Key benefits are increased productivity, improved surface finish and longer tool and spindle life.

Problem solver

Steadyline holders are particularly recommended for:

- Milling and turning operations with long overhangs with predominantly radial forces.
- Machining of deep cavities in mold and die workpieces.
- Machining of complex monolithic (one piece) workpieces, particularly in the aerospace, automotive and power generation industries.

Steadyline tooling range

For milling, standard holders with Steadyline damping systems are available with Combimaster and Shell mill tool connections, see Product pages. For internal turning, threading and boring, the standard range of bars with the GL tool connection is shown in a separate Steadyline brochure, please inquire.

Steadyline damping is also widely applicable on custom made tooling and tools, please inquire.

Productivity booster

The standard Steadyline shell mill holders enable machining over 5xd overhang with cutting speeds similar to short assemblies, hence increasing depth of cut (a_p) by up to 3 times compared to classic long holders. The chip removal rate can be drastically increased! For longer assemblies, please inquire.

For recommended cutting conditions, see Instructions page.



Type 5555 - Cylindrical



Type 5556 - Conical

Other features

- Types:** Steadyline shell mill holders type 5555 are cylindrical and 5556 are conical shaped for increased stiffness. Front end for tenon drive milling cutters is designed with large bearing face and through the pilot multi-channel coolant supply.
- Run-out:** Direct run-out of the pilot in relation to the external taper is 0.0002" (5 µm) maximum.
- Balancing** Holders are pre-balanced (see product pages, balancing columns).

Shell mill holders, Steadylite[®], main operating instructions

This page summarizes the instructions delivered with the holders. To ensure optimal use of the Steadylite shell mill holders, the detailed operating instructions delivered with the holder must be respected.

Note: The built-in damping system is ready to use, whatever the milling operation, the number of teeth in the cutter or the workpiece material.

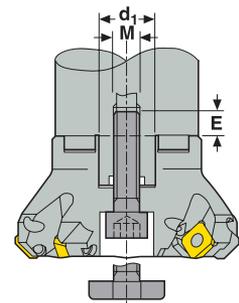
Milling cutter fitting

Due to the high cutting conditions achievable, a reliable clamping of the milling cutter onto the Steadylite holder must be realized as below:

–**Center bolt with suitable length:** For optimal use, the center bolt has to stand out from the milling cutter back face (E) (see table).

–**Center bolt tightening torque:** Apply the recommended center bolt tightening torque (see table).

d ₁ inch/mm	M inch/mm	E min inch/mm	E max inch/mm	Tightening torque ft/lbs	Tightening torque Nm
0.75	0.375	0.160	0.260	26	35
1.00	0.500	0.240	0.400	33	44
1.50	0.750	0.551	0.708	70	95
16	8	3	4	30	30
22	10	6	8	40	40
27	12	8	10	60	60
32	16	12	16	80	80
40	20	17	22	108	108



Recommended cutting conditions and maximum temperature

Make sure to never exceed the maximum RPM of the holder (indicated on the holder and listed in the table).

- Too high cutting conditions could cause vibrations of the milling assembly, this would prevent the damper operating properly and would damage the tool, the tool holder, the machine as well as the workpiece: set the cutting conditions in order to stay vibration free.

Optimal cutting conditions, selection procedure:

1. Cutting speed v_c and feed f : select the average values recommended for the cutter and inserts.

2. The width of cut a_e and the depth of cut a_p maximum are the parameters to fine tune. It is possible to increase them inside cutter and inserts recommendations, while staying vibration free.

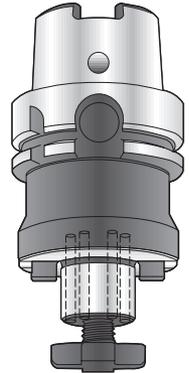
BEWARE: contrary to the use of classic long holders, the machining cannot be stabilized through additional radial force (e.g. by raising the feed).

Make sure the Steadylite holder body never exceeds a maximum temperature when in use of 176° F.

d ₁ (mm)	Max RPM	Operating temperature
0.75	8000	176° F
1.00	6000	
1.50	3000	
16	8000	
22	8000	
27	6000	
32	4000	
40	3000	

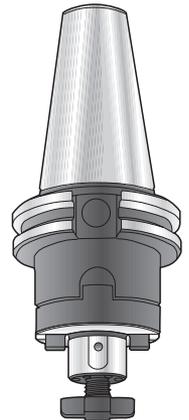
Shell mill holders

- Types:** EPB 5525, 5524 and 552 – Holders for tenon drive milling cutters. EPB 5525 and 5524 are with directional coolant channels through the pilot.
- Norm:** EPB 5525: Pilot and tenon drive features according to ISO 3937, but with larger bearing face OD than ISO (according to most recent cutters, for optimized rigidity). EPB 5524 and 552, ISO 3937: **small bearing face OD suitable for e.g. disc mill cutters Type B.** EPB 5525 with larger diameter pilots have 4 threaded holes according to DIN 6357 in addition to the central locking bolt.
- Run-out:** Direct run-out of the pilot in relation to the external taper is 0.0002" (5 µm) maximum.
- Balancing:** See Product pages.
- Accessories:** For metric cutters, when the cutter has no through coolant channels, it is possible to replace the standard cross head center bolt with a cross head center bolt that has through coolant channels. The option is shown in Accessories. This will direct the coolant towards the cutter's front end.



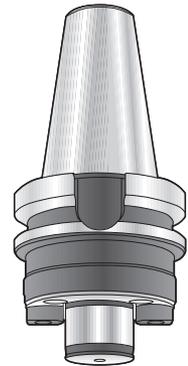
Combi shell mill holders

- Types:** EPB 553 – For tenon drive cutters or key drive cutters by removing the driving ring.
- Norm:** DIN 6358.
- Run-out:** Direct run-out of the pilot in relation to the external taper is 0.0002" (5 µm) maximum.
- Balancing:** Not suitable for balancing due to the removable driving ring.



Milling cutter holders, flange mounting

- Types:** EPB 569 – For large diameter face mill cutters. Offering a large bearing face and secure locking using 4 screws according to DIN 2079. High torque transmission thanks to large driving keys.
- Norm:** DIN 6357/DIN 2079.
- Run-out:** Direct run-out of the pilot in relation to the external taper is 0.0002" (5 µm) maximum.
- Balancing:** See Product pages.



Disc mill holders

- Types:** EPB M5656, 5657 – The disc mill is held by an adjustable sliding shaft arbor equipped with a driving key. The arbor and disc mill are locked using a pulling screw. Slim front end clamping flange for optimized accessibility.
- Norm:** Suitable for e.g. Seco disc mill cutters Type A.
- Balancing:** See Product pages.



Side lock holders, Weldon

Types:	EPB 584 – The tool position is fixed as a result of the tool shank flat(s) and cannot be adjusted. The locking method offers high torque transmission. Bore sizes \varnothing 5/8", 3/4", 1", 1 1/4", 1 1/2" (16, 20, 25, 32 and 40 mm) have the front face ground (Seco Weldon shanks and flanges compatible).	
Norm:	DIN 1835-2 Form B/ISO 5414-1.	
Tool shanks:	Weldon DIN 1835-1 Form B/ DIN 6535 Form HB.	
Run-out:	Direct run-out of the bore to the external taper is 0.00012". Reduced bore tolerances on \varnothing 3/8" 5/8" (6 to 18 mm) is +0.00004" to +0.0002" and \varnothing 3/4" (20 mm) and > is +0.00004" to +0.00028".	
Balancing:	See Product pages.	

Side lock holders, Weldon short

Types:	EPB 5842 – Short, giving maximum rigidity. Bore sizes \varnothing 5/8", 3/4", 1", 1 1/4", 1 1/2" (16, 20, 25 and 32 mm) have the front face ground (Seco Weldon shanks and flanges compatible).	
Norm:	Compatible to DIN 1835-1 Form B/ISO 5414-1 but not conformed.	
Tool shanks:	Weldon DIN 1835-1 Form B/ DIN 6535 Form HB.	
Run-out:	Direct run-out of the bore to the external taper is 0.0002". Reduced bore tolerances on \varnothing 3/8" to 5/8" (6 to 18 mm) are +0.00004" to +0.0002" and on \varnothing 3/4" (20 mm) and > are +0.00004" to +0.00028".	
Balancing:	See Product pages (1 = Fine balanced ; 2 = Pre-balanced).	

Side lock holders, Whistle Notch

Types:	EPB 5843 – Similar to Weldon, but with screw(s) angled 2° to lock the tool against an adjustable stop end screw. \varnothing 5/8", 3/4", 1", 1 1/4", 1 1/2" (16, 20, 25 and 32 mm) have the front face ground. A securing screw is provided for the stop screw.	
Norm:	DIN 1835-2 Form E.	
Tool shanks:	Whistle Notch DIN 1835-1 Form E/ DIN 6535 Form HE.	
Run-out:	Direct run-out of the bore to the external taper is 0.0001" (3 μ m). Reduced bore tolerances on \varnothing 3/8" to 5/8" (6 to 18 mm) is +0.00004" to +0.0002" and \varnothing 3/4" (20 mm) and > are +0.00004" to +0.00028".	
Balancing:	See Product pages (balancing with median clamping position of the screws).	

Shrinkfit holders, general information

A Shrinkfit tool holder works in conjunction with a specialized heater e.g. EasyShrink. The bore in which the tool locates is slightly undersized compared to the tool shank. Heating the holder opens up this bore, allowing the tool to be inserted. As the holder cools, the bore shrinks around the tool to create a concentric and rigid clamping. Bore size $\varnothing 1/4"$ to $1 1/4"$ and $\varnothing 3$ mm to 32 mm.

Thermal expansion:

Approx. $11 \mu\text{m}/\text{m}/^\circ$ for steel and HSS

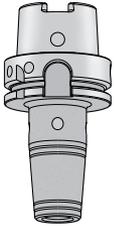
Approx. $6 \mu\text{m}/\text{m}/^\circ$ for carbide and heavy metal

e.g.: $\varnothing 20$, heating from 20°C to 270°C , increase of 250°C :

Steel: $0.020 \times 11 \times 250 = + 55 \mu\text{m}$

Carbide: $0.020 \times 6 \times 250 = + 30 \mu\text{m}$

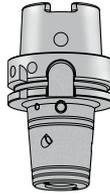
Shrinkfit holders, all available front end types



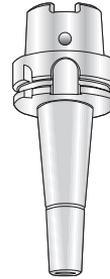
EPB 5603



EPB 5600



EPB 5600P



EPB 5801



EPB 5801P

Suitable tool shank types and tolerances for Shrinkfit holders

Cylindrical DIN 1835-1 Form A/ DIN 6535 Form HA.

Note: Type 5600P requires the Safe-Lock shank execution (grooves).

Tool shank tolerance required

$\varnothing 1/8"$ to $1/4"$ (3 to 5 mm) maximum h5, tool shank must be carbide or heavy metal (e.g. Densimet). $\varnothing 1/4"$ to $1 1/4"$ (6 to 32 mm) maximum h6, tool shank can be steel, HSS, carbide or heavy metal. Using h5 for $\varnothing 1/4"$ to $1 1/4"$ (6 to 32 mm) provides a safer minimum clamping torque. Make sure the minimum shrinking depth l_3 shown in the product pages for each holder is respected when fitting the tool shank into the holder.

Run-out

Maximum run-out when measured at a gauge projection of $3 \times d$ (d = bore dia.) in relation to the external taper or shank is $0.00015"$ ($3 \mu\text{m}$).

Direct run-out of the holder bore in relation to the taper or the shank is $0.00015"$ ($3 \mu\text{m}$) maximum.

Balancing

Shrinkfit holders are fine balanced as standard, except Shrinkfit extensions, being pre-balanced.

Heat resistance

EPB Shrinkfit holders are made from heat resistant steel guaranteeing structure, geometry and dimensional stability after many Shrinkfit heating cycles. The maximum acceptable temperature is 400°C .

DIN type Shrinkfit holders, EPB 5603

See also Shrinkfit holder general information on 32.

EPB 5603 has a 4.5° nose angle, an internal thread for a stop screw (stop screw delivered with the holder) and 4 balancing threaded holes, according to norm DIN 69882-8.

The stop screw has hexagonal back and front ends and a coolant through channel with front groove.

Norm DIN 69882-8 also defines the overall dimensions of some HSK-A Shrinkfit holder type 5603 sizes (marked with an asterisk in the Product pages): for the other type 5603 holders, this norm only applies to the front end shape, the thread for a stop screw and a stop screw delivered with the holder, and the 4 balancing threaded holes.

Holders type 5603 with diameters 3 to 5 mm as well as extra short holders have neither thread for stop screw (no stop screw delivered) nor balancing threaded holes, due to lack of space (see information in Product pages). Holders type 5603 in Combimaster and in Seco-Capto have no balancing threaded holes.



Transmittable torque to the tool shank (Nm) and Max RPM, Shrinkfit holders EPB 5603

Clamp Ø inch (mm)	Minimum static transmittable torque ft/lbs (Nm)	Shrinkfit clamping system Max RPM*
1/4" (6)	16.2 (22)	45,000
(8)	25.8 (35)	45,000
3/8" (10)	48 (65)	40,000
(12)	81 (110)	40,000
1/2" (14)	110.6 (150)	38,000
5/8" (16)	147.5 (200)	38,000
(18)	185.4 (250)	35,000
3/4" (20)	236 (320)	35,000
1" (25)	368.8 (500)	32,000
1 1/4" (32)	405.6 (550)	30,000

* The maximum RPM for holders equipped with this clamping system is often restricted by the holder's machine side taper type and size.

A kit of balancing screws for Shrinkfit holders EPB 5603 and EPB 5600 is available as Accessories (Part N° 90ZQ01)

The kit contains screws of different masses, to be fitted into holder's balancing threaded holes of Shrinkfit holders type 5603.

Balancing screws allow fine tune balancing of Shrinkfit holder and tool assemblies when using a suitable balancing machine. The appropriate balancing screws are meant to be screwed until stop in the threaded holes, with a torque of 8.8 in/lbs (1 Nm).

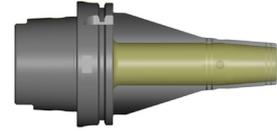


Shrinkfit holders, reinforced, EPB 5600

See also Shrinkfit holder general information on page 32.

Reinforced design:

The Shrinkfit front part OD dimensions are one size wider compared to type 5603. The body part from flange to Shrinkfit front is conical reinforced.



Periphery through coolant channels, with removable plugging screws:

When using tools without through coolant, remove the plugging screws to direct coolant towards the cutting edges.

The reinforced design achieves up to 40% more tool transmittable torque and higher rigidity, for increased productivity and quality performances. The coolant supply directed towards the cutting edges increases tool life.



Other features, Shrinkfit holders EPB 5600

Shrinkfit front with 4.5° nose angle (similar to DIN EPB 5603 holders but one size wider).

Internal thread for a stop screw. A stop screw is delivered with the holder (similar to DIN type 5603 holders). The stop screw features a central hole and a concave front face for through coolant with tools with through coolant.

4 balancing threaded holes for balancing screws (similar to DIN type 5603 holders). A kit of balancing screws is available as accessories, see guide page of EPB 5603 Shrinkfit holders.

Due to their dimensions (lack of space), some holders type 5600 don't have threads for stop screws (no stop screw delivered) or no balancing threaded holes (see information in Product pages).

The coolant channels design and numbers achieve high coolant flow: 2 channels up to $\varnothing 3/4"$ (20 mm), 3 channels for $\varnothing 1"$ to $1 1/4"$ (25 and 32 mm).

Coolant channel plugs are designed to be fitted without using additional equipment. Plug removal is easy and reliable.

Transmittable torque to the tool shank (Nm) and Max RPM, Shrinkfit holders, reinforced, EPB 5600

Clamp \varnothing (mm)	Minimum static transmittable torque ft/lbs (Nm)	Shrinkfit clamping system Max RPM*
6	18.4 (25)	45,000
8	35.4 (48)	45,000
10	66.4 (90)	40,000
12	110.6 (150)	40,000
16	206.5 (280)	38,000
20	309.8 (420)	35,000
25	457.3 (620)	30,000
32	553.2 (750)	25,000

* The maximum RPM for holders equipped with this clamping system is often restricted by the holder's machine side taper type and size.

Shrinkfit holders, EPB 5600 Safe-Lock

See also Shrinkfit holder general information on page 32.

The EPB 5600 Safe-Lock Shrinkfit holders combine a pull-out protection system for round shanked cutting tools with the highly accurate Shrinkfit clamping.

Safe-Lock tool pull-out protection system:

Drive pins are fitted into the Shrinkfit toolholder bores. In combination with spiral-shaped grooves of the cylindrical cutting tool shank, the pins prevent the tool from being pulled-out of the chuck during extreme machining. Most SECO Jabro-HPM solid end mills now can be ordered with Safe-Lock shank execution (grooves) on demand.

Safe-Lock is the solution against tool pull-out effects, it:

- secures the tool clamping,
- avoids tool ejection, workpiece scrapping, and damage on machine spindle,
- ensures optimum process reliability and longer tool life
- increases productivity as the milling cutter can be used with its maximum cutting data.



Using the EPB 5600 Shrinkfit design

Safe-Lock Shrinkfit holders use the EPB 5600 reinforced Shrinkfit design: see EPB 5600 Guide pages.

Differences EPB 5600 Safe-Lock vs EPB 5600:

Tools require the Safe-Lock shank execution.

Stop screw fitted in the holder vs in delivery content.

Due to their dimensions (lack of space), some EPB 5600 Safe-Lock holders don't have threads for stop screw and therefore no stop screw, and/or no balancing threaded holes (see information in Product pages).

Max RPM, Shrinkfit holders EPB 5600 Safe-Lock

Clamp Ø (mm)	Shrinkfit clamping system Max RPM*
12	45,000
16	38,000
20	35,000
25	30,000
32	25,000

* The maximum RPM for holders equipped with this clamping system is often restricted by the holder's machine side taper type and size.



Suitable tool shanks, to be:

Cylindrical DIN 1835-1 Form A/ DIN 6535 Form HA with Safe-Lock shank execution.

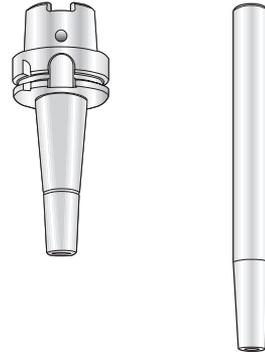
SAFE-LOCK™
by HAIMER.

Mold and Die type Shrinkfit holders, EPB 5801

See also Shrinkfit holder general information on 32.

Mold and Die Shrinkfit holders, EPB 5801 available in Monobloc and as cylindrical extension (see Additional equipment).

Long and slim 5°/3° nose angle design, with coated external surfaces. Designed to be particularly suitable for Mold & Die application.



High precision collet chucks, EPB 5672

Type:

EPB 5672 – High performance collet chuck system combining high run-out precision, high transmittable torque and HSM suitability.

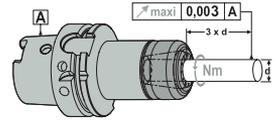
Run-out:

Maximum run-out, in relation to holder's back end taper is 0.0001" (3 µm) when measured with an ER HP collet at a gauge projection of 3xd up to a maximum of 1.969" (50mm).

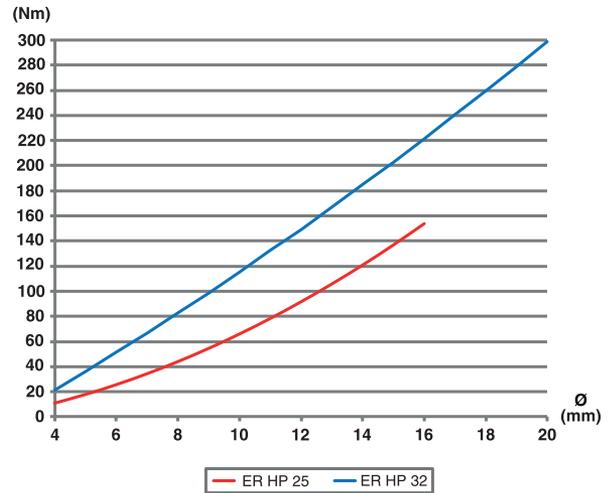
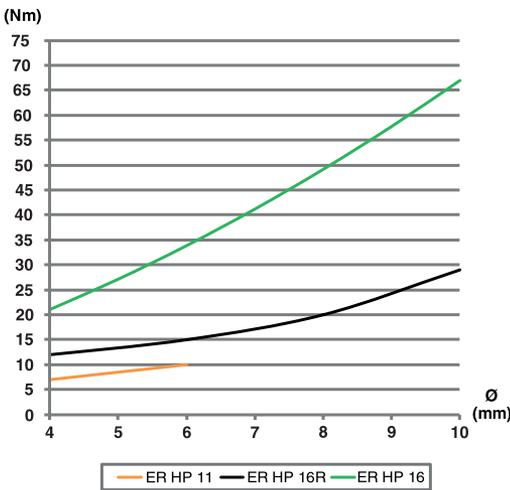
Suitable collets ER HP type 5672:

The high precision collet chucks EPB 5672 require a specific range of collets ER HP type 5672, see Additional Equipment.

The collet designation 'ER HP' indicates that the collet type 5672 is based on the external design of ISO 15488-B (ER), but equipped with a distinguishing plastic ring in the locking groove to avoid confusing it with a classic ER collet that would not provide the run-out mentioned above.



Transmittable static torque to the tool shank (Nm)



Transmittable static torques when collet nuts are tightened at max torque.

Balancing:

Fine balanced is standard.

Norm:

No norm.

Tool shanks:

Cylindrical DIN 1835-1 Form A/ DIN 6535 Form HA.

Tool shank diameter to be similar to collet's bore (no clamping capacity) and tolerance h10 max.

Through coolant supply:

1/ When using unsealed collets and no stop screw, the coolant flows through the collet's grooves, along the tool shank.

2/ To direct the coolant through the tool shank, two solutions are available:

- sealing obtained by using a concave tapered stop screw available as Accessories (for tool shanks without groove)
- sealing obtained by using sealed collets (available as Additional equipment).

Stop screw:

High precision collet chucks are delivered as standard without stop screws. Stop screws are not recommended for high spindle speeds, e.g. over 10,000 rpm. When using a stop screw, its tapered contact onto the tool shank can increase the tool run-out defect. Stop screws have to be ordered separately, see Accessories.

High precision collet chucks, EPB 5672 (cont.)

Roller spanners are required to tighten and release the plain cylindrical collet nuts of EPB 5672 chucks. Standard spanners and torque spanners are available as Accessories, to be ordered separately.

The use of a torque spanner is recommended for collet nut tightening: reliable application of the recommended clamping torque guarantees high transmittable torque to the tool and prevents nut or collet deformation.

For nut releasing, it is recommended to use a standard spanner: torque spanner's handle mechanism could be damaged by possible required higher untightening torque compared to the set torque for tightening.



Torque roller spanner, Tip/Handle



Standard roller spanner

Recommended tightening torque for the collet nut

Collet chuck size	Capacity d inch	Recommended tightening torque ft/lbs*	Recommended tightening torque Nm*
HP 11	.039-.276	7.4	10
HP 16R	.039	7.4	10
	.059-.138	11.1-14.8	15-20
	.157-.394	18.4-22.1	25-30
HP 16	.039	7.4	10
	.059-.138	18.4-22.1	25-30
	.157-.394	36.9-40.6	50-55
HP 25	.079-.118	18.4-22.1	25-30
	.138-.256	25.8-29.5	35-40
	.276-.394	40.6-44.3	55-60
	.413-.630	59.0-66.4	80-90
HP 32	.079-.118	22.1-25.8	30-35
	.138-.256	40.1-44.1	55-60
	.276-.610	81.1-88.5	110-120
	.630-.787	95.9-103.3	130-140

* Suitable roller spanner, standard and torque types are available as Accessories, see Product pages.

High precision type clamping system Max RPM

Collet chuck size	Capacity d inch	HP type clamping system Max RPM*
HP 11	.039-.276	50,000
HP 16R	.039-.394	50,000
HP 16	.039-.394	60,000
HP 25	.079-.630	42,000
HP 32	.079-.787	30,000

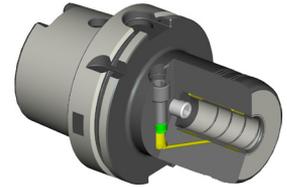
* The maximum RPM for holders equipped with this clamping system is often restricted by the holder's back-end taper type and size.

Operating instructions: To ensure optimal use of the high precision collet chucks, the detailed operating instructions delivered with the holder must be respected.

Hydraulic chucks, strong, EPB 5835

Hydraulic chucks, strong type, for High Performance Cutting are specially designed for rough milling applications. This holder allows higher cutting data thanks to the high transmittable torque, a great rigidity due to short design and a hydraulic system that minimizes vibration during machining.

An internal piston pressurizes hydraulic fluid into a chamber surrounding the holder bore. The high pressure is uniformly applied to grip 360° around the tool shank. Cutting tools are held with excellent precision. The bore has a helical groove where dirt, oil or grease can collect when it has inadvertently been left on the tool shank. The pressurizing screw must be tightened until stop using the dedicated key available as Accessories (see Product pages).



PLEASE NOTE: Never lock the chuck without a tool in place. This would damage the chamber and make the chuck unusable.

Tool shanks

Cylindrical DIN 1835-1 Form A/ DIN 6535 Form HA, Ø 1/2", 3/4", 1 1/4" (12, 20, 32 mm) and Weldon DIN 1835-1 Form B/ DIN 6535 Form HB, Ø 1/2", 3/4" (12, 20 mm). Additional tool shank diameters can be clamped using reduction sleeves (see next page).

Cylindrical OK	Weldon OK	Weldon NO	Whistle Notch NO
	Ø 1/2", Ø 3/4" Ø 12 mm, Ø 20 mm	Ø 1 1/4" Ø 32 mm	

Shank tolerance

h6 maximum.

Run-out

Maximum run-out when measured at a gauge projection of 3xd in relation to the external taper is 0.0002" (4 µm).



Balancing

Fine-balanced as standard.

Clamp Ø (mm)	Minimum static transmittable torque ft/lbs (Nm)	Operating temperature	Max coolant pressure	Hydraulic system Max RPM*
12	147.5 (200)	50-122° F (10-50° C)	1015 Psi (70 bar)	30,000
20	331.9 (450)			25,000
32	737.6 (1000)			18,000

* The maximum RPM for holders equipped with this clamping system is often restricted by the holder's machine side taper type and size. To reach maximum transmittable torque, the tool shank and bore must be clean and dry.

Hydraulic chucks, strong, EPB 5835 and EPB 5834

Control gauges, see Additional equipment

To check that the pressure of hydraulic chucks remains sufficient, it is recommended to regularly test the chucks with suitable gauges, shown in chapter Additional equipment.



Hydraulic chuck control instructions summary, using a control gauge:

Insert the control gauge into the chuck.

Tighten the clamping screw until you cannot turn the control gauge.

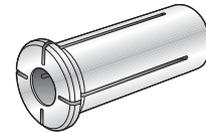
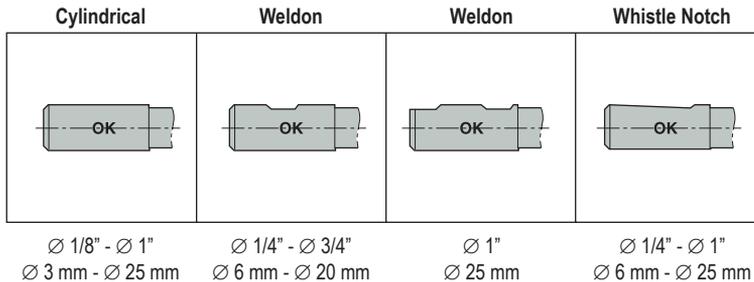
Then it should be possible to complete a minimum of three full turns of the pressurizing screw, before completely tightening.

This will confirm that the clamping capability is adequate.

Note: Detailed control instructions are part of the operating instruction sheet delivered with the hydraulic chucks.

Reduction sleeves for hydraulic chucks, see Additional equipment

The reduction sleeves for hydraulic chucks act as split collets allowing more shank types and sizes to be gripped (see below). The run-out with the sleeve is maximum 0.0002" (5 µm) at 3xd.



Reduction sleeves, range (see also chapter Additional equipment)

Tool shank \varnothing mm	Reduction sleeves $\varnothing 12$ mm	Reduction sleeves $\varnothing 20$ mm	Reduction sleeves $\varnothing 32$ mm
	Part No.	Part No.	Part No.
3	05F5832 12 03	05F5832 20 03	–
4	05F5832 12 04	05F5832 20 04	–
5	05F5832 12 05	05F5832 20 05	–
6	05F5832 12 06	05F5832 20 06	05F5832 32 06
8	05F5832 12 08	05F5832 20 08	05F5832 32 08
10	05F5832 12 10	05F5832 20 10	05F5832 32 10
12	–	05F5832 20 12	05F5832 32 12
14	–	05F5832 20 14	05F5832 32 14
16	–	05F5832 20 16	05F5832 32 16
18	–	–	05F5832 32 18
20	–	–	05F5832 32 20
25	–	–	05F5832 32 25

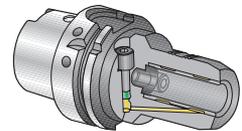
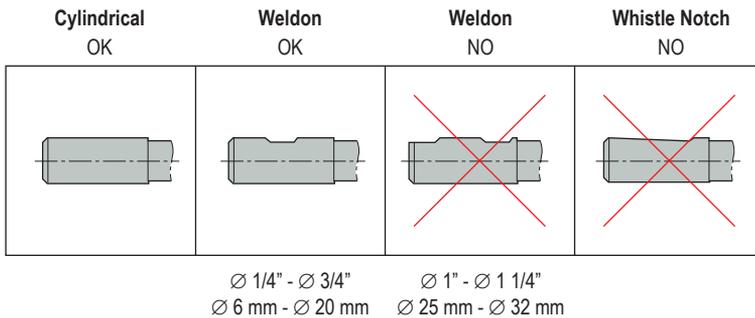
Hydraulic chucks, EPB 5834

A good choice for HSM and high precision. It is not recommended where high radial forces are involved due to its lower radial rigidity. An internal piston pressurizes hydraulic fluid into a chamber surrounding the holder bore. The high pressure is uniformly applied to grip 360° around the tool shank. Cutting tools are held with excellent precision. The bore has a helical groove where dirt, oil or grease can collect when it has inadvertently been left on the tool shank. The pressurizing screw must be completely tightened.

PLEASE NOTE: NEVER LOCK THE CHUCK WITHOUT A TOOL IN PLACE.

Types: EPB 5834 – DIN 69882-7 defines the overall dimensions of some HSK-A hydraulic chuck holder sizes, refer to the Product pages. For the other hydraulic chuck holder types and sizes this norm only applies to the front end.

Tool shanks: Cylindrical DIN 1835-1 Form A/ DIN 6535 Form HA, \varnothing 6 to 32 mm and Weldon DIN 1835-1 Form B/ DIN 6535 Form HB, \varnothing 1/4" to 3/4" (6 to 20 mm).



Shank tolerance
h6 maximum.

Run-out
Maximum run-out when measured at a gauge projection of 3xd in relation to the external taper is 0.00015" (3 μ m).

Balancing
Fine-balanced as standard.

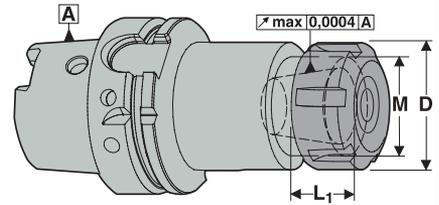
Clamp \varnothing (mm)	Minimum static transmittable torque ft/lbs (Nm)	Operating temperature	Max coolant pressure	Hydraulic system Max RPM*
6	14.8 (20)	50-122° F (10-50° C)	1015 psi (70 bar)	40,000
8	22 (30)			40,000
10	29.5 (40)			40,000
12	51.6 (70)			40,000
14	73.8 (100)			40,000
16	88.5 (120)			40,000
18	103.3 (140)			40,000
20	125.4 (170)			40,000
25	147.5 (200)			25,000
32	184.4 (250)			25,000



* The maximum RPM for holders equipped with this clamping system is often restricted by the holder's back-end taper type and size.
To reach maximum transmittable torque, the tool shank and bore must be clean and dry.

ER collet chucks

- Types:** **EPB 5675** – offers good flexibility thanks to the interchangeability of the collets.
The clamping range of an ER collet is up to 0.039" (1 mm).
- Norm:** ISO 15488.
- Tool shanks:** Cylindrical DIN 1835-1 Form A/ DIN 6535 Form HA.
- Run-out:** Maximum run-out when measured with a collet at a gauge projection of 3xd in relation to the external taper is 0.0004" (10 µm).
- Balancing:** See Product pages (1 = Fine balanced ; 2 = Pre-balanced).



Recommended tightening torque for the locking nut

Collet chuck size	D	L ₁	M	Max tightening torque ft/lbs (Nm)
ER16	32	18	M22 x 1.5	44.3 (60)
ER25	42	21	M32 x 1.5	81.1 (110)
ER32	50	23	M40 x 1.5	118.0 (160)
ER40	63	26	M50 x 1.5	132.8 (180)

Through coolant supply:

- There are two possibilities to direct the coolant through the tool shank coolant channel(s) when fitted into an ER collet chuck:
- by applying the concave front face of the stop screw equipping the ER collet chucks onto the tool shank (for tool shanks without groove)
 - by using a sealing nut, available as Accessories, and a sealing ring, available as Additional equipment. Sealing nuts are slightly longer than standard nuts, see lengths listed in Product pages.

ER collet chuck extensions, with cylindrical shank, Additional equipment

- Types:** **EPB 5450** – these collet chuck extensions have a cylindrical shank, tolerance h5.
They can be used where there is restricted access, when a long reach is required or to hold small tools. Extensions in sizes ER08R, ER11R, ER16R and ER25R are equipped with reduced diameter locking nuts.
- Norm:** ISO 15488.
- Tool shanks:** Cylindrical DIN 1835-1 Form A/ DIN 6535 Form HA.
- Run-out:** Maximum run-out when measured with a collet at a gauge projection of 3xd in relation to the to the cylindrical shank is .0006" (15 µm), or .0007" (18 µm) with the smallest ER 08.
- Balancing:** See Product pages.



Recommended tightening torque for the locking nut

Collet chuck size	D	L	M	Max tightening torque ft/lbs (Nm)
ER08R	12	11	M10 x 0.75	8.9 (12)
ER11R	16	12	M13 x 0.75	18.4 (25)
ER16R	22	18	M19 x 1	25.8 (35)
ER25R	32	20	M30 x 1	33.2 (45)
ER32	50	23	M40 x 1.5	118.0 (160)

OZ collet chucks

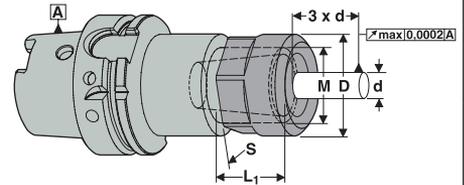
Types: EPB 5873 – Flexibility thanks to the interchangeability of collets. Ball bearing type locking nut.

Norm: DIN 6388.

Tool shanks: Cylindrical DIN 1835-1 Form A/ DIN 6535 Form HA.

Run-out: Maximum run-out when measured with a collet and at a gauge projection of 3xd in relation to the external taper is .0006" (15 μm) maximum, see OZ collets Guide and Product pages - Additional equipment.

Balancing: See Product pages.



Recommended tightening torque for the locking nut

Collet chuck size	D	L ₁	M	Max tightening torque ft/lbs (Nm)
OZ32	72	33.5	M60 x 2.5	103.3 (140)

Universal drill chucks

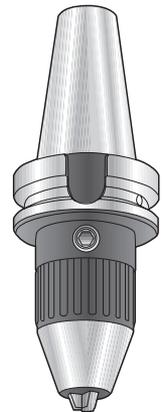
Types: EPB 5085 – Compact one piece design, allowing both CW or CCW spindle rotation. Clamping is made through a side access screw and gear mechanism.

Norm: No norm.

Tool shanks: Cylindrical DIN 1835-1 Form A/ DIN 6535 Form HA.

Run-out: Maximum run-out when measured at a gauge projection of 2.5xd in relation to the external taper is .0015" (40 μm) for diameters from 0.079" (2 mm). No run-out precision guarantee for diameters lower than 0.079" (2 mm).

Balancing: See Product pages.



Tapping chucks with micro-compensation, for synchronized tapping, EPB 5867

EPB 5867 – Improves tapping performances during synchronized tapping. The built-in axial micro flexure (+/- 0.020") prevents tap stress, which may appear from micro-deviation of the synchronism between the spindle rotation, feed and tap pitch. That micro-compensation mechanism offers longer tap life, protects tap against breakage, increases productivity and improves thread quality.

Suitable ER tapping collets with square drive:

offering precise tap holding and positive torque transmission.

Tool shanks:

Cylindrical tap shanks with a square back-end.

Balancing:

Balanced by design.

Through coolant supply:

Chucks EPB 5867 feature a through coolant design. Maximum coolant pressure 1160 psi (80 bar).

Suitable sealing rings:

The chucks are delivered with collet clamping nuts allowing the fitting of sealing rings, available as Additional equipment.

The rings prevent coolant to flow through the collet's grooves, forcing coolant to flow through the tap's coolant channel.

Assembly instructions:

The use of two dedicated wrenches, available as Accessories (see Product Pages) will provide the recommended tightening torque (see table below) and is recommended to eliminate the risk of damaging the micro-compensation system or the tap driver: the wrench (Part No. 56800x2-xx) is used to maintain the micro-compensation mechanism in position while the locking wrench (Part No. 56800x1-xx for sizes ER 11 and ER 20, Part No. 5680096-xx for sizes ER 25 and 40) is used to tighten the nut. Do not tighten the nut without maintaining the micro-compensation mechanism in position, even if the EPB 5867 tapping chuck is maintained in a Tool Boy assembly support.

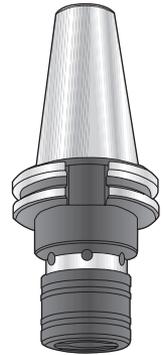


Recommended tightening torque for the ER tapping collet nuts

Tapping chuck size	Max tightening torque ft/lbs (Nm)
ER 11	22.1 (30)
ER 20	73.8 (100)
ER 25	95.9 (130)
ER 40	162.3 (220)

Quick change Tapping chucks

- Types:** **EPB 5283** – Offers an axial feed compensation in extension and compression which protects the tap against breakage. Shown here.
Note: Type 5283 chucks are also available with Weldon/Whistle Notch combined back end shank, see Additional equipment.
- Types:** **EPB 5260** – No axial compensation. Most machines on the market today are available with a standard option of rigid synchronized tapping.
- Norm:** No norm.
- Adapters:** Tap adapters, with or without torque limiter, see Additional equipment.
- Tool shanks:** DIN 374/376, DIN 371, ISO R529, PIPE.
- Balancing:** Pre balanced, cannot be fine balanced.

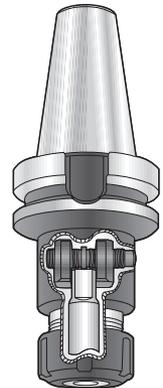


Assembly advice for the tap adapters:

Push the tap adapter into the chuck until it is locked automatically.
 To dismantle, push the front sleeve of the chuck to unlock and remove the tap adapter. In size 4, pulling the sleeve also unlocks the tap adapter.

ER tapping chucks

- Types:** **EPB 5865** – For rigid synchronized tapping, with ER collets, offering flexibility, and precise tap holding. The square clamping system is based on two driving jaws, the tap square is clamped between the jaws, while the cylindrical shank is clamped into the ER collet.
- Norm:** No norm.
- Tool shanks:** All cylindrical tap shanks with a square back end.
- Balancing:** See Product pages.
- Through coolant supply:**
 By using a sealing nut, available as Accessories, and a sealing ring, available as Additional equipment. Sealing nuts are slightly longer than standard nuts, see lengths listed in Product pages.



Adjustable drill holders

- Types:** **EPB BM/6100-6101** – These holders allow SECO Performax® drills to be radially offset from center.
 Available for R7 drill shanks, ISO 9766, Ø 1", 1 1/4", 1 1/2" (25, 32 and 40 mm).
 Reduction sleeves are available as Accessories.
- Norm:** No norm.
- Run-out:** Offset is adjusted by rotating the holder's internal sleeve and then locking.
 – Adjustable +.0314" to -.0118" (+0.8 to -0.3 mm) on diameter.
 – Adjustability graduations in increments of .002" (0.05 mm) on diameter.
 – Maximum radial adjustment for the drills is shown in Machining Navigator Holemaking.
- Balancing:** Not suitable for balancing due to the sleeve rotation.

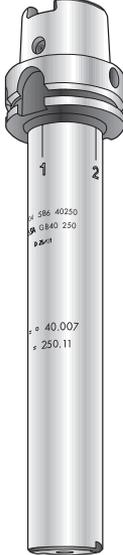


Greenstock blanks, available in Monobloc and Graflex

Types:	EPB 5023 – The taper/flange and Graflex connection are case hardened and ground. The cylindrical front part 120 to 130 daN/mm ² tensile strength it is not hardened and can be machined by the customer. Subsequent heat treatment is not recommended.	
Norm:	No norm. Used for special (custom-made) tooling.	
Balancing:	Not balanced.	

Test/Control bars, available in Monobloc

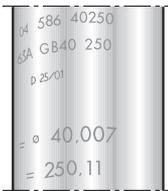
Types:	EPB 586 – Test bars are used primarily for checking the accuracy and to set the axes of the machine tool and tool presetter.	
Norm:	No norm.	
Accuracy:	Direct run-out between front part and taper 0.0002" (5 µm) maximum. Measurement values are tabulated on the accompanying datasheet and certificate of accuracy.	



1 2

586 40250
GB40 250
p 25/01

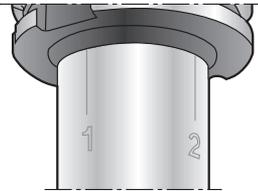
± 40.007
± 250.11



586 40250
GB40 250
p 25/01

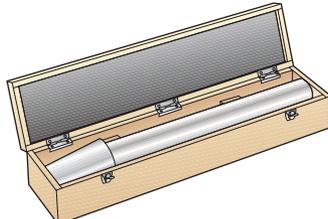
± 40.007
± 250.11

Diameter and length measurement values are laser engraved on each test bar.



1 2

Measurement positions are laser engraved.



Delivered in a protective case.



The front leading edge can be used for optical presetting.

Rotary coolant inducers for drills, available in Graflex

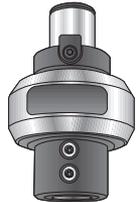
For machines not equipped with 'through the spindle' coolant, these inducers provide a way of delivering coolant through the drill. Inducers are available with Graflex back end size 5 or 6.

Inducers are available in five types of front ends:

Type BSM/6181-6183: For Type 7 drill shanks, ISO 9766 (Weldon compatible). Reduction sleeves are available, see Accessories.

Type BSM/6100-6101: for Perfomax drills with Type 7 shanks, adjustable +.0314" to .0118" (+0.8 to -0.3 mm) on \varnothing .

Type BSM/401: for Graflex modular system modules.



Manual inducers:

Connection to the coolant feed pipe has to be made manually after every holder change.

Inducers for automatic tool change:

The inducer has an indexable and compressible connecting pipe. The pipe connects to a coolant supply socket mounted on the machine tool spindle housing during the automatic tool change procedure. Before use, the connecting pipe has to be shortened to the required length.

Pipe orientation has to be set in line with the socket position.

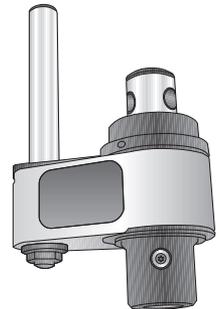
For application details, e.g. pipe shortening procedure, refer to the instruction sheet supplied with the inducers.

Spare connecting pipes are available, the same pipe is suitable for all inducers shown in the catalog:

Part No: EU9023001.

If not already fitted to the machine, the coolant supply socket has to be ordered and fitted.

The socket is available as Accessories: Part No. E99000.



Application note: (also marked on the inducer body):

Max coolant supply pressure: 240 psi (20 bar).

Never run the inducer without coolant.

Max speed: 4000 or 6000 rpm, depending on the inducer's size (shown on Product pages).

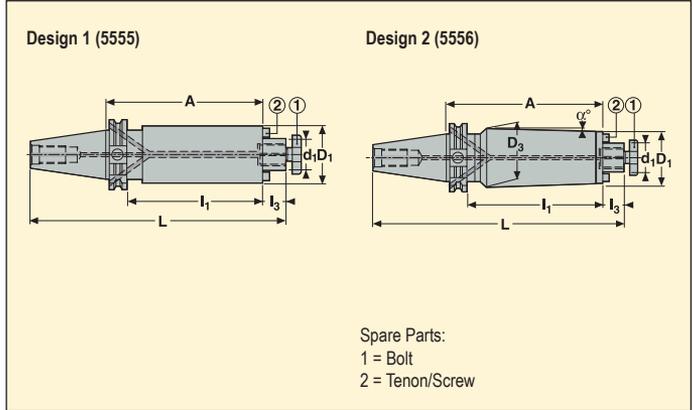
Coolant to be filtered to .0015" (40 μ m) maximum.

Balancing: Not suitable for balancing.





- Run-out .0002" (5 μm) maximum
- With dynamic damping, ready to use
- With coolant supply channels through the pilot



Taper	d ₁ inch	EDP No.	Part No.	Dimensions in inch						Design	α°	Balancing	lbs
				A	D ₁	D ₃	L	I ₁	I ₃				
CAT40 ADB	0.75	51032	E25025555075750	7.50	1.75	–	10.882	6.75	0.69	1	–	2	6.9
	0.75	51054	E25025556075900	9.00	1.75	2.35	12.382	8.25	0.69	2	1.9	2	10.1
	1.00	51055	E25025555100900	9.00	2.25	–	12.382	8.25	0.69	1	–	2	13.0
CAT50 ADB	0.75	51056	E25045555075750	7.50	1.75	–	12.195	6.75	0.69	1	–	2	11.1
	0.75	51057	E25045556075900	9.00	1.75	2.35	13.695	8.25	0.69	2	2	2	13.9
	1.00	51059	E25045555100900	9.00	2.25	–	13.695	8.25	0.69	1	–	2	17.7
	1.00	51060	E25045556100C00	12.00	2.25	3.00	16.695	11.25	0.69	2	1.7	2	24.2
	1.50	66637	E25045555150D75	13.75	3.50	–	18.699	13.00	0.94	1	–	2	44.1

Spare Parts

For d ₁	Bolt	Screw	Tenon
0.75	58211905	950D0312	16C2080712A
1.00	58212540	951D0416	16C2091014A
1.50	58213810	951D0616	16C2151421A

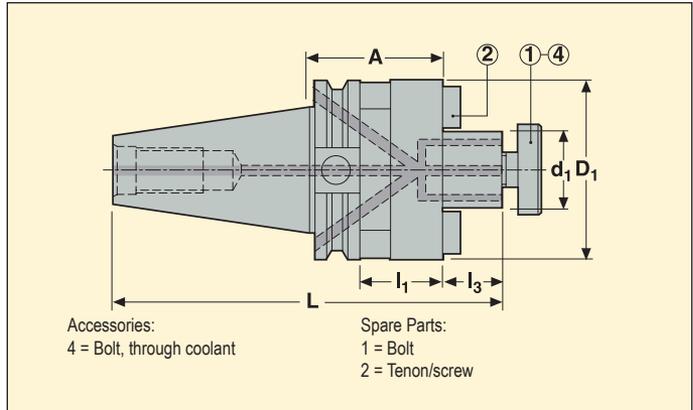
Please check availability in current price and stock-list.

EPB 5525 – With through coolant channels, shell mill holders – Inch

CAT Taper-Face – ADB



- Run-out .0002" (5 µm) maximum
- With coolant supply multi-channels through the pilot



Taper	d ₁ inch	EDP No.	Part No.	Dimensions in inch					Balancing	lbs
				A	D ₁	L	I ₁	I ₃		
CAT TF40 ADB	0.75	57619	E26425525075400	4.00	1.75	7.382	3.25	0.69	2	4.0
	1.00	57678	E26425525100400	4.00	2.25	7.382	3.25	0.69	2	5.5
	1.25	57689	E26425525125400	4.00	2.75	6.693	3.25	0.69	2	7.3
	1.50	57698	E26425525150400	4.00	3.50	7.634	3.25	0.94	2	10.1
CAT TF50 ADB	0.75	57699	E26445525075350	3.50	1.75	8.195	2.75	0.69	2	7.7
	1.00	57721	E26445525100400	4.00	2.25	8.695	3.25	0.69	2	9.3
	1.25	57722	E26445525125350	3.50	2.75	8.195	2.75	0.69	2	10.4
	1.50	57739	E26445525150400	4.00	3.50	8.947	3.25	0.94	2	14.8
	2.00	57745	E26445525200400	4.00	4.87	8.006	3.25	0.94	2	22.3

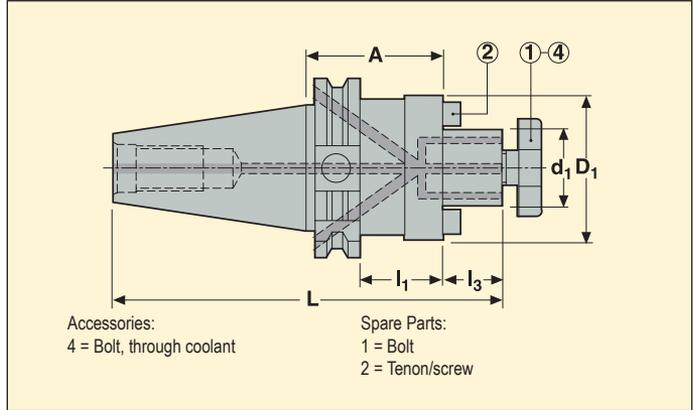
Spare Parts

For d ₁	Bolt	Plug	Screw	Tenon
CAT TF40, 0.75	58211905	950A0406	950D0312	16C11905A
CAT TF40, 1.00	58212540	950A0406	951D0416	16C12540A
CAT TF40, 1.25	58213175	950A0406	951D0516	16C23175
CAT TF40, 1.50	58213810	950A0406	951D0616	16C23810
CAT TF50, 0.75	58211905	950A0606	950D0312	16C11905A
CAT TF50, 1.00	58212540	950A0606	951D0416	16C12540A
CAT TF50, 1.25	58213175	950A0606	951D0516	16C23175
CAT TF50, 1.50	58213810	950A0606	951D0616	16C23810
CAT TF50, 2.00	58215080	950A0606	951D0820	16C25080

Please check availability in current price and stock-list.



- Run-out .0002" (5 µm) maximum
- With coolant supply multi-channels through the pilot



Taper	d ₁ inch	EDP No.	Part No.	Dimensions in inch					Balancing	lbs
				A	D ₁	L	l ₁	l ₃		
CAT50 ADB	0.50	01323	E25045525050200	6.01	1.25	6.565	1.25	0.56	2	7.1
	0.75	01324	E25045525075200	2.00	1.75	6.695	1.25	0.69	2	7.3
	0.75	21205	E25045525075350	3.50	1.75	8.195	2.75	0.69	2	7.7
	0.75	21206	E25045525075550	5.50	1.75	10.195	4.75	0.69	2	8.9
	1.00	01326	E25045525100225	2.25	2.25	6.945	1.50	0.69	2	7.7
	1.00	21207	E25045525100400	4.00	2.25	8.695	3.25	0.69	2	9.3
	1.00	21208	E25045525100600	6.00	2.25	10.695	5.25	0.69	2	11.2
	1.25	01329	E25045525125225	2.25	2.75	6.945	1.50	0.69	2	8.6
	1.25	21209	E25045525125350	3.50	2.75	8.195	2.75	0.69	2	10.1
	1.50	01331	E25045525150225	2.25	3.50	7.197	1.50	0.94	2	11.0
	1.50	21211	E25045525150400	4.00	3.50	8.947	3.25	0.94	2	13.5
	1.50	21212	E25045525150600	6.00	3.50	10.006	5.25	0.94	2	18.7
	2.00	01334	E25045525200225	2.25	4.87	7.197	1.50	0.94	2	12.6
	2.00	21213	E25045525200400	4.00	4.87	8.955	3.25	0.94	2	20.3

Spare Parts

For d ₁	Bolt	Screw	Tenon
0.50	58211270	950D0308	16C11270
0.75	58211905	950D0312	16C11905
1.00	58212540	951D0410	16C12540
1.25	58213175	951D0516	16C23175
1.50	58213810	951D0616	16C23810
2.00	58215080	951D0820	16C25080

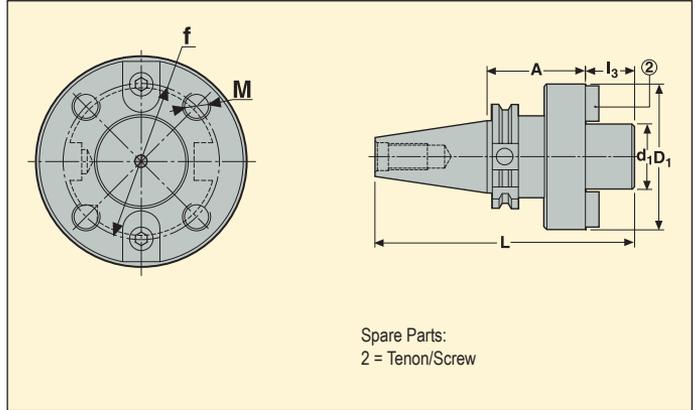
Please check availability in current price and stock-list.

EPB 569 – Milling cutter holders, flange mounting – Inch

ANSI B5.50 A



- Run-out .0002" (5 μm) maximum



Taper	d ₁ inch	EDP No.	Part No.	Dimensions in inch					M	Balancing	lbs
				A	D ₁	L	l ₃	f			
CAT50 A	2.50	01337	E2504569250300	3.00	4.87	8.148	1.14	4.00	5/8 UNC	2	16.5

Spare Parts

For d ₁	Screw	Tenon
2.50	951D1225	16C36350

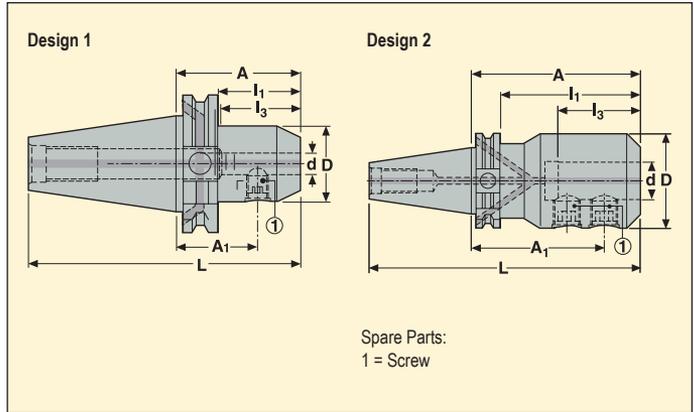
Please check availability in current price and stock-list.

EPB 584 – Side lock holders, Weldon – Inch

CAT Taper-Face – ADB



- Run-out .0002" (5 μm) maximum at 3xD



Taper	d inch	EDP No.	Part No.	Dimensions in inch						Design	Balancing	lbs
				A	D	L	I ₁	I ₃	A ₁			
CAT TF40 ADB	0.500	57878	E2642584050262	2.62	1.61	5.313	1.87	1.61	1.75	1	2	2.9
	0.625	57601	E2642584062300	3.00	1.87	5.693	2.25	1.87	2.09	1	2	3.3
	0.750	57602	E2642584075300	3.00	1.97	5.693	2.25	2.01	2.00	1	2	3.5
	1.000	57612	E2642584100400	4.00	2.50	6.693	3.25	2.24	2.88	2	2	5.5
	1.250	57613	E2642584125400	4.00	2.75	6.693	3.25	2.24	2.88	2	2	5.7
CAT TF50 ADB	0.500	57894	E2644584050462	4.62	1.61	8.626	3.87	1.61	3.75	1	2	7.9
	0.625	57614	E2644584062575	5.75	1.87	9.756	5.00	1.87	4.84	1	2	9.3
	1.000	57615	E2644584100400	4.00	2.50	8.014	3.25	2.24	2.88	2	2	9.7
	1.250	57616	E2644584125400	4.00	2.75	8.006	3.25	2.24	2.88	2	2	10.1
	1.500	57617	E2644584150400	4.00	3.50	8.014	3.25	2.62	2.50	2	2	15.9
	2.000	57618	E2644584200562	5.62	4.00	9.626	4.87	3.11	4.21	2	2	18.7

Spare Parts

For size	Plug	Locking screw
CAT TF40, 0.50	950A0406	951CNC043037
CAT TF40, 0.625	950A0406	951CNC056050
CAT TF40, 0.75	950A0406	951CNC062050
CAT TF40, 1.00 / 1.25	950A0406	951CNC075068
CAT TF50, 0.50	950A0606	951CNC043037
CAT TF50, 0.625	950A0606	951CNC056050
CAT TF50, 1.00 - 1.50	950A0606	951CNC075068
CAT TF50, 2.00	950A0606	951CNS100087

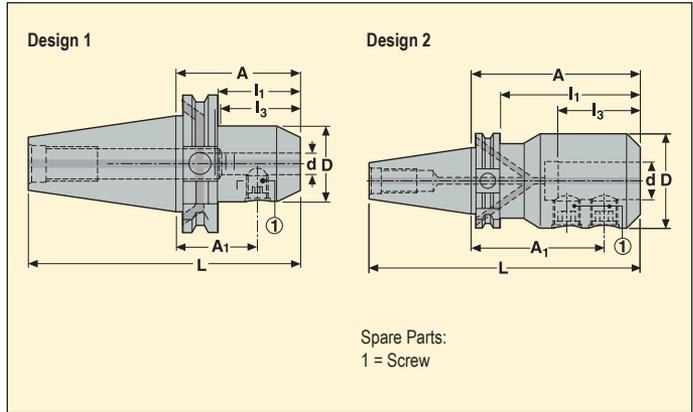
Please check availability in current price and stock-list.

EPB 584 – Side lock holders, Weldon – Inch

ANSI B5.50 ADB



- Run-out .0002" (5 µm) maximum at 3x d



Taper	d inch	EDP No.	Part No.	Dimensions in inch						Design	Balancing	lbs
				A	D	L	l ₁	l ₃	A ₁			
CAT40 ADB	0.375	01285	E2502584037200	2.00	1.37	4.693	–	1.50	1.25	1	2	2.4
	0.500	01286	E2502584050200	2.00	1.62	4.693	–	1.62	1.13	1	2	2.4
	0.625	01299	E2502584062250	2.50	1.87	5.193	–	1.87	1.59	1	2	2.9
	0.750	01300	E2502584075250	2.50	2.00	5.193	–	2.00	1.50	1	2	2.9
	0.750	21201	E2502584075375	3.75	2.00	6.443	–	2.01	2.75	2	2	3.7
	1.000	01302	E2502584100400	4.00	2.50	6.693	–	2.25	2.88	2	2	5.0
	1.250	01303	E2502584125400	4.00	2.75	6.690	–	2.25	2.88	2	2	8.2
	1.500	50700	E2502584150450	4.50	3.50	7.193	–	2.62	3.00	2	2	10.6

Spare Parts

For d	Locking screw
0.375	951CNC037031
0.500	951CNC043037
0.625	951CNC056050
0.750	951CNC062050
1.000	951CNC075068
1.250	951CNC075068
1.500	951CNC075068

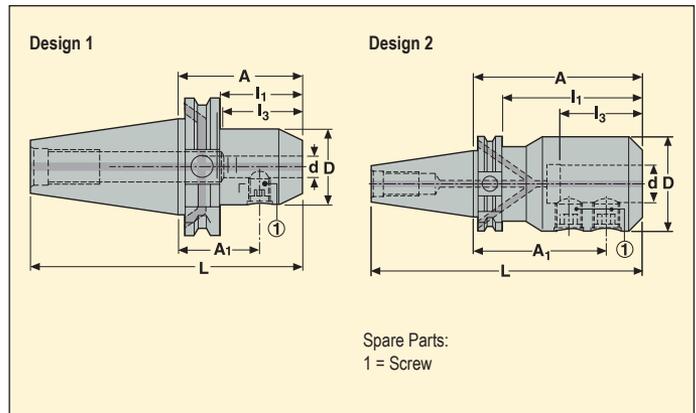
Please check availability in current price and stock-list.

EPB 584 – Side lock holders, Weldon – Inch

ANSI B5.50 ADB



- Run-out .0002" (5 µm) maximum at 3xD



Taper	d inch	EDP No.	Part No.	Dimensions in inch						Design	Balancing	lbs
				A	D	L	I ₁	I ₃	A ₁			
CAT50 ADB	0.375	01338	E2504584037250	2.50	1.37	6.506	1.75	1.50	1.75	1	2	6.8
	0.500	01339	E2504584050250	2.50	1.62	6.506	1.75	1.62	1.63	1	2	7.1
	0.500	21214	E2504584050462	4.62	1.62	8.626	3.87	1.62	3.75	1	2	8.0
	0.625	01340	E2504584062250	2.50	1.87	6.506	1.75	1.87	1.59	1	2	7.3
	0.625	21216	E2504584062575	5.75	1.87	9.756	5.00	1.87	4.84	2	2	9.3
	0.750	01341	E2504584075250	2.50	2.00	6.506	1.75	2.00	1.50	1	2	7.3
	0.750	21218	E2504584075575	5.75	2.00	9.756	5.00	2.01	4.75	2	2	9.7
	1.000	01346	E2504584100375	3.75	2.50	7.756	3.00	2.25	2.63	2	2	8.8
	1.000	21220	E2504584100600	6.00	2.50	10.006	5.25	2.24	4.88	2	2	11.7
	1.250	01355	E2504584125400	4.00	2.75	8.006	3.25	2.25	2.88	2	2	9.7
	1.250	21222	E2504584125600	6.00	2.75	10.006	5.25	2.24	4.88	2	2	12.5
	1.250	21223	E2504584125800	8.00	2.75	12.008	7.25	2.24	6.89	2	2	16.8
	1.500	01384	E2504584150450	4.50	3.50	8.506	3.75	2.62	3.00	2	2	12.8
	1.500	21224	E2504584150600	6.00	3.50	10.006	5.25	2.62	4.50	2	2	16.1
	2.000	01391	E2504584200537	5.37	4.00	9.376	4.62	3.12	3.96	2	2	16.2

Spare Parts

For d	Locking screw
0.375	951CNC037031
0.500	951CNC043037
0.625	951CNC056050
0.750	951CNC062050
1.000-1.500	951CNC075068
2.000	951CNS100087

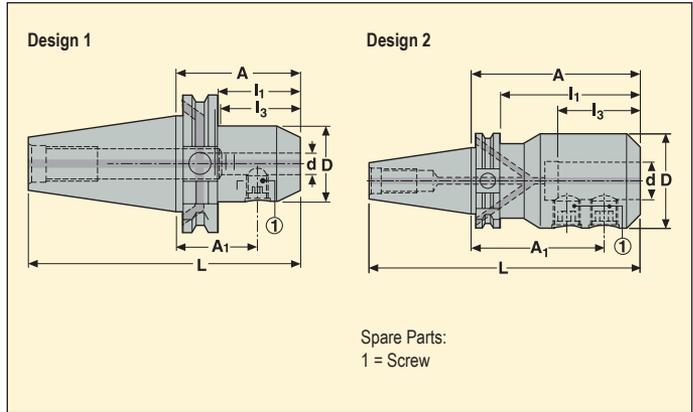
Please check availability in current price and stock-list.

EPB 584 – Side lock holders, Weldon – Metric

ANSI B5.50 ADB



- Run-out .0002" (5 µm) maximum at 3x d



Taper	d mm	EDP No.	Part No.	Dimensions in inch						Design	Balancing	lbs
				A	D	L	l ₁	l ₃	A ₁			
CAT40 ADB	12	07500	E250258412250	2.50	1.65	5.193	–	1.73	1.61	1	2	2.6
	16	07518	E250258416275	2.75	1.89	5.443	–	1.85	1.77	1	2	3.0
	20	07519	E250258420275	2.75	2.05	5.443	–	1.93	1.80	1	2	3.0
	25	07524	E250258425387	3.87	2.48	6.568	–	2.12	2.93	2	2	4.7
	32	07529	E250258432400	4.00	2.83	6.693	–	2.28	3.05	2	2	5.6
CAT50 ADB	12	07581	E250458412250	2.50	1.65	6.506	–	1.73	1.61	1	2	7.0
	16	07582	E250458416275	2.75	1.89	6.756	–	1.85	1.80	1	2	7.3
	20	13463	E250458420275	2.75	2.05	6.756	–	1.93	1.80	1	2	7.3
	25	13464	E250458425387	3.87	2.56	7.881	–	2.12	2.93	2	2	9.2
	32	13465	E250458432387	3.87	2.83	7.881	–	2.28	2.93	2	2	9.7
	40	13466	E250458440487	4.87	3.54	8.881	–	2.68	3.69	2	2	11.9

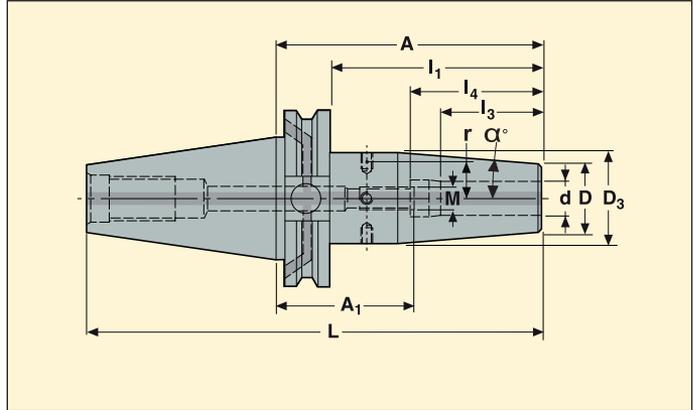
Spare Parts

For d	Screw
12	951C1216
16	951C1416
20	951C1616
25	951C1820
32	951C2020
40	951C2025

Please check availability in current price and stock-list.



- Run-out .0001" (2.5 µm) maximum at 3xd
- Delivered with one stop screw



Taper	d inch	EDP No.	Part No.	Dimensions in inch								M mm	α°	r inch	Balancing	lbs
				A	D	D ₃	L	I ₁	I ₃	I ₄	A ₁ min-max					
CAT TF40 ADB	0.250	31083	E26425603025375	3.75	0.827	1.063	6.443	3.00	0.866	1.476	2.33-2.73	M5	4.5	0.413	1	2.6
	0.375	31084	E26425603037375	3.75	0.945	1.260	6.443	3.00	1.220	1.673	2.14-2.53	M8x1	4.5	0.512	1	2.9
	0.500	31092	E26425603050375	3.75	0.945	1.260	6.443	3.00	1.339	1.791	2.02-2.41	M10x1	4.5	0.512	1	2.6
CAT TF50 ADB	0.375	29815	E26445603037400	4.00	0.945	1.260	8.006	3.25	1.220	1.673	2.39-2.78	M8x1	4.5	0.512	1	6.8
	0.500	29817	E26445603050400	4.00	0.945	1.260	8.006	3.25	1.339	1.791	2.27-2.66	M10x1	4.5	0.512	1	6.8
	0.625	29840	E26445603062400	4.00	1.063	1.339	8.006	3.25	1.535	1.988	2.07-2.46	M12x1	4.5	0.551	1	6.8
	0.750	29844	E26445603075400	4.00	1.299	1.654	8.006	3.25	1.614	2.067	1.99-2.39	M16x1	4.5	0.925	1	7.3
	1.000	29859	E26445603100400	4.00	1.732	2.087	8.014	3.25	1.850	2.303	1.76-2.15	M16x1	4.5	0.925	1	8.2

For Shrinkfit extensions, see page(s) 362-363.

Spare Parts

For d	Plug	Stop screw
CAT TF40, 0.250	950A0406	19BDR05165
CAT TF40, 0.375	950A0406	19BDR08165
CAT TF40, 0.500	950A0406	19BDR10165
CAT TF50, 0.375	950A0606	19BDR08165
CAT TF50, 0.500	950A0606	19BDR10165
CAT TF50, 0.625	950A0606	19BDR12165
CAT TF50, 0.750-1.250	950A0606	19BDR16165

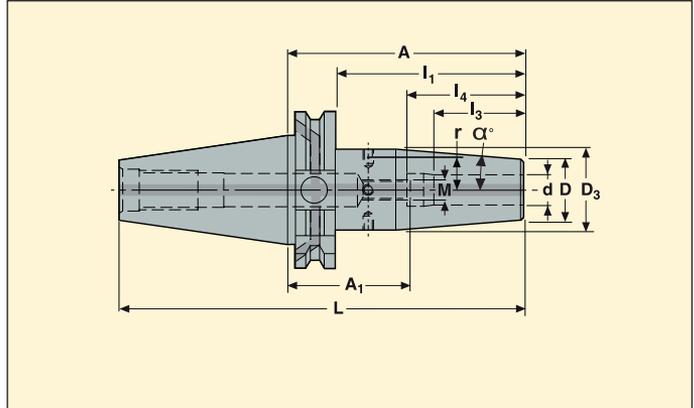
Accessories

For d	Balancing screws
CAT TF40, 0.250	90ZQ01
CAT TF40, 0.375	90ZQ01
CAT TF40, 0.500	90ZQ01
CAT TF50, 0.375	90ZQ01
CAT TF50, 0.500	90ZQ01
CAT TF50, 0.625	90ZQ01
CAT TF50, 0.750-1.250	90ZQ01

Please check availability in current price and stock-list.



- Run-out .0001" (2.5 μm) maximum at 3xd
- Delivered with one stop screw



Taper	d inch	EDP No.	Part No.	Dimensions in inch								M mm	α°	r inch	Balancing	lbs
				A	D	D ₃	L	I ₁	I ₃	I ₄	A ₁ min-max					
CAT 40 ADB	0.250	66533	E2502560302595	3.740	0.827	1.062	6.433	2.988	1.023	1.417	2.32-2.71	M5	4.5	0.413	1	2.6
	0.250	66532	E25025603025160	6.299	0.827	1.062	8.992	5.547	1.023	1.417	4.88-5.27	M5	4.5	0.413	1	3.3
	0.375	66535	E2502560303795	3.740	0.945	1.259	6.433	2.988	1.220	1.614	2.12-2.51	M8	4.5	0.512	1	2.9
	0.375	66534	E25025603037160	6.299	0.945	1.259	8.992	5.547	1.220	1.614	4.68-5.07	M8	4.5	0.512	1	3.7
	0.500	66537	E2502560305095	3.740	0.945	1.259	6.433	2.988	1.417	1.811	1.92-2.32	M10	4.5	0.512	1	2.9
	0.500	66536	E25025603050160	6.299	0.945	1.259	8.992	5.547	1.417	1.811	4.48-4.88	M10	4.5	0.512	1	3.5
	0.625	66539	E2502560306295	3.740	1.063	1.338	6.433	2.988	1.535	1.929	1.81-2.20	M12	4.5	0.551	1	2.9
	0.625	66538	E25025603062160	6.299	1.063	1.338	8.992	5.547	1.535	1.929	4.37-4.76	M12	4.5	0.551	1	3.7
	0.750	66541	E2502560307595	3.740	1.299	1.653	6.433	2.988	1.614	2.007	1.73-2.12	M16	4.5	0.709	1	3.1
	0.750	66540	E25025603075160	6.299	1.299	1.653	8.992	5.547	1.614	2.007	4.29-4.68	M16	4.5	0.709	1	4.4
1.000	66542	E25025603100115	4.527	1.732	2.086	7.221	3.185	1.850	2.244	1.69-2.08	M16	4.5	0.925	1	4.2	

For Shrinkfit extensions, see page(s) 362-363.

Spare Parts

For d	Stop screw
0.250	19BDR05165
0.375	19BDR08165
0.500	19BDR10165
0.625	19BDR12165
0.750/1.000	19BDR16165

Accessories

For d	Balancing screws
0.250	90ZQ01
0.375	90ZQ01
0.500	90ZQ01
0.625	90ZQ01
0.750/1.000	90ZQ01

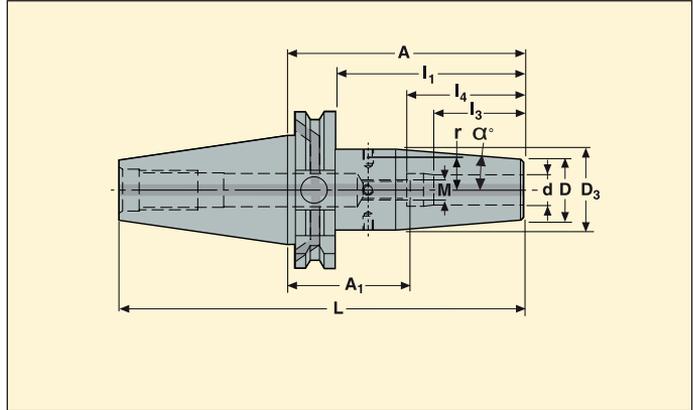
Please check availability in current price and stock-list.

EPB 5603 – Shrinkfit holders, DIN type – Inch

ANSI B5.50 ADB



- Run-out .0001" (2.5 µm) maximum at 3xd
- Delivered with one stop screw



Taper	d inch	EDP No.	Part No.	Dimensions in inch								M mm	α°	r inch	Balancing	lbs
				A	D	D ₃	L	I ₁	I ₃	I ₄	A ₁ min-max					
CAT 50 ADB	0.250	66544	E25045603025100	3.937	0.826	1.062	7.943	3.185	0.866	1.417	2.52-2.91	M5	4.5	0.413	1	7.3
	0.250	66545	E25045603025160	6.299	0.826	1.062	10.305	5.547	0.866	1.417	4.88-5.27	M5	4.5	0.413	1	7.7
	0.375	66546	E25045603037100	3.937	0.944	1.259	7.943	3.185	1.220	1.614	2.32-2.71	M8	4.5	0.512	1	7.5
	0.375	66547	E25045603037160	6.299	0.944	1.259	10.305	5.547	1.220	1.614	4.68-5.07	M8	4.5	0.512	1	8.2
	0.500	66548	E25045603050100	3.937	0.944	1.259	7.943	3.185	1.417	1.811	2.12-2.51	M10	4.5	0.512	1	7.2
	0.500	66549	E25045603050160	6.299	0.944	1.259	10.305	5.547	1.417	1.811	4.48-4.88	M10	4.5	0.512	1	8.2
	0.625	66550	E25045603062100	3.937	1.062	1.338	7.943	3.185	1.535	1.929	2.00-2.40	M12	4.5	0.551	1	7.5
	0.625	66551	E25045603062160	6.299	1.062	1.338	10.305	5.547	1.535	1.929	4.37-4.76	M12	4.5	0.551	1	8.2
	1.000	66554	E25045603100100	3.937	1.732	2.086	7.943	3.185	1.850	2.244	1.69-2.08	M16	4.5	0.925	1	8.2
	1.000	66555	E25045603100160	6.299	1.732	2.086	10.305	5.547	1.850	2.244	4.05-4.44	M16	4.5	0.925	1	10.3
	1.250	66556	E25045603125110	4.330	1.732	2.086	8.336	3.578	2.007	2.401	1.92-2.32	M16	4.5	0.925	1	8.2

For Shrinkfit extensions, see page(s) 362-363.

Spare Parts

For d	Stop screw
0.250	19BDR05165
0.375	19BDR08165
0.500	19BDR10165
0.625	19BDR12165
0.750-1.250	19BDR16165

Accessories

For d	Balancing screws
0.250	90ZQ01
0.375	90ZQ01
0.500	90ZQ01
0.625	90ZQ01
0.750-1.250	90ZQ01

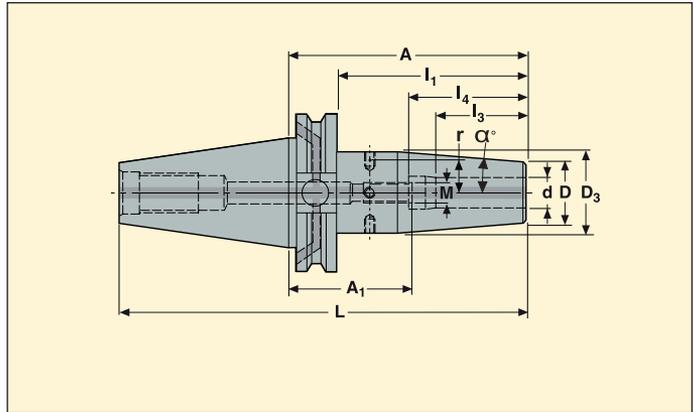
Please check availability in current price and stock-list.

EPB 5603 – Shrinkfit holders, DIN type – Metric

CAT Taper-Face – ADB



- Run-out .0001" (2.5 µm) maximum at 3xd
- Delivered with one stop screw



Taper	d mm	EDP No.	Part No.	Dimensions in inch								M mm	α°	r inch	Balancing	lbs
				A	D	D ₃	L	L ₁	L ₃	L ₄	A ₁ min-max					
CAT TF40 ADB	6	30187	E264256030695	3.740	0.827	1.063	6.433	2.990	0.866	1.476	2.32-2.72	M5	4.5	0.413	1	2.6
	8	30188	E264256030895	3.740	0.827	1.063	6.433	2.990	1.024	1.476	2.32-2.72	M6	4.5	0.413	1	2.6
	10	30189	E264256031095	3.740	0.945	1.260	6.433	2.990	1.220	1.673	2.13-2.52	M8x1	4.5	0.512	1	2.9
	12	30243	E264256031295	3.740	0.945	1.260	6.433	2.990	1.339	1.870	1.93-2.32	M10x1	4.5	0.512	1	2.6
	16	30262	E264256031695	3.740	1.063	1.339	6.433	2.990	1.535	1.988	1.81-2.20	M12x1	4.5	0.551	1	2.9
	20	30264	E264256032095	3.740	1.299	1.654	6.433	2.990	1.614	2.067	1.73-2.13	M16x1	4.5	0.709	1	3.1
CAT TF50 ADB	8	30269	E2644560308100	3.937	0.827	1.063	7.943	3.187	1.024	1.476	2.52-2.91	M6	4.5	0.413	1	6.6
	10	30270	E2644560310100	3.937	0.945	1.260	7.943	3.187	1.220	1.673	2.32-2.72	M8x1	4.5	0.512	1	6.8
	12	30271	E2644560312100	3.937	0.945	1.260	7.943	3.187	1.339	1.870	2.13-2.52	M10x1	4.5	0.512	1	6.8
	16	30272	E2644560316100	3.937	1.063	1.339	7.943	3.187	1.535	1.988	2.01-2.40	M12x1	4.5	0.551	1	6.8
	20	30274	E2644560320100	3.937	1.299	1.654	7.943	3.187	1.614	2.067	1.93-2.32	M16x1	4.5	0.709	1	7.3
		25	30275	E2644560325100	3.937	1.732	2.087	7.943	3.187	1.850	2.303	1.69-2.09	M16x1	4.5	0.925	1

For Shrinkfit extensions, see page(s) 362-363.

Spare Parts

For size	Plug	Stop screw
CAT TF40, 6	950A0406	19BDR12165
CAT TF40, 8	950A0406	19BDR08165
CAT TF40, 10	950A0406	19BDR12165
CAT TF40, 12-14	950A0406	19BDR05165
CAT TF40, 16-18	950A0406	19BDR12165
CAT TF40, 20-32	950A0406	19BDR16165
CAT TF50, 8	950A0606	19BDR06165
CAT TF50, 10	950A0606	19BDR08165
CAT TF50, 12-14	950A0606	19BDR10165
CAT TF50, 16-18	950A0606	19BDR12165
CAT TF50, 20-32	950A0606	19BDR16165

Accessories

For size	Balancing screws
CAT TF40, 6	90ZQ01
CAT TF40, 8	90ZQ01
CAT TF40, 10	90ZQ01
CAT TF40, 12-14	90ZQ01
CAT TF40, 16-18	90ZQ01
CAT TF40, 20-32	90ZQ01
CAT TF50, 8	90ZQ01
CAT TF50, 10	90ZQ01
CAT TF50, 12-14	90ZQ01
CAT TF50, 16-18	90ZQ01
CAT TF50, 20-32	90ZQ01

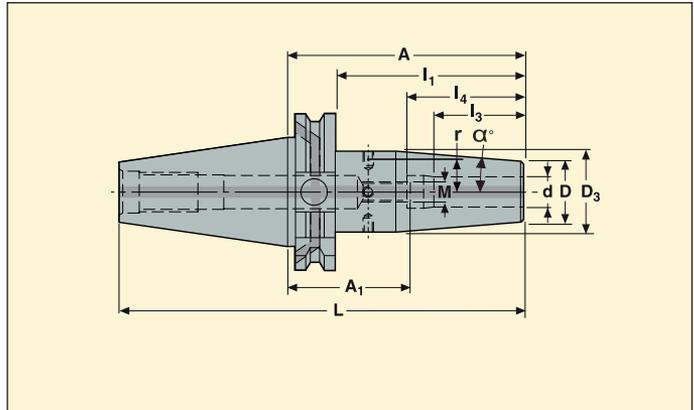
Please check availability in current price and stock-list.

EPB 5603 – Shrinkfit holders, DIN type – Metric

ANSI B5.50 ADB



- Run-out .0001" (2.5 μm) maximum at 3xd
- Delivered with one stop screw



Taper	d mm	EDP No.	Part No.	Dimensions in inch								M mm	α°	r inch	Balancing	lbs
				A	D	D ₃	L	I ₁	I ₃	I ₄	A ₁ min-max					
CAT50 ADB	6	66566	E2504560306400	4.000	0.827	1.063	8.006	3.250	1.024	1.417	2.58-2.98	M8	4.5	0.413	1	7.3
	8	66567	E2504560308400	4.000	0.827	1.063	8.006	3.250	1.024	1.417	2.58-2.98	M8	4.5	0.413	1	7.3
	10	66568	E2504560310400	4.000	0.945	1.260	8.006	3.250	1.220	1.614	2.78-3.17	M8	4.5	0.512	1	7.5
	12	66569	E2504560312400	4.000	0.945	1.260	8.006	3.250	1.339	1.850	2.15-2.54	M10	4.5	0.512	1	7.3
	14	66570	E2504560314400	4.000	1.063	1.339	8.006	3.250	1.339	1.850	2.15-2.54	M10	4.5	0.551	1	7.5
	16	66571	E2504560316400	4.000	1.063	1.339	8.006	3.250	1.496	1.969	2.03-2.43	M10	4.5	0.551	1	7.5
	18	66572	E2504560318400	4.000	1.299	1.654	8.006	3.250	1.496	1.969	2.03-2.43	M10	4.5	0.709	1	7.7
	20	66573	E2504560320400	4.000	1.299	1.654	8.006	3.250	1.654	2.047	1.95-2.35	M10	4.5	0.709	1	7.7
	25	66574	E2504560325400	4.000	1.732	2.087	8.006	3.250	1.732	2.283	1.72-2.11	M10	4.5	0.925	1	8.4
	32	66575	E2504560332400	4.000	1.732	2.087	8.006	3.250	2.047	2.441	1.56-2.35	M10	4.5	0.925	1	7.9

For Shrinkfit extensions, see page(s) 362-363.

Spare Parts

For d	Stop screw
6	19BDR05165
8	19BDR06165
10	19BDR08165
12-14	19BDR10165
16-18	19BDR12165
20-32	19BDR16165

Accessories

For d	Balancing screws
6	90ZQ01
8	90ZQ01
10	90ZQ01
12-14	90ZQ01
16-18	90ZQ01
20-32	90ZQ01

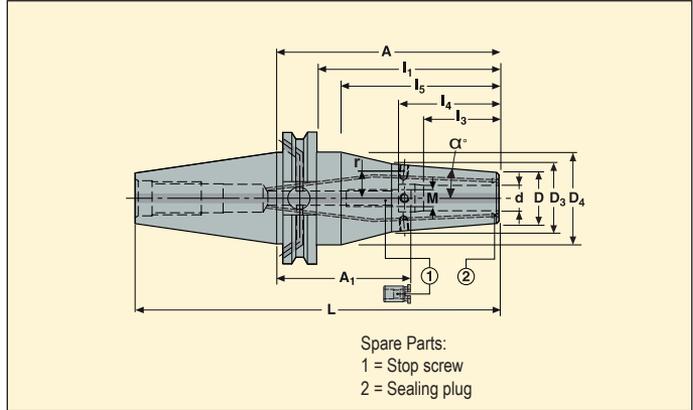
Please check availability in current price and stock-list.

EPB 5600 – Shrinkfit holders, reinforced – Inch

CAT B5.50-ADB



- Run-out .0001" (2.5 µm) maximum at 3xd
- Reinforced design with wider front and tapered body
- With coolant supply channels towards the tool (plugged)



Taper	d inch	EDP No.	Part No.	Dimensions in inch											M mm	α°	r inch	Balancing	lbs
				A	D	D ₃	D ₄	L	I ₁	I ₃	I ₄	I ₅	A ₁ min-max						
CAT40 ADB	0.500	92460	E25025600050287	2.87	1.06	1.30	1.75	5.57	2.12	1.34	1.87	1.50	1.14-1.54	10	4.5	0.75	1	2.6	
	0.625	92461	E25025600062300	3.00	1.30	1.55	1.75	5.69	2.25	1.54	1.99	1.62	1.07-1.46	12	4.5	0.75	1	2.9	
	0.750	92462	E25025600075312	3.12	1.73	1.98	1.75	5.82	2.37	1.61	1.75	1.75	1.12-1.51	16	4.5	0.89	1	3.3	
CAT50 ADB	0.500	92463	E25045600050325	3.25	1.06	1.36	2.75	7.26	2.50	1.34	1.87	1.87	1.52-1.91	10	4.5	1.25	1	7.5	
	0.625	92464	E25045600062325	3.25	1.30	1.59	2.75	7.26	2.50	1.54	1.99	1.87	1.32-1.72	12	4.5	1.25	1	7.5	
	0.750	92465	E25045600075350	3.50	1.73	2.07	2.75	7.51	2.75	1.61	2.07	2.12	1.49-1.89	16	4.5	1.25	1	8.4	
	1.000	92466	E25045600100400	4.00	1.89	2.30	2.75	8.01	3.25	1.85	2.30	2.62	1.76-2.15	16	4.5	0.98	1	8.8	
	1.250	92467	E25045600125400	4.00	1.89	2.30	2.75	8.01	3.25	2.01	2.46	2.62	1.60-1.99	16	4.5	0.98	1	8.6	

Spare Parts

For d	Sealing plugs	Stop screw
0.500	90AI03	19BDR10165
0.625	90AI03	19BDR12165
0.750-1.250	90AI04	19BDR16165

Accessories

For d	Balancing screws
0.500	90ZQ01
0.625	90ZQ01
0.750-1.250	90ZQ01

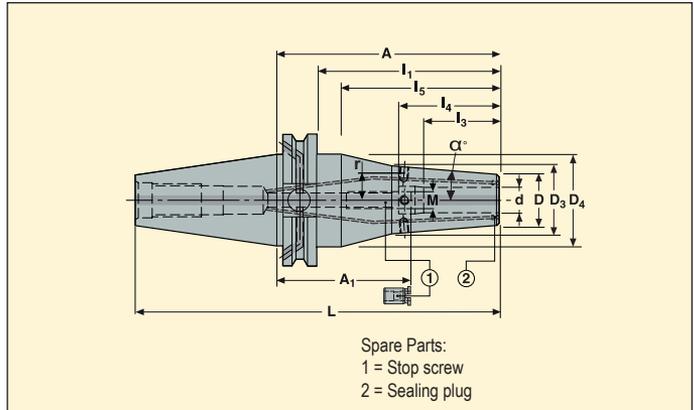
Please check availability in current price and stock-list.

