

KELCH

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KELCH

2019

精密刀柄

PRECISION HOLDERS

地区	名称	地址	邮编	电话
中国	德国kelch公司中国代表处	哈尔滨市和平路44号	150040	0451-86792534
华东地区总代理	无锡苏天工具有限公司	无锡市新吴区金城东路333号工博园5幢	214000	0510-88231212 转8110、8111
广东省总代理	东莞市业畅数控刀具有限公司	东莞市长安镇乌沙社区振安中路长荣国际机械五金广场内第首层L区22-2号	523841	0769-85351779
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吉林省总代理	吉林省恒丰数控工具有限公司	长春市经济开发区自由大路7299号枫林园37栋门市102号	130000	0431-89868585
辽宁省总代理	沈阳联环工具有限公司	沈阳市铁西区建设中路55号3门	110021	024-25655218
西南地区代理	成都金陵机电设备有限责任公司	成都市金牛区金府路777号31栋1号	610036	028-87692615
西北地区代理	陕西金哈森机电物资有限公司	西安市莲湖区大庆路5号蔚蓝机电广场2-D002-D003室	710048	029-88618596

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德国凯狮有限责任公司
KELCH GMBH GERMANY

1.0 SK 精密刀柄

1.04	符合DIN 69871的SK精密刀柄 (JT)
1.31	符合JS 6339的SK精密刀柄 (BT)

2.0 HSK 精密刀柄

2.03	i-tec® 热装夹头
2.08	丝锥快换夹头
2.09	削平型直柄立铣刀刀柄
2.15	液压夹头
2.17	弹簧夹头刀柄
2.21	套式铣刀刀柄 (带平键和传动环)
2.23	端铣刀柄
2.25	KFS模块式铣刀柄
2.26	带扁尾莫氏圆锥孔刀柄
2.27	无扁尾莫氏圆锥孔刀柄
2.28	毛坯刀柄

3.0 PSC 精密刀柄

3.03	i-tec® 热装夹头
3.06	丝锥快换夹头
3.07	削平型直柄立铣刀刀柄
3.11	液压夹头
3.12	弹簧夹头刀柄
3.15	套式铣刀刀柄 (带平键和传动环)
3.17	端铣刀柄
3.18	KFS模块式铣刀柄
3.19	带扁尾莫氏圆锥孔刀柄
3.20	毛坯刀柄

4.0 可选配件

4.02	夹套、夹紧螺母及配件
4.11	冷却管、螺钉、键和备用配件

5.0 机床功能部件及刀柄附件

5.02	定位芯轴
5.02	过度套
5.02	精密莫氏变径套
5.03	7: 24圆锥检验棒
5.03	莫氏圆锥检验棒
5.03	直柄小弹簧夹头
5.04	热缩变径杆
5.06	卸刀器
5.07	轴向对刀器
5.07	径向对刀器

1.0 SK –Steep Taper

1.04	SK Tool Holders according to DIN 69871 (JT)
1.31	SK Tool Holders according to JS 6339的SK精密刀柄 (BT)

2.0 HSK–Hollow Taper Shanks

2.03	i-tec® Shrink-fit Chucks
2.08	Quick Change Tapping Chucks
2.09	Reduction Sleeves for Straight Shanks With lateral driving surface
2.15	Hydraulic Expansion Chucks
2.17	Collet Chucks internal thread
2.21	Shell End Mill Arbors for milling cutters with longitudinal slot or tenon drive
2.23	Shell End Mill Arbors With enlarged contact diameter
2.25	Holders for screw-in milling cutters
2.26	Reduction Sleeves for morse taper with tang
2.27	Reduction Sleeves for morse taper with thread
2.28	Tool Blanks

3.0 PSC–Polygonal Taper Shanks

3.03	i-tec® Shrink-fit Chucks standard version
3.06	Quick Change Tapping Chucks
3.07	Reduction Sleeves for Straight Shanks with inclined clamping surface
3.11	Hydraulic Expansion Chucks
3.12	Collet Chucks ER/ESX 16 without internal thread
3.15	Shell End Mill Arbors for milling cutters with longitudinal slot or tenon drive
3.17	Shell End Mill Arbors for milling cutters with longitudinal slot
3.18	Holders for screw-in milling cutters
3.19	Reduction Sleeves for morse taper taper with tang
3.20	Tool Blanks

4.0 ACCESSORIES

4.02	Collets, Clamping Nuts and Accessories
4.11	Coolant Tubes, Screws, Keys and Spare Parts

5.0 Accessories Of NC Machines And Arbors

5.02	Location Shaft
5.02	Taper Reduction Sleeves
5.02	Precision Morse Taper Reduction Sleeves
5.03	Test Bars with 7: 24 Taper
5.03	Test Bars with Morse Taper
5.03	Small Collet Chucks With Parallel Shanks
5.04	i-tec® Shrink-fit Chuck Extensions
5.06	Tool Mounting Fixture
5.07	Axial Tool Adjusters
5.07	Tool Adjusters Radial

Explication des pictogrammes

	<p>规范 刀柄及其接口应符合这一规范。</p>	<p>Norm Tool holders and interface correspond to this Norm</p>
	<p>型 号 同规格符合一致性；A型及相应A型HSK柄部应符合标准E.g ISO 12164-1.</p>	<p>Type Type belongs to the corresponding Norm; E.g. ISO 12164-1 type A corresponds to HSK type A</p>
	<p>规格 适用于SK柄部的切削液</p>	<p>Type Coolant supply for SK</p>
	<p>动平衡性 符合G2.5级动平衡标准，25,000 min⁻¹条件下小于1g mm</p>	<p>Balance quality G2.5 25,000 min⁻¹ corresponds to < 1g mm</p>
	<p>径向跳动 接触面半径相对于柄部定位孔和中心轴的同轴度</p>	<p>Concentricity Radial run-out from the interface to the tool holder location hole/ centering pivot</p>
	<p>轴向跳动 (端面跳动) 接触面和连接面保持同轴性</p>	<p>Axial run-out Axial run-out from the interface to the contact face</p>

	<p>规范 刀柄及其接口应符合这一规范。</p>	<p>Length compensation Compensation on compression and tension for quick change tapping chucks</p>
	<p>内部冷却功能 1.带冷却功能 2.不带冷却功能</p>	<p>Coolant supply 1. Cool Stream bores include 2. Cool Stream bores possible as post-work</p>
	<p>冷却液供给 1.冷却孔包括在内 2.冷却孔尽可能保证高速切削性能</p>	<p>CoolStream 1. Cool Stream bores include 2. Cool Stream bores possible as post-work</p>
	<p>CAD数据 CAD数据按实际需要变更。</p>	<p>CAD data CAD data available on request</p>
	<p>数控接口 适用于直柄部</p>	<p>VDI Tool Holders for Straight Shank</p>

SK 精密刀柄

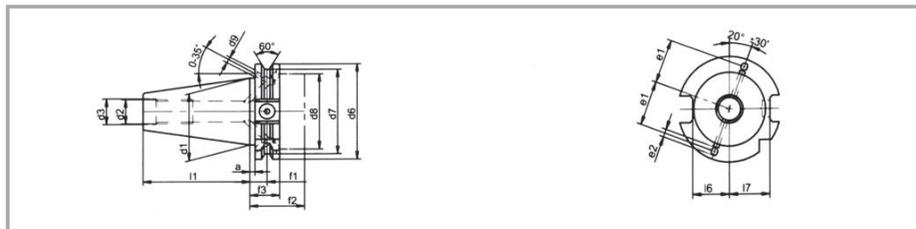
SK-Steep Taper



	DIN 69871型SK精密刀柄 (JT)	SK Tool Holders according to DIN 69871 (JT)
1.04-1.08	H-tec® 热装夹头	H-tec® Shrink-fit Chucks
1.09	丝锥快换夹头	Quick Change Tapping Chucks
1.10-1.12	削平型直柄立铣刀柄	Reduction Sleeves for Straight Shanks
1.13	液压夹头	Hydraulic Expansion Chucks
1.14-1.16	弹簧夹头刀柄	Collet Chucks
1.17-1.19	铣刀柄	Shell End Mill Arbors
1.20	KFS模块式铣刀刀柄	HOLDERS
1.21-1.22	莫氏圆锥孔刀柄	Reduction Sleeves
1.23	三面刃铣刀柄	Side milling Cutter Arbor
1.24	套式立铣刀柄	Shell End Mill Arbors
1.25	钻夹头刀柄	Drill Chuck
1.26-1.27	强力钻夹头刀柄	Strong Chuck Holder for Boring and Milling
1.28	毛坯刀柄	Tool Blanks

	JIS B 6339型SK精密刀柄 (BT)	SK Tool Holders according to DIN 69871 (BT)
1.31-1.34	H-tec® 热装夹头	H-tec® Shrink-fit Chucks
1.35	丝锥快换夹头	Quick Change Tapping Chucks
1.36-1.38	削平型直柄立铣刀柄	Reduction Sleeves for Straight Shanks
1.39	液压夹头	Hydraulic Expansion Chucks
1.40-1.42	弹簧夹头刀柄	Collet Chucks
1.43-1.45	铣刀柄	Shell End Mill Arbors
1.46	KFS模块式铣刀刀柄	HOLDERS
1.47-1.48	莫氏圆锥孔刀柄	Reduction Sleeves
1.49	三面刃铣刀柄	Side milling Cutter Arbor
1.50	套式立铣刀柄	Shell End Mill Arbors
1.51	钻夹头刀柄	Drill Chuck
1.52-1.53	强力钻夹头刀柄	Strong Chuck Holder for Boring and Milling
1.54	毛坯刀柄	Tool Blanks

德国标准刀柄 (JT)
Tool Holders DIN 69871



DIN 69871 Form AD/B

SK	d1	d2	d3 H7	d6 -0.1	d7 -0.5	d8	d9	l1
40	44.45	22.8	17	63.55	56.25	50	4	68.40
50	69.85	35.5	25	97.50	91.25	80	6	101.75

SK	l6 -0.4	l7 -0.4	e1 ±0.1	e2	a	d8	d9	l1
40	22.8	25.0	27	5	3.2	11.1	35	19.1
50	35.5	37.7	42	7	3.2	11.1	35	19.1

符合DIN 69871-1 AD/B型，并通过法兰把外冷却转换成内冷却的锥柄。其中B型冷却孔是由螺栓封堵的，按实际需要也可以拆卸。

DIN 69871-1 type AD/B for central coolant supply and for lateral coolant supply via the tool flange. Coolant bores for type B are closed with threaded pins on delivery. If required, unscrew the threaded pins.