EPB 5600 – Shrinkfit holders, reinforced – Metric

CAT B5.50-ADB



- Run-out .0001" (2.5 µm) maximum at 3xd
- Reinforced design with wider front and tapered body
- With coolant supply channels towards the tool (plugged)



Taper	d mm	EDP No.	Part No.	Dimensions in inch										M mm	α°	r inch	Balancing	lbs
				A	D	D ₃	D ₄	L	I ₁	I ₃	I ₄	I ₅	A ₁ min-max					
CAT40 ADB	12	92380	E250256001275	2.95	1.06	1.31	1.75	5.65	2.20	1.34	1.87	1.57	0.94-1.34	M10x1	4.5	0.53	1	2.6
	16	92381	E250256001680	3.15	1.30	1.57	1.75	5.84	2.40	1.54	1.99	1.77	1.30-1.61	M12x1	4.5	0.67	1	2.9
	20	92382	E250256002080	3.15	1.73	1.98	1.75	5.84	2.40	1.61	2.07	1.61	1.22-1.61	M16x1	4.5	0.85	1	3.3
CAT50 ADB	12	92383	E250456001285	3.35	1.06	1.37	2.75	7.35	2.59	1.34	1.87	1.97	1.59-1.93	M10x1	4.5	0.53	1	7.5
	16	92384	E250456001685	3.35	1.30	1.61	2.75	7.35	2.59	1.54	1.99	1.97	1.50-1.89	M10x1	4.5	0.67	1	7.7
	20	92385	E250456002090	3.54	1.73	2.07	2.75	7.55	2.79	1.61	2.07	2.17	1.61-2.01	M16x1	4.5	0.85	1	8.4

Spare Parts

For d	Sealing plugs	Stop screw
12	90AI03	19BDR10165
16	90AI03	19BDR12165
20	90AI04	19BDR16165

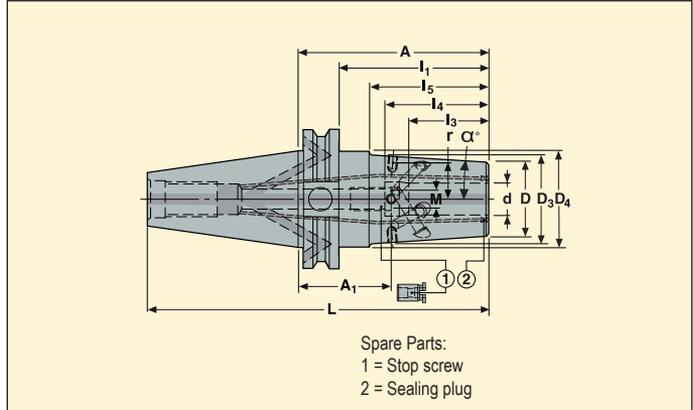
Accessories

For d	Balancing screws
12	90ZQ01
16	90ZQ01
20	90ZQ01

Please check availability in current price and stock-list.



- Run-out .0001" (2.5 µm) maximum at 3xd
- Reinforced design with wider front and tapered body
- With coolant supply channels towards the tool (plugged)



Taper	d inch	EDP No.	Part No.	Dimensions in inch											M mm	α°	r inch	Balancing	lbs
				A	D	D ₃	D ₄	L	I ₁	I ₃	I ₄	I ₅	A ₁ min-max						
CAT40 ADB	0.500	92501	E25025600050287P	2.87	1.06	1.30	1.75	5.57	2.12	1.34	1.87	1.50	1.14-1.48	10	4.5	0.75	1	2.6	
	0.625	92502	E25025600062300P	3.00	1.30	1.56	1.75	5.69	2.25	1.54	1.99	1.62	1.07-1.39	12	4.5	0.75	1	2.9	
	0.750	92503	E25025600075312P	3.13	1.73	1.98	1.75	5.82	2.38	1.61	1.75	1.55	1.12-1.45	16	4.5	0.89	1	3.3	
CAT50 ADB	0.500	92504	E25045600050325P	3.25	1.06	1.36	2.75	7.26	2.50	1.34	1.87	1.87	1.52-1.85	10	4.5	1.25	1	7.5	
	0.625	92505	E25045600062325P	3.25	1.30	1.59	2.75	7.26	2.50	1.54	1.99	1.87	1.32-1.64	12	4.5	1.25	1	7.5	
	0.750	92506	E25045600075350P	3.50	1.73	2.07	2.75	7.51	2.75	1.61	2.07	2.12	1.49-1.81	16	4.5	1.25	1	8.4	
	1.000	92507	E25045600100400P	4.00	1.89	2.30	2.75	8.01	3.25	1.85	2.30	2.62	1.76-2.07	16	4.5	0.98	1	8.8	
	1.250	92508	E25045600125400P	4.00	1.89	2.30	2.75	8.01	3.25	2.01	2.46	2.62	1.60-1.99	16	4.5	0.98	1	8.6	

Spare Parts

For d	Sealing plugs	Stop screw
0.500	90AI03	19BDR10165
0.625	90AI03	19BDR12165
0.750-1.250	90AI04	19BDR16165

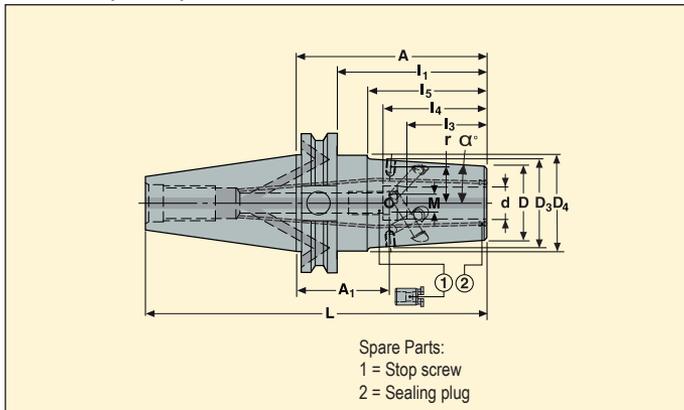
Accessories

For d	Balancing screws
0.500	90ZQ01
0.625	90ZQ01
0.750-1.250	90ZQ01

Please check availability in current price and stock-list.



- Run-out .0001" (2.5 µm) maximum at 3xd
- Reinforced design with wider front and tapered body
- With coolant supply channels towards the tool (plugged)



Taper	d mm	EDP No.	Part No.	Dimensions in inch											M mm	α°	r inch	Balancing	lbs
				A	D	D ₃	D ₄	L	I ₁	I ₃	I ₄	I ₅	A ₁ min-max						
CAT40 ADB	12	92484	E250256001275P	2.95	1.06	1.31	1.75	5.65	2.20	1.34	1.87	1.57	0.94-1.28	M10x1	4.5	0.53	1	2.6	
	16	92485	E250256001680P	3.15	1.30	1.57	1.75	5.84	2.40	1.54	1.99	1.77	1.30-1.61	M12x1	4.5	0.67	1	2.9	
	20	92487	E250256002080P	3.15	1.73	1.98	1.75	5.84	2.40	1.61	2.07	1.61	1.22-1.54	M16x1	4.5	0.85	1	3.3	
CAT50 ADB	12	92489	E250456001285P	3.35	1.06	1.37	2.75	7.35	2.59	1.34	1.87	1.97	1.59-1.93	M10x1	4.5	0.53	1	7.5	
	16	92490	E250456001685P	3.35	1.30	1.61	2.75	7.35	2.59	1.54	1.99	1.97	1.50-1.81	M12x1	4.5	0.67	1	7.7	
	20	92491	E250456002090P	3.54	1.73	2.07	2.75	7.55	2.79	1.61	2.07	2.17	1.61-1.93	M16x1	4.5	0.89	1	8.4	

Spare Parts

For d	Sealing plugs	Stop screw
12	90AI03	19BDR10165
16	90AI03	19BDR12165
20	90AI04	19BDR16165

Accessories

For d	Balancing screws
12	90ZQ01
16	90ZQ01
20	90ZQ01

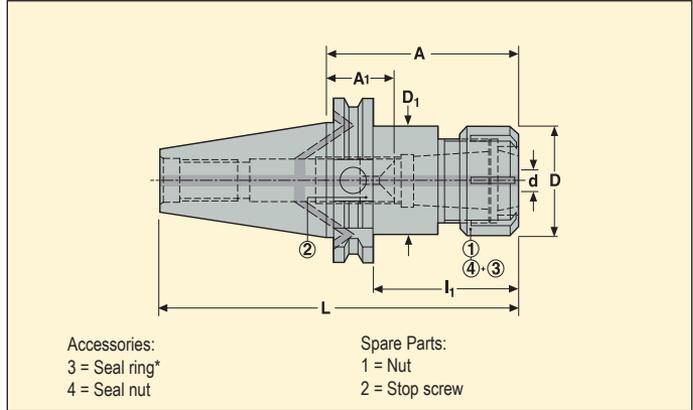
Please check availability in current price and stock-list.

EPB 5675 – ER collet chucks – Inch

ANSI B5.50 ADB



- Run-out .0004" (10 µm) maximum at 3xd



Taper	Capacity d inch	EDP No.	Part No.	Chuck & Collet Size	Dimensions in inch						Balancing	lbs
					A	D	D ₁	L	I ₁	A ₁ min-max		
CAT 40 ADB	0.019-0.393	65911	E2502567516250	ER 16	2.50	1.26	1.26	5.193	1.75	1.02-1.32	2	2.3
	0.019-0.393	65912	E2502567516400	ER 16	4.00	1.26	1.26	6.693	3.25	2.27-2.82	2	2.8
	0.039-0.629	65913	E2502567525250	ER 25	2.50	1.65	1.65	5.193	1.75	1.32-1.00	2	2.4
	0.039-0.629	65914	E2502567525400	ER 25	4.00	1.65	1.65	6.693	3.25	1.32-2.50	2	3.2
	0.078-0.787	65915	E2502567532275	ER 32	2.75	1.97	1.97	5.443	2.00	2.97-1.06	2	2.5
	0.078-0.787	65916	E2502567532500	ER 32	5.00	1.97	1.97	7.693	4.25	0.97-3.31	2	3.9
	0.118-1.023	65917	E2502567540400	ER 40	4.00	2.48	1.97	6.693	3.25	2.89-2.03	2	2.8
CAT 50 ADB	0.019-0.393	65918	E2504567516275	ER 16	2.75	1.26	1.26	6.756	2.00	1.02-1.32	2	6.9
	0.019-0.393	65919	E2504567516400	ER 16	4.00	1.26	1.26	8.006	3.25	2.25-2.80	2	7.3
	0.039-0.629	65920	E2504567525400	ER 25	4.00	1.65	1.65	8.006	3.25	1.28-1.00	2	7.7
	0.078-0.787	65921	E2504567532400	ER 32	4.00	1.97	1.97	8.006	3.25	-0.61-2.31	2	8.2
	0.078-0.787	65922	E2504567532600	ER 32	6.00	1.97	1.97	10.006	5.25	1.24-1.06	2	9.6
	0.118-1.023	65923	E2504567540400	ER 40	4.00	2.48	2.48	8.006	3.25	0.81-3.03	2	8.5
	0.118-1.023	65928	E2504567540600	ER 40	6.00	2.48	2.48	10.006	5.25	2.89-2.03	2	11.3

For ER collets, see page(s) 378-381, ER extensions, see page(s) 377.

Spare Parts

For size	Nut	Stop screw
ER 16	08B587516X	19B58708R10
ER 25	08B587525X	19B58718
ER 32	08B587532X	19B58722
ER40	08B587540X	19B58730
ER 40	08B587540X	19B58730

Accessories*

For size	Seal nut	Seal ring	Spanner
ER 16	08B587516IC	01B58751606	03B587516
ER 25	08B587525IC	01B58752506	03B587525
ER 32	08B587532IC	01B58753206	03B587532
ER40	08B587540IC	01B58754006	03B587540
ER 40	08B587540IC	01B58754006	03B587540

Please check availability in current price and stock-list.

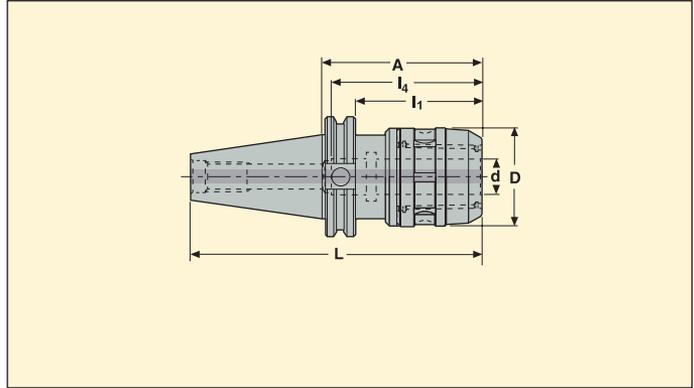
* For ER sealing rings, see page(s) 382.

Universal milling chucks – Inch

CAT40/50



- Run-out .0002" (5 µm) maximum at 3xd
- Coolant delivery through tool



Taper	EDP No.	Part No.	Clamping range	Dimensions in inch				Collet Series	lbs
				A	l ₄	D	d		
CAT40 AD	92983	CV40-UMC3.35-0750	0.12–0.75	3.346	2.596	2.047	0.75	UMC0750	4.2
	92984	CV40-UMC3.35-1000	0.12–1.00	3.346	2.596	2.362	1.00	UMC1000	4.4
	93000	CV40-UMC3.35-1250	0.19–1.25	3.346	2.596	2.520	1.25	UMC1250	4.4
	04243	CV40-UMC4.13-1000	0.12–1.00	4.134	3.384	2.362	–	UMC1000	
CAT50 AD	93001	CV50-UMC4.13-0750	0.12–0.75	4.134	3.384	2.047	0.75	UMC0750	9.7
	93006	CV50-UMC4.13-1000	0.12–1.00	4.134	3.384	2.362	1.00	UMC1000	10.4
	93007	CV50-UMC4.13-1250	0.19–1.25	4.134	3.384	2.717	1.25	UMC1250	10.6
	99533	CV50-UMC4.92-2000	1.00–2.00	4.921	4.171	4.134	2.00	UMC2000	17.2
	21675	CV50-UMC6.50-1250	0.19–1.25	6.496	5.746	2.717	1.25	UMC1250	14.1

Accessories

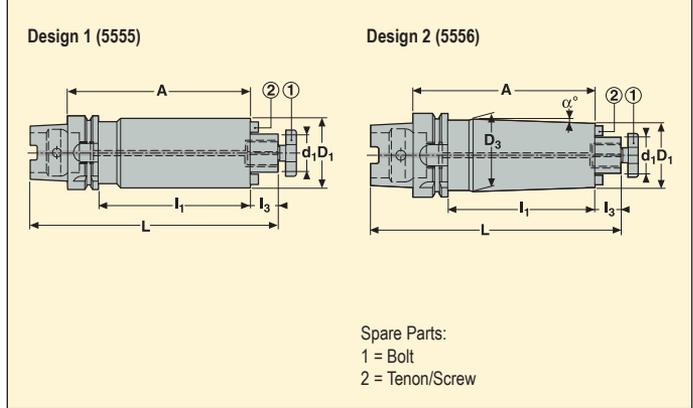
UMC Series	Spanner
UMCC0750	UMCC0750-SPAN
UMCC1000	UMCC1000-SPAN
UMCC1250	UMCC1250-SPAN
UMCC2000	UMCC2000-SPAN

Please check availability in current price and stock-list.

For U-series collets, see pages 368-370.



- Run-out .0002" (5 µm) maximum
- With dynamic damping, ready to use
- With coolant supply channels through the pilot



Taper	d ₁ inch	EDP No.	Part No.	Dimensions in inch						Design	α°	Balancing	lbs
				A	D ₁	D ₃	L	I ₁	I ₃				
HSK-A63	0.75	52564	E93045555075750	7.50	1.75	–	9.445	6.476	0.689	1	–	2	6.6
	0.75	52565	E93045556075900	9.00	1.80	2.332	10.945	7.976	0.689	2	2.2	2	9.7
	1.00	52567	E93045555100900	9.00	2.25	–	10.945	7.980	0.689	1	–	2	12.1
HSK-A100	0.75	52568	E93065555075750	7.50	1.75	–	10.154	6.358	0.689	1	–	2	9.5
	0.75	52574	E93065556075900	9.00	1.81	2.336	11.654	7.858	0.689	2	2.1	2	12.6
	1.00	52576	E93065555100900	9.00	2.25	–	11.657	7.862	0.689	1	–	2	15.0
	1.00	52577	E93065556100C00	12.00	2.32	3.000	14.654	10.858	0.689	2	1.9	2	23.1
	1.50	66635	E93065555150D75	13.75	3.50	–	15.719	12.610	0.940	1	–	2	42.5

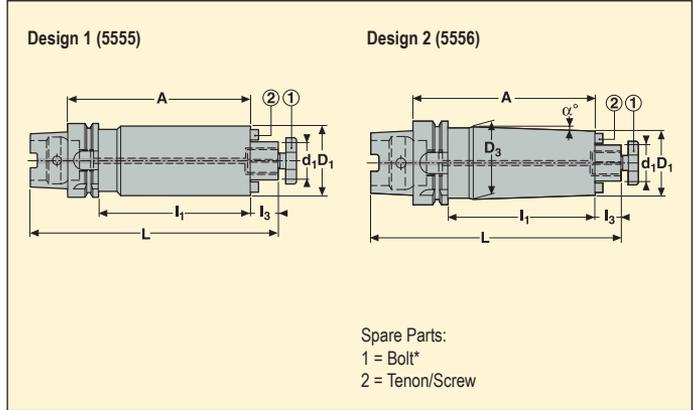
Spare Parts

For d ₁	Bolt	Screw	Tenon
0.75	58211905	950D0312	16C2080712A
1.00	58212540	950D0416	16C2091014A
1.50	58213810	950D0616	16C2151421A

Please check availability in current price and stock-list.



- Run-out .0002" (5 µm) maximum
- With dynamic damping, ready to use
- With coolant supply channels through the pilot



Taper	d ₁ mm	EDP No.	Part No.	Dimensions in inch						Design	α°	Balancing	lbs
				A	D ₁	D ₃	L	I ₁	I ₃				
HSK-A63	16	57458	E9304555516160	6.299	1.496	–	8.228	5.276	0.669	1	–	2	5.3
	22	50934	E9304555522210	8.268	1.890	–	10.276	7.244	0.748	1	–	2	7.8
	22	50961	E9304555522260	10.236	1.890	2.492	12.244	9.213	0.748	2	1.9	2	11.9
	27	50963	E9304555527260	10.236	2.362	–	12.323	9.213	0.827	1	–	2	14.5
HSK-A100	22	50964	E9306555522210	8.268	1.890	–	10.984	7.126	0.748	1	–	2	10.6
	22	50966	E9306555522260	10.236	1.890	2.559	12.953	9.094	0.748	2	1.9	2	14.9
	27	50967	E9306555527260	10.236	2.362	–	13.031	9.094	0.827	1	–	2	17.5
	27	50968	E9306555527320	12.598	2.362	3.228	15.394	11.457	0.827	2	2	2	26.1
	32	57459	E9306555532330	12.992	3.071	–	15.906	11.850	0.945	1	–	2	31.8
	40	66631	E9306555540350	13.780	3.504	–	16.693	12.638	1.063	1	–	2	42.8

d₁ 40, includes 4 threaded holes on the bearing face according to DIN 6357

Spare Parts*

For d ₁	Bolt	Screw	Tenon
16	5801608	951D0312	16C2080810A
22	5802210	951D0416	16C2101111
27	5802712	951D0516	16C2121214A
32	5803216	951D0516	16C2141421A
40	5804020	951D0616	16C2161621A

Accessories

For d ₁	Bolt, through coolant	Spanner
16	5801608L	5811608
22	5802210L	5812210
27	5802712L	5812712
32	5803216L	5813216
40	5804020L	5814020

Please check availability in current price and stock-list

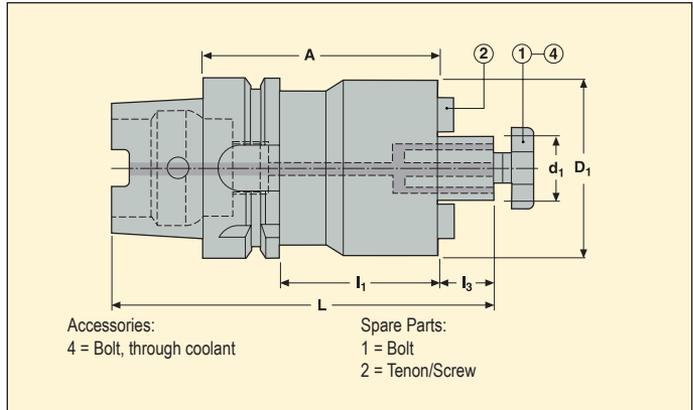
* These center bolts are similar to the original delivered ones: check if lengths L are suitable for the milling cutters used, therefore see instructions in page(s) 28 or in the Operating instructions sheet delivered with the holders.

EPB 5525 – Shell mill holders, with through coolant channels – Inch

HSK-A/ ISO 12164-1-A



- Run-out .0002" (5 µm) maximum
- With coolant supply channels through the pilot



Taper	d ₁ inch	EDP No.	Part No.	Dimensions in inch					Balancing		
				A	D ₁	L	I ₁	I ₃			
HSK-A63	0.75	00964	E93045525075200	2.00	1.75	3.950	0.97	0.69	1	2.2	
	0.75	00965	E93045525075300	3.00	1.75	4.950	1.97	0.69	1	2.9	
	1.00	00967	E93045525100237	2.37	2.25	4.320	1.34	0.69	1	4.0	
	1.25	00972	E93045525125237	2.37	2.75	4.319	1.34	0.69	1	5.0	
	1.50	00973	E93045525150237	2.37	3.50	4.570	1.34	0.94	1	3.2	
HSK-A100	0.75	00997	E93065525075200	2.00	1.75	4.660	0.86	0.69	1	2.2	
	0.75	00996	E93065525075400	4.00	1.75	6.660	2.86	0.69	1	3.5	
	1.00	01003	E93065525100200	2.00	2.25	4.660	0.86	0.69	1	3.6	
	1.00	01001	E93065525100400	4.00	2.25	6.660	2.86	0.69	1	5.6	
	1.25	01006	E93065525125400	4.00	2.75	6.660	2.86	0.69	1	8.4	
	1.50	01008	E93065525150225	2.25	3.50	5.160	0.86	0.94	1	8.7	
	1.50	01011	E93065525150400	4.00	3.50	6.910	2.86	0.94	1	13.6	
	2.00	01013	E93065525200400	4.00	4.87	6.910	2.86	0.94	1	26.4	

d₁ 2", includes 4 threaded holes on the bearing face according to DIN 6357

Spare Parts

For d ₁	Bolt	Screw	Tenon
0.75	58211905	950D0312	16C11905
1.00	58212540	951D0410	16C12540
1.25	58213175	951D0516	16C23175
1.50	58213810	951D0616	16C23810
2.00	58215080	951D0825	16C25080

Please check availability in current price and stock-list.

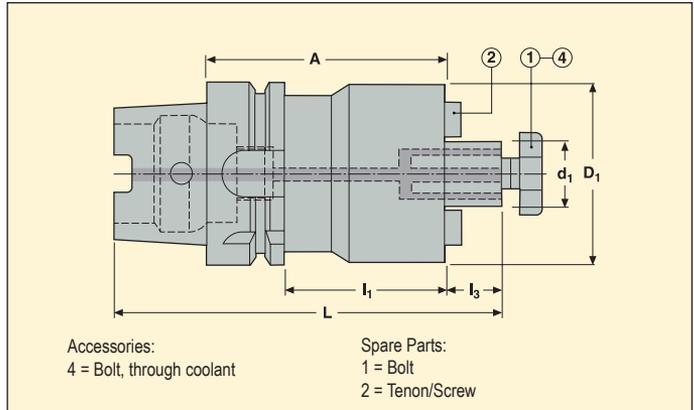
For HSK sealing plugs, coolant tubes and tube spanners, see page(s) 357.

EPB 5525/5524 – Shell mill holders, with through coolant channels – Metric

HSK-A/ ISO 12164-1-A



- Run-out .0002" (5 µm) maximum
- With coolant supply channels through the pilot



Taper	d ₁ mm	EDP No.	Part No.	Dimensions in inch					*	**	Balancing	lbs
				A	D ₁	L	I ₁	I ₃				
HSK-A63	16	30208	E930455251650	1.969	1.496	3.898	0.945	0.669			1	1.9
	16	30202	E9304552516100	3.937	1.496	5.866	2.913	0.669			1	2.9
	16	30205	E9304552516145	5.709	1.496	7.638	4.685	0.669			1	3.7
	22	30215	E930455252250	1.969	1.890	3.976	0.945	0.748	*		1	2.4
	22	30209	E9304552522100	3.937	1.890	5.945	2.913	0.748			1	3.8
	22	30213	E9304552522160	6.299	1.890	8.307	5.276	0.748			1	5.6
	27	30223	E930455252760	2.362	2.362	4.449	1.339	0.827	*	**	1	3.0
	27	30219	E9304552527100	3.937	2.362	6.024	2.913	0.827			1	4.9
	27	30221	E9304552527160	6.299	2.362	8.386	5.276	0.827			1	7.8
	32	30231	E930455253260	2.362	3.071	4.567	1.339	0.945	*		1	3.9
	32	30225	E9304552532100	3.937	3.071	6.142	2.913	0.945			1	6.5
	40	30232	E930455254060	2.362	3.504	4.685	1.339	1.063	*		1	4.5
	27	18783	E930455242760	2.362	1.890	4.449	1.339	0.827	*	**	1	2.6

d₁ 40, includes 4 threaded holes on the bearing face according to DIN 6357

* Conform to DIN 69882-3

** Diameter D₁ on type 5524 is smaller than on type 5525

Spare Parts

For d ₁	Bolt	Screw	Tenon
16	5801608	950D0312	16C10810164
22	5802210	950D0416	16C11012206
27/5524	5802712	951D0512	16C127
27/5525	5802712	951D0516	16C11214243
32	5803216	951D0516	16C2141421
40	5804020	951D0616	16C2161621

Accessories

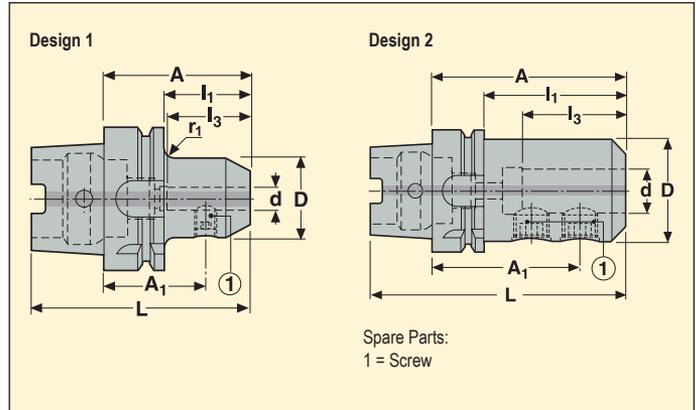
For d ₁	Bolt, through coolant	Spanner
16	5801608L	5811608
22	5802210L	5812210
27/5524	5802712L	5812712
27/5525	5802712L	5812712
32	5803216L	5813216
40	5804020L	5814020

Please check availability in current price and stock-list.

For HSK sealing plugs, coolant tubes and tube spanners, see page(s) 357.



- Run-out .0002" (5 µm) maximum at 3xd
- Weldon d 16, 20, 25, 32 and 40 with ground face (Secco-Weldon compatible)



Taper	d mm	EDP No.	Part No.	Dimensions in inch							*	Design	Balancing	lbs
				A	D	L	I ₁	I ₃	A ₁	r ₁				
HSK-A63	6	41650	E93045840665	2.559	0.984	3.819	1.535	1.063	1.870	0.12	*	1	1	1.9
	8	41651	E93045840865	2.559	1.102	3.819	1.535	1.181	1.870	0.12	*	1	1	1.8
	8	05366	E930458408120	4.724	1.102	5.984	3.701	1.181	4.035	0.12	*	1	1	2.3
	10	41652	E93045841065	2.559	1.378	3.819	1.535	1.417	1.791	0.12	*	1	1	2.0
	10	05368	E930458410120	4.724	1.378	5.984	3.701	1.417	3.957	0.12	*	1	1	2.9
	12	41653	E93045841280	3.150	1.654	4.409	2.126	1.693	2.283	0.12	*	1	1	2.5
	12	05370	E930458412120	4.724	1.654	5.984	3.701	1.693	3.858	0.12	*	1	1	3.4
	14	41654	E93045841480	3.150	1.732	4.409	2.126	1.693	2.283	0.12	*	1	1	2.6
	16	41655	E93045841680	3.150	1.890	4.409	2.126	1.811	2.224	0.12	*	1	1	2.8
	16	05373	E930458416120	4.724	1.890	5.984	3.701	1.811	3.799	0.10	*	1	1	4.1
	18	41656	E93045841880	3.150	1.969	4.409	2.126	1.811	2.224	0.06	*	1	1	3.0
	20	03309	E93045842080	3.150	2.047	4.409	2.126	1.890	2.185	0.03	*	1	1	3.0
	20	05376	E930458420120	4.724	2.047	5.984	3.701	1.890	3.760	0.03	*	1	1	4.4
	25	03310	E930458425110	4.331	2.480	5.591	–	2.126	3.406	–	*	2	2	5.0
	32	41659	E930458432110	4.331	2.835	5.591	–	2.283	3.406	–	*	2	2	5.6

Balancing 1, with steel shank

* Conform to DIN 69882-4

Spare Parts

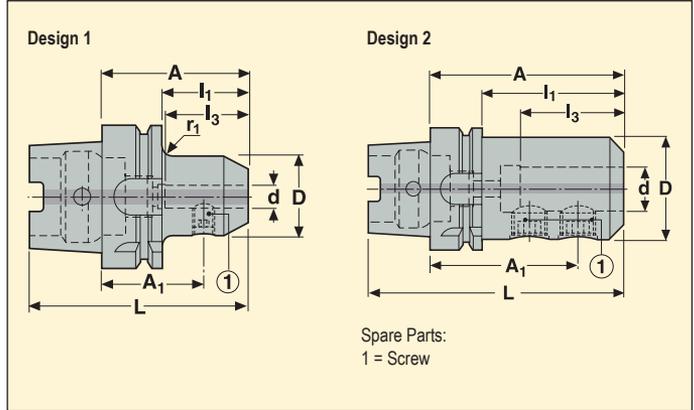
For d	Locking screw
6	951C0610
8	951C0810
10	951C1012
12-14	951C1216
16-18	951C1416
20	951C1616
25	951C1820
32	951C2020

Please check availability in current price and stock-list.

For HSK sealing plugs, coolant tubes and tube spanners, see page(s) 357.



- Run-out .0002" (5 μm) maximum at 3xd
- Weldon d 16, 20, 25, 32 and 40 with ground face (Seco-Weldon compatible)



Taper	d mm	EDP No.	Part No.	Dimensions in inch							*	Design	Balancing	lbs
				A	D	L	I ₁	I ₃	A ₁	r ₁				
HSK-A100	6	41660	E93065840680	3.150	0.984	5.118	2.008	1.063	2.461	0.591	*	1	1	4.9
	8	41661	E93065840880	3.150	1.102	5.118	2.008	1.181	2.461	0.394	*	1	1	5.0
	10	41662	E93065841080	3.150	1.378	5.118	2.008	1.417	2.382	0.197	*	1	1	5.2
	12	41663	E93065841280	3.150	1.654	5.118	2.008	1.693	2.283	0.197	*	1	1	5.4
	14	41667	E93065841480	3.150	1.732	5.118	2.008	1.693	2.283	0.197	*	1	1	5.5
	16	41670	E930658416100	3.937	1.890	5.906	2.795	1.811	3.012	0.197	*	1	1	6.3
	16	05624	E930658416160	6.299	1.890	8.268	5.157	1.811	5.374	0.197	*	1	1	8.0
	18	41671	E930658418100	3.937	1.969	5.906	2.795	1.811	3.012	0.197	*	1	1	6.5
	20	41672	E930658420100	3.937	2.047	5.906	2.795	1.890	2.953	0.197	*	1	1	6.6
	20	05625	E930658420160	6.299	2.047	8.268	5.157	1.890	5.335	0.197	*	1	1	8.7
	25	41673	E930658425100	3.937	2.559	5.906	2.795	2.126	3.012	0.197	*	2	1	7.7
	25	05626	E930658425160	6.299	2.559	8.268	5.157	2.126	5.374	0.197	*	2	1	11.0
	32	41674	E930658432100	3.937	2.835	5.906	2.795	2.283	3.012	0.197	*	2	1	8.2
	32	11002	E930658432160	6.299	2.835	8.268	5.157	2.283	5.374	0.197	*	2	1	12.3
	40	41675	E930658440120	4.724	3.445	6.693	3.583	2.677	3.543	0.197	*	2	1	10.4

Balancing 1, with steel shank

* Conform to DIN 69882-4

Spare Parts

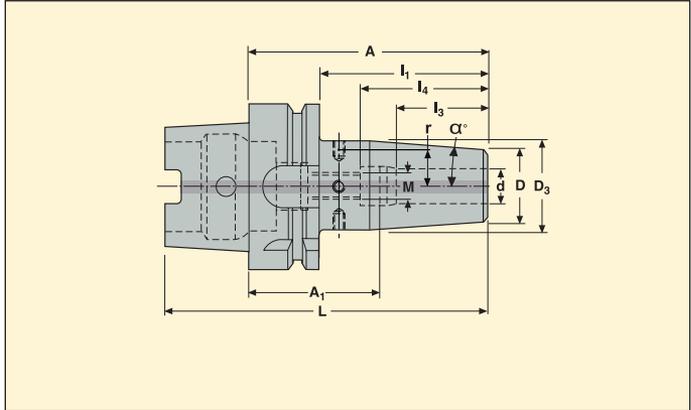
For d	Locking screw
6	951C0610
8	951C0810
10	951C1012
12-14	951C1216
16-18	951C1416
20	951C1616
25	951C1820
32	951C2020
40	951C2020

Please check availability in current price and stock-list.

For HSK sealing plugs, coolant tubes and tube spanners, see page(s) 357.



- Run-out .0001" (2.5 µm) maximum at 3rd
- Delivered with one stop screw



Taper	d mm	EDP No.	Part No.	Dimensions in inch									M mm	α°	r inch	*	Balancing	lbs
				A	D	D ₃	L	l ₁	l ₃	l ₄	A ₁ min-max							
HSK-A40	6	66271	E930256030680	3.150	0.827	1.063	3.937	2.362	0.866	1.476	1.732-2.126	M5	4.5	0.413	*	1	0.9	
	8	66272	E930256030880	3.150	0.827	1.063	3.937	2.362	1.024	1.476	1.732-2.126	M6	4.5	0.413	*	1	0.9	
	10	66273	E930256031080	3.150	0.945	1.260	3.937	2.362	1.220	1.673	1.535-1.929	M8x1	4.5	0.512	*	1	1.0	
	12	66274	E930256031290	3.543	0.945	1.260	4.331	2.756	1.339	1.870	1.732-2.126	M10x1	4.5	0.512	*	1	1.1	
	16	66275	E930256031690	3.543	1.063	1.339	4.331	2.756	1.535	1.988	1.614-2.008	M12x1	4.5	0.551	*	1	1.1	
HSK-A63	6	66278	E930456030680	3.150	0.827	1.063	4.409	2.126	0.866	1.476	1.732-2.126	M5	4.5	0.413	*	1	1.8	
	6	66276	E9304560306120	4.724	0.827	1.063	5.984	3.701	0.866	1.476	3.307-3.701	M5	4.5	0.413	1	2.2		
	6	66277	E9304560306160	6.299	0.827	1.063	7.559	5.276	0.866	1.476	4.882-5.276	M5	4.5	0.413	1	2.6		
	8	66281	E930456030880	3.150	0.827	1.063	4.409	2.126	1.024	1.476	1.732-2.126	M6	4.5	0.413	*	1	1.8	
	8	66279	E9304560308120	4.724	0.827	1.063	5.984	3.701	1.024	1.476	3.307-3.701	M6	4.5	0.413	1	2.2		
	8	66280	E9304560308160	6.299	0.827	1.063	7.559	5.276	1.024	1.476	4.882-5.276	M6	4.5	0.413	1	2.5		
	10	66284	E930456031085	3.346	0.945	1.260	4.606	2.323	1.220	1.673	1.732-2.126	M8x1	4.5	0.512	*	1	2.0	
	10	66282	E9304560310120	4.724	0.945	1.260	5.984	3.701	1.220	1.673	3.110-3.504	M8x1	4.5	0.512	1	2.4		
	10	66283	E9304560310160	6.299	0.945	1.260	7.559	5.276	1.220	1.673	4.685-5.079	M8x1	4.5	0.512	1	3.0		

For Shrinkfit extensions, see page(s) 362-363.

* Conform to DIN 69882-8

Spare Parts

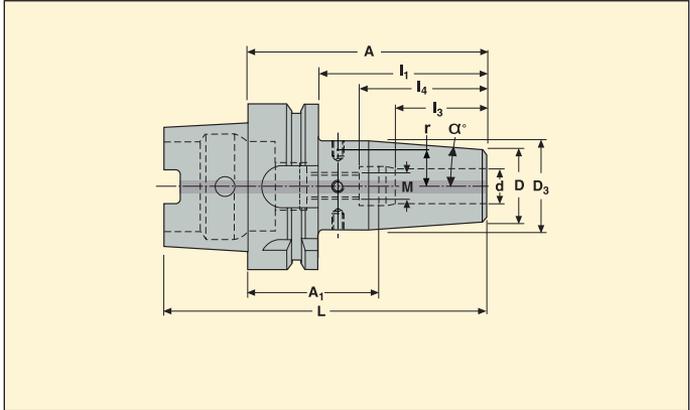
For d	Stop screw
6	19BDR05165
8	19BDR06165
10	19BDR08165
12	19BDR10165
16	19BDR12165

Accessories

For d	Balancing screws
6	90ZQ01
8	90ZQ01
10	90ZQ01
12	90ZQ01
16	90ZQ01

Please check availability in current price and stock-list.

For HSK sealing plugs, coolant tubes and tube spanners, see page(s) 357.



- Run-out .0001" (2.5 µm) maximum at 3xd
- Delivered with one stop screw

Taper	d mm	EDP No.	Part No.	Dimensions in inch									M mm	α°	r inch	*	Balancing	lbs
				A	D	D ₃	L	l ₁	l ₃	l ₄	A ₁ min-max							
HSK-A63	12	66287	E930456031290	3.543	0.945	1.260	4.803	2.520	1.339	1.870	1.732-2.126	M10x1	4.5	0.512	*	1	2.0	
	12	66285	E9304560312120	4.724	0.945	1.260	5.984	3.701	1.339	1.870	2.913-3.307	M10x1	4.5	0.512		1	2.4	
	12	66286	E9304560312160	6.299	0.945	1.260	7.559	5.276	1.339	1.870	4.488-4.882	M10x1	4.5	0.512		1	2.9	
	14	66289	E930456031490	3.543	1.063	1.339	4.803	2.520	1.339	1.870	1.732-2.126	M10x1	4.5	0.551	*	1	2.1	
	14	66288	E9304560314120	4.724	1.063	1.339	5.984	3.701	1.339	1.870	2.913-3.307	M10x1	4.5	0.551		1	2.5	
	16	66292	E930456031695	3.740	1.063	1.339	5.000	2.717	1.535	1.988	1.811-2.205	M12x1	4.5	0.551	*	1	2.1	
	16	66290	E9304560316120	4.724	1.063	1.339	5.984	3.701	1.535	1.988	2.795-3.189	M12x1	4.5	0.551		1	2.5	
	16	66291	E9304560316160	6.299	1.063	1.339	7.559	5.276	1.535	1.988	4.370-4.764	M12x1	4.5	0.551		1	3.1	
	18	66294	E930456031895	3.740	1.299	1.654	5.000	2.717	1.535	1.988	1.811-2.205	M12x1	4.5	0.709	*	1	2.5	
	18	66293	E9304560318120	4.724	1.299	1.654	5.984	3.701	1.535	1.988	2.795-3.189	M12x1	4.5	0.709		1	3.0	
	20	66295	E9304560320100	3.937	1.299	1.654	5.197	2.913	1.614	2.067	1.929-2.323	M16x1	4.5	0.709	*	1	2.5	
	20	66296	E9304560320120	4.724	1.299	1.654	5.984	3.701	1.614	2.067	2.717-3.110	M16x1	4.5	0.709		1	2.9	
	20	66298	E9304560320160	6.299	1.299	1.654	7.559	5.276	1.614	2.067	4.291-4.685	M16x1	4.5	0.709		1	3.8	
	25	66299	E9304560325115	4.528	1.732	2.087	5.787	3.504	1.850	2.303	2.283-2.677	M16x1	4.5	0.925	*	1	3.8	
25	66300	E9304560325160	6.299	1.732	2.087	7.559	5.276	1.850	2.303	4.055-4.449	M16x1	4.5	0.925		1	5.4		
32	66301	E9304560332120	4.724	1.732	2.087	5.984	3.701	2.008	2.461	2.323-2.717	M16x1	4.5	0.925	*	1	3.6		

For Shrinkfit extensions, see page(s) 362-363.

* Conform to DIN 69882-8

Spare Parts

For d	Stop screw
12-14	19BDR10165
16-18	19BDR12165
20-32	19BDR16165

Accessories

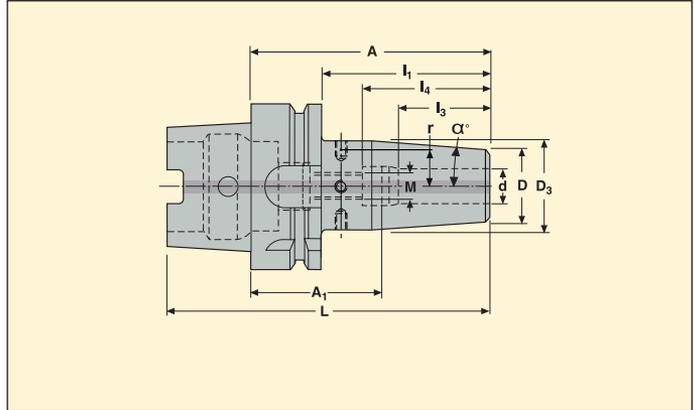
For d	Balancing screws
12-14	90ZQ01
16-18	90ZQ01
20-32	90ZQ01

Please check availability in current price and stock-list.

For HSK sealing plugs, coolant tubes and tube spanners, see page(s) 357.



- Run-out .0001" (2.5 µm) maximum at 3xd
- Delivered with one stop screw



Taper	d inch	EDP No.	Part No.	Dimensions in inch								M mm	α°	r inch	Balancing	lbs
				A	D	D ₃	L	I ₁	I ₃	I ₄	A ₁ min-max					
HSK -A100	0.250	66519	E9306560302585	3.346	0.826	1.062	5.315	2.204	1.023	1.417	1.92-2.32	M5	4.5	0.413	1	4.9
	0.250	66518	E93065603025160	6.299	0.826	1.062	8.268	5.157	1.023	1.417	4.88-5.28	M5	4.5	0.413	1	5.5
	0.375	66521	E9306560303785	3.346	0.944	1.259	5.315	2.204	1.220	1.614	1.73-2.12	M8	4.5	0.512	1	4.9
	0.375	66520	E93065603037160	6.299	0.944	1.259	8.268	5.157	1.220	1.614	4.68-5.08	M8	4.5	0.512	1	6.0
	0.500	66523	E9306560305095	3.740	0.944	1.259	5.709	2.598	1.417	1.811	1.92-2.32	M10	4.5	0.512	1	5.1
	0.500	66522	E93065603050160	6.299	0.944	1.259	8.268	5.157	1.417	1.811	4.49-4.88	M10	4.5	0.512	1	6.0
	0.625	66524	E93065603062100	3.937	1.062	1.338	5.906	2.795	1.535	1.929	2.00-2.40	M12	4.5	0.551	1	5.1
	0.625	66525	E93065603062160	6.299	1.062	1.390	8.268	5.157	1.540	1.970	4.36-4.76	M12	4.5	0.551	1	6.0
	0.750	66526	E93065603075105	4.133	1.299	1.653	6.102	2.992	1.614	2.007	2.12-2.51	M16	4.5	0.709	1	5.5
	0.750	66527	E93065603075130	5.118	1.299	1.653	7.087	3.976	1.614	2.007	3.11-3.50	M16	4.5	0.709	1	6.2
	0.750	66528	E93065603075160	6.299	1.299	1.653	8.268	5.157	1.614	2.070	4.28-4.68	M16	4.5	0.709	1	6.8
	1.000	66529	E93065603100115	4.527	1.732	2.086	6.496	3.385	1.850	2.244	2.28-2.67	M16	4.5	0.925	1	6.6
	1.000	66530	E93065603100160	6.299	1.732	2.086	8.268	5.157	1.850	2.244	4.05-4.44	M16	4.5	0.925	1	8.4
1.250	66531	E93065603125120	4.724	1.732	2.086	6.693	3.582	2.007	2.401	2.32-2.71	M16	4.5	0.925	1	6.6	

For Shrinkfit extensions, see page(s) 362-363.

Spare Parts

For d	Stop screw
0.250	19BDR05165
0.375	19BDR08165
0.500	19BDR10165
0.625	19BDR05165
0.750-1.250	19BDR16165

Accessories

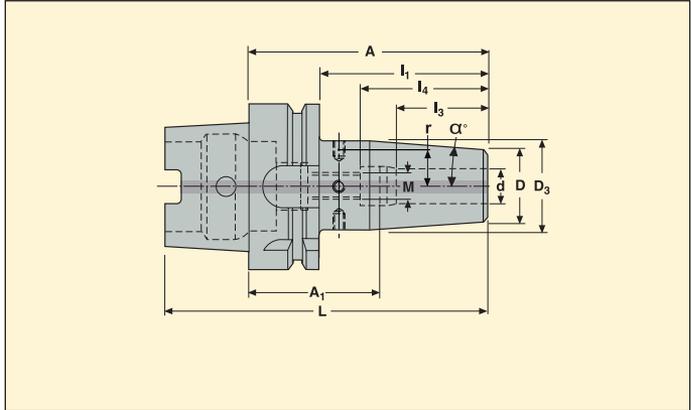
For d	Balancing screws
0.250	90ZQ01
0.375	90ZQ01
0.500	90ZQ01
0.625	90ZQ01
0.750-1.250	90ZQ01

Please check availability in current price and stock-list.

For HSK sealing plugs, coolant tubes and tube spanners, see page(s) 357.



- Run-out .0001" (2.5 µm) maximum at 3xd
- Delivered with one stop screw



Taper	d mm	EDP No.	Part No.	Dimensions in inch								M mm	α°	r inch	*	Balancing	lbs
				A	D	D ₃	L	L ₁	L ₃	L ₄	A ₁ min-max						
HSK -A100	6	66304	E930656030685	3.346	0.827	1.063	5.315	2.205	0.866	1.476	1.929-2.323	M5	4.5	0.413	*	1	4.7
	6	66302	E9306560306120	4.724	0.827	1.063	6.693	3.583	0.866	1.476	3.307-3.701	M5	4.5	0.413		1	5.0
	6	66303	E9306560306160	6.299	0.827	1.063	8.268	5.157	0.866	1.476	4.882-5.276	M5	4.5	0.413		1	5.4
	8	66307	E930656030885	3.346	0.827	1.063	5.315	2.205	1.024	1.476	1.929-2.323	M6	4.5	0.413	*	1	4.7
	8	66305	E9306560308120	4.724	0.827	1.063	6.693	3.583	1.024	1.476	3.307-3.701	M6	4.5	0.413		1	5.0
	8	66306	E9306560308160	6.299	0.827	1.063	8.268	5.157	1.024	1.476	4.882-5.276	M6	4.5	0.413		1	5.4
	10	66310	E930656031090	3.543	0.945	1.260	5.512	2.402	1.220	1.673	1.929-2.323	M8x1	4.5	0.512	*	1	4.9
	10	66308	E9306560310120	4.724	0.945	1.260	6.693	3.583	1.220	1.673	3.110-3.504	M8x1	4.5	0.512		1	5.3
	10	66309	E9306560310160	6.299	0.945	1.260	8.268	5.157	1.220	1.673	4.685-5.079	M8x1	4.5	0.512		1	5.8

For Shrinkfit extensions, see page(s) 362-363.

* Conform to DIN 69882-8

Spare Parts

For d	Stop screw
6	19BDR05165
8	19BDR06165
10	19BDR08165

Accessories

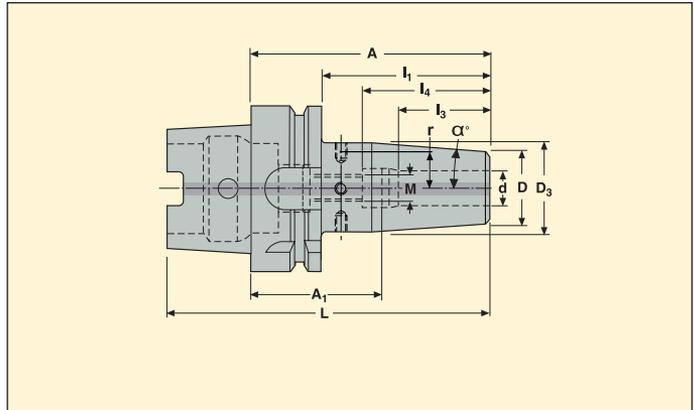
For d	Balancing screws
0.236	90ZQ01
0.315	90ZQ01
0.394	90ZQ01

Please check availability in current price and stock-list.

For HSK sealing plugs, coolant tubes and tube spanners, see page(s) 357.



- Run-out .0001" (2.5 µm) maximum at 3xd
- Delivered with one stop screw



Taper	d mm	EDP No.	Part No.	Dimensions in inch								M mm	α°	r inch	*	Balancing	lbs
				A	D	D ₃	L	I ₁	I ₃	I ₄	A ₁ min-max						
HSK -A100	12	66313	E930656031295	3.740	0.945	1.260	5.709	2.598	1.339	1.870	1.929-2.323	M10x1	4.5	0.512	*	1	4.9
	12	66311	E9306560312120	4.724	0.945	1.260	6.693	3.583	1.339	1.870	2.913-3.307	M10x1	4.5	0.512		1	5.2
	12	66312	E9306560312160	6.299	0.945	1.260	8.268	5.157	1.339	1.870	4.488-4.882	M10x1	4.5	0.512		1	5.8
	14	66314	E930656031495	3.740	1.063	1.339	5.709	2.598	1.339	1.870	1.929-2.323	M10x1	4.5	0.551	*	1	5.0
	16	66315	E9306560316100	3.937	1.063	1.339	5.906	2.795	1.535	1.988	2.008-2.402	M12x1	4.5	0.551	*	1	5.0
	16	66316	E9306560316130	5.118	1.063	1.339	7.087	3.976	1.535	1.988	3.189-3.583	M12x1	4.5	0.551		1	5.5
	16	66317	E9306560316160	6.299	1.063	1.339	8.268	5.157	1.535	1.988	4.370-4.764	M12x1	4.5	0.551		1	5.9
	18	66318	E9306560318100	3.937	1.299	1.654	5.906	2.795	1.535	1.988	2.008-2.402	M12x1	4.5	0.709	*	1	5.4
	20	66321	E9306560320105	4.134	1.299	1.654	6.102	2.992	1.614	2.067	2.126-2.520	M16x1	4.5	0.709	*	1	5.5
	20	66323	E9306560320130	5.118	1.299	1.654	7.087	3.976	1.614	2.067	3.110-3.504	M16x1	4.5	0.709		1	6.2
	20	66326	E9306560320160	6.299	1.299	1.654	8.268	5.157	1.614	2.067	4.291-4.685	M16x1	4.5	0.709		1	6.7
	25	66328	E9306560325115	4.528	1.732	2.087	6.496	3.386	1.850	2.303	2.283-2.677	M16x1	4.5	0.925	*	1	6.6
	25	66329	E9306560325160	6.299	1.732	2.087	8.268	5.157	1.850	2.303	4.055-4.449	M16x1	4.5	0.925		1	8.4
	32	66330	E9306560332120	4.724	1.732	2.087	6.693	3.583	2.008	2.461	2.323-2.717	M16x1	4.5	0.925	*	1	6.6

For Shrinkfit extensions, see page(s) 362-363.

* Conform to DIN 69882-8

Spare Parts

For d	Stop screw
12-14	19BDR10165
16-18	19BDR12165
20-32	19BDR16165

Accessories

For d	Balancing screws
12-14	90ZQ01
16-18	90ZQ01
20-32	90ZQ01

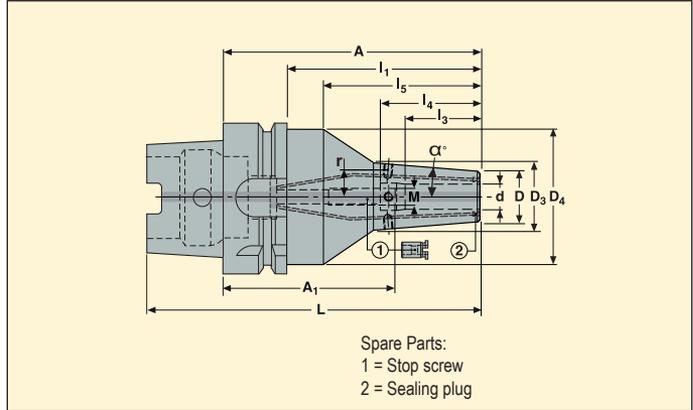
Please check availability in current price and stock-list.
For HSK sealing plugs, coolant tubes and tube spanners, see page(s) 357.

EPB 5600 – Shrinkfit holders, reinforced – Inch

HSK-A/ ISO 12164-1-A



- Run-out .0001" (2.5 µm) maximum at 3rd
- Reinforced design with wider front and tapered body
- With coolant supply channels towards the tool (plugged)



Taper	d inch	EDP No.	Part No.	Dimensions in inch											M mm	α°	r inch	*	Balancing	lbs
				A	D	D ₃	D ₄	L	I ₁	I ₃	I ₄	I ₅	A ₁ min-max							
HSK -A63	0.500	92440	E93045600050275	2.75	1.06	1.33	-	4.01	1.73	1.34	1.81	-	-	-	4.5	0.53	*	1	2.0	
	0.625	92441	E93045600062300	3.12	1.30	1.61	-	4.26	1.98	1.54	1.99	-	1.02-1.42	-	4.5	0.67	1	2.2		
	0.750	92442	E93045600075300	3.00	1.73	2.04	-	4.26	1.98	1.61	1.99	-	1.02-1.42	-	4.5	0.89	1	2.9		
HSK -A100	0.750	92443	E93065600075412	4.12	1.73	2.20	-	6.09	2.98	1.61	2.07	-	2.12-2.51	16	4.5	0.89	1	6.8		
	1.000	92444	E93065600100450	4.50	1.89	2.25	3.44	6.47	3.36	1.85	2.30	2.73	2.26-2.65	16	4.5	0.98	1	8.6		
	1.250	92451	E93065600125450	4.50	1.89	2.25	3.44	6.47	3.36	2.01	2.46	2.73	2.10-2.49	16	4.5	0.98	1	8.2		

* Holder without thread for a stop screw.

Spare Parts

For d	Sealing plugs	Stop screw
0.500	90AI03	19BDR10165
0.625	90AI03	19BDR12165
0.750-1.250	90AI04	19BDR16165

Accessories

For d	Balancing screws
0.500	90ZQ01
0.625	90ZQ01
0.750-1.250	90ZQ01

Please check availability in current price and stock-list.

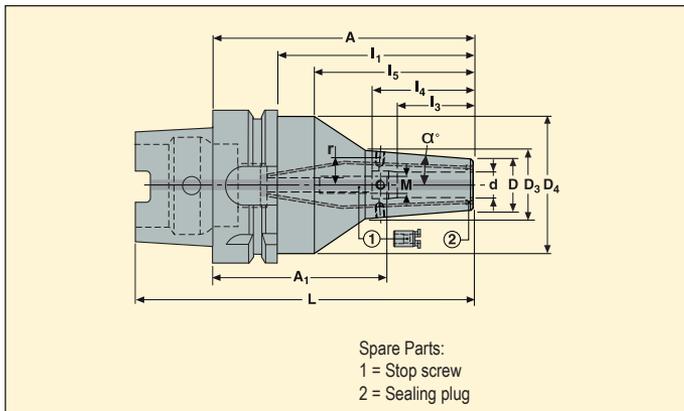
For HSK sealing plugs, coolant tubes and tube spanners, see page(s) 357.

EPB 5600 – Shrinkfit holders, reinforced – Metric

HSK-A/ ISO 12164-1-A



- Run-out .0001" (2.5 µm) maximum at 3xd
- Reinforced design with wider front and tapered body
- With coolant supply channels towards the tool (plugged)



Taper	d mm	EDP No.	Part No.	Dimensions in inch											M mm	α°	r inch	Balancing	lbs	
				A	D	D ₃	D ₄	L	I ₁	I ₃	I ₄	I ₅	A ₁ min-max							
HSK-A63	6	77016	E930456000670	2.76	0.94	1.22	—	4.02	1.73	0.87	1.48	—	—	—	—	4.5	**	0.47	1	1.9
	6	77028	E9304560006130	5.12	0.94	1.27	2.07	6.38	4.09	0.87	1.48	3.46	3.70-4.09	M5	4.5	0.47	1	3.4		
	6	77038	E9304560006160	6.30	0.94	1.27	2.07	7.56	5.28	0.87	1.48	4.65	4.88-5.28	M5	4.5	0.47	1	4.2		
	8	77017	E930456000870	2.76	0.94	1.22	—	4.02	1.73	1.02	1.48	—	—	—	4.5	**	0.47	1	1.9	
	8	77029	E9304560008130	5.12	0.94	1.27	2.07	6.38	4.09	1.02	1.48	3.46	3.70-4.09	M6	4.5	0.47	1	3.4		
	8	77039	E9304560008160	6.30	0.94	1.27	2.07	7.56	5.28	1.02	1.48	4.65	4.88-5.28	M6	4.5	0.47	1	4.2		
	10	77018	E930456001070	2.76	1.06	1.34	—	4.02	1.73	1.22	1.67	—	—	—	4.5	**	0.53	1	1.9	
	10	77032	E9304560010130	5.12	1.06	1.39	2.07	6.38	4.09	1.22	1.67	3.46	3.50-3.90	M8x1	4.5	0.53	1	3.5		
	10	77040	E9304560010160	6.30	1.06	1.39	2.07	7.56	5.28	1.22	1.67	4.65	4.69-5.08	M8x1	4.5	0.53	1	4.3		
	12	77019	E930456001270	2.76	1.06	1.33	—	4.02	1.73	1.34	1.81	—	—	—	4.5	**	0.53	1	1.9	
	12	77034	E9304560012130	5.12	1.06	1.39	2.07	6.38	4.09	1.34	1.87	3.46	3.31-3.70	M10x1	4.5	0.53	1	3.5		
	12	77041	E9304560012160	6.30	1.06	1.39	2.07	7.56	5.28	1.34	1.87	4.65	4.49-4.88	M10x1	4.5	0.53	1	4.3		
	16	77020	E930456001675	2.95	1.30	1.61	—	4.21	1.93	1.54	1.99	—	—	—	4.5	**	0.67	1	2.2	
	16	77035	E9304560016130	5.12	1.30	1.66	2.07	6.38	4.09	1.54	1.99	3.46	3.19-3.58	M12x1	4.5	0.67	1	3.7		
	16	77042	E9304560016160	6.30	1.30	1.66	2.07	7.56	5.28	1.54	1.99	4.65	4.37-4.76	M12x1	4.5	0.67	1	4.7		
	20	77021	E930456002075	2.95	1.73	2.04	—	4.21	1.93	1.61	1.99	—	—	—	4.5	**	0.85	1	2.6	
	20	77036	E9304560020130	5.12	1.73	2.27	2.07	6.38	4.09	1.61	2.07	3.46	3.11-3.50	M16x1	4.5	0.85	1	4.7		
	20	77043	E9304560020160	6.30	1.73	2.44	2.07	7.56	5.28	1.61	2.07	4.65	4.29-4.69	M16x1	4.5	0.85	1	6.0		
25	77022	E930456002585	3.35	1.89	2.22	2.07	4.61	2.32	1.85	2.30	1.69	—	—	4.5	**	—	***	1	3.1	
25	77037	E9304560025130	5.12	1.89	2.48	2.07	6.38	4.09	1.85	2.30	3.46	2.87-3.27	M16x1	4.5	0.98	1	5.2			
25	77044	E9304560025160	6.30	1.89	2.48	2.07	7.56	5.28	1.85	2.30	4.65	4.06-4.45	M16x1	4.5	0.98	1	6.7			
32	77023	E930456003285	3.35	1.89	2.22	2.07	4.61	2.32	2.01	2.40	1.69	—	—	4.5	**	—	***	1	2.8	

** Holder without thread for a stop screw

*** Holder without threaded holes for balancing screw

Spare Parts

For d	Sealing plugs	Stop screw
6	90AI03	19BDR05165
8	90AI03	19BDR06165
10	90AI03	19BDR08165
12	90AI03	19BDR10165
16	90AI03	19BDR12165
20-32	90AI04	19BDR16165

Accessories

For d	Balancing screws
6	90ZQ01
8	90ZQ01
10	90ZQ01
12	90ZQ01
16	90ZQ01
20-32	90ZQ01

Please check availability in current price and stock-list.

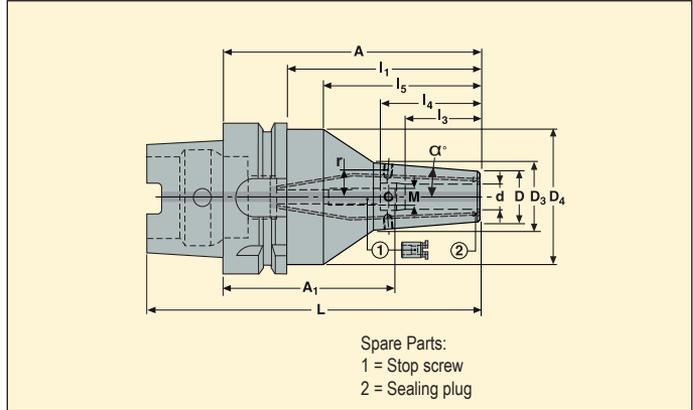
For HSK sealing plugs, coolant tubes and tube spanners, see page(s) 357.

EPB 5600 – Shrinkfit holders, reinforced – Metric

HSK-A/ ISO 12164-1-A



- Run-out .0001" (2.5 µm) maximum at 3xd
- Reinforced design with wider front and tapered body
- With coolant supply channels towards the tool (plugged)



Taper	d mm	EDP No.	Part No.	Dimensions in inch											M mm	α°	r inch	Balancing	
				A	D	D ₃	D ₄	L	I ₁	I ₃	I ₄	I ₅	A ₁ min-max						
HSK -A100	6	77053	E9306560006160	6.30	0.94	1.27	3.44	8.27	5.16	0.87	1.48	4.53	4.88-5.28	M5	4.5	0.47	1	9.8	
	8	77054	E9306560008160	6.30	0.94	1.27	3.44	8.27	5.16	1.02	1.48	4.53	4.88-5.28	M6	4.5	0.47	1	9.8	
	10	77045	E930656001090	3.54	1.06	1.44	–	5.51	2.40	1.22	1.67	–	1.93-2.32	M8x1	4.5	0.53	1	5.2	
	10	77056	E9306560010160	6.30	1.06	1.39	3.44	8.27	5.16	1.22	1.67	4.53	4.69-5.08	M8x1	4.5	0.53	1	10.0	
	10	77061	E9306560010200	7.87	1.06	1.39	3.44	9.84	6.73	1.22	1.67	6.10	6.26-6.65	M8x1	4.5	0.53	1	12.1	
	12	77046	E930656001295	3.74	1.06	1.47	–	5.71	2.60	1.34	1.87	–	1.93-2.32	M10x1	4.5	0.53	1	5.3	
	12	77055	E9306560012160	6.30	1.06	1.39	3.44	8.27	5.16	1.34	1.87	4.53	4.49-4.88	M10x1	4.5	0.53	1	9.9	
	12	77062	E9306560012200	7.87	1.06	1.39	3.44	9.84	6.73	1.34	1.87	6.10	6.06-6.46	M10x1	4.5	0.53	1	12.1	
	16	77047	E9306560016100	3.94	1.30	1.74	–	5.91	2.80	1.54	1.99	–	2.01-2.40	M12x1	4.5	0.67	1	5.6	
	16	77057	E9306560016160	6.30	1.30	1.66	3.44	8.27	5.16	1.54	1.99	4.53	4.37-4.76	M12x1	4.5	0.67	1	10.3	
	16	77063	E9306560016200	7.87	1.30	1.66	3.44	9.84	6.73	1.54	1.99	6.10	5.94-6.34	M12x1	4.5	0.67	1	12.6	
	20	77048	E9306560020105	4.13	1.73	2.20	–	6.10	2.99	1.61	2.07	–	2.13-2.52	M16x1	4.5	0.85	1	6.6	
	20	77058	E9306560020160	6.30	1.73	2.09	3.44	8.27	5.16	1.61	2.07	4.53	4.29-4.69	M16x1	4.5	0.85	1	11.3	
	20	77064	E9306560020200	7.87	1.73	2.09	3.44	9.84	6.73	1.61	2.07	6.10	5.87-6.26	M16x1	4.5	0.85	1	13.9	
	25	77051	E9306560025115	4.53	1.89	2.33	3.44	6.50	3.39	1.85	2.30	2.76	2.28-2.68	M16x1	4.5	0.98	1	8.7	
	25	77059	E9306560025160	6.30	1.89	2.33	3.44	8.27	6.34	1.85	2.30	4.53	4.06-4.45	M16x1	4.5	0.98	1	11.8	
	25	77065	E9306560025200	7.87	1.89	2.33	3.44	9.84	6.73	1.85	2.30	6.10	5.63-6.02	M16x1	4.5	0.98	1	14.7	
	32	77052	E9306560032115	4.53	1.89	2.33	3.44	6.50	3.39	2.01	2.46	2.76	2.13-2.52	M16x1	4.5	0.98	1	8.3	
32	77060	E9306560032160	6.30	1.89	2.33	3.44	8.27	5.16	2.01	2.46	4.53	3.90-4.29	M16x1	4.5	0.98	1	11.5		

Spare Parts

For d	Sealing plugs	Stop screw
6	90AI03	19BDR05165
8	90AI03	19BDR06165
10	90AI03	19BDR08165
12	90AI03	19BDR10165
16	90AI03	19BDR12165
20-32	90AI04	19BDR16165

Accessories

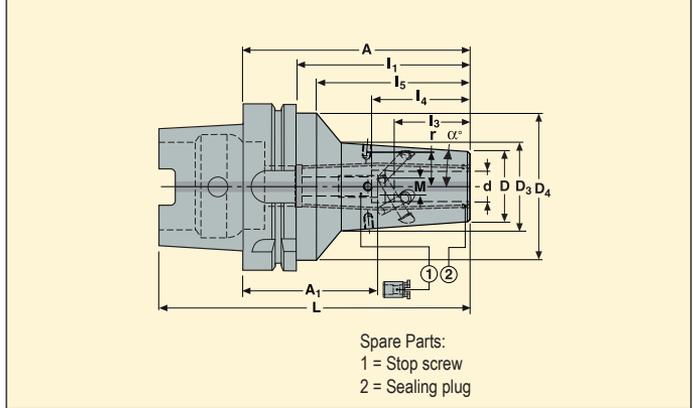
For d	Balancing screws
6	90ZQ01
8	90ZQ01
10	90ZQ01
12	90ZQ01
16	90ZQ01
20-32	90ZQ01

Please check availability in current price and stock-list.

For HSK sealing plugs, coolant tubes and tube spanners, see page(s) 357.



- Run-out .0001" (2.5 µm) maximum at 3xd
- With Safe-Lock tool pull-out protection system
- Reinforced design of EPB 5600
- With coolant supply channels towards the tool (plugged)



Taper	d inch	EDP No.	Part No.	Dimensions in inch										M mm	α°	r inch	Balancing	lbs
				A	D	D ₃	D ₄	L	I ₁	I ₃	I ₄	I ₅	A ₁ min-max					
HSK-A63	0.500	84438	E93045600050275P	2.75	1.06	1.33	-	3.98	1.73	1.34	1.81	-	-	-	4.5	0.53	1	1.9
	0.625	84439	E93045600062300P	3.00	1.30	1.61	-	4.21	1.93	1.54	1.99	-	1.02-1.42	-	4.5	0.67	1	2.2
	0.750	84441	E93045600075300P	3.00	1.73	2.04	-	4.18	5.28	1.61	1.99	-	1.02-1.42	-	4.5	0.89	1	2.6
HSK-A100	0.750	84486	E93065600075412P	4.12	1.73	2.20	-	6.09	2.98	1.61	2.07	-	2.12-2.43	16	4.5	0.89	1	6.6
	1.000	84488	E93065600100450P	4.50	1.89	2.25	3.44	6.47	3.36	1.85	2.30	2.73	2.26-2.57	16	4.5	0.98	1	8.4
	1.250	84569	E93065600125450P	4.50	1.89	2.25	3.44	6.47	3.36	2.01	2.46	2.73	2.10-2.49	16	4.5	0.98	1	7.9

Spare Parts

For d	Sealing plugs	Stop screw
0.500-0.625	90AI03	**
0.750	90AI04	19BDR16165
1.000-1.250	90AI04	19BDR16165

Accessories

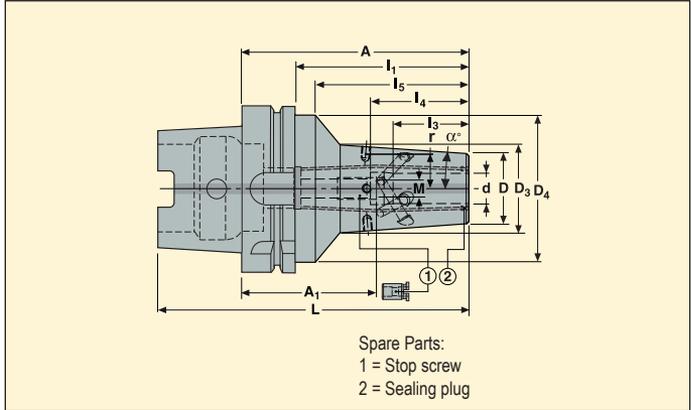
For d	Balancing screws
0.500-0.625	90ZQ01
0.750	90ZQ01
1.000-1.250	90ZQ01

Please check availability in current price and stock-list.

** Stop screw not removable/replaceable by the user, please request a repair process.



- Run-out .0001" (2.5 µm) maximum at 3rd
- With Safe-Lock tool pull-out protection system
- Reinforced design of EPB 5600
- With coolant supply channels towards the tool (plugged)



Taper	d mm	EDP No.	Part No.	Dimensions in inch											M mm	α°	**	***	r inch	Balancing	
				A	D	D ₃	D ₄	L	I ₁	I ₃	I ₄	I ₅	A ₁ min-max								
HSK -A63	12	84216	E930456001270P	2.76	1.06	1.33	-	4.02	1.73	1.34	1.81	-	-	-	4.5	**			0.53	1	1.9
	16	84217	E930456001675P	2.95	1.30	1.61	-	4.21	1.93	1.54	1.99	-	-	-	4.5	**			0.67	1	2.2
	20	84218	E930456002075P	2.95	1.73	2.04	-	4.21	1.93	1.61	1.99	-	-	-	4.5	**			0.85	1	2.6
	25	84219	E930456002585P	3.35	1.89	2.22	-	4.61	2.32	1.85	2.30	-	-	-	4.5	**	***		-	1	3.1
HSK -A100	16	84221	E9306560016100P	3.94	1.30	1.74	-	5.91	2.80	1.54	1.99	-	2.01-2.32	M12x1	4.5				0.67	1	5.7
	20	84222	E9306560020105P	4.13	1.73	2.20	-	6.10	2.99	1.61	2.07	-	2.13-2.44	M16x1	4.5				0.85	1	6.8
	25	84223	E9306560025115P	4.53	1.89	2.25	3.44	6.50	3.39	1.85	2.30	2.76	2.28-2.60	M16x1	4.5				0.98	1	8.6
	32	84224	E9306560032115P	4.53	1.89	2.25	3.44	6.50	3.39	2.01	2.46	2.76	2.13-2.52	M16x1	4.5				0.98	1	8.2

** Holder without thread for a stop screw nor a stop screw

*** Holder without threaded holes for balancing screws

Spare Parts

For d	Sealing plugs	Stop screw
12-16	90AI03	****
20-32	90AI04	19BDR16165

Accessories

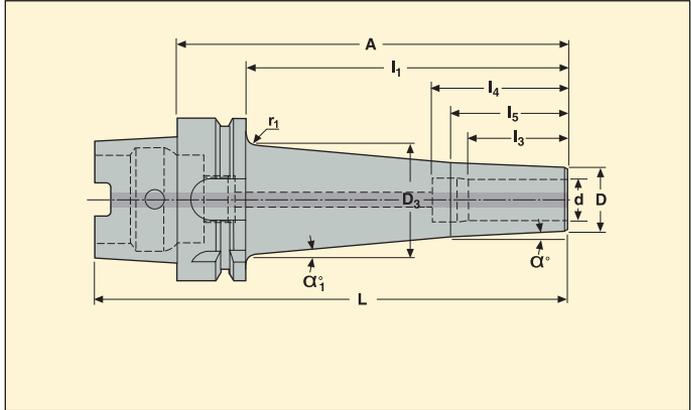
For d	Balancing screws
12-16	90ZQ01
20-32	90ZQ01

Please check availability in current price and stock-list.

**** For \varnothing 12 and 16 mm, stop screw not removable/replaceable by the user, please request a repair process



• Run-out .0001" (2.5 µm) maximum at 3xd



Taper	d mm	EDP No.	Part No.	Dimensions in inch									α°	α_1°	r_1 inch	Balancing	lbs
				A	D	D_3	L	I_1	I_3	I_4	I_5						
HSK -A40	3	05708	E930258010370	2.756	0.354	0.630	3.543	1.969	0.512	–	0.984	3	5	0.276	1	0.5	
	3	05731	E9302580103100	3.937	0.354	0.866	4.724	3.150	0.512	–	0.984	3	5	0.236	1	0.6	
	4	05709	E930258010470	2.756	0.394	0.669	3.543	1.969	0.591	–	0.984	3	5	0.276	1	0.5	
	6	05711	E930258010670	2.756	0.472	0.728	3.543	1.969	1.024	1.575	1.260	3	5	0.276	1	0.6	
HSK -A63	3	05854	E9304580103100	3.937	0.354	0.827	5.197	2.913	0.512	–	0.984	3	5	0.276	1	1.6	
	3	05855	E9304580103140	5.512	0.354	1.102	6.772	4.488	0.512	–	0.984	3	5	0.276	1	1.9	
	4	05860	E9304580104100	3.937	0.394	0.866	5.197	2.913	0.591	–	0.984	3	5	0.276	1	1.6	
	4	05873	E9304580104140	5.512	0.394	1.142	6.772	4.488	0.591	–	0.984	3	5	0.276	1	1.9	
	5	05880	E9304580105100	3.937	0.433	0.906	5.197	2.913	0.709	–	0.984	3	5	0.276	1	1.6	
	5	05887	E9304580105140	5.512	0.433	1.181	6.772	4.488	0.709	–	0.984	3	5	0.276	1	2.0	
	6	05893	E9304580106100	3.937	0.472	0.906	5.197	2.913	1.024	1.575	1.260	3	5	0.276	1	1.6	
	6	05899	E9304580106140	5.512	0.472	1.181	6.772	4.488	1.024	1.575	1.260	3	5	0.276	1	2.0	
	8	05910	E9304580108100	3.937	0.630	1.063	5.197	2.913	1.181	1.732	1.417	3	5	0.276	1	1.8	
	8	05921	E9304580108140	5.512	0.630	1.339	6.772	4.488	1.181	1.732	1.417	3	5	0.276	1	2.4	
	10	04681	E9304580110120	4.724	0.709	1.260	5.984	3.701	1.260	1.772	1.496	3	5	0.276	1	2.1	
	10	05945	E9304580110160	6.299	0.709	1.535	7.559	5.276	1.260	1.772	1.496	3	5	0.276	1	2.8	
12	04682	E9304580112130	5.118	0.787	1.417	6.378	4.094	1.339	1.811	1.575	3	5	0.276	1	2.3		
12	05955	E9304580112170	6.693	0.787	1.693	7.953	5.669	1.339	1.811	1.575	3	5	0.197	1	3.1		
14	06001	E9304580114180	7.087	0.866	1.850	4.409	6.063	1.339	1.890	1.575	3	5	0.118	1	3.6		
16	06134	E9304580116150	5.906	0.945	1.693	7.165	4.882	1.496	2.047	1.772	3	5	0.197	1	3.0		
HSK -A100	6	05848	E9306580106160	6.299	0.472	1.299	8.268	5.157	1.024	1.575	1.260	3	5	0.276	1	5.0	
	8	05849	E9306580108160	6.299	0.630	1.457	8.268	5.157	1.181	1.732	1.417	3	5	0.276	1	5.3	
	10	05850	E9306580110180	7.087	0.709	1.654	9.055	5.945	1.260	1.772	1.496	3	5	0.276	1	5.9	
	12	05851	E9306580112180	7.087	0.787	1.732	9.055	5.945	1.339	1.811	1.575	3	5	0.177	1	6.1	
	14	05852	E9306580114180	7.087	0.866	1.811	9.055	5.945	1.339	1.890	1.575	3	5	0.276	1	6.3	
	16	05853	E9306580116200	7.874	0.945	2.008	9.843	6.732	1.496	2.047	1.772	3	5	0.276	1	7.1	

Please check availability in current price and stock-list.

For Shrinkfit extensions, see page(s) 362-363.

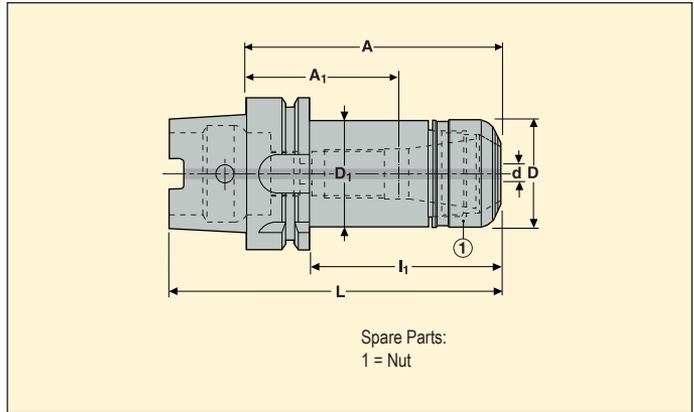
For HSK sealing plugs, coolant tubes and tube spanners, see page(s) 357.

EPB 5672 – High precision collet chucks

HSK-A/ ISO 12162-1-A



- Run-out .0001" (2.5 µm) maximum at 3xd
- High transmittable torque
- High RPM suitable



Taper	Capacity d inch	EDP No.	Part No.	Chuck & Collet Size	Dimensions in inch						**	Balancing	
					A	D	D ₁	L	I ₁	A ₁ min-max*			
HSK-A40	0.039-0.276	84769	E930256721150	HP 11	1.969	0.630	0.630	2.756	1.181	0.787-1.260	**	1	0.7
	0.039-0.394	09239	E930256721660	HP 16	2.362	1.181	1.181	3.150	1.575	0.787-1.299	**	1	0.8
HSK-A63	0.039-0.276	84770	E9304567211100	HP 11	3.937	0.630	0.630	5.197	2.913	2.205-3.228		1	1.8
	0.039-0.394	09240	E930456721660	HP 16	2.362	1.181	1.181	3.622	1.339	1.102-1.299	**	1	1.7
	0.039-0.394	09241	E9304567216100	HP 16	3.937	1.181	1.181	5.197	2.913	2.205-2.874		1	2.1
	0.039-0.394	09243	E9304567216130	HP 16	5.118	1.181	1.181	6.378	4.094	3.386-4.055		1	2.4
	0.039-0.394	09246	E9304567216160	HP 16	6.299	1.181	1.181	7.559	5.276	4.567-5.236		1	2.8
	0.079-0.630	09247	E9304567225100	HP 25	3.937	1.575	1.575	5.197	2.913	1.929-2.598		1	2.6
	0.079-0.630	09248	E9304567225130	HP 25	5.118	1.575	1.575	6.378	4.094	2.598-3.780		1	3.1
	0.079-0.630	09250	E9304567225160	HP 25	6.299	1.575	1.575	7.559	5.276	3.780-4.961		1	3.7
	0.079-0.787	09251	E9304567232100	HP 32	3.937	1.969	1.969	5.197	2.913	2.047-2.362		1	3.1
	0.079-0.787	09256	E9304567232130	HP 32	5.118	1.969	1.969	6.378	4.094	2.638-3.543		1	4.1
HSK-A100	0.079-0.787	09257	E9304567232160	HP 32	6.299	1.969	1.969	7.559	5.276	3.819-4.724		1	5.0
	0.079-0.630	09259	E9306567225160	HP 25	6.299	1.575	1.575	8.268	5.157	3.780-4.961		1	6.6
	0.079-0.787	09261	E9306567232100	HP 32	3.937	1.969	1.969	5.906	2.795	2.165-2.362		1	6.0
	0.079-0.787	09262	E9306567232160	HP 32	6.299	1.969	1.969	8.268	5.157	3.819-4.724		1	7.8

For ER HP collets type 5672, see page(s) 371-376.

* A1 setting length onto stop screw when possible, or total available setting length for chucks without thread for stop screw, ** Chuck without thread for stop screw

Spare Parts

For size	Nut
HP 11	08B567211
HP 16	08B567216
HP 25	08B567225
HP 32	08B567232

Accessories***

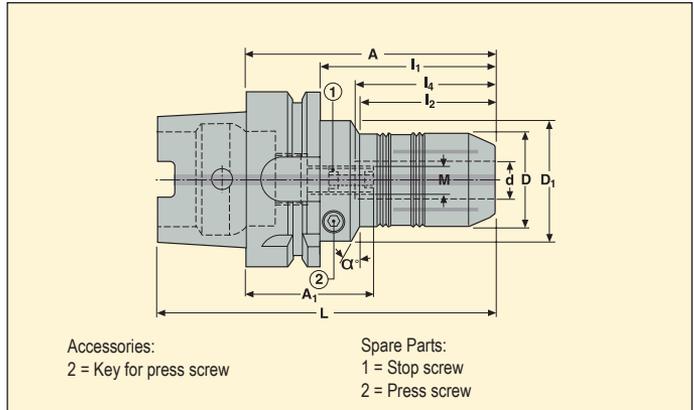
For size	Socket	Spanner	Stop screw	Torque key
HP 11	03EF567211	03B567211	19B5870812	03DYD010100
HP 16	03EF567216	03B567216	19B58711	03DYD010100
HP 25	03EF567225	03B567225	19B58718	03DYD020200
HP 32	03EF567232	03B567232	19B58722	03DYD020200

Please check availability in current price and stock-list.

*** When using a stop screw, its tapered contact onto the tool shank can increase the tool run-out defect. For tightening torque, see page 38.



• Run-out .00015" (4 μm) maximum at 3xd



Taper	d mm	EDP No.	Part No.	Dimensions in inch									M mm	*	α°	Balancing	lbs
				A	D	D ₁	L	l ₁	l ₂	l ₄	A ₁ min-max						
HSK-A63	6	30294	E930458340670	2.756	1.024	1.969	4.016	1.732	0.906	1.496	1.26-1.65	M5	*	30	1	2.1	
	8	30295	E930458340870	2.756	1.102	1.969	4.016	1.732	0.945	1.496	1.26-1.65	M5	*	30	1	2.1	
	10	30296	E930458341080	3.150	1.181	1.969	4.409	2.126	1.339	1.654	1.50-1.89	M8	*	30	1	2.3	
	12	30297	E930458341285	3.346	1.260	1.969	4.606	2.323	1.575	1.850	1.50-1.89	M10		30	1	2.4	
	14	30298	E930458341485	3.346	1.339	1.969	4.606	2.323	1.575	1.850	1.50-1.89	M10	*	30	1	2.4	
	16	30299	E930458341690	3.543	1.496	1.969	4.803	2.520	1.811	1.969	1.57-1.97	M10	*	30	1	2.6	
	18	30300	E930458341890	3.543	1.575	1.969	4.803	2.520	1.890	1.969	1.57-1.97	M10	*	30	1	2.6	
	20	30301	E930458342090	3.543	1.654	1.969	4.803	2.520	1.850	2.047	1.50-1.89	M10	*	30	1	2.7	
HSK-A100	25	30303	E9304583425120	4.724	2.283	2.087	5.984	3.701	3.071	2.283	2.44-2.83	M10	*	60	1	4.8	
	32	30304	E9304583432125	4.921	2.520	2.087	6.181	-	-	2.480	2.52-2.91	M10	*	90	1	5.4	
	12	39126	E930658341295	3.740	1.260	1.969	5.709	2.598	1.575	1.850	1.89-2.28	M10	*	30	1	5.5	
	16	39812	E930658341695	3.740	1.496	1.969	5.709	2.598	1.811	1.969	1.77-2.17	M10	*	30	1	5.6	
	20	34276	E9306583420105	4.134	1.654	1.969	6.102	2.992	1.850	2.047	2.09-2.48	M10	*	30	1	6.2	
	25	39813	E9306583425110	4.331	2.283	2.756	6.299	3.189	1.969	2.283	2.05-2.44	M10	*	30	1	7.9	
32	34277	E9306583432110	4.331	2.520	2.756	6.299	3.189	2.362	2.480	1.85-2.24	M10	*	30	1	7.9		

For reduction sleeves, see page(s) 364-366. For control gauges, see page(s) 367.

* Conform to DIN 69882-7.