德国标准刀柄 (JT)
Tool Holders DIN 69871



DIN 69871 Form AD

内冷却符合DIN 69871-1 AD.

设计: 数据孔参数符合DIN 69873。硬度应满足较低的变形量，维氏硬度在HV670 ± 40 (近似于HRC58 ± 2)，淬硬 (渗碳) 层在0.5mm以上。锥度公差数在AT3符合DIN2080-1。对于柄部其他参数参见于上表。

材料: 一般要求: 符合硬度要求的合金钢材料，并且能承受扭矩980N/mm²。

说明: 价格和交付情况如有变化会在详单上实时更新。制造商保留对技术修改的权力。单位以mm。

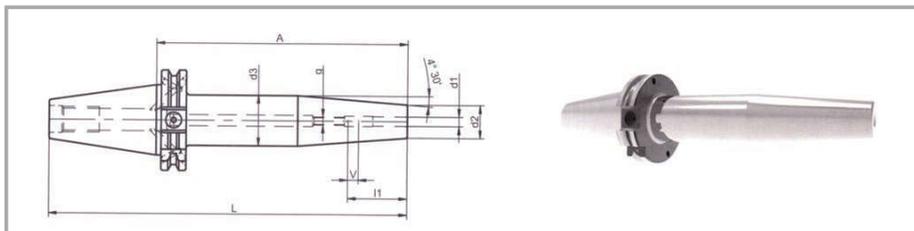
DIN 69871-1 type AD for central coolant supply.

Design: Steep taper with bore for identification chip according to DIN 69873. Hardened by means of a special low-distortion hardening process. Vickers hardness 670 ± 40 HV30 (HRC58 ± 2). Hardness depth Eht = min 0.5mm Taper angle tolerance quality AT3 according to DIN 2080-1. For details of concentricity of steep taper to tool holder, refer to appropriate page of catalogue.

Material: If not otherwise specified: Case-hardened alloy steel with a core tensile strength after case hardening of min. 980 N/mm².

Standard Specification: Prices and delivery conditions are shown in the corresponding price list valid at the time in question. Manufacturer reserves the right to make technical modifications. All dimensions in mm.

i-tec® 热装夹头 (标准型)
i-tec® Shrink-fit Chucks standard version



No	SK	d1	A	d2	d3	l1	g	L	v	kg
311.0011.292	40	3	70	12	17	—	—	139	—	0.9
311.0012.292	40	3	120	12	17	—	—	189	—	1.0
311.0013.292	40	4	70	12	17	—	—	139	—	0.9
311.0014.292	40	4	120	12	17	—	—	189	—	1.0
311.0015.292	40	5	70	12	17	—	—	139	—	0.9
311.0016.292	40	5	120	12	17	—	—	189	—	1.0
311.0001.292	40	6	80	21	31	36	M 5	149	10	1.1
311.0031.292	40	6	120	21	31	36	M 5	189	10	1.3
311.0041.292	40	6	160	21	31	36	M 5	229	10	1.6
311.0002.292	40	8	80	21	31	36	M 6	149	10	1.1
311.0032.292	40	8	120	21	32	36	M 6	189	10	1.3
311.0042.292	40	8	160	21	32	36	M 6	229	10	1.5
311.0003.292	40	10	80	24	34	41	M 8 x 1	149	10	1.1
311.0033.292	40	10	120	24	34	41	M 8 x 1	189	10	1.4
311.0043.292	40	10	160	24	34	41	M 8 x 1	229	10	1.6
311.0004.292	40	12	80	24	34	47	M10 x 1	149	10	1.1
311.0034.292	40	12	120	24	34	47	M10 x 1	189	10	1.4
311.0044.292	40	12	160	24	34	47	M10 x 1	229	10	1.6
311.0005.292	40	14	80	27	37	47	M10 x 1	149	10	1.1
311.0045.292	40	14	160	27	36	47	M10 x 1	229	10	1.7
311.0006.292	40	16	80	27	37	50	M12 x 1	149	10	1.1
311.0036.292	40	16	120	27	36	50	M12 x 1	189	10	1.4
311.0046.292	40	16	160	27	36	50	M12 x 1	229	10	1.7
311.0007.292	40	18	80	33	43	50	M12 x 1	149	10	1.3
311.0047.292	40	18	160	33	44	50	M12 x 1	229	10	2.1
311.0008.292	40	20	80	33	43	52	M16 x 1	149	10	1.2
311.0038.292	40	20	120	33	44	52	M16 x 1	189	10	1.6
311.0048.292	40	20	160	33	44	52	M16 x 1	229	10	2.1
311.0009.292	40	25	100	44	50	58	M16 x 1	169	10	1.7
311.0049.292	40	25	160	44	50	58	M16 x 1	229	10	2.6
311.0001.291	50	6	80	21	31	36	M 5	182	10	2.9
311.0041.291	50	6	160	21	32	36	M 5	262	10	3.3
311.0051.291	50	6	200	21	27	36	M 5	302	10	3.3
311.0002.291	50	8	80	21	31	36	M 6	182	10	2.9
311.0042.291	50	8	160	21	32	36	M 6	262	10	3.3
311.0052.291	50	8	200	21	27	36	M 6	302	10	3.3
311.0003.291	50	10	80	24	34	41	M 8 x 1	182	10	2.9
311.0043.291	50	10	160	24	34	41	M 8 x 1	262	10	3.4
311.0053.291	50	10	200	24	34	41	M 8 x 1	302	10	3.7