Spare Parts

For Taper/d	Press screw	Stop screw
A63/6-8	950AF0810008	19LS0512A
A63/10	950AF0810008	19LS0820T
A63/12	950AF0810008	19LS1016A
A63/14-20	950AF1010010	19LS1016A
A63/25-32	950AF1010010	19LS1020A
A100/12	950AF0810008	19LS1020A
A100/16-32	950AF1010010	19LS1020A

Accessories

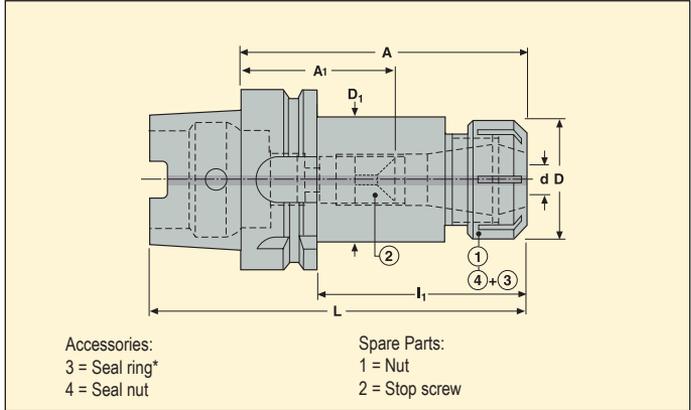
For Taper/d	Locking key
A63/6-8	H04-4
A63/10	H04-4
A63/12	H04-4
A63/14-20	H04-4
A63/25-32	H04-4
A100/12	H04-4
A100/16-32	H04-4

Please check availability in current price and stock-list.

For HSK sealing plugs, coolant tubes and tube spanners, see page(s) 357.



• Run-out .0004" (10 µm) maximum at 3xd



Taper	Capacity d inch	EDP No.	Part No.	Chuck & Collet Size	Dimensions in inch						*	Balancing	lbs
					A	D	D ₁	L	I ₁	A ₁ min-max			
HSK -A32	0.020-0.394	66053	E930156751660	ER 16	2.362	1.260	1.260	2.992	1.575	0.945-1.181		1	0.5
HSK -A40	0.020-0.394	66054	E930256751660	ER 16	2.362	1.260	1.260	3.150	1.575	1.024-1.181		1	0.8
	0.039-0.630	66055	E930256752570	ER 25	2.756	1.654	1.339	3.543	1.969	–		1	1.0
HSK -A63	0.020-0.394	66056	E9304567516100	ER 16	3.937	1.260	1.260	5.197	2.913	2.047-2.677		1	2.2
	0.020-0.394	66057	E9304567516160	ER 16	6.299	1.260	1.260	7.559	5.276	4.409-5.039	*	1	3.0
	0.039-0.630	66058	E9304567525100	ER 25	3.937	1.654	1.654	5.197	2.913	1.732-2.441	*	1	2.7
	0.039-0.630	66059	E9304567525160	ER 25	6.299	1.654	1.654	7.559	5.276	3.583-4.803		1	4.0
	0.079-0.787	66060	E9304567532100	ER 32	3.937	1.969	1.969	5.197	2.913	1.772-2.362	*	1	3.1
	0.079-0.787	66061	E9304567532160	ER 32	6.299	1.969	1.969	7.559	5.276	3.622-4.724		1	5.0
	0.118-1.024	66062	E9304567540120	ER 40	4.724	2.480	2.087	5.984	3.701	2.087-2.953	*	1	4.0
HSK -A100	0.039-0.630	66063	E9306567525100	ER 25	3.937	1.654	1.654	5.906	2.795	2.047-2.441		1	5.6
	0.039-0.630	66064	E9306567525160	ER 25	6.299	1.654	1.654	8.268	5.157	3.583-4.803		1	6.9
	0.079-0.787	66065	E9306567532100	ER 32	3.937	1.969	1.969	5.906	2.795	2.087-2.362	*	1	6.0
	0.079-0.787	66066	E9306567532160	ER 32	6.299	1.969	1.969	8.268	5.157	3.622-4.724		1	7.9
	0.118-1.024	66069	E9306567540120	ER 40	4.724	2.480	2.480	6.693	3.583	2.283-2.953	*	1	7.8

For ER collets, see page(s) 378-381, ER extensions, see page(s) 377.

* Conform to DIN 69882-6

Spare Parts

For size	Nut	Stop screw
ER 16	08B587516X	19B58711
ER 25	08B587525X	19B58718
ER 32	08B587532X	19B58722
ER 40	08B587540X	19B58730

Accessories**

For size	Seal nut	Seal ring	Spanner
ER 16	08B587516IC	01B58751605	03B587516
ER 25	08B587525IC	01B58752506	03B587525
ER 32	08B587532IC	01B58753206	03B587532
ER 40	08B587540IC	01B58754006	03B587540

Please check availability in current price and stock-list.

** For ER sealing rings, see page(s) 382.

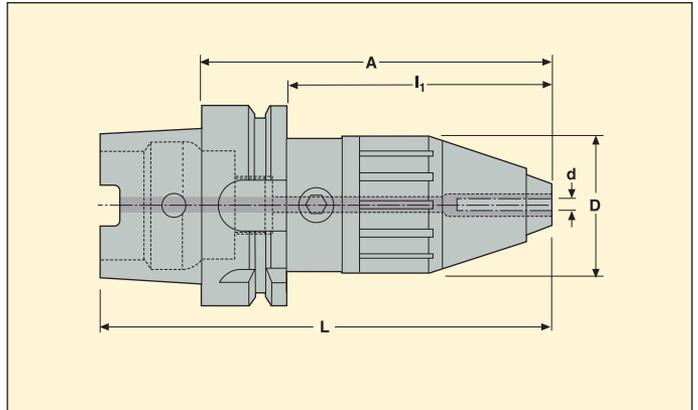
For HSK sealing plugs, coolant tubes and tube spanners, see page(s) 357.

EPB 5085 – Universal drill chucks – Metric

HSK-A/ ISO 12164-1-A



- Run-out .00015" (4 μm) maximum at 2.5xd



Taper	Capacity d inch	EDP No.	Part No.	Dimensions in inch				Balancing	lbs
				A	D	L	I ₁		
HSK-A63	0.039-0.512	06418	E9304508513	4.331	1.693	5.591	3.307	2	4.4
	0.098-0.630	06420	E9306508516	5.276	2.205	7.244	4.134	2	7.2
HSK-A100									

Accessories

For Capacity d	Key
0.039-0.512	H06-4
0.098-0.630	H06-4

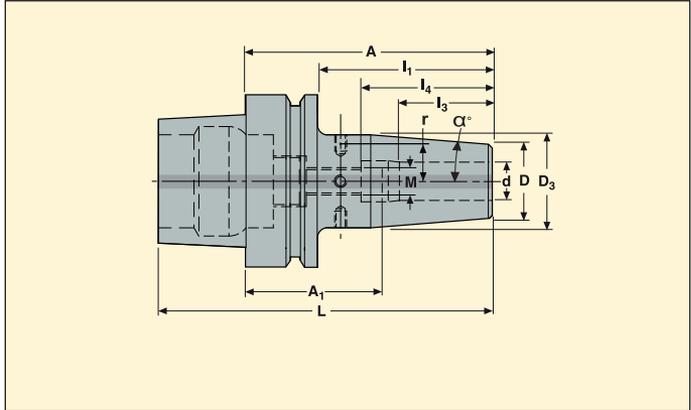
Please check availability in current price and stock-list.
 For HSK sealing plugs, coolant tubes and tube spanners, see page(s) 357.

EPB 5603 – Shrinkfit holders, DIN type – Metric



- Run-out .0001" (2.5 µm) maximum at 3rd
- Delivered with one stop screw

HSK-E (with thread for coolant tube*)



Taper	d mm	EDP No.	Part No.	Dimensions in inch										M mm	α°	r inch	**	Balancing	
				A	D	D ₃	L	I ₁	I ₂	I ₃	I ₄	A ₁ min-max							
HSK-E40	3	66335	E934256030350	1.97	0.59	–	2.76	1.18	0.51	–	–	–	–	–	4.5	–	**	1	0.7
	4	66336	E934256030450	1.97	0.59	–	2.76	1.18	0.59	–	–	–	–	–	4.5	–	**	1	0.7
	6	66337	E934256030650	1.97	0.83	–	2.76	1.18	0.87	1.22	–	–	–	–	4.5	–	**	1	0.7
	6	66338	E934256030670	2.76	0.83	1.06	3.54	1.97	0.87	1.48	1.34-1.73	M5	4.5	0.41	–	**	1	0.9	
	8	66339	E934256030850	1.97	0.83	–	2.76	1.18	1.02	1.22	–	–	–	–	4.5	–	**	1	0.7
	8	66340	E934256030870	2.76	0.83	1.06	3.54	1.97	1.02	1.48	1.34-1.73	M6	4.5	0.41	–	**	1	0.8	
	10	66341	E934256031055	2.17	0.94	–	2.95	1.38	1.22	1.42	–	–	–	–	4.5	–	**	1	0.9
	12	66343	E934256031260	2.36	0.94	–	3.15	1.57	1.34	1.61	–	–	–	–	4.5	–	**	1	0.9
	16	66345	E934256031665	2.56	1.06	–	3.35	1.77	1.54	1.81	–	–	–	–	4.5	–	**	1	0.9

** Extra-short holder, without thread for a stop screw or threaded holes for balancing screws.
For Shrinkfit extensions, see page(s) 362-363.

Spare Parts

For d	Stop screw
...30670	19BDR05165
...30870	19BDR06165

Accessories

For d	Balancing screws
...30670	90ZQ01
...30870	90ZQ01

Please check availability in current price and stock-list.

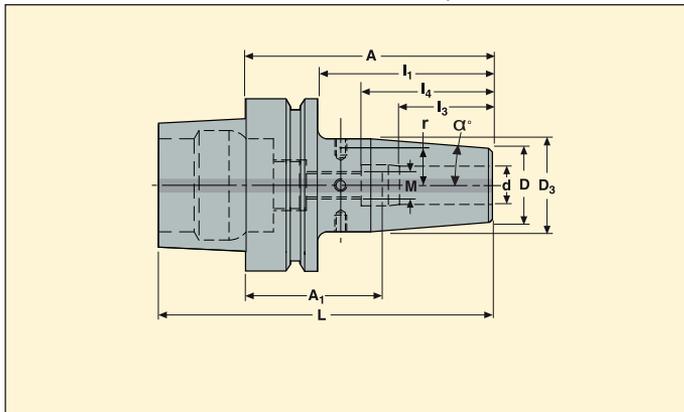
* For HSK sealing plugs, coolant tubes and tube spanners, see page(s) 357.

EPB 5603 – Shrinkfit holders, DIN type – Metric



- Run-out .0001" (2.5 µm) maximum at 3xd
- Delivered with one stop screw

HSK-E (with thread for coolant tube*)



Taper	d mm	EDP No.	Part No.	Dimensions in inch										M mm	α°	r inch	**	Balancing	lbs
				A	D	D ₃	L	I ₁	I ₂	I ₃	I ₄	A ₁ min-max							
HSK-E50	3	66349	E934356030355	2.17	0.59	–	3.15	1.14	0.51	–	–	–	–	4.5	–	**	1	1.1	
	4	66351	E934356030455	2.17	0.59	–	3.15	1.14	0.59	–	–	–	–	4.5	–	**	1	1.0	
	6	66352	E934356030655	2.17	0.83	–	3.15	1.14	0.87	1.26	–	–	–	4.5	–	**	1	1.1	
	8	66354	E934356030855	2.17	0.83	–	3.15	1.14	1.02	1.26	–	–	–	4.5	–	**	1	1.1	
	10	66356	E934356031060	2.36	0.94	–	3.35	1.34	1.22	1.46	–	–	–	4.5	–	**	1	1.3	
	12	66358	E934356031265	2.56	0.94	–	3.54	1.54	1.34	1.65	–	–	–	4.5	–	**	1	1.3	
	12	66359	E934356031290	3.54	0.94	1.26	4.53	2.52	1.34	1.87	1.73-2.13	M10x1	4.5	0.51	–	1	1.5		
	16	66360	E934356031670	2.76	1.06	–	3.74	1.73	1.54	1.85	–	–	–	4.5	–	**	1	1.3	

** Extra-short holder, without thread for a stop screw or threaded holes for balancing screws.
For Shrinkfit extensions, see page(s) 362-363.

Spare Parts

For	Stop screw
E934356031290	19BDR10165

Accessories

For	Balancing screws
E934356031290	90ZQ01

Please check availability in current price and stock-list.

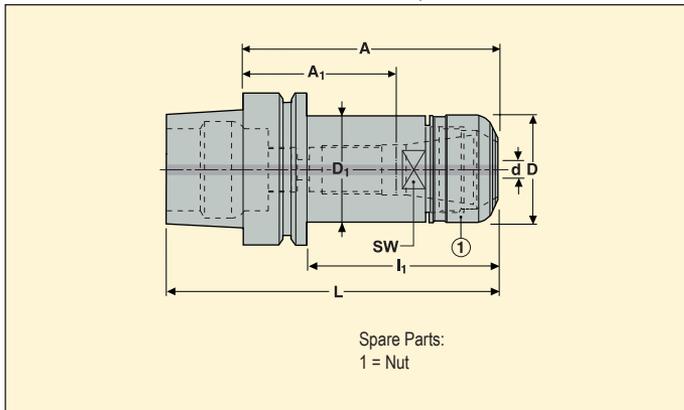
* For HSK sealing plugs, coolant tubes and tube spanners, see page(s) 357.

EPB 5672 – High precision collet chucks

HSK-E (with thread for coolant tube****)



- Run-out .0001" (2.5 µm) maximum at 3xd
- High transmittable torque
- High RPM suitable



Taper	Capacity d inch	EDP No.	Part No.	Chuck & Collet Size	Dimensions in inch							SW***	**	Balancing	lbs
					A	D	D ₁	L	I ₁	A ₁ min-max*					
HSK-E25	0.039-0.276	84771	E934056721150	HP 11	1.97	0.63	0.63	2.48	1.57	0.59-1.26	0.51	**	1	0.2	
	0.039-0.394	09263	E934056721655R	HP 16R	2.17	0.94	0.94	2.68	1.77	0.83-1.10	0.83	**	1	0.3	
HSK-E32	0.039-0.276	84772	E934156721150	HP 11	1.97	0.63	0.63	2.60	1.18	0.71-1.26	0.51	**	1	0.4	
	0.039-0.394	09266	E934156721660R	HP 16R	2.36	0.94	0.94	2.99	1.57	0.98-1.30	0.83	**	1	0.5	
HSK-E40	0.039-0.276	84773	E934256721150	HP 11	1.97	0.63	0.63	2.76	1.18	0.79-1.26	0.51	**	1	0.7	
	0.039-0.394	09267	E934256721660	HP 16	2.36	1.18	1.18	3.15	1.57	1.14-1.30	1.06	**	1	0.8	
	0.039-0.394	09268	E9342567216120	HP 16	4.72	1.18	1.18	5.51	3.94	2.68-3.66	1.06	**	1	1.5	
	0.079-0.630	09269	E934256722570	HP 25	2.76	1.57	1.57	3.54	-	0.83-1.42	1.42	**	1	1.0	
HSK-E50	0.039-0.394	09272	E934356721660	HP 16	2.36	1.18	1.18	3.35	1.34	0.94-1.30	1.06	**	1	1.2	
	0.039-0.394	09270	E9343567216120	HP 16	4.72	1.18	1.18	5.71	3.70	2.95-3.66	1.06	**	1	1.8	
	0.079-0.630	09273	E934356722570	HP 25	2.76	1.57	1.57	3.74	1.73	0.98-1.42	1.42	**	1	1.5	

For ER HP collets type 5672, see page(s) 371-376. Chuck size **HP 16R** use the collet size ER HP 16. * A₁ when using a stop screw.

** Chuck without thread for stop screw. *** Flats for preventing the chuck from rotation during collet nut tightening, as HSK-E tapers are without driving slots.

Spare Parts

For size	Nut
HP 11	08B567211
HP 16	08B567216
HP 16R	08B567216R
HP 25	08B567225

Accessories****

For size	Socket	Spanner	Stop screw	Torque key
HP 11	03EF567211	03B567211	19B5870812	03DYD010100
HP 16	03EF567216	03B567216	19B58711	03DYD010100
HP 16R	03EF567216R	03B567216R	19B58711	03DYD010100
HP 25	03EF567225	03B567225	19B58718	03DYD020200

Please check availability in current price and stock-list.

**** When using a stop screw, its tapered contact onto the tool shank can increase the tool run-out defect. For tightening torque, see page 38.

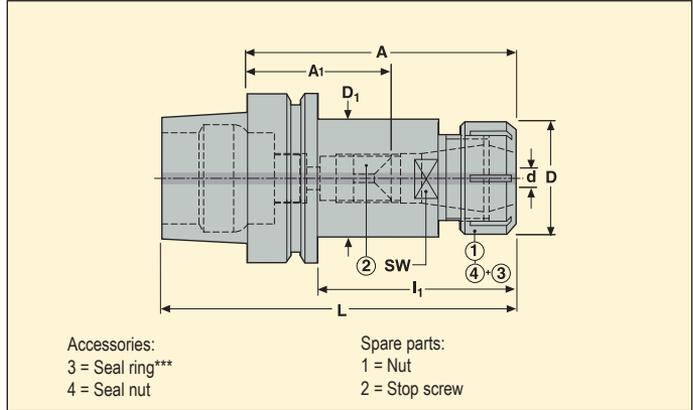
***** For HSK sealing plugs, coolant tubes and tube spanners, see page(s) 357.

EPB 5675 – ER collet chucks – ISO 15488

HSK-E (with thread for coolant tube*)



- Run-out .0004" (10 µm) maximum at 3xd



Taper	Capacity d inch	EDP No.	Part No.	Chuck & Collet Size	Dimensions in inch							Balancing	lbs
					A	D	D ₁	L	I ₁	A ₁ min-max	SW**		
HSK-E32	0.020-0.394	66070	E934156751660	ER 16	2.362	1.260	1.024	2.992	1.575	0.945-1.181	0.866	1	0.6
	0.020-0.394	66071	E934256751660	ER 16	2.362	1.260	1.260	3.150	1.575	1.024-1.181	1.063	1	0.8
HSK-E40	0.039-0.630	66072	E934256752570	ER 25	2.756	1.654	1.339	3.543	1.969	–	1.181	1	1.0
	0.020-0.394	66073	E9343567516100	ER 16	3.937	1.260	1.260	4.921	2.913	2.087-2.677	0.827	1	1.7
HSK-E50	0.039-0.630	66075	E9343567525100	ER 25	3.937	1.654	1.654	4.921	2.913	1.732-2.441	1.496	1	2.1
	0.079-0.787	66084	E9343567532100	ER 32	3.937	1.969	1.654	4.921	2.913	1.772-2.362	1.496	1	2.2

For ER collets, see page(s) 378-381, ER extensions, see page(s) 377.

** Flats for preventing the chuck from rotation during collet nut tightening, as HSK-E tapers are without driving slots.

Spare Parts

For size	Nut	Stop screw
ER 16	08B587516X	19B58711
ER 25	08B587525X	19B58718
ER 32	08B587532X	19B58722

Accessories***

For size	Seal nut	Seal ring	Spanner
ER 16	08B587516IC	01B58751606	03B587516
ER 25	08B587525IC	01B58752506	03B587525
ER 32	08B587532IC	01B58753206	03B587532

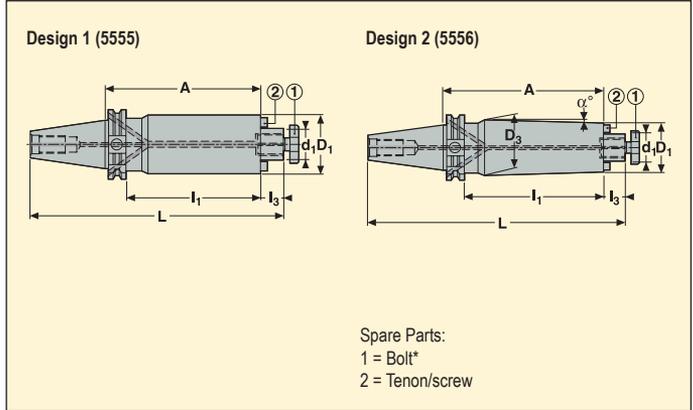
Please check availability in current price and stock-list.

* For HSK sealing plugs, coolant tubes and tube spanners, see page(s) 357.

*** For ER sealing rings, see page(s) 382.



- Run-out .0002" (5 µm) maximum
- With dynamic damping, ready to use
- With coolant supply channels through the pilot



Taper	d ₁ mm	EDP No.	Part No.	Dimensions in inch						Design	α°	Balancing	lbs
				A	D ₁	D ₃	L	I ₁	I ₃				
DIN40 ADB	16	57460	E3469555516160	6.299	1.496	–	9.661	5.551	0.669	1	–	2	4.7
	22	50969	E3469555522210	8.268	1.890	–	11.709	7.520	0.748	1	–	2	8.2
	22	50970	E3469555622260	10.236	1.890	2.488	13.677	9.488	0.748	2	1.9	2	12.3
DIN50 ADB	22	50972	E3471555522210	8.268	1.890	–	13.020	7.520	0.748	1	–	2	11.8
	22	50973	E3471555622260	10.236	1.890	2.598	14.988	9.488	0.748	2	2	2	16.6
	27	50974	E3471555527260	10.236	2.362	–	15.067	9.488	0.827	1	–	2	18.8
	27	50975	E3471555627320	12.598	2.362	3.130	17.429	11.850	0.827	2	1.7	2	27.0
	32	57461	E3471555532330	12.992	3.071	–	17.941	12.244	0.945	1	–	2	33.0
	40	66632	E3471555540350	13.780	3.504	–	18.728	13.031	1.063	1	–	2	45.0

d₁ 40, includes 4 threaded holes on the bearing face according to DIN 6357

Spare Parts*

For d ₁	Bolt	Screw	Tenon
16	5801608	950D0312	16C2080810A
22	5802210	950D0416	16C2101111
27	5802712	950D0516	16C2121214A
32	5803216	950D0516	16C2141421A
40	5804020	950D0616	16C2161621A

Accessories

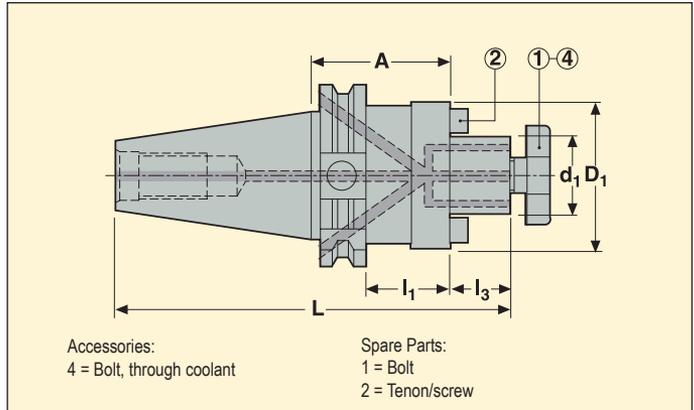
For d ₁	Bolt, through coolant	Spanner
16	5801608L	5811608
22	5802210L	5812210
27	5802712L	5812712
32	5803216L	5813216
40	5804020L	5814020

Please check availability in current price and stock-list.

* These center bolts are similar to the original delivered ones: check if lengths L are suitable for the milling cutters used, therefore see instructions in page(s) 28 or in the Operating instructions sheet delivered with the holders.



- Run-out .0002" (5 µm) maximum
- With coolant supply channels through the pilot



Taper	d ₁ mm	EDP No.	Part No.	Dimensions in inch					Balancing	lbs	
				A	D ₁	L	I ₁	I ₃			
DIN50 ADB	16	07006	E3471552516100	3.937	1.496	8.610	3.189	0.669	2	8.4	
	22	07003	E347155252235	1.378	1.890	6.130	0.630	0.748	2	6.6	
	22	07005	E3471552522100	3.937	1.890	8.689	3.189	0.748	2	10.5	
	22	07004	E3471552522160	6.299	1.890	11.051	5.551	0.748	2	11.4	
	27	07000	E347155252740	1.575	2.362	6.406	0.827	0.827	2	7.1	
	27	07002	E3471552527100	3.937	2.362	8.768	3.189	0.827	2	11.2	
	27	07001	E3471552527160	6.299	2.362	11.130	5.551	0.827	2	13.4	
	32	06997	E347155253250	1.969	3.071	6.917	1.220	0.945	2	8.8	
	32	06999	E3471552532100	3.937	3.071	8.886	3.189	0.945	2	14.1	
	32	06998	E3471552532160	6.299	3.071	11.248	5.551	0.945	2	18.5	
	40	06994	E347155254050	1.969	3.504	7.035	1.220	1.063	2	9.0	
	40	06996	E3471552540100	3.937	3.504	9.004	3.189	1.063	2	14.6	
	40	06995	E3471552540160	6.299	3.504	11.366	5.551	1.063	2	19.2	

d₁ 40, includes 4 threaded holes on the bearing face according to DIN 6357

Spare Parts

For d ₁	Bolt	Screw	Tenon
16	5801608	950D0312	16C10810164
22	5802210	950D0416	16C11012206
27	5802712	951D0512	16C11214243
32	5803216	951D0516	16C2141421
40	5804020	951D0616	16C2161621

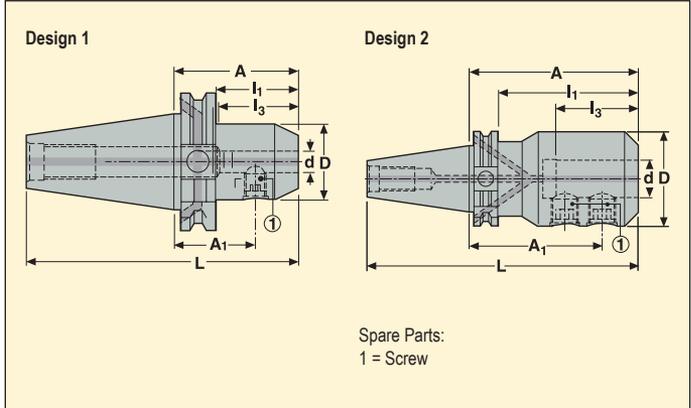
Accessories

For d ₁	Bolt, through coolant	Spanner
16	5801608L	5811608
22	5802210L	5812210
27	5802712L	5812712
32	5803216L	5813216
40	5804020L	5814020

Please check availability in current price and stock-list.



- Run-out .0002" (5 µm) maximum at 3xd
- Weldon d 16, 20, 25, 32 and 40 with ground face (Secco-Weldon compatible)

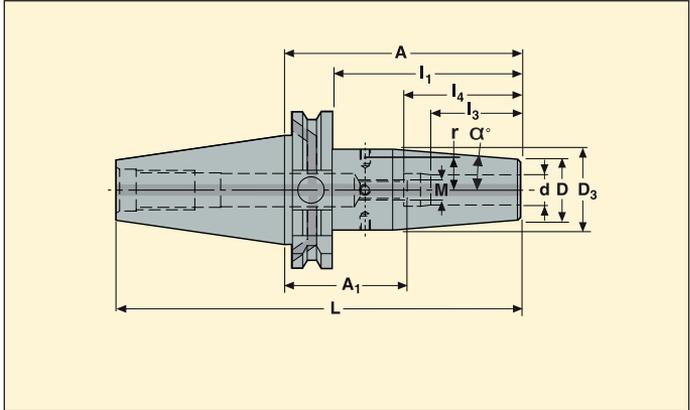


Taper	d mm	EDP No.	Part No.	Dimensions in inch						Design	Balancing	lbs
				A	D	L	I ₁	I ₃	A ₁			
DIN50 ADB	6	23132	E34715840663	2.480	0.984	6.484	1.732	1.063	1.791	1	2	5.8
	6	06993	E347158406120	4.724	0.984	8.728	3.976	1.063	4.035	1	2	6.2
	8	23133	E34715840863	2.480	1.102	6.484	1.732	1.181	1.791	1	2	5.9
	8	06991	E347158408120	4.724	1.102	8.728	3.976	1.181	4.035	1	2	6.4
	10	23134	E34715841063	2.480	1.378	6.484	1.732	1.417	1.713	1	2	6.0
	10	06989	E347158410120	4.724	1.378	8.728	3.976	1.417	3.957	1	2	6.6
	12	23135	E34715841263	2.480	1.654	6.484	1.732	1.693	1.614	1	2	6.3
	12	06986	E347158412120	4.724	1.654	8.728	4.724	1.693	3.858	1	2	7.3
	14	23136	E34715841463	2.480	1.732	6.484	1.732	1.693	1.614	1	2	6.7
	16	23137	E34715841663	2.480	1.890	6.484	1.732	1.811	1.555	1	2	6.8
	16	06984	E347158416120	4.724	1.890	8.728	3.976	1.811	3.799	1	2	7.9
	16	06983	E347158416160	6.299	1.890	10.303	5.551	1.811	5.374	1	2	8.9
	18	23138	E34715841863	2.480	1.969	6.484	1.732	1.811	1.555	1	2	6.9
	20	23139	E34715842063	2.480	2.047	6.484	1.732	1.890	1.516	1	2	6.7
	20	06982	E347158420120	4.724	2.047	8.728	3.976	1.890	3.760	1	2	8.9
	25	23145	E34715842580	3.150	2.559	7.154	2.402	2.126	2.224	2	2	8.1
	25	06981	E347158425120	4.724	2.559	8.728	3.976	2.126	3.799	2	2	10.3
	32	23140	E347158432100	3.937	2.835	7.941	3.189	2.283	3.012	2	2	9.8
	40	23146	E347158440120	4.724	3.150	8.728	3.976	2.677	3.563	2	2	12.6
	50	23141	E347158450130	5.118	3.937	9.122	-	3.071	3.760	2	2	15.9

Spare Parts

For d	Locking screw
6	951C0610
8	951C0810
10	951C1012
12-14	951C1216
16-18	951C1416
20	951C1616
25	951C1820
32-40	951C2020
50	951C2425

Please check availability in current price and stock-list.



- Run-out .0001" (2.5 µm) maximum at 3xd
- Delivered with one stop screw

Taper	d mm	EDP No.	Part No.	Dimensions in inch								M mm	α°	r inch	Balancing	lbs
				A	D	D ₃	L	I ₁	I ₃	I ₄	A ₁ min-max					
DIN40 ADB	6	66366	E346956030680	3.15	0.83	1.06	5.84	2.40	0.87	1.48	1.73-2.13	M5	4.5	0.41	1	2.2
	6	66363	E3469560306120	4.72	0.83	1.06	7.42	3.98	0.87	1.48	3.31-3.70	M5	4.5	0.41	1	2.6
	6	66365	E3469560306160	6.30	0.83	1.06	8.99	5.55	0.87	1.48	4.88-5.28	M5	4.5	0.41	1	3.1
	8	66371	E346956030880	3.15	0.83	1.06	5.84	2.40	1.02	1.48	1.73-2.13	M6	4.5	0.41	1	2.2
	8	66367	E3469560308120	4.72	0.83	1.06	7.42	3.98	1.02	1.48	3.31-3.70	M6	4.5	0.41	1	2.6
	8	66368	E3469560308160	6.30	0.83	1.06	8.99	5.55	1.02	1.48	4.88-5.28	M6	4.5	0.41	1	2.9
	10	66374	E346956031080	3.15	0.94	1.26	5.84	2.40	1.22	1.67	1.54-1.93	M8x1	4.5	0.51	1	2.3
	10	66372	E3469560310120	4.72	0.94	1.26	7.42	3.98	1.22	1.67	3.11-3.50	M8x1	4.5	0.51	1	2.9
	10	66373	E3469560310160	6.30	0.94	1.26	8.99	5.55	1.22	1.67	4.69-5.08	M8x1	4.5	0.51	1	3.4
	12	66378	E346956031280	3.15	0.94	1.26	5.84	2.40	1.34	1.87	1.34-1.73	M10x1	4.5	0.51	1	2.3
	12	66375	E3469560312120	4.72	0.94	1.26	7.42	3.98	1.34	1.87	2.91-3.31	M10x1	4.5	0.51	1	2.8
	12	66377	E3469560312160	6.30	0.94	1.26	8.99	5.55	1.34	1.87	4.49-4.88	M10x1	4.5	0.51	1	3.3
	14	66380	E346956031480	3.15	1.06	1.34	5.84	2.40	1.34	1.87	1.34-1.73	M10x1	4.5	0.55	1	2.4
	14	66379	E3469560314120	4.72	1.06	1.34	7.42	3.98	1.34	1.87	2.91-3.31	M10x1	4.5	0.55	1	3.0
	16	66384	E346956031680	3.15	1.06	1.34	5.84	2.40	1.54	1.99	1.22-1.61	M12x1	4.5	0.55	1	2.3
	16	66382	E3469560316120	4.72	1.06	1.34	7.42	3.98	1.54	1.99	2.80-3.19	M12x1	4.5	0.55	1	3.1
	16	66383	E3469560316160	6.30	1.06	1.34	8.99	5.55	1.54	1.99	4.37-4.76	M12x1	4.5	0.55	1	3.5
	18	66386	E346956031880	3.15	1.30	1.65	5.84	2.40	1.54	1.99	1.22-1.61	M12x1	4.5	0.71	1	2.9
	20	66389	E346956032080	3.15	1.30	1.65	5.84	2.40	1.61	2.07	1.14-1.54	M16x1	4.5	0.71	1	2.5
	20	66387	E3469560320120	4.72	1.30	1.65	7.42	3.98	1.85	2.07	2.72-3.11	M16x1	4.5	0.71	1	3.5
25	66391	E3469560325100	3.94	1.73	2.09	6.63	3.19	1.85	2.30	1.69-2.09	M16x1	4.5	0.93	1	3.7	

For Shrinkfit extensions, see page(s) 362-363.

Spare Parts

For d	Stop screw
6	19BDR05165
8	19BDR06165
10	19BDR08165
12-14	19BDR10165
16-18	19BDR12165
20-25	19BDR16165

Accessories

For d	Balancing screws
6	90ZQ01
8	90ZQ01
10	90ZQ01
12-14	90ZQ01
16-18	90ZQ01
20-25	90ZQ01

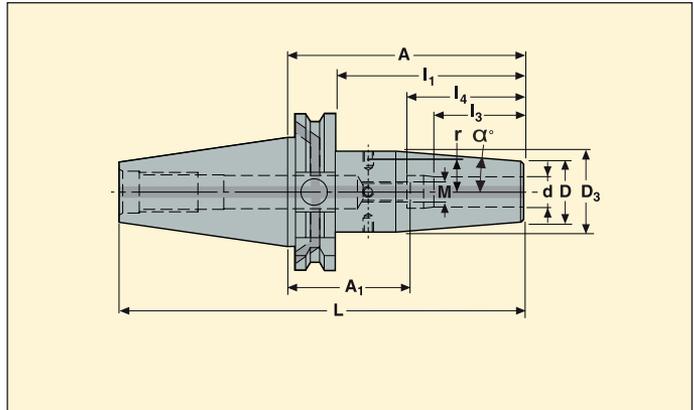
Please check availability in current price and stock-list.

EPB 5603 – Shrinkfit holders, DIN type – Metric

DIN 69871-ADB



- Run-out .0001" (2.5 µm) maximum at 3xd
- Delivered with one stop screw



Taper	d mm	EDP No.	Part No.	Dimensions in inch										M mm	α°	r inch	Balancing	lbs
				A	D	D ₃	L	I ₁	I ₃	I ₄	A ₁ min-max							
DIN50 ADB	6	66392	E347156030680	3.15	0.83	1.06	7.15	2.40	0.87	1.48	1.73-2.13	M5	4.5	0.41	1	6.2		
	6	66393	E3471560306160	6.30	0.83	1.06	10.31	5.55	0.87	1.48	4.88-5.28	M5	4.5	0.41	1	6.7		
	8	66394	E347156030880	3.15	0.83	1.06	7.15	2.40	1.02	1.48	1.73-2.13	M6	4.5	0.41	1	6.1		
	8	66396	E3471560308160	6.30	0.83	1.06	10.30	5.55	1.02	1.48	4.88-5.28	M6	4.5	0.41	1	6.7		
	10	66397	E347156031080	3.15	0.94	1.26	7.15	2.40	1.22	1.67	1.54-1.93	M8x1	4.5	0.51	1	6.2		
	10	66398	E3471560310160	6.30	0.94	1.26	10.30	5.55	1.22	1.67	4.69-5.08	M8x1	4.5	0.51	1	7.2		
	12	66399	E347156031280	3.15	0.94	1.26	7.15	2.40	1.34	1.87	1.34-1.73	M10x1	4.5	0.51	1	6.2		
	12	66400	E3471560312160	6.30	0.94	1.26	10.30	5.55	1.34	1.87	4.49-4.88	M10x1	4.5	0.51	1	7.2		
	14	66401	E347156031480	3.15	1.06	1.34	7.15	2.40	1.34	1.87	1.34-1.73	M10x1	4.5	0.55	1	6.3		
	16	66402	E347156031680	3.15	1.06	1.34	7.15	2.40	1.54	1.99	1.22-1.61	M12x1	4.5	0.55	1	6.2		
	16	66403	E3471560316160	6.30	1.06	1.34	10.30	5.55	1.54	1.99	4.37-4.76	M12x1	4.5	0.55	1	7.5		
	18	66405	E347156031880	3.15	1.30	1.65	7.16	2.40	1.54	1.99	1.22-1.61	M12x1	4.5	0.71	1	6.6		
	20	66407	E347156032080	3.15	1.30	1.65	7.15	2.40	1.61	2.07	1.14-1.54	M16x1	4.5	0.71	1	6.4		
	20	66409	E3471560320160	6.30	1.30	1.65	10.30	5.55	1.61	2.07	4.29-4.69	M16x1	4.5	0.71	1	8.2		
	25	66410	E347156032590	3.54	1.73	2.09	7.55	2.80	1.85	2.30	1.30-1.69	M16x1	4.5	0.93	1	7.4		
	25	66411	E3471560325160	6.30	1.73	2.09	10.30	5.55	1.85	2.30	4.06-4.45	M16x1	4.5	0.93	1	9.9		
	32	66412	E347156033290	3.54	1.73	2.09	7.55	2.80	2.01	2.46	1.14-1.54	M16x1	4.5	0.93	1	7.0		

For Shrinkfit extensions, see page(s) 362-363.

Spare Parts

For d	Stop screw
6	19BDR05165
8	19BDR06165
10	19BDR08165
12-14	19BDR10165
16-18	19BDR12165
20-32	19BDR16165

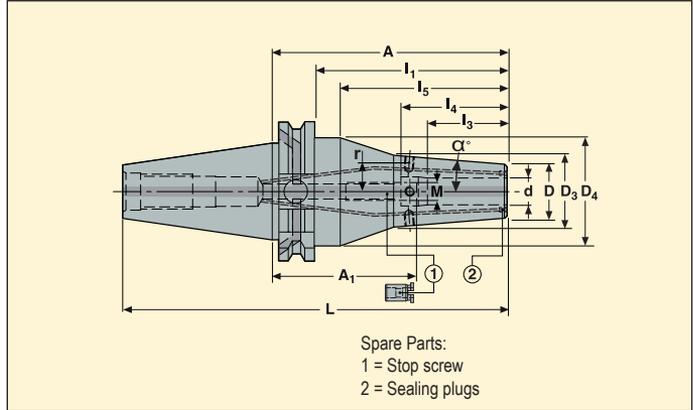
Accessories

For d	Balancing screws
6	90ZQ01
8	90ZQ01
10	90ZQ01
12-14	90ZQ01
16-18	90ZQ01
20-32	90ZQ01

Please check availability in current price and stock-list.



- Run-out .0001" (2.5 µm) maximum at 3xd
- Reinforced design with wider front and tapered body
- With coolant supply channels towards the tool (plugged)



Taper	d mm	EDP No.	Part No.	Dimensions in inch											M mm	α°	**	r inch	Balancing	
				A	D	D ₃	D ₄	L	I ₁	I ₃	I ₄	I ₅	A ₁ min-max							
DIN40 ADB	6	77074	E3469560006130	5.12	0.94	1.27	1.95	7.81	4.37	0.87	1.48	3.74	3.70-4.09	M5	4.5		0.47	1	3.7	
	8	77075	E3469560008130	5.12	0.94	1.27	1.95	7.81	4.37	1.02	1.48	3.74	3.70-4.09	M6	4.5		0.47	1	3.7	
	10	77067	E346956001065	2.56	1.06	1.35	–	5.25	1.81	1.22	1.67	–	0.94-1.34	M8x1	4.5		0.53	1	2.3	
	10	77076	E3469560010130	5.12	1.06	1.39	1.95	7.81	4.37	1.22	1.67	3.74	3.50-3.90	M8x1	4.5		0.53	1	4.0	
	12	77068	E346956001265	2.56	1.06	1.35	–	5.25	1.81	1.34	1.87	–	0.75-1.14	M10x1	4.5		0.53	1	2.3	
	12	77077	E3469560012130	5.12	1.06	1.39	1.95	7.81	4.37	1.34	1.87	3.74	3.31-3.70	M10x1	4.5		0.53	1	3.9	
	16	77069	E346956001665	2.56	1.30	1.59	–	5.25	1.81	1.54	1.99	–	0.63-1.02	M12x1	4.5		0.67	1	2.4	
	16	77078	E3469560016130	5.12	1.30	1.66	1.95	7.81	4.37	1.54	1.99	3.74	3.19-3.58	M12x1	4.5		0.67	1	4.2	
	20	77070	E346956002065	2.56	1.73	–	1.95	5.25	1.81	1.61	2.07	–	0.55-0.94	M16x1	4.5	**	–	1	2.8	
	20	77079	E3469560020130	5.12	1.73	2.28	1.95	7.81	4.37	1.61	2.07	3.74	3.11-3.50	M16x1	4.5		0.85	1	5.2	
25	77071	E346956002575	2.95	1.89	2.19	1.95	5.65	2.20	1.85	2.30	1.57	0.71-1.10	M16x1	4.5	**	–	1	3.2		
25	77080	E3469560025130	5.12	1.89	2.48	1.95	7.81	4.37	1.85	2.30	3.74	2.87-3.27	M16x1	4.5		0.98	1	5.7		

** Holder without threaded holes for balancing screws

Spare Parts

For d	Sealing plugs	Stop screw
6	90AI03	19BDR05165
8	90AI03	19BDR06165
10	90AI03	19BDR08165
12	90AI03	19BDR10165
16	90AI03	19BDR12165
20-25	90AI04	19BDR16165

Accessories

For d	Balancing screws
6	90ZQ01
8	90ZQ01
10	90ZQ01
12	90ZQ01
16	90ZQ01
20-25	90ZQ01

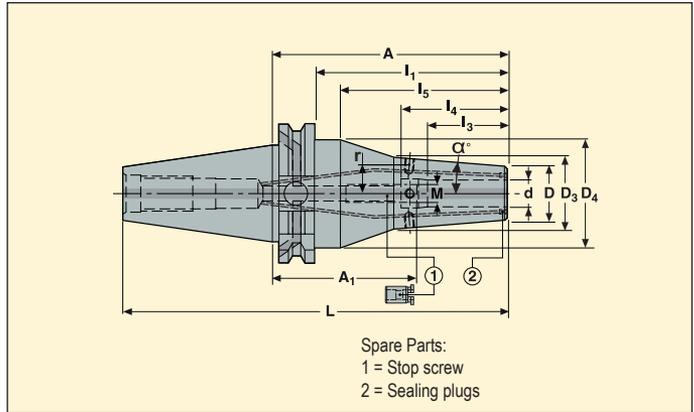
Please check availability in current price and stock-list.

EPB 5600 – Shrinkfit holders, reinforced – Metric

DIN 69871-ADB



- Run-out .0001" (2.5 µm) maximum at 3xd
- Reinforced design with wider front and tapered body
- With coolant supply channels towards the tool (plugged)



Taper	d mm	EDP No.	Part No.	Dimensions in inch											M mm	α°	r inch	Balancing	
				A	D	D ₃	D ₄	L	I ₁	I ₃	I ₄	I ₅	A ₁ min-max						
DIN50 ADB	6	77090	E3471560006160	6.30	0.94	1.27	3.13	10.30	5.55	0.87	1.48	4.92	4.88-5.28	M5	4.5	0.47	1	10.7	
	8	77091	E3471560008160	6.30	0.94	1.27	3.13	10.30	5.55	1.02	1.48	4.92	4.88-5.28	M6	4.5	0.47	1	10.7	
	10	77083	E347156001080	3.15	1.06	1.44	–	7.15	2.40	1.22	1.67	–	1.54-1.93	M8x1	4.5	0.53	1	6.6	
	10	77092	E3471560010160	6.30	1.06	1.39	3.13	10.30	5.55	1.22	1.67	4.92	4.69-5.08	M8x1	4.5	0.53	1	10.9	
	10	77098	E3471560010200	7.87	1.06	1.39	3.13	11.88	7.13	1.22	1.67	6.50	6.26-6.65	M8x1	4.5	0.53	1	12.8	
	12	77084	E347156001280	3.15	1.06	1.44	–	7.15	2.40	1.34	1.87	–	1.34-1.73	M10x1	4.5	0.53	1	6.5	
	12	77093	E3471560012160	6.30	1.06	1.39	3.13	11.88	7.13	1.34	1.87	4.92	4.49-4.88	M10x1	4.5	0.53	1	10.9	
	12	77100	E3471560012200	7.87	1.06	1.39	3.13	11.88	7.13	1.34	1.87	6.50	6.06-6.46	M10x1	4.5	0.53	1	12.7	
	16	77085	E347156001680	3.15	1.30	1.68	–	7.15	2.40	1.54	1.99	–	1.22-1.61	M12x1	4.5	0.67	1	6.7	
	16	77094	E3471560016160	6.30	1.30	1.66	3.13	10.30	5.55	1.54	1.99	4.92	4.37-4.76	M12x1	4.5	0.67	1	11.2	
	16	77101	E3471560016200	7.87	1.30	1.66	3.13	11.88	7.13	1.54	1.99	6.50	5.94-6.34	M12x1	4.5	0.67	1	13.2	
	20	77086	E347156002080	3.15	1.73	2.11	–	7.15	2.40	1.61	2.07	–	1.14-1.54	M16x1	4.5	0.85	1	7.2	
	20	77095	E3471560020160	6.30	1.73	2.09	3.13	10.30	5.55	1.61	2.07	4.92	4.29-4.69	M16x1	4.5	0.85	1	12.3	
	20	77102	E3471560020200	7.87	1.73	2.09	3.13	11.88	7.13	1.61	2.07	6.50	5.87-6.26	M16x1	4.5	0.85	1	14.7	
	25	77087	E347156002590	3.54	1.89	2.41	–	7.55	2.80	1.85	2.30	–	1.30-1.69	M16x1	4.5	0.98	1	8.1	
	25	77096	E3471560025160	6.30	1.89	2.33	3.13	10.30	5.55	1.85	2.30	4.92	4.06-4.45	M16x1	4.5	0.98	1	12.9	
	25	77105	E3471560025200	7.87	1.89	2.33	3.13	11.88	7.13	1.85	2.30	6.50	5.63-6.02	M16x1	4.5	0.98	1	15.5	
	32	77089	E347156003290	3.54	1.89	2.41	–	7.55	2.80	2.01	2.46	–	1.14-1.54	M16x1	4.5	0.98	1	7.7	
	32	77097	E3471560032160	6.30	1.89	2.33	3.13	10.30	5.55	2.01	2.46	4.92	3.90-4.29	M16x1	4.5	0.98	1	12.6	
	32	77106	E3471560032200	7.87	1.89	2.33	3.13	11.88	7.13	2.01	2.46	6.50	5.47-5.87	M16x1	4.5	0.98	1	15.1	

Spare Parts

For d	Sealing plugs	Stop screw
6	90AI03	19BDR05165
8	90AI03	19BDR06165
10	90AI03	19BDR08165
12	90AI03	19BDR10165
16	90AI03	19BDR12165
20-32	90AI04	19BDR16165

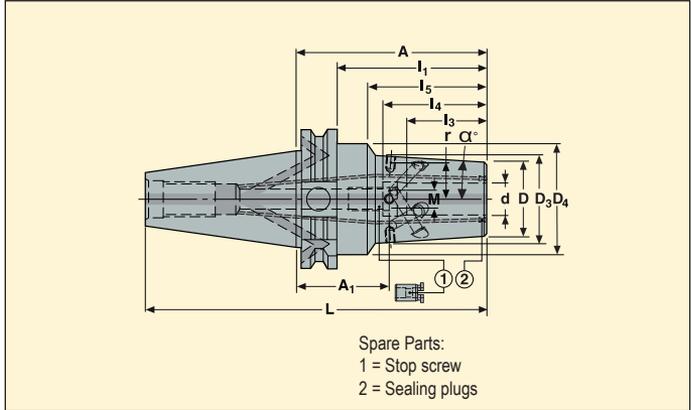
Accessories

For d	Balancing screws
6	90ZQ01
8	90ZQ01
10	90ZQ01
12	90ZQ01
16	90ZQ01
20-32	90ZQ01

Please check availability in current price and stock-list.



- Run-out .0001" (2.5 µm) maximum at 3rd
- With Safe-Lock tool pull-out protection system
- Reinforced design of EPB 5600
- With coolant supply channels towards the tool (plugged)



Taper	d mm	EDP No.	Part No.	Dimensions in inch											M mm	α°	**	r inch	Balancing	lbs
				A	D	D ₃	D ₄	L	I ₁	I ₃	I ₄	I ₅	A ₁ min-max							
DIN40 ADB	12	92475	E346956001265P	2.56	1.06	1.35	–	5.25	1.81	1.34	1.87	–	0.75-1.08	M10x1	4.5		0.53	1	2.4	
	16	92476	E346956001665P	2.56	1.30	1.59	–	5.25	1.81	1.54	1.99	–	0.63-0.94	M12x1	4.5		0.67	1	2.4	
	20	92477	E346956002065P	2.56	1.73	–	1.95	5.25	1.81	1.61	2.07	–	0.55-0.87	M16x1	4.5	**	–	1	2.9	
	25	92478	E346956002575P	2.95	1.89	2.19	1.95	5.65	2.20	1.85	2.30	1.57	0.71-1.02	M16x1	4.5	**	–	1	3.3	
DIN50 ADB	12	92479	E347156001280P	3.15	1.06	1.44	–	7.16	2.40	1.34	1.87	–	1.34-1.67	M10x1	4.5		0.53	1	6.6	
	16	92480	E347156001680P	3.15	1.30	1.68	–	7.16	2.40	1.54	1.99	–	1.22-1.54	M12x1	4.5		0.67	1	6.8	
	20	92481	E347156002080P	3.15	1.73	2.11	–	7.16	2.40	1.61	2.07	–	1.14-1.54	M16x1	4.5		0.85	1	7.5	
	25	92482	E347156002590P	3.54	1.89	2.41	–	7.55	2.79	1.85	2.30	–	1.30-1.61	M16x1	4.5		0.98	1	8.2	
	32	92483	E347156003290P	3.54	1.89	2.41	–	7.55	2.79	2.01	2.46	–	1.14-1.54	M16x1	4.5		0.98	1	7.7	

** Holder without threaded holes for balancing screws

Spare Parts

For d	Sealing plugs	Stop screw
12-16	90AI03	***
20-32	90AI04	19BDR16165

Accessories

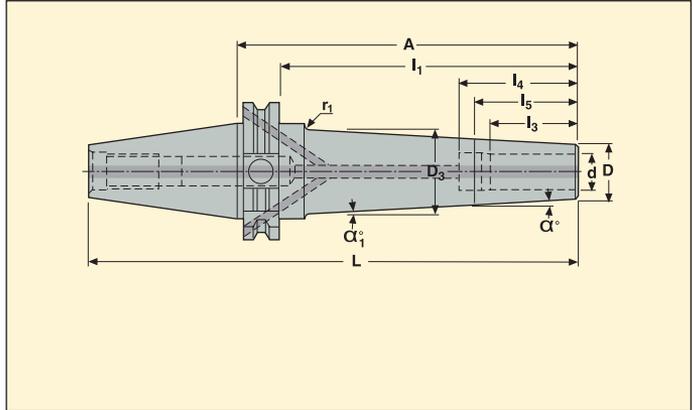
For d	Balancing screws
12-16	90ZQ01
20-32	90ZQ01

Please check availability in current price and stock-list.

*** For d 12 and 16 mm, stop screw not removable/replaceable by the user, please request a repair process



• Run-out .0001" (2.5 μm) maximum at 3xd



Taper	d mm	EDP No.	Part No.	Dimensions in inch								α°	α₁°	r₁ inch	Balancing	lbs
				A	D	D₃	L	I₁	I₃	I₄	I₅					
DIN40 ADB/ CAT40	3	05458	E347658010380	3.15	0.35	0.59	5.84	2.40	0.51	-	0.98	3	5	0.28	1	2.2
	3	05719	E3476580103140	5.51	0.35	1.02	8.20	4.72	0.51	-	0.98	3	5	0.28	1	2.5
	4	05459	E347658010480	3.15	0.39	0.63	5.84	2.40	0.59	-	0.98	3	5	0.28	1	2.2
	4	05803	E3476580104140	5.51	0.39	1.06	8.20	4.72	0.59	-	0.98	3	5	0.28	1	2.5
	6	05460	E347658010680	3.15	0.47	0.67	5.84	2.40	1.02	1.57	-	3	-	0.28	1	2.2
	6	05804	E3476580106140	5.51	0.47	1.18	8.20	4.72	1.02	1.57	1.26	3	5	0.28	1	2.6
	8	05465	E347658010880	3.15	0.63	0.83	5.84	2.40	1.18	1.73	-	3	-	0.28	1	2.3
	8	05805	E3476580108140	5.51	0.63	1.26	8.20	4.72	1.18	1.73	1.42	3	5	0.24	1	2.7
	10	05461	E347658011080	3.15	0.71	0.91	5.84	2.40	1.26	1.77	-	3	-	0.28	1	2.3
	10	05807	E3476580110160	6.30	0.71	1.50	8.99	5.51	1.26	1.77	1.50	3	5	0.10	1	3.2
	12	05462	E347658011280	3.15	0.79	0.98	5.84	2.40	1.34	1.81	-	3	-	0.28	1	2.3
	12	05721	E3476580112170	6.69	0.79	1.61	9.39	5.91	1.34	1.81	1.57	3	5	-	1	3.6

Please check availability in current price and stock-list.
For Shrinkfit extensions, see page(s) 362-363.

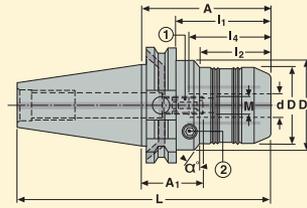
EPB 5835 – Hydraulic chucks, strong – Metric

DIN 69871-ADB

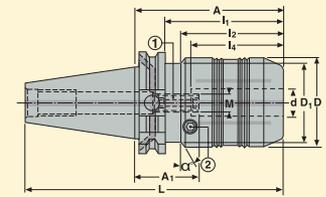


- Run-out .00015" (4 μm) maximum at 3xd

Design 1



Design 2



Accessories:
2 = Key

Spare Parts:
1 = Stop screw

Taper	d mm	EDP No.	Part No.	Dimensions in inch								M mm	Design	α°	Balancing	lbs
				A	D	D ₁	L	I ₁	I ₂	I ₄	A ₁ min-max					
DIN40 ADB	12	84334	E346958351275	2.953	1.890	–	5.646	2.205	–	1.850	1.102-1.496	M10	1	–	1	3.3
	20	84336	E346958352080	3.150	2.461	1.949	5.843	2.402	1.772	2.047	1.102-1.496	M10	2	0	1	4.4
DIN50 ADB	12	84338	E347158351275	2.953	1.890	2.480	6.957	2.205	1.496	1.850	1.102-1.496	M10	1	30	1	7.5
	20	84340	E347158352080	3.150	2.461	–	7.154	2.402	–	2.047	1.102-1.496	M10	1	–	1	8.8
	32	84341	E347158353280	3.150	3.150	–	7.154	2.402	–	2.480	0.669-1.063	M10	1	–	1	10.0

For reduction sleeves, see page(s) 364-366. For control gauges, see page(s) 367.

Spare Parts

For d	Stop screw
12-32	19LS1016A

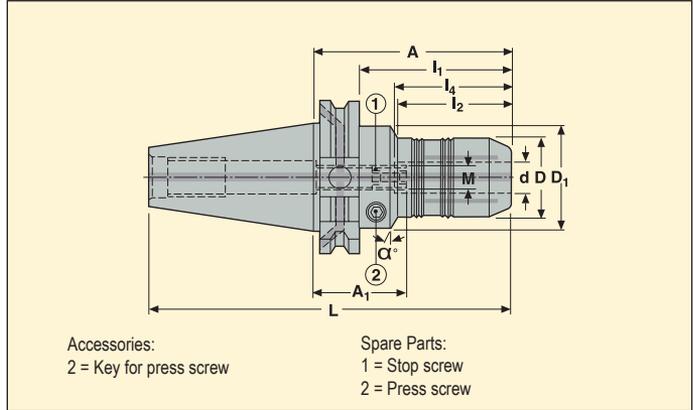
Accessories

For d	Locking key
12-32	03HXL06

Please check availability in current price and stock-list.



- Run-out .00015" (4 µm) maximum at 3xd



Taper	d mm	EDP No.	Part No.	Dimensions in inch								M mm	α°	Balancing	lbs
				A	D	D ₁	L	I ₁	I ₂	I ₄	A ₁ min-max				
DIN40 ADB	6	38923	E346958340680	3.150	1.024	1.969	5.843	2.402	0.906	1.496	1.654-2.047	M5	30	1	3.0
	8	38924	E346958340880	3.150	1.102	1.969	5.843	2.402	0.945	1.496	1.654-2.047	M5	30	1	3.0
	10	38925	E346958341080	3.150	1.181	1.969	5.843	2.402	1.339	1.654	1.496-1.890	M8	30	1	2.8
	12	38926	E346958341280	3.150	1.260	1.969	5.843	2.402	1.575	1.850	1.299-1.693	M10	30	1	2.9
	14	38927	E346958341480	3.150	1.339	1.969	5.843	2.402	1.575	1.850	1.299-1.693	M10	30	1	2.9
	16	38928	E346958341680	3.150	1.496	1.969	5.843	2.402	1.811	1.969	1.181-1.575	M10	30	1	3.1
	20	38930	E346958342080	3.150	1.654	1.969	5.843	2.402	1.850	2.047	1.102-1.496	M10	30	1	3.1
	25	33458	E346958342595	3.740	2.283	1.969	6.433	2.992	2.362	2.283	1.457-1.850	M10	60	1	4.3
DIN50 ADB	12	39124	E347158341280	3.150	1.260	1.969	7.154	2.402	1.575	1.850	1.299-1.693	M10	30	1	11.0
	20	38931	E347158342080	3.150	1.654	1.969	7.154	2.402	1.850	2.047	1.102-1.496	M10	30	1	11.9
	25	33459	E347158342595	3.740	2.283	2.756	7.744	2.992	1.969	2.283	1.457-1.850	M10	30	1	8.8
	32	38932	E347158343290	3.543	2.520	2.756	7.547	2.795	1.969	2.480	1.063-1.457	M10	30	1	12.6

For reduction sleeves, see page(s) 366. For control gauges, see page(s) 367.

Spare Parts

For d	Press screw	Stop screw
6-8	950AF0810008	19LS0520A
10	950AF0810008	19LS0820A
12	950AF0810008	19LS1020A
14-32	950AF1010010	19LS1020A

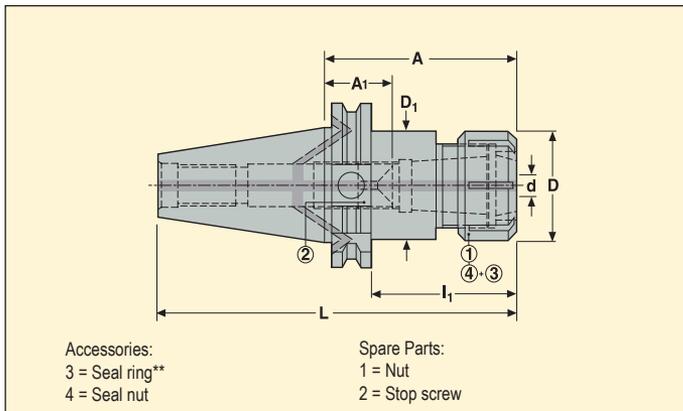
Accessories

For d	Locking key
6-8	H04-4
10	H04-4
12	H04-4
14-32	H04-4

Please check availability in current price and stock-list.



• Run-out .0004" (10 µm) maximum at 3xd



Taper	Capacity d inch	EDP No.	Part No.	Chuck & Collet Size	Dimensions in inch						Balancing	lbs
					A	D	D ₁	L	I ₁	A ₁ min-max		
DIN40 ADB	0.020-0.394	66042	E346956751670	ER 16	2.756	1.260	1.260	5.449	2.008	0.866-1.496	1	2.2
	0.020-0.394	66041	E3469567516120	ER 16	4.724	1.260	1.260	7.417	3.976	2.835-3.465	1	2.8
	0.039-0.630	66044	E346956752570	ER 25	2.756	1.654	1.654	5.449	2.008	0.433-1.260	1	2.4
	0.039-0.630	66043	E3469567525120	ER 25	4.724	1.654	1.654	7.417	3.976	2.008-3.228	1	3.5
	0.079-0.787	66046	E346956753270	ER 32	2.756	1.969	1.969	5.449	2.008	0.472-1.181	1	2.6
	0.079-0.787	66045	E3469567532120	ER 32	4.724	1.969	1.969	7.417	3.976	2.047-3.150	1	4.1
	0.118-1.024	66040	E446956754070	ER 40*	2.756	2.480	1.969	5.449	2.008	0-0.984	1	2.6
DIN50 ADB	0.020-0.394	66048	E347156751670	ER 16	2.756	1.260	1.260	6.760	2.008	0.866-1.496	2	6.0
	0.020-0.394	66047	E3471567516120	ER 16	4.724	1.260	1.260	8.728	3.976	2.835-3.465	2	6.5
	0.039-0.630	66049	E347156752590	ER 25	3.543	1.654	1.654	7.547	2.795	0.827-2.047	2	6.7
	0.079-0.787	66051	E347156753290	ER 32	3.543	1.969	1.969	7.547	2.795	0.866-1.969	2	7.1
	0.079-0.787	66050	E3471567532150	ER 32	5.906	1.969	1.969	9.909	5.157	3.228-4.331	2	8.8
		0.118-1.024	66052	E3471567540100	ER 40	3.937	2.480	2.480	7.941	3.189	1.102-2.165	2

For ER collets, see page(s) 378-381, ER extensions, see page(s) 377.

* Chuck ER40/A70 is type AD (E4469) without flange coolant through, instead type ADB (E3469)

Spare Parts

For size	Nut	Stop screw
ER 16	08B587516X	19B58711
ER 25	08B587525X	19B58718
ER 32	08B587532X	19B58722
ER 40	08B587540X	19B58730

Accessories**

For size	Seal nut	Seal ring	Spanner
ER 16	08B587516IC	01B58751606	03B587516
ER 25	08B587525IC	01B58752506	03B587525
ER 32	08B587532IC	01B58753206	03B587532
ER 40	08B587540IC	01B58754006	03B587540

Please check availability in current price and stock-list.

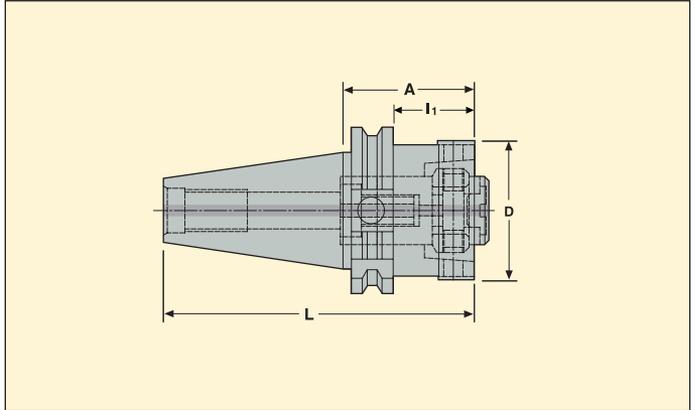
** For ER sealing rings, see page(s) 382.

EPB 5095 – Taper adapters HSK – Metric

DIN 69871-AD



- Run-out .0002" (5 µm) maximum at 3xd



Taper	For HSK-A/C	EDP No.	Part No.	Dimensions in inch				Equipped with TF unit ref.	Balancing	
				A	D	L	I ₁			
DIN50 AD	HSK-A/C63	58536	E447150956340	1.575	2.756	5.579	0.827	24H509563	2	6.5

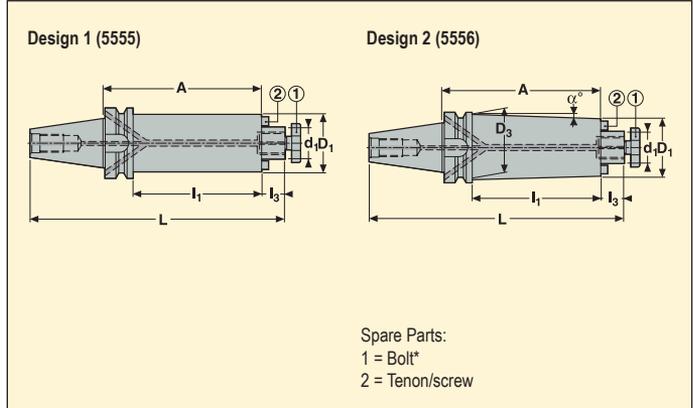
Accessories

For	Key
HSK-A/C63	H05-4

Please check availability in current price and stock-list.



- Run-out .0002" (5 µm) maximum
- With dynamic damping, ready to use
- With coolant supply channels through the pilot



Taper	d ₁ mm	EDP No.	Part No.	Dimensions in inch						Design	α°	Balancing	lbs
				A	D ₁	D ₃	L	I ₁	I ₃				
BT40 ADB	16	57462	E3414555516160	6.299	1.496	–	9.543	5.236	0.669	1	–	2	4.9
	22	50976	E3414555522210	8.268	1.890	–	11.591	7.205	0.748	1	–	2	8.3
	22	50977	E3414555622260	10.236	1.890	2.362	13.559	9.173	0.748	2	1.3	2	11.9
	27	50979	E3414555527260	10.236	2.362	–	13.638	9.173	0.827	1	–	2	15.1
BT50 ADB	22	50980	E3416555522210	8.268	1.890	–	13.024	6.772	0.748	1	–	2	13.4
	22	50984	E3416555622260	10.236	1.890	2.520	14.992	8.740	0.748	2	1.9	2	17.4
	27	50981	E3416555527260	10.236	2.362	–	15.071	8.740	0.827	1	–	2	20.0
	27	50982	E3416555627320	12.598	2.362	3.150	17.433	11.102	0.827	2	1.9	2	27.9
	32	57463	E3416555532330	12.992	3.071	–	17.945	11.496	0.945	1	–	2	33.8
	40	66633	E3416555540350	13.780	3.504	–	18.850	12.283	1.063	1	–	2	45.6

d₁ 40, includes 4 threaded holes on the bearing face according to DIN 6357

Spare Parts*

For d ₁	Bolt	Screw	Tenon
16	5801608	950D0312	16C2080810A
22	5802210	950D0416	16C2101111
27	5802712	950D0516	16C2121214A
32	5803216	950D0516	16C2141421A
40	5804020	950D0616	16C2161621A

Accessories

For d ₁	Bolt, through coolant	Spanner
16	5801608L	5811608
22	5802210L	5812210
27	5802712L	5812712
32	5803216L	5813216
40	5804020L	5814020

Please check availability in current price and stock-list.

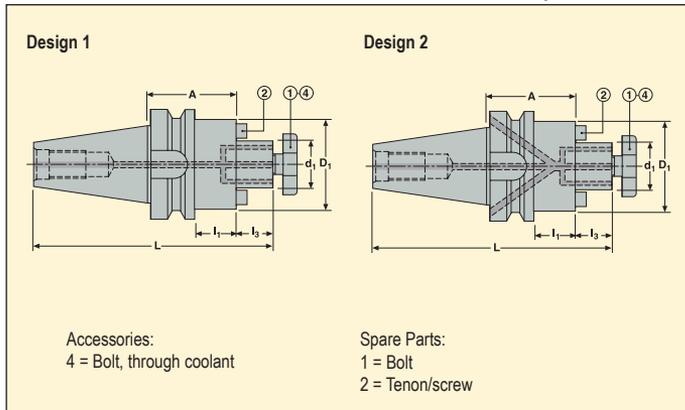
* These center bolts are similar to the original delivered ones: check if lengths L are suitable for the milling cutters used, therefore see instructions in page(s) 28 or in the Operating instructions sheet delivered with the holders.

EPB 5525 – Shell mill holders, with through coolant channels – Metric

BT Taper-Face-AD/ADB



- Run-out .0002" (5 µm) maximum
- With coolant supply channels through the pilot



Taper	d ₁ mm	EDP No.	Part No.	Dimensions in inch					Design	Balancing	lbs
				A	D ₁	L	l ₁	l ₃			
BT TF30 AD	16	44409	E400255251640	1.575	1.496	4.150	0.709	0.669	1	2	1.3
	22	44410	E400255252240	1.575	1.890	4.228	0.709	0.748	1	2	1.5
	27	44411	E400255252740	1.575	2.362	4.307	0.709	0.827	1	2	2.0
	32	44412	E400255253245	1.772	3.071	4.622	0.906	0.945	1	2	3.1
BT TF40 ADB	16	44413	E321455251650	1.969	1.496	5.213	0.906	0.669	2	2	2.6
	22	44420	E321455252245	1.772	1.890	5.094	1.102	0.748	2	2	2.9
	27	44421	E321455252745	1.772	2.362	5.173	0.709	0.827	2	2	3.3
	32	44414	E321455253250	1.969	3.071	5.488	0.906	0.945	2	2	4.2
	40	44415	E321455254050	1.969	3.504	5.606	0.906	1.063	2	2	4.9
BT TF50 ADB	22	44416	E321655252255	2.165	1.890	6.921	0.669	0.748	2	2	8.8
	27	44417	E321655252755	2.165	2.362	7.000	0.669	0.827	2	2	9.0
	32	44418	E321655253255	2.165	3.071	7.118	0.669	0.945	2	2	9.7
	40	44419	E321655254055	2.165	3.504	7.236	0.669	1.063	2	2	10.1

d₁ 40, includes 4 threaded holes on the bearing face according to DIN 6357

Spare Parts*

For d ₁	Bolt	Screw	Tenon
16	5801608	950D0312	16C10810164
22	5802210	950D0416	16C11012206
27	5802712	951D0512	16C11214243
32	5803216	951D0516	16C2141421
40	5804020	951D0616	16C2161621

Accessories

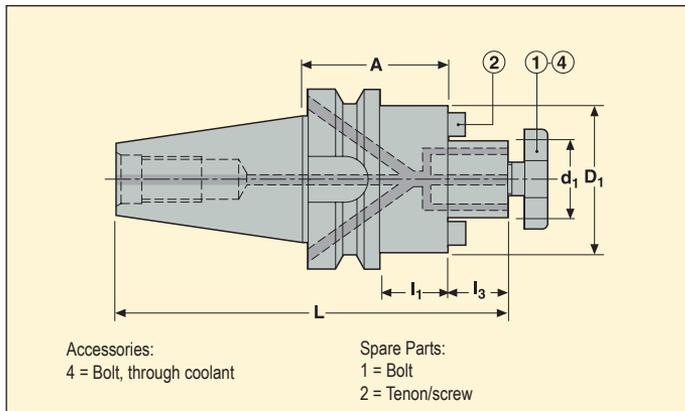
For d ₁	Bolt, through coolant	Spanner
16	5801608L	5811608
22	5802210L	5812210
27	5802712L	5812712
32	5803216L	5813216
40	5804020L	5814020

Please check availability in current price and stock-list.

* for TF40 products, plug 950A0406, for TF50 products, plug 950A0606



- Run-out .0002" (5 µm) maximum
- With coolant supply channels through the pilot



Taper	d ₁ mm	EDP No.	Part No.	Dimensions in inch					*	Balancing	lbs	
				A	D ₁	L	l ₁	l ₃				
BT50 ADB	16	07079	E3416552516100	3.937	1.496	8.614	2.441	0.669		2	8.8	
	22	07078	E3416552522100	3.937	1.890	8.693	2.441	0.748		2	9.4	
	22	07077	E3416552522160	6.299	1.890	11.055	4.803	0.748		2	11.8	
	22	07076	E341655252255	2.165	1.890	6.921	0.669	0.748		2	8.3	
	27	07073	E341655252755	2.165	2.362	7.000	0.669	0.827	*	2	8.7	
	27	07075	E3416552527100	3.937	2.362	8.772	2.441	0.827		2	10.6	
	27	07074	E3416552527160	6.299	2.362	11.134	4.803	0.827		2	13.9	
	32	07072	E3416552532100	3.937	3.071	8.890	2.441	0.945		2	13.0	
	32	07071	E3416552532160	6.299	3.071	11.252	4.803	0.945		2	17.7	
	32	07070	E341655253255	2.165	3.071	7.118	0.669	0.945		2	9.4	
	40	07069	E3416552540100	3.937	3.504	9.008	2.441	1.063		2	14.5	
	40	07068	E3416552540160	6.299	3.504	11.370	4.803	1.063		2	20.8	
	40	07067	E341655254055	2.165	3.504	7.236	0.669	1.063		2	9.9	
		27	18803	E341655242755	2.165	1.890	7.000	1.102	0.827	*	2	8.3

d₁ 40, includes 4 threaded holes on the bearing face according to DIN 6357

* Diameter D₁ on type 5524 is smaller than on type 5525

Spare Parts

For d ₁	Bolt	Screw	Tenon
16	5801608	950D0312	16C10810164
22	5802210	950D0416	16C11012206
27/5524	5802712	951D0512	16C127
27/5525	5802712	951D0512	16C11214243
32	5803216	951D0516	16C2141421
40	5804020	951D0616	16C2161621

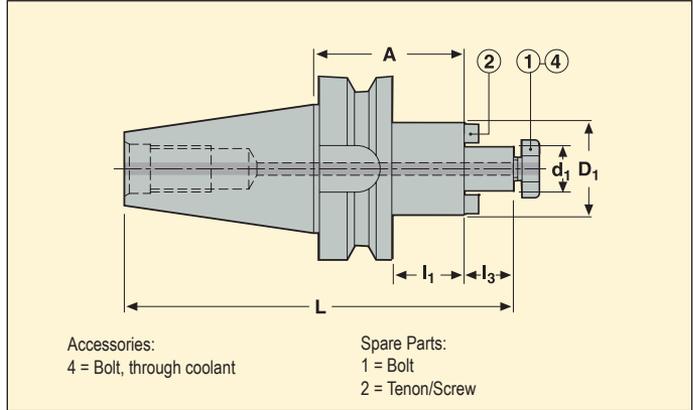
Accessories

For d ₁	Bolt, through coolant	Spanner
16	5801608L	5811608
22	5802210L	5812210
27/5524	5802712L	5812712
27/5525	5802712L	5812712
32	5803216L	5813216
40	5804020L	5814020

Please check availability in current price and stock-list.



- Run-out .0002" (5 µm) maximum
- Small front face diameter D_1 according to ISO 3937, suitable for Seco disc mill cutters Type B



Taper	d_1 mm	EDP No.	Part No.	Dimensions in inch					Balancing	
				A	D_1	L	l_1	l_3		
BT30 AD	16	06388	E40405521640	1.575	1.260	4.150	0.709	0.669	2	1.1
	22	06389	E40405522240	1.575	1.575	4.228	0.709	0.748	2	1.4
	27	06391	E40405522740	1.575	1.890	4.307	0.709	0.827	2	1.6
BT40 AD	16	06392	E40415521652	2.047	1.260	5.291	0.984	0.669	2	2.5
	22	87144	E40415522252	2.047	1.575	5.370	0.984	0.748	2	2.8
	27	05281	E40415522752	2.047	1.890	5.449	0.984	0.827	2	3.1
	32	05547	E40415523252	2.047	2.283	5.567	0.984	0.945	2	3.5
	40	06393	E40415524060	2.362	2.756	6.000	1.299	1.063	2	5.0
BT50 AD	22	04976	E57665522263	2.480	1.575	7.236	0.984	0.748	2	8.4
	27	04985	E57665522763	2.480	1.890	7.315	0.984	0.827	2	8.7
	32	04986	E57665523263	2.480	2.283	7.433	0.984	0.945	2	9.3
	40	04988	E57665524063	2.480	2.756	7.551	0.984	1.063	2	10.1

Spare Parts

For d_1	Bolt	Screw	Tenon
16	5801608	950D0308	16C116
22	5802210	951D0410	16C122
27	5802712	951D0512	16C127
32	5803216	951D0514	16C132
40	5804020	951D0616	16C140

Accessories

For d_1	Bolt, through coolant	Spanner
16	5801608L	5811608
22	5802210L	5812210
27	5802712L	5812712
32	5803216L	5813216
40	5804020L	5814020

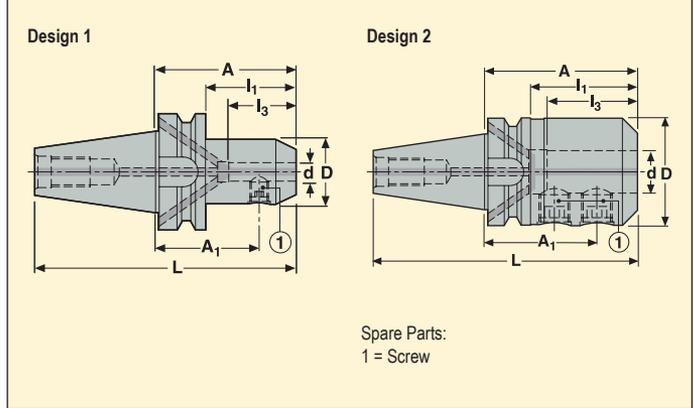
Please check availability in current price and stock-list.

EPB 584 – Side lock holders, Weldon – DIN 1835 Form B/ DIN 6535 Form HB – Metric

BT Taper-Face – ADB



- Run-out .0002" (5 µm) maximum at 3xd
- Weldon d 16, 20, 25, 32 and 40 with ground face (Seco-Weldon compatible)



Taper	d mm	EDP No.	Part No.	Dimensions in inch						Design	Balancing	lbs
				A	D	L	I ₁	I ₃	A ₁			
BT TF40 ADB	16	44440	E32145841665	2.559	1.890	5.134	1.496	1.811	1.634	1	2	3.1
	20	44442	E32145842065	2.559	2.047	5.134	1.496	1.890	1.594	1	2	3.3
	25	44449	E32145842590	3.543	2.480	6.118	2.480	2.126	2.618	2	2	4.9
	32	44450	E321458432100	3.937	2.835	6.512	2.874	2.283	3.012	2	2	6.0
	40	44443	E321458440110	4.331	3.150	6.906	2.953	2.677	3.169	2	2	7.1
BT TF50 ADB	25	44451	E321658425100	3.937	2.480	7.945	2.441	2.126	3.012	2	2	10.8
	32	44452	E321658432105	4.134	2.835	8.142	2.638	2.283	3.209	2	2	11.7
	40	44444	E321658440115	4.528	3.150	8.535	3.031	2.638	3.484	2	2	12.8
	50	44453	E321658450130	5.118	3.937	9.126	3.622	3.071	3.760	2	2	16.8

Spare Parts

For d	Plug	Locking screw
BT TF40, 16	950A0406	951C1416
BT TF40, 20	950A0406	951C1616
BT TF40, 25	950A0406	951C1820
BT TF40, 32-40	950A0406	951C2020
BT TF50, 25	950A0606	951C1820
BT TF50, 32-40	950A0606	951C2020
BT TF50, 50	950A0606	951C2425

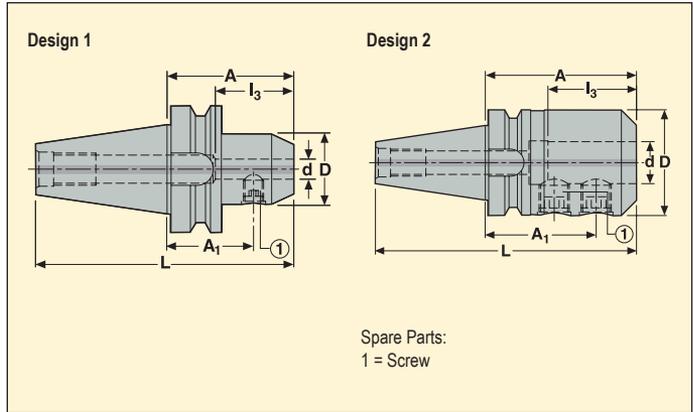
Please check availability in current price and stock-list.

EPB 584 – Side lock holders, Weldon – Inch

BT JIS B 6339-AD



- Run-out .0002" (5 µm) maximum at 3xd



Taper	d inch	EDP No.	Part No.	Dimensions in inch					Design	Balancing	lbs
				A	D	L	I ₃	A ₁			
BT40 AD	0.375	00914	E4041584037250	2.50	1.37	5.075	1.50	1.75	1	2	2.6
	0.500	00915	E4041584050250	2.50	1.62	5.075	1.62	1.63	1	2	2.8
	0.625	00917	E4041584062250	2.50	1.87	5.075	1.87	1.59	1	2	2.9
	0.750	00919	E4041584075250	2.50	2.00	5.075	2.00	1.50	1	2	2.9
	1.000	00922	E4041584100400	4.00	2.50	6.575	2.25	2.88	2	2	5.3
	1.250	00923	E4041584125400	4.00	2.75	6.575	2.25	2.88	2	2	5.5
BT50 AD	0.500	00938	E5766584050300	3.00	1.62	7.008	1.62	2.13	1	2	8.4
	0.625	00939	E5766584062300	3.00	1.87	7.008	1.87	2.09	1	2	8.6
	0.750	00942	E5766584075300	3.00	2.00	7.008	2.00	2.00	1	2	8.6
	1.000	00944	E5766584100400	4.00	2.50	8.008	2.25	2.88	2	2	10.4
	1.250	00945	E5766584125400	4.00	2.75	8.008	2.25	2.88	2	2	10.8
	1.500	00946	E5766584150450	4.50	3.50	8.508	2.62	3.00	2	2	13.9

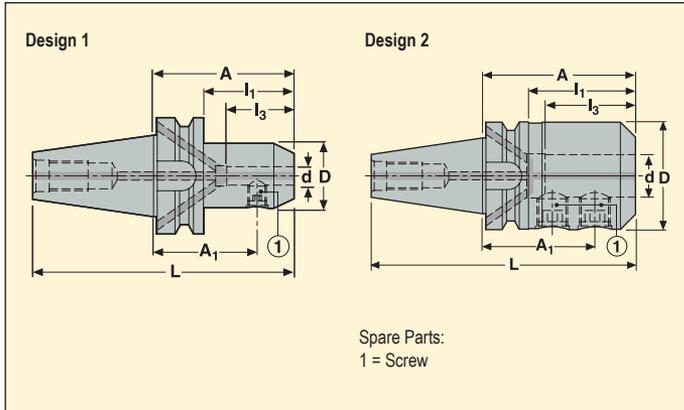
Spare Parts

For d	Locking screw
0.375	951CNC037031
0.500	951CNC043037
0.625	951CNC056050
0.750	951CNC062050
1.00 - 1.50	951CNC075068

Please check availability in current price and stock-list.



- Run-out .0002" (5 µm) maximum at 3xd
- Weldon d 16, 20, 25, 32 and 40 with ground face (Secco-Weldon compatible)



Taper	d mm	EDP No.	Part No.	Dimensions in inch						Design	Balancing	lbs
				A	D	L	I ₁	I ₃	A ₁			
BT40 ADB	6	23225	E34145840650	1.969	0.984	4.543	0.906	1.063	1.280	1	2	2.2
	6	07042	E341458406120	4.724	0.984	7.299	3.661	1.063	4.035	1	2	2.9
	8	23226	E34145840850	1.969	1.102	4.543	0.906	1.181	1.280	1	2	2.3
	10	23227	E34145841063	2.480	1.378	5.055	1.417	1.417	1.713	1	2	2.6
	12	23228	E34145841263	2.480	1.654	5.055	1.417	1.693	1.614	1	2	2.9
	12	07039	E341458412120	4.724	1.654	7.299	3.661	1.693	3.858	1	2	4.1
	14	23229	E34145841463	2.480	1.732	5.055	1.417	1.693	1.614	1	2	2.9
	16	23230	E34145841663	2.480	1.890	5.055	1.417	1.811	1.555	1	2	3.0
	16	07037	E341458416120	4.724	1.890	7.299	3.661	1.811	3.799	1	2	4.7
	18	23231	E34145841863	2.480	1.969	5.055	1.417	1.811	1.555	1	2	3.1
	20	23232	E34145842063	2.480	2.047	5.055	1.417	1.890	1.516	1	2	3.0
	20	07035	E341458420120	4.724	2.047	7.299	3.661	1.890	3.760	1	2	5.1
	25	23233	E34145842590	3.543	2.480	6.118	-	2.126	2.618	2	2	4.9
	32	23234	E341458432100	3.937	2.835	6.512	-	2.283	3.012	2	2	6.0

Spare Parts

For d	Locking screw
6	951C0610
8	951C0810
10	951C1012
12-14	951C1216
16-18	951C1416
20	951C1616
25	951C1820
32	951C2020

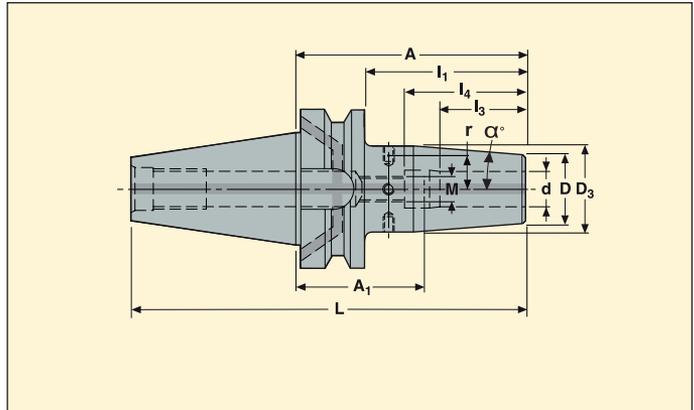
Please check availability in current price and stock-list.

EPB 5603 – Shrinkfit holders, DIN type – Metric

BT JIS B 6339-ADB



- Run-out .0001" (2.5 µm) maximum at 3xd
- Delivered with one stop screw



Taper	d mm	EDP No.	Part No.	Dimensions in inch								M mm	α°	r inch	Balancing	lbs
				A	D	D ₃	L	I ₁	I ₃	I ₄	A ₁ min-max					
BT40 ADB	6	66415	E341456030690	3.543	0.827	1.063	6.118	2.480	0.866	1.476	2.126-2.520	M5	4.5	0.413	1	2.6
	6	66413	E3414560306120	4.724	0.827	1.063	7.299	3.661	0.866	1.476	3.307-3.701	M5	4.5	0.413	1	2.9
	6	66414	E3414560306160	6.299	0.827	1.063	8.874	5.236	0.866	1.476	4.882-5.276	M5	4.5	0.413	1	3.2
	8	66418	E341456030890	3.543	0.827	1.063	6.118	2.480	1.024	1.476	2.126-2.520	M6	4.5	0.413	1	2.6
	8	66416	E3414560308120	4.724	0.827	1.063	7.299	3.661	1.024	1.476	3.307-3.701	M6	4.5	0.413	1	2.9
	8	66417	E3414560308160	6.299	0.827	1.063	8.874	5.236	1.024	1.476	4.882-5.276	M6	4.5	0.413	1	3.2
	10	66421	E341456031090	3.543	0.945	1.260	6.118	2.480	1.220	1.673	1.811-2.323	M8x1	4.5	0.512	1	2.7
	10	66419	E3414560310120	4.724	0.945	1.260	7.299	3.661	1.220	1.673	3.110-3.504	M8x1	4.5	0.512	1	3.3
	10	66420	E3414560310160	6.299	0.945	1.260	8.874	5.236	1.220	1.673	4.685-5.079	M8x1	4.5	0.512	1	3.7

For Shrinkfit extensions, see page(s) 362-363.

Spare Parts

For d	Stop screw
6	19BDR05165
8	19BDR06165
10	19BDR08165

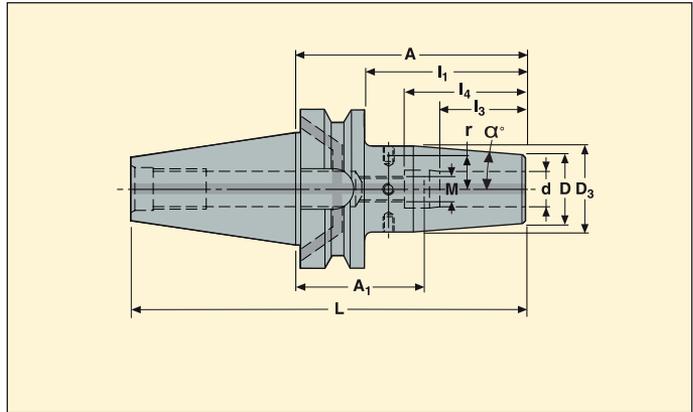
Accessories

For d	Balancing screws
6	90ZQ01
8	90ZQ01
10	90ZQ01

Please check availability in current price and stock-list.



- Run-out .0001" (2.5 µm) maximum at 3xd
- Delivered with one stop screw



Taper	d mm	EDP No.	Part No.	Dimensions in inch								M mm	α°	r inch	Balancing	lbs
				A	D	D ₃	L	I ₁	I ₃	I ₄	A ₁ min-max					
BT40 ADB	12	66424	E341456031290	3.543	0.945	1.260	6.118	2.480	1.339	1.870	1.732-2.126	M10x1	4.5	0.512	1	2.7
	12	66422	E3414560312120	4.724	0.945	1.260	7.299	3.661	1.339	1.870	2.913-3.307	M10x1	4.5	0.512	1	3.1
	12	66423	E3414560312160	6.299	0.945	1.260	8.874	5.236	1.339	1.870	4.488-4.882	M10x1	4.5	0.512	1	3.7
	14	66426	E341456031490	3.543	1.063	1.339	6.118	2.480	1.339	1.870	1.732-2.126	M10x1	4.5	0.551	1	3.0
	14	66425	E3414560314120	4.724	1.063	1.339	7.299	3.661	1.339	1.870	2.913-3.307	M10x1	4.5	0.551	1	3.3
	16	66429	E341456031690	3.543	1.063	1.339	6.118	2.480	1.535	1.988	1.614-2.008	M12x1	4.5	0.551	1	2.7
	16	66427	E3414560316120	4.724	1.063	1.339	7.299	3.661	1.535	1.988	2.795-3.189	M12x1	4.5	0.551	1	3.3
	16	66428	E3414560316160	6.299	1.063	1.339	8.874	5.236	1.535	1.988	4.370-4.764	M12x1	4.5	0.551	1	3.7
	18	66431	E341456031890	3.543	1.299	1.654	6.118	2.480	1.535	1.988	1.614-2.008	M12x1	4.5	0.709	1	3.1
	20	66433	E341456032090	3.543	1.299	1.654	6.118	2.480	1.614	2.067	1.535-1.929	M16x1	4.5	0.709	1	3.0
	20	66432	E3414560320120	4.724	1.299	1.654	7.299	3.661	1.614	2.067	2.717-3.110	M16x1	4.5	0.709	1	3.7
	25	66434	E3414560325100	3.937	1.732	2.087	6.512	2.874	1.850	2.303	1.693-2.087	M16x1	4.5	0.925	1	3.9

For Shrinkfit extensions, see page(s) 362-363.

Spare Parts

For d	Stop screw
12-14	19BDR10165
16-18	19BDR12165
20-25	19BDR16165

Accessories

For d	Balancing screws
12-14	90ZQ01
16-18	90ZQ01
20-25	90ZQ01

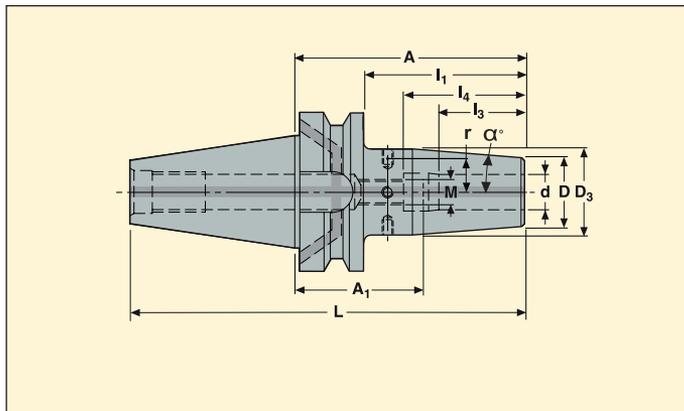
Please check availability in current price and stock-list.

EPB 5603 – Shrinkfit holders, DIN type – Metric

BT JIS B 6339-ADB



- Run-out .0001" (2.5 µm) maximum at 3xd
- Delivered with one stop screw



Taper	d mm	EDP No.	Part No.	Dimensions in inch								M mm	α°	r inch	Balancing	lbs
				A	D	D ₃	L	I ₁	I ₃	I ₄	A ₁ min-max					
BT50 ADB	6	66438	E3416560306100	3.937	0.827	1.063	7.945	2.441	0.866	1.476	2.520-2.913	M5	4.5	0.413	1	8.3
	6	66439	E3416560306160	6.299	0.827	1.063	10.307	4.803	0.866	1.476	4.882-5.276	M5	4.5	0.413	1	8.8
	8	66441	E3416560308100	3.937	0.827	1.063	7.945	2.441	1.024	1.476	2.520-2.913	M6	4.5	0.413	1	8.4
	8	66442	E3416560308160	6.299	0.827	1.063	10.307	4.803	1.024	1.476	4.882-5.276	M6	4.5	0.413	1	8.8
	10	66443	E3416560310100	3.937	0.945	1.260	7.945	2.441	1.220	1.673	2.323-2.717	M8x1	4.5	0.512	1	8.4
	10	66444	E3416560310160	6.299	0.945	1.260	10.307	4.803	1.220	1.673	4.685-5.079	M8x1	4.5	0.512	1	9.1
	12	66445	E3416560312100	3.937	0.945	1.260	7.945	2.441	1.339	1.870	2.126-2.520	M10x1	4.5	0.512	1	8.4
	12	66446	E3416560312160	6.299	0.945	1.260	10.307	4.803	1.339	1.870	4.488-4.882	M10x1	4.5	0.512	1	9.1
	14	66447	E3416560314100	3.937	1.063	1.339	7.945	2.441	1.339	1.870	2.126-2.520	M10x1	4.5	0.551	1	8.5
	16	66448	E3416560316100	3.937	1.063	1.339	7.945	2.441	1.535	1.988	2.008-2.402	M12x1	4.5	0.551	1	8.4
	16	66449	E3416560316160	6.299	1.063	1.339	10.307	4.803	1.535	1.988	4.370-4.764	M12x1	4.5	0.551	1	9.3
	18	66450	E3416560318100	3.937	1.299	1.654	7.945	2.441	1.535	1.988	2.008-2.402	M12x1	4.5	0.709	1	8.7
	20	66451	E3416560320100	3.937	1.299	1.654	7.945	2.441	1.614	2.067	1.929-2.323	M10x1	4.5	0.709	1	8.6
	20	66452	E3416560320160	6.299	1.299	1.654	10.307	4.803	1.614	2.067	4.291-4.685	M16x1	4.5	0.709	1	9.9
	25	66453	E3416560325110	4.331	1.732	2.087	8.339	2.835	1.850	2.303	2.087-2.480	M16x1	4.5	0.925	1	9.6
	25	66454	E3416560325160	6.299	1.732	2.087	10.307	4.803	1.850	2.303	4.055-4.449	M16x1	4.5	0.925	1	11.5
32	66455	E3416560332110	4.331	1.732	2.087	8.339	2.835	2.008	2.461	1.929-2.323	M16x1	4.5	0.925	1	9.3	

For Shrinkfit extensions, see page(s) 362-363.

Spare Parts

For d	Stop screw
6	19BDR05165
8	19BDR06165
10	19BDR08165
12-14	19BDR10165
16-18	19BDR12165
20-32	19BDR16165

Accessories

For d	Balancing screws
6	90ZQ01
8	90ZQ01
10	90ZQ01
12-14	90ZQ01
16-18	90ZQ01
20-32	90ZQ01

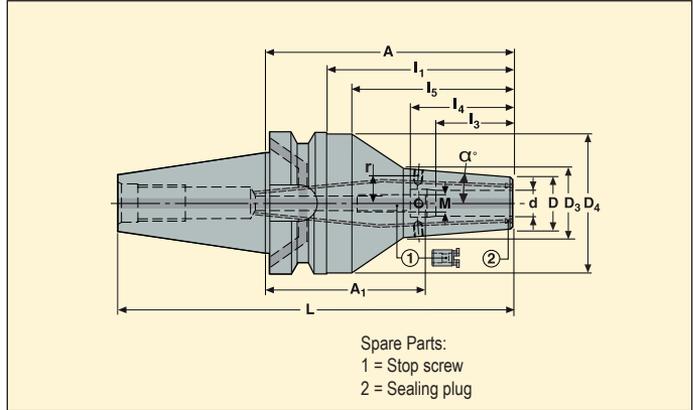
Please check availability in current price and stock-list.

EPB 5600 – Shrinkfit holders, reinforced – Metric

BT Taper-Face – ADB



- Run-out .0001" (2.5 µm) maximum at 3rd
- Reinforced design with wider front and tapered body
- With coolant supply channels towards the tool (plugged)



Taper	d mm	EDP No.	Part No.	Dimensions in inch								M mm	α°	r inch	Balancing	lbs
				A	D	D ₃	L	I ₁	I ₃	I ₄	A ₁ min-max					
BT TF40 ADB	12	92387	E321456001270	2.756	1.063	1.331	5.331	1.693	1.339	1.870	0.945-1.339	M10x1	4.5	0.531	1	2.6
	16	92388	E321456001675	2.953	1.299	1.598	5.528	1.890	1.535	1.988	1.024-1.417	M12x1	4.5	0.669	1	2.9
	20	92389	E321456002075	2.953	1.732	2.031	5.528	1.890	1.614	2.067	0.945-1.339	M16x1	4.5	0.846	1	3.5
	25	92390	E321456002585	3.346	1.890	2.328	5.921	2.283	1.850	2.303	1.102-1.496	M16x1	4.5	0.984	1	3.7
BT TF50 ADB	12	92400	E3216560012100	3.937	1.063	1.449	7.945	2.441	1.339	1.870	2.126-2.520	M10x1	4.5	0.531	1	9.0
	16	92401	E3216560016100	3.937	1.299	1.685	7.945	2.441	1.535	1.988	2.008-2.402	M12x1	4.5	0.669	1	9.3
	20	92402	E3216560020100	3.937	1.732	2.118	7.945	2.441	1.614	2.067	1.929-2.323	M16x1	4.5	0.846	1	9.9
	25	92403	E3216560025100	3.937	1.890	2.276	7.945	2.441	1.850	2.303	1.693-2.087	M16x1	4.5	0.984	1	9.9
	32	92404	E3216560032105	4.134	1.890	2.303	8.142	2.638	2.008	2.461	1.732-2.126	M16x1	4.5	0.984	1	9.9

Spare Parts

For d	Plug	Sealing plugs	Stop screw
BTF40, 12	950A0406	90AI03	19BDR10165
BTF40, 16	950A0406	90AI03	19BDR12165
BTF40, 20-25	950A0406	90AI04	19BDR16165
BTF50, 12	950A0606	90AI03	19BDR10165
BTF50, 16	950A0606	90AI03	19BDR12165
BTF50, 20-32	950A0606	90AI04	19BDR16165

Accessories

For d	Balancing screws
BTF40, 12	90ZQ01
BTF40, 16	90ZQ01
BTF40, 20-25	90ZQ01
BTF50, 12	90ZQ01
BTF50, 16	90ZQ01
BTF50, 20-32	90ZQ01

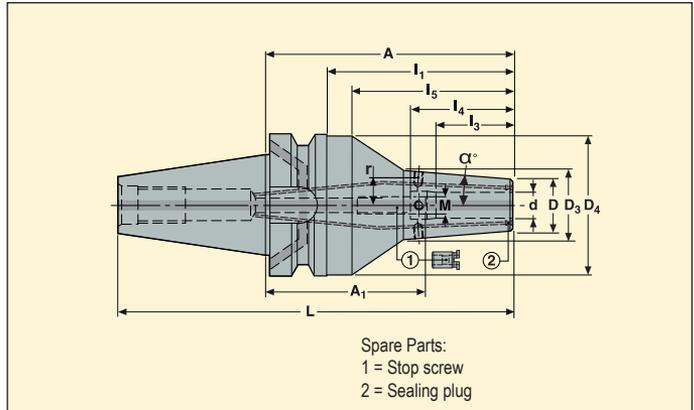
Please check availability in current price and stock-list.

EPB 5600 – Shrinkfit holders, reinforced – Metric

BT JIS B 6339-ADB



- Run-out .0001" (2.5 µm) maximum at 3xd
- Reinforced design with wider front and tapered body
- With coolant supply channels towards the tool (plugged)



Taper	d mm	EDP No.	Part No.	Dimensions in inch											M mm	α°	r inch	Balancing	lbs
				A	D	D ₃	D ₄	L	L ₁	L ₃	L ₄	L ₅	A ₁ min-max						
BT40 ADB	6	77112	E3414560006130	5.118	0.945	1.268	2.421	7.693	4.055	0.866	1.476	3.740	3.701-4.094	M5	4.5	0.472	1	4.4	
	8	77113	E3414560008130	5.118	0.945	1.268	2.421	7.693	4.055	1.024	1.476	3.740	3.701-4.094	M6	4.5	0.472	1	4.4	
	10	77107	E3414560010130	2.756	1.063	1.331	–	5.331	1.693	1.220	1.673	–	1.142-1.535	M8x1	4.5	0.531	1	2.6	
	10	77114	E3414560010130	5.118	1.063	1.386	2.421	7.693	4.055	1.220	1.673	3.740	3.504-3.898	M8x1	4.5	0.531	1	4.5	
	12	77108	E3414560012130	2.756	1.063	1.331	–	5.331	1.693	1.339	1.870	–	0.945-1.339	M10x1	4.5	0.531	1	2.6	
	12	77115	E3414560012130	5.118	1.063	1.386	2.421	7.693	4.055	1.339	1.870	3.740	3.307-3.701	M10x1	4.5	0.531	1	4.5	
	16	77109	E3414560016130	2.953	1.299	1.598	–	5.528	1.890	1.535	1.988	–	1.024-1.417	M12x1	4.5	0.669	1	2.9	
	16	77116	E3414560016130	5.118	1.299	1.661	2.421	7.693	4.055	1.535	1.988	3.740	3.189-3.583	M12x1	4.5	0.669	1	4.7	
	20	77110	E3414560020130	2.953	1.732	2.031	–	5.528	1.890	1.614	2.067	–	0.945-1.339	M16x1	4.5	0.846	1	3.2	
	20	77117	E3414560020130	5.118	1.732	2.092	2.421	7.693	4.055	1.614	2.067	3.740	3.110-3.504	M16x1	4.5	0.846	1	5.6	
25	77111	E3414560025130	3.346	1.890	2.328	–	5.921	2.283	1.850	2.303	–	1.102-1.496	M16x1	4.5	0.984	1	3.9		
25	77119	E3414560025130	5.118	1.890	2.480	2.421	7.693	4.055	2.008	2.303	3.740	2.874-3.268	M16x1	4.5	0.984	1	6.1		

Spare Parts

For d	Sealing plugs	Stop screw
6	90AI03	19BDR05165
8	90AI03	19BDR06165
10	90AI03	19BDR08165
12	90AI03	19BDR10165
16	90AI03	19BDR12165
20-25	90AI04	19BDR16165

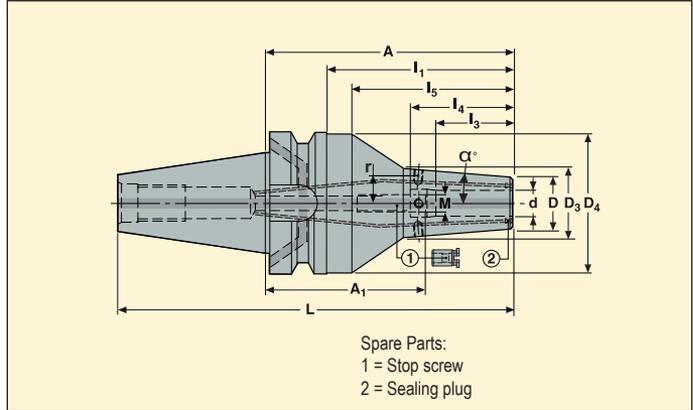
Accessories

For d	Balancing screws
6	90ZQ01
8	90ZQ01
10	90ZQ01
12	90ZQ01
16	90ZQ01
20-25	90ZQ01

Please check availability in current price and stock-list.



- Run-out .0001" (2.5 µm) maximum at 3xd
- Reinforced design with wider front and tapered body
- With coolant supply channels towards the tool (plugged)



Taper	d mm	EDP No.	Part No.	Dimensions in inch										M mm	α°	r inch	Balancing	lbs
				A	D	D ₃	D ₄	L	I ₁	I ₃	I ₄	I ₅	A ₁ min-max					
BT50 ADB	6	77132	E3416560006160	6.299	0.945	1.268	3.839	10.307	4.803	0.866	1.476	4.331	4.882-5.276	M5	4.5	.472	1	13.6
	8	77133	E3416560008160	6.299	0.945	1.268	3.839	10.307	4.803	1.024	1.476	4.331	4.882-5.276	M6	4.5	.472	1	13.4
	10	77120	E3416560010100	3.937	1.063	1.449	–	7.945	2.441	1.220	1.673	–	2.323-2.717	M8x1	4.5	.531	1	8.8
	10	77134	E3416560010160	6.299	1.063	1.386	3.839	10.307	4.803	1.220	1.673	4.331	4.685-5.079	M8x1	4.5	.531	1	13.7
	10	77140	E3416560010200	7.874	1.063	0.992	3.839	11.882	6.378	1.220	1.673	5.906	6.260-6.654	M8x1	4.5	.531	1	16.2
	12	77121	E3416560012100	3.937	1.063	1.449	–	7.945	2.441	1.339	1.870	–	2.126-2.520	M10x1	4.5	.531	1	8.7
	12	77135	E3416560012160	6.299	1.063	1.386	3.839	10.307	4.803	1.339	1.870	4.331	4.488-4.882	M10x1	4.5	.531	1	13.7
	12	77141	E3416560012200	7.874	1.063	1.386	3.839	11.882	6.378	1.339	1.870	5.906	6.063-6.457	M10x1	4.5	.531	1	16.2
	16	77122	E3416560016100	3.937	1.299	1.685	–	7.945	2.441	1.535	1.988	–	2.008-2.402	M12x1	4.5	.669	1	8.9
	16	77136	E3416560016160	6.299	1.299	1.661	3.839	10.307	4.803	1.535	1.988	4.331	4.370-4.764	M12x1	4.5	.669	1	13.9
	16	77142	E3416560016200	7.874	1.299	1.661	3.839	11.882	6.378	1.535	1.988	5.906	5.945-6.339	M12x1	4.5	.669	1	16.6
	20	77128	E3416560020100	3.937	1.732	2.118	–	7.945	2.441	1.614	2.067	–	1.929-2.323	M16x1	4.5	.846	1	9.5
	20	77137	E3416560020160	6.299	1.732	2.091	3.839	10.307	4.803	1.614	2.067	4.331	4.291-4.685	M16x1	4.5	.846	1	14.9
	20	77145	E3416560020200	7.874	1.732	2.091	3.839	11.882	6.378	1.614	2.067	5.906	5.866-6.260	M16x1	4.5	.846	1	18.0
	25	77130	E3416560025100	3.937	1.890	2.354	–	7.945	2.441	1.850	2.303	–	1.693-2.087	M16x1	4.5	.984	1	9.8
	25	77138	E3416560025160	6.299	1.890	2.327	3.839	10.307	4.803	1.850	2.303	4.331	4.449-4.055	M16x1	4.5	.984	1	15.4
25	77146	E3416560025200	7.874	1.890	2.327	3.839	11.882	6.378	1.850	2.303	5.906	6.024-5.630	M16x1	4.5	.984	1	18.7	
32	77131	E3416560032105	4.134	1.890	2.386	–	8.142	2.638	2.008	2.461	–	1.732-2.126	M16x1	4.5	.984	1	9.7	
32	77139	E3416560032160	6.299	1.890	2.327	3.839	10.307	4.803	2.008	2.461	4.331	3.898-4.291	M16x1	4.5	.984	1	15.1	
32	77147	E3416560032200	7.874	1.890	2.327	3.839	11.882	6.378	2.008	2.461	5.906	5.472-5.866	M16x1	4.5	.984	1	18.4	

Spare Parts

For d	Sealing plugs	Stop screw
6	90AI03	19BDR05165
8	90AI03	19BDR06165
10	90AI03	19BDR08165
12	90AI03	19BDR10165
16	90AI03	19BDR12165
20-32	90AI04	19BDR16165

Accessories

For d	Balancing screws
6	90ZQ01
8	90ZQ01
10	90ZQ01
12	90ZQ01
16	90ZQ01
20-32	90ZQ01

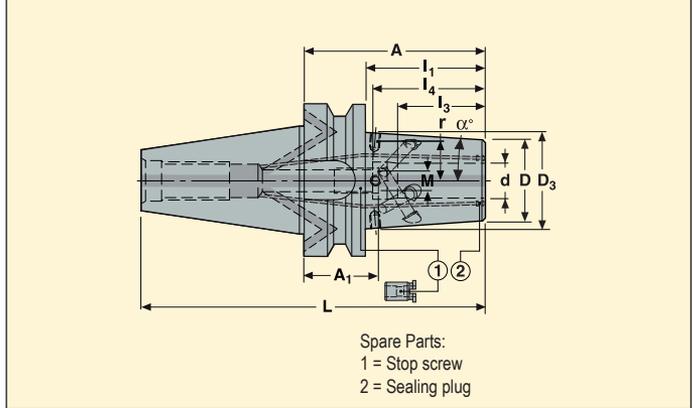
Please check availability in current price and stock-list.

EPB 5600P Safe-Lock™ – Shrinkfit holders, reinforced and with tool pull-out protection

BT Taper-Face – ADB



- With Safe-Lock™ tool pull-out protection system
- Reinforced design of EPB 5600
- Run-out .0001" (2.5 µm) maximum at 3xd
- With coolant supply channels towards the tool (plugged)



Taper	d mm	EDP No.	Part No.	Dimensions in inch								M mm	α°	r inch	Balancing	lbs
				A	D	D ₃	L	I ₁	I ₃	I ₄	A ₁ min-max					
BT TF40 ADB	12	84225	E321456001270P	2.756	1.063	1.331	5.331	1.693	1.339	1.870	0.94-1.28	M10x1	4.5	0.531	1	2.6
	16	84226	E321456001675P	2.953	1.299	1.598	5.528	1.890	1.535	1.988	1.02-1.34	M12x1	4.5	0.669	1	2.9
	20	84227	E321456002075P	2.953	1.732	2.031	5.528	1.890	1.614	2.067	0.94-1.26	M16x1	4.5	0.846	1	3.5
	25	84228	E321456002585P	3.346	1.890	2.328	5.921	2.283	1.850	2.303	1.10-1.42	M16x1	4.5	0.984	1	3.7
BT TF50 ADB	12	84229	E3216560012100P	3.937	1.063	1.449	7.945	2.441	1.339	1.870	2.13-2.46	M10x1	4.5	0.531	1	9.0
	16	84230	E3216560016100P	3.937	1.299	1.685	7.945	2.441	1.535	1.988	2.01-2.32	M12x1	4.5	0.669	1	9.3
	20	84231	E3216560020100P	3.937	1.732	2.118	7.945	2.441	1.614	2.067	1.93-2.24	M16x1	4.5	0.846	1	9.9
	25	84232	E3216560025100P	3.937	1.890	2.276	7.945	2.441	1.850	2.303	1.69-2.01	M16x1	4.5	0.984	1	9.9
	32	84233	E3216560032105P	4.134	1.890	2.303	8.142	2.638	2.008	2.461	1.73-2.13	M16x1	4.5	0.984	1	9.9

Spare Parts

For d	Plug	Sealing plugs	Stop screw
BT TF40, 12	950A0406	90AI03	-
BT TF40, 16	950A0406	90AI03	-
BT TF40, 20-25	950A0406	90AI04	19BDR16165
BT TF50, 12	950A0606	90AI03	-
BT TF50, 16	950A0606	90AI03	-
BT TF50, 20-32	950A0606	90AI04	19BDR16165

Accessories

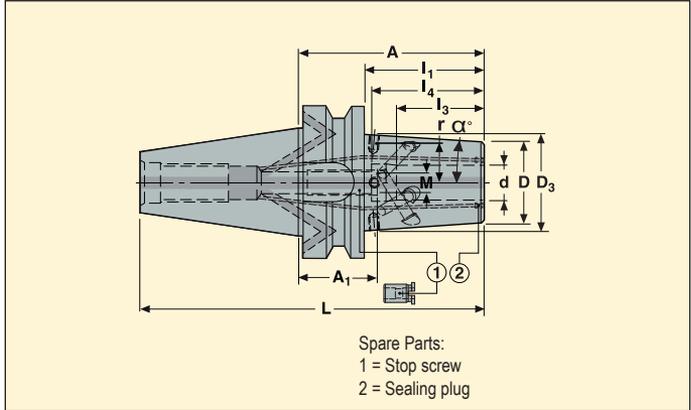
For d	Balancing screws
BT TF40, 12	90ZQ01
BT TF40, 16	90ZQ01
BT TF40, 20-25	90ZQ01
BT TF50, 12	90ZQ01
BT TF50, 16	90ZQ01
BT TF50, 20-32	90ZQ01

Please check availability in current price and stock-list

(-) For d 12 and 16 mm, stop screw not removable/replaceable by the user, please request a repair process



- Run-out .0001" (2.5 µm) maximum at 3rd
- With Safe-Lock tool pull-out protection system
- Reinforced design of EPB 5600
- With coolant supply channels towards the tool (plugged)



Taper	d mm	EDP No.	Part No.	Dimensions in inch								M mm	α°	r inch	Balancing	lbs
				A	D	D ₃	L	I ₁	I ₃	I ₄	A ₁ min-max					
BT40 ADB	12	92492	E341456001270P	2.756	1.063	1.331	5.331	1.693	1.339	1.870	0.945-1.280	M10x1	4.5	0.531	1	2.6
	16	92493	E341456001675P	2.953	1.299	1.598	5.528	1.890	1.535	1.988	1.024-1.339	M12x1	4.5	0.669	1	2.9
	20	92494	E341456002075P	2.953	1.732	2.031	5.528	1.890	1.614	2.067	0.945-1.260	M16x1	4.5	0.846	1	3.3
	25	92495	E341456002585P	3.346	1.969	2.328	5.921	2.283	1.850	2.303	1.102-1.417	M16x1	4.5	0.984	1	4.0
BT50 ADB	12	92496	E3416560012100P	3.937	1.063	1.449	7.945	2.441	1.339	1.870	2.126-2.461	M10x1	4.5	0.531	1	8.8
	16	92497	E3416560016100P	3.937	1.299	1.685	7.945	2.441	1.535	1.988	2.008-2.323	M12x1	4.5	0.669	1	9.0
	20	92498	E3416560020100P	3.937	1.732	2.118	7.945	2.441	1.614	2.067	1.929-2.244	M16x1	4.5	0.846	1	9.7
	25	92499	E3416560025100P	3.937	1.890	2.354	7.945	2.441	1.850	2.303	2.087-1.614	M16x1	4.5	0.984	1	9.9
	32	92500	E3416560032105P	4.134	1.890	2.386	8.142	2.638	2.008	2.461	1.732-2.126	M16x1	4.5	0.984	1	9.7

Spare Parts

For d	Sealing plugs	Stop screw
12-16	90AI03	**
20-32	90AI04	19BDR16165

Accessories

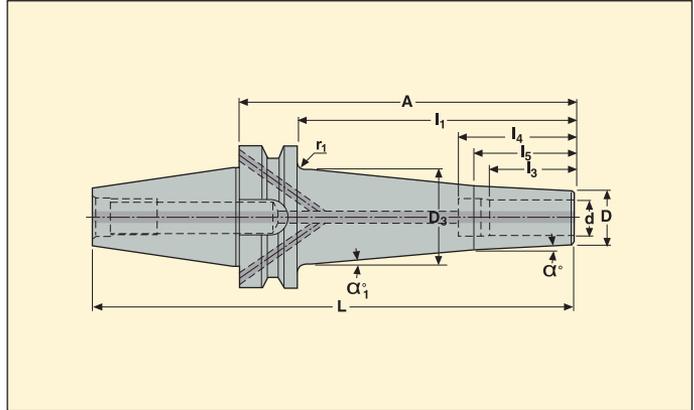
For d	Balancing screws
12-16	90ZQ01
20-32	90ZQ01

Please check availability in current price and stock-list.

** For d 12 and 16 mm, stop screw not removable/replaceable by the user, please request a repair process



• Run-out .0001" (2.5 µm) maximum at 3xd



Taper	d mm	EDP No.	Part No.	Dimensions in inch								α°	α_1°	r ₁ mm	Balancing	lbs
				A	D	D ₃	L	I ₁	I ₃	I ₄	I ₅					
BT40 ADB	3	05409	E341458010390	3.543	0.354	0.748	6.118	2.480	0.512	–	0.984	3	5	0.276	1	2.2
	3	05828	E3414580103140	5.512	0.354	1.063	8.087	4.449	0.512	–	0.984	3	5	0.276	1	2.5
	4	05410	E341458010490	3.543	0.394	0.787	6.118	2.480	0.591	–	0.984	3	5	0.276	1	2.2
	4	05829	E3414580104140	5.512	0.394	1.102	8.087	4.449	0.591	–	0.984	3	5	0.276	1	2.5
	5	05830	E3414580105140	5.512	0.433	1.142	8.087	4.449	0.709	–	0.984	3	5	0.276	1	2.6
	6	05411	E341458010690	3.543	0.472	0.827	6.118	2.480	1.024	1.575	1.260	3	5	0.276	1	2.2
	6	05831	E3414580106140	5.512	0.472	1.181	8.087	4.449	1.024	1.575	1.260	3	5	0.276	1	2.6
	8	05412	E341458010890	3.543	0.630	0.984	6.118	2.480	1.181	1.732	1.417	3	5	0.276	1	2.3
	8	05832	E3414580108140	5.512	0.630	1.339	8.087	4.449	1.181	1.732	1.417	3	5	0.276	1	2.8
	10	05413	E341458011090	3.543	0.709	1.063	6.118	2.480	1.260	1.772	1.496	3	5	0.276	1	2.3
	10	05833	E3414580110160	6.299	0.709	1.535	8.874	5.236	1.260	1.772	1.496	3	5	0.276	1	3.3
	12	05414	E341458011290	3.543	0.787	1.142	6.118	2.480	1.339	1.811	1.575	3	5	0.276	1	2.4

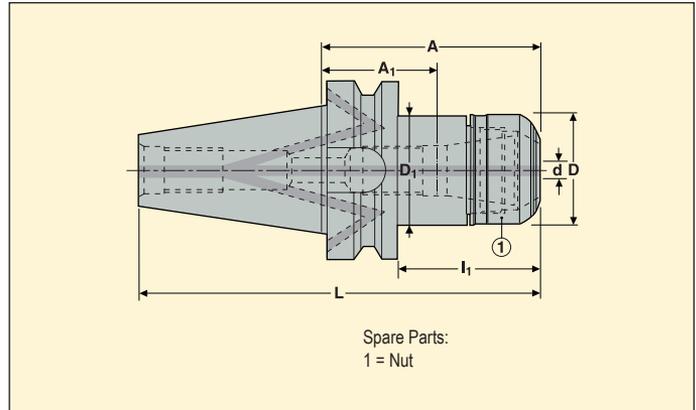
Please check availability in current price and stock-list.
For Shrinkfit extensions, see page(s) 362-363.

EPB 5672 – High precision collet chucks

BT Taper-Face – ADB



- Run-out .0001" (2.5 μm) maximum at 3xd
- High transmittable torque
- High RPM suitable



Taper	Capacity d inch	EDP No.	Part No.	Chuck & Collet Size	Dimensions in inch						Balancing	lbs
					A	D	D ₁	L	l ₁	A ₁ min-max*		
BT TF40 ADB	0.039-0.394	30287	E3214567216160	HP 16	6.299	1.181	1.181	8.874	5.236	4.528-5.118	1	3.5
	0.039-0.394	30185	E321456721670	HP 16	2.756	1.181	1.181	5.331	1.693	0.984-1.575	1	2.4
	0.079-0.630	30288	E3214567225160	HP 25	6.299	1.575	1.575	8.874	5.236	4.173-4.803	1	4.4
	0.079-0.630	30186	E321456722570	HP 25	2.756	1.575	1.575	5.331	1.693	0.630-1.260	1	2.6
BT TF50 ADB	0.039-0.394	30289	E3216567216100	HP 16	3.937	1.181	1.181	6.512	2.441	2.165-2.756	1	8.8
	0.039-0.394	30290	E3216567216160	HP 16	6.299	1.181	1.181	8.874	4.803	4.528-5.118	1	9.3
	0.079-0.787	30266	E3216567232100	HP 32	3.937	1.969	1.969	7.945	2.441	1.417-2.047	1	9.0
	0.079-0.787	30291	E3216567232160	HP 32	6.299	1.969	1.969	8.874	4.803	3.780-4.409	1	11.2

For ER HP collets type 5672, see page(s) 371-376.

* A₁ setting length onto stop screw when possible, or total available setting length for chucks without thread for stop screw.

Spare Parts

For size	Nut	Plug
BT TF40, HP 16	08B567216	950A0406
BT TF50, HP 16	08B567216	950A0606
HP 25	08B567225	950A0406
HP 32	08B567232	950A0606

Accessories**

For size	Socket	Spanner	Stop screw	Torque key
BT TF40, HP 16	03EF567216	03B567216	19B58711	03DYD010100
BT TF50, HP 16	03EF567216	03B567216	19B58711	03DYD010100
HP 25	03EF567225	03B567225	19B58718	03DYD020200
HP 32	03EF567232	03B567232	19B58722	03DYD020200

Please check availability in current price and stock-list.

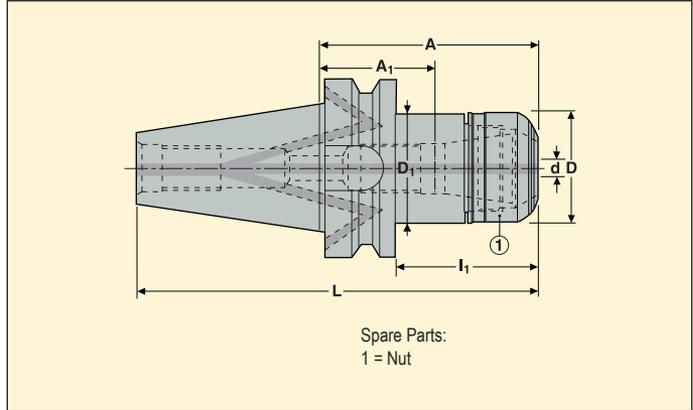
** When using a stop screw, its tapered contact onto the tool shank can increase the tool run-out defect. For tightening torque, see page 38.

EPB 5672 – High precision collet chucks

BT JIS B 6339-AD/ADB



- Run-out .0001" (2.5 µm) maximum at 3xd
- High transmittable torque
- High RPM suitable



Taper	Capacity d inch	EDP No.	Part No.	Chuck & Collet Size	Dimensions in inch						Balancing	lbs
					A	D	D ₁	L	I ₁	A ₁ min-max*		
BT30 AD	0.039-0.276	84774	E404056721150	HP 11	1.969	0.630	0.630	3.874	1.102	0.236-1.260	1	1.1
	0.039-0.394	09285	E341456721670	HP 16	2.756	1.181	1.181	5.331	1.693	0.984-1.575	1	2.5
BT40 ADB	0.039-0.394	09286	E3414567216160	HP 16	6.299	1.181	1.181	8.874	5.236	4.528-5.118	1	3.4
	0.079-0.630	09287	E341456722570	HP 25	2.756	1.575	1.575	5.331	1.693	0.630-1.260	1	2.6
	0.079-0.630	09289	E3414567225160	HP 25	6.299	1.575	1.575	8.874	5.236	3.740-4.803	1	4.3
	0.079-0.787	09291	E341456723270	HP 32	2.756	1.969	1.969	5.331	1.693	0.591-0.866	1	2.8
	0.079-0.630	09293	E3416567225100	HP 25	3.937	1.575	1.575	7.945	2.441	1.378-2.441	1	8.7
0.079-0.787	09294	E3416567232100	HP 32	3.937	1.969	1.969	7.945	2.441	1.417-2.047	1	9.1	

For ER HP collets type 5672, see page(s) 371-376.

* A1 setting length onto stop screw when possible, or total available setting length for chucks without thread for stop screw.

Spare Parts

For size	Nut
HP 11	08B567211
HP 16	08B567216
HP 25	08B567225
HP 32	08B567232

Accessories**

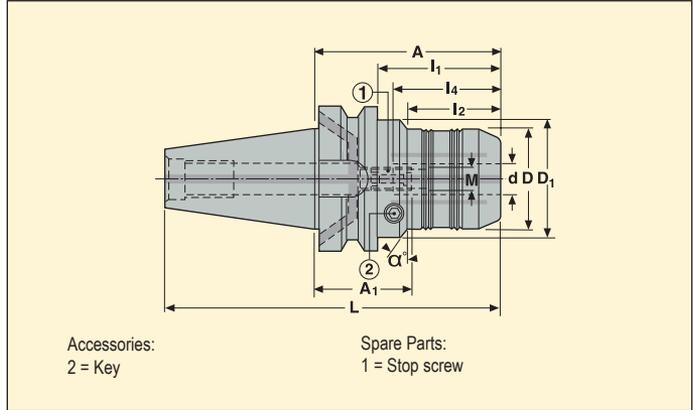
For size	Socket	Spanner	Stop screw	Torque key
HP 11	03EF567211	03B567211	19B5870812	03DYD010100
HP 16	03EF567216	03B567216	19B58711	03DYD010100
HP 25	03EF567225	03B567225	19B58718	03DYD020200
HP 32	03EF567232	03B567232	19B58722	03DYD020200

Please check availability in current price and stock-list.

** When using a stop screw, its tapered contact onto the tool shank can increase the tool run-out defect. For tightening torque, see page 38.



- Run-out .00015" (4 μm) maximum at 3xd



Taper	d mm	EDP No.	Part No.	Dimensions in inch								M mm	α°	Balancing	lbs
				A	D	D ₁	L	I ₁	I ₂	I ₄	A ₁ min-max				
BT40 ADB	12	84300	E341458351275	2.953	1.890	2.067	5.528	1.890	1.496	1.850	1.102-1.496	M10	30	1	3.4
	20	84312	E341458352085	3.346	2.461	–	5.921	2.283	–	2.047	1.299-1.693	M10	–	1	4.9
BT50 ADB	12	84319	E341658351275	2.953	1.890	–	6.961	1.457	–	1.850	1.102-1.496	M10	–	1	8.8
	20	84320	E341658352085	3.346	2.461	–	7.354	1.850	–	2.047	1.299-1.693	M10	–	1	10.4
	32	84323	E341658353290	3.543	3.150	–	7.551	2.047	–	2.480	1.063-1.457	M10	–	1	11.7

For reduction sleeves, see page(s) 364-366. For control gauges, see page(s) 367.

Spare Parts

For d	Stop screw
12-32	19LS1016A

Accessories

For d	Locking key
12-32	03HXL06

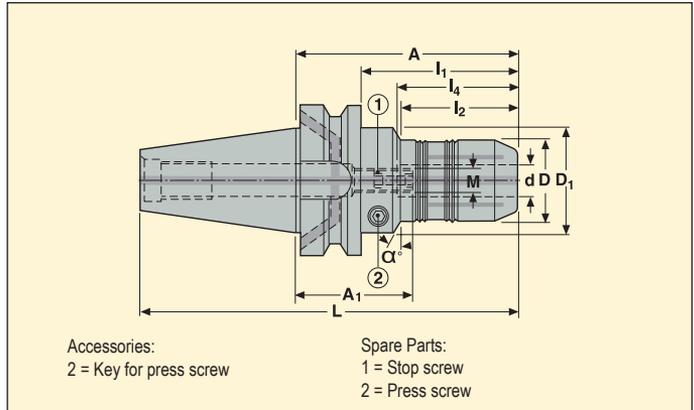
Please check availability in current price and stock-list.

EPB 5834 – Hydraulic chucks – Metric

BT JIS B 6339-ADB



• Run-out .00015" (4 μm) maximum at 3xd



Taper	d mm	EDP No.	Part No.	Dimensions in inch								M mm	α°	Balancing	lbs
				A	D	D ₁	L	I ₁	I ₂	I ₄	A ₁ min-max				
BT40 ADB	6	38906	E341458340690	3.543	1.024	1.969	6.118	2.480	0.906	1.496	2.047-2.441	M5	30	1	3.4
	8	38907	E341458340890	3.543	1.102	1.969	6.118	2.480	0.945	1.496	2.047-2.441	M5	30	1	3.4
	10	38908	E341458341090	3.543	1.181	1.969	6.118	2.480	1.339	1.654	1.890-2.283	M8	30	1	3.2
	12	38909	E341458341290	3.543	1.260	1.969	6.118	2.480	1.575	1.850	1.693-2.087	M10	30	1	3.1
	14	38910	E341458341490	3.543	1.339	1.969	6.118	2.480	1.575	1.850	1.693-2.087	M10	30	1	3.2
	16	38911	E341458341690	3.543	1.496	1.969	6.118	2.480	1.811	1.969	1.575-1.969	M10	30	1	3.3
	20	38914	E341458342090	3.543	1.654	1.969	6.118	2.480	1.850	2.047	1.890-2.283	M10	30	1	3.3
	25	33460	E3414583425105	4.134	2.283	2.756	6.709	3.071	1.969	2.283	1.850-2.244	M10	45	1	5.1
BT50 ADB	12	39123	E3416583412105	4.134	1.260	1.969	8.142	2.638	1.575	1.850	2.283-2.677	M10	30	1	8.8
	20	38920	E3416583420105	4.134	1.654	1.969	8.142	2.638	1.850	2.047	2.087-2.480	M10	30	1	8.9
	25	33461	E3416583425110	4.331	2.283	2.756	8.339	2.835	1.969	2.283	2.047-2.441	M10	30	1	10.5
	32	38922	E3416583432115	4.528	2.520	2.756	8.535	3.031	1.969	2.480	2.047-2.441	M10	30	1	11.0

For reduction sleeves, see page(s) 364-366. For control gauges, see page(s) 367.

Spare Parts

For d	Press screw	Stop screw
6-8	950AF0810008	19LS0520A
10	950AF0810008	19LS0820A
12	950AF0810008	19LS1020A
14-32	950AF1010010	19LS1020A

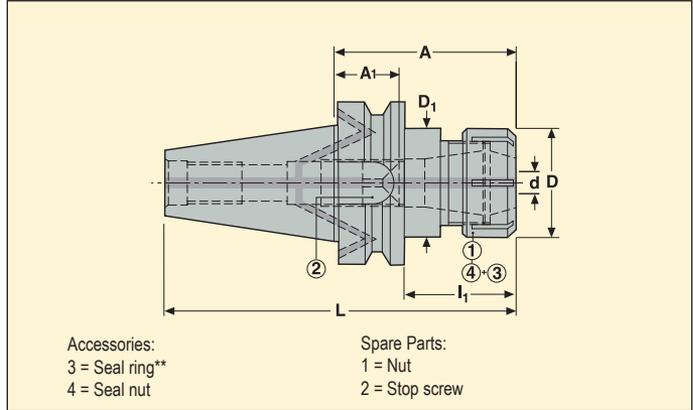
Accessories

For d	Locking key
6-8	H04-4
10	H04-4
12	H04-4
14-32	H04-4

Please check availability in current price and stock-list.



• Run-out .0004" (10 µm) maximum at 3xd



Taper	Capacity d inch	EDP No.	Part No.	Chuck & Collet Size	Dimensions in inch						Balancing	lbs
					A	D	D ₁	L	I ₁	A ₁ min-max		
BT40 ADB	0.020-0.394	65980	E341456751670	ER 16	2.756	1.260	1.260	5.331	1.693	0.984-1.575	1	2.5
	0.020-0.394	65972	E3414567516120	ER 16	4.724	1.260	1.260	7.299	3.661	2.953-3.543	1	3.1
	0.039-0.630	65996	E341456752570	ER 25	2.756	1.654	1.654	5.331	1.693	0.079-1.260	1	2.6
	0.039-0.630	65987	E3414567525120	ER 25	4.724	1.654	1.654	7.299	3.661	2.047-3.228	1	3.7
	0.079-0.787	66000	E341456753270	ER 32	2.756	1.969	1.969	5.331	1.693	0-1.063	1	2.8
	0.079-0.787	65999	E3414567532120	ER 32	4.724	1.969	1.969	7.299	3.661	1.299-3.031	1	4.3
	0.118-1.024	66009	E3414567540100	ER 40	3.937	2.480	2.480	6.512	2.874	1.063-1.969	1	4.3
BT40 AD	0.118-1.024	65971	E404156754075	ER 40*	2.953	2.480	2.480	5.528	1.890	0.118-0.984	1	3.1
BT50 ADB	0.020-0.394	66012	E3416567516120	ER 16	4.724	1.260	1.260	8.732	3.228	2.992-3.543	2	8.5
	0.039-0.630	66015	E341656752590	ER 25	3.543	1.654	1.654	7.551	2.047	0.866-2.047	2	8.4
	0.079-0.787	66035	E341656753290	ER 32	3.543	1.969	1.969	7.551	2.047	0-1.850	2	8.6
	0.079-0.787	66034	E3416567532150	ER 32	5.906	1.969	1.969	9.913	4.409	1.142-4.213	2	10.4
	0.118-1.024	66036	E3416567540100	ER 40	3.937	2.480	2.480	7.945	2.441	0.630-1.969	2	9.5

For ER collets, see page(s) 378-381, ER extensions, see page(s) 377.

* Chuck ER40/A75 is type AD (E4041) without flange coolant through, instead type ADB (E3414)

Spare Parts

For size	Nut	Stop screw
ER 16	08B587516X	19B58711
ER 25	08B587525X	19B58718
ER 32	08B587532X	19B58722
ER 40	08B587540X	19B58730

Accessories**

For size	Seal nut	Seal ring	Spanner
ER 16	08B587516IC	01B58751605	03B587516
ER 25	08B587525IC	01B58752505	03B587525
ER 32	08B587532IC	01B58753205	03B587532
ER 40	08B587540IC	01B58754005	03B587540
ER 40*	08B587540IC	01B58754005	03B587540

Please check availability in current price and stock-list.

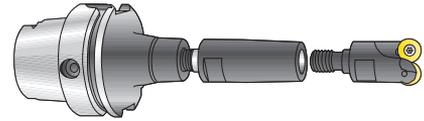
** For ER sealing rings, see page(s) 382.

The modular milling solution for medium size cutters

Combimaster tools achieve optimum access and shortest overhang.

Stability, precision and balance are improved vs. classic assemblies, e.g. Weldon or collet chucks. Extensions and reducers help realize optimum tool length.

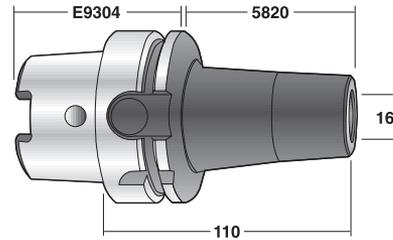
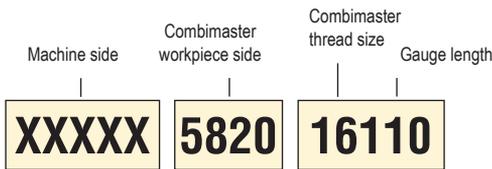
Modular: The Graflex/Combimaster and Seco-Capto/Combimaster arbors allow you to mix systems. Combimaster/Shrinkfit holders are also available to hold small tools.



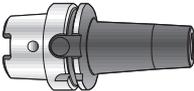
Balancing quality

Most Combimaster holders are fine balanced. Steadyline Combimaster holders are pre-balanced. See Product pages.

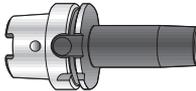
Combimaster holders, code key



Combimaster holders, workpiece side types



5820
Entirely tapered



5821
Cylindrical and front tapered*

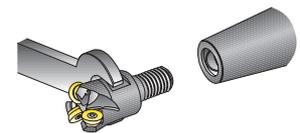
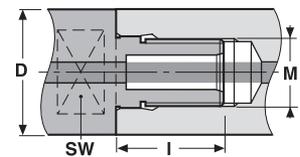


5822
Entirely cylindrical

* See specific shape in Product pages.

Recommended Combimaster connections tightening torques

Combimaster size M	Tightening torque ft/lbs (Nm)	Tightening key size SW (mm)	I (mm)	D (mm)
M6	7.38 (10)	9	13.50	11.0
M8	18.44 (25)	11	17.75	13.5
M10	29.50 (40)	15	18.75	18.5
M12	44.25 (60)	19	21.75	23.0
M16	59.00 (80)	26	22.75	30.0
M20	88.51 (120)	32	27.00	36.5



Combimaster cutter heads

Note: Combimaster cutter heads are shown in Machining Navigator Milling.

Steadyline vibration damping Combimaster arbors

Steadyline Combimaster holders come in addition to the existing Steadyline shell mill holders.

Combimaster assemblies achieve optimum access to the workpiece. Stability, precision and balance are improved vs. classic assemblies, e.g. Weldon or collet chucks. Steadyline vibration damping Combimaster holders are a patented solution to boost your productivity or offer you a solution in long overhang situations.

Steadyline Combimaster holders are available in several length projections, long (same length as the longest equivalent conventional Combimaster holders) and longer (adding longer projections to the range of conventional Combimaster holders).

Steadyline Combimaster holder types



EPB K820
Steadyline Combimaster
entirely tapered



EPB K821
Steadyline Combimaster
cylindrical and front tapered

EPB K820

Steadyline Combimaster holders are tapered to provide the best compromise between rigidity and accessibility to the workpiece.

EPB K821

Steadyline Combimaster holders have a cylindrical body profile for a slimmer access to the workpiece.

Steadyline Combimaster holders, main operating instructions

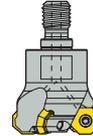
This summarizes the instructions delivered with the holders. To ensure optimal use of the Steadyline Combimaster holders, the detailed operating instructions delivered with the holder must be respected.

Note: The built-in damping system is ready to use, whatever the milling operation, the number of teeth in the cutter or the workpiece material.

Combimaster heads and intermediates

Combimaster holders with Steadyline vibration damping system are designed to directly hold Combimaster heads. Addition of Combimaster intermediates is not recommended, as it will reduce the damper's effect.

Note: Combimaster cutter heads are grouped and in each cutter family in Machining Navigator Milling.



Recommended cutting conditions and maximum temperature for Steadyline Combimaster holders

Make sure never to exceed the maximum RPM of the holder (indicated on the holder and listed in the Product pages).

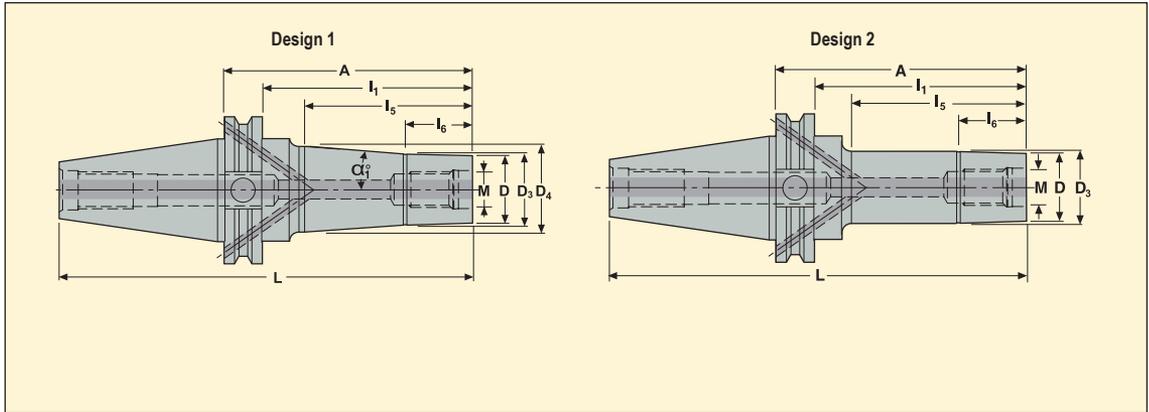
Inappropriate cutting conditions could cause vibrations of the milling assembly, this would prevent the damper operating properly and would damage the tool, the tool holder, the machine as well as the workpiece: set the cutting conditions in order to stay vibration free.

Optimal cutting conditions, selection procedure:

1. **Cutting speed V_c and feed f :** select the average values recommended for the cutter and inserts.
2. **The width of cut a_e and the depth of cut a_p are the parameters to fine tune.** It is possible to increase them inside cutter and inserts recommendations, while staying vibration free.

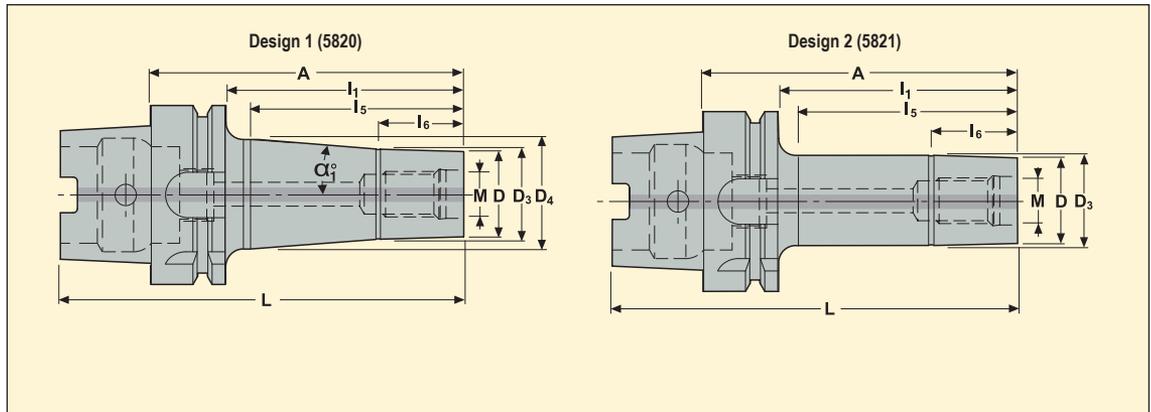
BEWARE: contrary to the use of classic long holders, the machining cannot be stabilized through additional radial force (e.g. by raising the feed).

Make sure the Steadyline Combimaster holder body never exceeds a maximum temperature of 176°F when in use.



Taper	Connecting thread size (M)	EDP No.	Part No.	Dimensions in inch								α_1°	Design	Balancing	lbs	
				A	L	I ₁	I ₅	I ₆	D	D ₃	D ₄					
CAT40 ADB	M6	82322	E250258200660	2.36	5.06	1.61	0.98	0.39	0.43	0.46	0.57	5.33	1	1	2.2	
	M8	82323	E250258200860	2.36	5.06	1.61	0.98	0.39	0.53	0.62	0.73	5.3	1	1	2.2	
	M10	82324	E250258201040	1.57	4.27	0.82	0.20	0.20	0.73	0.78	0.78	6.8	1	1	2.2	
	M10	82260	E250258201085	3.35	6.04	2.60	1.97	0.59	0.73	0.78	0.96	3.9	1	1	2.4	
	M12	82325	E250258201240	1.57	4.27	0.82	0.20	0.20	0.91	1.01	1.01	9.6	1	1	2.2	
	M12	82262	E250258211285	3.35	6.04	2.60	1.97	0.79	0.91	0.93	0.93	-	2	1	4.4	
	M16	82326	E250258201640	1.57	4.27	0.82	0.20	0.20	1.18	1.29	1.29	9.6	1	1	2.2	
	M16	82265	E2502582116135	5.31	8.01	4.56	3.94	1.18	1.18	1.20	1.20	-	2	1	5.7	
	M16	82264	E250258211685	3.35	6.04	2.60	1.97	0.79	1.18	1.20	1.20	-	2	1	4.9	
	M20	58093	E260258202040	1.57	4.27	0.82	0.78	0.20	1.44	1.48	1.48	5.7	1	1	2.0	
	M20	58101	E260258212085	3.35	6.04	2.59	2.44	0.79	1.44	1.46	-	-	2	1	2.6	
	M20	58102	E2602582120135	5.31	8.01	4.56	4.44	0.79	1.44	1.46	-	-	2	1	3.5	
CAT50 ADB	M12	82333	E2504582012145	5.71	9.71	4.96	4.33	1.18	0.91	0.97	1.52	4.9	1	1	7.7	
	M12	82331	E250458201295	3.74	7.75	2.99	2.36	0.98	0.91	0.97	1.20	4.7	1	1	7.1	
	M16	82335	E2504582016145	5.71	9.71	4.96	3.94	1.18	1.18	1.25	1.93	7	1	1	8.4	
	M16	82336	E2504582016195	7.68	11.68	6.93	5.91	1.38	1.18	1.25	1.97	4.55	1	1	9.7	
	M16	82334	E250458201695	3.74	7.75	2.99	1.97	0.79	1.18	1.25	1.67	10.2	1	1	7.5	
	M20	58103	E260458202095	3.74	7.75	2.99	1.97	0.79	1.44	1.48	1.91	6.9	1	1	7.3	
	M20	58104	E2604582020145	5.71	9.72	4.96	3.94	1.18	1.44	1.48	2.15	4.1	1	1	8.6	
	M20	58105	E2604582020195	7.68	11.69	6.93	5.91	0.79	1.44	1.48	2.20	10.4	1	1	10.1	

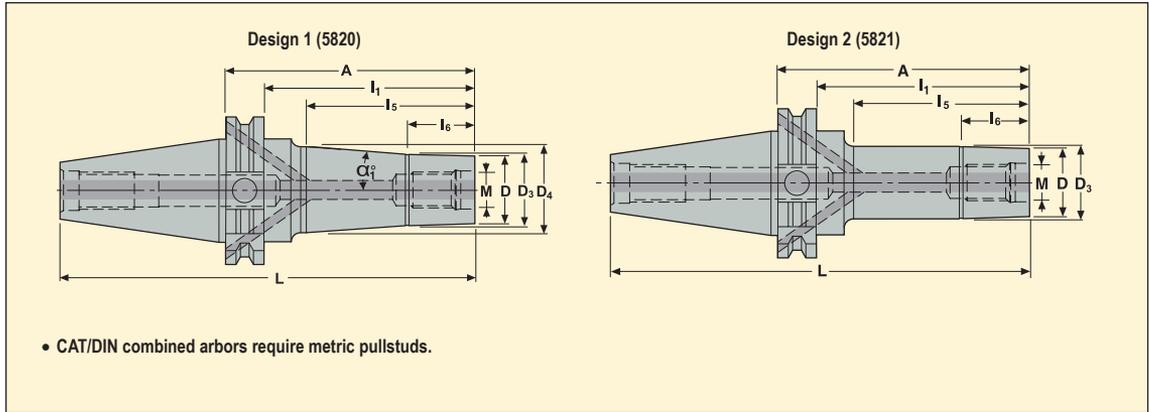
Please check availability in current price and stock-list.



Taper	Connecting thread size (M)	EDP No.	Part No.	Dimensions in inch									α_1°	Design	Balancing	lbs
				A	L	I ₁	I ₅	I ₆	D	D ₃	D ₄					
HSK-A40	M6	43805	E930258200645	1.77	2.56	0.98	0.59	0.39	0.43	0.46	0.53	10.2	1	1	0.7	
HSK-A63	M8	16352	E930458200860	2.36	3.62	1.34	0.98	0.39	0.53	0.62	0.73	5.3	1	1	1.5	
	M8	16353	E930458200885	3.35	4.61	2.32	1.97	0.59	0.53	0.62	0.79	3.5	1	1	1.8	
	M10	17259	E930458201060	2.36	3.62	1.34	0.98	0.39	0.73	0.78	0.91	6.3	1	1	1.8	
	M10	17262	E930458201085	3.35	4.61	2.32	1.97	0.59	0.73	0.78	0.96	3.9	1	1	1.8	
	M10	16355	E9304582010135	5.31	6.57	4.29	3.94	0.79	0.73	0.78	1.08	2.8	1	1	2.2	
	M10	16356	E9304582010185	7.28	8.54	6.26	5.91	0.79	0.73	0.78	1.46	3.8	1	1	3.1	
	M10	17297	E930458211060	2.36	3.62	1.34	0.98	0.39	0.73	0.73	–	–	2	1	1.5	
	M12	17273	E930458201260	2.36	3.62	1.34	0.98	0.39	0.91	0.97	1.12	7.2	1	1	1.8	
	M12	17274	E930458201285	3.35	4.61	2.32	1.97	0.79	0.91	0.97	1.18	5	1	1	2.0	
	M12	17263	E9304582012110	4.33	5.59	3.31	2.95	0.98	0.91	0.97	1.24	3.9	1	1	2.2	
	M12	17268	E9304582012135	5.31	6.57	4.29	3.94	1.18	0.91	0.97	1.30	3.4	1	1	2.6	
	M12	16357	E9304582012185	7.28	8.54	6.26	5.91	1.18	0.91	0.97	1.67	4.2	1	1	3.7	
	M12	17299	E930458211260	2.36	3.62	1.34	0.98	0.39	0.91	0.93	–	–	2	1	1.8	
	M12	17302	E930458211285	3.35	4.61	2.32	1.97	0.79	0.91	0.93	–	–	2	1	1.8	
	M16	17292	E930458201660	2.36	3.62	1.34	0.98	0.39	1.18	1.25	1.40	6.9	1	1	2.0	
	M16	17293	E930458201685	3.35	4.61	2.32	1.97	0.79	1.18	1.25	1.46	5	1	1	2.4	
	M16	17276	E9304582016110	4.33	5.59	3.31	2.95	0.98	1.18	1.25	1.52	3.9	1	1	2.6	
	M16	17279	E9304582016135	5.31	6.57	4.29	3.94	1.18	1.18	1.25	1.57	3.4	1	1	3.1	
	M16	17280	E9304582016185	7.28	8.54	6.26	5.91	1.38	1.18	1.25	1.97	4.5	1	1	4.6	
	M16	16362	E930458211685	3.35	4.61	2.32	1.97	0.79	1.18	1.20	–	–	2	1	2.2	
M16	16363	E9304582116110	4.33	5.59	3.31	2.95	0.98	1.18	1.20	–	–	2	1	2.4		
M16	16364	E9304582116135	5.31	6.57	4.29	3.94	1.18	1.18	1.20	–	–	2	1	2.6		
M20	47424	E930458202065	2.56	3.82	1.54	1.18	0.39	1.44	1.48	1.75	6.4	1	1	2.2		
M20	10445	E9304582020110	4.33	5.59	3.31	2.95	0.98	1.44	1.48	1.75	6.5	1	1	3.1		
M20	47425	E9304582120110	4.33	5.59	3.31	2.95	0.98	1.44	1.46	–	–	2	1	2.6		
HSK-A100	M8	17370	E930658200885	3.35	5.31	2.20	1.97	0.59	0.53	0.62	0.96	7.2	1	1	4.6	
	M10	17374	E930658201085	3.35	5.31	2.20	1.97	0.59	0.73	0.78	1.14	7.6	1	1	4.9	
	M10	17373	E9306582010110	4.33	6.30	3.19	2.95	0.79	0.73	0.78	1.28	6.6	1	1	5.1	
	M12	17396	E930658201285	3.35	5.31	2.20	1.97	0.79	0.91	0.97	1.38	9.7	1	1	5.1	
	M12	17377	E9306582012110	4.33	6.30	3.19	2.95	0.98	0.91	0.97	1.50	7.6	1	1	5.3	
	M12	17378	E9306582012135	5.31	7.28	4.17	3.94	1.18	0.91	0.97	1.67	6.6	1	1	5.7	
	M12	17383	E9306582012185	7.28	9.25	6.14	5.91	1.18	0.91	0.97	1.67	4.2	1	1	6.4	
	M16	17414	E930658201685	3.35	5.31	2.20	1.97	1.18	1.18	1.25	1.67	10.2	1	1	5.3	
	M16	17407	E9306582016135	5.31	7.28	4.17	3.94	1.18	1.18	1.25	1.93	7	1	1	6.4	
	M16	17409	E9306582016185	7.28	9.25	6.14	5.91	1.38	1.18	1.25	1.97	4.5	1	1	7.3	
	M16	17410	E9306582016235	9.25	11.22	8.11	7.87	1.38	1.18	1.25	2.17	4	1	1	9.0	
	M20	47426	E930658202075	2.95	4.92	1.81	1.57	0.79	1.44	1.48	1.87	14.1	1	1	5.3	
	M20	06666	E9306582020135	5.31	7.28	4.17	3.94	1.18	1.44	1.48	2.15	6.9	1	1	6.8	
	M20	47428	E9306582120110	4.33	6.30	3.19	2.95	0.98	1.44	1.46	–	–	2	1	5.7	

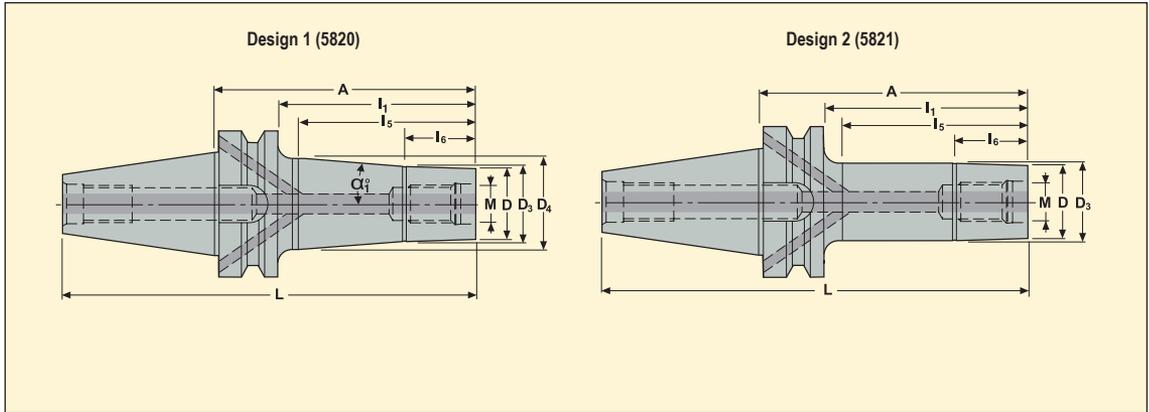
Please check availability in current price and stock-list.

For HSK sealing plugs, coolant tubes and tube spanners, see page(s) 357.



Taper	Connecting thread size (M)	EDP No.	Part No.	Dimensions in inch									α_1°	Design	Balancing	lbs
				A	L	I ₁	I ₅	I ₆	D	D ₃	D ₄					
DIN40 ADB/ CAT40	M6	43810	E347658200660	2.36	5.06	1.61	0.98	0.39	0.43	0.46	0.57	5.3	1	1	2.2	
	M8	16322	E347658200860	2.36	5.06	1.61	0.98	0.39	0.53	0.62	0.73	5.3	1	1	2.2	
	M10	19772	E347658201040	1.57	4.27	0.83	0.20	0.20	0.73	0.78	0.78	6.8	1	1	2.2	
	M10	17119	E347658201060	2.36	5.06	1.61	0.98	0.39	0.73	0.78	0.91	6.3	1	1	2.2	
	M10	17123	E347658201085	3.35	6.04	2.60	1.97	0.59	0.73	0.78	0.96	3.9	1	1	2.4	
	M10	16327	E3476582010135	5.31	8.01	4.57	3.94	0.79	0.73	0.78	1.08	2.8	1	1	2.9	
	M10	17162	E347658211060	2.36	5.06	1.61	0.98	0.39	0.73	0.73	–	–	2	1	2.2	
	M12	17126	E347658201240	1.57	4.27	0.83	0.20	0.20	0.91	0.97	0.97	9.6	1	1	2.2	
	M12	17127	E347658201260	2.36	5.06	1.61	0.98	0.39	0.91	0.97	1.12	7.2	1	1	2.4	
	M12	17148	E347658201285	3.35	6.04	2.60	1.97	0.79	0.91	0.97	1.18	5	1	1	2.6	
	M12	17124	E3476582012110	4.33	7.02	3.58	2.95	0.98	0.91	0.97	1.24	3.9	1	1	2.9	
	M12	16331	E3476582012185	7.28	9.98	6.54	5.91	1.18	0.91	0.97	1.67	4.2	1	1	4.0	
	M12	17185	E347658211260	2.36	5.06	1.61	0.98	0.39	0.91	0.93	–	–	2	1	2.4	
	M12	17188	E347658211285	3.35	6.04	2.60	1.97	0.79	0.91	0.93	–	–	2	1	2.4	
	M16	17153	E347658201640	1.57	4.27	0.83	0.20	0.20	1.18	1.25	1.25	9.6	1	1	2.2	
	M16	17154	E347658201660	2.36	5.06	1.61	0.98	0.39	1.18	1.25	1.40	7.2	1	1	2.4	
	M16	17156	E347658201685	3.35	6.04	2.60	1.97	0.79	1.18	1.25	1.46	5	1	1	2.9	
	M16	17149	E3476582016110	4.33	7.02	3.58	2.95	0.98	1.18	1.25	1.52	3.9	1	1	3.3	
M16	17151	E3476582016135	5.31	8.01	4.57	3.94	1.18	1.18	1.25	1.59	3.6	1	1	3.5		
M16	17152	E3476582016185	7.28	9.98	6.54	5.91	1.38	1.18	1.25	1.71	2.9	1	1	4.6		
M16	16332	E347658211685	3.35	6.04	2.60	1.97	0.79	1.18	1.20	–	–	2	1	2.6		
M16	16336	E3476582116110	4.33	7.02	3.58	2.95	0.98	1.18	1.20	–	–	2	1	2.9		
M16	16344	E3476582116135	5.31	8.01	4.57	3.94	1.18	1.18	1.20	–	–	2	1	3.3		
DIN50 ADB/ CAT50	M12	17200	E347858201295	3.74	7.74	2.99	1.97	0.79	0.91	0.97	1.38	9.7	1	1	7.3	
	M12	17191	E3478582012145	5.71	9.71	4.96	3.94	1.18	0.91	0.97	1.61	6.6	1	1	7.9	
	M12	17198	E3478582012195	7.68	11.68	6.93	5.91	1.18	0.91	0.97	1.67	4.2	1	1	8.6	
	M12	17199	E3478582012245	9.65	13.65	8.90	7.87	1.18	0.91	0.97	1.87	3.8	1	1	9.9	
	M16	17205	E347858201695	3.74	7.74	2.99	1.97	0.79	1.18	1.25	1.67	10.2	1	1	7.5	
	M16	17201	E3478582016145	5.71	9.71	4.96	3.94	1.18	1.18	1.25	1.93	7	1	1	9.0	
	M16	17202	E3478582016195	7.68	11.68	6.93	5.91	1.38	1.18	1.25	1.97	4.5	1	1	10.1	
	M16	17203	E3478582016245	9.65	13.65	8.90	7.87	1.38	1.18	1.25	2.17	4	1	1	11.0	
	M16	17204	E3478582016295	11.61	15.62	10.87	9.84	1.38	1.18	1.25	2.34	3.7	1	1	12.8	
DIN40 ADB	M20	47432	E346958212045	1.77	4.46	1.02	0.79	0.39	1.44	1.46	–	–	2	1	2.2	
	M20	47433	E3469582020110	4.33	7.02	3.58	2.95	0.98	1.44	1.48	1.75	4	1	1	3.5	
	M20	47434	E346958212085	3.35	6.04	2.59	2.36	0.79	1.44	1.46	–	–	2	1	2.6	
DIN50 ADB	M20	47436	E347158202095	3.74	7.75	2.99	2.56	0.98	1.44	1.48	1.99	9.3	1	1	7.1	
	M20	47438	E3471582020145	5.71	9.71	4.96	4.53	0.79	1.44	1.48	2.07	6.9	1	1	8.8	
	M20	47440	E3471582120110	4.33	8.34	3.58	3.15	0.98	1.44	1.46	–	–	2	1	7.1	

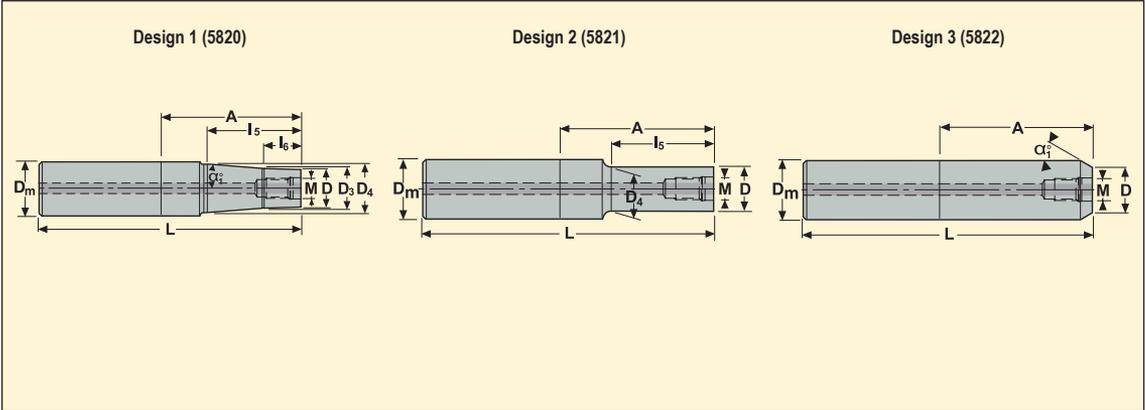
Please check availability in current price and stock-list.



Taper	Connecting thread size (M)	EDP No.	Part No.	Dimensions in inch										α ₁ °	Design	Balancing	lbs
				A	L	I ₁	I ₅	I ₆	D	D ₃	D ₄						
BT40 ADB	M6	43811	E341458200660	2.36	4.94	1.30	0.98	0.39	0.43	0.46	0.57	5.3	1	1	2.2		
	M10	16974	E341458201085	3.35	5.92	2.28	1.97	0.59	0.73	0.78	0.96	3.9	1	1	2.4		
	M10	16959	E3414582010135	5.31	7.89	4.25	3.94	0.79	0.73	0.78	1.08	2.8	1	1	2.9		
	M10	17043	E341458211060	2.36	4.94	1.30	0.98	0.39	0.73	0.78	-	-	2	1	2.2		
	M12	16993	E341458201240	1.57	4.15	0.51	0.20	0.20	0.91	0.97	0.97	9.6	1	1	2.2		
	M12	17001	E341458201260	2.36	4.94	1.30	0.98	0.39	0.91	0.97	1.12	7.2	1	1	2.4		
	M12	17007	E341458201285	3.35	5.92	2.28	1.97	0.79	0.91	0.97	1.18	5	1	1	2.6		
	M12	16975	E3414582012110	4.33	6.91	3.27	2.95	0.98	0.91	0.97	1.24	3.9	1	1	2.9		
	M12	16976	E3414582012135	5.31	7.89	4.25	3.94	1.18	0.91	0.97	1.30	3.4	1	1	3.1		
	M12	17044	E341458211260	2.36	4.94	1.30	0.98	0.39	0.91	0.93	-	-	2	1	2.4		
	M12	17051	E341458211285	3.35	5.92	2.28	1.97	0.79	0.91	0.93	-	-	2	1	2.4		
	M16	17036	E341458201640	1.57	4.15	0.51	0.20	0.20	1.18	1.25	1.25	9.6	1	1	2.4		
	M16	17038	E341458201660	2.36	4.94	1.30	0.98	0.39	1.18	1.25	1.40	7.2	1	1	2.6		
	M16	17041	E341458201685	3.35	5.92	2.28	1.97	0.79	1.18	1.25	1.46	5	1	1	2.9		
	M16	17008	E3414582016110	4.33	6.91	3.27	2.95	0.98	1.18	1.25	1.52	3.9	1	1	3.3		
	M16	17021	E3414582016135	5.31	7.89	4.25	3.94	1.18	1.18	1.25	1.59	3.6	1	1	3.7		
	M16	17034	E3414582016185	7.28	9.86	6.22	5.91	1.38	1.18	1.25	1.97	4.5	1	1	5.3		
	M20	47429	E341458212045	1.77	4.35	0.71	0.39	0.20	1.44	1.46	-	-	2	1	2.4		
	M20	06670	E3414582020110	4.33	6.91	3.27	2.95	0.98	1.44	1.48	1.75	4	1	1	3.7		
	M20	47430	E341458212085	3.35	5.92	2.28	1.97	0.79	1.44	1.46	-	-	2	1	3.1		
BT50 ADB	M12	17078	E341658201295	3.74	7.75	2.24	1.97	0.79	0.91	0.97	1.38	9.7	1	1	8.4		
	M12	17054	E3416582012145	5.71	9.72	4.21	3.94	1.18	0.91	0.97	1.61	6.6	1	1	9.0		
	M12	17058	E3416582012195	7.68	11.69	6.18	5.91	1.18	0.91	0.97	1.67	4.2	1	1	9.7		
	M16	17092	E341658201695	3.74	7.75	2.24	1.97	0.79	1.18	1.25	1.67	10.2	1	1	8.6		
	M16	17083	E3416582016145	5.71	9.72	4.21	3.94	1.18	1.18	1.25	1.93	7	1	1	9.7		
	M16	17084	E3416582016195	7.68	11.69	6.18	5.91	1.38	1.18	1.25	1.97	4.5	1	1	10.6		
	M16	17089	E3416582016245	9.65	13.65	8.15	7.87	1.38	1.18	1.25	2.17	4	1	1	11.9		
	M16	19869	E3416582016295	11.61	15.62	10.12	9.84	1.38	1.18	1.25	2.34	3.7	1	1	13.9		
	M20	06688	E341658202095	3.74	7.75	2.24	1.97	0.79	1.44	1.48	1.91	10.4	1	1	8.8		
	M20	06689	E3416582020145	5.71	9.72	4.21	3.94	1.18	1.44	1.48	2.15	6.9	1	1	10.1		
	M20	47431	E3416582120110	4.33	8.34	2.83	2.56	0.98	1.44	1.46	-	-	2	1	9.0		

Please check availability in current price and stock-list.

EPB BD/5820-5821-5822 – Combimaster cylindrical extensions, steel, heavy metal or carbide – inch

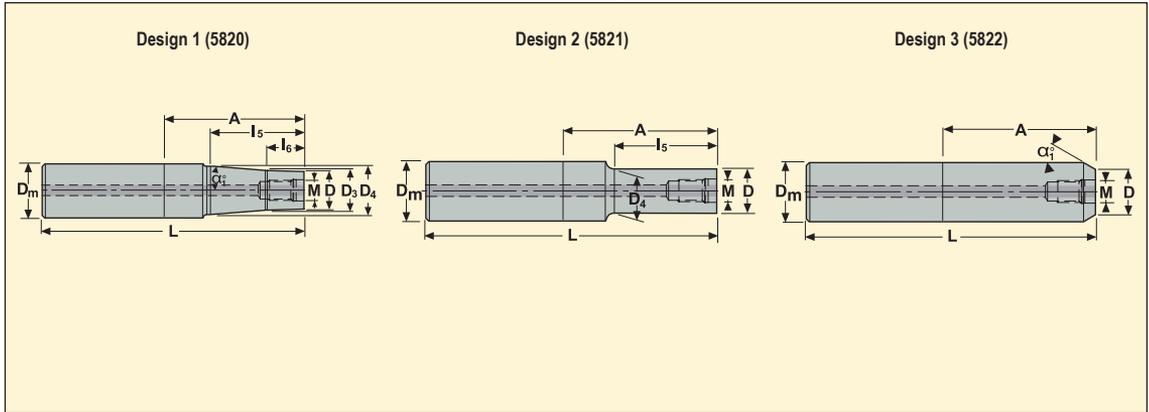


Cyl. Shank D _m	Connecting thread size (M)	EDP No.	Part No.	Dimensions in inch							α ₁ °	Design	Balancing	
				A	L	I ₅	I ₆	D	D ₃	D ₄				
0.625	M8	21915	BD115582208275	2.75	4.50	-	-	0.53	-	-	-	3	1	0.4
	M8	21916	BD115582208425E	4.25	6.00	-	-	0.53	-	-	-	3	1	0.9
0.750	M10	19924	BD119582210150	1.50	3.50	-	-	0.73	-	-	-	3	1	2.0
	M10	21917	BD119582210300	3.00	5.00	-	-	0.73	-	-	-	3	1	0.7
	M10	21918	BD119582210500E	5.00	7.00	-	-	0.73	-	-	-	3	1	1.5
1.000	M12	21919	BD125582212325	3.25	5.50	-	-	0.90	-	-	-	3	1	1.3
	M12	21921	BD125582212675E	6.75	9.00	-	-	0.90	-	-	-	3	1	3.3
1.250	M12	19927	BD131582012425	4.25	6.50	2.75	0.79	0.90	0.97	1.21	3.5	1	1	2.0
	M16	19929	BD131582116425	4.25	6.50	2.75	-	1.18	-	-	-	2	1	2.2
	M16	19930	BD131582116600	6.00	8.25	4.48	-	1.18	-	-	-	2	1	2.6
	M16	19931	BD131582116600D	6.00	8.25	4.48	-	1.18	-	-	-	2	1	5.7
	M16	21922	BD131582216375	3.75	5.95	-	-	1.18	-	-	-	3	1	2.0

Please check availability in current price and stock-list.

D = heavy metal, E = carbide

EPB BD/5820-5821-5822 – Combimaster cylindrical extensions, steel, heavy metal or carbide – metric

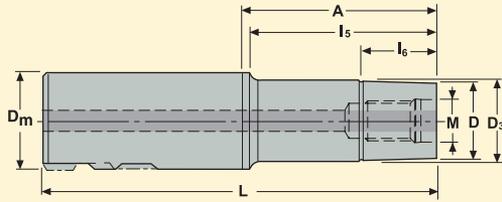


Cyl. Shank D _m	Connecting thread size (M)	EDP No.	Part No.	Dimensions in inch							α ₁ °	Design	Balancing	lbs
				A	L	I ₅	I ₆	D	D ₃	D ₄				
12	M6	43815	BD01258220660	2.36	4.13	-	-	0.43	-	-	-	3	2	0.2
	M6	43817	BD01258220695E	3.74	5.51	-	-	0.43	-	-	-	3	2	0.7
14	M8	18242	BD01458220860	2.36	4.13	-	-	0.53	-	-	-	3	2	0.4
	M8	18243	BD01458220895E	3.74	5.51	-	-	0.53	-	-	-	3	2	1.8
16	M8	19853	BD01658220865	2.56	4.45	-	-	0.53	-	-	-	3	2	0.4
	M8	19854	BD016582208105E	4.13	6.02	-	-	0.53	-	-	-	3	2	0.9
	M8	29674	BD016582108105E	4.13	6.02	1.97	-	0.53	-	0.57	-	2	2	0.9
18	M10	18245	BD01858221070	2.76	4.65	-	-	0.71	-	-	-	3	2	0.7
	M10	18244	BD018582210125E	4.92	6.81	-	-	0.71	-	-	-	3	2	1.8
20	M10	18246	BD02058221075	2.95	4.92	-	-	0.73	-	-	-	3	2	0.7
	M10	18195	BD02058211040D	1.57	3.54	0.98	-	0.73	-	0.73	-	2	2	1.1
	M10	18186	BD020582110110	4.33	6.30	2.56	-	0.73	-	0.73	-	2	2	0.9
	M10	16810	BD020582110110D	4.33	6.30	2.56	-	0.73	-	0.73	-	2	2	1.8
25	M12	18249	BD02558221280	3.15	5.35	-	-	0.91	-	-	-	3	2	1.1
	M12	29675	BD025582112185E	7.28	9.49	3.35	-	0.91	-	0.93	-	2	2	3.5
	M12	16811	BD025582112185	7.28	9.49	3.35	-	0.91	-	0.93	-	2	2	2.0
	M12	18196	BD025582112185D	7.28	9.49	3.35	-	0.91	-	0.91	-	2	2	3.7
32	M12	18208	BD032582012100	3.94	6.30	2.56	0.98	0.91	0.97	1.22	4.5	1	2	2.0
	M12	18216	BD032582012240	9.45	11.81	5.71	1.18	0.91	0.97	1.22	1.6	1	2	3.1
	M16	18252	BD03258221695	3.74	6.10	-	-	1.18	-	-	-	3	2	2.0
	M16	18221	BD032582116100	3.94	6.30	2.56	-	1.18	-	1.18	-	2	2	2.0
	M16	16839	BD032582116100D	3.94	6.30	2.56	-	1.18	-	1.18	-	2	2	4.4
	M16	18223	BD032582116145D	5.71	8.07	4.33	-	1.18	-	1.18	-	2	2	5.7
	M16	18224	BD032582116240	9.45	11.81	5.71	-	1.18	-	1.18	-	2	2	3.7
	M16	16840	BD032582116240D	9.45	11.81	5.71	-	1.18	-	1.18	-	2	2	8.4
40	M16	18229	BD04058201690	3.54	6.30	2.56	0.98	1.18	1.25	1.54	5.2	1	2	3.1
	M16	18226	BD040582016135	5.31	8.07	4.33	1.38	1.18	1.25	1.54	2.8	1	2	3.7
	M16	18227	BD040582016230	9.06	11.81	5.71	1.38	1.18	1.25	1.54	1.9	1	2	5.5

Please check availability in current price and stock-list.