No	SK	d1	A	d2	d3	l1	g	L	v	kg
311.0004.291	50	12	80	24	34	47	M10 x 1	182	10	2.9
311.0044.291	50	12	160	24	34	47	M10 x 1	262	10	3.4
311.0054.291	50	12	200	24	34	47	M10 x 1	302	10	3.6
311.0005.291	50	14	80	27	37	47	M10 x 1	182	10	2.9
311.0045.291	50	14	160	27	36	47	M10 x 1	262	10	3.5
311.0055.291	50	14	200	27	36	47	M10 x 1	302	10	3.8
311.0006.291	50	16	80	27	37	50	M12 x 1	182	10	2.9
311.0046.291	50	16	160	27	36	50	M12 x 1	262	10	3.4
311.0056.291	50	16	200	27	36	50	M12 x 1	302	10	3.7
311.0007.291	50	18	80	33	43	50	M12 x 1	182	10	3.0
311.0047.291	50	18	160	33	44	50	M12 x 1	262	10	3.9
311.0057.291	50	18	200	33	44	50	M12 x 1	302	10	4.3
311.0008.291	50	20	80	33	43	52	M16 x 1	182	10	3.0
311.0048.291	50	20	160	33	44	52	M16 x 1	262	10	3.7
311.0058.291	50	20	200	33	44	52	M16 x 1	302	10	4.1
311.0009.291	50	25	100	44	53	58	M16 x 1	202	10	3.6
311.0049.291	50	25	160	44	53	58	M16 x 1	262	10	4.5
311.0059.291	50	25	200	44	53	58	M16 x 1	302	10	5.0
311.0010.291	50	32	100	44	57	61	M16 x 1	202	10	3.4
311.0050.291	50	32	160	44	56	61	M16 x 1	262	10	4.4
311.0060.291	50	32	200	44	53	61	M16 x 1	302	10	4.8

设计: 被夹持刀具柄部直径公差应为h6级。

Design: The clamping diameter is designed for a shank tolerance of h6.

说明: 不包括调整长度用的调整螺钉(从Φ6起)。

Standard Specification: Adjusting screw for length adjustment(from Φ6) is not included.

备注: 其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

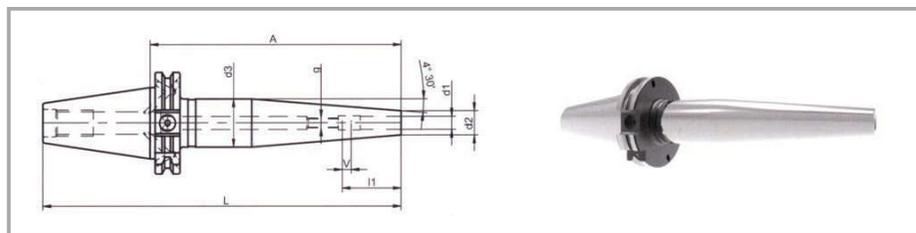
ACCESSORIES
配件



4.12

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No	SK	d1	A	d2	d3	l1	g	L	v	kg
311.0700.292	40	3	120	9	25	—	—	188	—	1.0
311.0710.292	40	3	160	9	25	—	—	228	—	1.1
311.0701.292	40	4	120	9	25	—	—	188	—	1.0
311.0711.292	40	4	160	9	25	—	—	228	—	1.1
311.0702.292	40	5	120	9	25	—	—	188	—	1.0
311.0712.292	40	5	160	9	25	—	—	228	—	1.1
311.0703.292	40	6	120	15	31	36	M 5	188	10	1.1
311.0713.292	40	6	160	15	30	36	M 5	228	10	1.3
311.0704.292	40	8	120	15	31	36	M 6	188	10	1.1
311.0714.292	40	8	160	15	30	36	M 6	228	10	1.3
311.0705.292	40	10	120	18	34	41	M 8 x 1	188	10	1.2
311.0715.292	40	10	160	18	32	41	M 8 x 1	228	10	1.4
311.0706.292	40	12	120	18	34	47	M10 x 1	188	10	1.1
311.0716.292	40	12	160	18	32	47	M10 x 1	228	10	1.4
<hr/>										
311.0700.291	50	3	120	9	25	—	—	222	—	2.8
311.0710.291	50	3	160	9	25	—	—	262	—	2.9
311.0701.291	50	4	120	9	25	—	—	222	—	2.8
311.0711.291	50	4	160	9	25	—	—	262	—	2.9
311.0702.291	50	5	120	9	25	—	—	222	—	2.8
311.0712.291	50	5	160	9	25	—	—	262	—	2.9
311.0703.291	50	6	120	15	31	36	M 5	222	10	2.9
311.0713.291	50	6	160	15	30	36	M 5	262	10	3.1
311.0704.291	50	8	120	15	31	36	M 6	222	10	2.9
311.0714.291	50	8	160	15	30	36	M 6	262	10	3.1
311.0705.291	50	10	120	18	34	41	M 8 x 1	222	10	3.0
311.0715.291	50	10	160	18	32	41	M 8 x 1	262	10	3.2
311.0706.291	50	12	120	18	34	47	M10 x 1	222	10	2.9
311.0716.291	50	12	160	18	32	47	M10 x 1	262	10	3.1

设计: 被夹持刀具柄部直径公差应为h6级。

Design: The clamping diameter is designed for a shank tolerance of h6.