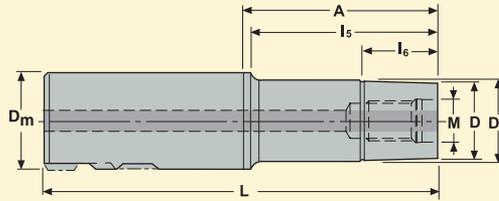
D = heavy metal, E = carbide

EPB BW/5821 – Combimaster Weldon extensions – inch



Weldon shank D _m	Connecting thread size (M)	EDP No.	Part No.	Dimensions in inch							Design	Balancing	Type of mounting	lbs 
				A	L	I ₅	I ₆	D	D ₃					
0.75	M10	19941	BW519582210125	1.25	3.25	–	–	0.73	–	*	1	Seco/Weldon	0.4	
1.00	M12	19943	BW525582212075	0.75	3.00	–	–	0.90	–	*	1	Seco/Weldon	0.7	
	M12	19945	BW625582112250	2.50	5.75	2.00	0.79	0.90	0.97	2	1	3 Flat Weldon	1.1	
1.25	M16	19944	BW531582116150	1.50	3.75	1.00	0.39	1.18	1.25	2	1	Seco/Weldon	1.1	
	M16	19947	BW631582116300	3.00	6.25	2.50	0.79	1.18	1.25	2	1	3 Flat Weldon	2.0	
	M16	19948	BW631582116400	4.00	7.25	3.50	1.18	1.18	1.25	2	1	3 Flat Weldon	2.4	

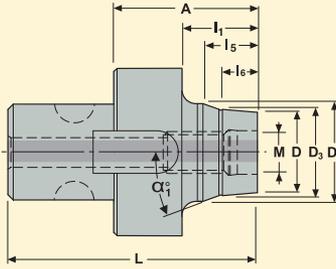
Please check availability in current price and stock-list.
 * Indicates Cylindrical design with Weldon flats.



Weldon shank D _m	Connecting thread size (M)	EDP No.	Part No.	Dimensions in inch						Balancing	
				A	L	I ₅	I ₆	D	D ₃		
20	M10	23058	BW02058211030	30	80	25	10	18.5	18.5	2	0.4
	M10	23059	BW020582110102	102	152	97	20	18.5	18.5	2	0.9
25	M12	23060	BW02558211245	45	101	40	20	23	23.5	2	0.9
	M12	23061	BW025582112115	115	171	110	30	23	23.5	2	1.3
32	M16	23062	BW03258211645	45	105	40	20	30	30.5	2	1.3
40	M20	47457	BW040582120102	102	172	97	30	36.5	37	2	3.3

Please check availability in current price and stock-list.

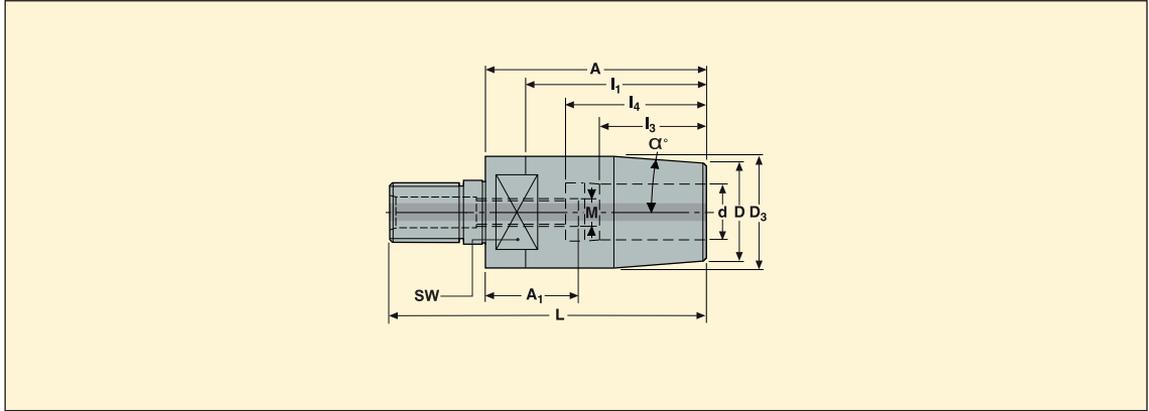
EPB BM/5820 – Graflex Combimaster adapters



Graflex shank size	Connecting thread size (M)	EDP No.	Part No.	Dimensions in inch								α_1°	Balancing	lbs
				A	L	I ₁	I ₅	I ₆	D	D ₃	D ₄			
G5	M16	18823	BM05058201640	1.57	2.76	0.79	0.59	0.39	1.18	1.25	1.38	18.25	2	1.3

Please check availability in current price and stock-list.

EPB BS/5603 – Shrinkfit DIN type, Combimaster holders



Connecting thread size	Shrinkfit d mm	EDP No.	Part No.	Dimensions in inch								SW mm	α°	Balancing		
				A	L	I ₁	I ₃	I ₄	D	D ₃	M					A ₁ min-max
M16	6	66461	BS01656030665	2.56	3.46	2.13	0.87	1.48	0.83	1.06	M5	1.14-1.54	26	4.5	2	0.7
	8	66462	BS01656030865	2.56	3.46	2.13	1.02	1.48	0.83	1.06	M6	1.14-1.54	26	4.5	2	0.7
	10	66463	BS01656031070	2.76	3.66	2.76	1.22	1.67	0.94	1.18	M8x1	1.14-1.54	26	4.5	2	0.9
	12	66464	BS01656031270	2.76	3.66	2.76	1.34	1.67	0.94	1.18	M10x1	0.94-1.34	26	4.5	2	0.9

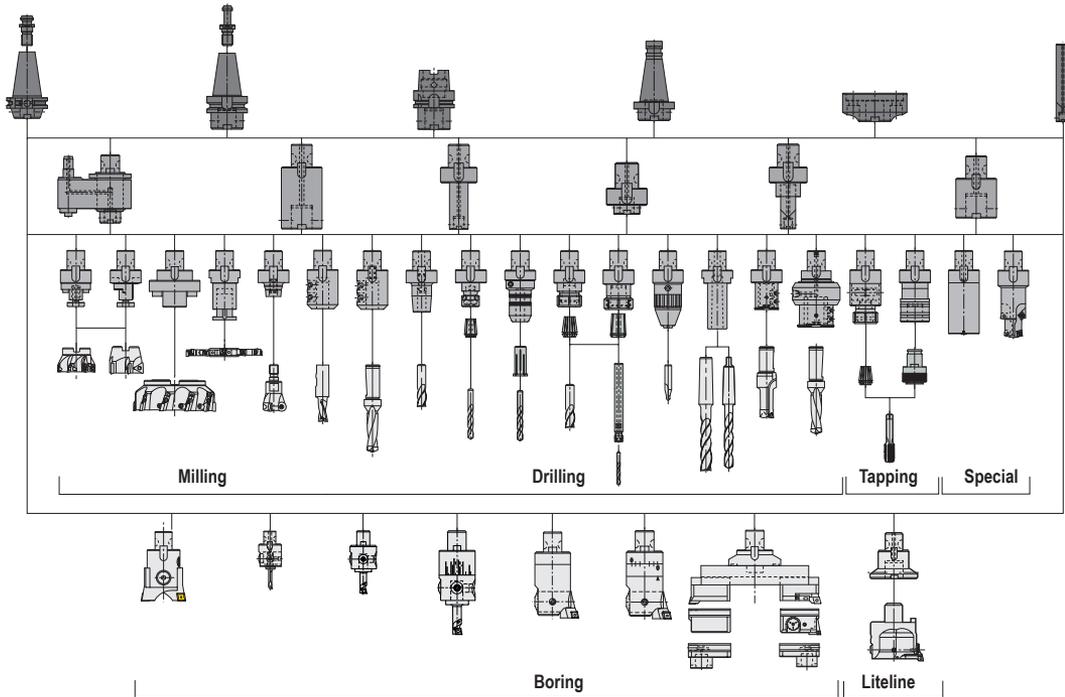
Spare Parts

Accessories

For d	Stop screw	For d	Balancing screws
			
6	19BDR05165	10	90ZQ01
8	19BDR06165	12	90ZQ01
10	19BDR08165	6	90ZQ01
12	19BDR10165	8	90ZQ01

Please check availability in current price and stock-list.

A complete range of modules, suitable for all machines and all machining operations



A modular system for flexibility and performance

Flexibility:

Tooling of variable lengths and diameters can rapidly be built together, when they are needed. Graflex modules e.g. toolholders and boring heads, as well as cutting tools can be fitted on all types of machines, by the substitution of only the basic Graflex arbor.

The Graflex modules are suitable for milling, drilling, tapping, reaming and boring.

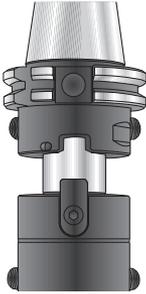
Performance:

The connection rigidity and precision, enables Graflex assemblies to be used in similar machining conditions as the same sized Monobloc holders. The wide range of modules permits tooling dimensions closest to the required machining operation, for optimized cutting conditions.

All basic arbors, extensions and reducers, main toolholders and all boring heads have through coolant possibilities.



The Graflex connection (patented)

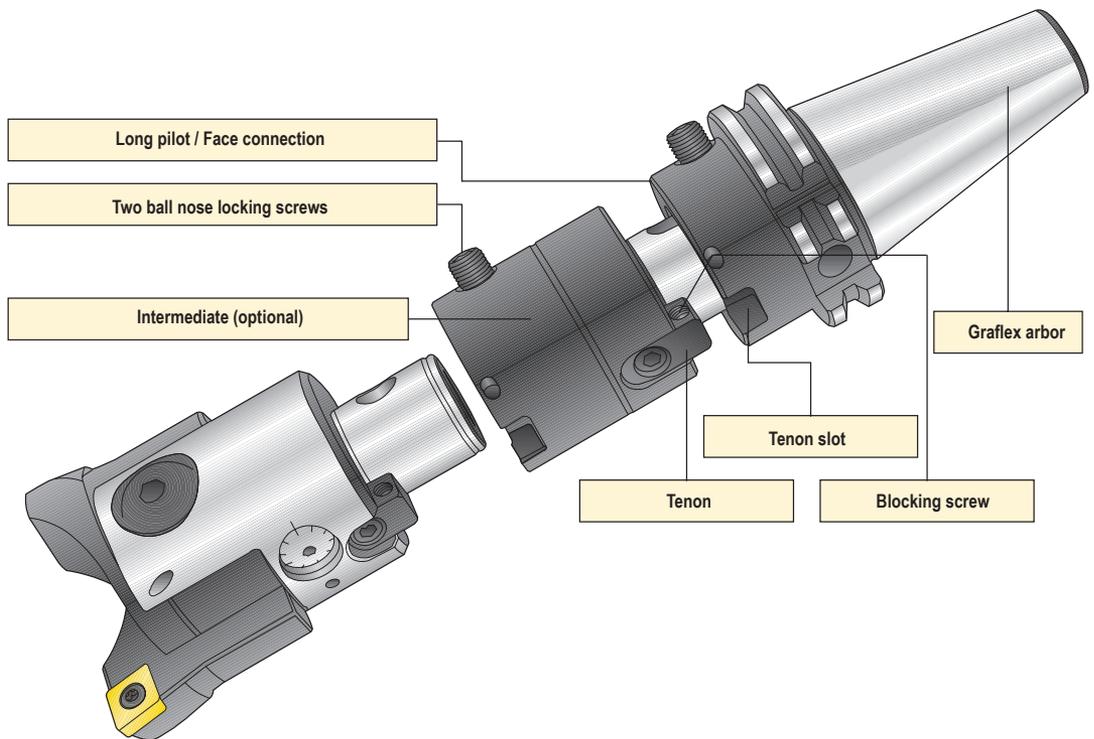


The long pilot and face connection, combined with EPB's production quality, masters all machining requirements, e.g. strength and precision in milling as well as in boring.

Radial access to the locking screws = easy handling.

High face contact pressure which can be enhanced by self-locking of the connection during machining = improved rigidity.

Graflex is a registered trademark of Seco-EPB.

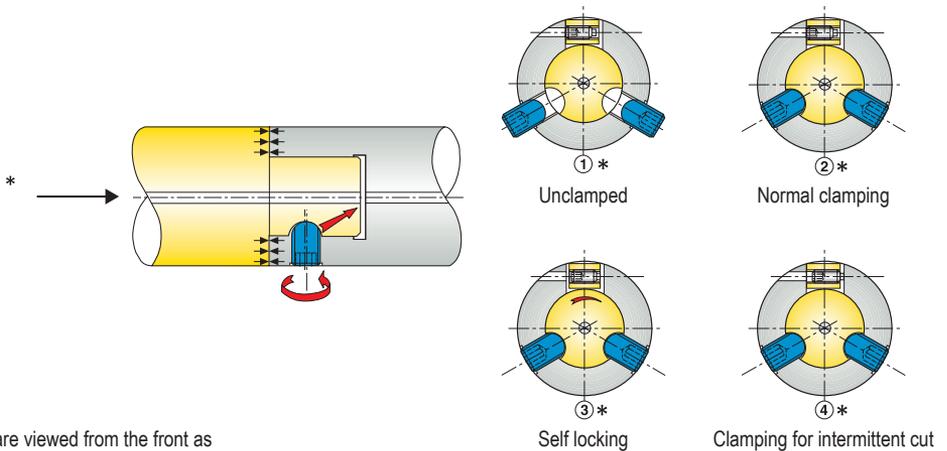


The alternative Graflex connection using a split tenon is shown in Holemaking catalog chapter Liteline.

Graflex assembly procedure

1. Assemble the Graflex arbor and module(s) using the tenon(s) for easy orientation. Tighten the ball nose locking screws ensuring that the left face of the tenon contacts the left face of the tenon slot (Drawings 1 & 2).
2. Strong machining torque e.g. during boring may create micro rotational movement of the pilot in relation to the bore, causing micro displacement of the ball nose screw's contact surfaces. This results in complementary self-locking of the connection, enhancing the system's rigidity (Drawing 3).
3. For operations involving intermittent cutting e.g. heavy milling, the blocking screw provided in the tenon can be tightened so as to avoid micro rotational movement and prevent self locking (Drawing 4).

Note: For optimized assembly procedure, see next page.



* Drawings 1, 2, 3 and 4 are viewed from the front as when normally assembled e.g. when using the Tool Boy assembly support.

Optimized Graflex assembly procedure

left face

1. Clean the parts to be assembled and apply thin oxidation protection film.
2. Assemble the parts ensuring that the left face of the tenon contacts the left face of the tenon slot.
3. Lightly tighten screw A
4. Lightly tighten screw B

Normal clamping for continuous cut, e.g. boring, light duty milling

5. Torque screw A (low values).
6. Torque screw B (low values).

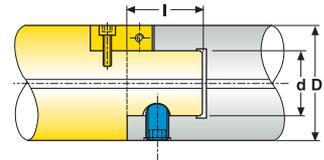
left face

5. Torque the blocking screw C.
6. Torque screw A (high values).
7. Torque screw B (high values).
8. Double check the blocking screw tightening

Clamping for intermittent cut, e.g. interrupted boring, heavy duty milling

Graflex connection, dimensions and recommended locking torques

The Graflex connection is self locking, therefore it has a low requirement for checking that the locking torques have been applied. There is usually no requirement for torque control. The table shows the recommended torque ranges, prioritizing assembly precision (low values) or rigidity/heavy duty (high values).



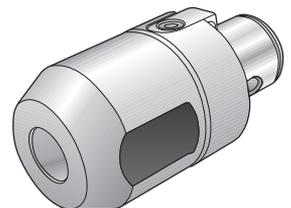
Graflex size	d mm	D mm	l mm	Recommended Graflex connection locking torques	
				Ball nose screws (A) & (B) Low values – High values	Tenon blocking screw (C)
0	08	16	12	1.11 - 1.48 ft/lbs (1.5 - 2 Nm)	–
1	11	20	13	1.11 - 1.48 ft/lbs (1.5 - 2 Nm)	–
2	14	25	16	1.84 - 2.95 ft/lbs (2.5 - 4 Nm)	–
3	18	32	20	3.69 - 5.90 ft/lbs (5 - 8 Nm)	0.30 ft/lbs (0.4 Nm)
4	22	40	24	9.59 - 14.75 ft/lbs (13 - 20 Nm)	0.52 ft/lbs (0.7 Nm)
5	28	50	30	12.54 - 18.44 ft/lbs (17 - 25 Nm)	1.48 ft/lbs (2 Nm)
6	36	63	40	16.96 - 25.82 ft/lbs (23 - 35 Nm)	2.95 ft/lbs (4 Nm)
7	46	90	50	29.50 - 44.26 ft/lbs (40 - 60 Nm)	5.90 ft/lbs (8 Nm)

Balancing of the Graflex modules

All basic arbors except size 7 are fine balanced as standard for optimized compatibility with the boring heads used at high speeds. Graflex intermediates and tool holders are pre-balanced.

In the Product pages, each Graflex module balancing quality is indicated in the balancing column.

Main Graflex intermediates and adapters can be fine balanced on request, please inquire.



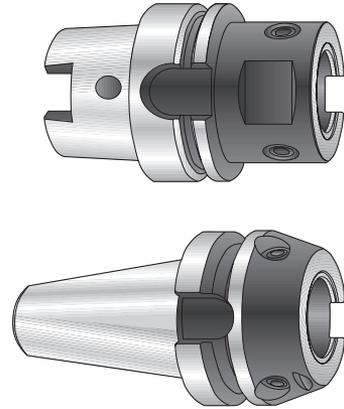
Graflex connection, Accessories and Spare Parts

Accessories (locking keys) and spare parts (two ball nose screws kits or tenon kits) are grouped on page(s) 271.

Graflex arbors – EPB 401, EPB 409

Graflex basic arbors are available for all machine spindles type HSK, SA and Seco-Capto - Type EM...

Arbors are mainly available in 3 different lengths (short, medium and long).
All arbors except size 7 are fine balanced as standard, see balancing column in Product pages.

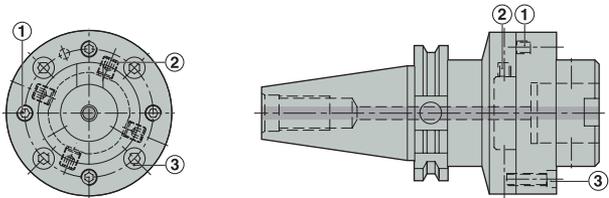


Graflex adjustable arbors - Type ER...401...

Radial and angular adjustment enable the elimination of run-out of the cutting tool edge (e.g. reamer) in any Graflex tool holder e.g. hydraulic chuck, Weldon, collet chuck.

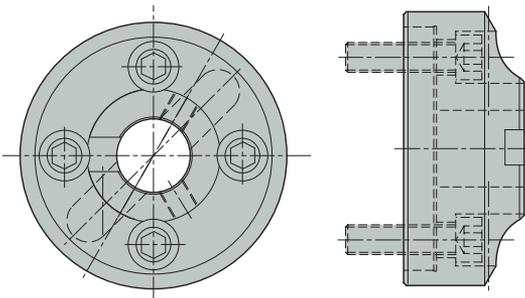
Setting:

In order to adjust the cutting tool center line, 4 screws (1) perform the angular adjustment and 4 screws (2) the radial adjustment. The assembly is locked by 4 screws (3).



Graflex flange mounts - Type M409...

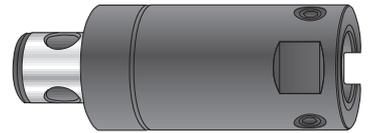
Graflex modules can be securely locked onto the machine spindle, without being influenced by the taper precision and the locking performance of the spindle.
Designed to suit to DIN 2079 spindle front ends.



Graflex extensions – EPB 402

Extensions have the same Graflex size at the front (Graflex bore) and at the back (Graflex shank). They are mainly available in different lengths: short, medium and long.

New: Extra long extensions are particularly suitable for creating optimum assemblies for Performax modular drill heads SD 600.



Graflex reducers – EPB 403

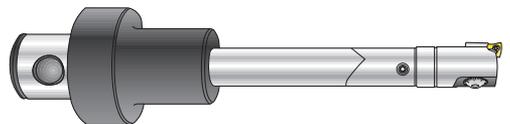
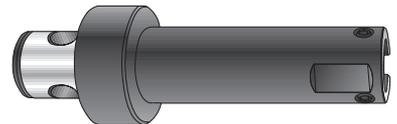
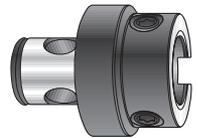
Reducers have a smaller Graflex size at the front (Graflex bore) in relation to the back (Graflex shank).

Long Graflex reducers

When used with a Graflex boring head, long Graflex reducers give boring length to diameter ratio of approx. 4xd.

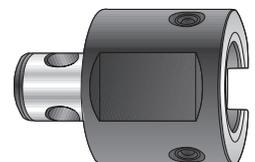
Extra long Graflex reducers, carbide type – Type M403...C...

The extension section is manufactured from carbide.
 The extra long reducers to be used with fine boring heads for boring length to diameter ratio of approx. 7xd.
 Very rigid but brittle extensions, not suitable for heavy duty applications.
 Maximum boring lengths are listed in the Product pages (I_u).
 Other lengths can be supplied on request, please inquire.



Graflex enlargers - Part No. M40356 and M40367

The enlargers enable the mounting of modules with large Graflex connection size 6 or 7 on arbors with maximum connection size 5 or 6.



Graflex cylindrical extensions – EPB 401

Cylindrical Graflex extensions, steel type

The cylindrical shank, with tolerance h5, can be held in any suitable holding system, including Shrinkfit holders.

Suitable for long rough or fine boring.

Maximum boring depths are listed in the Product pages (l_u).

These extensions have a through coolant channel.



Cylindrical Graflex extensions, carbide type M401...C

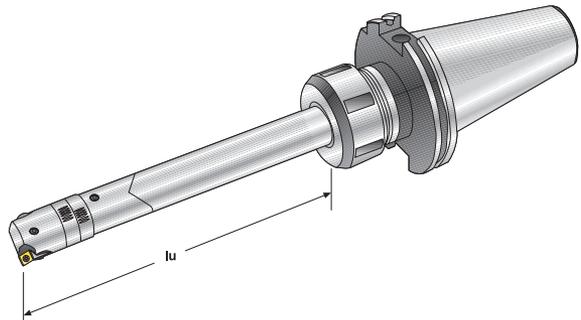
Graflex extensions with cylindrical shank in carbide are suitable for fine boring length to diameter ratios of up to approx. 9xd.

The cylindrical shank with tolerance h5 can be held in Shrinkfit holders, or any other suitable holding system.

Very rigid but brittle extensions, not suitable for heavy duty applications.

Maximum boring depths are listed in the Product pages (l_u).

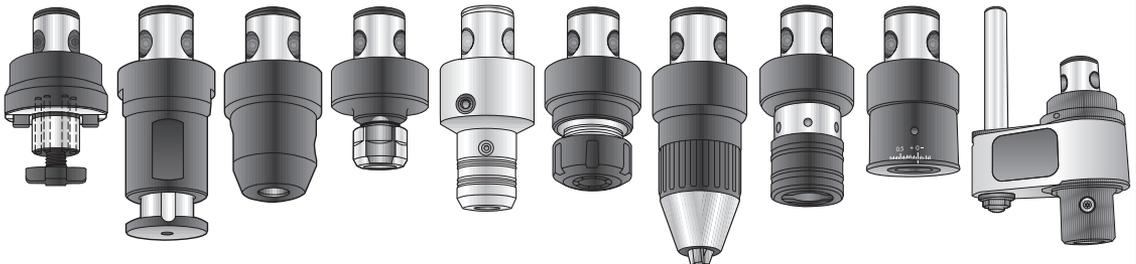
These extensions have a through coolant channel.



Graflex tool holders – EPB 5525, EPB 584, etc

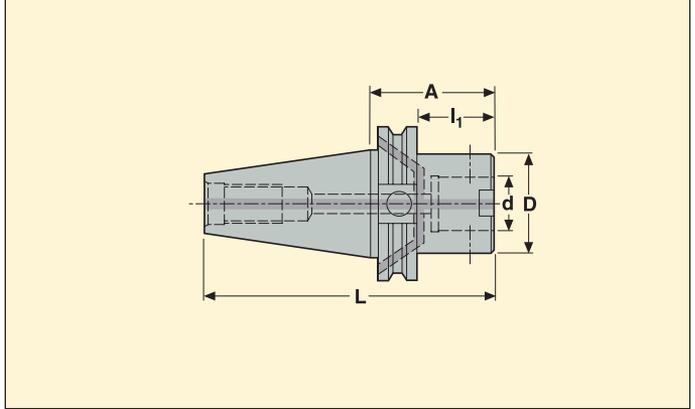
Graflex holders are available with main front end types similar to Monobloc holders. Adjustable drill holders and rotary coolant inducers are only available with a Graflex connection for high flexibility.

Note: Graflex adapters with Combimaster front end, see Combimaster chapter.



EPB 401 – Graflex arbors

CAT Taper-Face -ADB



Taper	Graflex bore		EDP No.	Part No.	Dimensions in inch				Balancing	lbs
	Size	d mm			A	L	I ₁	D		
CAT TF40 ADB	G3	18	30363	EM26424011880	3.15	5.84	2.40	1.26	1	2.6
	G4	22	30379	EM26424012280	3.15	5.84	2.40	1.57	1	3.1
	G5	28	30382	EM264240128100	3.94	6.63	3.19	1.97	1	4.2
	G6	36	30384	EM264240136100	3.94	6.63	3.19	2.48	1	5.1
CAT TF50 ADB	G4	22	31152	EM264440122100	3.94	7.94	3.19	1.57	1	7.3
	G5	28	31155	EM264440128100	3.94	7.94	3.19	1.97	1	7.9
	G6	36	31142	EM264440136120	4.72	8.73	3.97	2.48	1	10.1
	G7	46	31143	EM264440146200	7.87	11.88	7.12	3.54	2	22.7

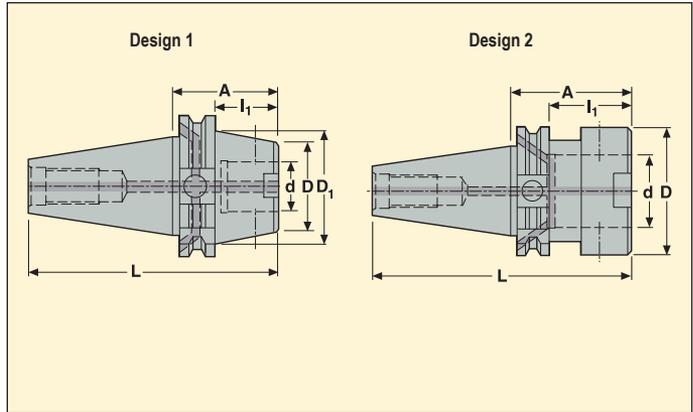
Spare Parts

For Taper	Plug
CAT TF40	950A0406
CAT TF50	950A0606

Please check availability in current price and stock-list.

EPB 401 – Graflex arbors

DIN 69871-ADB

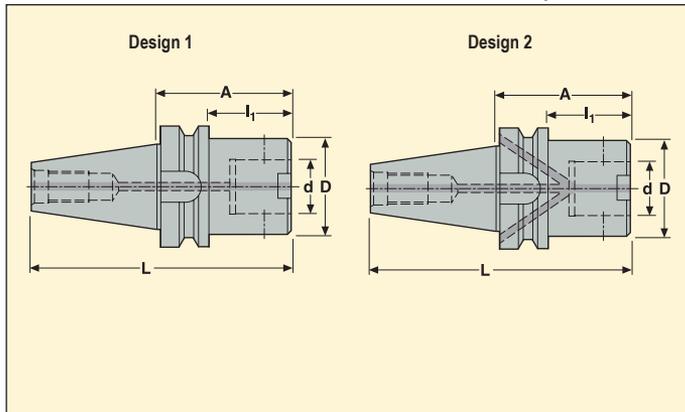


Taper	Graflex bore		EDP No.	Part No.	Dimensions in inch					Design	Balancing	lbs
	Size	d mm			A	L	I ₁	D	D ₁			
DIN40 ADB	G1	11	23297	EM34694011190	3.543	6.236	2.791	0.787	-	2	1	2.1
	G2	14	21425	EM34694011435	1.378	4.071	0.626	0.984	-	2	1	1.8
	G2	14	23298	EM34694011490	3.543	6.236	2.791	0.984	-	2	1	2.2
	G3	18	23321	EM34694011835	1.378	4.071	0.626	1.260	1.969	1	1	2.0
	G3	18	23299	EM346940118100	3.937	6.630	3.185	1.260	-	2	1	2.7
	G4	22	23300	EM34694012235	1.378	4.071	0.626	1.575	1.969	1	1	2.0
	G4	22	23301	EM346940122100	3.937	6.630	3.185	1.575	-	2	1	3.2
	G5	28	20118	EM34694012840	1.575	4.268	0.823	1.969	-	2	1	2.1
	G5	28	23302	EM34694012880	3.150	5.843	2.398	1.969	-	2	1	3.3
	G5	28	23303	EM346940128120	4.724	7.417	3.972	1.969	-	2	1	4.6
	G6	36	23304	EM34694013660	2.362	5.055	1.610	2.480	-	2	1	2.7
	G6	36	23305	EM346940136120	4.724	7.417	3.972	2.480	-	2	1	5.8
DIN50 ADB	G2	14	23306	EM347140114100	3.937	7.941	3.185	0.984	-	2	1	6.2
	G3	18	23307	EM34714011835	1.378	5.382	0.626	1.260	-	2	1	5.9
	G3	18	23308	EM347140118110	4.331	8.335	3.579	1.260	-	2	1	6.6
	G4	22	23309	EM34714012235	1.378	5.382	0.626	1.575	3.150	1	1	6.3
	G4	22	23310	EM347140122120	4.724	8.728	3.972	1.575	-	2	1	7.4
	G5	28	23311	EM34714012840	1.575	5.579	0.823	1.969	-	2	1	6.1
	G5	28	23312	EM347140128100	3.937	7.941	3.185	1.969	-	2	1	7.8
	G5	28	23313	EM347140128140	5.512	9.516	4.760	1.969	-	2	1	9.0
	G6	36	23314	EM34714013645	1.772	5.776	1.020	2.480	-	2	1	6.3
	G6	36	23315	EM347140136100	3.937	7.941	3.185	2.480	-	2	1	9.0
	G6	36	23316	EM347140136140	5.512	9.516	4.760	2.480	-	2	1	11.0
	G7	46	23317	EM34714014650	1.969	5.972	1.217	3.543	-	2	2	7.1
	G7	46	23318	EM347140146120	4.724	8.728	3.972	3.543	-	2	2	14.3
	G7	46	23319	EM347140146200	7.874	11.878	7.122	3.543	-	2	2	22.7

Please check availability in current price and stock-list.

EPB 401 – Graflex arbors

BT Taper-Face-AD/ADB



Taper	Graflex bore		EDP No.	Part No.	Dimensions in inch				Design	Balancing	lbs
	Size	d mm			A	L	I ₁	D			
BT TF30 AD	G3	18	30392	EM40024011850	1.969	3.874	1.102	1.260	1	1	1.1
	G4	22	30393	EM40024012250	1.969	3.874	1.102	1.575	1	1	1.3
BT TF40 ADB	G4	22	30388	EM321440122100	3.937	6.512	2.874	1.575	2	1	3.5
	G5	28	29719	EM321440128120	4.724	7.299	3.661	1.969	2	1	4.6
	G6	36	30389	EM321440136120	4.724	7.299	3.661	2.480	2	1	6.2
BT TF50 ADB	G5	28	30390	EM321640128140	5.512	9.520	4.016	1.969	2	1	10.8
	G6	36	29990	EM321640136140	5.512	9.520	4.016	2.480	2	1	12.3
	G7	46	30055	EM321640146200	7.874	11.882	6.378	3.543	2	2	23.6

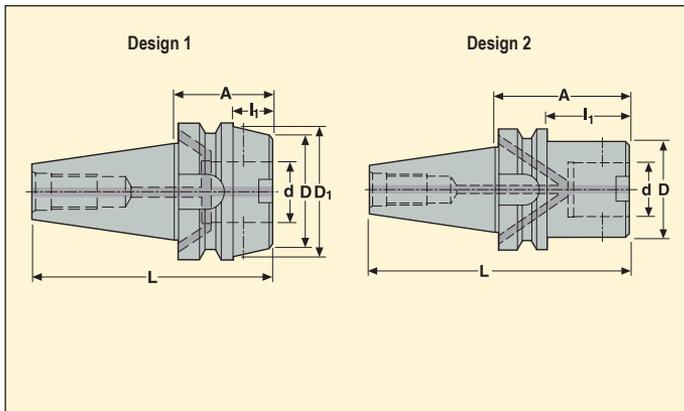
Spare Parts

For Taper	Plug
BT TF40	950A0406
BT TF50	950A0606

Please check availability in current price and stock-list.

EPB 401 – Graflex arbors

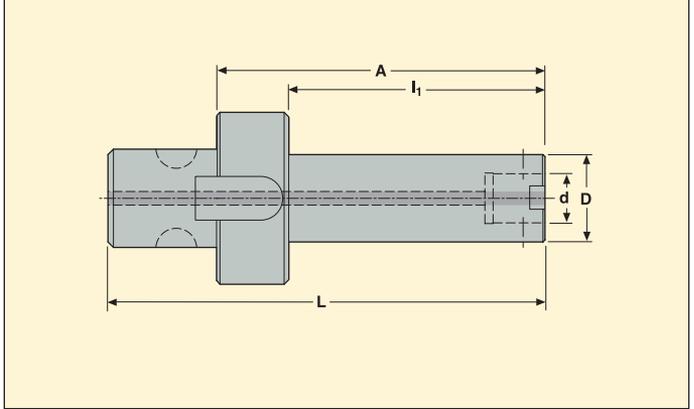
BT JIS B 6339-ADB



Taper	Graflex bore			Part No.	Dimensions in inch					Design	Balancing	lbs
	Size	d mm	EDP No.		A	L	I ₁	D	D ₁			
BT40 ADB	G1	11	23324	EM34144011190	3.543	6.118	2.480	0.787	-	2	1	2.3
	G2	14	21423	EM34144011440	1.575	4.150	0.512	0.984	-	2	1	2.2
	G2	14	23325	EM34144011490	3.543	6.118	2.480	0.984	-	2	1	2.5
	G3	18	23326	EM34144011840	1.575	4.150	0.512	1.260	2.441	1	1	2.4
	G3	18	23327	EM341440118100	3.937	6.512	2.874	1.260	-	2	1	2.9
	G4	22	23328	EM34144012245	1.772	4.346	0.709	1.575	2.441	1	1	2.5
	G4	22	23329	EM341440122100	3.937	6.512	2.874	1.575	-	2	1	3.4
	G5	28	20280	EM34144012845	1.772	4.346	0.709	1.969	2.441	1	1	2.5
	G5	28	23331	EM34144012880	3.150	5.724	2.087	1.969	-	2	1	3.4
	G5	28	23332	EM341440128120	4.724	7.299	3.661	1.969	-	2	1	4.7
	G6	36	23333	EM34144013650	1.969	4.543	-	2.480	-	2	1	2.5
	G6	36	23334	EM341440136120	4.724	7.299	-	2.480	-	2	1	6.1
BT50 ADB	G2	14	23335	EM341640114110	4.331	8.339	2.835	0.984	-	2	1	8.2
	G3	18	23336	EM34164011845	1.772	5.780	0.276	1.260	2.756	1	1	7.9
	G3	18	23337	EM341640118120	4.724	8.732	3.228	1.260	-	2	1	8.6
	G4	22	23338	EM34164012250	1.969	5.976	0.472	1.575	2.756	1	1	8.1
	G4	22	23339	EM341640122140	5.512	9.520	4.016	1.575	-	2	1	9.6
	G5	28	23340	EM34164012855	2.165	6.173	0.669	1.969	3.858	1	1	8.8
	G5	28	23341	EM341640128100	3.937	7.945	2.441	1.969	-	2	1	9.3
	G5	28	23342	EM341640128140	5.512	9.520	4.016	1.969	-	2	1	10.6
	G6	36	23343	EM34164013663	2.480	6.488	0.984	2.480	3.858	1	1	9.3
	G6	36	23344	EM341640136100	3.937	7.945	2.441	2.480	-	2	1	10.1
	G6	36	23345	EM341640136140	5.512	9.520	4.016	2.480	-	2	1	12.2
	G7	46	23346	EM34164014665	2.559	6.567	1.063	3.543	3.858	1	2	9.5
	G7	46	23347	EM341640146120	4.724	8.732	3.228	3.543	-	2	2	15.0
	G7	46	23348	EM341640146200	7.874	11.882	6.378	3.543	-	2	2	23.6

Please check availability in current price and stock-list.

EPB 403 – Graflex long reducers



• For extra long reducers, see following page

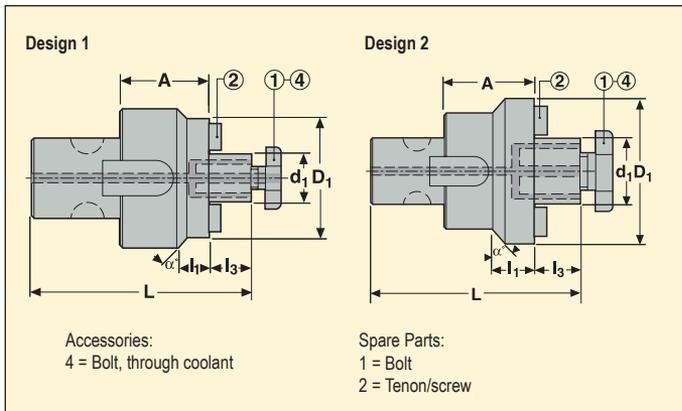
Graflex bore		EDP No.	Part No.	Dimensions in mm				Balancing	
Size	d mm			A	L	I ₁	D		
G5	8	56782	M40350070	2.756	3.937	1.969	0.630	2	1.1
	11	56784	M40351080	3.150	4.331	2.362	0.787	2	1.3
	14	56786	M40352100	3.937	5.118	3.150	0.984	2	1.6
	18	56788	M40353120	4.724	5.906	3.937	1.260	2	2.2
	22	56790	M40354150	5.906	7.087	5.118	1.575	2	3.6
G6	11	56794	M40361090	3.543	5.118	2.520	0.787	2	2.4
	14	56796	M40362110	4.331	5.906	3.307	0.984	2	2.7
	18	56798	M40363120	4.724	6.299	3.701	1.260	2	3.2
	22	56800	M40364150	5.906	7.480	4.882	1.575	2	4.6
	28	56808	M40365190	7.480	9.055	6.457	1.969	2	7.1
G7	36	56813	M40376230	9.055	11.024	8.031	2.480	–	14.1

Please check availability in current price and stock-list.

EPB 5525 – Shell mill holders, with through coolant channels – Inch



- Run-out .0002" (5 μm) maximum
- With coolant supply channels through the pilot



Graflex shank size	d ₁ inch	EDP No.	Part No.	Dimensions in inch					Design	α°	Balancing	
				A	D ₁	L	l ₁	l ₃				
G5	0.50	94784	M552528050	1.26	1.25	2.441	0.47	0.56	1	45	1	1.2
G5	0.75	94785	M552528075	1.26	1.75	2.441	0.47	0.56	1	45	1	1.4
G5	1.00	94786	M552528100	1.26	2.25	2.441	0.47	1.26	2	30	1	1.6
G6	0.75	94787	M552536075	1.58	1.75	3.155	0.55	0.69	1	45	1	2.6
G6	1.00	00760	M552536100	1.58	2.25	3.155	0.55	0.69	1	45	1	2.8
G7	1.25	94789	M552546125	1.58	2.75	3.549	0.55	0.69	1	60	2	5.5
G7	1.50	00763	M552546150	2.00	3.50	3.969	1.17	0.94	1	60	2	8.2
G7	2.00	00764	M552546200	2.00	4.87	3.969	1.45	0.94	2	60	2	10.8

Spare Parts

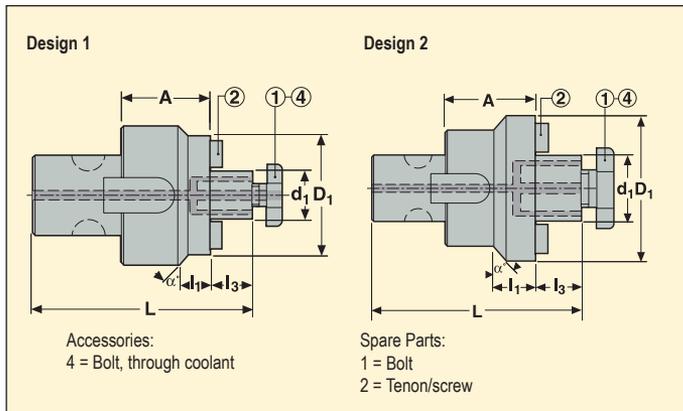
For Shank/ d ₁	Bolt	Screw	Tenon
G5/0.50	58211270	950D0308	16C11270
G5/0.75	58211905	951D0308	16C11905
G5/1.00	58212540	951D0410	16C12540
G6/0.75	58211905	951D0308	16C11905
G6/1.00	58212540	951D0410	16C12540
G7/1.25	58213175	951D0516	16C23175
G7/1.50	58213810	951D0616	16C23810
G7/2.00	58215080	951D0820	16C25080

Please check availability in current price and stock-list.

EPB 5525/5524 – Shell mill holders, with through coolant channels – Metric



- Run-out .0002" (5 µm) maximum
- With coolant supply channels through the pilot



Graflex shank size***	d ₁ mm	EDP No.	Part No.	Dimensions in inch					*	**	Design	α°	Balancing	lbs
				A	D ₁	L	I ₁	I ₃						
G3	16	06952	M55251816	0.787	1.260	2.441	–	0.669	*		1	–	2	0.4
G4R	16	06924	M55252216R	0.984	1.496	2.598	–	0.669			1	–	2	0.7
G4	22	06951	M55252222	0.984	1.890	2.677	0.748	0.748	*		2	45	2	1.0
G5	16	06949	M55252816	1.260	1.496	3.110	0.236	0.669			1	45	2	1.3
G5R	22	06937	M55252822R	1.260	1.890	3.189	–	0.748	*		1	–	2	1.4
G5	27	06948	M55252827	1.260	2.362	3.268	0.945	0.827	*	**	2	45	2	1.9
G5R	27	18805	M55242827R	1.260	1.890	3.268	–	0.827	*	**	1	–	2	1.5
G6	22	06946	M55253622	1.575	1.890	3.150	0.256	0.748			1	45	2	2.6
G6	22	06947	M55253622120	4.724	1.890	6.299	3.189	0.748			1	30	2	5.2
G6R	27	06944	M55253627R	1.575	2.362	3.150	–	0.827	*		1	–	2	2.8
G6R	27	06945	M55253627120R	4.724	2.362	6.299	–	0.827	*		1	–	2	6.6
G6	32	06943	M55253632	1.575	3.071	3.150	0.551	0.945	*		2	30	2	3.5
G7	27	06942	M55254627R	1.575	2.362	4.370	0.197	0.827			1	45	2	4.4
G7	32	06941	M55254632	1.575	3.071	4.488	0.315	0.945			1	45	2	5.7
G7R	32	06940	M55254632R	1.575	3.071	4.488	–	0.945	*		1	–	2	5.0

* Suitable for long wall milling and plunging. ** Diameter D₁ on type 5524 is smaller than on type 5525

*** (R) = D reduced compared to the standard Graflex D

Spare Parts

For Shank/ d ₁	Bolt	Screw	Tenon
3/16	5801608	950D0308	16C116
4/16R	5801608	950D0312	16C10810164
4/22, 5/22R, 6/22	5802210	950D0416	16C11012206
5/16	5801608	950D0312	16C10810164
5/27, 6/27R	5802712	951D0516	16C11214243
5/27R	5802712	951D0512	16C127
6/32, 7/32	5803216	951D0516	16C2141421
7/27R	5802712	951D0516	16C11214243
7/32R	5803216	951D0516	16C2141421

Accessories

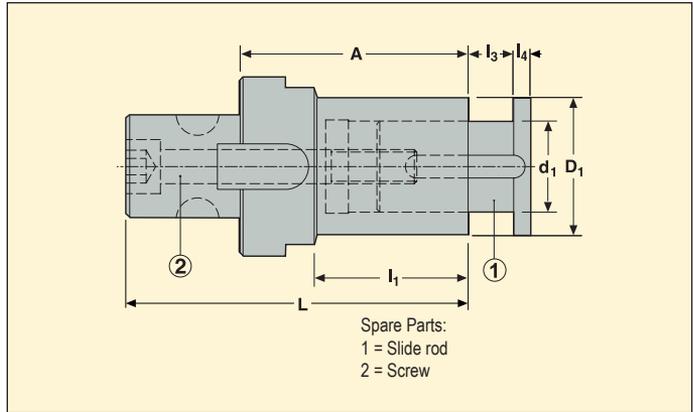
For Shank/ d ₁	Bolt, through coolant	Spanner
3/16	5801608L	5811608
4/16R	5801608L	5811608
4/22, 5/22R, 6/22	5802210L	5812210
5/16	5801608L	5811608
5/27, 6/27R	5802712L	5812712
5/27R	5802712L	5812712
6/32, 7/32	5803216L	5813216
7/27R	5802712L	5812712
7/32R	5803216L	5813216

Please check availability in current price and stock-list.

EPB 5656 – Disc mill holders – Metric



- With adjustable slide rod
- Best suitable for Seco disc mill cutters Type A



Graflex shank size	d ₁ mm	EDP No.	Part No.	Dimensions in inch						Balancing	lbs
				A	D ₁	L	l ₁	l ₃	l ₄		
G3	16	76736	M56561816	1.969	1.102	2.756	1.417	0.394	0.118	2	0.7
G4	22	76737	M56562222	2.362	1.378	3.307	1.693	0.472	0.157	2	1.2
G5	27	76738	M56562827	2.559	1.654	3.740	1.772	0.551	0.197	2	2.1
	32	06939	M5656283212	3.150	1.890	4.331	2.362	0.945	0.236	2	2.9
G6	32	06938	M5656363212	3.346	1.890	4.921	2.323	0.945	0.236	2	4.0
	40	76741	M56563640	4.331	2.283	5.906	3.307	1.181	0.276	2	5.9
G7	50	76743	M56564650	5.118	2.835	7.087	4.094	1.260	0.315	–	11.7
	60	06953	M56564660	5.906	3.543	7.874	4.882	1.575	0.315	–	18.0

Spare Parts

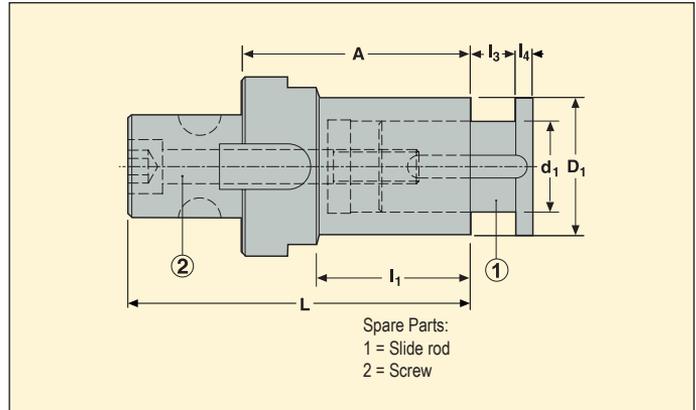
For Shank/ d ₁	Screw	Slide rod	Tenon
G3/16	950D0650	565616	90M3
G4/22	950D0860	565622	90M4
G5/27	950D1070	565627	90M5
G5/32	950D1290	56563202	90M5
G6/32	950D12100	56563202	90M6
G6/40	950D16110	565640	90M6
G7/50	950D16120	565650	90M7
G7/60	950D16120	565660	90M7

Please check availability in current price and stock-list.

EPB 5656 – Disc mill holders – Inch



- With adjustable slide rod
- Best suitable for Seco disc mill cutters Type A



Taper	d ₁ inch	EDP No.	Part No.	Dimensions in inch						Balancing	lbs
				A	D ₁	L	I ₁	I ₃	I ₄		
G5	1.00	56864	M565628100	2.560	1.650	3.741	1.770	0-0.550	0.197	2	2.1
	1.25	56865	M565628125	2.760	1.970	3.941	1.970	0-0.630	0.236	2	2.7
G6	1.50	56866	M565636150	4.330	2.280	5.905	3.310	0-0.980	0.276	2	6.0
		13656	M565646200	5.120	2.830	7.089	4.090	0-1.250	0.315	2	11.8
G7											

Spare Parts

For d ₁	Screw	Slide rod	Tenon
1.00	950D1070	5656100	90M5
1.25	950D1270	5656125	90M5
1.50	950D16100	5656150	90M6
2.00	950D16120	5656200	90M7

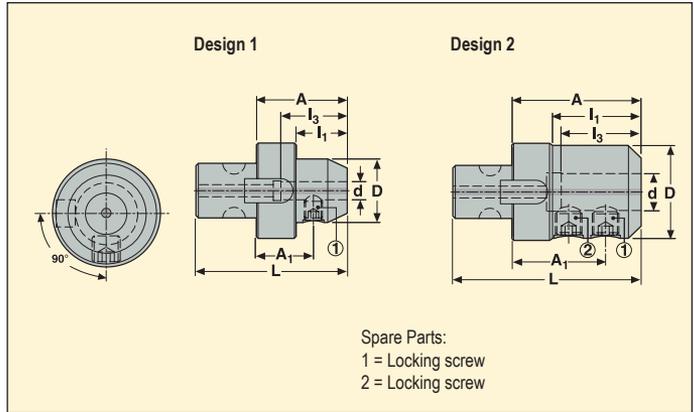
Please check availability in current price and stock-list.

EPB 584 – Side lock holders, Weldon - DIN 1835 Form B/ DIN 6535 Form HB – Metric

DIN 1835 Form B/DIN 6535 Form HB



- Run-out .0002" (5 µm) maximum at 3x_d
- Weldon d 16, 20, 25, 32 and 40 with ground face (Seco-Weldon compatible)



Graflex shank size	d mm	EDP No.	Part No.	Dimensions in inch						Design	Balancing	lbs
				A	D	L	I ₁	I ₃	A ₁			
G5	6	76748	M5842806	1.772	0.984	2.953	0.984	1.063	1.083	1	2	1.1
	8	76749	M5842808	1.772	1.102	2.953	0.984	1.181	1.083	1	2	1.1
	10	76750	M5842810	2.165	1.378	3.346	1.378	1.417	1.398	1	2	1.4
	12	76751	M5842812	2.362	1.654	3.543	1.575	1.693	1.496	1	2	1.7
	14	76752	M5842814	2.362	1.732	3.543	1.575	1.693	1.496	1	2	1.8
	16	76753	M5842816	2.559	1.890	3.740	1.772	1.811	1.634	1	2	2.1
	18	76754	M5842818	2.559	1.969	3.740	1.772	1.811	1.634	1	2	2.1
	20	71723	M5842820	2.559	2.047	3.740	1.772	1.890	1.594	1	2	2.2
G6	10	76758	M5843610	2.165	1.378	3.740	1.142	1.417	1.398	1	2	2.4
	12	76759	M5843612	2.362	1.654	3.937	1.339	1.693	1.496	1	2	2.6
	16	76761	M5843616	2.559	1.890	4.134	1.535	1.811	1.634	1	2	3.0
	18	76762	M5843618	2.559	1.969	4.134	1.535	1.811	1.634	1	2	3.0
	20	76763	M5843620	2.559	2.047	4.134	1.535	1.890	1.594	1	2	3.0
	25	72478	M5843625	3.150	2.480	4.724	–	2.126	2.224	2	2	4.3
	32	71725	M5843632	3.150	2.835	4.724	2.126	2.283	2.224	2	2	4.7
G7	32	76766	M5844632	3.150	2.835	5.118	2.126	2.283	2.224	2	–	6.8
	40	76767	M5844640	3.937	3.150	5.906	2.913	2.677	2.776	2	–	8.8

Spare Parts*

For Shank/ d ₁	Locking screw 1	Locking screw 2
6	951C0610	–
8	951C0810	–
10	951C1012	–
12-14	951C1216	–
16-18	951C1416	–
20	951C1616	–
25	951C1820	–
G6/32	951C2020	951C2017
G7/32	951C2020	–
40	951C2020	–

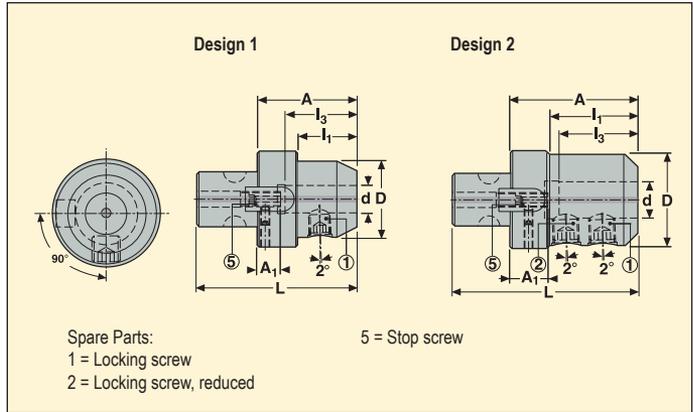
Please check availability in current price and stock-list.

*Tenons included: 90M5 for G5, 90M6 for G6, 90M7 for G7.

EPB 5843 – Side lock holders, Whistle Notch - DIN 1835 Form E/ DIN 6535 Form HE



- Run-out .0002" (5 µm) maximum at 3xd
- Whistle Notch d 16, 20, 25 and 32 with ground face



Graflex shank size	d mm	EDP No.	Part No.	Dimensions in inch						Design	Balancing	lbs
				A	D	L	I ₁	I ₃	A ₁ min-max			
G5	20	76775	M58432820	2.559	2.047	3.740	1.772	1.929	0.433-0.984	1	2	2.2
G6	25	76784	M58433625	3.150	2.480	4.724	–	2.126	0.630-0.945	2	2	4.2
	32	76785	M58433632	3.150	2.835	4.724	2.126	2.283	0.669-0.866	2	2	4.6

Spare Parts

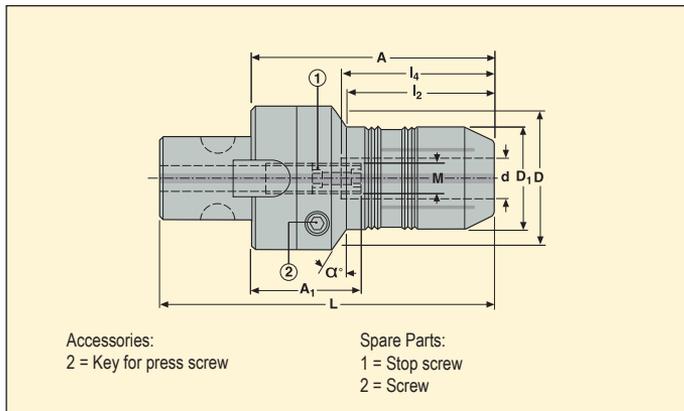
For d	Locking screw 1	Locking screw 2	Stop screw	Tenon
20	951C1616	–	19TLR1030	90M6
25	951C1820	–	19TLR1030	90M6
32	951C2020	951C2017	19TLR1030	90M6

Please check availability in current price and stock-list.

EPB 5834 – Hydraulic chucks



- Run-out .00015" (4 μm) maximum at 3xd



Graflex shank size	d mm	EDP No.	Part No.	Dimensions in inch							M mm	α°	Balancing	lbs
				A	D	D ₁	L	l ₂	l ₄	A ₁ min-max				
G5	20	38999	M58342820	3.543	1.969	1.654	4.724	1.850	2.047	1.654-2.047	M10	30	2	2.5
	25	33462	M58343625	3.937	2.480	2.283	5.512	1.969	2.283	1.654-2.047	M10	30	2	4.9
G6	32	39001	M58343632	3.937	2.520	-	5.512	-	2.480	2.047-2.441	M10	30	2	5.0

For reduction sleeves, see page(s) 366. For control gauges, see page(s) 367.

Spare Parts

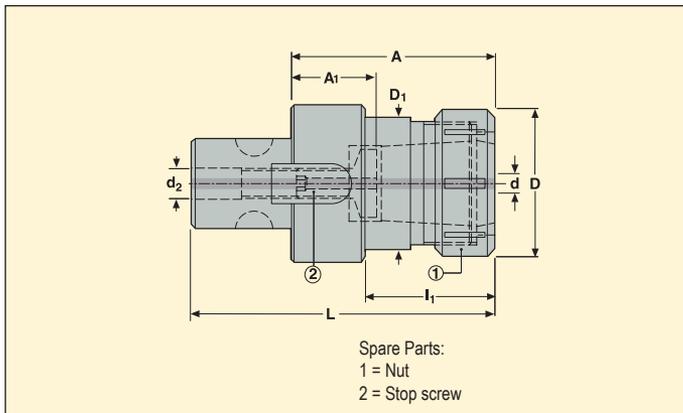
For d	Press screw	Stop screw	Tenon
20	950AF1010010	19LS1020A	90M5
25	950AF1010010	19LS0820A	90M6
32	950AF1010010	19LS1020A	90M6

Accessories

For d	Locking key
20	H04-4
25	H04-4
32	H04-4

Please check availability in current price and stock-list.

EPB 5873 – OZ collet chucks - DIN 6388



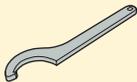
Graflex shank size	Capacity d inch	EDP No.	Part No.	Chuck & Collet Size	Dimensions in inch							Balancing	lbs
					A	D	D ₁	d ₂	L	I ₁	A ₁ min-max		
G6	0.157-1.260	84339	M58733632	OZ 32	3.543	2.835	2.480	M12	5.118	2.520	0.984-1.181	2	4.3

For OZ collets, see page(s) 383.

Spare Parts

For size	Nut	Stop screw	Tenon
OZ 32	 08B587332	 19PM1232	 90M6

Accessories

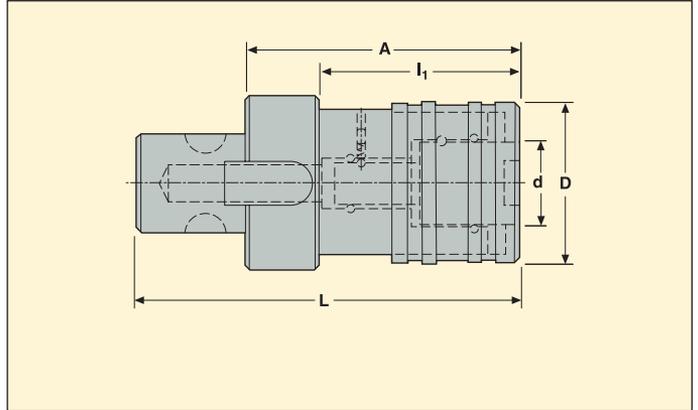
For size	Key
OZ 32	 03B587332

Please check availability in current price and stock-list.

EPB 5283 – Quick change tapping chucks with axial compensation



- With extension and compression
- Without through coolant (for through coolant, see following page)



Graflex shank size	Tapping range	EDP No.	Part No.	For tap adapter		Dimensions in inch						lbs
				Size US-EU	d mm	Compression	Extension	A	D	L	I ₁	
G4	M3-M12	56824	M5283222	1-2	19	0.295	0.295	3.150	1.535	4.094	2.087	0.6

Spare Parts

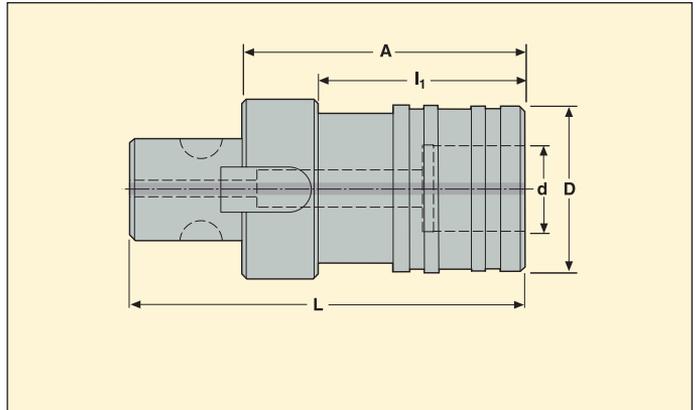
For d ₁	Tenon
19	90M4

Please check availability in current price and stock-list.
 For quick change tap adapters, see page(s) 389-392.

EPB 5260 – Quick change tapping chucks for synchronized tapping



- No compensation.
- Maximum coolant pressure 725 psi (50 bar)



Graflex shank size	Tapping range	EDP No.	Part No.	For tap adapter		Dimensions in inch				lbs
				Size	d mm	A	D	L	l_1	
G3	M3-M12	12155	M5260218	1-2	19	1.575	1.260	2.362	1.063	0.5
G5	M8-M20	12215	M5260328	2-3	31	2.165	2.047	3.346	1.614	1.5
G6	M14-M33	12156	M5260436	3-4	48	3.150	2.874	4.724	2.520	3.7

Spare Parts

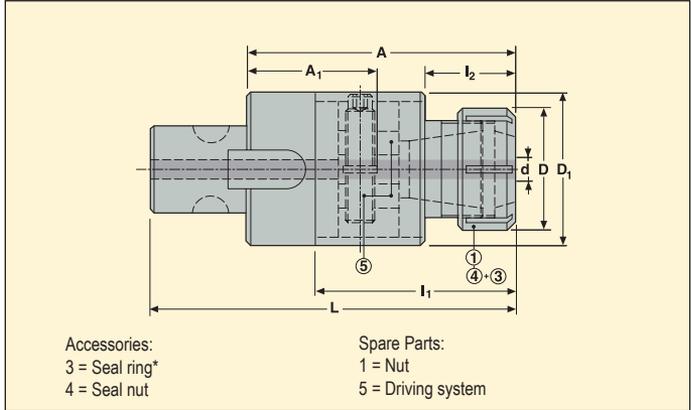
For size	Tenon
G3	90M3
G5	90M5
G6	90M61

Please check availability in current price and stock-list.

EPB 5865 – ER tapping chucks for synchronized tapping - DIN 6499



- Run-out .0002" (5 µm) maximum at 3rd
- No compensation



Graflex shank size	Tapping range	EDP No.	Part No.	For tap adapter		Dimensions in inch							lbs
				Size	d mm	A	D	D ₁	L	I ₁	I ₂	A ₁	
G5	M5-M20	56888	M58652825	ER 25	1-16	3.346	1.654	1.654	4.528	2.559	1.299	1.535	1.9
G6	M5-M30	86943	M58653632	ER 32	2-20	4.331	1.969	2.480	5.906	1.457	1.457	2.106	4.5
	M12-M33	56889	M58653640	ER 40	3-26	4.528	2.480	2.480	6.102	1.693	1.693	2.067	5.1

For ER collets, see page(s) 378-381.

Spare Parts

For size	Driving system	Nut	Tenon
ER 25	90T586525	08B587525X	90M5
ER 32	90T586532	08B587532X	90M6
ER 40	90T586532	08B587540X	90M6

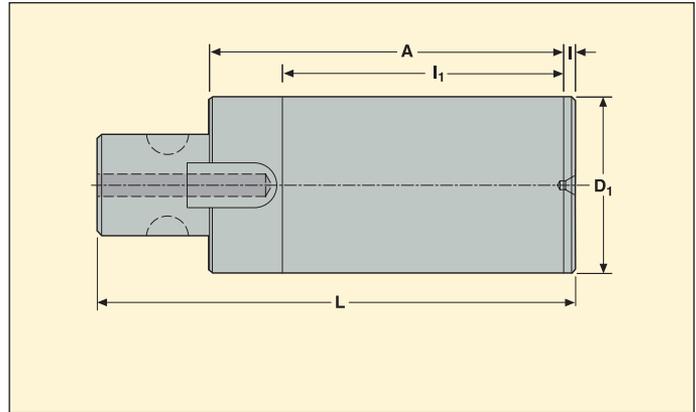
Accessories*

For size	Key	Seal nut	Seal ring
ER 25	03B587525	08B587525IC	01B58752505
ER 32	03B587532	08B587532IC	01B58753205
ER 40	03B587540	08B587540IC	01B58754003

Please check availability in current price and stock-list.

* For ER type sealing rings, see page(s) 382.

EPB 5023 – Greenstock blanks



Taper	D ₁	EDP No.	Part No.	Dimensions in inch						Balancing	lbs
				A	L	d ₂	l	l ₁	l ₂		
G5	1.969	56819	M502328501	3.937	5.118	0.236	0.315	3.465	1.772	2	3.63
	2.480	56820	M502336632	6.299	7.874	0.315	0.315	5.591	2.362	2	9.81
G7	3.543	56821	M502346903	7.874	9.843	0.394	0.315	7.165	2.756	2	23.1

Spare Parts

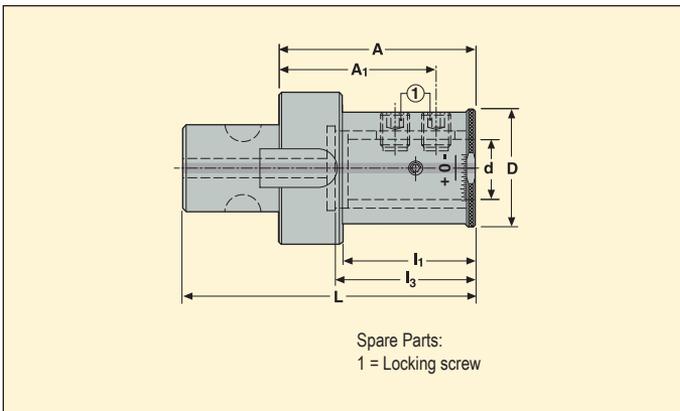
For size	Tenon
G5	90M5
G6	90M6
G7	90M7

Please check availability in current price and stock-list.

EPB 6100 – Adjustable drill holders, for type 7 drill shanks - Metric



- For Perfo-max drills
- Adjustable from $-.012$ to $+.031$ " on diameter



For drill shank type	d mm	EDP No.	Part No.	Dimensions in inch						lbs
				A	A ₁	D	L	I ₁	I ₃	
R7	25	06959	BM061610025	2.756	2.165	1.929	4.331	2.126	2.126	2.5
	32	06958	BM061610032	3.346	2.756	2.795	4.921	2.598	2.382	4.6
	40	06957	BM061610040	3.346	2.756	3.189	4.921	2.598	2.382	5.2

Spare Parts

For d	Locking screw	Tenon
25	950AF1210014	90M61
32	950AF1210020	90M61
40	950AF1210020	90M61

Accessories

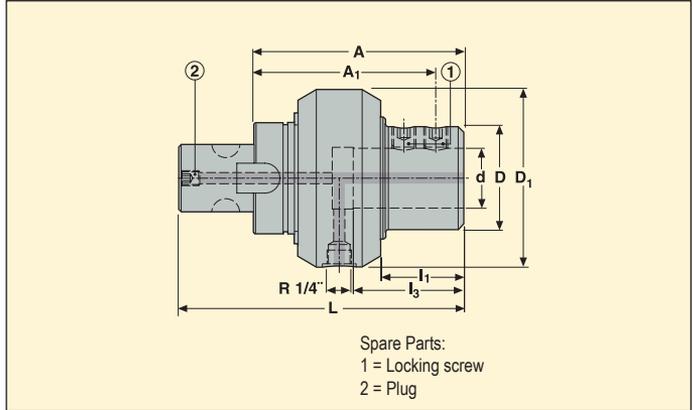
For d	Key	Reducing sleeve	Reducing sleeve 2
25	H06-4	-	-
32	H06-4	05B61003225	-
40	H06-4	05B61004025	05B61004032

Please check availability in current price and stock-list.

EPB 6183/00 – Rotary coolant inducers, manual tool change, for type 7 drill shanks - Inch - ISO 9766



- Filtration to .0016" (40 µm) maximum required
- Maximum pressure 290 psi (20 bar)



Graflex shank size	For drill shank type	d inch	EDP No.	Part No.	Dimensions in inch							Max rpm	lbs
					A	A ₁	D	D ₁	L	l ₁	l ₃		
G5	R7	1.00	00719	BSM051618325100	4.150	3.559	1.555	2.953	5.331	1.669	2.126	6000	3.1
G6	R7	1.25	00778	BSM061618331200	4.350	3.760	2.165	3.740	5.925	1.673	2.283	4000	6.0
	R7	1.50	00782	BSM061618338200	4.547	3.957	2.480	3.740	6.122	1.870	2.559	4000	6.3

Spare Parts

Accessories

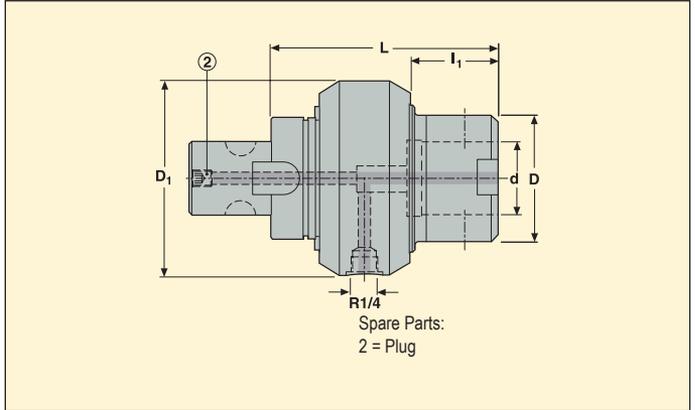
For d	Locking screw	Plug	Tenon	For d	Key	Reducing sleeve	Reducing sleeve 2
1.00	19X60841208	950A0810	90M51	1.00	H06-4	-	-
1.25	19X608412	950A1012	90M61	1.25	H06-4	05B61013125	-
1.50	19X608412	950A1012	90M61	1.50	H06-4	05B61013825	05B61013831

Please check availability in current price and stock-list.

EPB 401/00 – Rotary coolant inducers, manual tool change, for Graflex modules



- Filtration to .0016" (40 μm) maximum required



Graflex shank size	Graflex bore size		EDP No.	Part No.	Dimensions in inch				Max pressure bar	Max rpm	
	Size	d mm			D	D ₁	L	I ₁			
G6	G5	28	12174	BSM06140128200	1.969	3.740	4.724	0.866	20	4000	5.6
	G6	36	01873	BSM06140136200	2.362	3.740	3.471	1.063	20	4000	5.9

Spare Parts

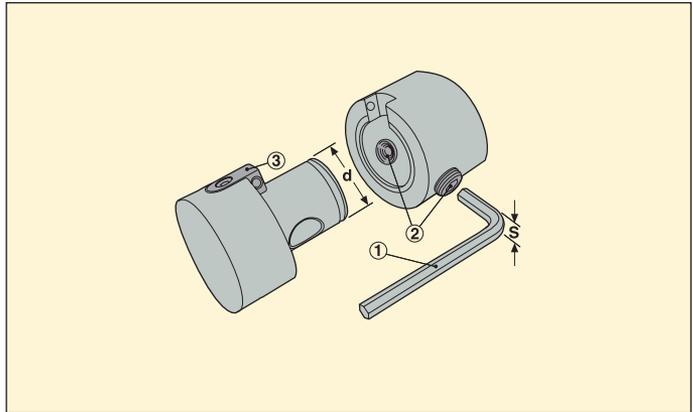
For d	Plug	Tenon
28, 36	950A1012	90M61

Please check availability in current price and stock-list.

Accessories and Spare parts for the Graflex connection on Graflex arbors, intermediates and holders



• For connection details and locking procedures, see the Guide pages.



Accessories and Spare parts	Description	EDP No.	Part No.	S	For Graflex connection d mm	For Graflex connection size	
						Female	Male
Accessories	Locking key (1)	73565	03H02	2	08/11	0/1	–
	Locking key (1)	73566	03H025	2.5	14	2	–
	Locking key (1)	73567	03H03	3	18	3	–
	Locking key (1)	73568	03H04	4	22	4	–
	Locking key (1)	73569	03H05	5	28	5	–
	Locking key (1)	72663	03H06	6	36	6	–
	Locking key (1)	73571	03H10	10	46	7	–
Spare parts standard	Two ball nose screws kit (2)	55844	90F0	2	08	0	–
	Two ball nose screws kit (2)	55845	90F1	2	11	1	–
	Two ball nose screws kit (2)	55846	90F2	2.5	14	2	–
	Two ball nose screws kit (2)	55847	90F3	3	18	3	–
	Two ball nose screws kit (2)	55848	90F4	4	22	4	–
	Two ball nose screws kit (2)	55849	90F5	5	28	5	–
	Two ball nose screws kit (2)	55850	90F6	6	36	6	–
	Two ball nose screws kit (2)	55851	90F7	10	46	7	–
	Tenon kit (3)	55852	90M0	–	08	–	0
	Tenon kit (3)	55853	90M1	–	11	–	1
	Tenon kit (3)	55854	90M2	–	14	–	2
	Tenon kit (3)	55855	90M3	–	18	–	3
	Tenon kit (3)	55856	90M4	–	22	–	4
	Tenon kit (3)	55857	90M5	–	28	–	5
	Tenon kit (3)	55858	90M6	–	36	–	6
	Tenon kit (3)	55859	90M7	–	46	–	7
	Spare parts dedicated*	Two short ball nose screws kit (2)	67669	90F01	2	08	0
Two short ball nose screws kit (2)		10954	90F51	5	28	5	–
Two short ball nose screws kit (2)		10955	90F71	10	46	7	–
Short tenon kit (3)		61822	90M51	–	28	–	5
Short tenon kit (3)		61824	90M61	–	36	–	6
Thin tenon kit (3)		06928	90M7R	–	46	–	7

Please check availability in current price and stock-list.

For the Accessories and Spare parts of the Graflex connection on boring heads and on Liteline items, see the Boring heads chapter in the Holmaking catalog.

* List of the Graflex items requiring dedicated Graflex connection Spare parts, see page(s) 272.

List of the Graflex items requiring dedicated Graflex connection Spare parts

Dedicated Spare part		Suitable for				
90F01	Two short ball nose screws kit	M4011408C	-	-	-	-
90F71	Two short ball nose screws kit	-	-	-	EM34714014650	-
90M51	Short tenon kit	-	BSM0516181255A0	-	-	BSM051618125100
		BSM051618325100	-	-	-	-
90M61	Short tenon kit	BM061610025	BM061610032	BM061610040	BM061610125	BM061610131
		BM061610138	-	-	-	-
		-	BSM0616181406A0	-	-	-
		-	BSM061618132200	BSM061618140200	BSM061618331200	BSM061618338200
		BSM06140128200	-	BSM06140136200	-	-
		-	-	M5260436	-	-
90M5R	Thin tenon kit	M55252822R	M55242827R	-	-	-
90M6R	Thin tenon kit	M55253627R	M55253627120R	-	-	-
90M7R	Thin tenon kit	-	-	M55254627R	M55254632R	-

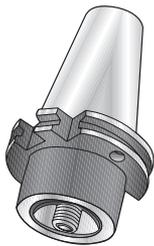
For the Accessories and Spare parts of the Graflex connection on boring heads and on Liteline items, see Boring heads chapter in Holemaking catalog
 Graflex items not listed above require standard Graflex connection Spare parts, see page(s) 271.

The Seco-Capto Tooling range shows:

- Seco-Capto Basic arbors: Basic arbors have a non Seco-Capto back-end shank (HSK, DIN, BT, ...) and a Seco-Capto receiver front-end to hold Seco-Capto tools, tool holders and intermediates onto rotating or static non PSC* type spindles.
- Seco-Capto Flange Mounts: Flange Mounts have a back end flange to be fitted onto SA spindle faces and a Seco-Capto receiver front end. For manual clamping of Seco-Capto tools, tool holders and intermediates onto rotating or static SA type spindles. Note: Seco-Capto Clamping Units to equip turning turrets are part of the Turning catalog chapter.
- Seco-Capto Intermediates: Extensions and Reducers, with Seco-Capto shank back end and Seco-Capto receiver front end. To extend the length of Seco-Capto assemblies or to adapt Seco-Capto smaller size items onto larger ones.
- Seco-Capto Tool Holders: to hold rotary or static tools without PSC* coupling shank (Shell mill, Weldon, Shrinkfit, ...) onto PSC* type spindles or onto Seco-Capto Basic Holders, Flanges, Clamping Units and Intermediates. Note: Seco-Capto Adapters are the link to the Combimaster (milling) and Graflex (holders and boring heads) systems.

* PSC stands for Polygonal Shank Coupling, as defined by the Norm ISO26623.

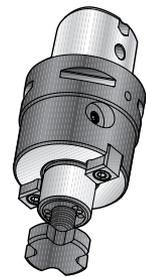
Seco-Capto couplings (receivers or shanks) are in accordance with the Norm ISO26623.



Basic arbors (and Flanges)



Intermediates



Tool holders (and Adapters)



Basic arbors

HSK-A/T HSK 63, 100	DIN 69871 Form ADB 40, 50	DIN 69871 Form B 40, 50	DIN 26623-2 Form ADB 40, 50	BT JIS Form AD/ ADB 30, 40, 50	BT JIS Form B 40, 50	BT Form AD/ ADB 30, 40, 50	Mazak BT JIS Form AD 40, 50	DIN 2080 40, 50
C.-390.410/411	C.-390.140	C.-390.272	316/317..5191	C.-390.55/58	C.-390.369	234..5191	C.-390.605	C.-390.00
pages 284-287	pages 290-291	pages 292-293	pages 288-289	pages 296-297	pages 298-299	pages 294-295	pages 300-301	pages 302-303

Basic arbors

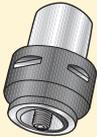
CAT TF Form ADB	Mazak CAT TF Form ADB	CAT-V Form ADB
234..5191	945/947..5191	C.-A390B.45
pages 278-279	pages 280-281	pages 282-283

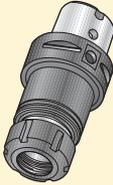
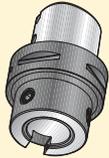
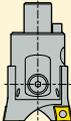
Intermediates

Extensions	Reducers
C.-391.01	C.-391.02
pages 304-305	pages 306-307

Tool holders

Shell mill holders, with through coolant channels	Shell mill holders, with reduced facediameter	Steadyline, vibration damping shell mill holders	Disc mill holders	Side lock holders Weldon/Seco Weldon	Side lock holders, Whistle Notch	Drill holders, ISO 9766
C.-391.5525/5524	C.-391.0552	C.-391.5555/ 5556	C.-391.5657	C.-391.0584 C.-391.20	C.-391.21	C.-391.27
page 315	page 316	pages 312-313	page 318	pages 319-322	pages 323-324	pages 325-326

Intermediates, short version for segments clamping only	
	
Extensions	Reducers
C.-391.01	C.-391.02
pages 308-309	pages 310-311

Tool holders						
						
Shrinkfit holders, DIN type	Hydraulic chucks	ER collet chucks, DIN 6499	Tapping chucks	Steadyline Combimaster holders	Combimaster adapters	Graflex adapters
C.-391.5603 C.-391.5600 C.-391.5600P	C.-391.5835 C.-391.5834	C.-391.5672 C.-391.5675	C.-391.5867 C.-391.60/61	C.-391.K820/K821	C.-391.5820	C.-391.0401
pages 327-332	pages 333-336	page 337	pages 339-343	page 344	page 345	page 346
						

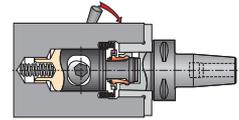
Tightening torques for arbors, intermediates and holders with center bolt clamping

Seco-Capto size	Center bolt tightening torque (ft/lbs)	Center bolt tightening torque (Nm)
C3	30-37	40-50
C4	37-44	50-60
C5	66-74	90-100
C6	118-133	160-180
C8	118-133	160-180



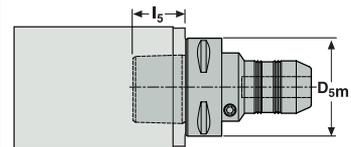
Tightening torques for flange mounts with cam shaft clamping

Seco-Capto size	Cam tightening torque (ft/lbs)	Cam tightening torque (Nm)
C3	26	35
C4	37	50
C5	52	70
C6	66	90
C8 and C8X	96	130



Seco-Capto shank sizes

Seco-Capto size	Dimensions in inch		Dimensions in mm	
	D _{5m}	l ₅	D _{5m}	l ₅
C3	1.26	0.75	32	19
C4	1.57	0.94	40	24
C5	1.97	1.18	50	30
C6	2.48	1.50	63	38
C8	3.15	1.89	80	48
C8X	3.94	1.89	80	48



The Seco-Capto joint features a self-locking taper. Where the center bolt system is used, unscrew the center bolt until the bolt head makes contact with the tool holder, causing the bolt to force the taper joint apart. When using the cam shaft side clamping system, over tightening of the cam will force the taper joint apart.

Balancing

Where items are pre-balanced or fine-balanced, the balance quality is shown in the product pages:

1 = Fine balancing quality:

Unbalance $e = 3 \text{ g. mm/kg}$ maximum for items with mass $M \geq 1 \text{ kg}$ or $U = 3 \text{ g. mm}$ maximum for items $< 1 \text{ kg}$.

2 = Pre-balancing quality:

Unbalance $e = 30 \text{ g. mm/kg}$ maximum for items with mass $M \geq 1 \text{ kg}$ or $U = 30 \text{ g. mm}$ maximum for items $< 1 \text{ kg}$.

Most pre-balanced items can be fine-balanced on request, please inquire.

Housing for data carrier

More and more holders are with data carrier blind hole. If not already available, blind holes for data carriers can be machined and data carriers fitted on request, please inquire.

Code key for Seco-Capto arbors and rotating tool holders

C6	-	A	391	.	20	-	40	085	B
1		2	3		4		5	6	7

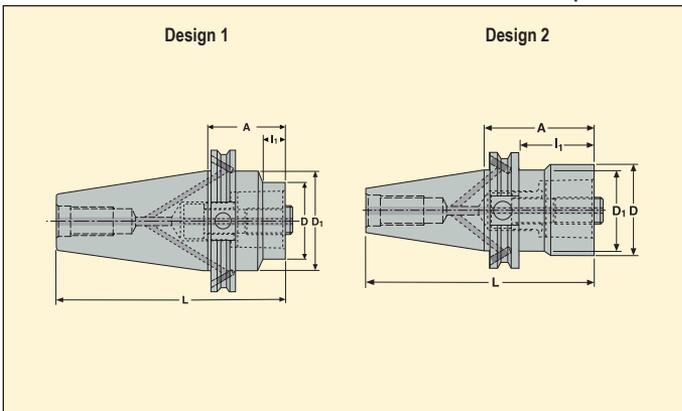
1. Coupling size	2. Inch or metric designation	3. Style of holder/adapter
<p>Size: inch: mm:</p> <p>C3 D5m = 1.260 32</p> <p>C4 D5m = 1.575 40</p> <p>C5 D5m = 1.969 50</p> <p>C6 D5m = 2.480 63</p> <p>C8 D5m = 3.150 80</p> <p>C8X D5m = 3.937 100</p>	<p>A = inch No A = metric</p>	<p>390 = Basic holder 391 = Intermediate adapter, tool adapter</p>

4. Family code	
<p>Basic holders</p> <p>410 = HSK-A/C</p> <p>45 = CAT V Form AD</p> <p>455 = CAT V Form B</p> <p>545 = CAT V BIG PLUS</p> <p>140 = DIN 69871 Form AD</p> <p>272 = DIN 69871 Form B</p> <p>540 = DIN 39871 BIG PLUS®</p> <p>55/58 = BT JIS Form AD</p> <p>369 = BT JIS Form B</p> <p>555/558 = BT JIS BIG PLUS</p> <p>00 = DIN 2080</p> <p>34705 = DIN 2079 Front clamp</p>	<p>Intermediate/tool adapters</p> <p>01 = Extension</p> <p>02 = Reducer</p> <p>0401 = Graflex adapters</p> <p>05 = Shell mill no through coolant</p> <p>14 = ER collet chucks</p> <p>21 = Side lock Whistle notch</p> <p>27 = ISO 9766 drill holder</p> <p>60/61 = Tapping chucks</p> <p>5525/5524 = Shell mill through coolant</p> <p>552 = Shell mill without through coolant</p> <p>5545 = Shell mill Accu-fit™</p> <p>5555/5556 = Steadyline®</p> <p>5600 = Safe-Lock™ Shrinkfit reinforced</p> <p>5600P = Safe-Lock™ Shrinkfit reinforced with pull out protection</p> <p>5657 = Disc mill holder</p> <p>5672 = High precision collet chucks</p> <p>5675 = ER collet chucks</p> <p>5803 = Shrinkfit DIN type</p> <p>5820 = Combimaster adapters</p> <p>5834 = Hydraulic chucks</p> <p>5835 = Hydraulic chucks, Strong</p> <p>584/20 = Side lock Weldon</p> <p>5867 = Tapping chucks for synchronized tapping, compensation</p>

5. Taper/connection size	6. Gauge length	7. Revision
<p>30 = 30 taper</p> <p>40 = 40 taper</p> <p>50 = 50 taper</p> <p>60 = 60 taper</p>	<p>Programming length of tool in inch or mm</p> <p>Two examples:</p> <p>070 = 70 mm (2.76")</p> <p>110 = 110 mm (4.33")</p>	<p>If a rotating tool ends with a letter, it is an updated version of the holder.</p> <p>e.g. C4-391.20-12055A = updated version</p>

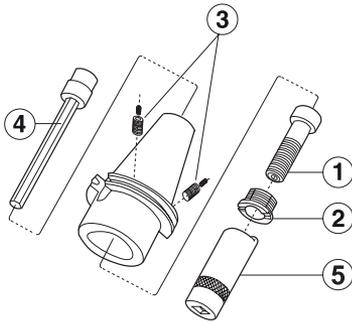
EPB 5191 – Seco-Capto™ basic holders

CAT Taper-Face ADB



Taper	Seco-Capto™ size	EDP No.	Part No.	Dimensions in inch					Design	Balancing	lbs
				A	D	D ₁	L	I ₁			
CAT TF40 ADB	C4	58546	E234251914040	1.580	1.58	1.75	4.270	0.140	1	2	2.2
	C5	58553	E234251915050	1.970	1.97	1.75	4.660	1.220	2	2	2.2
CAT TF50 ADB	C4	58555	E234451914040	1.580	1.58	2.75	5.580	0.090	1	2	6.8
	C5	58556	E234451915040	1.580	1.97	2.75	5.580	0.090	1	–	6.4
	C6	58576	E234451916340	1.580	2.48	2.75	5.580	0.120	1	–	6.4
	C6	58584	E234451916390	3.543	2.48	2.75	7.543	1.457	1	–	8.7
	C8	58588	E2344519180100	3.937	3.15	2.75	7.937	0.750	2	–	9.0
	C8	58605	E2344519180150	5.906	3.15	2.75	9.906	0.750	2	–	14.4

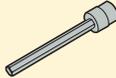
Please check availability in current price and stock-list



Accessories:
 4 = Extension key
 5 = Spanner

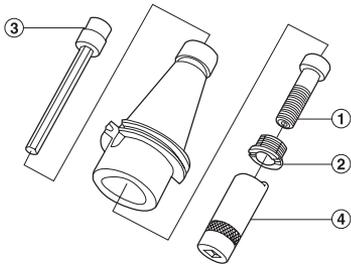
Spare Parts:
 1 = Center screw
 2 = Retaining nut
 3 = Sealing plugs

Accessories

For	Extension key	Spanner
		
C4	5680015-05	5680065-10
C5	5680015-01	5680065-11
C6	5680015-02	5680065-12
C8	5680015-02	5680065-12

Spare Parts

For	Center screw	Retaining nut	Sealing plugs
			
E234251914040	5512063-07	5512091-03	564301701
E234251915050	5512063-08	5512091-01	564301701
E234451914040	5512063-07	5512091-03	564301702
E234451915040	5512063-08	5512091-01	564301702
E234451916340	5512063-09	5512091-02	564301702
E234451916390	5512063-09	5512091-02	564301702
E2344519180100	5512063-09	5512091-02	564301702
E2344519180150	5512063-09	5512091-02	564301702



Accessories:
 3 = Extension key
 4 = Spanner

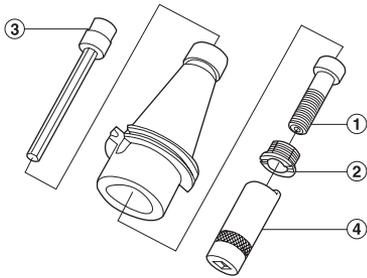
Spare Parts:
 1 = Center screw
 2 = Retaining nut

Accessories

For	Extension key	Spanner
		
C6	5680015-02	5680065-12
C8	5680015-02	5680065-12

Spare Parts

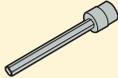
For	Center screw	Retaining nut
		
E945451918070	5512067-04	5512091-02
E947451916350	5512063-09	5512091-02
E947451918070	5512063-09	5512091-02



Accessories:
 3 = Extension key
 4 = Retaining nut spanner

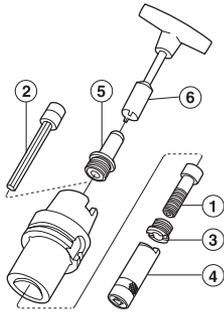
Spare Parts:
 1 = Center screw
 2 = Retaining nut

Accessories

For	Extension key	Spanner
		
C3 CAT 40	5680015-05	5680065-13
C3 CAT 50	5680015-05	5680065-13
C4 CAT 40	5680015-05	5680065-10
C4 CAT 50	5680015-05	5680065-10
C5 CAT 40	5680015-01	5680065-11
C5 CAT 50	5680015-01	5680065-11
C6 CAT 40	5680015-01	5680065-12
C6 CAT 50	5680015-02	5680065-12
C8 CAT 50	5680015-02	5680065-12

Spare Parts

For	Center screw	Retaining nut	Sealing plugs
			
C3 CAT 40	5512063-10	5512091-04	564301701
C3 CAT 50	5512063-10	5512091-04	564301702
C4 CAT 40	5512063-07	5512091-03	564301701
C4 CAT 50	5512063-07	5512091-03	564301702
C5 CAT 40	5512063-08	5512091-01	564301701
C5 CAT 50	5512063-08	5512091-01	564301702
C6 CAT 40	5512063-13	5512091-02	564301701
C6 CAT 50	5512063-09	5512091-02	564301702
C8 CAT 50	5512063-09	5512091-02	564301702



Accessories:
 2 = Extension key
 4 = Retaining nut spanner
 6 = Key for coolant tube

Spare Parts:
 1 = Center screw
 3 = Retaining nut
 5 = Coolant tube*

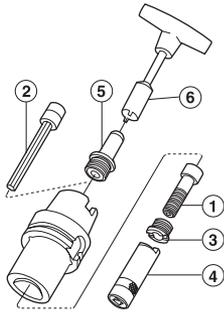
Accessories

For	Extension Key	Key	Spanner
			
C3-390.410-63075C	5680015-05	5680094-04	5680065-13
C3-390.410-100080A	5680015-05	5680094-06	5680065-13
C4-390.410-63080C	5680015-05	5680094-04	5680065-10
C4-390.410-100090A	5680015-05	5680094-06	5680065-10
C5-390.410-63090C	5680015-01	5680094-04	5680065-11
C5-390.410-100100A	5680015-01	5680094-06	5680065-11
C6-390.410-100110A	5680015-02	5680094-06	5680065-12
C8-390.410-100120A	5680015-02	5680094-06	5680065-12

Spare Parts*

For	Center screw	Coolant tube	Retaining nut
			
C3-390.410-63075C	5512063-10	5692020-04	5512091-04
C3-390.410-100080A	5512063-10	5692020-06	5512091-04
C4-390.410-63080C	5512063-07	5692020-04	5512091-03
C4-390.410-100090A	5512063-07	5692020-06	5512091-03
C5-390.410-63090C	5512063-08	5692020-04	5512091-01
C5-390.410-100100A	5512063-08	5692020-06	5512091-01
C6-390.410-100110A	5512063-09	5692020-06	5512091-02
C8-390.410-100120A	5512063-09	5692020-06	5512091-02

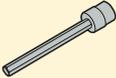
* A special coolant tube is delivered together with each Seco-Capto HSK basic holder



Accessories:
 2 = Extension key
 4 = Retaining nut spanner
 6 = Key for coolant tube

Spare Parts:
 1 = Center screw
 3 = Retaining nut
 5 = Coolant tube*

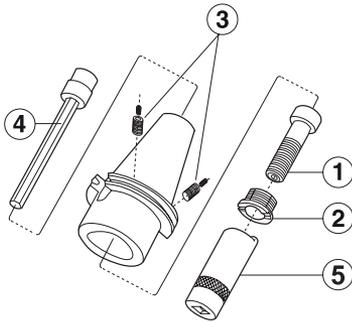
Accessories

For	Extension key	Key	Spanner
			
C4-390.411-63080	5680015-05	5680094-04	5680065-10
C4-390.411-100090	5680015-05	5680094-06	5680065-10
C5-390.411-63090	5680015-01	5680094-04	5680065-11
C5-390.411-100100	5680015-01	5680094-06	5680065-11
C6-390.411-100110	5680015-02	5680094-06	5680065-12
C8-390.411-100120	5680015-02	5680094-06	5680065-12

Spare Parts*

For	Center screw	Coolant tube	Retaining nut
			
C4-390.411-63080	5512063-07	5692020-04	5512091-03
C4-390.411-100090	5512063-07	5692020-06	5512091-03
C5-390.411-63090	5512063-08	5692020-04	5512091-01
C5-390.411-100100	5512063-08	5692020-06	5512091-01
C6-390.411-100110	5512063-09	5692020-06	5512091-02
C8-390.411-100120	5512063-09	5692020-06	5512091-02

* A special coolant tube is delivered together with each Seco-Capto HSK basic holder



Accessories:
 4 = Extension key
 5 = Spanner

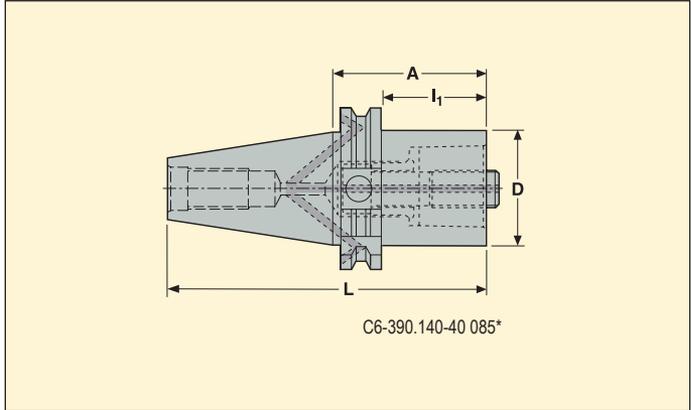
Spare Parts:
 1 = Center screw
 2 = Retaining nut
 3 = Sealing plugs

Accessories

For	Extension key	Spanner
		
C4	5680015-05	5680065-10
C5	5680015-01	5680065-11
C8	5680015-02	5680065-12
TF40 C6	5680015-01	5680065-12
TF50 C6	5680015-02	5680065-12

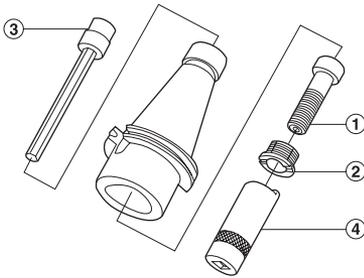
Spare Parts

For	Center screw	Retaining nut	Sealing plugs
			
E316951915050	5512063-08	5512091-01	564301701
E316951916385	5512063-13	5512091-02	564301701
E317151914030	5512063-07	5512091-03	564301702
E317151915030	5512063-08	5512091-01	564301702
E317151915070	5512063-08	5512091-01	564301702
E3171519163100	5512063-09	5512091-02	564301702
E317151916350	5512063-09	5512091-02	564301702
E3171519180120	5512063-09	5512091-02	564301702
E317151918070	5512063-09	5512091-02	564301702



Seco-Capto™ size	Taper	EDP No.	Part No.	*	Dimensions in inch				Balancing	lbs
					A	D	L	I ₁		
C3	DIN40 ADB	99294	C3-390B.140-40030		1.181	1.260	3.874	0.429	2	1.8
	DIN40 ADB	99295	C3-390B.140-40060		2.362	1.260	5.055	1.610	2	2.0
	DIN50 ADB	99296	C3-390B.140-50030		1.181	1.260	5.185	0.429	–	5.7
	DIN50 ADB	99298	C3-390B.140-50060		2.362	1.260	6.366	1.610	–	6.0
C4	DIN40 ADB	99299	C4-390B.140-40030		1.181	1.575	3.874	0.429	2	1.8
	DIN40 ADB	99300	C4-390B.140-40060		2.362	1.575	5.055	1.610	2	2.4
	DIN50 ADB	99301	C4-390B.140-50030		1.181	1.575	5.185	0.429	–	5.7
	DIN50 ADB	99302	C4-390B.140-50060		2.362	1.575	6.366	1.610	–	6.2
C5	DIN40 ADB	99303	C5-390B.140-40040		1.575	1.969	4.268	0.823	2	2.0
	DIN40 ADB	99304	C5-390B.140-40080		3.150	1.969	5.843	2.398	2	3.3
	DIN50 ADB	99305	C5-390B.140-50030		1.181	1.969	5.185	0.429	–	5.7
	DIN50 ADB	99306	C5-390B.140-50070		2.756	1.969	6.760	2.004	–	6.8
C6	DIN40 ADB	99307	C6-390B.140-40085	*	3.346	2.480	6.039	2.594	–	4.0
	DIN50 ADB	99308	C6-390B.140-50030		1.181	2.480	5.185	0.429	–	5.5
	DIN50 ADB	99309	C6-390B.140-50080		3.150	2.480	7.154	2.398	–	7.9
C8	DIN50 ADB	99310	C8-390B.140-50070		2.756	3.150	6.760	2.004	–	8.2
	DIN50 ADB	99311	C8-390B.140-50120		4.724	3.150	8.728	3.972	–	12.3

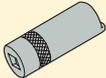
Please check availability in current price and stock-list.
* For light machining only.



Accessories:
 3 = Extension key
 4 = Retaining nut spanner

Spare Parts:
 1 = Center screw
 2 = Retaining nut

Accessories

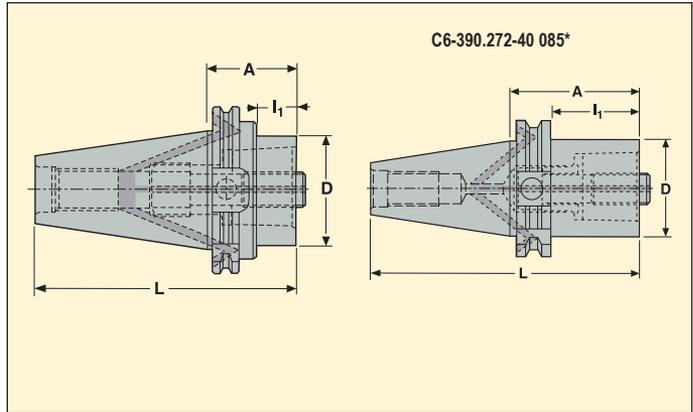
For Capto size	Extension key	Spanner
		
C3 DIN 40	5680015-05	5680065-13
C3 DIN 50	5680015-05	5680065-13
C4 DIN 40	5680015-05	5680065-10
C4 DIN 50	5680015-05	5680065-10
C5 DIN 40	5680015-01	5680065-11
C5 DIN 50	5680015-01	5680065-11
C6 DIN 40	5680015-01	5680065-12
C6 DIN 50	5680015-02	5680065-12
C8 DIN 50	5680015-02	5680065-12

Spare Parts

For Capto size	Center screw	Retaining nut	Sealing plugs
			
C3 DIN 40	5512063-10	5512091-04	564301701
C3 DIN 50	5512063-10	5512091-04	564301702
C4 DIN 40	5512063-07	5512091-03	564301701
C4 DIN 50	5512063-07	5512091-03	564301702
C5 DIN 40	5512063-08	5512091-01	564301701
C5 DIN 50	5512063-08	5512091-01	564301702
C6 DIN 40	5512063-13	5512091-02	564301701
C6 DIN 50	5512063-09	5512091-02	564301702
C8 DIN 50	5512063-09	5512091-02	564301702



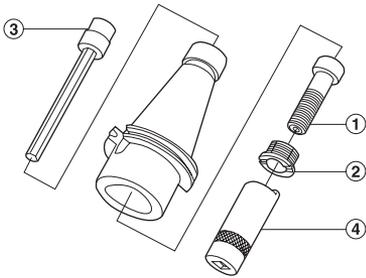
- Coolant through flange



Seco-Capto™ size	Taper	EDP No.	Part No.	*	Dimensions in inch				Balancing	lbs
					A	D	L	l ₁		
C3	DIN40 B	15625	C3-390.272-40060		2.362	1.260	5.055	1.610	2	2.6
	DIN50 B	15626	C3-390.272-50030		1.181	1.260	5.187	0.429	–	5.7
	DIN50 B	15627	C3-390.272-50060		2.362	1.260	6.368	1.610	–	6.2
C4	DIN40 B	15628	C4-390.272-40030		1.181	1.575	3.874	0.429	2	1.8
	DIN40 B	15629	C4-390.272-40060		2.362	1.575	5.055	1.610	2	2.3
C5	DIN40 B	15632	C5-390.272-40040		1.575	1.969	4.268	0.823	2	2.0
	DIN40 B	15633	C5-390.272-40080		3.150	1.969	5.843	2.398	2	3.3
C6	DIN40 B	28023	C6-390.272-40085	*	3.346	2.480	6.039	2.596	2	3.9
	DIN50 B	15637	C6-390.272-50080		3.150	2.480	7.156	2.008	–	8.2
C8	DIN50 B	15638	C8-390.272-50070		2.756	3.150	6.762	2.004	–	8.1

Please check availability in current price and stock-list.

* For light machining only.



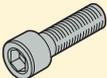
Accessories:
 3 = Extension key
 4 = Retaining nut spanner

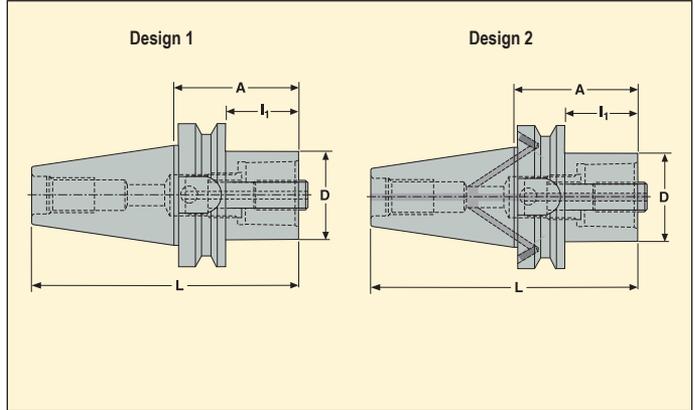
Spare Parts:
 1 = Center screw
 2 = Retaining nut

Accessories

For	Extension Key	Spanner
		
C3	5680015-05	5680065-13
C4	5680015-05	5680065-10
C5	5680015-01	5680065-11
C6-40085	5680015-01	5680065-12
C6	5680015-02	5680065-12
C8	5680015-02	5680065-12

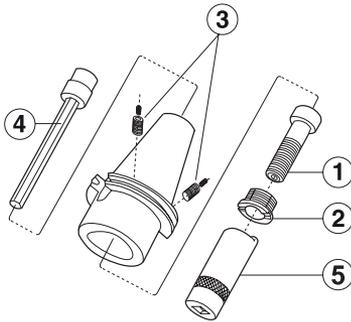
Spare Parts

For	Center screw	Retaining nut
		
C3	5512063-10	5512091-04
C4	5512063-07	5512091-03
C5	5512063-08	5512091-01
C6-40085	5512063-13	5512091-02
C6	5512063-09	5512091-02
C8	5512063-09	5512091-02



Taper	Seco-Capto™ size	EDP No.	Part No.	Dimensions in inch				Design	Balancing	lbs
				A	D	L	I ₁			
BT TF30 AD	C3	58456	E400251913240	1.575	1.260	3.480	0.866	1	–	1.0
	C4	58458	E400251914060	2.362	1.575	4.268	0.866	1	–	1.4
BT TF40 ADB	C4	58464	E311451914040	1.575	1.575	4.150	0.512	2	–	2.4
	C5	58473	E311451915050	1.969	1.969	4.543	0.906	2	–	2.6
	C6	58481	E311451916375	2.953	2.480	5.528	1.890	2	–	3.7
BT TF50 ADB	C4	58491	E311651914040	1.575	1.969	5.583	0.079	2	–	7.9
	C5	58492	E311651915040	1.575	1.969	5.583	0.079	2	–	7.7
	C6	58514	E311651916350	1.969	2.480	5.976	0.472	2	–	7.9
	C6	58525	E3116519163100	3.937	2.480	7.945	2.441	2	–	10.2
	C8	58538	E311651918070	2.756	3.150	6.764	1.260	2	–	9.3
	C8	58545	E3116519180120	4.724	3.150	4.795	3.228	2	–	13.0

Please check availability in current price and stock-list



Accessories:
 4 = Extension key
 5 = Spanner

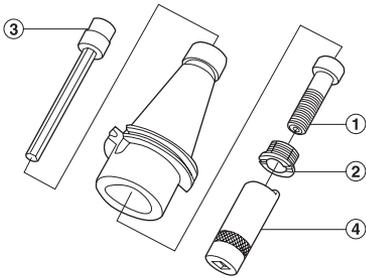
Spare Parts:
 1 = Center screw
 2 = Retaining nut
 3 = Sealing plugs

Accessories

For	Extension key	Spanner
		
C3	5680015-05	5680065-13
C4	5680015-05	5680065-10
C5	5680015-01	5680065-11
BT TF40 C6	5680015-01	5680065-12
BT TF50 C6	5680015-02	5680065-12
C8	5680015-02	5680065-12

Spare Parts

For	Center screw	Retaining nut	Sealing plugs
			
C3	5512063-10	5512091-04	–
BT TF30 C4	5512063-07	5512091-03	–
BT TF40 C4	5512063-07	5512091-03	564301701
BT TF40 C5	5512063-08	5512091-01	564301701
BT TF40 C6	5512063-13	5512091-02	564301701
BT TF50 C4	5512063-07	5512091-03	564301702
BT TF50 C5	5512063-08	5512091-01	564301702
BT TF50 C6	5512063-09	5512091-02	564301702
C8	5512063-09	5512091-02	564301702



Accessories:
 3 = Extension key
 4 = Retaining nut spanner

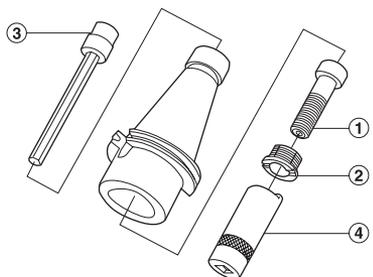
Spare Parts:
 1 = Center screw
 2 = Retaining nut

Accessories

For	Extension key	Spanner
		
C3 BT 30	5680015-05	5680065-13
C3 BT 40	5680015-05	5680065-13
C3 BT 50	5680015-05	5680065-13
C4 BT 40	5680015-05	5680065-10
C4 BT 50	5680015-05	5680065-10
C5 BT 40	5680015-01	5680065-11
C5 BT 50	5680015-01	5680065-11
C6 BT 40	5680015-01	5680065-12
C6 BT 50	5680015-02	5680065-12

Spare Parts

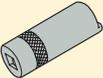
For	Center screw	Retaining nut	Sealing plugs
			
C3 BT 30	5512063-10	5512091-04	–
C3 BT 40	5512063-10	5512091-04	564301701
C3 BT 50	5512063-10	5512091-04	564301702
C4 BT 40	5512063-07	5512091-03	564301701
C4 BT 50	5512063-07	5512091-03	564301702
C5 BT 40	5512063-08	5512091-01	564301701
C5 BT 50	5512063-08	5512091-01	564301702
C6 BT 40	5512063-13	5512091-02	564301701
C6 BT 50	5512063-09	5512091-02	564301702



Accessories:
 3 = Extension key
 4 = Retaining nut spanner

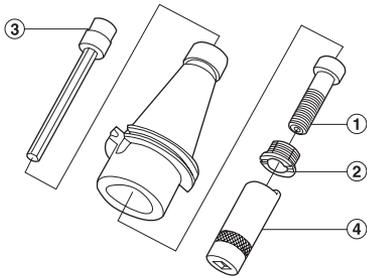
Spare Parts:
 1 = Center screw
 2 = Retaining nut

Accessories

For Capto size	Extension Key	Spanner
		
C3	5680015-05	5680065-13
C4	5680015-05	5680065-10
C5	5680015-01	5680065-11

Spare Parts

For Capto size	Center screw	Retaining nut
		
C3	5512063-10	5512091-04
C4	5512063-07	5512091-03
C5	5512063-08	5512091-01



Accessories:
 3 = Extension key
 4 = Retaining nut spanner

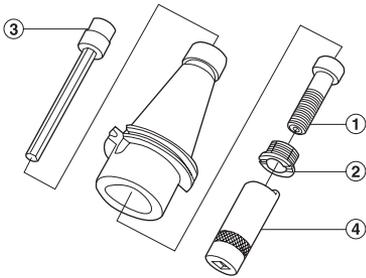
Spare Parts:
 1 = Center screw
 2 = Retaining nut

Accessories

For Capto size	Extension key	Spanner
		
C5	5680015-01	5680065-11
C6	5680015-02	5680065-12
C8	5680015-02	5680065-12

Spare Parts

For Capto size	Center screw	Retaining nut
		
C5	5512063-08	5512091-01
C6	5512063-09	5512091-02
C8	5512063-09	5512091-02



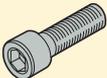
Accessories:
 3 = Extension key
 4 = Retaining nut spanner

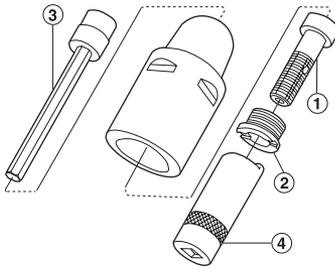
Spare Parts:
 1 = Center screw
 2 = Retaining nut

Accessories

For	Extension Key	Spanner
		
C3	5680015-05	5680065-13
C4	5680015-05	5680065-10
C5	5680015-01	5680065-11
C6	5680015-02	5680065-12
C6-40075	5680015-01	5680065-12
C8	5680015-02	5680065-12

Spare Parts

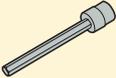
For	Center screw	Retaining nut
		
C3	5512063-10	5512091-04
C4	5512063-07	5512091-03
C5	5512063-08	5512091-01
C6	5512063-09	5512091-02
C6-40075	5512063-13	5512091-02
C8	5512063-09	5512091-02



Accessories:
 3 = Extension key
 4 = Retaining nut spanner

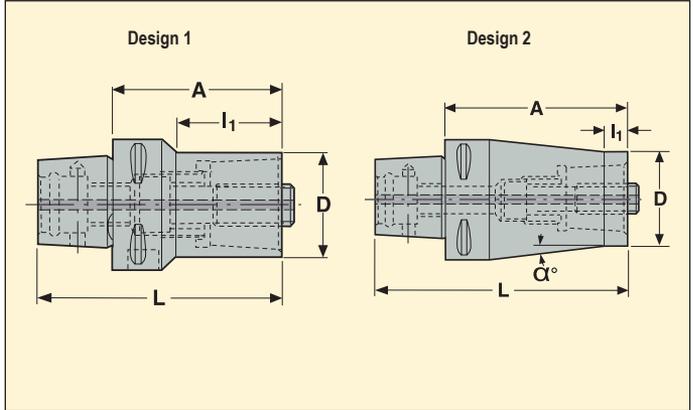
Spare Parts:
 1 = Center screw
 2 = Retaining nut

Accessories

For	Extension key	Pin	Spanner
			
C...-32	5680015-05	3113020-304	5680065-13
C...-40	5680015-05	3113020-355	5680065-10
C...-50	5680015-01	3113020-406	5680065-11
C...-63	5680015-02	3113020-457	5680065-12
C...-80	5680015-02	3113020-509	5680065-12

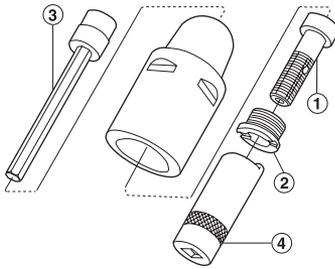
Spare Parts

For	Center screw	Retaining ring
		
C...-32	5512067-01	5512091-04
C...-40	5512067-02	5512091-03
C...-50	5512067-03	5512091-01
C...-63	5512067-04	5512091-02
C...-80	5512067-04	5512091-02



Seco-Capto™ shank	Seco-Capto™ receiver	EDP No.	Part No.	Dimensions in inch				α°	Design	
				A	D	L	l ₁			
C4	C3	15935	C4-391.02-32055A	2.165	1.260	3.110	1.220	–	1	0.9
	C3	28152	C4-391.02-32070A	2.756	1.260	3.701	0.472	6	2	1.2
C5	C3	15936	C5-391.02-32060A	2.362	1.260	3.543	1.370	–	1	1.4
	C4	15938	C5-391.02-40065A	2.559	1.575	3.740	1.575	–	1	1.7
C6	C3	15939	C6-391.02-32070A	2.756	1.260	4.252	1.535	–	1	2.3
	C4	15940	C6-391.02-40080A	3.150	1.575	4.646	2.024	–	1	2.7
	C5	15941	C6-391.02-50080A	3.150	1.969	4.646	2.028	–	1	3.2
	C5	26260	C6-391.02-50110A	4.331	1.969	5.827	0.472	4.5	2	4.7
C8	C3	15942	C8-391.02-32060A	2.362	1.260	4.252	1.154	–	1	3.8
	C4	15943	C8-391.02-40070A	2.756	1.575	4.646	1.437	–	1	4.2
	C5	15944	C8-391.02-50080A	3.150	1.969	5.039	1.941	–	1	4.9
	C6	15945	C8-391.02-63080A	3.150	2.480	5.039	2.091	–	1	5.4
	C6	26238	C8-391.02-63120A	4.724	2.480	6.614	0.472	6	2	8.7

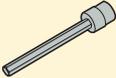
Please check availability in current price and stock-list.



Accessories:
 3 = Extension key
 4 = Retaining nut spanner

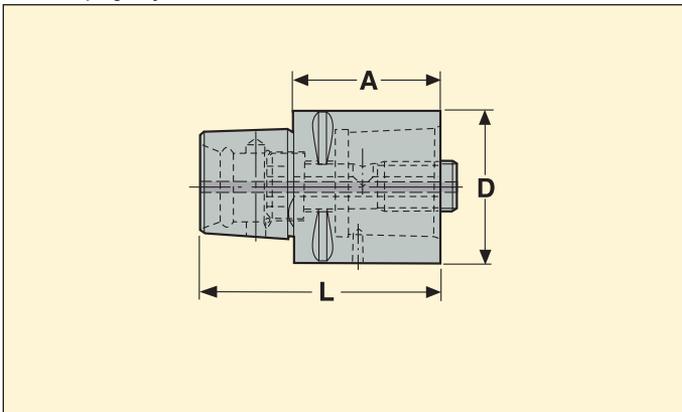
Spare Parts:
 1 = Center screw
 2 = Retaining nut

Accessories

For	Extension key	Spanner
		
C...-32	5680015-05	5680065-13
C...-40	5680015-05	5680065-10
C...-50	5680015-01	5680065-11
C...-63	5680015-02	5680065-12

Spare Parts

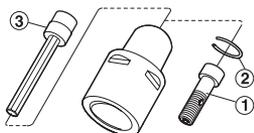
For	Center screw	Pin	Retaining nut
			
C...-32	5512067-01	3113020-304	5512091-04
C...-40	5512067-02	3113020-355	5512091-03
C...-50	5512067-03	3113020-406	5512091-01
C...-63	5512067-04	3113020-457	5512091-02



- The Seco-Capto machine side of short extensions can only be held by spindles with segment clamping (not with center bolt clamping)

Seco-Capto™ shank	Seco-Capto™ receiver	EDP No.	Part No.	Dimensions in inch			lbs
				A	D	L	
C3	C3	28150	C3-391.01-32035	1.378	1.260	2.126	0.5
C4	C4	28151	C4-391.01-40040	1.575	1.575	2.520	0.8
C5	C5	32597	C5-391.01-50050	1.969	1.969	3.150	1.5
C6	C6	26220	C6-391.01-63060	2.362	2.480	3.858	2.9
C8	C8	26235	C8-391.01-80065	2.559	3.150	4.449	5.1

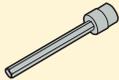
Please check availability in current price and stock-list.



Accessories:
3 = Extension key

Spare Parts:
1 = Center screw
2 = Circlip

Accessories

For	Extension key
	
C...-32	5680015-05
C...-40	5680015-05
C...-50	5680015-05
C...-63	5680015-02
C...-80	5680015-02

Spare Parts

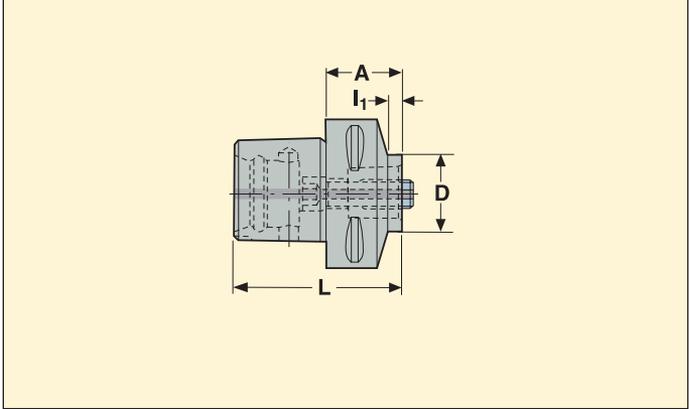
For	Center screw	Circlip
		
C...-32	5512068-01	5545040-02
C...-40	5512068-02	5545040-03
C...-50	5512068-03	5545040-07
C...-63	5512068-04	5545040-08
C...-80	5512068-05	5545040-08

EPB 02 - Seco-Capto reducers, short version, for segment clamping only - ISO 26623-1

ISO 26623-1

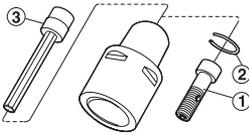


- The Seco-Capto machine side of short reducers can only be hold by spindles with segment clamping (not with center bolt clamping)



Seco-Capto™ shank	Seco-Capto™ receiver	EDP No.	Part No.	Dimensions in inch				lbs
				A	D	L	I ₁	
C5	C3	28153	C5-391.02-32033	1.299	1.260	2.480	0.394	1.1
	C4	28155	C5-391.02-40040	1.575	1.575	2.756	0.709	1.2
C6								
	C3	28156	C6-391.02-32032	1.260	1.260	2.756	0.236	1.9
	C4	26221	C6-391.02-40040	1.575	1.575	3.071	0.433	2.1
	C5	26222	C6-391.02-50050	1.969	1.969	3.465	0.965	2.2
C8	C5	28158	C8-391.02-50045	1.772	1.969	3.661	0.394	4.1
	C6	28159	C8-391.02-63055	2.165	2.480	4.055	0.787	4.7

Please check availability in current price and stock-list.



Accessories:
3 = Extension key

Spare Parts:
1 = Center screw
2 = Circlip

Accessories

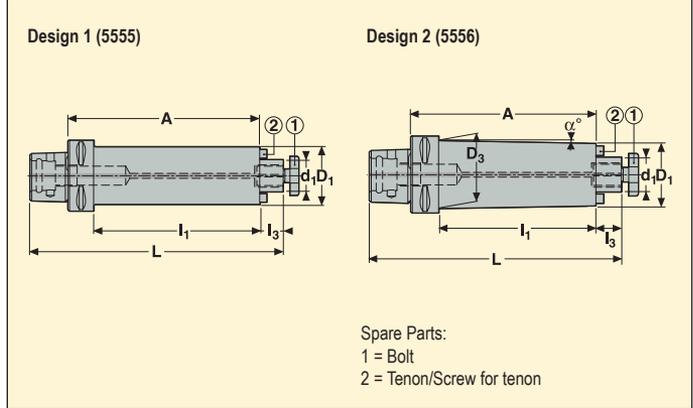
For	Extension key
	
C5-391.02-32033	5680015-05
C5-391.02-40040	5680015-05
C6-391.02-32032	5680015-05
C6-391.02-40040	5680015-05
C6-391.02-50050	5680015-01
C8-391.02-50045	5680015-01
C8-391.02-63055	5680015-02

Spare Parts

For	Center screw	Circlip
		
C5-391.02-32033	5512068-01	5545040-02
C5-391.02-40040	5512068-06	5545040-07
C6-391.02-32032	5512068-01	5545040-02
C6-391.02-40040	5512068-02	5545040-03
C6-391.02-50050	5512068-07	5545040-08
C8-391.02-50045	5512068-08	5545040-08
C8-391.02-63055	5512068-05	5545040-08



- Run-out .0002" (5 μm) maximum
- With dynamic damping, ready to use



Seco-Capto™ shank	d ₁ inch	EDP No.	Part No.	Dimensions in inch						Design	α°	Balancing	lbs
				A	D ₁	D ₃	L	I ₁	I ₃				
C6	0.75	66640	C6-391.5555-075750	6.516	1.750	–	8.996	7.500	0.689	1	–	2	6.8
	0.75	66641	C6-391.5556-075900	8.016	1.750	2.350	11.185	9.000	0.689	2	2	2	10.1
	1.00	66642	C6-391.5555-100900	8.016	2.250	–	11.185	9.000	0.689	1	–	2	12.8
C8	1.00	66646	C8-391.5556-100C00	10.819	2.250	3.051	14.579	12.000	0.689	2	2	2	22.7
	1.50	66638	C8-391.5555-150D75	12.571	3.500	–	16.583	13.752	0.941	1	–	2	41.7

d₁ 40, includes 4 threaded holes on the bearing face according to DIN 6357

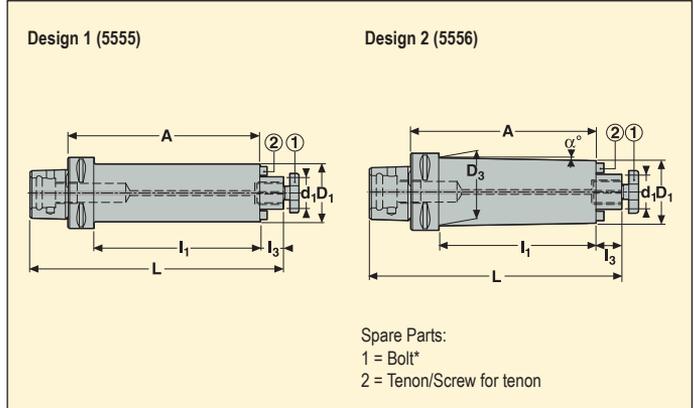
Spare Parts

For d ₁	Bolt	Screw	Tenon
0.75	58211905	951D0312	16C11905
1.00	58212540	951D0410	16C12540
1.50	58213810	951D0616	16C2151421A

Please check availability in current price and stock-list.



- Run-out .0002" (5 µm) maximum
- With dynamic damping, ready to use



Seco-Capto™ shank	d ₁ mm	EDP No.	Part No.	Dimensions in inch						Design	α°	Balancing	lbs
				A	D ₁	D ₃	L	I ₁	I ₃				
C6	16	57464	C6-391.5555-16160	6.299	1.496	–	8.465	5.315	0.669	1	–	2	4.7
	22	50985	C6-391.5555-22210	8.268	1.890	–	10.512	7.283	0.748	1	–	2	8.0
	22	50986	C6-391.5556-22260	10.236	1.890	2.362	12.480	9.252	0.748	2	1.3	2	8.8
	27	50987	C6-391.5555-27260	10.236	2.362	–	12.559	9.252	0.827	1	–	2	14.9
C8	22	50988	C8-391.5555-22210	8.268	1.890	–	10.906	6.969	0.748	1	–	2	10.0
	22	50992	C8-391.5556-22260	10.236	1.890	2.520	12.874	8.937	0.748	2	1.8	2	14.2
	27	50993	C8-391.5555-27260	10.236	2.362	–	12.953	8.937	0.827	1	–	2	16.8
	27	50994	C8-391.5556-27320	12.598	2.362	2.953	15.315	11.299	0.827	2	1.3	2	23.4
	32	57465	C8-391.5555-32330	12.992	3.071	–	15.827	11.693	0.945	1	–	2	44.0
	40	66634	C8-391.5555-40350	13.780	3.504	–	16.614	12.480	1.063	1	–	2	41.9

d₁ 40, includes 4 threaded holes on the bearing face according to DIN 6357

Spare Parts*

For d ₁	Bolt	Screw	Tenon
16	5801608	951D0312	16C2080810A
22	5802210	951D0416	16C2101111
27	5802712	951D0516	16C2121214A
32	5803216	951D0516	16C2141421A
40	5804020	951D0616	16C2161621A

Accessories

For d ₁	Bolt, through coolant	Spanner
16	5801608L	5811608
22	5802210L	5812210
27	5802712L	5812712
32	5803216L	5813216
40	5804020L	5814020

Please check availability in current price and stock-list.

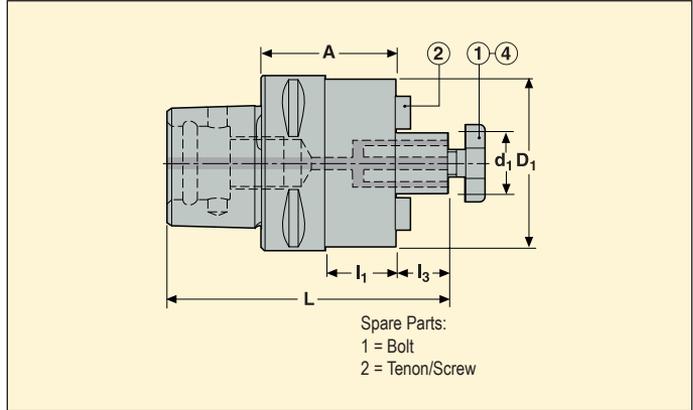
* These center bolts are similar to the original delivered ones: check if lengths L are suitable for the milling cutters used, therefore see instructions in page(s) 28 or in the Operating instructions sheet delivered with the holders.

EPB 5525 – Shell mill holders, with through coolant channels – Inch

Seco-Capto/ ISO 26623-1



• Run-out .0002" (5 µm) maximum



Seco-Capto™ shank	d ₁ inch	EDP No.	Part No.	Dimensions in inch					Balancing	
				A	D ₁	L	I ₁	I ₃		
C4	0.75	37712	C4-391.5525-075150	1.50	1.75	2.44	0.71	0.69	1	1.1
C5	0.75	37713	C5-391.5525-075150	1.50	1.75	2.68	0.59	0.69	1	1.5
	1.00	37714	C5-391.5525-100150	1.50	2.07	2.68	0.71	0.69	1	1.8
C6	0.75	37715	C6-391.5525-075150	1.50	1.75	3.00	0.52	0.69	1	2.2
	1.00	37716	C6-391.5525-100150	1.50	2.07	3.00	0.52	0.69	1	2.5
	1.25	37717	C6-391.5525-125150	1.50	2.75	3.00	0.63	0.69	1	3.0
	1.50	37718	C6-391.5525-150175	1.75	3.50	3.25	0.88	0.94	1	4.7
C8	1.00	37719	C8-391.5525-100200	2.00	2.07	3.89	0.70	0.69	1	4.9
	1.25	37721	C8-391.5525-125200	2.00	2.75	3.89	0.70	0.69	1	5.6
	1.50	37722	C8-391.5525-150200	2.00	3.50	3.89	0.82	0.94	1	6.5

* Diameter D₁ on type 5524 is smaller than on type 5525

Spare Parts

For d ₁	Bolt	Screw	Tenon
0.75	58211905	950D0312	16C11905A
1.00	58212540	951D0416	16C12540A
1.25	58213175	951D0516	16C23175
1.50	58213810	951D0616	16C23810

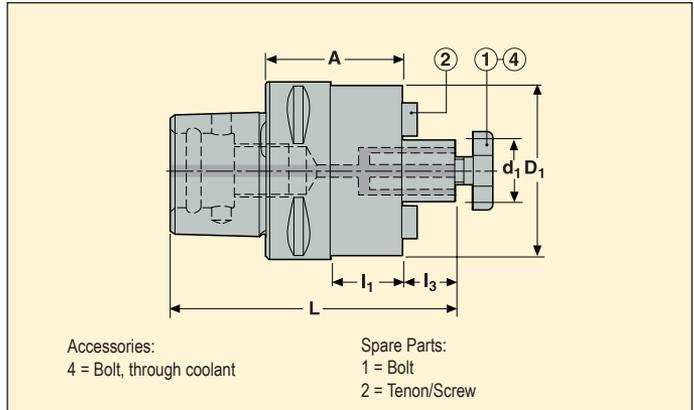
Please check availability in current price and stock-list.

EPB 5525/5524 – Shell mill holders, with through coolant channels

Seco-Capto/ ISO 26623-1



• Run-out .0002" (5 µm) maximum



Seco-Capto™ shank	d ₁ mm	EDP No.	Part No.	Dimensions in inch					*	Balancing	lbs
				A	D ₁	L	I ₁	I ₃			
C3	16	26980	C3-391.5525-16030	1.181	1.496	2.598	0.591	0.669		1	0.6
C4	16	26981	C4-391.5525-16035	1.378	1.496	2.992	0.472	0.669		1	0.9
	22	26988	C4-391.5525-22040	1.575	1.890	3.268	0.787	0.748		1	1.3
C5	16	27015	C5-391.5525-16035	1.378	1.496	3.228	0.472	0.669		1	1.3
	22	27016	C5-391.5525-22040	1.575	1.890	3.504	0.669	0.748		1	1.7
	27	27017	C5-391.5525-27040	1.575	2.362	3.583	0.787	0.827	*	1	2.1
	27	27008	C5-391.5524-27040	1.575	1.890	3.583	0.669	0.827	*	1	1.8
C6	16	27019	C6-391.5525-16035	1.378	1.496	3.543	0.394	0.669		1	2.0
	22	27036	C6-391.5525-22040	1.575	1.890	3.819	0.591	0.748		1	2.4
	27	27043	C6-391.5525-27040	1.575	2.362	3.898	0.591	0.827	*	1	2.7
	32	27044	C6-391.5525-32040	1.575	3.071	4.016	0.709	0.945		1	3.5
	27	27018	C6-391.5524-27040	1.575	1.890	3.898	0.591	0.827	*	1	2.5
C8	27	27046	C8-391.5525-27050	1.969	2.362	4.685	0.669	0.827	*	1	5.0
	32	27055	C8-391.5525-32050	1.969	3.071	4.803	0.669	0.945		1	5.8
	40	27056	C8-391.5525-40055	2.165	3.504	5.118	0.984	1.063		1	6.7
	27	27045	C8-391.5524-27050	1.969	1.890	4.685	0.669	0.827	*	1	4.7

* Diameter D₁ on type 5524 is smaller than on type 5525

Spare Parts

For d ₁	Bolt	Screw	Tenon
16	5801608	950D0312	16C10810164
22	5802210	950D0416	16C11012206
27/5524	5802712	951D0512	16C127
27/5525	5802712	951D0516	16C11214243
32	5803216	951D0516	16C2141421
40	5804020	951D0616	16C2161621

Accessories

For d ₁	Bolt, through coolant	Spanner
16	5801608L	5811608
22	5802210L	5812210
27/5524	5802712L	5812712
27/5525	5802712L	5812712
32	5803216L	5813216
40	5804020L	5814020

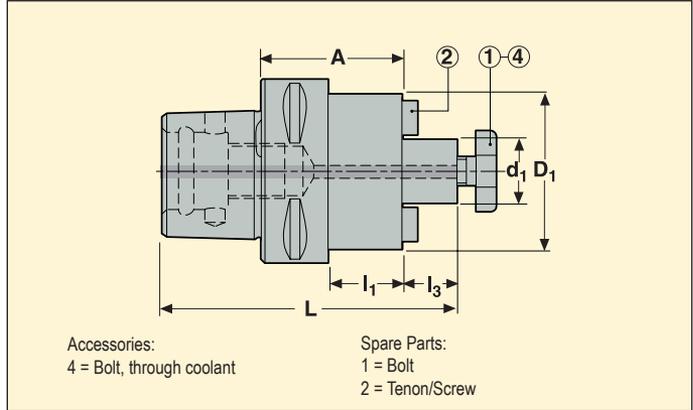
Please check availability in current price and stock-list.

EPB 552 – Shell mill holders, small face – ISO 3937, without through coolant

Seco-Capto/ ISO 26623-1



• Run-out .0002" (5 µm) maximum



Seco-Capto™ shank	d ₁ mm	EDP No.	Part No.	Dimensions in inch					Balancing	lbs
				A	D ₁	L	I ₁	I ₃		
C3	16	66207	C3-391.0552-16030	1.181	1.260	2.598	0.591	0.669	1	0.5
C4	16	66208	C4-391.0552-16032	1.260	1.260	2.874	0.354	0.669	1	0.8
	22	66209	C4-391.0552-22055	2.165	1.575	3.858	1.378	0.748	1	1.5
C5	22	66211	C5-391.0552-22070	2.756	1.575	4.685	1.850	0.748	1	2.2
	27	66213	C5-391.0552-27035	1.378	1.890	3.386	0.472	0.827	1	1.7
C6	22	66214	C6-391.0552-22035	1.378	1.575	3.622	0.394	0.748	1	2.2
	27	66215	C6-391.0552-27035	1.378	1.890	3.701	0.394	0.827	1	2.4
	32	66220	C6-391.0552-32035	1.378	2.283	3.819	0.394	0.945	1	2.7
C8	27	66228	C8-391.0552-27035	1.378	1.890	4.094	0.079	0.827	1	4.3
	32	66229	C8-391.0552-32035	1.378	2.283	4.213	0.079	0.945	1	4.5
	40	66232	C8-391.0552-40035	1.378	2.756	4.331	0.079	1.063	1	4.9

Spare Parts

For d ₁	Bolt	Screw	Tenon
16	5801608	950D0308	16C116
22	5802210	950D0410	16C122
27	5802712	951D0512	16C127
32	5803216	951D0514	16C132
40	5804020	951D0616	16C140

Accessories

For d ₁	Bolt, through coolant	Spanner
16	5801608L	5811608
22	5802210L	5812210
27	5802712L	5812712
32	5803216L	5813216
40	5804020L	5814020

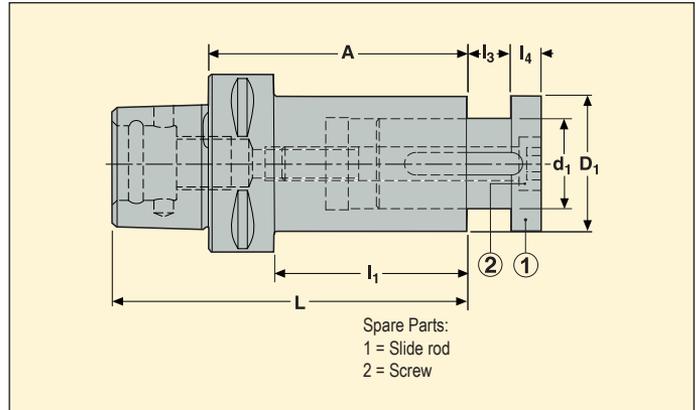
Please check availability in current price and stock-list.

EPB 5657 – Disc mill holders – Inch

Seco-Capto/ ISO 26623-1



- With adjustable slide rod
- Best suitable for Seco disc mill cutters Type A



Seco-Capto™ shank	d ₁ inch	EDP No.	Part No.	Dimensions in inch						Balancing	lbs
				A	D ₁	L	I ₁	I ₃	I ₄		
C5	1.00	37723	C5-391.5657-100350	3.50	1.65	4.68	2.59	0-0.55	0.20	2	2.7
	1.25	37731	C5-391.5657-125475	4.75	1.97	5.93	3.96	0-0.63	0.24	2	4.5
C6	1.00	37732	C6-391.5657-100350	3.50	1.65	5.00	2.52	0-0.55	0.20	2	3.4
	1.25	37733	C6-391.5657-125475	4.75	1.97	6.25	3.78	0-0.63	0.24	2	5.1
C8	1.00	37734	C8-391.5657-100350	3.50	1.65	5.39	2.20	0-0.55	0.20	2	5.4
	1.25	37735	C8-391.5657-125475	4.75	1.97	6.64	3.45	0-0.63	0.24	2	7.1
	1.50	37737	C8-391.5657-150600	6.00	2.24	7.89	4.70	0-0.98	0.28	2	9.3

Spare Parts

For d ₁	Slide rod	
1.00		5657100
1.25		5657125
1.50		5657150

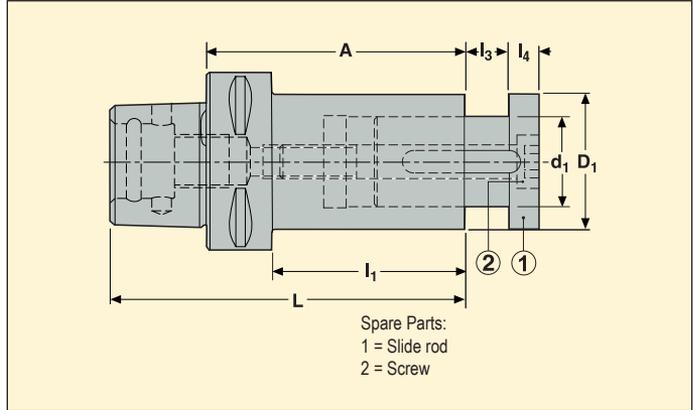
Please check availability in current price and stock-list.

EPB 5657 – Disc mill holders – Metric

Seco-Capto/ ISO 26623-1



- With adjustable slide rod
- Best suitable for Seco disc mill cutters Type A



Seco-Capto™ shank	d ₁ mm	EDP No.	Part No.	Dimensions in inch						Balancing	lbs
				A	D ₁	L	I ₁	I ₃	I ₄		
C4	22	27059	C4-391.5657-22075	2.953	1.378	3.898	2.047	0-0.472	0.157	2	1.5
C5	22	27061	C5-391.5657-22080	3.150	1.378	4.331	2.244	0-0.472	0.157	2	2.0
	27	27062	C5-391.5657-27090	3.543	1.654	4.724	2.638	0-0.591	0.197	2	2.7
	32	27067	C5-391.5657-32120	4.724	1.890	5.906	3.819	0-0.945	0.236	2	4.2
C6	22	27068	C6-391.5657-22080	3.150	1.378	4.646	2.165	0-0.472	0.157	2	2.7
	27	27069	C6-391.5657-27090	3.543	1.654	5.039	2.559	0-0.591	0.197	2	3.4
	32	27070	C6-391.5657-32120	4.724	1.890	6.220	3.740	0-0.945	0.236	2	4.8
	40	27071	C6-391.5657-40150	5.906	2.283	7.402	4.921	0-1.181	0.276	2	7.6
C8	27	27072	C8-391.5657-27090	3.543	1.654	5.433	2.244	0-0.591	0.197	2	5.3
	32	27073	C8-391.5657-32120	4.724	1.890	6.614	3.425	0-0.945	0.236	2	6.8
	40	27074	C8-391.5657-40150	5.906	2.283	7.795	4.606	0-1.181	0.276	2	9.4
	50	27075	C8-391.5657-50200	7.874	2.835	9.764	6.575	0-1.260	0.315	2	15.7
	60	27076	C8-391.5657-60220	8.661	3.543	10.551	7.480	0-1.575	0.315	2	24.7

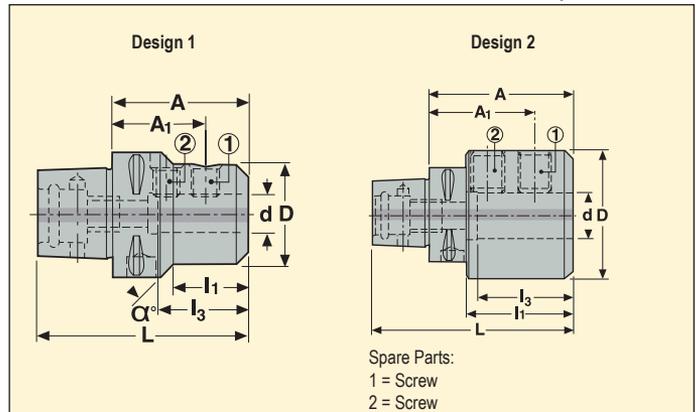
Spare Parts

For d ₁	Screw	Slide rod
22	19C565722	565722
27	19C565727	565727
32	950D1690	565732
40	19C565740	565740
50	19C565750	565750
60	19C565760	565760

Please check availability in current price and stock-list.

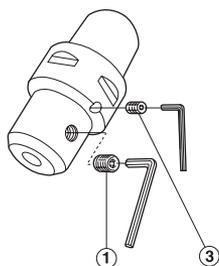


• Run-out .0002" (5 μm) maximum at 3x d



Seco-Capto™ shank	d mm	EDP No.	Part No.	Dimensions in inch						Design	α°	Balancing	lbs
				A	D	L	A ₁	L ₁	L ₃				
C3	6	15795	C3-391.20-06045A	1.811	0.984	2.559	1.102	1.083	1.063	1	30	2	0.6
	8	15796	C3-391.20-08045A	1.811	1.102	2.559	1.102	1.142	1.181	1	45	2	0.6
	10	15797	C3-391.20-10050	1.969	1.378	2.717	1.181	-	1.417	2	-	2	0.7
	12	15798	C3-391.20-12055	2.165	1.654	2.913	1.280	-	1.575	2	-	2	1.1
C4	6	15800	C4-391.20-06050	1.969	0.984	2.913	1.260	1.004	1.063	1	30	2	0.8
	8	15801	C4-391.20-08050	1.969	1.102	2.913	1.260	1.043	1.181	1	45	2	0.8
	10	15802	C4-391.20-10050A	2.008	1.378	2.953	1.220	1.165	1.417	1	30	2	1.0
	12	15803	C4-391.20-12055A	2.205	1.654	3.150	1.319	-	1.693	2	-	2	1.3
	14	26214	C4-391.20-14055	2.165	1.732	3.110	1.280	-	1.693	2	-	2	1.3
C5	6	15805	C5-391.20-06050	1.969	0.984	3.150	1.260	1.004	1.063	1	20	2	1.2
	8	15806	C5-391.20-08050	1.969	1.102	3.150	1.260	1.024	1.181	1	20	2	1.3
	10	15807	C5-391.20-10055	2.165	1.378	3.346	1.378	1.083	1.417	1	45	2	1.5
	12	15808	C5-391.20-12060	2.362	1.654	3.543	1.476	1.417	1.693	1	45	2	1.8
	14	26216	C5-391.20-14060	2.362	1.732	3.543	1.476	1.457	1.693	1	45	2	1.9
	18	28166	C5-391.20-18060	2.362	1.969	3.543	1.417	-	1.811	1	-	2	2.0
C6	6	15812	C6-391.20-06055	2.165	0.984	3.661	1.457	0.984	1.063	1	22	2	2.1
	8	15813	C6-391.20-08055	2.165	1.102	3.661	1.457	1.024	1.181	1	22	2	2.1
	10	15814	C6-391.20-10060	2.362	1.378	3.858	1.575	1.181	1.417	1	30	2	2.3
	12	15815	C6-391.20-12060	2.362	1.654	3.858	1.476	1.299	1.693	1	25	2	2.5
	14	26226	C6-391.20-14060	2.362	1.732	3.858	1.476	1.319	1.693	1	25	2	2.6
	18	26259	C6-391.20-18065	2.559	1.969	4.055	1.614	1.535	1.811	1	30	2	2.9
C8	6	28167	C8-391.20-06070	2.756	0.984	4.646	2.047	1.063	1.063	1	25	2	4.5
	8	26239	C8-391.20-08070	2.756	1.102	4.646	2.047	1.102	1.181	1	25	2	0.3
	10	28171	C8-391.20-10070	2.756	1.378	4.646	1.969	1.161	1.417	1	25	2	4.9
	12	26240	C8-391.20-12070	2.756	1.654	4.646	1.870	1.220	1.693	1	25	2	5.5
	14	28178	C8-391.20-14070	2.756	1.732	4.646	1.870	1.244	1.693	1	25	2	4.9
	18	28184	C8-391.20-18070	2.756	1.969	4.646	1.811	1.299	1.811	1	25	2	4.9
	50	15824	C8-391.20-50120	4.724	3.937	6.614	3.346	-	3.071	2	-	2	13.2

Please check availability in current price and stock-list.



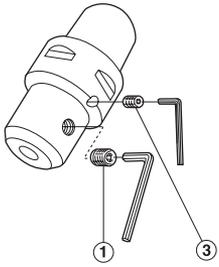
Spare Parts:

1 = Screw

3 = Screw

Spare Parts

For d	Locking screw 1	Locking screw 2
6	3214050-357	-
8	3214050-407	-
10	3214050-458	-
12	3214050-509	-
14	3214050-509	-
18	3214050-539	-
50	3214050-661	3214050-611



Spare Parts:
 1 = Screw
 3 = Screw

Spare Parts

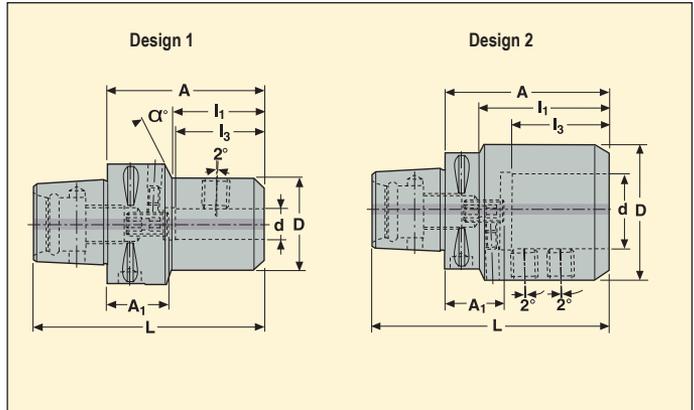
For d	Locking screw
	
16	951C1416
20	951C1616
25	951C1820
32	951C2020
40	951C2020

EPB 21 – Adapter, Side lock holders, Whistle notch - DIN 1835-2 Form E

Seco-Capto/ ISO 26623-1

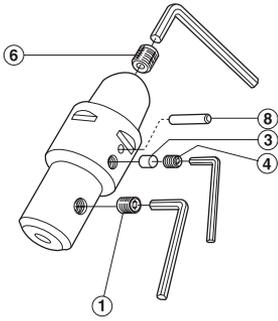


• Run-out .0002" (5 μm) maximum at 3rd



Seco-Capto™ shank	d mm	EDP No.	Part No.	Dimensions in inch						Design	α°	Balancing	lbs
				A	D	L	A ₁ min-max	I ₁	I ₃				
C3	6	15825	C3-391.21-06070A	2.756	0.984	3.504	1.260-1.575	1.457	1.181	1	45	2	0.8
	8	15826	C3-391.21-08070A	2.756	1.102	3.504	1.260-1.575	1.575	1.181	1	45	2	0.8
	10	15827	C3-391.21-10070	2.756	1.378	3.504	1.102-1.496	–	1.535	1	–	2	1.1
	12	15828	C3-391.21-12075	2.953	1.654	3.701	1.102-1.575	–	1.732	2	–	2	1.5
C4	6	15829	C4-391.21-06070A	2.756	0.984	3.701	1.260-1.575	1.457	1.181	1	30	2	1.1
	8	15830	C4-391.21-08070A	2.756	1.102	3.701	1.260-1.575	1.457	1.181	1	30	2	1.1
	10	15831	C4-391.21-10070	2.756	1.378	3.701	1.102-1.496	1.535	–	1	30	2	1.4
	12	15832	C4-391.21-12075	2.953	1.654	3.898	1.102-1.575	–	1.732	2	–	2	1.7
	14	15833	C4-391.21-14075	2.953	1.732	3.898	1.102-1.575	–	1.732	2	–	2	1.8
C5	6	15834	C5-391.21-06070A	2.756	0.984	3.937	1.260-1.575	1.457	1.181	1	15	2	1.6
	8	15836	C5-391.21-08070A	2.756	1.102	3.937	1.260-1.575	1.457	1.181	1	15	2	1.7
	10	15837	C5-391.21-10070	2.756	1.378	3.937	1.102-1.496	1.496	1.535	1	15	2	1.9
	12	15838	C5-391.21-12075	2.953	1.654	4.134	1.102-1.575	1.693	1.732	1	30	2	2.2
	14	15839	C5-391.21-14075	2.953	1.732	4.134	1.102-1.575	1.732	1.732	1	30	2	2.3
	16	15840	C5-391.21-16080	3.150	1.890	4.331	1.181-1.654	1.890	1.850	1	45	2	2.6
	18	15841	C5-391.21-18080	3.150	1.969	4.331	1.181-1.654	–	1.850	1	–	2	2.7
C6	20	15842	C5-391.21-20085	3.346	2.047	4.528	1.299-1.772	–	1.929	2	–	2	2.9
	6	15843	C6-391.21-06075A	2.953	0.984	4.449	1.457-1.772	1.378	1.181	1	15	2	2.7
	8	15844	C6-391.21-08075A	2.953	1.102	4.449	1.457-1.772	1.378	1.181	1	15	2	2.8
	10	15845	C6-391.21-10075	2.953	1.378	4.449	1.299-1.693	1.417	1.535	1	15	2	3.0
	12	15846	C6-391.21-12080	3.150	1.654	4.646	1.299-1.772	1.654	1.732	1	15	2	3.4
	14	15847	C6-391.21-14080	3.150	1.732	4.646	1.299-1.772	1.654	1.732	1	15	2	3.4
	16	15849	C6-391.21-16080	3.150	1.890	4.646	1.181-1.654	1.850	1.850	1	15	2	3.5
	18	15850	C6-391.21-18080	3.150	1.969	4.646	1.181-1.654	1.850	1.850	1	15	2	3.5
	20	15851	C6-391.21-20085	3.346	2.047	4.843	1.299-1.772	2.008	1.929	1	15	2	3.8
	25	15852	C6-391.21-25090	3.543	2.559	5.039	1.260-1.732	–	2.126	2	–	2	5.0
C8	32	15853	C6-391.21-32095	3.740	2.835	5.236	1.299-1.772	–	2.283	2	–	2	5.5
	6	28130	C8-391.21-06065A	2.559	0.984	4.449	1.063-1.378	0.984	1.181	1	20	2	4.6
	8	26241	C8-391.21-08065A	2.559	1.102	4.449	1.063-1.378	1.004	1.181	1	20	2	4.9
	10	26242	C8-391.21-10065	2.559	1.378	4.449	0.906-1.299	1.063	1.535	1	20	2	4.4
	12	26243	C8-391.21-12070	2.756	1.654	4.646	0.906-1.378	1.299	1.732	1	20	2	4.6
	14	26245	C8-391.21-14070	2.756	1.732	4.646	0.906-1.378	1.319	1.732	1	20	2	4.9
	16	28132	C8-391.21-16075	2.953	1.890	4.843	0.984-1.457	1.535	1.850	1	20	2	5.2
	18	28134	C8-391.21-18075	2.953	1.969	4.843	0.984-1.457	1.555	1.850	1	20	2	5.5
	20	28135	C8-391.21-20080	3.150	2.047	5.039	1.102-1.575	1.772	1.929	1	15	2	5.4
	25	28136	C8-391.21-25090	3.543	2.559	5.433	1.260-1.732	2.244	2.126	1	20	2	6.6
	32	28137	C8-391.21-32095	3.740	2.835	5.630	1.299-1.772	2.480	2.283	1	20	2	6.7

Please check availability in current price and stock-list.



Spare Parts:
 1 = Screw
 3 = Plug
 4 = Screw
 6 = Screw
 8 = Pin

Spare Parts

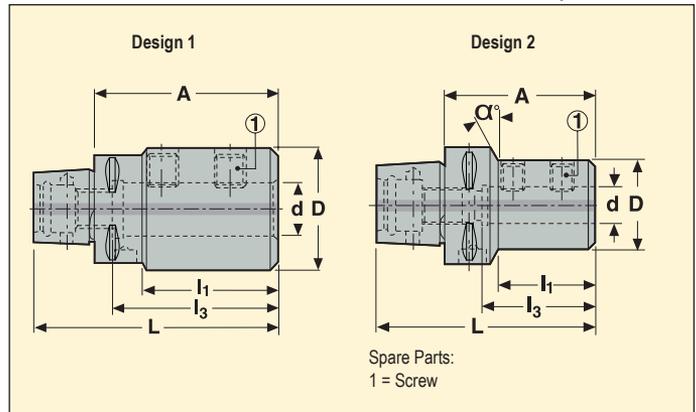
For	Locking screw 1 	Locking screw 2 	Pin 	Stop screw 
C...-10	3214050-458	3214010-355	-	5512066-03
C...-12 / C...-14	3214050-509	3214010-357	-	5512066-05
C...-16 / C...-18	3214050-539	3214010-357	-	5512066-06
C...-20	3214050-559	3214010-357	-	5512066-07
C...-25	3214050-590	3214010-357	-	5512066-07
C...-32	3214050-610	3214010-357	-	5512066-07
C3...-06070	3214050-357	3214010-355	3113020-459	5512066-01
C3...-08070	3214050-407	3214010-355	3113020-459	5512066-02
C4...-06070	3214050-357	3214010-355	3113020-461	5512066-01
C4...-08070	3214050-407	3214010-355	3113020-461	5512066-02
C5...-06070	3214050-357	3214010-355	3113020-463	5512066-01
C5...-08070	3214050-407	3214010-355	3113020-463	5512066-02
C6...-06075	3214050-357	3214010-355	3113020-465	5512066-01
C6...-08075	3214050-407	3214010-355	3113020-465	5512066-02
C8...-06065	3214050-357	3214010-355	3113020-465	5512066-01
C8...-08065	3214050-407	3214010-355	3113020-465	5512066-02

EPB 27 – Side lock holders

Seco-Capto/ ISO 26623-1



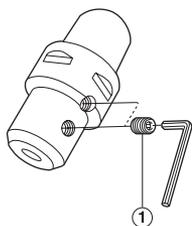
- Run-out .0002" (5 µm) maximum at 3x_d



Seco-Capto™ shank	d mm	EDP No.	Part No.	Dimensions in inch					Design	α°	Balancing	lbs
				A	D	L	I ₁	I ₃				
C3	16	15872	C3-391.27-16056	2.205	1.417	2.953	1.614	1.949	1	60	2	0.8
	20	15873	C3-391.27-20060	2.362	1.575	3.110	1.772	2.028	1	–	2	0.9
C4	16	15874	C4-391.27-16056	2.205	1.417	3.150	1.280	1.949	2	60	2	1.0
	20	15876	C4-391.27-20060	2.362	1.575	3.307	–	2.028	2	–	2	1.1
	25	15877	C4-391.27-25077	3.031	1.772	3.976	2.244	2.264	1	–	2	1.6
C5	16	15878	C5-391.27-16065	2.559	1.417	3.740	1.642	1.949	2	25	2	1.6
	20	15879	C5-391.27-20060	2.362	1.575	3.543	1.484	2.028	2	25	2	1.5
	25	16049	C5-391.27-25071	2.795	1.772	3.976	1.839	2.461	2	60	2	1.9
	32	15881	C5-391.27-32075	2.953	2.047	4.134	2.165	2.421	1	–	2	2.1
C6	16	15882	C6-391.27-16070	2.756	1.417	4.252	1.693	1.949	2	20	2	2.4
	20	15883	C6-391.27-20070	2.756	1.575	4.252	1.724	2.028	2	20	2	2.5
	25	26208	C6-391.27-25070A	2.835	1.772	4.331	1.803	2.343	2	25	2	2.6
	32	15885	C6-391.27-32075	2.953	2.047	4.449	1.961	2.421	2	30	2	2.8
	40	20744	C6-391.27-40085	3.346	2.559	4.843	2.480	2.815	1	–	2	3.7
C8	16	26246	C8-391.27-16080	3.150	1.417	5.039	1.654	1.949	2	20	2	4.7
	20	26247	C8-391.27-20080	3.150	1.575	5.039	1.724	2.028	2	17	2	4.8
	25	26248	C8-391.27-25085	3.346	1.772	5.236	1.961	2.264	2	17	2	4.9
	32	26249	C8-391.27-32090	3.543	2.047	5.433	2.118	2.421	2	14	2	5.2
	40	26251	C8-391.27-40095	3.740	2.559	5.630	2.472	2.815	2	17	2	5.9

Please check availability in current price and stock-list.

A - Programming length for Performax drills



Spare Parts:
1 = Screw

Spare Parts

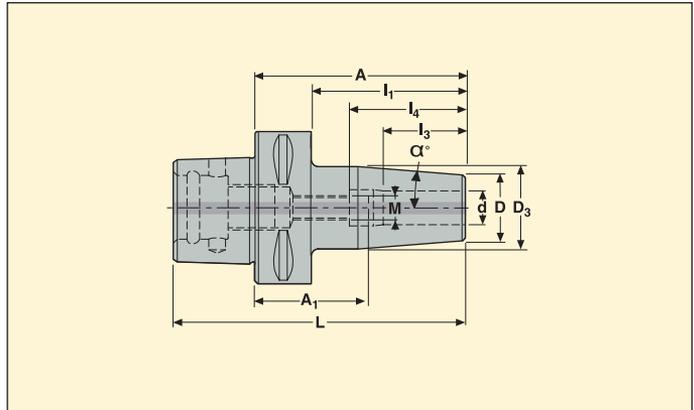
For d	Locking screw
16	5514042-04
20	5514042-04
25	416.1-838
32	416.1-838
40	5514042-06

EPB 5603 – Shrinkfit holders – Metric

Seco-Capto/ ISO 26623-1



• Run-out .0001" (2.5 µm) maximum at 3xD



Seco-Capto™ shank	d mm	EDP No.	Part No.	Dimensions in inch										Balancing	lbs
				A	D	D ₃	L	I ₁	I ₃	I ₄	A ₁ min-max	M			
C3	6	66473	C3-391.5603-06065	2.559	0.827	1.063	3.307	1.850	0.866	1.476	1.142-1.535	M5	1	0.7	
	8	66474	C3-391.5603-08065	2.559	0.827	1.063	3.307	1.850	1.024	1.476	1.142-1.535	M6	1	0.7	
	10	66475	C3-391.5603-10070	2.756	0.945	1.260	3.504	2.047	1.220	1.673	1.142-1.535	M8x1	1	0.9	
	12	66476	C3-391.5603-12070	2.756	0.945	1.260	3.504	2.047	1.339	1.673	0.945-1.339	M10x1	1	0.9	
C4	6	66477	C4-391.5603-06075	2.953	0.827	1.063	3.898	2.047	0.866	1.476	1.535-1.535	M5	1	1.1	
	8	66478	C4-391.5603-08075	2.953	0.827	1.063	3.898	2.047	1.024	1.476	1.535-1.535	M6	1	1.1	
	10	66479	C4-391.5603-10075	2.953	0.945	1.260	3.898	2.047	1.220	1.673	1.339-1.732	M8x1	1	1.1	
	12	66480	C4-391.5603-12075	2.953	0.945	1.260	3.898	2.047	1.339	1.870	1.142-1.535	M10x1	1	1.1	
	14	66481	C4-391.5603-14080	3.150	1.063	1.339	4.094	2.244	1.339	1.870	1.339-1.732	M10x1	1	1.3	
	16	66482	C4-391.5603-16080	3.150	1.063	1.339	4.094	2.244	1.535	1.988	1.220-1.614	M12x1	1	1.3	
C5	6	66483	C5-391.5603-06075	2.953	0.827	1.063	4.134	2.047	0.866	1.476	1.535-1.929	M5	1	1.4	
	8	66484	C5-391.5603-08075	2.953	0.827	1.063	4.134	2.047	1.024	1.476	1.535-1.929	M6	1	1.4	
	10	66485	C5-391.5603-10075	2.953	0.945	1.260	4.134	2.047	1.220	1.673	1.339-1.732	M8x1	1	1.5	
	12	66486	C5-391.5603-12075	2.953	0.945	1.260	4.134	2.047	1.339	1.870	1.142-1.535	M10x1	1	1.5	
	14	66487	C5-391.5603-14080	3.150	1.063	1.339	4.331	2.244	1.339	1.870	1.339-1.732	M10x1	1	1.6	
	16	66488	C5-391.5603-16080	3.150	1.063	1.339	4.331	2.244	1.535	1.988	1.220-1.614	M12x1	1	1.6	
	18	66489	C5-391.5603-18080	3.150	1.299	1.654	4.331	2.244	1.535	1.988	1.220-1.614	M12x1	1	2.0	
	20	66490	C5-391.5603-20085	3.346	1.299	1.654	4.528	2.441	1.614	2.067	1.339-1.732	M16x1	1	1.9	
	25	66491	C5-391.5603-25090	3.543	1.732	2.087	4.724	2.756	1.850	2.303	1.299-1.693	M16x1	1	2.6	
C6	6	66493	C6-391.5603-06080	3.150	0.827	1.063	4.646	2.165	0.866	1.476	1.732-2.126	M5	1	2.2	
	8	66494	C6-391.5603-08080	3.150	0.827	1.063	4.646	2.165	1.024	1.476	1.732-2.126	M6	1	2.2	
	10	66495	C6-391.5603-10080	3.150	0.945	1.260	4.646	2.165	1.220	1.673	1.535-1.929	M8x1	1	2.4	
	12	66496	C6-391.5603-12080	3.150	0.945	1.260	4.646	2.165	1.339	1.870	1.339-1.732	M10x1	1	2.4	
	14	66497	C6-391.5603-14085	3.346	1.063	1.339	4.843	2.362	1.339	1.870	1.535-1.929	M10x1	1	2.4	
	16	66498	C6-391.5603-16085	3.346	1.063	1.339	4.843	2.362	1.535	1.988	1.417-1.811	M12x1	1	2.4	
	18	66499	C6-391.5603-18085	3.346	1.299	1.654	4.843	2.362	1.535	1.988	1.417-1.811	M12x1	1	2.9	
	20	66500	C6-391.5603-20085	3.346	1.299	1.654	4.843	2.362	1.614	2.067	1.339-1.732	M16x1	1	2.6	
	25	66501	C6-391.5603-25090	3.543	1.732	2.087	5.039	2.559	1.850	2.303	1.299-1.693	M16x1	1	3.4	
	32	66502	C6-391.5603-32095	3.740	1.732	2.087	5.236	2.756	2.008	2.461	1.339-1.732	M16x1	1	3.2	
	C8	16	66503	C8-391.5603-16090	3.543	1.063	1.339	5.433	2.244	1.535	1.988	1.614-2.008	M12x1	1	4.6
		18	66504	C8-391.5603-18090	3.543	1.299	1.654	5.433	2.244	1.535	1.988	1.614-2.008	M12x1	1	4.9
20		66505	C8-391.5603-20090	3.543	1.299	1.654	5.433	2.244	1.614	2.067	1.535-1.929	M16x1	1	4.7	
25		66506	C8-391.5603-25090	3.543	1.732	2.087	5.433	2.244	1.850	2.303	1.299-1.693	M16x1	1	5.3	
32		66507	C8-391.5603-32090	3.543	1.732	2.087	5.433	2.244	2.008	2.461	1.142-1.535	M16x1	1	5.1	

Please check availability in current price and stock-list.
No fine tune balancing threaded holes

For Shrinkfit extensions, see page(s) 362-363.

Spare Parts

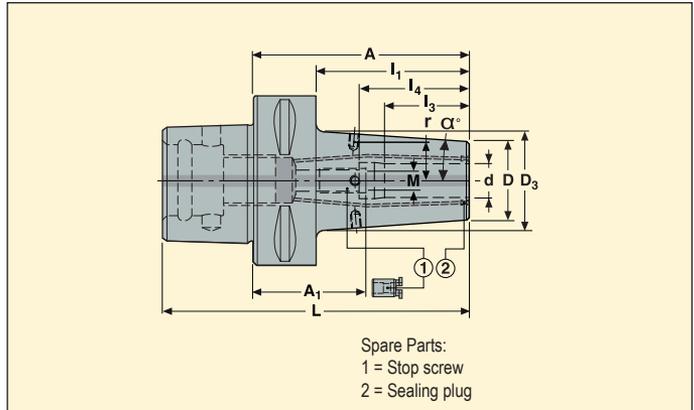
For d	Stop screw 
6	19BDR05165
8	19BDR06165
10	19BDR08165
12-14	19BDR10165
16-18	19BDR12165
20-32	19BDR16165

EPB 5600 – Shrinkfit holders, reinforced – Inch

Seco-Capto/ ISO 26623-1



- Run-out .0001" (2.5 µm) maximum at 3xd
- Reinforced design with wider front and tapered body
- With coolant supply channels towards the tool (plugged)



Seco-Capto™ shank	d inch	EDP No.	Part No.	Dimensions in inch									M mm	r inch	α°	Balancing	lbs
				A	D	D ₃	L	I ₁	I ₃	I ₄	A ₁ min-max						
C6	0.500	92468	C6-391.5600-050312	3.125	1.063	1.400	4.621	2.141	1.339	1.870	1.393-1.786	10	0.47	4.5	1	2.4	
	0.625	92469	C6-391.5600-062337	3.375	1.299	1.676	4.871	2.391	1.535	1.988	1.446-1.840	12	0.67	4.5	1	2.9	
	0.750	92470	C6-391.5600-075337	3.375	1.732	2.109	4.871	2.391	1.614	2.067	1.367-1.761	16	0.89	4.5	1	3.5	
C8	0.750	92471	C8-391.5600-075375	3.750	1.732	2.118	5.640	2.451	1.614	2.067	1.742-2.136	16	0.89	4.5	1	6.0	
	1.000	92472	C8-391.5600-100400	4.000	1.890	2.315	5.890	2.701	1.850	2.303	1.756-2.150	16	0.98	4.5	1	6.2	
	1.250	92474	C8-391.5600-125400	4.000	1.890	2.315	5.890	2.701	2.008	2.461	1.598-1.992	16	0.98	4.5	1	6.0	

For Shrinkfit extensions, see page(s) 362-363.

Spare Parts

For d	Sealing plugs	Stop screw
0.500	90AI03	19BDR10165
0.625	90AI03	19BDR12165
0.750-1.250	90AI04	19BDR16165

Accessories

For d	Balancing screws
0.500	90ZQ01
0.625	90ZQ01
0.750-1.250	90ZQ01

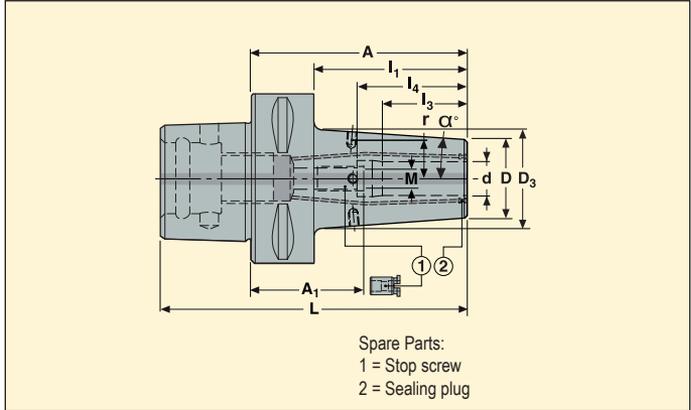
Please check availability in current price and stock-list.

EPB 5600 – Shrinkfit holders, reinforced – Metric

Seco-Capto/ ISO 26623-1



- Run-out .0001" (2.5 µm) maximum at 3xd
- Reinforced design with wider front and tapered body
- With coolant supply channels towards the tool (plugged)



Seco-Capto™ shank	d mm	EDP No.	Part No.	Dimensions in inch								M mm	r mm	α°	Balancing	
				A	D	D ₃	L	I ₁	I ₃	I ₄	A ₁ min-max					
C6	12	92421	C6-391.5600-12080	3.150	1.063	1.402	4.646	2.165	1.339	1.870	1.339-1.732	M10x1	13.5	4.5	1	2.6
	16	92422	C6-391.5600-16085	3.346	1.299	1.669	4.843	2.362	1.535	1.988	1.417-1.811	M12x1	17	4.5	1	2.9
	20	92424	C6-391.5600-20085	3.346	1.732	2.102	4.843	2.362	1.614	2.067	1.339-1.732	M16x1	21.5	4.5	1	3.5
	25	92425	C6-391.5600-25090	3.543	1.890	2.291	5.039	2.559	1.850	2.303	1.299-1.693	M16x1	25	4.5	1	4.0
C8	16	92430	C8-391.5600-16095	3.740	1.299	1.681	5.630	2.441	1.535	1.988	1.811-2.205	M12x1	17	4.5	1	5.1
	20	92431	C8-391.5600-20095	3.740	1.732	2.114	5.630	2.441	1.614	2.067	1.732-2.126	M16x1	21.5	4.5	1	5.7
	25	92437	C8-391.5600-25100	3.937	1.890	2.303	5.827	2.638	1.850	2.303	1.693-2.087	M16x1	25	4.5	1	6.2

For Shrinkfit extensions, see page(s) 362-363.

Spare Parts

For d	Sealing plugs	Stop screw
12	90AI03	19BDR10165
16	90AI03	19BDR12165
20-25	90AI04	19BDR16165

Accessories

For d	Balancing screws
12	90ZQ01
16	90ZQ01
20-25	90ZQ01

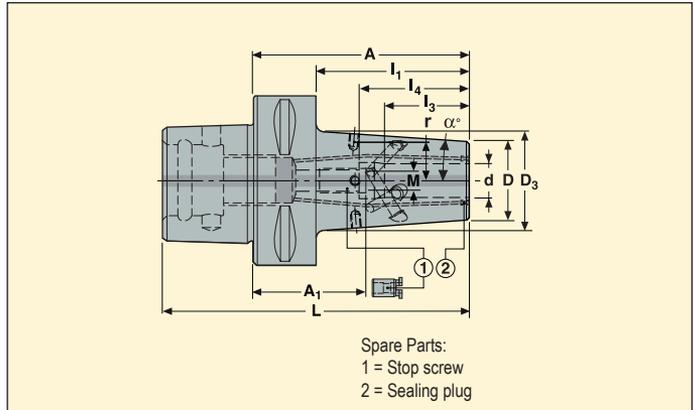
Please check availability in current price and stock-list.

EPB 5600P Safe-Lock™ – Shrinkfit holders, reinforced and with tool pull-out protection – Inch

Seco-Capto/ ISO 26623-1



- Run-out .0001" (2.5 µm) maximum at 3xd
- With Safe-Lock tool pull-out protection system
- Reinforced design of EPB 5600
- With coolant supply channels towards the tool (plugged)



Seco-Capto™ shank	d inch	EDP No.	Part No.	Dimensions in inch										M mm	r mm	α°	Balancing	lbs
				A	D	D ₃	L	I ₁	I ₃	I ₄	A ₁ min-max							
C6	0.500	92509	C6-391.5600-050312P	3.125	1.063	1.400	4.621	2.141	1.339	1.870	1.393-1.727	10	12	4.5	1	2.4		
	0.625	92510	C6-391.5600-062337P	3.375	1.299	1.676	4.871	2.391	1.535	1.988	1.446-1.761	12	17	4.5	1	2.9		
	0.750	92511	C6-391.5600-075337P	3.375	1.732	2.109	4.871	2.391	1.614	2.067	1.367-1.682	16	22.5	4.5	1	3.5		
C8	0.750	92512	C8-391.5600-075375P	3.750	1.732	2.118	5.640	2.451	1.614	2.067	1.742-2.057	16	22.5	4.5	1	6.0		
	1.000	92513	C8-391.5600-100400P	4.000	1.890	2.315	5.890	2.701	1.850	2.303	1.756-2.071	16	25	4.5	1	6.0		
	1.250	92514	C8-391.5600-125400P	4.000	1.890	2.315	5.890	2.701	2.008	2.461	1.598-1.992	16	25	4.5	1	5.7		

For Shrinkfit extensions, see page(s) 362-363.

Spare Parts

For d	Sealing plugs	Stop screw
0.500-0.625	90AI03	*
0.750-1.250	90AI04	19BDR16165

Accessories

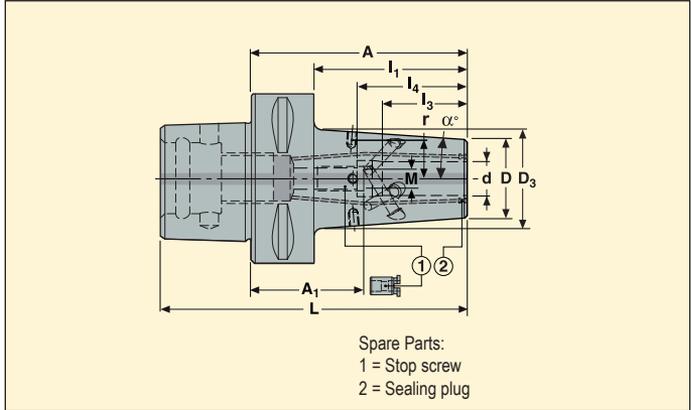
For d	Balancing screws
0.500-0.625	90ZQ01
0.750-1.250	90ZQ01

Please check availability in current price and stock-list.