说明: 不包括调整长度用的调整螺钉 (从Φ6起)。

Standard Specification: Adjusting screw for length adjustment(from Φ6) is not included.

备注: 其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

ACCESSORIES

配件

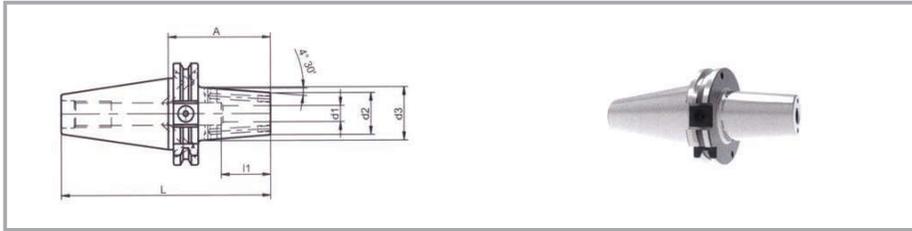


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i-tec® 热装夹头(超短型)
i-tec® Shrink-fit Chucks ultra short version



No	SK	d1	A	d2	d3	I1	L	kg
311.4353.292	40	10	65	26	33	41	133	1.0
311.4354.292	40	12	65	26	33	45	133	1.0
311.4356.292	40	16	65	29	36	52	133	1.0
311.4358.292	40	20	65	35	42	54	133	1.1
311.4359.292	40	25	75	45	50	59	143	1.4

设计: 被夹持刀具柄部直径公差应为h6级, 并带有内冷功能。

Design: The clamping diameter is designed for a shank tolerance of h6. With closable Cool Stream bores.

备注: 其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

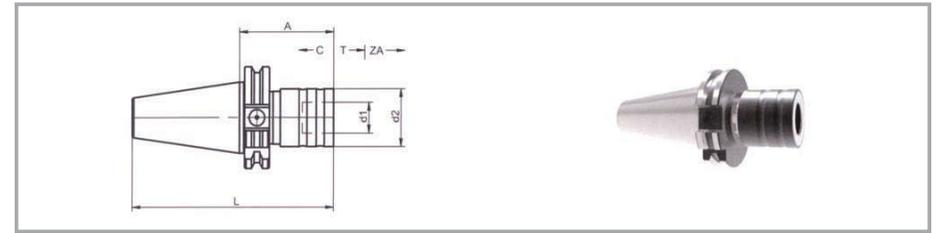
ACCESSORIES
配件



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丝锥快换夹头
Quick Change Tapping Chucks



No	SK	M	A	d1	d2	L	C	T	kg
440.0001.292	40	M3-M12	60	19	36	128.4	6.5	7.5	3.2
440.0101.161	40	M3-M12	120	19	36	188.4	6.5	7.5	4.7
440.0002.292	40	M8-M20	98	31	53	166.4	8.5	15	4.1
440.0103.161	40	M8-M20	150	31	53	218.4	8.5	15	5.4
440.0001.291	50	M3-M12	60	19	36	161.75	6.5	7.5	2.6
440.0002.291	50	M8-M20	98	31	53	199.75	8.5	15	11.1
440.0105.161	50	M8-M20	150	31	53	251.75	8.5	15	14.8
440.0106.161	50	M14-M33	139	48	78	240.75	15	23	12.9
440.0107.161	50	M14-M33	200	48	78	301.75	15	23	17.2

使用: 用于夹持带或不带安全连接的快换丝锥夹套。

Use: For holding quick change inserts with or without safety clutch.

设计: 长度补偿在收缩和拉伸方向取决于进给和螺距的不同。压缩时能够保证当轴向力达到允许值时立即脱离攻丝状态, 拉力释放时能够保证丝锥夹头免于过大轴向拉力造成的损害。

Design: Length compensation on compression and tension to compensate the difference between feed and tap pitch. The pressure point mechanism guarantees that the tap immediately cuts the thread as soon as the permissible axial force is reached. The tension lock protects the tapping chuck against damage as a result of high axial tensile load.

备注: 其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

ACCESSORIES
配件



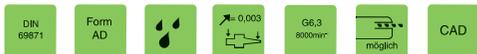
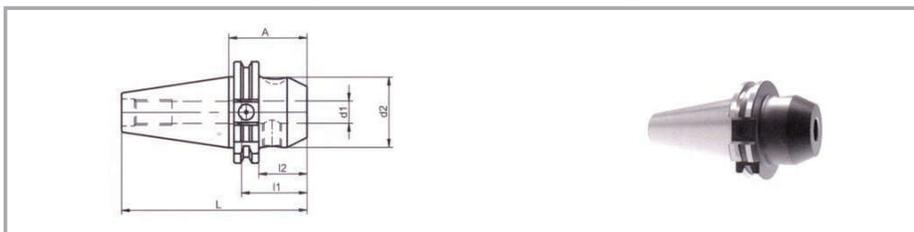
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削平型直柄立铣刀刀柄 (威尔顿型)
Reduction Sleeves for Straight Shanks with lateral driving surface (Weldon)



No	SK	d1	A	d2	l2	L	Tol./d1	kg
420.0251.292	40	6	50	25	31	119	+0.005	0.9
420.0260.292	40	6	100	25	81	169	+0.005	1.1
420.0252.292	40	8	50	28	31	119	+0.005	1.0
420.0261.292	40	8	100	28	81	169	+0.005	1.1
420.0253.292	40	10	50	35	31	119	+0.005	1.0
420.0262.292	40	10	100	35	81	169	+0.005	1.3
420.0254.292	40	12	50	42	31	119	+0.005	1.1
420.0263.292	40	12	100	42	81	169	+0.005	1.6
420.0258.292	40	14	50	44	31	119	+0.005	1.1
420.0264.292	40	14	100	44	81	169	+0.005	1.6
420.0255.292	40	16	63	48	44	132	+0.005	1.3
420.0265.292	40	16	100	48	81	169	+0.005	1.8
420.0259.292	40	18	63	50	44	132	+0.005	1.3
420.0266.292	40	18	100	50	81	169	+0.005	1.9
420.0256.292	40	20	63	52	44	132	+0.007	1.3
420.0267.292	40	20	100	52	81	169	+0.007	1.9
420.0257.292	40	25	100	65	81	169	+0.007	2.3
420.0268.292	40	32	100	72	81	169	+0.007	2.5
420.0251.291	50	6	63	25	44	165	+0.005	2.8
420.0271.291	50	6	100	25	81	202	+0.005	2.9
420.0252.291	50	8	63	28	44	165	+0.005	2.8
420.0272.291	50	8	100	28	81	202	+0.005	3.0
420.0253.291	50	10	63	35	44	165	+0.005	2.9
420.0273.291	50	10	100	35	81	202	+0.005	3.2
420.0254.291	50	12	63	42	44	165	+0.005	3.0
420.0274.291	50	12	100	42	81	202	+0.005	3.4
420.0264.291	50	14	63	44	44	165	+0.005	3.0
420.0275.291	50	14	100	44	81	202	+0.005	3.4
420.0255.291	50	16	63	48	44	165	+0.005	3.1
420.0276.291	50	16	100	48	81	202	+0.005	3.5
420.0268.291	50	18	63	50	44	165	+0.005	3.1
420.0277.291	50	18	100	50	81	202	+0.005	3.6
420.0256.291	50	20	63	52	44	165	+0.007	3.1
420.0278.291	50	20	100	52	81	202	+0.007	3.6
420.0257.291	50	25	80	65	61	182	+0.007	3.8
420.0279.291	50	25	100	65	81	202	+0.007	4.2
420.0258.291	50	32	100	72	81	202	+0.007	4.5
420.0259.291	50	40	100	80	81	202	+0.007	4.7
440.0020.009	50	50	125	100	106	227	+0.007	5.3
440.0022.009	60	25	100	65	81	262	+0.007	13.2
440.0023.009	60	32	100	72	81	262	+0.007	14.1
440.0024.009	60	40	115	90	96	277	+0.007	15.1
440.0025.009	60	50	125	100	106	287	+0.007	15.3
440.0026.009	60	63	150	130	131	312	+0.007	15.9

使用: 按DIN 1835 B型(威尔顿型)和DIN 6535 HB型夹持直柄铣刀。

说明: 包括夹紧螺钉, 从d1=25mm的孔起提供2个紧固螺钉。

备注: 其他型号和尺寸可按订货要求制作。

Use: For holding shank tools with lateral driving surface, DIN 1835 type B and DIN 6535 type HB.

Standard Specification: With clamping screw. From location hole d1 = 25mm 2 clamping screws are included.

Note: Other designs and sizes are available on request.

ACCESSORIES

配件

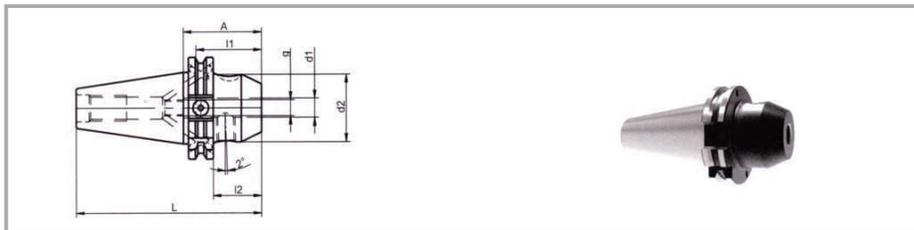


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带2° 斜削平型直柄立铣刀刀柄 (威斯尔凹口型)
Reduction Sleeves for Straight Shanks with inclined clamping surface (Whistle Notch)