* Stop screw not removable/replaceable by the user, please request a repair process



- Run-out .0001" (2.5 µm) maximum at 3rd
- With Safe-Lock tool pull-out protection system
- Reinforced design of EPB 5600
- With coolant supply channels towards the tool (plugged)



Seco-Capto™ shank	d mm	EDP No.	Part No.	Dimensions in inch								M mm	r mm	α°	Balancing	lbs
				A	D	D ₃	L	I ₁	I ₃	I ₄	A ₁ min-max					
C6	12	84243	C6-391.5600-12080P	3.150	1.063	1.402	4.646	2.165	1.339	1.870	1.339-1.673	M10x1	13.5	4.5	1	2.6
	16	84244	C6-391.5600-16085P	3.346	1.299	1.669	4.843	2.362	1.535	1.988	1.417-1.732	M12x1	17	4.5	1	2.9
	20	84258	C6-391.5600-20085P	3.346	1.732	2.102	4.843	2.362	1.614	2.067	1.339-1.654	M16x1	21.5	4.5	1	3.5
	25	84269	C6-391.5600-25090P	3.543	1.890	2.291	5.039	2.559	1.850	2.303	1.299-1.614	M16x1	25	4.5	1	4.0
C8	16	84271	C8-391.5600-16095P	3.740	1.299	1.681	5.630	2.441	1.535	1.988	1.811-2.126	M12x1	17	4.5	1	5.1
	20	84272	C8-391.5600-20095P	3.740	1.732	2.114	5.630	2.441	1.614	2.067	1.732-2.047	M16x1	21.5	4.5	1	5.7
	25	84273	C8-391.5600-25100P	3.937	1.890	2.303	5.827	2.638	1.850	2.303	1.693-2.008	M16x1	25	4.5	1	6.2

For Shrinkfit extensions, see page(s) 362-363.

Spare Parts

For d	Sealing plugs	Stop screw
12-16	90AI03	*
20-25	90AI04	19BDR16165

Accessories

For d	Balancing screws
12-16	90ZQ01
20-25	90ZQ01

Please check availability in current price and stock-list.

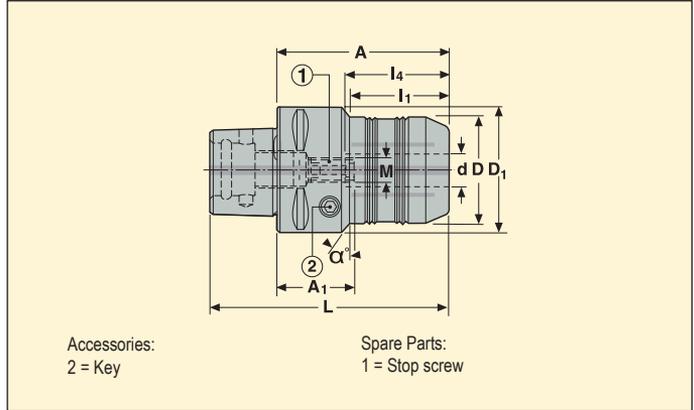
* Stop screw not removable/replaceable by the user, please request a repair process

EPB 5835 – Hydraulic chucks, strong

Seco-Capto/ ISO 26623-1



- Run-out .00015" (4 µm) maximum at 3xd



Seco-Capto™ shank	d mm	EDP No.	Part No.	Dimensions in inch							M mm	α°	Balancing	lbs
				A	D	D ₁	L	I ₁	I ₄	A ₁ min-max				
C6	12	84342	C6-391.5835-12075	2.953	1.890	2.480	4.449	1.516	1.850	1.102-1.496	M10	30	1	3.4
	20	84343	C6-391.5835-20080	3.150	2.480	2.480	4.646	–	2.047	1.102-1.496	M10	–	1	4.3
C8	20	84345	C8-391.5835-20090	3.543	2.480	3.150	5.433	2.244	2.047	1.496-1.890	M10	0	1	6.6
	32	84346	C8-391.5835-32090	3.543	3.150	3.150	5.433	–	2.480	1.063-1.457	M10	–	1	7.9

For reduction sleeves, see page(s) 364-366. For control gauges, see page(s) 367.

Spare Parts

Accessories

For d	Stop screw	For d	Locking key
12, 20, 32	19LS1016A	12, 20, 32	03HXL06

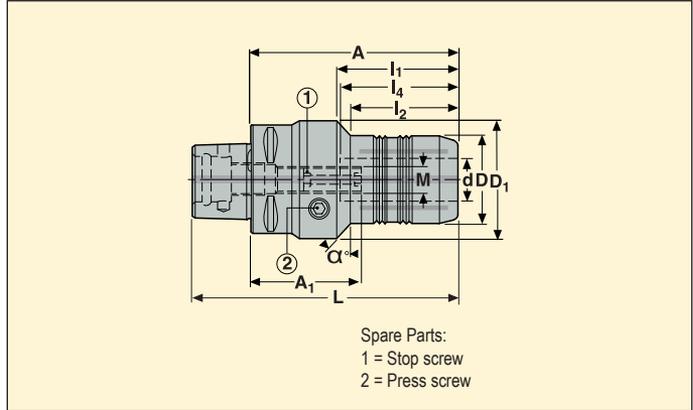
Please check availability in current price and stock-list.

EPB 5834 – Hydraulic chucks – Inch

Seco-Capto/ ISO 26623-1



- Run-out .00015" (4 µm) maximum at 3xd



Seco-Capto™ shank	d inch	EDP No.	Part No.	Dimensions in inch									Design	α°	Balancing	lbs
				A	D	D ₁	L	I ₁	I ₂	I ₄	A ₁ min-max	M				
C5	0.75	37779	C5-391.5834-075325	3.25	1.65	1.97	4.43	1.94	1.85	2.05	1.20-1.60	0.39	2	30	1	2.2
	1.25	37781	C6-391.5834-125400	4.00	2.52	2.52	5.50	–	–	2.48	1.52-1.91	0.39	2	30	1	5.0
C8	0.75	37782	C8-391.5834-075400	4.00	1.65	1.97	5.89	2.70	1.85	2.05	1.93-2.32	0.39	2	30	1	5.5
	1.25	37783	C8-391.5834-125425	4.25	2.52	2.76	6.14	2.95	1.97	2.48	1.77-2.16	0.39	2	30	1	7.3

For reduction sleeves, see page(s) 364-366. For control gauges, see page(s) 367.

Spare Parts

For d	Press screw	Stop screw
0.75-1.25	950AF1010010	19LS1020A

Accessories

For d	Locking key
0.75-1.25	H04-4

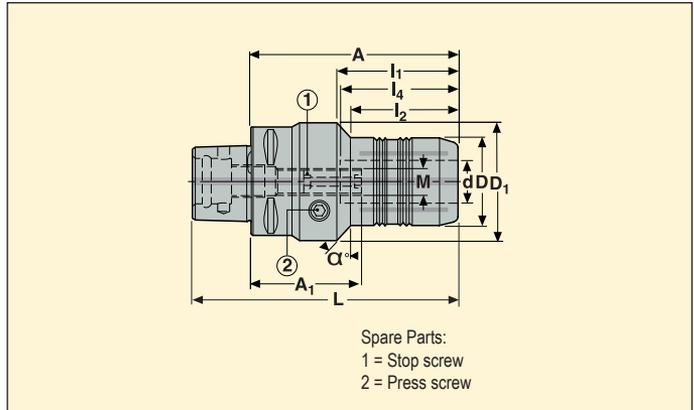
Please check availability in current price and stock-list.

EPB 5834 – Hydraulic chucks – Metric

Seco-Capto/ ISO 26623-1



• Run-out .00015" (4 μm) maximum at 3xd



Seco-Capto™ shank	d mm	EDP No.	Part No.	Dimensions in inch									Design	α°	Balancing	lbs
				A	D	D ₁	L	I ₁	I ₂	I ₄	A ₁ min-max	M				
C4	12	27165	C4-391.5834-12085	3.346	1.260	1.969	4.291	1.780	1.575	1.850	1.890-1.496	M10	1	30	1	1.7
C5	6	27166	C5-391.5834-06065	2.559	1.024	1.969	3.740	–	0.906	1.496	1.457-1.063	M5	2	30	1	1.7
	8	27167	C5-391.5834-08065	2.559	1.102	1.969	3.740	–	0.945	1.496	1.457-1.063	M5	2	30	1	1.9
	10	27168	C5-391.5834-10075	2.953	1.181	1.969	4.134	–	1.339	1.654	1.693-1.299	M8	2	30	1	1.9
	12	27169	C5-391.5834-12080	3.150	1.260	1.969	4.331	–	1.575	1.850	1.693-1.299	M10	2	30	1	1.9
	14	27170	C5-391.5834-14080	3.150	1.339	1.969	4.331	–	1.575	1.850	1.693-1.299	M10	2	30	1	2.0
	16	27171	C5-391.5834-16085	3.346	1.496	1.969	4.528	–	1.811	1.969	1.772-1.378	M10	2	30	1	2.2
	20	27173	C5-391.5834-20085	3.346	1.654	1.969	4.528	–	1.850	2.047	1.693-1.299	M10	2	30	1	2.2
	25	30198	C5-391.5834-25095	3.740	2.283	2.283	4.921	–	–	2.283	1.850-1.457	M10	1	–	1	3.6
C6	06	27174	C6-391.5834-06065	2.559	1.024	1.969	4.055	1.575	0.906	1.496	1.457-1.063	M5	2	30	1	2.4
	08	27178	C6-391.5834-08065	2.559	1.102	1.969	4.055	1.575	0.945	1.496	1.457-1.063	M5	2	30	1	2.4
	10	27181	C6-391.5834-10075	2.953	1.181	1.969	4.449	1.969	1.339	1.654	1.693-1.299	M8	2	30	1	2.6
	12	27182	C6-391.5834-12080	3.150	1.260	1.969	4.646	2.165	1.575	1.850	1.693-1.299	M10	2	30	1	2.6
	16	27192	C6-391.5834-16085	3.346	1.496	1.969	4.843	2.362	1.811	1.969	1.772-1.378	M10	2	30	1	2.8
	20	27199	C6-391.5834-20085	3.346	1.654	1.969	4.843	2.362	1.850	2.047	1.693-1.299	M10	2	30	1	3.0
	25	27205	C6-391.5834-25095	3.740	2.283	2.283	5.236	2.756	–	2.283	1.850-1.457	M10	2	–	1	1.3
	32	27206	C6-391.5834-32100	3.937	2.520	2.520	5.433	–	–	2.480	1.850-1.457	M10	1	–	1	4.9
C8	20	27207	C8-391.5834-20095	3.740	1.654	1.969	5.630	2.441	2.047	2.047	2.087-1.693	M10	2	30	1	5.2
	32	27208	C8-391.5834-32105	4.134	2.520	2.756	6.024	2.835	2.362	2.480	2.047-1.654	M10	2	30	1	7.0

Spare Parts

For d	Press screw	Stop screw
12	950AF0810008	19LS1016A
6-8	950AF0810008	19LS0512A
10	950AF0810008	19LS0816A
14-32	950AF1010010	19LS1016A

Accessories

For d	Locking key
12	H04-4
6-8	H04-4
10	H04-4
14-32	H04-4

Please check availability in current price and stock-list.

For reduction sleeves, see page(s) 364-366. For control gauges, see page(s) 367.

Accessories

For d	Locking key
	
6-8	H04-4
10	H04-4
12	H04-4
14-32	H04-4

Spare Parts

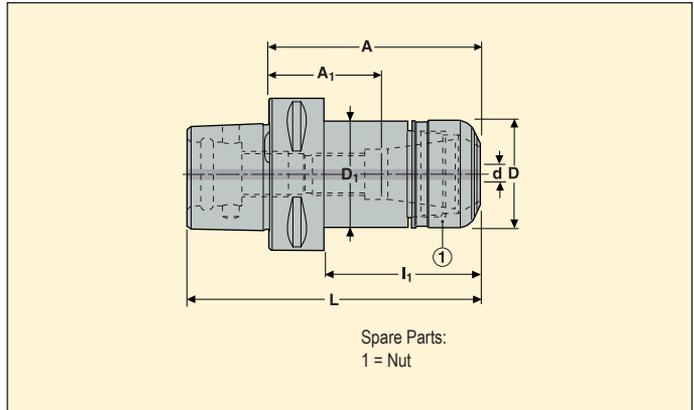
For d	Press screw	Stop screw
		
6-8	950AF0810008	19LS0512A
10	950AF0810008	19LS0816A
12	950AF0810008	19LS1016A
14-32	950AF1010010	19LS1016A

EPB 5672 – High precision collet chucks

Seco-Capto/ ISO 26623-1



• Run-out .0001" (2.5 µm) maximum at 3xd



Seco-Capto™ shank	d inch	EDP No.	Part No.	Chuck & Collet Size	Dimensions in inch						**	Balancing	lbs
					A	D	D ₁	L	I ₁	A ₁ min-max*			
C3	.039-.276	84775	C3-391.5672-11045	HP 11	1.772	0.630	0.630	2.520	1.063	0.236-1.063	**	1	0.4
	.039-.394	09321	C3-391.5672-16045R	HP 16R	1.772	0.945	0.945	2.520	1.063	0.236-0.689	**	1	0.4
	.039-.394	09319	C3-391.5672-16060	HP 16	2.362	1.181	1.181	3.110	1.654	0.787-1.181		1	0.7
C4	.039-.276	84776	C4-391.5672-11045	HP 11	1.772	0.630	0.630	2.717	0.866	0.236-1.063	**	1	0.7
	.039-.394	09325	C4-391.5672-16045R	HP 16R	1.772	0.945	0.945	2.717	0.866	0.236-0.689	**	1	0.7
	.039-.394	09323	C4-391.5672-16060	HP 16	2.362	1.181	1.181	3.307	1.457	0.787-1.181		1	0.9
C5	.039-.394	09326	C5-391.5672-16065	HP 16	2.559	1.181	1.181	3.740	1.654	0.906-1.378		1	1.4
	.079-.630	09327	C5-391.5672-25085	HP 25	3.346	1.575	1.575	4.528	2.441	1.614-1.850		1	1.9
C6	.039-.394	09329	C6-391.5672-16075	HP 16	2.953	1.181	1.181	4.449	1.969	1.181-1.772		1	2.3
	.079-.630	09330	C6-391.5672-25090	HP 25	3.543	1.575	1.575	5.039	2.559	1.575-2.047		1	2.8
C8	.079-.630	09331	C8-391.5672-25100	HP 25	3.937	1.575	1.575	5.827	2.638	1.575-2.441		1	5.0
	.079-.787	09332	C8-391.5672-32100	HP 32	3.937	1.969	1.969	5.827	2.638	1.417-2.047		1	5.6

For ER HP collets type 5672, see page(s) 371-376. Chuck size **HP 16R** use the collet size ER HP 16

* A1 setting length onto stop screw when possible, or total available setting length for chucks without thread for stop screw. ** Chuck without thread for stop screw

Spare Parts

For size	Nut
HP 11	08B567211
HP 16	08B567216
HP 16R	08B567216R
HP 25	08B567225
HP 32	08B567232

Accessories***

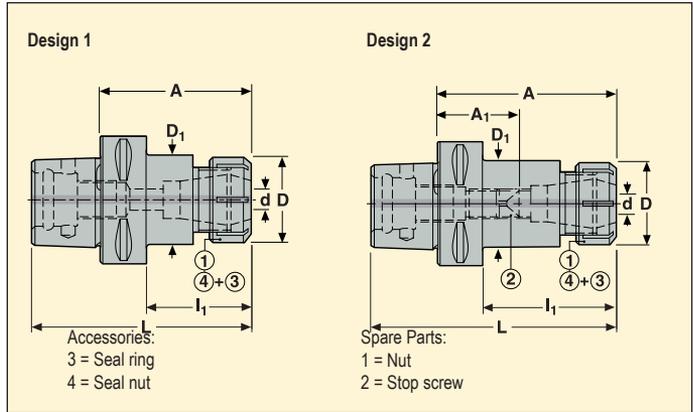
For size	Socket	Spanner	Stop screw	Torque key
HP 11	03EF567211	03B567211	–	03DYD010100
HP 16	03EF567216	03B567216	19B58711	03DYD010100
HP 16R	03EF567216R	03B567216R	–	03DYD010100
HP 25	03EF567225	03B567225	19B58718	03DYD020200
HP 32	03EF567232	03B567232	19B58722	03DYD020200

Please check availability in current price and stock-list.

*** When using a stop screw, its tapered contact onto the tool shank can increase the tool run-out defect. For tightening torque, see page 38.



• Run-out .0004" (10 µm) maximum at 3xd



Seco-Capto™ shank	ER		EDP No.	Part No.	Dimensions in inch						Design	Balancing	lbs
	Size	Capacity d inch			A	D	D ₁	L	I ₁	A ₁ min-max			
C3	ER 16	0.020-0.394	65885	C3-391.5675-16045	1.772	1.260	–	2.520	1.063	–	1	1	0.5
	ER 25	0.039-0.630	65886	C4-391.5675-25052	2.047	1.654	–	2.992	1.142	–	1	1	0.9
C4	ER 32	0.079-0.787	65890	C4-391.5675-32054	2.126	1.969	–	3.071	–	–	1	1	0.9
	ER 25	0.039-0.630	65891	C5-391.5675-25055	2.165	1.654	1.654	3.346	1.260	–	1	1	1.4
C5	ER 25	0.039-0.630	65892	C5-391.5675-25100	3.937	1.654	1.654	5.118	3.031	1.220-2.441	2	1	2.3
	ER 32	0.079-0.787	65894	C5-391.5675-32057	2.244	1.969	–	3.425	1.260	–	1	1	1.5
C6	ER 16	0.020-0.394	65895	C6-391.5675-16100	3.937	1.260	1.260	5.433	2.953	2.047-2.677	2	1	2.6
	ER 25	0.039-0.630	65896	C6-391.5675-25060	2.362	1.654	1.654	3.858	1.378	–	1	1	2.2
	ER 25	0.039-0.630	65897	C6-391.5675-25100	3.937	1.654	1.654	5.433	2.953	1.220-2.441	2	1	3.0
	ER 25	0.039-0.630	65898	C6-391.5675-25130	5.118	1.654	1.654	6.614	4.134	2.402-3.622	2	1	3.7
	ER 25	0.039-0.630	65899	C6-391.5675-25160	6.299	1.654	1.654	7.795	5.315	3.583-4.803	2	1	4.3
	ER 32	0.079-0.787	65900	C6-391.5675-32060	2.362	1.969	1.969	3.858	1.378	–	1	1	2.2
	ER 32	0.079-0.787	65901	C6-391.5675-32100	3.937	1.969	1.969	5.433	3.071	1.260-2.362	2	1	3.4
	ER 32	0.079-0.787	65902	C6-391.5675-32130	5.118	1.969	1.969	6.614	4.252	2.441-3.543	2	1	4.4
	ER 40	0.118-1.024	65903	C6-391.5675-40065	2.559	2.480	–	4.055	1.772	–	1	1	2.7
	C8	ER 32	0.079-0.787	65904	C8-391.5675-32070	2.756	1.969	1.969	4.646	1.457	0.906-1.181	2	1
ER 32		0.079-0.787	65907	C8-391.5675-32160	6.299	1.969	1.969	8.189	5.118	3.622-4.724	2	1	7.3
ER 40		0.118-1.024	65910	C8-391.5675-40070	2.756	2.480	–	4.646	1.457	0.906-1.181	2	1	4.7

Spare Parts

Accessories*

For d	Nut	Stop screw	For d	Seal nut	Seal ring	Spanner
ER 16	08B587516X	19B58711	ER 16	08B587516IC	01B58751606	03B587516
ER 25	08B587525X	19B58718	ER 25	08B587525IC	01B58752506	03B587525
ER 32	08B587532X	19B58722	ER 32	08B587532IC	01B58753206	03B587532
ER 40	08B587540X	19B58730	ER 40	08B587540IC	01B58754006	03B587540

Please check availability in current price and stock-list.

For ER collets, see page(s) 378-381, ER extensions, see page(s) 377.

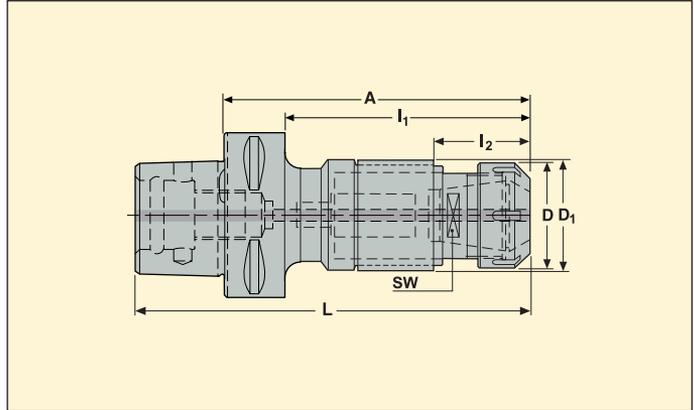
* For ER sealing rings, see page(s) 382.

EPB 5867 – Tapping chucks for synchronized tapping, with micro-compensation

Seco-Capto/ ISO 26623-1



- Built-in axial micro flexure (+/- .020") prevents tap stress
- Tap fitting based on ER tapping collets with square drive
- Maximum coolant pressure 1160 psi (80 bar)



Seco-Capto™ shank	Tapping range	Size	EDP No.	Part No.	Dimensions in inch							
					A	D	D ₁	L	I ₁	I ₂	SW	
C4	M2-M5	ER 11	00841	C4-391.5867-11080	3.150	0.736	0.925	4.094	2.362	0.949	0.500	0.9
	M4-M12	ER 20	00842	C4-391.5867-20102	4.024	1.327	1.378	4.969	3.228	1.587	0.866	1.5
	M8-M20	ER 25	00859	C4-391.5867-25122	4.787	1.654	1.732	5.732	4.000	1.657	1.102	2.4
C5	M4-M12	ER 20	00861	C5-391.5867-20103	4.043	1.327	1.378	5.224	3.256	1.587	0.866	2.0
	M8-M20	ER 25	00863	C5-391.5867-25122	4.807	1.654	1.732	5.988	4.020	1.657	1.102	2.9
	M16-M30	ER 40	00864	C5-391.5867-40154	6.063	2.469	2.441	7.244	5.276	2.047	1.562	6.2
C6	M4-M12	ER 20	00865	C6-391.5867-20105	4.122	1.327	1.378	5.618	3.256	1.587	0.866	2.6
	M8-M20	ER 25	00866	C6-391.5867-25124	4.886	1.654	1.732	6.382	4.020	1.657	1.102	3.5
	M16-M30	ER 40	00867	C6-391.5867-40154	6.043	2.469	2.441	7.539	5.177	2.047	1.562	6.4
C8	M4-M12	ER 20	00868	C8-391.5867-20112	4.398	1.327	1.378	6.287	3.217	1.587	0.866	4.9
	M8-M20	ER 25	00869	C8-391.5867-25131	5.161	1.654	1.732	7.051	3.980	1.657	1.102	5.7
	M16-M30	ER 40	00873	C8-391.5867-40161	6.319	2.469	2.441	8.209	5.138	2.047	1.559	8.6

For ER tapping collets with square drive, see page(s) 386.

Spare Parts

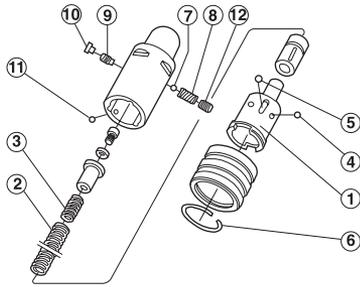
For size	Nut
ER 11	5533050-07
ER 20	5533051-02
ER 25	5533051-03
ER 40	5533051-05

Accessories

For size	Locking key	Spanner
ER 11	5680092-03	03B587511UM
ER 20	5680092-04	03B587520UM
ER 25	5680092-05	03B587525
ER 40	5680092-06	03B587540

Please check availability in current price and stock-list.

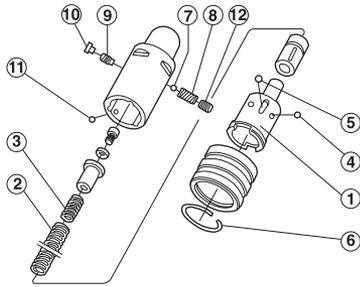
For EPB 5867 sealing rings, see page(s) 387.



Spare Parts:
 1 = Barrel
 2-12 = Complete spare parts set items

Spare Parts

For size	Barrel	Spare parts set
		-
C...-01	5638055-01	5471020-01
C...-02	5638055-02	5471020-02
C...-03	5638055-03	5471020-03



Spare Parts:
 1 = Barrel
 2-12 = Complete spare parts set items

Spare Parts

For size	Barrel	Spare parts set
		-
C...-01	5638055-01	5471020-01
C...-02	5638055-02	5471020-02
C...-03	5638055-03	5471020-03



HSK coolant tubes and sealing plugs

Depending on the machine requirements, HSK Form A, -B, -D, or -E holders must be equipped with a coolant tube or a sealing plug.

WARNING :

Using holders without a coolant tube or a plug fitted, when required, could cause unseen machine spindle damage.

EPB holders HSK-A and HSK-E (standard range), and HSK-B and -D (special), are delivered without coolant tube (2) or sealing plug (1).

Coolant tube (2), tube spanner (3) and sealing plug (1) have to be ordered separately, see page(s) 357.

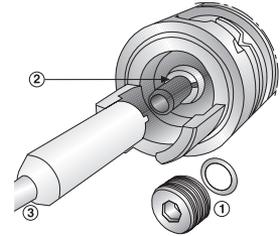
Coolant tubes, made of two parts and including two identical seals, allow a slight angular movement of $\pm 1^\circ$ (standard requirement).

They require a specific design of mounting spanner (there is no standardized design).

Plugs (delivered with a seal) use standard hexagonal locking keys, not available in the catalog.

Note: DIN 69893 Form C and -F do generally not require a coolant tube or plug.

Through coolant and sealing functions are provided by the locking unit.



Spare sealing plugs for ADB holders

A number of holders are of the ADB through coolant design.

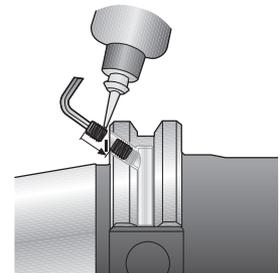
For B through coolant (flange through coolant), the two originally fitted sealing plugs in the holder's flange have to be removed, and a non through coolant pull stud has to be used so as to seal the back of the holder.

For AD through coolant (central draw bar through coolant), the two sealing plugs in the holder's flange have to be in place, and a through coolant pull stud has to be used.

Spare sealing plugs are shown on page(s) 361.

Sealing paste required for sealing plug mounting is not available from Seco-EPB: we recommend LOCTITE 577 - Thread sealing paste.

Sealing plug mounting instructions: After cleaning or on a new sealing plug, apply sealing paste onto thread. Screw sealing plug until its back face is flush with holder's flange back face. Sealing to moderate pressure is obtained instantly; the maximum pressure resistance is reached after 24 hours, 1450 psi (100 bar) maximum - see also sealing paste's directions for use.



Shrinkfit extensions

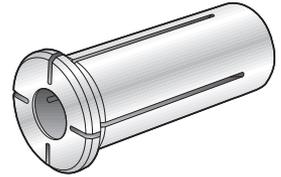
Together with the Shrinkfit holders, comes a complete range of Type 5801 slim Shrinkfit extensions with cylindrical shank, tolerance h5. Extensions can be used for extending the overall length of holders, or holding small diameter tools from $\varnothing 1/8"$ (3 mm).



Reduction sleeves for hydraulic chucks

The reduction sleeves for hydraulic chucks act as split collets and allow to grip more shank types and sizes: cylindrical, Weldon, Whistle Notch $\varnothing \leq 1"$ (25 mm). The run-out with the sleeve is maximum .0002" (5 μm) at 3xd (d being the internal diameter of the sleeve). Transmittable torque with a reduction sleeve is at least equivalent to chucks without a sleeve.

Note: As the grooves are not all along the sleeves, the coolant is still forced to come through the tool center (as when using a hydraulic chuck without sleeve).



Control gauges for hydraulic chucks

Control gauges are used to check the clamping capability of the hydraulic chuck.

Hydraulic chuck control instructions summary, using a control gauge:

Insert the control gauge into the chuck.

Tighten the clamping screw until you cannot turn the control gauge.

Then it should be possible to complete a minimum of three full turns of the pressurising screw, before completely tightening (2.5 turns for $\varnothing 6$ mm and $\varnothing 8$ mm).

This will confirm that the clamping capability is adequate.

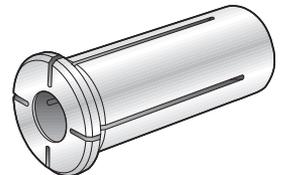
Note: Detailed control instructions are part of the operating instruction sheet delivered with the hydraulic chucks.



Reduction sleeves for UMC Milling Chucks

The reduction sleeves for milling chucks act as split collets, more shank types and sizes can be gripped: cylindrical, Weldon, Whistle Notch. The run-out with the sleeve is maximum .0002" (5 μm) at 3xd (d being the internal diameter of the sleeve). Transmittable torque with a reduction sleeve is at least equivalent to chucks without a sleeve.

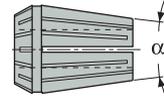
Note: When using standard U-series collets, the assembly will not be sealed for coolant use. If coolant through the tool is required, use coolant collet plus coolant-thru nut as an assembly. Collet plus slotted nut provides coolant flow along the tool.



See pages 368-370.

ER HP collets, type 5672 for collet chucks EPB 5672

Collet taper angle: $\alpha = 16^\circ$



Run-out:

Maximum run-out is .0001" (3 μm) up to a maximum of 1.969" (50 mm) when measured at a gauge projection of 3xd in relation to the external taper of the high precision collet chuck type 5672.

The collet designation 'ER HP' indicates that the collet type 5672 is based on the external design of ISO 15488-B (ER), but equipped with a distinguishing plastic ring in the locking groove to avoid confusing it with a classic ER collet that would not provide the run-out mentioned above.



Tool shanks:

Tool shank diameter to be similar to collet's bore (no clamping capacity) and tolerance h10 max.

Range:

A selection of ER HP collets type 5672, not sealed and sealed, in most current diameters is available as standard, as listed on page(s) 371-376.

As shown below, further diameters are available on request, please inquire.

Collet size	Not sealed			Sealed		
	From \varnothing (mm)	To \varnothing (mm)	\varnothing steps (mm)	From \varnothing (mm)	To \varnothing (mm)	\varnothing steps (mm)
ER HP 11	1	7	0.5	3	6	1
ER HP 16*	1	10	0.5	3	10	1
ER HP 25	2	10	0.5	3	16	1
	11	16	1.0			
ER HP 32	2	20	1.0	3	20	1

* The collet size ER HP 16 is suitable for both chuck sizes HP 16R and HP 16.

ER collet chuck extensions, with cylindrical shanks

See also information in General guide, page(s) 42.

Extensions are an economical solution to hold smaller tool shanks in existing holders.



ER collets

Norm: DIN 6499

Collet taper angle: $\alpha = 16^\circ$.

High flexibility: The clamping range of an ER collet is nominal to $-.040''$ (-1 mm) ($-.020''$ or -0.5 mm for ER 08 and ER 11).

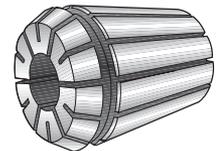
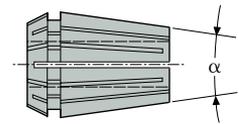
ER collets with cylindrical shank available in sizes: ER 08, 11, 16, 25 and 32, see page 377.

ER collets, standard

Run-out: Maximum run-out when measured at a gauge projection of approx. $3 \times d$ in relation to the external taper of the collet is $.0014''$ ($35 \mu\text{m}$). See pages 378-381.

ER collets, metallic sealed collets

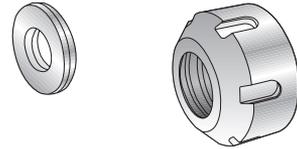
Metallic sealed collets seal tool to collet. Good up to 2000 psi coolant thru the tool. Ultra-precision with maximum $0.0002''$ run-out.



Sealing rings for ER sealing nuts

ER chucks are delivered as standard with drilled stop screws for coolant through plain ended tool shanks.

In order to seal other types of shanks, sealing rings are used in conjunction with sealing nuts, see Accessories in ER collet chucks Product pages.



Sealing range of a ring is nominal to $-0.020''$ (-0.5 mm).
Coolant pressure maximum 1450 psi (100 bar).

Sealing ring assembling advice: Insert sealing ring into the nut from the back, until it “clicks” into the nut’s front face. The sealing ring’s marked face should be oriented inside the nut to avoid erosion of the diameter information marking.
Release by pressure onto the sealing ring’s front face.

Range: A selection of ER sealing rings in most current diameters are available as standard, as listed on page(s) 382.

As shown below, further diameters are available on request, please inquire.

Sealing ring size	From \varnothing (mm)	To \varnothing (mm)	\varnothing steps (mm)	Sealing ring (mm)
ER 16	3	10	0.5	-0.5
ER 25	3	16	0.5	-0.5
ER 32	3	20	0.5	-0.5
ER 40*	3	26	0.5	-0.5

* Sealing rings in size ER 40 are only available on request, please inquire.

Note: Sealing rings and sealing nuts in sizes ER 08 and ER 11 are not available.

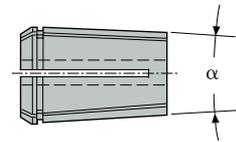
OZ collets

Norm: DIN 6388

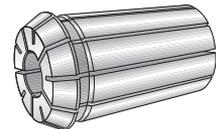
Collet taper angle: $\alpha/2 = 1/10$ (approx. $2^{\circ}52'$).

High flexibility: The clamping range of an OZ collet is nominal to $0.020''$ (-0.5 mm).

Run-out: Maximum run-out when measured at a gauge projection of $3xd$ in relation to the external taper of the OZ chuck type 5873 is $.0006''$ ($15 \mu\text{m}$).



Range: A selection of OZ 32 collets in most current diameters is available as standard, as listed on page(s) 383. As shown below, further diameters are available on request, please inquire.



Collet size	From \varnothing (mm)	To \varnothing (mm)	\varnothing steps (mm)	Clamping range (mm)
OZ-B 32	4	32	0.5	-0.5

EPB 5867, ER tapping collets with square drive

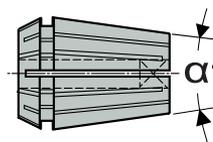
Collet taper angle: $\alpha = 16^\circ$

Specific ER collets featuring a driving square to fit the tap's square. These specific ER collets with square are required to secure the tapping process.

Dedicated clamping size on the nominal diameter.

Range: A selection of ER tapping collets in most current diameters and squares is available as standard, as listed on page(s) 386. As shown below, further diameters and squares are available on request, please inquire with diameter and square sizes.

Collet size	From \varnothing (mm)	To \varnothing (mm)	Clamping range
ER 11	2.5	6	0
ER 20	4.0	12	0
ER 25	4.0	16	0
ER 40	12.0	22	0



EPB 5867, Sealing rings

The EPB 5867 tapping chucks are delivered with collet clamping nuts allowing the fitting of sealing rings, available as Additional equipment. The rings prevent coolant to flow through the collet's grooves, forcing coolant to flow through the tap's coolant channel. Coolant pressure maximum 2176 psi (150 bar).



Sealing ring assembling advice: Insert sealing ring into the nut from the back, until it "clicks" into the nut's front face. The sealing ring's marked face should be oriented inside the nut to avoid erosion of the diameter information marking.

Release by pressure onto the sealing ring's front face.

Range: A selection of EPB 5867 sealing rings in most current diameters are available as standard, as listed on page(s) 387.

As shown below, further diameters are available on request, please inquire.

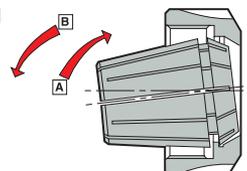
Sealing ring size	From \varnothing (mm)	To \varnothing (mm)	\varnothing steps (mm)	Sealing ring (mm)
ER 20	4	12	0.5	-0.5
ER 25	4	16	0.5	-0.5
ER 40	6	22	0.5	-0.5

Assembly advice for ER, ER tapping collets and OZ collets

The collet must always be inserted into the nut, and the nut screwed onto the chuck before introducing the tool into the collet.

The collet is fitted inside the nut by applying slight pressure A, and released by a radial pressure B.

Never lock the nut without a tool in place.

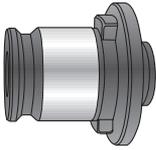


Quick change tapping chucks, with Weldon/Whistle Notch combined back end shank

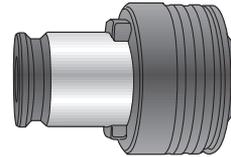
These quick change tapping chucks with axial compensation have economic advantages as they are not dependent on a specific spindle size. See more information in General guide, page(s) 45.

Quick change tap adapters

Allow quick changing of the tap and adapter.



Adapters without torque limiter
Type QCTC

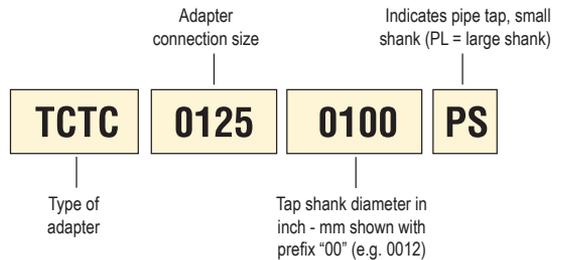


Adapters with torque limiter
Type TCTC

The adapter has to be chosen according to the tap shank diameter and tapping chuck size (e.g. 0100). Dimensions are in relation to ANSI standards for taps, which also cover the thread size.

The torque of an adapter with a torque limiter is set according to the thread size when delivered. Therefore a tap with the same shank diameter and same square size, but with a different pitch cannot be substituted.

For adapters without torque limiters this can be done, as only tap shank diameter and square are critical.



Assembly supports, Tool Boy

This indexable toolholder assembly support provides a safe and efficient tool preparation facility. Easily fixed to a workbench.

Tool Boy assembly supports are made of a base unit and a head. The common base unit accommodates all head types and sizes.

Several holder locking systems are available, depending on the type of taper: fast spring bolt for HSK/ SA40/ Seco-Capto; screw bolt for SA50; clamping ring for VDI.

A selection of Toolboy for most current tool holder types and sizes is available as standard, as listed in the product page. Further types are available on request, please inquire.

Horizontal orientation to right or left, e.g. for tool and insert assembly.



Vertical orientation up or downwards, e.g. for boring head setting or pull stud mounting.



HSK locking units, TF

TF units enable spindles with HSK interface to be adapted to take HSK-C and HSK-A holders. For access to the locking mechanism, HSK-A holders must have the radial access hole in the taper. Units also enable the release of the holder from the spindle (HSK is self-locking).



Operating principle

Locking: the side access locking screw activates two gripping jaws, which exert axial and radial locking forces on to the holder's internal pulling taper.

This locks the holder into the spindle and pushes the coolant seal onto the internal face. (Fig. 1 and 2).

Releasing: by turning the screw in the opposite direction the jaws are removed from the pulling taper and the ejector pushes on the holder's internal face to release it from the spindle (Fig. 3).

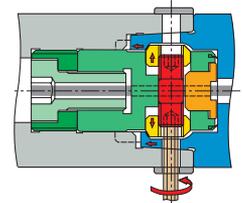


Fig. 1

Main features:

The two locking jaws are self orientating in order to achieve four point locking.

The locking principle guarantees the required HSK locking pressures.

Sealing is designed to withstand high pressure coolant flow.

Symmetrical acting ejector, no risk of holder sticking.

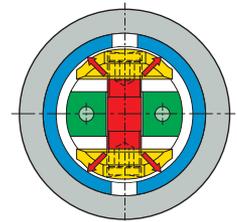


Fig. 2

Unit fitting:

Simple and inexpensive spindle machining operations for fitting the unit, based on a thread and a centering bore. See page(s) 395, showing also indexing pins as Accessories.

The unit is fitted by screwing down to a dead stop. A slip clutch allows alignment of the unit clamping screw with the access holes in the spindle.

After alignment, secure the slip clutch by tightening the screw located at the bottom of the two coolant holes.

For installing and removing the units use the dedicated spanners available in Accessories.

For application details, refer to the instruction sheet supplied with the unit.

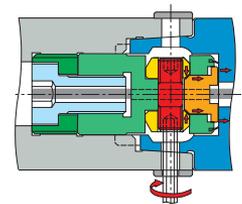


Fig. 3

HSK locking flange mounts, TF

TF flange mounts allow spindle front faces to be easily equipped with a complete HSK connection (HSK interface and locking). The flange mounts have a precise HSK taper/face, drivers for HSK-A and HSK-C holders, and include a TF locking unit, already fitted.

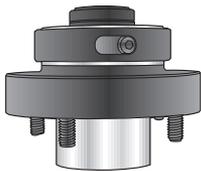
Three flange types are available:

- Type BR1: with radial and angular adjustment.
- Type BR2: short, with radial adjustment.
- Type BR3: short and slim, with radial adjustment.

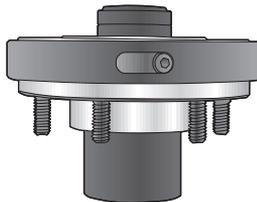
Features:

Protecting ring to seal the mount's radial holes for TF unit access.
Simple and inexpensive spindle machining operations for fitting the flange mount.
See machining advice in Product pages.

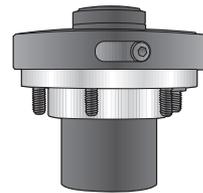
Flanges are delivered with all components included, also shown as spare parts.
Spanners to release the TF units are available in Accessories, see page(s) 394.
Indexing pins available as Accessories are listed on page(s) 395.



BR1



BR2



BR3

Pull studs (retention knobs)

Seco offers a range of pull studs (retention knobs) to fit popular toolholders and Graflex taper holders that provide high quality with greater safety, traceability and availability.

- Each pull stud shipped has re-order information contained on the shipping container.
- Seco's EDP No. and the last 2 digits of the month and year manufactured and a serial number are laser marked on each pull stud for traceability.

We use only the finest steel that is vacuum de-gassed, re-melt stock. Both the steel and pull studs are manufactured in the USA.

All pull studs with close tolerances are hard turned after heat treating and then black oxide coated. Surface finish of a minimum of 63 micro inches is required on the hardened surfaces of the pull stud to retard cracking.

Selecting the right pull stud

There are a few key pieces of information that make it easy for Seco to identify the pull stud needed for a specific machine spindle.

With what spindle taper will the pull stud be used? Look at the drawings on the following pages to find one that most closely matches the pull stud needed. Note the drawing style. Go to the table for the taper (V40, BT50 etc.) and find the section with the appropriate spindle taper and look for that style. The L1 dimension will narrow the possibilities and the angle facing the thread should focus your choice on the proper part. If you cannot locate the exact pull stud you need, it may be necessary to identify the machine make and model and spindle speed and whether there is coolant through the spindle or flange. When trying to match an existing pull stud give us the part number etched on it and, if possible, the manufacturer. We can quickly convert this number to a Seco number.

All pull studs are made to standards:

ABBREVIATION

1. ANSI/ASME
2. CAT
3. ISO
4. DIN
5. JMTBA (BT JMT)
6. JIS

STANDARD ORGANIZATION STANDARD

- American National Standards
Caterpillar Design Standards
ISO International Standards Org.
DIN Deutsches Institut Fur Normung
Japanese Mach. Tool Builders Assoc.
JIS Japanese Industrial Standards

STANDARD

- ASME B5.50-1994
MF 2560
7388/2-1984 (E)
DIN 69 872
MAS 403-1982
JIS B 6339-1986

Pull Studs have different Head Angles:

STANDARD

1. ANSI
2. CAT
3. ISO
4. DIN
5. JMTBA (BT JMT)

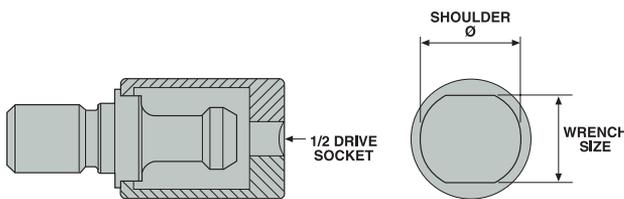
ANGLES

- 45 DEG.
45 DEG.
A = 15 DEG., B = 45 DEG.,
A = 15 DEG., B = hole 1/2 way through part
TYPE 1 = 45 DEG., TYPE 2 = 60 DEG., TYPE 3 = 90 DEG.

Drive sockets

Pull Stud Drive Sockets are a perfect supplement to our pull studs. They are heavy-duty 1/2" drive sockets that are designed to fit the various retention knobs in use. Made of the finest chrome moly steel, our Pull Stud Drive Sockets are black oxide coated to inhibit rust and are laser marked with our EDP number, type, size of knob and the torque range required. They are packaged with labels. Sockets aid in the installation and removal of pull studs.

By using a socket and a torque wrench the ideal tightness is achieved without rounding off the pull stud's corners.



Pull stud (retention knob) sockets				
Part No.	Part max dia inch	Max flat inch	Max torque ft/lbs	Socket Part No.
RKW30	0.655	0.535	40	RKW30
RKW30M	0.675	0.511	40	RKW30M
RKW30D	0.675	0.556	40	RKW30D
RKW40	0.944	0.755	85	RKW40
RKW40M	0.894	0.711	85	RKW40M
RKW45	1.205	1.004	100	RKW45
RKW45M	1.225	0.950	100	RKW45M
RKW50	1.450	1.255	110	RKW50
RKW50M	1.500	1.185	110	RKW50M

Pull stud safety

The only thing holding our cutting tools in the machine spindle is the pull stud. Pull studs are not intended to last forever. A program is available to help our customers use them safely. It teaches the importance of pull stud inspections and that they must be visually inspected for damage and checked for tightness every time the tool in the holder is put into service.

- The last two digits of the month / year and the serial number (03/99 S/N 000356) are marked on the side of the pull stud. By adding these numbers to the pull stud, traceability is insured. For example: Record the year and serial number to an inspection log and specify the frequency, and the type of inspection to be performed (visual, magnetic particle, or dimensional).
- Extra labels are provided upon request. Stick-on labels and laminated labels are available at no charge to put into the machine tool cabinet or the machine tool manual for safe keeping. When reordering this is helpful to be sure of the correct pull stud part number. The labels have part numbers, a description and drawing of the pull stud as well as a warning statement.

Pull studs (retention knobs)

EDP No.	Style drawing	"T" Threads dia. pitch	"A" angle radius	"D1" knob dia.	"D2" neck dia.	"D3" hole dia.	"D4" pilot dia.	"L" oal inch	"L1" length inch	"L2" length inch	HOLE yes/no	Socket part no.
TOOL SHANK Cat V-40												
01635	A - A	.625-11	45	0.74	0.49	0.28	N/A	1.50	0.44	0.64	Y	RKW40
01636	A - A	.625-11	45	0.74	0.49	N/A	N/A	1.50	0.44	0.64	N	RKW40
01637	A - PT	.625-11	45	0.59	0.39	N/A	N/A	2.27	1.00	1.27	N	RKW40
01639	A - PT	.625-11	45	0.59	0.41	0.16	N/A	2.25	1.14	1.44	Y	RKW40M
01640	BT - PT	.625-11	45	0.59	0.39	N/A	0.64	2.25	0.99	1.26	N	RKW40
01641	BT - PT	.625-11	60	0.59	0.39	N/A	0.64	2.25	0.99	1.26	N	RKW40
01643	BT - PT	.625-11	90	0.59	0.39	N/A	0.64	2.25	0.99	1.26	N	RKW40
01648	BT - A	.625-11	45	0.74	0.49	0.28	0.64	1.62	0.44	0.64	Y	RKW40
01649	BT - PT	.625-11	45	0.59	0.39	0.20	0.64	2.25	0.99	1.26	Y	RKW40
01651	I - I (A)	.625-11	15	0.75	0.55	0.28	N/A	1.89	0.79	1.03	Y	RKW40
01760	A - PT	.625-11	45	0.59	0.39	N/A	N/A	2.13	0.99	1.26	N	RKW40
01761	A - PT	.625-11	45	0.59	0.39	0.19	N/A	2.12	0.99	1.26	Y	RKW40
01654	I - I (A)	.625-11	15	0.75	0.55	0.28	N/A	2.13	0.79	1.03	Y	RKW40
01655	I - I (B)	.625-11	45	0.74	0.50	0.29	N/A	1.75	0.44	0.65	Y	RKW40
01656	D - D (A)	.625-11	15	0.75	0.55	0.28	N/A	1.88	0.79	1.02	Y	RKW40
01657	D - D (A)	.625-11	15	0.75	0.55	N/A	N/A	1.88	0.79	1.02	N	RKW40
TOOL SHANK Cat V-50												
01678	A - A	1.00-8	45	1.14	0.82	0.51	N/A	2.30	0.70	1.00	Y	RKW50
01762	A - A	1.00-8	45	1.14	0.82	0.47	N/A	2.30	0.70	1.00	Y	RKW50
01679	A - A	1.00-8	45	1.14	0.82	N/A	N/A	2.30	0.70	1.00	N	RKW50
01763	A - A	1.00-8	45	1.14	0.82	0.46	N/A	2.30	0.70	1.00	Y	RKW50M
01680	BT - PT	1.00-8	45	0.90	0.67	N/A	1.03	3.35	1.38	1.78	N	RKW50
01681	BT - PT	1.00-8	60	0.90	0.67	N/A	1.03	3.35	1.38	1.78	N	RKW50
01683	BT - PT	1.00-8	90	0.90	0.67	N/A	1.03	3.35	1.38	1.78	N	RKW50
01684	A - PT	1.00-8	90	0.90	0.67	N/A	N/A	3.08	1.38	1.78	N	RKW50
01688	BT - A	1.00-8	45	1.14	0.82	0.39	1.03	2.30	0.70	1.00	Y	RKW50M
01689	BT - PT	1.00-8	45	0.90	0.67	0.39	1.03	3.36	1.38	1.78	Y	RKW50
01691	BT - PT	1.00-8	45	0.90	0.67	0.24	1.03	3.36	1.38	1.78	Y	RKW50
01692	BT - PT	1.00-8	60	0.90	0.67	0.34	1.03	3.36	1.38	1.78	Y	RKW50
01693	A - PT	1.00-8	90	0.94	0.71	N/A	N/A	2.52	0.90	1.22	N	RKW50M
01694	BT - PT	1.00-8	90	0.90	0.67	0.25	1.03	3.35	1.38	1.78	Y	RKW50
01697	D - D (A)	1.00-8	15	1.10	0.83	0.46	N/A	2.64	0.98	1.34	Y	RKW50M
TOOL SHANK BT-30												
01594	BT - PT	M12X1.75	45	0.43	0.27	N/A	0.49	1.69	0.71	0.90	N	RKW30M
01595	BT - PT	M12X1.75	60	0.43	0.27	N/A	0.49	1.69	0.71	0.90	N	RKW30M
TOOL SHANK BT-40												
01613	A / A	M16X2.0	45	0.74	0.49	0.28	N/A	1.50	0.44	0.64	Y	RKW40
01614	A / A	M16X2.0	45	0.74	0.49	N/A	N/A	1.50	0.44	0.64	N	RKW40
01615	BT - A	M16X2.0	45	0.74	0.49	N/A	0.67	1.61	0.55	0.75	N	RKW40
01616	BT - A	M16X2.0	45	0.74	0.49	0.28	0.67	1.61	0.55	0.75	Y	RKW40
01619	BT - PT	M16X2.0	45	0.59	0.39	N/A	0.67	2.36	1.10	1.38	N	RKW40
01620	BT - PT	M16X2.0	60	0.59	0.39	N/A	0.67	2.36	1.10	1.38	N	RKW40
01622	BT - PT	M16X2.0	45	0.59	0.39	0.20	0.67	2.36	1.10	1.38	Y	RKW40
01623	BT - PT	M16X2.0	60	0.59	0.39	0.20	0.67	2.36	1.10	1.38	Y	RKW40
01626	BT - I (A)	M16X2.0	15	0.75	0.55	0.28	0.67	2.13	0.90	1.14	Y	RKW40
01627	I - I (A)	M16X2.0	15	0.75	0.55	0.27	0.66	2.12	0.79	1.02	Y	RKW40
01629	D - D (A)	M16X2.0	15	0.75	0.55	0.28	0.67	2.14	0.79	1.02	Y	RKW40
TOOL SHANK BT-50												
01668	A - A	M24X3.0	45	1.14	0.82	0.47	N/A	2.30	0.70	1.00	Y	RKW50
01670	BT - PT	M24X3.0	45	0.90	0.67	N/A	0.98	3.35	1.38	1.77	N	RKW50M
01671	BT - PT	M24X3.0	60	0.90	0.67	N/A	0.98	3.35	1.38	1.77	N	RKW50M
01672	BT - PT	M24X3.0	90	0.90	0.67	N/A	0.98	3.35	1.38	1.77	N	RKW50M
01675	D - D (A)	M24X3.0	15	1.10	0.83	0.45	0.98	2.92	0.98	1.34	Y	RKW50M

Requesting Pull Stud Identification

Select the style and fill in the blanks:

Style _____

“T” _____

“D2” _____

“D3” _____

“D4” _____

“L” _____

“L1” _____

“A°” _____

Machine Make _____

Machine Model _____

Spindle Size _____; Max. RPM _____

Toolholder Thread _____ metric; _____ inch

Coolant through spindle? yes; no

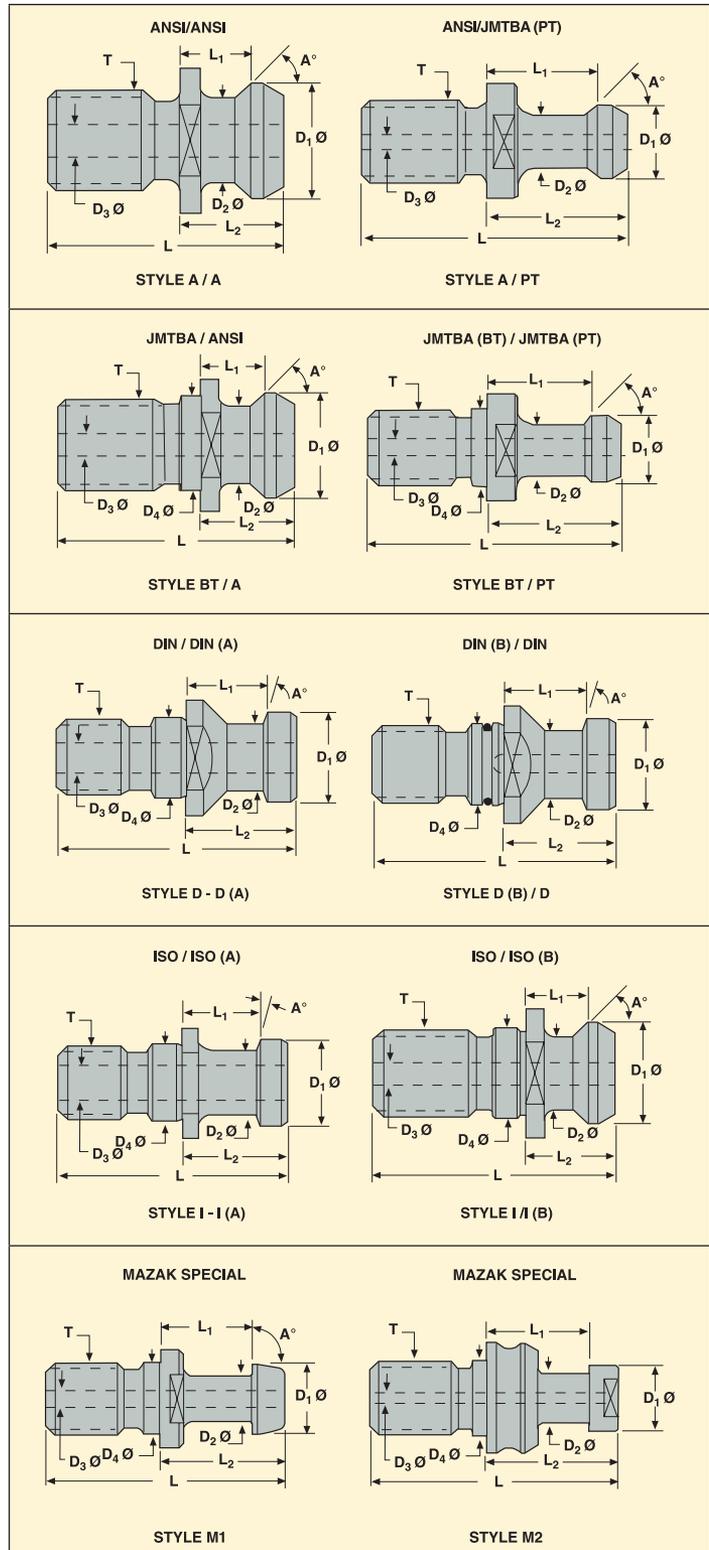
High pressure coolant? yes; no

Pull stud have O-ring? yes; no

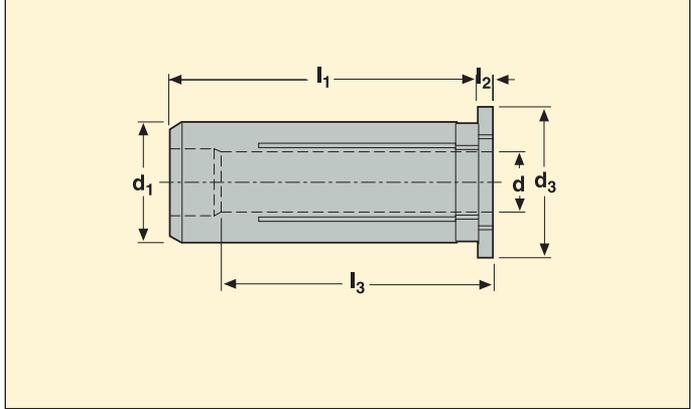
Location of O-ring _____

Pilot? yes; no

Note: Before installing the pull stud, compare it to the pull stud in the machine at the present time, or in the machine tool operators manual. If the pull studs are not identical, do not use the new pull stud. Call your distributor and give them the details.



EPB 5832 - Reduction sleeves for hydraulic chucks – Inch

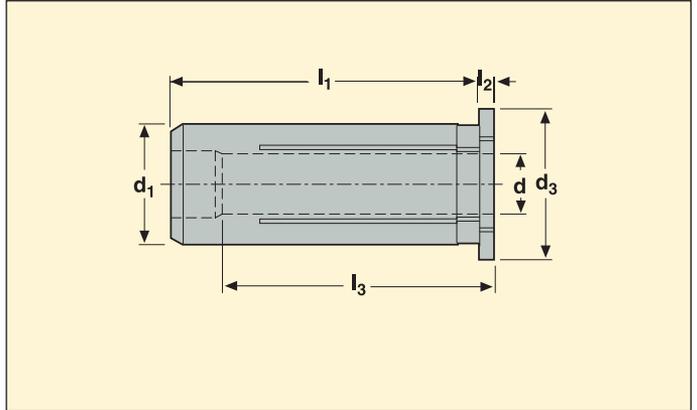


- Run-out .0002" (5 µm) maximum at 3xd when assembled
- Nominal clamping diameter only (no clamping range)
- Tool shank tolerance h6 maximum

d ₁ inch	d inch	EDP No.	Part No.	Dimensions in inch			
				d ₃	l ₁	l ₂	l ₃
0.75	0.118	25863	HCC750-3C	1.140	2.070	0.080	1.100
	0.125	14744	HCC750-125C	1.140	2.070	0.080	1.100
	0.157	25864	HCC750-4C	1.140	2.070	0.080	1.100
	0.187	14745	HCC750-187C	1.140	2.070	0.080	1.100
	0.197	25866	HCC750-5C	1.140	2.070	0.080	1.100
	0.236	25867	HCC750-6C	1.140	2.070	0.080	1.420
	0.250	14746	HCC750-250C	1.140	2.070	0.080	1.420
	0.312	14747	HCC750-312C	1.140	2.070	0.080	1.420
	0.315	25868	HCC750-8C	1.140	2.070	0.080	1.420
	0.375	14748	HCC750-375C	1.140	2.070	0.080	1.420
	0.394	25869	HCC750-10C	1.140	2.070	0.080	1.570
	0.437	14749	HCC750-437C	1.140	2.070	0.080	1.770
	0.472	25871	HCC750-12C	1.140	2.070	0.080	1.770
	0.500	14750	HCC750-500C	1.140	2.070	0.080	1.770
0.551	25873	HCC750-14C	1.140	2.070	0.080	1.890	
0.625	14752	HCC750-625C	1.140	2.070	0.080	1.890	
1.25	0.197	25874	HCC1250-5C	1.540	2.500	0.120	1.100
	0.236	25875	HCC1250-6C	1.540	2.500	0.120	2.200
	0.250	14754	HCC1250-250C	1.540	2.500	0.120	2.200
	0.312	14755	HCC1250-312C	1.540	2.500	0.120	2.200
	0.315	25876	HCC1250-8C	1.540	2.500	0.120	2.200
	0.394	16314	HCC1250-10C	1.540	2.500	0.120	1.570
	0.375	14756	HCC1250-375C	1.540	2.500	0.120	1.570
	0.472	16315	HCC1250-12C	1.540	2.500	0.120	1.770
	0.500	14758	HCC1250-500C	1.540	2.500	0.120	1.770
	0.551	01584	HCC1250-14C	1.540	2.500	0.120	1.770
	0.625	14759	HCC1250-625C	1.540	2.500	0.120	1.890
	0.630	07123	HCC1250-16C	1.540	2.500	0.120	1.890
	0.709	25877	HCC1250-18C	1.540	2.500	0.120	1.890
	0.750	14760	HCC1250-750C	1.540	2.500	0.120	1.970
	0.787	25878	HCC1250-20C	1.540	2.500	0.120	1.970
	0.875	14761	HCC1250-875C	1.540	2.500	0.120	1.970
	0.984	25879	HCC1250-25C	1.540	2.500	0.120	2.200
	1.000	14762	HCC1250-1000C	1.540	2.500	0.120	2.200

Please check availability in current price and stock-list.

EPB 5832 - Reduction sleeves for hydraulic chucks – Inch, Metric d1



- Run-out .0002" (5 µm) maximum at 3xd when assembled
- Nominal clamping diameter only (no clamping range)
- Tool shank tolerance h6 maximum

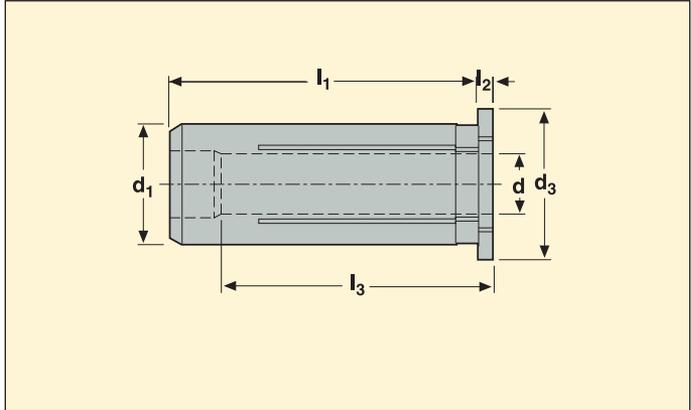
d ₁ mm	d inch	EDP No.	Part No.	Dimensions in inch			
				d ₃	l ₁	l ₂	l ₃
20	0.125	28345	HCC20-125C	1.140	2.070	0.080	1.100
	0.187	28346	HCC20-187C	1.140	2.070	0.080	1.100
	0.250	14771	HCC20-250C	1.140	2.070	0.080	2.200
	0.312	14772	HCC20-312C	1.140	2.070	0.080	2.200
	0.375	14773	HCC20-375C	1.140	2.070	0.080	2.200
	0.437	14774	HCC20-437C	1.140	2.070	0.080	1.770
	0.500	14775	HCC20-500C	1.140	2.070	0.080	1.770
	0.625	14776	HCC20-625C	1.140	2.070	0.080	1.890
32	0.250	25880	HCC32-250C	1.540	2.500	0.120	2.200
	0.375	07173	HCC32-375C	1.540	2.500	0.120	2.200
	0.500	07174	HCC32-500C	1.540	2.500	0.120	1.770
	0.625	07175	HCC32-625C	1.540	2.500	0.120	1.890
	0.750	07176	HCC32-750C	1.540	2.500	0.120	1.970
	0.875	07177	HCC32-875C	1.540	2.500	0.120	1.970
	1.000	07178	HCC32-1000C	1.540	2.500	0.120	2.200

Please check availability in current price and stock-list.

EPB 5832 - Reduction sleeves for hydraulic chucks – Metric



- Run-out .0002" (5 μm) maximum at 3xd when assembled
- Nominal clamping diameter only (no clamping range)
- Tool shank tolerance h6 maximum



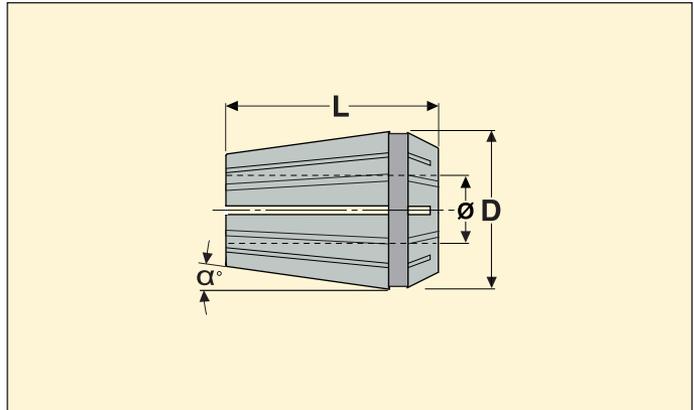
d ₁ mm	d mm	EDP No.	Part No.	Dimensions in inch			
				d ₃	l ₁	l ₂	l ₃
12	3	10875	05F58321203	0.630	1.575	0.157	1.142
	4	10876	05F58321204	0.630	1.575	0.157	1.142
	5	10877	05F58321205	0.630	1.575	0.157	1.142
	6	10878	05F58321206	0.630	1.575	0.157	1.417
	8	10879	05F58321208	0.630	1.575	0.157	1.457
	10	10880	05F58321210	0.630	1.575	0.157	1.575
20	3	78028	05F58322003	0.984	1.969	0.157	1.102
	4	78029	05F58322004	0.984	1.969	0.157	1.102
	5	78030	05F58322005	0.984	1.969	0.157	1.102
	6	86861	05F58322006	0.984	1.969	0.157	1.417
	8	86862	05F58322008	0.984	1.969	0.157	1.457
	10	86863	05F58322010	0.984	1.969	0.157	1.575
	12	86864	05F58322012	0.984	1.969	0.157	1.772
	14	86865	05F58322014	0.984	1.969	0.157	1.772
	16	86866	05F58322016	0.984	1.969	0.157	1.890
32	6	86867	05F58323206	1.417	2.362	0.157	1.417
	8	86868	05F58323208	1.417	2.362	0.157	1.417
	10	86869	05F58323210	1.417	2.362	0.157	1.575
	12	86870	05F58323212	1.417	2.362	0.157	1.772
	14	86871	05F58323214	1.417	2.362	0.157	1.811
	16	86872	05F58323216	1.417	2.362	0.157	1.890
	18	86873	05F58323218	1.417	2.362	0.157	1.929
	20	86874	05F58323220	1.417	2.362	0.157	1.969
	25	86875	05F58323225	1.417	2.362	0.157	2.205

Please check availability in current price and stock-list.

EPB 5672 – ER HP collets – Inch, unsealed



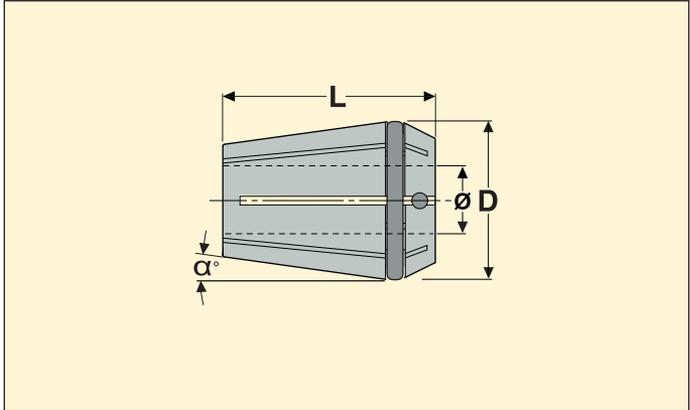
- Run-out .0001" (3 μm) maximum at 3xd when assembled on a HP collet chuck, EPB 5672.
- Nominal clamping diameter only (no clamping range).
- Tool shank tolerance h10 maximum.



For chuck		EDP No.	Part No.	Collet bore	Dimensions in inch	
Capacity Ø inch	Size				D	L
0.062-0.250	HP 11	84793	5672110158	1/16	0.453	0.709
	HP 11	84794	5672110317	1/8	0.453	0.709
	HP 11	84795	5672110476	3/16	0.453	0.709
	HP 11	84796	5672110635	1/4	0.453	0.709
0.125-0.375	HP 16	09564	5672160317	1/8	0.669	1.083
	HP 16	09565	5672160476	3/16	0.669	1.083
	HP 16	09566	5672160635	1/4	0.669	1.083
	HP 16	09567	5672160952	3/8	0.669	1.083
0.125-0.500	HP 25	09568	5672250317	1/8	1.024	1.339
	HP 25	09569	5672250476	3/16	1.024	1.339
	HP 25	09570	5672250635	1/4	1.024	1.339
	HP 25	09571	5672250793	5/16	1.024	1.339
	HP 25	09573	5672250952	3/8	1.024	1.339
	HP 25	09574	567225127	1/2	1.024	1.339
0.125-0.750	HP 32	09575	5672320317	1/8	1.299	1.575
	HP 32	09576	5672320635	1/4	1.299	1.575
	HP 32	09578	5672320952	3/8	1.299	1.575
	HP 32	09579	567232127	1/2	1.299	1.575
	HP 32	09580	5672321587	5/8	1.299	1.575
	HP 32	09582	5672321905	3/4	1.299	1.575

Please check availability in current price and stock-list.

EPB 5672 – ER HP collets – Inch, sealed



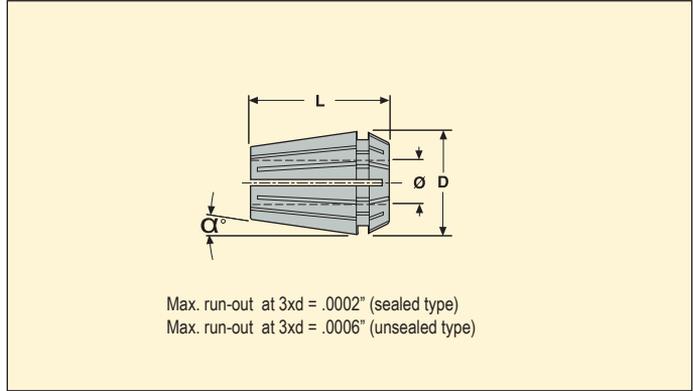
- Run-out .0001" (3 µm) maximum at 3xd when assembled on a HP collet chuck, EPB 5672
- Nominal clamping diameter only (no clamping range)
- Tool shank tolerance h10 maximum

For chuck		EDP No.	Part No.	Collet bore	Dimensions in inch	
Capacity Ø inch	Size				D	L
0.125-0.250	HP 11	86974	5672S110317	1/8	0.453	0.709
	HP 11	86975	5672S110476	3/16	0.453	0.709
	HP 11	86976	5672S110635	1/4	0.453	0.709
0.125-0.375	HP 16	76988	5672S160317	1/8	0.669	1.083
	HP 16	76989	5672S160476	3/16	0.669	1.083
	HP 16	76990	5672S160635	1/4	0.669	1.083
	HP 16	76991	5672S160793	5/16	0.669	1.083
	HP 16	76992	5672S160952	3/8	0.669	1.083
0.125-0.625	HP 25	76994	5672S250317	1/8	1.024	1.339
	HP 25	76995	5672S250476	3/16	1.024	1.339
	HP 25	76996	5672S250635	1/4	1.024	1.339
	HP 25	76997	5672S250793	5/16	1.024	1.339
	HP 25	76999	5672S250952	3/8	1.024	1.339
	HP 25	77000	5672S25127	1/2	1.024	1.339
	HP 25	77001	5672S251587	5/8	1.024	1.339
0.125-0.750	HP 32	77002	5672S320317	1/8	1.299	1.575
	HP 32	77003	5672S320476	3/16	1.299	1.575
	HP 32	77004	5672S320635	1/4	1.299	1.575
	HP 32	77005	5672S320793	5/16	1.299	1.575
	HP 32	77006	5672S320952	3/8	1.299	1.575
	HP 32	77007	5672S32127	1/2	1.299	1.575
	HP 32	77008	5672S321587	5/8	1.299	1.575
	HP 32	77009	5672S321905	3/4	1.299	1.575

Please check availability in current price and stock-list.

ER collets – inch

Sealed and unsealed design



- For ER chuck type 5675
- Clamping range .000 or -.040* see table below
- Note: When using thru coolant with an unsealed ER collet a sealing nut and sealing ring are required

For chuck		EDP No.	Part No. sealed type	Clamping range sealed type	EDP No.	Part No. unsealed type	Clamping range unsealed type	Dimensions in inch			
Capacity Ø inch	Size							Collet bore	D	L	α°
1/16-1/4	ER 11		–	–	22656	SCER110625	-0.020	1/16	0.452	0.433	8°
	ER 11		–	–	22657	SCER110937	-0.020	3/32	0.452	0.433	8°
	ER 11	78014	SCER111250MS	0.000	22658	SCER111250	-0.020	1/8	0.452	0.433	8°
	ER 11		–	–	22659	SCER111562	-0.020	5/32	0.452	0.433	8°
	ER 11	78018	SCER111875MS	0.000	22660	SCER111875	-0.020	3/16	0.452	0.433	8°
	ER 11	78019	SCER112187MS	0.000	22661	SCER112187	-0.020	7/32	0.452	0.433	8°
	ER 11	78024	SCER112500MS	-0.020	22662	SCER112500	-0.020	1/4	0.452	0.433	8°
1/16-13/32	ER 16		–	–	22663	SCER160625	-0.020	1/16	0.669	1.062	8°
	ER 16		–	–	22664	SCER160937	-0.020	3/32	0.669	1.062	8°
	ER 16	78026	SCER161250MS	0.000	22665	SCER161250	-0.040	1/8	0.669	1.062	8°
	ER 16		–	–	22666	SCER161562	-0.040	5/32	0.669	1.062	8°
	ER 16	78027	SCER161875MS	0.000	22667	SCER161875	-0.040	3/16	0.669	1.062	8°
	ER 16	78180	SCER162187MS	0.000	22668	SCER162187	-0.040	7/32	0.669	1.062	8°
	ER 16	78031	SCER162500MS	-0.020	22669	SCER162500	-0.040	1/4	0.669	1.062	8°
	ER 16	78186	SCER162812MS	-0.020	22670	SCER162812	-0.040	9/32	0.669	1.062	8°
	ER 16	78033	SCER163125MS	-0.020	22671	SCER163125	-0.040	5/16	0.669	1.062	8°
	ER 16	78193	SCER163437MS	-0.020	22672	SCER163437	-0.040	11/32	0.669	1.062	8°
	ER 16	78037	SCER163750MS	-0.020	22673	SCER163750	-0.040	3/8	0.669	1.062	8°
	ER 16	78203	SCER164065MS	-0.020	22674	SCER164062	-0.040	13/32	0.669	1.062	8°
	ER 16*	78039	SCER16ColletSetMSin	–	22579	SCER16ColletSetinch	–	–	–	–	–
1/16-5/8	ER 25		–	–	22675	SCER250625	-0.040	1/16	1.023	1.338	8°
	ER 25		–	–	22676	SCER250937	-0.040	3/32	1.023	1.338	8°
	ER 25		–	–	22677	SCER251250	-0.040	1/8	1.023	1.338	8°
	ER 25		–	–	22678	SCER251562	-0.040	5/32	1.023	1.338	8°
	ER 25		–	–	22679	SCER251875	-0.040	3/16	1.023	1.338	8°
	ER 25	78204	SCER252187MS	0.000	22680	SCER252187	-0.040	7/32	1.023	1.338	8°
	ER 25	78047	SCER252500MS	0.000	22681	SCER252500	-0.040	1/4	1.023	1.338	8°
	ER 25	78205	SCER252812MS	-0.020	22682	SCER252812	-0.040	9/32	1.023	1.338	8°
	ER 25		–	–	22683	SCER253125	-0.040	5/16	1.023	1.338	8°
	ER 25		–	–	22684	SCER253437	-0.040	11/32	1.023	1.338	8°
	ER 25	78050	SCER253750MS	-0.020	22685	SCER253750	-0.040	3/8	1.023	1.338	8°
	ER 25	78244	SCER324062MS	-0.020	22686	SCER254062	-0.040	13/32	1.023	1.338	8°
	ER 25	78054	SCER254375MS	-0.020	22687	SCER254375	-0.040	7/16	1.023	1.338	8°
	ER 25	78212	SCER254687MS	-0.020	22688	SCER254687	-0.040	15/32	1.023	1.338	8°
	ER 25	78056	SCER255000MS	-0.020	22689	SCER255000	-0.040	1/2	1.023	1.338	8°
	ER 25	78213	SCER255312MS	-0.020	22690	SCER255312	-0.040	17/32	1.023	1.338	8°
	ER 25	78057	SCER255625MS	-0.020	22691	SCER255625	-0.040	9/16	1.023	1.338	8°
	ER 25	78215	SCER255937MS	-0.020	22692	SCER255937	-0.040	19/32	1.023	1.338	8°
	ER 25	78063	SCER256252MS	-0.020	22693	SCER256250	-0.040	5/8	1.023	1.338	8°
	ER 25*	81791	SCER25ColletSetMSin	–	22580	SCER25ColletSetinch	–	–	–	–	–

Please check availability in current price and stock-list.

*Collet sets contain complete range for each collet size.

ER collets – inch

Sealed and unsealed design

For chuck		EDP No.	Part No. sealed type	Clamping range sealed type	EDP No.	Part No. unsealed type	Clamping range unsealed type	Dimensions in inch				
Capacity Ø inch	Size							Collet bore	D	L	a°	
3/32-3/4	ER 32	–	–	–	22694	SCER320937	-0.040	3/32	1.299	1.574	8°	
	ER 32	–	–	–	22695	SCER321250	-0.040	1/8	1.299	1.574	8°	
	ER 32	–	–	–	22696	SCER321562	-0.040	5/32	1.299	1.574	8°	
	ER 32	–	–	–	22697	SCER321875	-0.040	3/16	1.299	1.574	8°	
	ER 32	–	–	–	22698	SCER322187	-0.040	7/32	1.299	1.574	8°	
	ER 32	78064	SCER322500MS	0.000	22699	SCER322500	-0.040	1/4	1.299	1.574	8°	
	ER 32	78218	SCER322812MS	-0.020	22700	SCER322812	-0.040	9/32	1.299	1.574	8°	
	ER 32	78066	SCER323125MS	-0.020	22701	SCER323125	-0.040	5/16	1.299	1.574	8°	
	ER 32	–	–	–	22702	SCER323437	-0.040	11/32	1.299	1.574	8°	
	ER 32	78067	SCER323750MS	-0.020	22703	SCER323750	-0.040	3/8	1.299	1.574	8°	
	ER 32	78244	SCER324062MS	-0.020	22704	SCER324062	-0.040	13/32	1.299	1.574	8°	
	ER 32	78068	SCER324375MS	-0.020	22705	SCER324375	-0.040	7/16	1.299	1.574	8°	
	ER 32	78247	SCER324687MS	-0.020	22706	SCER324687	-0.040	15/32	1.299	1.574	8°	
	ER 32	78069	SCER325000MS	-0.020	22707	SCER325000	-0.040	1/2	1.299	1.574	8°	
	ER 32	78249	SCER325315MS	-0.020	22708	SCER325312	-0.040	17/32	1.299	1.574	8°	
	ER 32	78070	SCER325625MS	-0.020	22709	SCER325625	-0.040	9/16	1.299	1.574	8°	
	ER 32	–	–	–	22710	SCER325937	-0.040	19/32	1.299	1.574	8°	
	ER 32	78071	SCER326250MS	-0.020	22711	SCER326250	-0.040	5/8	1.299	1.574	8°	
	ER 32	78251	SCER326562MS	-0.020	22712	SCER326562	-0.040	21/32	1.299	1.574	8°	
	ER 32	78072	SCER326875MS	-0.020	22713	SCER326875	-0.040	11/16	1.299	1.574	8°	
	ER 32	78254	SCER327187MS	-0.020	22714	SCER327187	-0.040	23/32	1.299	1.574	8°	
	ER 32	78073	SCER327500MS	-0.020	22715	SCER327500	-0.040	3/4	1.299	1.574	8°	
	ER 32*	78074	SCER32ColletSetMSin	–	22582	SCER32ColletSetinch	–	–	–	–	–	–
1/8-1	ER 40	–	–	–	22716	SCER401250	-0.040	1/8	1.614	1.811	8°	
	ER 40	–	–	–	22717	SCER401562	-0.040	5/32	1.614	1.811	8°	
	ER 40	–	–	–	22718	SCER401875	-0.040	3/16	1.614	1.811	8°	
	ER 40	–	–	–	22719	SCER402187	-0.040	7/32	1.614	1.811	8°	
	ER 40	78255	SCER402500MS	0.000	22720	SCER402500	-0.040	1/4	1.614	1.811	8°	
	ER 40	–	–	–	22721	SCER402812	-0.040	9/32	1.614	1.811	8°	
	ER 40	78256	SCER403125MS	0.000	22722	SCER403125	-0.040	5/16	1.614	1.811	8°	
	ER 40	–	–	–	22723	SCER403437	-0.040	11/32	1.614	1.811	8°	
	ER 40	78075	SCER403750MS	-0.020	22724	SCER403750	-0.040	3/8	1.614	1.811	8°	
	ER 40	–	–	–	22725	SCER404062	-0.040	13/32	1.614	1.811	8°	
	ER 40	78076	SCER404375MS	-0.020	22726	SCER404375	-0.040	7/16	1.614	1.811	8°	
	ER 40	–	–	–	22727	SCER404687	-0.040	15/32	1.614	1.811	8°	
	ER 40	78077	SCER405000MS	-0.020	22728	SCER405000	-0.040	1/2	1.614	1.811	8°	
	ER 40	–	–	–	22729	SCER405312	-0.040	17/32	1.614	1.811	8°	
	ER 40	78078	SCER405625MS	-0.020	22731	SCER405625	-0.040	9/16	1.614	1.811	8°	
	ER 40	–	–	–	22732	SCER405937	-0.040	19/32	1.614	1.811	8°	
	ER 40	–	SCER406250MS	-0.020	22733	SCER406250	-0.040	5/8	1.614	1.811	8°	
	ER 40	–	–	–	22734	SCER406562	-0.040	21/32	1.614	1.811	8°	
	ER 40	78080	SCER406875MS	-0.020	22735	SCER406875	-0.040	11/16	1.614	1.811	8°	
	ER 40	–	–	–	22736	SCER407187	-0.040	23/32	1.614	1.811	8°	
	ER 40	78081	SCER407500MS	-0.020	22737	SCER407500	-0.040	3/4	1.614	1.811	8°	
	ER 40	–	–	–	22738	SCER407812	-0.040	25/32	1.614	1.811	8°	
	ER 40	78082	SCER408125MS	-0.020	22739	SCER408125	-0.040	13/16	1.614	1.811	8°	
	ER 40	–	–	–	22740	SCER408437	-0.040	27/32	1.614	1.811	8°	
	ER 40	78083	SCER408750MS	-0.020	22741	SCER408750	-0.040	7/8	1.614	1.811	8°	
	ER 40	–	–	–	22742	SCER409062	-0.040	29/32	1.614	1.811	8°	
	ER 40	–	–	–	22743	SCER409375	-0.040	15/16	1.614	1.811	8°	
	ER 40	–	–	–	22744	SCER409687	-0.040	31/32	1.614	1.811	8°	
	ER 40	78084	SCER401000MS	-0.020	22745	SCER401000	-0.040	1	1.614	1.811	8°	
	ER 40*	78085	SCER40ColletSetMSin	–	41737	SCER40ColletSetinch	–	–	–	–	–	–

Please check availability in current price and stock-list.