No	SK	d1	A	d2	I1	L2	g	L	ToL/d1	v	kg
420.0151.292	40	6	50	25	35	31	M 5	119	+ 0.005	10	0.9
420.0152.292	40	8	50	28	35	31	M 6	119	+ 0.005	10	1.0
420.0153.292	40	10	50	35	39	31	M 8	119	+ 0.005	10	1.0
420.0154.292	40	12	50	42	44	31	M10	119	+ 0.005	10	1.1
420.0164.292	40	14	50	44	44	31	M10	119	+ 0.005	10	1.1
420.0155.292	40	16	63	48	47	44	M12	132	+ 0.005	10	1.3
420.0168.292	40	18	63	50	47	44	M12	132	+ 0.005	10	1.4
420.0156.292	40	20	63	52	49	44	M16	132	+ 0.007	10	1.3
420.0157.292	40	25	100	65	54	81	M20	169	+ 0.007	10	2.3
420.0158.292	40	32	100	72	58	81	M20	169	+ 0.007	10	2.5
420.0151.291	50	6	63	25	35	44	M 5	165	+ 0.005	10	2.8
420.0152.291	50	8	63	28	35	44	M 6	165	+ 0.005	10	2.8
420.0153.291	50	10	63	35	39	44	M 8	165	+ 0.005	10	2.9
420.0154.291	50	12	63	42	44	44	M10	165	+ 0.005	10	3.0
420.0164.291	50	14	63	44	44	44	M10	165	+ 0.005	10	3.0
420.0155.291	50	16	63	48	47	44	M12	165	+ 0.005	10	3.1
420.0168.291	50	18	63	50	47	44	M12	165	+ 0.005	10	3.1
420.0156.291	50	20	63	52	49	44	M16	165	+ 0.007	10	3.1
420.0157.291	50	25	80	65	54	61	M20	182	+ 0.007	10	3.8
420.0158.291	50	32	100	72	58	81	M20	202	+ 0.007	10	4.5
420.0159.291	50	40	100	80	75	81	M20	202	+ 0.007	10	4.8

使用: 用于夹持带角度驱动面 (2°) 的直柄铣刀, DIN 1835 标准中的E

说明: 包括配好的夹紧螺钉和限位螺钉, 从d1=25mm的孔起提供2个紧固螺钉。

备注: 带孔的止动螺钉用于内冷却。其他型号和尺寸可按订货要求制作。

Use: For holding shank tools with inclined clamping surface (2°), DIN 1835 type E and DIN 6535 type HE.

Standard Specification: Clamping screw and adjusting screw included. From location hole d1 = 25mm 2 clamping screws are included.

Note: Bored through adjusting screw for coolant. Other designs and sizes are available on request.

ACCESSORIES

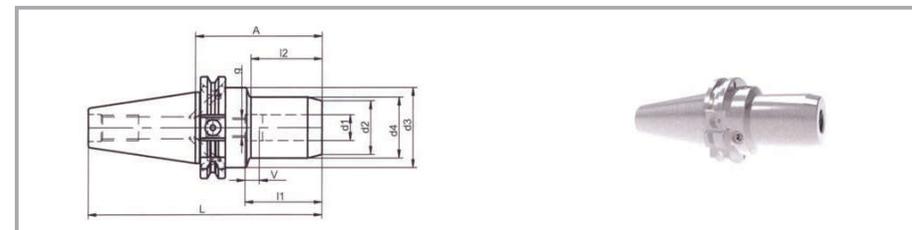
配件



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液压夹头
Hydraulic Expansion Chucks



No	SK	d1	A	d2	d3	d4	I1	I2	g	L	V	kg
702.0001.292	40	6	80	22	50	26	37	40	M 5	148	10	1.4
702.0002.292	40	8	80	24	50	28	37	40	M 6	148	10	1.4
702.0003.292	40	10	80	26	50	30	41	40	M8x1	148	10	1.4
702.0004.292	40	12	80	28	50	32	46	40	M10x1	148	10	1.4
702.0005.292	40	14	80	30	50	34	46	40	M10x1	148	10	1.4
702.0006.292	40	16	80	34	50	38	49	46	M12x1	148	10	1.4
702.0007.292	40	18	80	36	50	40	49	46	M12x1	148	10	1.4
702.0008.292	40	20	85	38	50	42	51	46	M16x1	153	10	1.4
702.0009.292	40	25	95	45	55	50	57	76	M16x1	163	10	2.0
702.0010.292	40	32	115	56	63	63	61	65	M16x1	183	10	2.2
702.0001.291	50	6	80	22	50	26	37	40	M 5	182	10	3.3
702.0002.291	50	8	80	24	50	28	37	40	M 6	182	10	3.3
702.0003.291	50	10	80	26	50	30	41	40	M 8x1	182	10	3.3
702.0004.291	50	12	80	28	50	32	46	40	M10x1	182	10	3.3
702.0005.291	50	14	80	30	50	34	46	40	M10x1	182	10	3.3
702.0006.291	50	16	80	34	50	38	49	46	M12x1	182	10	3.3
702.0007.291	50	18	80	36	50	40	49	46	M12x1	182	10	3.3
702.0008.291	50	20	85	38	50	42	51	46	M16x1	187	10	3.3
702.0009.291	50	25	100	45	60	55	57	55	M16x1	202	10	4.7
702.0010.291	50	32	100	56	70	63	61	55	M16x1	202	10	4.9

使用: 用于夹持DIN 1835 A、B型和DIN 6535 HA、HB型直柄铣刀, DIN 6535HE型刀柄仅能与缩径套共用; 夹持精度h6级, 粗糙度最小为Ra0.3, 对于φ25和φ32只有DIN1835 A型和DIN6535 HA型可用。

说明: 带内置的限位螺钉。

备注: 其他型号和尺寸可按订货要求制作。

Use: For shank tools according to DIN 1835 type A and B and DIN 6535 type HA and HB. Shanks according to DIN 6535 type HE are only applicable with reduction bushes. Shank quality h6, Ra min. = 0.3. For φ25 and 32 only type A or HA can be used.