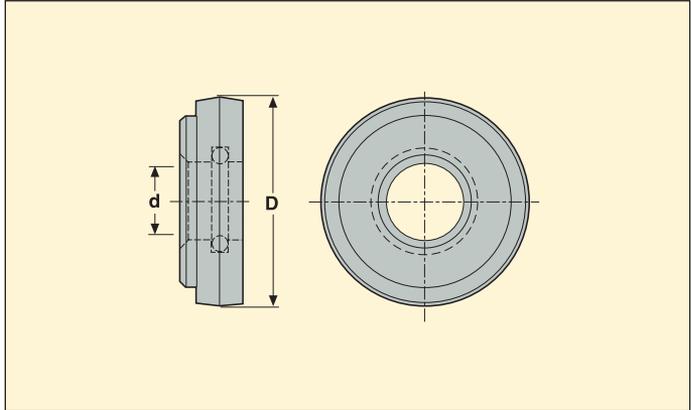
ER collets – metric

Sealed and unsealed design

For chuck		EDP No.	Part No. sealed type	Clamping range sealed type	EDP No.	Part No. unsealed type	Clamping range unsealed type	Dimensions in mm			a°
Capacity Ø mm	Size							Collet bore	D	L	
1-16	ER25		–	–	22783	SCER2502	-0.5	2	1.023	1.338	8°
	ER25		–	–	22784	SCER2503	-1	3	1.023	1.338	8°
	ER25		–	–	22785	SCER2504	-1	4	1.023	1.338	8°
	ER25		–	–	22786	SCER2505	-1	5	1.023	1.338	8°
	ER25	78101	SCER2506MS	0.0	22787	SCER2506	-1	6	1.023	1.338	8°
	ER25		–	–	22788	SCER2507	-1	7	1.023	1.338	8°
	ER25	78102	SCER2508MS	-0.5	22789	SCER2508	-1	8	1.023	1.338	8°
	ER25		–	–	22790	SCER2509	-1	9	1.023	1.338	8°
	ER25	78103	SCER2510MS	-0.5	22791	SCER2510	-1	10	1.023	1.338	8°
	ER25		–	–	22792	SCER2511	-1	11	1.023	1.338	8°
	ER25	78105	SCER2512MS	-0.5	22793	SCER2512	-1	12	1.023	1.338	8°
	ER25		–	–	22794	SCER2513	-1	13	1.023	1.338	8°
	ER25	78107	SCER2514MS	-0.5	22795	SCER2514	-1	14	1.023	1.338	8°
	ER25		–	–	22796	SCER2515	-1	15	1.023	1.338	8°
ER25	78108	SCER2516MS	-0.5	22797	SCER2516	-1	16	1.023	1.338	8°	
ER25*	78109	SCER25ColletSetMSmm	–	22584	SCER25ColletSetmm	–	–	–	–	–	–
2-20	ER32		–	–	22798	SCER3203	-1	3	1.299	1.574	8°
	ER32		–	–	22799	SCER3204	-1	4	1.299	1.574	8°
	ER32		–	–	22800	SCER3205	-1	5	1.299	1.574	8°
	ER32	78110	SCER3206MS	0.0	22801	SCER3206	-1	6	1.299	1.574	8°
	ER32		–	–	22802	SCER3207	-1	7	1.299	1.574	8°
	ER32	78111	SCER3208MS	-0.5	22803	SCER3208	-1	8	1.299	1.574	8°
	ER32		–	–	22804	SCER3209	-1	9	1.299	1.574	8°
	ER32	78113	SCER3210MS	-0.5	22806	SCER3210	-1	10	1.299	1.574	8°
	ER32		–	–	22807	SCER3211	-1	11	1.299	1.574	8°
	ER32	78115	SCER3212MS	-0.5	22808	SCER3212	-1	12	1.299	1.574	8°
	ER32		–	–	22809	SCER3213	-1	13	1.299	1.574	8°
	ER32	78116	SCER3214MS	-0.5	22810	SCER3214	-1	14	1.299	1.574	8°
	ER32		–	–	22811	SCER3215	-1	15	1.299	1.574	8°
	ER32	78117	SCER3216MS	-0.5	22812	SCER3216	-1	16	1.299	1.574	8°
	ER32		–	–	22813	SCER3217	-1	17	1.299	1.574	8°
	ER32	78118	SCER3218MS	-0.5	22814	SCER3218	-1	18	1.299	1.574	8°
	ER32		–	–	22815	SCER3219	-1	19	1.299	1.574	8°
ER32	78120	SCER3220MS	-0.5	22816	SCER3220	-1	20	1.299	1.574	8°	
ER32*	78121	SCER32ColletSetMSmm	–	22585	SCER32ColletSetmm	–	–	–	–	–	–
3-26	ER40		–	–	22817	SCER4004	-1	4	1.614	1.811	8°
	ER40	78122	SCER4006MS	0.0	22818	SCER4005	-1	5	1.614	1.811	8°
	ER40		–	–	22819	SCER4006	-1	6	1.614	1.811	8°
	ER40		–	–	22820	SCER4007	-1	7	1.614	1.811	8°
	ER40	78123	SCER4008MS	0.0	22821	SCER4008	-1	8	1.614	1.811	8°
	ER40		–	–	22822	SCER4009	-1	9	1.614	1.811	8°
	ER40	78124	SCER4010MS	-0.5	22823	SCER4010	-1	10	1.614	1.811	8°
	ER40		–	–	22824	SCER4011	-1	11	1.614	1.811	8°
	ER40	78125	SCER4012MS	-0.5	22825	SCER4012	-1	12	1.614	1.811	8°
	ER40		–	–	22826	SCER4013	-1	13	1.614	1.811	8°
	ER40	78126	SCER4014MS	-0.5	22827	SCER4014	-1	14	1.614	1.811	8°
	ER40		–	–	22828	SCER4015	-1	14	1.614	1.811	8°
	ER40	78127	SCER4016MS	-0.5	22829	SCER4016	-1	16	1.614	1.811	8°
	ER40		–	–	22830	SCER4017	-1	17	1.614	1.811	8°
	ER40	78128	SCER4018MS	-0.5	22831	SCER4018	-1	18	1.614	1.811	8°
	ER40		–	–	22832	SCER4019	-1	19	1.614	1.811	8°
	ER40	78129	SCER4020MS	-0.5	22833	SCER4020	-1	20	1.614	1.811	8°
	ER40		–	–	22834	SCER4021	-1	21	1.614	1.811	8°
	ER40	78131	SCER4022MS	-0.5	22835	SCER4022	-1	22	1.614	1.811	8°
	ER40		–	–	22836	SCER4023	-1	23	1.614	1.811	8°
	ER40	78132	SCER4024MS	-0.5	22837	SCER4024	-1	24	1.614	1.811	8°
ER40	78133	SCER4025MS	-0.5	22838	SCER4025	-1	25	1.614	1.811	8°	
ER40	78134	SCER4026MS	-0.5	22839	SCER4026	-1	26	1.614	1.811	8°	
ER40*	78135	SCER40ColletSetMSmm	–	41738	SCER40ColletSetmm	–	–	–	–	–	–

Please check availability in current price and stock-list.

EPB 5875 - ER sealing rings



- For fitting into ER sealing nuts

For sealing nut size/Part No.	Sealing capacity d mm	Sealing capacity d inch	EDP No.	Part No.	D inch
ER 16/ 08B5875IC	4.5-5	.177-.197	29961	01B58751605	0.512
	5.5-6	.217-.236	30314	01B58751606	0.512
	6.5-7	.256-.276	29963	01B58751607	0.512
	7.5-8	.295-.315	30315	01B58751608	0.512
	8.5-9	.335-.354	29967	01B58751609	0.512
	9.5-10	.374-.394	29968	01B58751610	0.512
ER 25/ 08B587525IC	4.5-5	.177-.197	29973	01B58752505	0.827
	5.5-6	.217-.236	29978	01B58752506	0.827
	6.5-7	.256-.276	29981	01B58752507	0.827
	7.5-8	.295-.315	29982	01B58752508	0.827
	8.5-9	.335-.354	29983	01B58752509	0.827
	9.5-10	.374-.394	29992	01B58752510	0.827
	10.5-11	.413-.433	29998	01B58752511	0.827
	11.5-12	.453-.472	30000	01B58752512	0.827
	13.5-14	.531-.551	88809	01B58752514	0.827
	15.5-16	.610-.630	30010	01B58752516	0.827
ER 32/ 08B587532IC	4.5-5	.177-.197	30017	01B58753205	1.063
	5.5-6	.217-.236	30316	01B58753206	1.063
	6.5-7	.256-.276	30020	01B58753207	1.063
	7.5-8	.295-.315	30023	01B58753208	1.063
	8.5-9	.335-.354	30026	01B58753209	1.063
	9.5-10	.374-.394	30028	01B58753210	1.063
	10.5-11	.413-.433	30317	01B58753211	1.063
	11.5-12	.453-.472	03370	01B58753212	1.063
	13.5-14	.531-.551	57876	01B58753214	1.063
	15.5-16	.610-.630	30319	01B58753216	1.063
	17.5-18	.689-.709	30320	01B58753218	1.063
	19.5-20	.768-.787	30321	01B58753220	1.063

Please check availability in current price and stock-list.

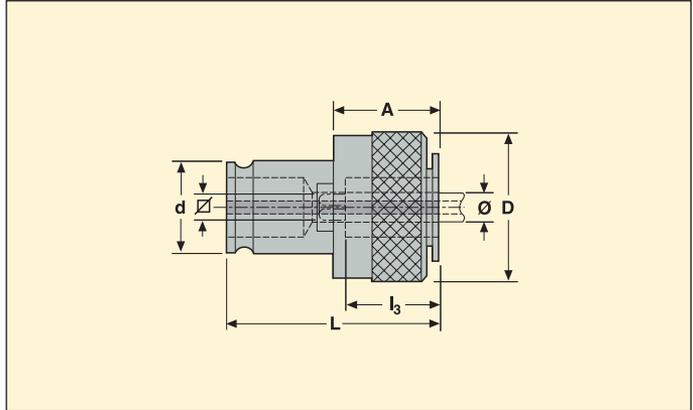
For sealing nuts, see Accessories in ER collet chucks pages.

Note: Sealing rings in size ER 40 are only available on request, please inquire. Not available in size ER 08 and ER 11.

TCTC - Quick change tap adapters, with torque limiter – Inch



• Torque is set according to the thread size

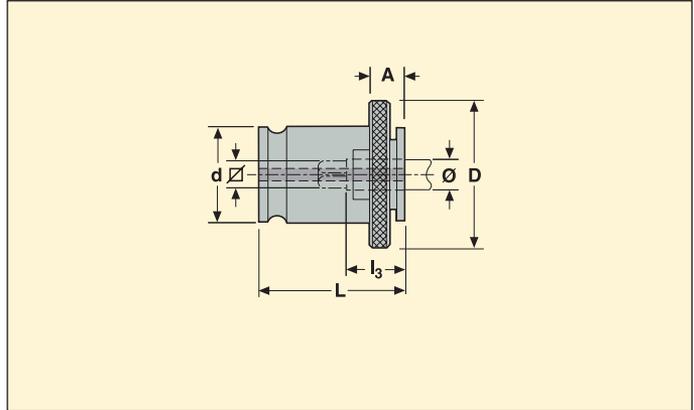


For quick change tapping chuck		For tap shank			EDP No.	Part No.	Dimensions in inch					lbs
Range	US Size	For thread size	Ø inch	Square inch			A	D	L	d	l ₃	
0-1/4 hand	1	0-6	0.141	0.110	14672	TCTC-0006-0100	0.98	1.26	1.831	0.75	0.67	0.4
	1	8	0.168	0.131	14673	TCTC-0008-0100	0.98	1.26	1.831	0.75	0.67	0.4
	1	10	0.194	0.152	14674	TCTC-0010-0100	0.98	1.26	1.831	0.75	0.67	0.4
	1	12	0.220	0.165	14675	TCTC-0012-0100	0.98	1.26	1.831	0.75	0.67	0.4
	1	1/4	0.255	0.191	14676	TCTC-0250-0100	0.98	1.26	1.831	0.75	0.67	0.4
	1	5/16	0.318	0.238	14677	TCTC-0312-0100	0.98	1.26	1.831	0.75	0.67	0.4
	1	3/8	0.381	0.286	14678	TCTC-0375-0100	0.98	1.26	1.831	0.75	0.67	0.4
	1	7/16	0.323	0.242	14679	TCTC-0437-0100	0.98	1.26	1.831	0.75	0.67	0.4
	1	1/2	0.367	0.275	14680	TCTC-0500-0100	0.98	1.26	1.831	0.75	0.67	0.4
	1	9/16	0.429	0.322	14681	TCTC-0562-0100	0.98	1.26	1.831	0.75	0.67	0.4
1/8 pipe	1	1/8 SS	0.313	0.234	14683	TCTC-0125-0100PL	0.98	1.26	1.831	0.75	0.67	0.4
	1	1/8 IS	0.438	0.328	14682	TCTC-0125-0100PS	0.98	1.26	1.831	0.75	0.67	0.4
5/16-7/8 hand	2	5/16	0.318	0.238	14684	TCTC-0312-0200	1.34	1.97	2.717	1.22	1.18	1.3
	2	3/8	0.381	0.286	14685	TCTC-0375-0200	1.34	1.97	2.717	1.22	1.18	1.3
	2	7/16	0.323	0.242	14686	TCTC-0437-0200	1.34	1.97	2.717	1.22	1.18	1.3
	2	1/2	0.367	0.275	14687	TCTC-0500-0200	1.34	1.97	2.717	1.22	1.18	1.3
	2	9/16	0.429	0.322	14688	TCTC-0562-0200	1.34	1.97	2.717	1.22	1.18	1.3
	2	5/8	0.480	0.360	14690	TCTC-0625-0200	1.34	1.97	2.717	1.22	1.18	1.3
	2	11/16	0.542	0.406	14691	TCTC-0687-0200	1.34	1.97	2.717	1.22	1.18	1.3
	2	3/4	0.590	0.442	14692	TCTC-0750-0200	1.34	1.97	2.717	1.22	1.18	1.1
	2	13/16	0.652	0.489	14694	TCTC-0812-0200	1.34	1.97	2.717	1.22	1.18	1.1
	2	7/8	0.697	0.523	14695	TCTC-0875-0200	1.34	1.97	2.717	1.22	1.18	1.1
	2	1	0.800	0.600	14696	TCTC-1000-0200	1.34	1.97	2.717	1.22	1.18	1.1
1/4, 3/8, 1/2 pipe	2	1/4p	0.562	0.421	14698	TCTC-0250-0200P	1.34	1.97	2.717	1.22	1.18	1.3
	2	3/8p	0.700	0.531	14699	TCTC-0375-0200P	1.34	1.97	2.717	1.22	1.18	1.3
	2	1/2p	0.687	0.515	14700	TCTC-0500-0200P	1.34	1.97	2.717	1.22	1.18	1.3
13/16-1-3/8 hand	3	13/16	0.652	0.489	14701	TCTC-0812-0300	1.77	2.83	3.957	1.89	1.73	3.7
	3	7/8	0.697	0.523	14702	TCTC-0875-0300	1.77	2.83	3.957	1.89	1.73	3.7
	3	15/16	0.760	0.570	14703	TCTC-0937-0300	1.77	2.83	3.957	1.89	1.73	3.7
	3	1	0.800	0.600	14704	TCTC-1000-0300	1.77	2.83	3.957	1.89	1.73	3.7
	3	1-1/8	0.897	0.672	14705	TCTC-1125-0300	1.77	2.83	3.957	1.89	1.73	3.5
	3	1-1/4	1.021	0.766	14707	TCTC-1250-0300	1.77	2.83	3.957	1.89	1.73	3.5
	3	1-3/8	1.108	0.831	14708	TCTC-1375-0300	1.77	2.83	3.957	1.89	1.73	3.5
1/2, 3/4, 1 pipe	3	1/2p	0.687	0.515	14709	TCTC-0500-0300P	1.77	2.83	3.957	1.89	1.73	3.7
	3	3/4p	0.906	0.679	14710	TCTC-0750-0300P	1.77	2.83	3.957	1.89	1.73	3.7
	3	1p	1.125	0.844	14711	TCTC-1000-0300P	1.77	2.83	3.957	1.89	1.73	3.5

Please check availability in current price and stock-list.

For tap adapter code key, see page(s) 354.

QCTC - Quick change tap adapters, without torque limiter – Inch



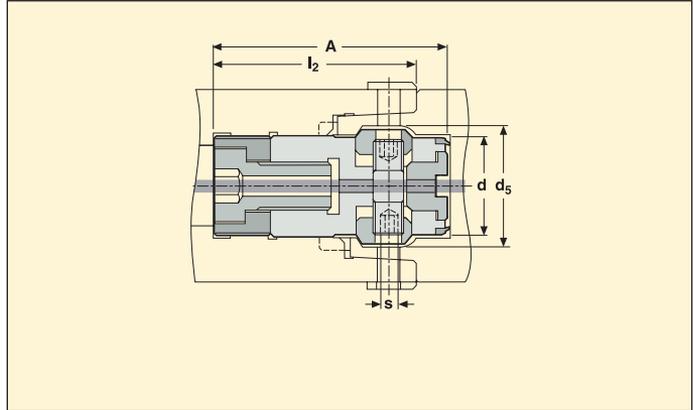
For quick change tapping chuck		For tap shank			EDP No.	Part No.	Dimensions in inch					lbs
Range	US Size	For thread size	Ø inch	Square inch			A	D	L	d	l ₃	
0-1/2 hand	1	0-6	0.141	0.110	61755	QCTC-0006-0100	0.28	1.18	1.043	0.75	0.67	0.2
	1	8	0.168	0.131	61757	QCTC-0008-0100	0.28	1.18	1.043	0.75	0.67	0.2
	1	10	0.194	0.152	61759	QCTC-0010-0100	0.28	1.18	1.043	0.75	0.67	0.2
	1	12	0.220	0.165	61760	QCTC-0012-0100	0.28	1.18	1.043	0.75	0.67	0.2
	1	1/4	0.255	0.191	61765	QCTC-0250-0100	0.28	1.18	1.043	0.75	0.67	0.2
	1	5/16	0.318	0.238	61769	QCTC-0312-0100	0.28	1.18	1.043	0.75	0.67	0.2
	1	3/8	0.381	0.286	61773	QCTC-0375-0100	0.28	1.18	1.043	0.75	0.67	0.2
	1	7/16	0.323	0.242	61777	QCTC-0437-0100	0.28	1.18	1.043	0.75	0.67	0.2
	1	1/2	0.367	0.275	61781	QCTC-0500-0100	0.28	1.18	1.043	0.75	0.67	0.2
	1	9/16	0.429	0.322	61785	QCTC-0562-0100	0.28	1.18	1.043	0.75	0.67	0.2
1/8 pipe	1	1/8	0.313	0.234	61763	QCTC-0125-0100P	0.28	1.18	1.043	0.75	0.67	0.2
5/16-7/8 hand	2	5/16	0.318	0.238	61771	QCTC-0312-0200	0.43	1.89	1.122	1.22	1.18	0.7
	2	3/8	0.381	0.286	61775	QCTC-0375-0200	0.43	1.89	1.122	1.22	1.18	0.7
	2	7/16	0.323	0.242	61779	QCTC-0437-0200	0.43	1.89	1.122	1.22	1.18	0.7
	2	1/2	0.367	0.275	61783	QCTC-0500-0200	0.43	1.89	1.122	1.22	1.18	0.7
	2	9/16	0.429	0.322	61787	QCTC-0562-0200	0.43	1.89	1.122	1.22	1.18	0.7
	2	5/8	0.480	0.360	61789	QCTC-0625-0200	0.43	1.89	1.122	1.22	1.18	0.7
	2	11/16	0.542	0.406	61790	QCTC-0687-0200	0.43	1.89	1.122	1.22	1.18	0.7
	2	3/4	0.590	0.442	61791	QCTC-0750-0200	0.43	1.89	1.122	1.22	1.18	0.7
	2	13/16	0.652	0.489	61792	QCTC-0812-0200	0.43	1.89	1.122	1.22	1.18	0.7
	2	7/8	0.697	0.523	61793	QCTC-0875-0200	0.43	1.89	1.122	1.22	1.18	0.7
1/4, 3/8, 1/2 pipe	2	1/4p	0.562	0.421	61767	QCTC-0250-0200P	0.43	1.89	1.122	1.22	1.18	0.7
	2	3/8p	0.700	0.531	61776	QCTC-0375-0200P	0.43	1.89	1.122	1.22	1.18	0.7
	2	1/2p	0.687	0.515	61784	QCTC-0500-0200P	0.43	1.89	1.122	1.22	1.18	0.7
13/16-1-3/8 hand	3	13/16	0.652	0.489	14660	QCTC-0812-0300	0.55	2.76	1.811	1.89	1.73	1.8
	3	7/8	0.697	0.523	14662	QCTC-0875-0300	0.55	2.76	1.811	1.89	1.73	1.8
	3	15/16	0.760	0.570	14663	QCTC-0937-0300	0.55	2.76	1.811	1.89	1.73	1.8
	3		0.800	0.600	14666	QCTC-1000-0300	0.55	2.76	1.811	1.89	1.73	1.8
	3	1-1/8	0.896	0.672	14667	QCTC-1125-0300	0.55	2.76	1.811	1.89	1.73	1.8
	3	1-1/4	1.021	0.766	14668	QCTC-1250-0300	0.55	2.76	1.811	1.89	1.73	1.8
	3	1-3/8	1.108	0.831	14669	QCTC-1375-0300	0.55	2.76	1.811	1.89	1.73	1.8

Please check availability in current price and stock-list.

EPB 5095 – HSK locking units, TF



- For manual clamping of holders HSK-C and HSK-A with radial bore



For HSK-A/C	EDP No.	Part No.	Dimensions in inch					lbs
			A	d	d ₅	l ₂	s	
HSK-A/C 32	26447	24H509532	1.575	0.657	0.827	1.280	0.098	0.1
HSK-A/C 40	09792	24H509540	1.890	0.807	1.004	1.594	0.118	0.2
HSK-A/C 50	97942	24H509550	2.362	1.004	1.260	1.988	0.157	0.4
HSK-A/C 63	97943	24H509563	2.953	1.319	1.575	2.579	0.197	0.9
HSK-A/C 80	99463	24H509580	3.622	1.634	1.969	3.150	0.236	1.8
HSK-A/C 100	97941	24H509510	4.331	2.067	2.480	3.858	0.315	3.5

Spare Parts

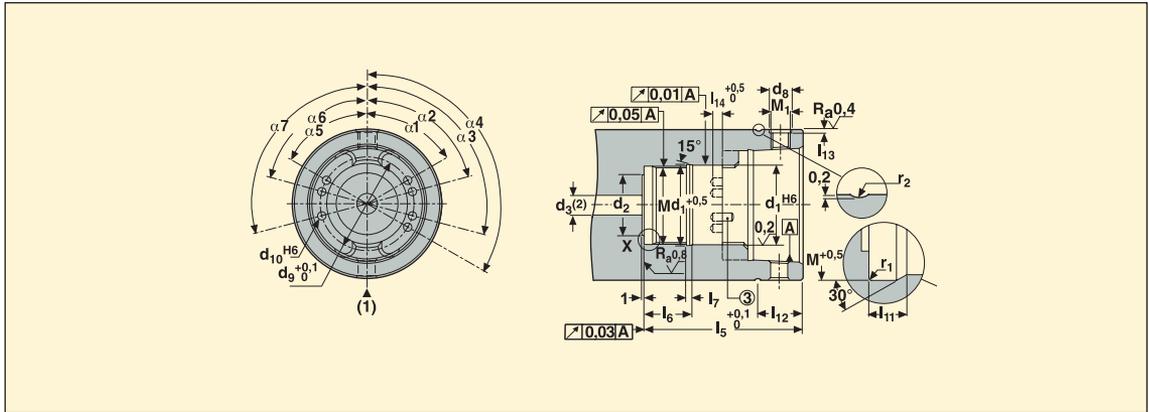
For HSK	O-ring
HSK-A/C 32	930R14
HSK-A/C 40	930R17
HSK-A/C 50	930R21
HSK-A/C 63	930R27
HSK-A/C 80	930R34
HSK-A/C 100	930R43

Accessories

For HSK	Locking key	Spanner
HSK-A/C 32	H2.5-2D	03E509532
HSK-A/C 40	03M03	03E509540
HSK-A/C 50	H04-4	03E509550
HSK-A/C 63	H05-4	03E509563
HSK-A/C 80	H06-4	03E509580
HSK-A/C 100	03M08	03E509510

Please check availability in current price and stock-list.

Machining standards for fitting the HSK locking units, TF



Spindle HSK Form C	Dimensions in mm												
	d_1^{H6}	d_2	(2) d_3 max	d_8	d_9	d_{10}^{H12}	$l_5^{0+0.1}$	l_6	l_7	l_{11}	l_{12}	l_{13}	$l_{14}^{0+0.5}$
32	17	12	4.2	5	20	1.5	32.5	10	1.5	2.5	11	0.6	3.5
40	21	16	5	6.5	25	2	40.5	12	2	3	13	0.8	3.5
50	26	20	6.8	7.5	31	2.5	50.5	15	2	4	15	0.8	3.5
63	34	26	8.4	9.5	39.5	3.5	65.5	20	2.5	5	18	1	4
80	42	30.5	10.2	12	49.5	4.5	80	22	3	5	23	1.2	5
100	53	30.5	12	14	62	4.5	98	26	3	5	28	1.5	5

(1) Position of the access to the unit clamping screw, (2) If through coolant

HSK	M	M1	r_1	r_2	$\alpha 1^\circ$	$\alpha 2^\circ$	$\alpha 3^\circ$	$\alpha 4^\circ$	$\alpha 5^\circ$	$\alpha 6^\circ$	$\alpha 7^\circ$		
32	M16 x 1	M4	0.4	1.4	50	75	100	127.5	50	80	105		
40	M20 x 1	M5	0.4	1.4	52.5	75	100	127.5	52.5	80	105		
50	M25 x 1	M6	0.4	1.6	55	75	100	125	55	80	105		
63	M33 x 1	M8	0.4	1.6	60	75	105	120	60	75	105		
80	M41 x 1.5	M10	0.8	2.2	60	75	105	120	60	75	105		
100	M52 x 1.5	M12	0.8	2.2	45	75	105	135	45	75	105		

Accessories

HSK	Indexing pin DIN 1481 (3)	
32	1.5 x 6	925E01506
40	2 x 6	925E02006
50	2.5 x 6	925E02506
63	3.5 x 6	925E03508
80	4.5 x 10	925E04510
100	4.5 x 10	925E04510

Steels, ferritic and martensitic stainless steels

SMG	Description	Properties	Reference
P1	Free-cutting steels	50 < UTS < 125	1213 UTS = 55 ksi
P2	Low alloy ferritic steels, C < 0.25%wt Low alloy weldable general structural steels	45 < UTS < 85	A284 GRC UTS = 60 ksi
P3	Ferritic & ferritic/pearlitic steels, C < 0.25%wt Weldable general structural steels Case hardening steels	60 < UTS < 90	5115 UTS = 80 ksi
P4	Low alloy general structural steels, 0.25% < C < 0.67%wt Low alloy Quench & Temper steels	75 < UTS < 175	1045 UTS = 95 ksi
P5	Structural steels, 0.25% < C < 0.67%wt Quench & Temper steels	80 < UTS < 175	4140 UTS = 100ksi
P6	Low alloy through hardening steels, C > 0.67%wt Low alloy spring and bearing steels	75 < UTS < 175	1095 UTS = 85 ksi
P7	Through hardening steels, C > 0.67%wt Spring and bearing steels	85 < UTS < 175	52100 UTS = 95 ksi
P8	Tool steels High Speed Steels (HSS)	85 < UTS < 175	H13 UTS = 100 ksi
P11	Ferritic & martensitic stainless steels	60 < UTS < 175	420 UTS = 95 ksi

Free-cutting, austenitic and duplex stainless steels

SMG	Description	Properties	Reference
M1	Free-cutting austenitic stainless steels		303
M2	Low alloy austenitic stainless steels		304
M3	Medium alloy austenitic stainless steels		316 L
M4	High alloy austenitic and duplex stainless steels		2205 Duplex
M5	Difficult high alloy austenitic and duplex stainless steels		2507 Super duplex

Cast irons

SMG	Description	Properties	Reference
K1	Grey cast irons (GCI)		A48 35 B
K2	Compacted graphite irons (CGI)		Grade 400-15
K3	Malleable cast irons (MCI)		A220 60004
K4	Nodular cast irons (SGI)		80-55-06
K5	Austempered ductile irons (ADI)		1050/700/7
K6	Austenitic lamellar cast irons		A436 Type 1 (Ni-Resist 1)
K7	Austenitic nodular cast irons		A439 Type D-2M (Ni-Resist D-2M)

Non-ferrous metals

SMG	Description	Properties	Reference
N1	Aluminum alloys, Si < 9%		7075-T6
N2	Aluminum alloys, 9% < Si < 16%		413.2 Si = 12%
N3	Aluminum alloys, Si > 16%		AlSi17Cu5
N11	Copper alloys		UNS C38500

Superalloys and titanium

SMG	Description	Properties	Reference
S1	Iron based superalloys		Discalloy
S2	Cobalt based superalloys		Stellite 21
S3	Nickel based superalloys		Inconel 718
S11	Titanium, low alloyed, (α)		Ti
S12	Titanium, medium alloyed, (α + β)		TiAl6V4
S13	Titanium, high alloyed, (near β and β)		Ti10V2Fe3Al

Hard materials

SMG	Description	Properties	Reference
H3	Case hardened steels	58 < HRC < 62	5115 60 HRC
H5	Quenched & Tempered steels	38 < HRC < 56	4140 50 HRC
H7	Quenched & Tempered steels Bearing steels	56 < HRC < 64	52100 60 HRC
H8	Tool steels High Speed Steels	38 < HRC < 64	H13 50 HRC
H11	Martensitic stainless steels	38 < HRC < 50	420 45 HRC
H12	Precipitation hardened stainless steels	33 < HRC < 50	17-4PH 35 HRC
H21	Manganese steels	23 < HRC < 64	Hadfield, High manganese steel 50 HRC
H31	White cast irons	50 < HRC < 64	A532 ID, White cast iron 55 HRC

Other difficult materials

SMG	Description	Properties	Reference
PM1	Low alloy PM materials		F-0008 Fe-0.7C
PM2	Medium alloy PM materials		FLC-4608 Fe2Cu1.8Ni0.5Mo0.2Mn0.8C
PM3	High alloy PM materials Exhaust valve seat materials		
HF1	Hard facing alloys Welded or plasma deposited iron based alloys		
HF2	Hard facing alloys Welded or plasma deposited cobalt and nickel based alloys		
CC1	Sintered tungsten carbide		G50

Plastics and Composites

SMG	Description	Properties	Reference
TS1	Thermosetting polymers		Urea formaldehyde (UF)
TS2	Thermosetting Carbon fiber composites		T300 T700 T800 HTA-S IMA - Epoxy (M21)...
TS3	Thermosetting Glass fiber composites		Epoxy - HX.(42..)/E glass (7781...)...
TS4	Thermosetting Aramide fiber composites		Kevlar 49
TP1	Thermoplastic polymers		Polycarbonate (PC)
TP2	Thermoplastic Carbon fiber composites		PPS/PEEK - T300..
TP3	Thermoplastic Glass fiber composites		PPS/PEEK - E glass or A glass...
TP4	Thermoplastic Aramide fiber composites		

Graphite

SMG	Description	Properties	Reference
GR1	Graphite		R 8500

SMG

SMG	AISI / ASTM	EN	EN-Nr	W-Nr	DIN	AFNOR	BS	UNI	JIS	SS
P1	1213	11 SMn30	1.0715	1.0715	9 SMn 28	S 250	230 M 07	CF 9 SMn 28	SUM 22	1912
	12 L 13	11 SMnPb30	1.0718	1.0718	9 SMnPb 28	S 250 Pb		CF 9 SMnPb 28	SUM 22 L	1914
	1108	10 S 20	1.0721	1.0721	10 S 20	10 F 1	210 M 15	CF 10 S 20		
	11 L 08				10 SPb 20	10 PbF 2		CF 10 SPb 20		
		15 SMn13	1.0725	1.0723	15 S 20		210 A 15		SUM 32	1922
	1140	35 S20	1.0726	1.0726	35 S 20	35 MF 4	212 M 36			1957
	1146	46 S20	1.0727	1.0727	46 S 20	45 MF 4	212 M 44			1973
	1215	11 SMn37	1.0736	1.0736	9 SMn 36	S 300	240 M 07	CF 9 SMn 36		
12 L 14	11 SMnPb 37	1.0737	1.0737	9 SMnPb 36	S 300 Pb		CF 9 SMnPb 36		1926	
P2		S235JR	1.0037	1.0037	St 37-2	E 24-2		Fe 360 B	STKM 12 C	1311
	A 573 Gr. 58	S235JRG2	1.0038	1.0116	St 37-3	E 24-3, E 24-4	4360-40 C	Fe 360 D FF		1312, 1313
	A 573 Gr. 70	S275J2G3	1.0144	1.0144	St 44-3 N	E 28-3, E 28-4	4360-43 C	Fe 430 D FF	SM 41 C	1412, 1414
	1010	C 10	1.0301	1.0301	C 10	AF 34 C 10, XC 10	045 M 10	C 10	S 10 C	
	1015			1.0401	C 15	AF3 7 C 12, XC 18	080 M 15	C 15, C 16		1350
	1023	C22+N	1.0402	1.0402	C 22	C 20	050 A 20	C 20, C 21		1450
		S355JR	1.0570	1.0570	St 52-3	E 36-3, E 36-4	4360-50 C	Fe 510 B	SM 50 YA	2172, 2132
	1015	C 15R	1.1141	1.1141	Ck 15	XC 15, XC 18	080 M 15	C 15, C 16	S 15 C, S 15 CK	1370
1025			1.1158	Ck 25	XC 25	060 A 25	C 25	S 25 C		
P3				1.2162	21 MnCr 5	20 NC 5			SCR 420 H	
	A 204 Gr. A	16 Mo 3	1.5415	1.5415	15 Mo 3	15 D 3	1501-240	16 Mo 3		2912
	4520			1.5423	16 Mo 5		1503-245-420	16 Mo 5	SB 450 M	
	3310, 9314	14 NiCr 14	1.5752	1.5752	14 NiCr 14	12 NC 15	655 M 13		SNC 815 (H)	
	4320			1.5919	15 CrNi 6	16 NC 6	S 107	16 CrNi 4		
		18 NiCrMo 7 6	1.6587	1.6587	18 CrNiMo 7 6	18 NCD 6	820 A 16	18 NiCrMo 7		
	5115	16 MnCr 5	1.7131	1.7131	16 MnCr 5	16 MC 5	527 M 17	16 MnCr 5	SCR 415	2511
		16 MnCrS 5	1.7139	1.7139	16 MnCrS 5					
	5120	20 MnCr 5	1.7147	1.7147	20 MnCr 5	20 MC 5		20 MnCr 5	SMnC 420 (H)	
	5120 H	20 MnCrS 5	1.7149	1.7149	20 MnCrS 5	20 MnCrS 5			SMnC 21 H	
A 182-F11, F12	13 CrMo 4 5	1.7335	1.7335	13 CrMo 4 4	15 CD 3.5	1501-620 Gr. 27	14 CrMo 4 5		2216	
A 387 Gr. 12 Cl. 2				1.7337	16 CrMo 4 4	15 CD 4.5	1501-620 Gr. 27	14 CrMo 4 5	2216	
A 182-F22	10 CrMo 9 10	1.7380	1.7380	10 CrMo 9 10	10 CD 9.10	1501-622 Gr. 31	12 CrMo 9 10		2218	
P4	1035	C35+N		1.0501	C 35	AF 55 C 35	060 A 35	C 35		1550
	1045	E 335	1.0503	1.0503	C 45	AF 65 C 45	80 M 46	C 45	S 45 C	1650
	1040	C40+N		1.0511	C 40	AF 60 C 40	080 M 40	C 40	S 40 C	
	1055	E 360	1.0070	1.0535	St 70-2	A 70-2		Fe 690		1655
	1060	C60+N	1.0601	1.0601	C 60	CC 55	080 A 62	C 60		
	1039			1.1157	40 Mn 4	35 M 5	150 M 36			
	1330	G 28 Mn6	1.1165	1.1165	30 Mn 5		120 M 36		SMn 1 H, SCMn 2	
	1335	G 28 Mn6+QT	1.1165	1.1167	36 Mn 5	40 M 5	150 M 36		SMn 438 (H), SCMn 3	2120
	1035	C 35E	1.1181	1.1181	Ck 35	XC 38 H1	080 M 36	C 35	S 35 C	1572
	1045	C 45E	1.1191	1.1191	Ck 45	XC 42	080 M 46	C 45	S 45 C	1672
1064	C 60E	1.1221	1.1221	Ck 60	XC 60	080 A 62	C 60	S 58 C	1665, 1678	
1060			1.1740	C 60 W	Y3 55			SK 7		
P5	9255	55 SiCr7	1.7100	1.0904	55 Si 7	55 S 7	250 A 53	55 Si 8		2085, 2090
	4142, 4140	42 CrMo 4	1.7225	1.1201	42 CrMo 4	42 CD 4	708 M 40	42 CrMo 4	SCM 440 (H)	2244
	4142, 4140	42 CrMo 4	1.7225	1.1201	42 CrMo 4	42 CD 4	708 M 40	42 CrMo 4	SCM 440 (H)	2244
	4135			1.2330	35 CrMo 4	34 CD 4	708 A 37	35 CrMo 4		2234
	S1			1.2542	45 WCrV 7		BS 1	45 WCrV 8 KU		2710
	L6		1.2714	1.2714	56 NiCrMoV 7		BH 224-5	56 NiCrMoV7-KU	SKT 4	
	5045			1.5121	46 MnSi 4					
	3135			1.5710	36 NiCr 6	35 NC 6	640 A 35		SNC 236	
	3435			1.5736	36 NiCr 10	35 NC 11		35 NiCr 9	SNC 631 (H)	
	9840	36CrNiMo4+TA		1.6511	36 CrNiMo 4	40 NCD 3	816 M 40	38 NiCrMo 4 (KB)		
	4340	34 CrNiMo 6	1.6582	1.6582	34 CrNiMo 6	35 NCD 6	817 M 40	35 NiCrMo 6 (KW)	SNCM 447	2541
	5132	34 Cr 4	1.7033	1.7033	34 Cr 4	32 C 4	530 A 32	34 Cr 4 (KB)	SCR 430 (H)	
5140	41 Cr 4	1.7035	1.7035	41 Cr 4	42 C 4	530 M 40	41 Cr 4	SCR 440 (H)		
4130	25 CrMo 4	1.7218	1.7218	25 CrMo 4	25 CD 4 S	708 M 25	25 CrMo 4 (KB)	SCM 425	2225	
			1.7361	32 CrMo 12	30 CD 12	722 M 24	32 CrMo 12		2240	
6150	50 CrV 4	1.8159	1.8159	50 CrV 4	50 CV 4	735 A 50	51 CrV 4	SUP 10	2230	
A 355 Cl. A	41 CrAlMo 7 10	1.8509	1.8509	41 CrAlMo 7	40 CAD 6.12	905 M 39	41 CrAlMo 7	SACM 645	2940	
P6	1070	C 67S	1.1231	1.1231	Ck 67	XC 68	060 A 67	C 70		1770
	1095	C 100S	1.1274	1.1274	Ck 101		060 A 96		SUP 4	1870
	W1	C 105U	1.1545	1.1545	C 105 W1	Y1 105		C 100 KU		1880
				1.1645	C 105 W2	Y1 105		C 100 KU	SK 3	
	W1			1.1663	C 125 W	Y2 120		C 120 KU	SK 2	

SMG

UNS	U.N.E./ I.H.A.	GOST	Misc. Brands	Condition	Structure
G12130				Annealed	
G12134				Annealed	
				Annealed	
				Annealed	
G11400		40		Annealed	
G11460				Annealed	
G12150				Annealed	
G12144				Annealed	
		16D		Annealed	
		18kp		Annealed	
		S114kP		Annealed	
G10100		10		Annealed	
G10170	F.1110	15		Annealed	
G10200		20		Annealed	
		17G1S		Annealed	
G10170	F.1511	15		Annealed	
G10250	F.1120	25		Annealed	
				Annealed	
				Annealed	
G45200				Annealed	
G33106		20X2H4A		Annealed	
				Annealed	
				Annealed	
G51170	F.1516	12KHN2		Annealed	
		18HG		Annealed	
G51200		20KH		Annealed	
		20KH		Annealed	
		12KHM		Annealed	
				Annealed	
J21890	F.155	12KH8		Annealed	
G10350	F.1130	35		Annealed	
G10430	F.5110	45		Annealed	
		40		Annealed	
	F.1150	55		Annealed	
G10600		60		Annealed	
G10390		40G		Annealed	
G13300		30G2		Annealed	
G13350	F.411	35G2		Annealed	
G10340	F.1135	35		Annealed	
G10420	F.1140	45		Annealed	
G10640	F.1150	60		Annealed	
		60		Annealed	
	F.144	55S2		Annealed	
G41400	F.1252	38HM		Annealed	
G41400	F.1252	38HM		Quenched & Tempered	
T51620	F.1250	35KHM		Annealed	
T41901	F.5241	5KHV2S		Annealed	
T61206		5KHNV		Annealed	
				Annealed	
				Quenched & Tempered	
				Annealed	
G98400				Quenched & Tempered	
	F.1280	38H2N2MA		Annealed	
G51320		35KH		Quenched & Tempered	
G51400		40H		Quenched & Tempered	
G41300	F.1251	20KHM		Quenched & Tempered	
				Quenched & Tempered	
H61500	F.143	50KHFA		Quenched & Tempered	
K24065	F.1740			Annealed	
G10700	F.5103	70		Annealed	
G10950	F.5117			Annealed	
	F.5118	U10A		Annealed	
		U10		Annealed	
		U13		Annealed	

SMG

SMG	AISI / ASTM	EN	EN-Nr	W-Nr	DIN	AFNOR	BS	UNI	JIS	SS	UNS
P7	L2	107 CrV 3	1.2210	1.2210	115 CrV 3	100 C 3		107 CrV 3 KU			T61202
	O1			1.2510	100 MnCrV 4	90 MWCV 5	BO 1	95 MnWCr 5 KU	SKS 3	2140	T31501
	O2	90 MnCrV 8	1.2842	1.2842	90 MnCrV 8	90 MV 8	BO 2	90 MnVCr 8 KU			T31502
	52100	100 Cr 6	1.3505	1.3505	100 Cr 6	100 C 6	534 A 99	100 Cr 6	SUJ 2	2258	G51986
P8	D3	X 210 Cr 12	1.2080	1.2080	X 210 Cr 12	Z 200 C 12	BD 3	X 210 Cr 13 KU	SKD 1		T30403
	H11			1.2343	X 38 CrMoV 5 1	Z 38 CDV 5	BH 11	X 37 CrMoV 5 1 KU	SKD 6		T20811
	H13	X 40 CrMoV 5 1	1.2344	1.2344	X 40 CrMoV 5 1	Z 40 CDV 5	BH 13	X 40 CrMo 5 1 1 KU	SKD 61	2242	T20813
	A2	X 100 CrMoV 5	1.2363	1.2363	X 100 CrMoV 5 1	Z 100 CDV 5	BA 2	X 100 CrMoV 5 1 KU	SKD 12	2260	T30102
	H10			1.2365	X 32 CrMoV 3 3	32 DCV 28	BH 10	30 CrMoV 12 27 KU	SKD 7		T20810
				1.2436	X 210 CrW 12			X 215 CrW 12 1 KU	SKD 2	2312	
				1.2601	X 165 CrMoV 12			X 165 CrMoV 12 KU		2310	
	L6			1.2713	55 NiCrMoV 6	55 NCDV 7			SKT 4		T61206
	M35	HS 6-5-2-5	1.3243	1.3243	S 6-5-2-5	Z 85 WDKCV 06-05-05-04-02		HS 6-5-2-5	SKH 55	2723	
	M42	HS 2-10-1-8	1.3247	1.3247	S 2-10-1-8	Z 110 DKCWV 09-08-04	BM 42	HS 2-9-1-8	SKH 51		T11342
	T4	HS 18-1-2-5	1.3255	1.3255	S 18-1-2-5	Z 80 WKCVC 18-05-04-01	BT 4	HS 18-1-1-5	SKH 3		T12004
	M2	HS 6-5-2	1.3343	1.3343	S 6-5-2	Z 85 WDCV 06-05-04-02	BM 2	HS 6-5-2	SKH 9, SKH 51	2722	T11302
	M7	HS 2-9-2	1.3348	1.3348	S 2-9-2	Z 100 DCWV 09-04-02-02		HS 2-9-2	SKH 58	2782	T11307
	T1	HS 18-0-1	1.3355	1.3355	S 18-0-1	Z 80 WCV 18-04-01	BT 1	HS 18-0-1	SKH 2		T12001
P11	403	X 6 Cr 13	1.4000	1.4000	X 6 Cr 13	Z 6 C 12	403 S 17	X 6 Cr 13	SUS 403	2301	S41008
	410, CA-15	X 12 Cr 13	1.4006	1.4006	X 10 Cr 13	Z 10 C 13	410 S 21	X 12 Cr 13	SUS 410	2302	S41000
	430	X 6 Cr 17	1.4016	1.4016	X 6 Cr 17	Z 8 C 17	430 S 15	X 8 Cr 17	SUS 430	2320	S43000
	420	X 20 Cr 13	1.4021	1.4021	X 20 Cr 13	Z 20 C 13	420 S 37	X 20 Cr 13	SUS 420 J 1	2303	S42000
	420	X 39 Cr 13	1.4031	1.4031	X 40 Cr 13	Z 40 C 14	420 S 45	X 40 Cr 14	SUS 420	2304	S40280
	440 A	X 70 CrMo 15	1.4109	1.4109	X 65 CrMo 14	Z 70 D 14			SUS 440 A		S44002
	440 B	X 90 CrMoV 18	1.4112	1.4112	X 90 CrMoV 18	Z 2 CND 18 05	409 S 19	X CrTi 12	SUS 440 B	2327	S44003
	440 C	X 105 CrMo 17	1.4125	1.4125	X 105 CrMo 17	Z 100 CD 17		X 105 CrMo 17	SUS 440 C		S44004
		X 3 CrNiMo 13 3	1.4313	1.4313	X 5 CrNi 13 4	Z 5 CN 13.4	425 C 11	X 6 CrNi 13 04	SCS 5	2385	J91540
	446	X 18 CrN 28	1.4749	1.4749	X 18 CrN 28	Z 18 C 25				2322	S44600
M1	303	X 10 CrNiS 18 9	1.4305	1.4305	X 10 CrNiS 18 9	Z 10 CNF 18.09	303 S 31	X 10 CrNi 18 09	SUS 303	2346	S30300
M2	302	X 12 CrNi 18 8	1.4300	1.4300	X 12 CrNi 18 8	Z 12 CN 18	302 S 25		SUS 302	2331	S30200
	304, 304 H	X 5 CrNi 18 9	1.4301	1.4301	X 6 CrNi 18 10	Z 6 CN 18.09	304 S 31	X 5 CrNi 18 11	SUS 304	2333	S30400
	304 L	X 2 CrNi 19 11	1.4306	1.4306	X 2 CrNi 19 11	Z 2 CN 18.10	304 S 12	X 3 Cr Ni 18 11	SUS 304 L	2352	S30403
	301	X 9 CrNi 18 8	1.4310	1.4310	X 12 CrNi 17 7	Z 12 CN 17.07	301 S 21	X 12 CrNi 17 07	SUS 301	(2331)	S30100
	316	X 5 CrNiMo 17 12 2	1.4401	1.4401	X 5 CrNiMo 17 12 2	Z 3 CND 17.11.1	316 S 31	X 5 CrNiMo 17 12	SUS 316	2347	S31600
	347	X 6 CrNiNb 18 10	1.4550	1.4550	X 6 CrNiNb 18 10	Z 6 CENNb 18.10	347 S 31	X 6 CrNiNb 18 11	SUS 347	2338	S34700
M3	304 LN	X 2 CrNiN 18 10	1.4311	1.4311	X 2 CrNiN 19 11	Z 2 CN 18 .10Az	304 S 62	X 2 CrNiN 18 11	SUS 304 LN	2371	S30453
	310 S	X 12 CrNi 25 21	1.4335	1.4335	X 12 CrNi 25 21	Z 12 CN 25.20	310 S 24	X 6 CrNi 26 20	SUH 310, SUS 310 S	2361	S31008
	316 LN	X 2 CrNiMoN 17 13 3	1.4429	1.4429	X 2 CrNiMoN 17 13 3	Z 2 CND 17.13 Az	316 S 62	X 2 CrNiMoN 17 13 3	SUS 316 LN	2375	S31653
	316 L	X 2 CrNiMo 18 14 3	1.4435	1.4435	X 2 CrNiMo 18 14 3	Z 2 CND 17.13	316 S 12	X 2 CrNiMo 17 13 2	SCS 16, SUS 316 L	2353	S31603
	317	X 3 CrNiMo 18 12 3	1.4466	1.4466	X 5 CrNi 18 15		317 S 16	X 5 CrNi 18 15	SUS 317	2366	S31700
	X 9 CrNiSiNc 21 11 2	1.4835	1.4893	X 9 CrNiSiNc 21 11 2		310 S 31			2368	S30815	
M4		X 2 CrNiMoSi 19 5	1.4424	1.4417	X 2 CrNiMoSi 19 5	Z 2 CND 18.05.03				2376	S31500
	329	X 3 CrNiMo 27 5 2	1.4460	1.4460	X 4 CrNiMo 27 5 2	Z 3 CND 25.7 Az		X 3 CrNiMo 27 5 2	SUS 329 J 1	2324	S32900
	329 LN	X 2 CrNiMoN 22 5 3	1.4462	1.4462	X 2 CrNiMoN 22 5	Z 2 CND 22.05 Az	332 S 15	X 2 CrNiMoN 22 5		2377	S31803
	904L	X 2 NiCrMoCu 25 20 5	1.4539	1.4539	X 2 NiCrMoCu 25 20 5	Z 2 NCDU 25 20	904 S 13			2562	N08904
M5	F 53	X 2 CrNiMoN 25 7 4	1.4410	1.4410	X 2 CrNiMoN 25 7 4	Z 3 CND 25.07 Az		X 2 CrNiMoN 25 7 4		2328	S32750
		X 1 CrNiMoN 20 18 7	1.4547	1.4529	X 1 CrNiMoN 20 18 7	Z 1 CNDU 20.18.05 Az		X 1 CrNiMoN 20 18 7		2778	S31254
	XM-13	X 6 NiCrTiMoV 25 15	1.4534	1.4534	X 3 CrNiMoAl 13 8 2						S13800
	XM-12		1.4540	1.4540	X 4 CrNiCuNb 16 4	Z 4 CUNUB 16.4 M					S15500
	AMS 5528	X 3 CrNiMoAl 13 8 2	1.4568	1.4568	X 7 CrNiAl 17 7	Z 9 CAN 17.7	301 S 81	X 7 CrNiAl 17 7	SUS 631	2388	S17700
		X 1 CrNiMoN 25 22 8	1.4652	1.4652	X 2 CrNiMoN 25 22 7						S32654
		X 10 NiCrAlTi 32 20	1.4876	1.4876	X 10 NiCrAlTi 32 20	Z 10 NC 32.21			NCF 800		N08800
660	X 5 CrNiCuNb 16 4	1.4980	1.4943	X 4 NiCrTi 25 15	Z 6 NCTDU 25.15	HR 51		SUH 660	2570	S66286	

SMG

UNS	U.N.E./ I.H.A.	GOST	Misc. Brands	Condition	Structure
T61202	F.520L	11KHf		Annealed	
T31501	F.5220	9KHVG		Annealed	
T31502		9G2F		Annealed	
G51986	F.5230	SHKH15		Annealed	
T30403	F.5212	KH12		Annealed	
T20811		4KH5MFS		Annealed	
T20813	F.5318	4KH5MF1S		Annealed	
T30102	F.5227	9KH5VF		Annealed	
T20810		3KH3M3F		Annealed	
	F.5213	KH12		Annealed	
		KH12MF		Annealed	
T61206	F.520.S	5KHNM		Annealed	
	F.5613	R6M5K5		Annealed	
T11342		R2AM9K5		Annealed	
T12004		R18K5F2		Annealed	
T11302	F.5603	R6M5		Annealed	
T11307				Annealed	
T12001		R18		Annealed	
S41008		08KH13		Annealed	Ferrite
S41000	F.3401	12KH13, 08KH13		Annealed	Martensite
S43000	F.3113	12KH17		Annealed	Ferrite
S42000	F.5261	20KH13		Annealed	Martensite
S40280	F.3404	40KH13		Annealed	Martensite
S44002				Annealed	Martensite
S44003		95KH18		Annealed	Martensite
S44004		95KH18		Annealed	Martensite
J91540			F6NM	Annealed	Martensite
S44600		15KH28		Annealed	Ferrite
S30300	F.3508	12KH19N9		Annealed	Austenite
S30200		12KH18N9		Annealed	Austenite
S30400	F.3504	08KH18N10		Annealed	Austenite
S30403	F.3504	03KH18N11		Annealed	Austenite
S30100	F.3517	07KH16N6		Annealed	Austenite
S31600	F.3534	08KH17H13M2T		Annealed	Austenite
S34700	F.3524	08KH18N12B		Annealed	Austenite
S30453	F.3541	03KH18N11		Annealed	Austenite
S31008		12KH25N20		Annealed	Austenite
S31653		03KH16N15M3		Annealed	Austenite
S31603	F.3533	03KH17N14M3		Annealed	Austenite
S31700		08KH17H15M3T		Annealed	Austenite
S30815			253 MA	Annealed	Austenite
S31500			3RE60	Annealed	Duplex
S32900				Annealed	Duplex
S31803			SAF 2205	Annealed	Duplex
N08904				Annealed	Super austenite
S32750			SAF 2507	Annealed	Super duplex
S31254			254 SMO	Annealed	Super austenite
S13800			PH13-8Mo	Solution treated	Austenite
S15500			15-5-PH	Solution treated	Martensite
S17700		09KH17N7YU1	17-7-PH	Solution treated	Austenite/ferrite
S32654			654 SMO	Annealed	Super austenite
N08800			Alloy 800	Annealed	Austenite
S66286			A286	Solution treated	Austenite

SMG

SMG	AISI / ASTM	EN	EN-Nr	W-Nr	DIN	AFNOR	BS	UNI	JIS	SS
K1	A48 25 B	EN-GJL-150	0.6150	0.6150	GG-15	Ft 15 D	Grade 150	G15	FC 150	01 15-00
	A48 30 B	EN-GJL-200	0.6200	0.6200	GG-20	Ft 20 D	Grade 220	G20	FC 200	01 20-00
	G 3500	EN-GJL-215			GG-220 HB					02 19
	A48 35 B	EN-GJL-250	0.6250	0.6250	GG-25	Ft 25 D	Grade 260	G25	FC 250	01 25-00
	A48 45 B	EN-GJL-300	0.6300	0.6300	GG-30	Ft 30 D	Grade 300	G30	FC 300	01 30-00
A48 50 B	EN-GJL-350	0.6350	0.6350	GG-35	Ft 35 D	Grade 350	G35	FC 350	01 35-00	
K2	Grade 350	EN-GJV-300			GJV-300					
	Grade 400	EN-GJV-350			GJV-350					
	Grade 400-15	EN-GJV-400			GJV-400					
	Grade 450	EN-GJV-450			GJV-450					
Grade 500	EN-GJV-500			GJV-500						
K3	A220 60004	EN-GJMB-550-4	0.8155		GTS-55-04	P 540/5	P 540/5	P 55-04	PCMP55-04	08 54-00
K4		EN-GJS-350-22	0.7033	0.7033	GGG-35.3	FGS 370-17	Grade 350/22		FCD 350-22L	07 17-15
	60-40-18	EN-GJS-400-15	0.7040	0.7040	GGG-40	FGS 400-12	Grade 420/12	GS 400-12	FCD 400-18L	07 17-02
	60-40-18	EN-GJS-400-18	0.7043	0.7043	GGG-40.3	FGS-370-17	Grade 370/17	GSO 42/17		07 17-12
	A536 80-55-6	EN-GJS-500-7	0.7050	0.7050	GGG-50	FGS 500-7	Grade 500/7	GS 500-7	FCD 500-7	07 27-02
	A476 80-60-03	EN-GJS-600-3	0.7060	0.7060	GGG-60	FGS 600-3	Grade 600/3	GS 600-3	FCD 600-3	07 32-03
A536 100-70-03	EN-GJS-700-2	0.7070	0.7070	GGG-70	FGS 700-2	Grade 700/2	GS 700-2	FCD 700-2	07 37-01	
K5	1600/1300/-	-								
	1050/700/7	EN-GJS-1000-5			GJS-1000-5					
	1200/850/4	EN-GJS-1200-2			GJS-1200-2					
	1400/1100/1	EN-GJS-1400-1			GJS-1400-1					
850/550/10	EN-GJS-800-8			GJS-800-8						
K6	A436 Type 2	EN-GJLA-XNiCr 20-2	0.6660	0.6660	GGL-NiCr 20 2	FGL Ni20 Cr2	Grade F2			05 23-00
	A436 Type 3	EN-GJLA-XNiCr 30-3	0.6676	0.6676	GGL-NiCr 30 3	FGL Ni30 Cr3	Grade F3			
	A436 Type 1	EN-GJLA-XNiCuCr15-6-2	0.6655	0.6655	GGL-NiCuCr 15 6 2	FGL Ni15 Cu6 Cr2	Grade F1			
K7	A439 Type D-5	EN-GJSA-XNi35	0.7683	0.7683	GGG-Ni 35	FGS Ni35				
	A436 Type D-2	EN-GJSA-XNiCr20-2	0.7660	0.7660	GGG-NiCr 20 2	FGS Ni20 Cr2	Grade S2			
	A436 Type D-3	EN-GJSA-XNiCr30-3	0.7676	0.7676	GGG-NiCr 30 3	FGS Ni30 Cr3	Grade S3			
	-	EN-GJSA-XNiMn13-7	0.7652	0.7652	GGG-NiMn 13 7	FGS Ni13 Mn7	Grade S6			07 72-00
A439 Type D-2M	EN-GJSA-XNiMn23-4	0.7673	0.7673	GGG-NiMn 23 4	FGS Ni23 Mn4	Grade S2M				
N1		AW-1050A	AI99.5	3.0255	AI99.5	A-5/1050A	1B		(A1050)	4007
		AW-3103	AlMn1	3.0515	AlMn1		N3			4054
		AW-3003	AlMn1Cu	3.0517	AlMn1Cu	A-M1/3003			A3003	
		AW-2014	AlCuSiMn	3.1255	AlCuSiMn	A-U4SG/2014	H15			4338
		AW-2011	AlCuBiPb	3.1655	AlCuBiPb	A-U5PbBi/2011	FC1		A2011	4355
	A380	AC-46200	AlSi8Cu3(Si)	3.2161	G-AlSi8Cu3					4251
	B26	AC-42000		3.2341	G-AlSi5Mg	A-S7G	LM25	3599	AC 4C	4244
		AW-6060	AlMgSi0.5	3.3206	AlMgSi0.5	A-GS/6060	(H9)			4103
		AW-6063	AlMgSi0.7	3.3210	AlMgSi0.7	A-GSUC/6061	(H10)		(A6063)	4104,4107
		AW-5005	AlMg1	3.3315	AlMg1	A-G0.6	N41			4106
		AW-7020	AlZn4.5Mg1	3.4335	AlZn4.5Mg1	A-Z5G/7020	H17			4425
		AW-7075		3.4365	AlZnMgCu1.5	A-Z5GU/7075	2L95/2L96		A7075	
	AMS 4442	MN65120	MgSe3Zn2Zr1	3.5103	G-MgSe3Zn2Zr1	ZRE1	MAG6-TE			
AZ61A	MG-P-63	MgAl6Zn	3.5612	G-MgAl6Zn	G-A6-Z1	MAG-E-121				
AZ80A	MG-P-61	MgAl8Zn	3.5812	G-MgAl8Zn	(G-A7-Z1)					
N2		AW-6082	AlMgSi1	3.2315	AlMgSi1	A-SGM0.7/6082	H30			4212
	B85	AC-43400	AlSi10Mg(Fe)	3.2381	G-AlSi10Mg	A-S10G	LM9			4253
	A413.2	AC-44200	AlSi12	3.2382	GD-AlSi12					
N3	B390.0		AlSi17Cu5						ADC14	
N11	CA952	CC331G		2.0940.01	CuAl10Fe	CuAl10Fe	AB1			5710
	CA955	CC333G		2.0975.01	CuAl10Ni	CuAl10Ni5Fe5	AB2			5716
					CuNi10Fe1Mn	CuNi10Fe1Mn	CN102			5667
					CuNi10Zn45					
					CW408J	CuNi18Zn19Pb	CuNi18Zn19Pb1			
	CA937	CW352H		2.1176	CuPb10Sn	CuSn10Pb10	LB2			5640
		CC480K		2.1050.01	CuSn10	CuSn10	CT1			5443
					2.1087	CuSn10Zn				5458
		CW452K	CuSn6	2.1020	CuSn6	CuSn6	PB103		C5191	5428
		CW502L	CuZn15	2.0240	CuZn15	CuZn15	CZ102		CZ300	5112
		CW706R	CuZn28Sn1	2.0470	CuZn28Sn1	CuZn29Sn1				5220
		CW508L	CuZn37	2.0321	CuZn37	CuZn37	CZ108			5150
		CW717R	CuZn38Sn1	2.0530	CuZn38Sn1					
	CW614N	CuZn39Pb3	2.0401	CuZn39Pb3	CuZn39Pb3	CZ121			5170	
	CW612N	CuZn40Pb2	2.0402	CuZn40Pb2	CuZn39Pb2	CZ120			5168	
	CW622N	CuZn44Pb2	2.0410	CuZn44Pb2		CZ104			5272	

SMG

UNS	U.N.E./ I.H.A.	GOST	Misc. Brands	Condition	Structure
F11601		Sc 15			Grey cast iron (GCI)
F12101		Sc 20			Grey cast iron (GCI)
					Grey cast iron (GCI)
F12401		Sc 25			Grey cast iron (GCI)
F13101		Sc 30			Grey cast iron (GCI)
F13502		Sc 35			Grey cast iron (GCI)
					Compacted graphite irons (CGI)
					Compacted graphite irons (CGI)
					Compacted graphite irons (CGI)
					Compacted graphite irons (CGI)
					Compacted graphite irons (CGI)
F24130				Tempered	Malleable cast irons (MCI)
					Nodular cast irons (SGI)
F32800	FGE 38-17	Vc 42-12			Nodular cast irons (SGI)
F32800		Vc 42-12			Nodular cast irons (SGI)
F33800	FGE 50-7	Vc 50-2			Nodular cast irons (SGI)
F34100	FGE 60-2	Vc 60-2			Nodular cast irons (SGI)
F34800	FGE 70-2	Vc 70-2			Nodular cast irons (SGI)
ADI grade 5					Austempered cast irons (ADI)
ADI grade 2					Austempered cast irons (ADI)
ADI grade 3					Austempered cast irons (ADI)
ADI grade 4					Austempered cast irons (ADI)
ADI grade 1					Austempered cast irons (ADI)
F41002			Ni-Resist 2		Austenitic lamellar cast irons
F41004			Ni-Resist 3		Austenitic lamellar cast irons
F41000			Ni-Resist 1		Austenitic lamellar cast irons
F43006			Ni-Resist D-5		Austenitic nodular cast irons
F43000			Ni-Resist D-2		Austenitic nodular cast irons
F43003			Ni-Resist D-3		Austenitic nodular cast irons
-			Nodumag		Austenitic nodular cast irons
F43010			Ni-Resist D-2M		Austenitic nodular cast irons
AA1050A					
AA3103					
AA3003					
AA2014					
AA2011					
A13800					
AA6060					
AA6005					
AA5005					
AA7020					
AA7075					
M12330					
M11600					
AA6082					
A13600					
C95200		BrA9ZH3L			
C95500		BrA10ZH4N4L			
C70600					
C76300					
C93700					
C90700					
C90500					
C51900		BrOF6.5-0.15			
C23000		L90			
C44300		LOMsh70-1-0.05			
C27200					
C46400		LO60-1			
C38500					
C37800					
C68700		LAMsh77-2-0.05			

SMG

SMG	AISI / ASTM	EN	EN-Nr	W-Nr	DIN	AFNOR	BS	UNI	JIS	SS
S1										
S2										
S3		NiMo30		2.4810						
		NiMo16Cr15W		2.4819						
		NiCr19Fe19Nb5Mo3		2.4668						
				2.4669						
		NiCr20TiAl		2.4631						
		NiCr19Co18Mo4Ti3Al3								
	NiCr20Co13Mo4Ti3Al		2.4654							
S11				3.7024						
	AMS 4919									
S12	AMS 4943									
	AMS 4920, Grd 5	TiAl6V4		3.7164						
S13	AMS 4986				TiV10Fe2Al3					
H3	5115	16 MnCr 5	1.7131	1.7131	16 MnCr 5	16 MC 5	527 M 17	16 MnCr 5	SCR 415	2511
H5	4142, 4140	42 CrMo 4	1.7225	1.1201	42 CrMo 4	42 CD 4	708 M40	42 CrMo 4	SCM 440 (H)	2244
	1070	C 67S	1.1231	1.1231	Ck 67	XC 68	060 A 67	C 70		1770
	1078, 1080	C 75S	1.1248	1.1248	Ck 75	XC 75	060 A 78	C 75		1774, 1778
	1095	C 100S	1.1274	1.1274	Ck 101		060 A 96		SUP 4	1870
	W 1	C 105U	1.1545	1.1545	C 105 W1	Y1 105		C 100 KU		1880
	S1			1.2550		60 WCrV 7	55 WC 20		55 WCrV 8 KU	
	5155	55 Cr 3	1.7176	1.7176	55 Cr 3	55 C 3	527 A 60	55 Cr 3	SUP 9 (A)	2253
H7	L2	107 CrV 3	1.2210	1.2210	115 CrV 3	100 C 3		107 CrV 3 KU		
	O1			1.2510		100 MnCrW 4	90 MWCV 5	BO 1	95 MnWCr 5 KU	SKS 3
	O2	90 MnCrV 8	1.2842	1.2842	90 MnCrV 8	90 MV 8		BO 2	90 MnVCr 8 KU	
	52100	100 Cr 6	1.3505	1.3505	100 Cr 6	100 C 6	534 A 99	100 Cr 6	SUJ 2	2258
H8	H13	X 40 CrMoV 5 1	1.2344	1.2344	X 40 CrMoV 5 1	Z 40 CDV 5	BH 13	X 40 CrMo 5 1 1 KU	SKD 61	2242
	A2	X 100 CrMoV 5	1.2363	1.2363	X 100 CrMoV 5 1	Z 100 CDV 5	BA 2	X 100 CrMoV 5 1 KU	SKD 12	2260
	D2	X 155 CrVMo 12 1		1.2379	X 155 CrVMo 12 1	Z 160 CDV 12	BD 2	X 155 CrVMo 12 1 KU	SKD 11	
				1.2436		X 210 CrW 12			X 215 CrW 12 1 KU	SKD 2
				1.2601		X 165 CrMoV 12			X 165 CrMoW 12 KU	
				1.2713		55 NiCrMoV 6	55 NCDV 7			SKT 4
	M35	HS 6-5-2-5	1.3243	1.3243	S 6-5-2-5	Z 85 WDKCV 06-05-05-04-02		HS 6-5-2-5	SKH 55	2723
	M42	HS 2-10-1-8	1.3247	1.3247	S 2-10-1-8	Z 110 DKCWV 09-08-04	BM 42	HS 2-9-1-8	SKH 51	
H11	M2	HS 6-5-2	1.3343	1.3343	S 6-5-2	Z 85 WDCV 06-05-04-0	BM 2	HS 6-5-2	SKH 9, SKH 51	2722
	T1	HS 18-0-1	1.3355	1.3355	S 18-0-1	Z 80 WCV 18-04-01	BT 1	HS 18-0-1	SKH 2	
	420	X 20 Cr 13	1.4021	1.4021	X 20 Cr 13	Z 20 C 13	420 S 37	X 20 Cr 13	SUS 420 J 1	2303
	440 A	X 70 CrMo 15	1.4109	1.4109	X 65 CrMo 14	Z 70 D 14			SUS 440 A	
	440 B	X 90 CrMoV 18	1.4112	1.4112	X 90 CrMoV 18	Z 2 CND 18 05	409 S 19	X CrTi 12	SUS 440 B	2327
440 C	X 105 CrMo 17	1.4125	1.4125	X 105 CrMo 17	Z 100 CD 17		X 105 CrMo 17	SUS 440 C		
H12	XM-13	X 3 CrNiMoAl 13 8 2	1.4534	1.4534	X 3 CrNiMoAl 13 8 2					
	630	X 5 CrNiCuNb 16 4	1.4548	1.4542	X 5 CrNiCuNb 17 4	Z 6 CNU 17.4			SCS 24, SUS 630	
	AMS 5528	X 7 CrNiAl 17 7	1.4568	1.4568	X 7 CrNiAl 17 7	Z 9 CAN 17.7	301 S 81	X 7 CrNiAl 17 7	SUS 631	2388
	660	X 6 NiCrTiMoV 25 15	1.4980	1.4943	X 4 NiCrTi 25 15	Z 6 NCTDV 25.15	HR 51		SUH 660	2570
H21	A128 Grade A	X 120 Mn 12	1.3401	1.3401	X 120 Mn 12	Z 120 M 12	BW 10		SC MnH 1	2183
H31	A532 IB (NiCr-LC)	EN-GJN-HV520	0.9620	G-X330 NiCr 4 2	FB Ni4 Cr2 BC	Grade 2 A	Grade 2 A			05 12-00
	A532 IA (NiCr-HC)	EN-GJN-HV550	0.9625	G-X260 NiCr 4 2	FB Ni4 Cr2 HC	Grade 2 B	Grade 2 B			05 13-00
	A532 ID (Ni-HiCr)	EN-GJN-HV600(XCr11)	0.9630	G-X300 CrNiSi 9 5 2	FB Cr9 Ni5	Grade 2 C, D, E	Grade 2 C, D, E			04 57-00

SMG

UNS	U.N.E./ I.H.A.	GOST	Misc. Brands	Condition	Structure
			Discalloy	Precipitation hardened	
			Haynes 25		
			Stellite 21		
			Stellite 31		
N10002			Hastelloy C		
N10276		KHN65MV	Hastelloy C-276		
			IN 100		
N07718			Inconel 718		
N07750			Inconel X-750	Solution treated	
N07080			Nimonic 80A		
			René 41		
N07500			Udimet 500		
N07001			Waspalloy		
			Ti	Commercially pure	Ti (α)
R54620			Ti 6-2-4-2	Annealed	Ti (α)
R56320			Ti 3Al-2.5V (grd 9)	Annealed	Ti ($\alpha+\beta$)
R56400		VT6	Ti 6Al-4V	Annealed	Ti ($\alpha+\beta$)
			Ti 10V-2Fe-3Al	Annealed	Ti (β)
G51170	F.1516	12KH2		Case hardened	
G41400	F.1252	38HM		Quenched & Tempered	
G10700	F.5103	70		Quenched & Tempered	
G10780	F.5107	75		Quenched & Tempered	
G10950	F.5117			Quenched & Tempered	
	F.5118	U10A		Quenched & Tempered	
		5KHV2SF		Quenched & Tempered	
G51550				Quenched & Tempered	
T61202	F.520L	11KHF		Quenched & Tempered	
T31501	F.5220	9KHVG		Quenched & Tempered	
T31502		9G2F		Quenched & Tempered	
G51986	F.5230	SHKH15		Quenched & Tempered	
T20813	F.5318	4KH5MF1S		Quenched & Tempered	
T30102	F.5227	9KH5VF		Quenched & Tempered	
T30402	F.5211	KH12MF		Quenched & Tempered	
	F.5213	KH12		Quenched & Tempered	
		KH12MF		Quenched & Tempered	
T61206	F.520.S	5KHNM		Quenched & Tempered	
	F.5613	R6M5K5		Quenched & Tempered	
T11342		R2AM9K5		Quenched & Tempered	
T11302	F.5603	R6M5		Quenched & Tempered	
T12001		R18		Quenched & Tempered	
S42000	F.5261	20KH13		Quenched & Tempered	Martensite
S44002				Quenched & Tempered	Martensite
S44003		95KH18		Quenched & Tempered	Martensite
S44004		95KH18		Quenched & Tempered	Martensite
S13800			PH13-8Mo	Precipitation hardened	Martensite
S17400			17-4-PH	Precipitation hardened	Martensite
S17700		09KH17N7YU1	17-7-PH	Precipitation hardened	Austenite/ferrite
S66286			A286	Precipitation hardened	Austenite
F45001			Ni-Hard 2		White cast iron
F45000			Ni-Hard 1		White cast iron
F45003			Ni-Hard 4		White cast iron

Spare Part and Accessory index



EDP No.	Product Desc.
10746	00X509550
10747	00X50955063
10748	00X50955080
10749	00X509563
60794	00X509563100
15978	00X50956380
29961	01B58751605
30314	01B58751606
29973	01B58752505
29978	01B58752506
30017	01B58753205
30316	01B58753206
30048	01B58754003
30056	01B58754005
30063	01B58754006
10803	02B54240
10805	02B54250
73533	03B545008
86715	03B545011
73540	03B545016
73544	03B545025
84778	03B567211
09433	03B567216
09437	03B567216R
09440	03B567225
09441	03B567232
68229	03B587332
01284	03B587511UM
73557	03B587516
01287	03B587520UM
73562	03B587525
73563	03B587532
68228	03B587540
09442	03DYD010100
09443	03DYD020200
26200	03E509510
58382	03E509532
58383	03E509540
99627	03E509550
81693	03E509563
58686	03E509580
84779	03EF567211
09445	03EF567216
09448	03EF567216R
09450	03EF567225
09452	03EF567232
73565	03H02
73566	03H025
73567	03H03
73568	03H04
73569	03H05
72663	03H06
73571	03H10
98103	03HXL06
56020	03M03
97938	03M08
01348	05B61003225
01345	05B61004025
01347	05B61004032
15170	05B61013125
15167	05B61013825
15169	05B61013831
84777	08B567211
09411	08B567216
09412	08B567216R
09418	08B567225

EDP No.	Product Desc.
09419	08B567232
83946	08B587332
55810	08B587508M
55811	08B587511M
30325	08B587516IC
55812	08B587516M
21175	08B587516MC
55813	08B587516X
30142	08B587525IC
86718	08B587525M
21176	08B587525MC
55814	08B587525X
30324	08B587532IC
55815	08B587532X
30143	08B587540IC
55816	08B587540X
10810	15B54240
10266	16C10810164
10814	16C11012206
10815	16C11214243
55817	16C11270
86719	16C116
55818	16C11905
86720	16C122
55819	16C12540
86721	16C127
86722	16C132
10310	16C13201
10812	16C140
80068	16C2080712A
80050	16C2080810A
80051	16C2091014A
21172	16C2101111
80052	16C2121214A
97998	16C2141421
80053	16C2141421A
80054	16C2151421A
10945	16C2161613
62906	16C2161621
80055	16C2161621A
86723	16C34040
55823	16C35060
09793	17C090045
10952	17C120065
55826	19A71030
55827	19A71040
55828	19A71060
10817	19B172490
86730	19B58705
86731	19B58706
09805	19B5870812
97944	19B58708R10
80064	19B58711
10752	19B58718
10753	19B58722
10755	19B58727
10756	19B58730
10759	19B58735
21769	19BDR05165
66670	19BDR06165
21770	19BDR08165
21677	19BDR10165
21771	19BDR12165
21772	19BDR16165
29693	19C565722
29694	19C565727

EDP No.	Product Desc.
29696	19C565740
29697	19C565750
29699	19C565760
60887	19DS06010005002
60795	19DS08012506002
40973	19LS0512A
10267	19LS0520A
40972	19LS0816A
29673	19LS0820A
10268	19LS0820T
10946	19LS1016A
10269	19LS1020A
55835	19PM1016
55836	19PM1216
55837	19PM1220
55838	19PM1225
93109	19PM1232
72540	19TLR1030
10253	19X608412
10254	19X60841208
32604	3113020-304
32605	3113020-355
32606	3113020-406
32607	3113020-457
32608	3113020-459
32609	3113020-461
32610	3113020-463
32611	3113020-465
32612	3113020-509
40443	3214010-355
28677	3214010-357
28664	3214050-357
28665	3214050-407
28666	3214050-458
28667	3214050-509
28668	3214050-539
32614	3214050-559
28669	3214050-590
28671	3214050-610
28672	3214050-611
28674	3214050-661
32641	416.1-838
28264	5471020-01
28265	5471020-02
28266	5471020-03
28608	5512063-07
28609	5512063-08
28611	5512063-09
28606	5512063-10
28274	5512063-13
28679	5512066-01
28680	5512066-02
28682	5512066-03
28683	5512066-05
28684	5512066-06
28685	5512066-07
28633	5512067-01
28634	5512067-02
28636	5512067-03
28637	5512067-04
28276	5512068-01
28279	5512068-02
28280	5512068-03
28281	5512068-04
28282	5512068-05
28283	5512068-06

EDP No.	Product Desc.
28997	5512068-07
30720	5512068-08
40386	5512091-01
40387	5512091-02
40385	5512091-03
28612	5512091-04
28686	5514042-04
28284	5514042-06
01256	5533050-07
01260	5533051-02
01261	5533051-03
01262	5533051-05
28288	5545040-02
95905	5545040-03
28289	5545040-07
28290	5545040-08
28294	5638055-01
28296	5638055-02
28302	5638055-03
13334	564301701
13347	564301702
82690	5656100
82692	5656125
82693	5656150
76746	565616
82696	5656200
76755	565622
76764	565627
25954	56563202
76732	565640
32398	565650
25955	565660
82684	5657100
82685	5657125
82686	5657150
82688	5657200
29687	565722
82689	5657250
29688	565727
29689	565732
29690	565740
29691	565750
29692	565760
28615	5680015-01
28616	5680015-02
28614	5680015-05
28619	5680065-10
28620	5680065-11
28621	5680065-12
28618	5680065-13
01266	5680092-03
01268	5680092-04
01269	5680092-05
01270	5680092-06
28303	5680094-04
28304	5680094-06
28306	5680096-04
29006	5692020-04
32616	5692020-06
76733	5801608
88818	5801608L
76734	5802210
88819	5802210L
76835	5802712
88821	5802712L
86708	5803216

EDP No.	Product Desc.
82516	5803216L
86709	5804020
12172	5804020L
86710	5811608
86711	5812210
86712	5812712
86713	5813216
86714	5814020
72973	58211270
72974	58211905
72976	58212540
72978	58213175
72979	58213810
72981	58215080
69901	901B04
10770	901B05
80452	90AI03
80453	90AI04
55844	90F0
67669	90F01
55845	90F1
55846	90F2
55847	90F3
55848	90F4
55849	90F5
55850	90F6
55851	90F7
55852	90M0
55853	90M1
55854	90M2

EDP No.	Product Desc.
55855	90M3
55856	90M4
55857	90M5
61822	90M51
55858	90M6
61824	90M61
55859	90M7
06928	90M7R
55894	90T586525
55895	90T586532
66671	90ZQ01
66743	930R14
66744	930R17
66745	930R21
66746	930R27
66747	930R34
66748	930R43
55861	950A0406
10778	950A0505
55863	950A0606
10779	950A0806
41764	950A0810
55904	950A1008
55866	950A1012
10780	950A1410
10781	950A1412
40969	950A1416
29707	950AF0810008
28640	950AF1010010
00444	950AF1210014

EDP No.	Product Desc.
04471	950AF1210020
69923	950D0308
55909	950D0312
86750	950D0410
86751	950D0416
80061	950D0516
09842	950D0525
72515	950D0616
86752	950D0625
10790	950D0630
86754	950D0650
87770	950D0825
86756	950D0860
55878	950D1070
86881	950D12100
86757	950D1290
40970	950D16110
86758	950D16120
29695	950D1690
40971	950E0512
10800	950E1670
86760	951C0610
86762	951C0810
86763	951C1012
86764	951C1216
86765	951C1416
66687	951C1614
86766	951C1616
10844	951C1814
40968	951C1817

EDP No.	Product Desc.
86767	951C1820
11769	951C2014
75371	951C2017
86768	951C2020
86770	951C2025
10834	951C2425
72983	951CNC037031
72984	951CNC043037
72985	951CNC056050
72986	951CNC062050
72987	951CNC075068
72988	951CNS100087
82525	951D0312
72549	951D0410
55918	951D0416
72551	951D0512
75378	951D0514
10839	951D0516
10401	951D0616
55933	951D1225
43063	H04-4
12700	H05-4
89983	H06-4
15179	H2.5-2D
92971	UMCC0750-SPAN
92972	UMCC1000-SPAN
92982	UMCC1250-SPAN
99968	UMCC2000-SPAN

Cemented carbide inserts and insert carriers

Cemented carbide inserts and cemented carbide insert carriers from Seco Tools are not included in the product range intended for the following requirements. Nevertheless Seco Tools can make the following declaration.

These products meet all requirements in RoHS (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment), WEEE (Waste Electrical & Electronic Equipment) and ELV (End of Life Vehicles) requirements.

Products do not contain mercury, lead, hexavalent chromium, cadmium, CFC, HCFC, flame retardants or solvents in concentrations that exceed specifications in the regulations.

Regrinding:

Wet or dry grinding can produce potentially hazardous dusts or mists that can irritate skin, eyes, nose, throat and result in lung damage or disease. To avoid injury use proper safety precautions and protective equipment.

Disposal:

Seco Tools will buy back used inserts and solid carbide tools for recycling. Inserts and solid carbide tools should be separated from other metal waste (steel, aluminum, copper etc).

All packing material is fully recyclable.

CBN and PCD inserts

Inserts from Seco Tools are not included in the product range intended for the following requirements. Nevertheless Seco Tools can make the following declaration.

This product meets all requirements in RoHS (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment), WEEE (Waste Electrical & Electronic Equipment) and ELV (End of Life Vehicles) requirements.

Products do not contain mercury, lead, hexavalent chromium, cadmium, CFC, HCFC, flame retardants or solvents in concentrations that exceed specifications in the regulations.

Regrinding:

Wet or dry grinding can produce potentially hazardous dusts or mists that can irritate skin, eyes, nose, throat and result in lung damage or disease. To avoid injury use proper safety precautions and protective equipment.

Disposal:

Seco Tools will buy back used CBN- or PCD-tipped inserts for recycling. Inserts should be separated from other metal waste (steel, aluminum, copper etc). Solid CBN-inserts may be discarded as landfill waste.

All packing material is fully recyclable.

Black oxide insert carriers

Insert carriers from Seco Tools are not included in the product range intended for the following requirements. Nevertheless Seco Tools can make the following declaration.

This product meets all requirements in RoHS (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment), WEEE (Waste Electrical & Electronic Equipment) and ELV (End of Life Vehicles) requirements.

Products do not contain mercury, lead, hexavalent chromium, cadmium, CFC, HCFC, flame retardants or solvents in concentrations that exceed specifications in the regulations.

Disposal:

Used insert carriers may be sent for recycling together with ordinary steel waste (swarf and discarded steel scrap) for recycling.

All packing material is fully recyclable.

Cermet inserts

Inserts from Seco Tools are not included in the product range intended for the following requirements. Nevertheless Seco Tools can make the following declaration.

This product meets all requirements in RoHS (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment), WEEE (Waste Electrical & Electronic Equipment) and ELV (End of Life Vehicles) requirements.

Cermet grade C15M inserts do contain nickel and will leach nickel when in contact with the skin. Amount of leaching is higher than specified in norm SS-EN 1811 Reference test method for release of nickel from products intended to come into direct and prolonged contact with the skin. These norms are intended for products that are in direct and prolonged contact with the skin and are therefore not directly applicable for cermet inserts. Persons with known allergic reactions to nickel are advised to wear protective gloves when handling cermet inserts.

Regrinding:

Wet or dry grinding can produce potentially hazardous dusts or mists that can irritate skin, eyes, nose, throat and result in lung damage or disease. To avoid injury use proper safety precautions and protective equipment.

Disposal:

Used inserts may be recycled. Inserts should be separated from other metal waste (steel, aluminum, copper, etc) including cemented carbide inserts.

All packing material is fully recyclable.

Nickel coated insert carriers

Insert carriers from Seco Tools are not included in the product range intended for the following requirements. Nevertheless Seco Tools can make the following declaration.

This product meets all requirements in RoHS (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment), WEEE (Waste Electrical & Electronic Equipment) and ELV (End of Life Vehicles) requirements.

Products do not contain mercury, lead, hexavalent chromium, cadmium, CFC, HCFC, flame retardants or solvents in concentrations that exceed specifications in the regulations.

Insert carriers do contain nickel and will leach nickel when in contact with the skin. Amount of leaching is not higher than norm SS-EN 1811 Reference test method for release of nickel from products intended to come into direct and prolonged contact with the skin.

These norms are intended for products that are in direct and prolonged contact with the skin and are therefore not directly applicable for insert carriers. Persons with known allergic reactions to nickel are advised to wear protective gloves when handling nickel coated insert carriers.

Disposal:

Used tools maybe sent for recycling together with ordinary steel waste (swarf and discarded steel scrap) for recycling.

All packing material is fully recyclable.

Intentionally added alloying elements

Grade	Cemented carbide										Coating						
	W	Ti	Ta	Nb	Co	Cr	Ni	Mo	C	N	Ti	Al	C	N	O	Si	Nb
CP20	■				■				■		■			■			
CP200	■				■	■			■		■			■			
CP300	■	■	■	■	■				■		■	■		■			
CP500	■				■	■			■		■	■		■			
CP600	■				■	■			■		■	■		■			
C15M	■	■	■	■	■		■	■	■	■							
CF	■		■		■		■	■	■								
CM	■		■		■		■	■	■								
DP2000	■		■	■	■				■		■	■	■	■	■		
DP3000	■	■	■	■	■				■	■	■	■	■	■	■		
F15M	■				■	■			■		■	■		■			
F25M	■	■			■	■			■		■	■		■			
F30M	■				■	■			■		■	■		■			
F40M	■				■	■			■		■	■		■			
HX	■				■	■			■		■						
H02	■		■		■	■			■		■						
H15	■				■	■			■		■						
H25	■				■	■			■		■						
KX	■				■	■			■		■						
MH1000	■				■	■			■		■	■		■			
MK1500	■		■		■				■		■	■	■	■	■		
MK2050	■		■		■	■			■		■	■	■	■		■	
MM4500	■				■	■			■		■	■	■	■	■		
MP1020	■	■	■	■	■				■		■						
MP1500	■		■	■	■				■		■	■	■	■	■		
MP2500	■		■	■	■				■		■	■	■	■	■		
MP3000	■				■	■			■		■	■	■	■	■		
MS2500	■		■	■	■				■		■	■	■	■	■		
MS2050	■				■	■			■		■	■	■	■			
RX1500	■		■		■		■	■	■		■	■	■	■	■		
RX2000	■		■		■	■			■		■	■	■	■	■		
T350M	■			■	■				■		■	■	■	■	■		
T25M	■			■	■				■		■	■	■	■	■		
TGK1500	■		■		■				■		■	■	■	■	■		
TGP25	■	■	■	■	■				■		■	■	■	■	■		
TGP35	■		■	■	■				■		■	■	■	■	■		
TGP45	■		■	■	■				■		■	■	■	■	■		
TH1000	■				■	■			■		■	■	■	■	■		■
TH1500	■				■	■			■		■	■	■	■	■		
TK1001	■				■	■			■		■	■	■	■	■		
TK2001	■		■		■	■			■		■	■	■	■	■		
TM2000	■	■	■	■	■				■	■	■	■	■	■	■		
TM4000	■	■	■	■	■				■	■	■	■	■	■	■		
TP0500	■	■	■	■	■				■		■	■	■	■	■		
TP0501	■	■	■	■	■	■			■		■	■	■	■	■		
TP1020	■	■	■	■	■				■	■	■						
TP1030	■	■	■	■	■				■	■	■	■	■	■	■	■	
TP1500	■	■	■	■	■				■	■	■	■	■	■	■		
TP1501	■	■	■	■	■				■	■	■	■	■	■	■		
TP200	■	■	■	■	■				■	■	■	■	■	■	■		
TP2500	■	■	■	■	■				■	■	■	■	■	■	■		
TP2501	■	■	■	■	■	■			■	■	■	■	■	■	■		
TP40	■		■	■	■				■		■	■	■	■			
TS2000	■				■	■			■		■	■	■	■	■		
TS2500	■		■		■				■		■	■	■	■	■		
T250D	■				■	■			■		■	■	■	■	■		
T400D	■				■	■			■		■	■	■	■	■		
T100R	■				■	■			■		■	■	■	■	■		
T60M	■	■	■	■	■				■		■	■	■	■			
883	■		■		■				■		■						
890	■				■	■			■		■						

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1-800-832-8326

Technical specifications are subject to
change without notice.