Standard Specification: Bored through adjusting screw included.

Note: Other designs and sizes are available on request.

ACCESSORIES

配件



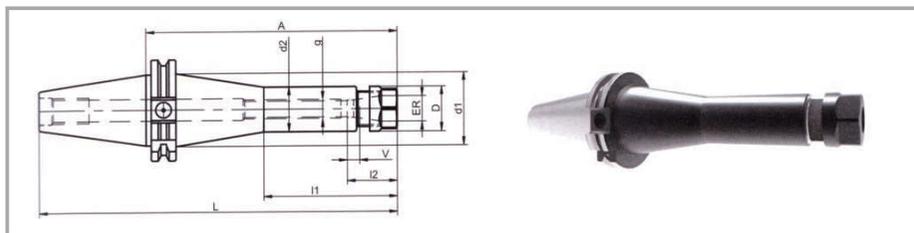
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ER/ESX ER-11/16 弹簧夹头刀柄 (带调整螺钉孔)
Collet Chucks ER/ESX 11/16 with internal thread



No	SK	ER	A	d1	d2	D	l1	l2	g	L	V	kg
698.0261.292	40	ER11 (0.5-7)	63	-	18.5	19	-	18	M 6	131	10	0.9
698.0262.292	40	ER11 (0.5-7)	100	-	18.5	14	-	18	M 6	168	10	1.0
698.0251.292	40	ER16 (0.5-10)	63	-	28	28	-	27	M12	131	10	1.0
698.0252.292	40	ER16 (0.5-10)	100	-	28	28	-	27	M12	168	10	1.1
698.0253.292	40	ER16 (0.5-10)	160	46	28	28	85	27	M12	228	10	1.5
698.0251.291	50	ER16 (0.5-10)	100	-	28	28	-	27	M12	202	10	2.9
698.0252.291	50	ER16 (0.5-10)	160	78	28	28	85	27	M12	262	10	3.8

使用: 用于夹持按DIN 1835 A型、B型、E型以及DIN 6535 HA型、HB型和HE型的直柄刀具。

Use: For clamping tools with straight shank according to DIN 1835 type A, B and E and DIN 6535 type HA, HB and HE.

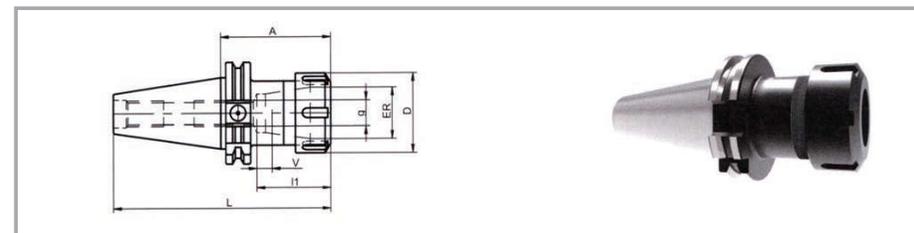
说明: 夹头包括夹紧螺母, 标准配置夹紧螺母为国产配件, 如需进口配件需客户另外订购

Standard Specification: Collet chuck including clamping nut.

备注: 其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

ER/ESX ER25/32/40 弹簧夹头刀柄 (带调整螺钉孔)
Collet Chucks ER/ESX 25/32/40 with internal thread



No	SK	ER	A	D	l1	g	L	V	kg
640.0103.040	40	ER 20 (1-13)	70	34	40	M12	138	10	1.2
640.0186.040	40	ER 20 (1-13)	100	34	40	M12	168	10	1.5
640.0187.040	40	ER 20 (1-13)	160	34	40	M12	228	10	1.7
697.0250.292	40	ER 25 (1-16)	70	42	43	M16	138	10	1.3
697.0255.292	40	ER 25 (1-16)	100	42	43	M16	168	10	1.5
640.0188.040	40	ER 25 (1-16)	160	42	43	M16	228	10	2.1
697.0251.292	40	ER 32 (2-20)	70	50	47	M16	138	10	1.3
697.0253.292	40	ER 32 (2-20)	100	50	47	M16	168	10	1.7
640.0189.040	40	ER 32 (2-20)	160	50	47	M16	228	10	2.4
697.0252.292	40	ER 40 (3-26)	80	63	53	M16	148	10	1.3
697.0254.292	40	ER 40 (3-26)	120	63	53	M16	188	10	2.3
640.0190.040	40	ER 40 (3-26)	160	63	53	M16	228	10	3.2
640.0191.040	50	ER 20 (1-13)	70	34	40	M12	172	10	3.4
640.0113.040	50	ER 20 (1-13)	100	34	40	M12	202	10	3.8
640.0193.040	50	ER 20 (1-13)	160	34	40	M12	262	10	4.5
640.0194.040	50	ER 25 (1-16)	70	42	43	M16	172	10	3.3
640.0115.040	50	ER 25 (1-16)	100	42	43	M16	202	10	3.8
640.0196.040	50	ER 25 (1-16)	160	42	43	M16	262	10	4.4
640.0197.040	50	ER 32 (2-20)	70	50	47	M16	172	10	3.5
640.0117.040	50	ER 32 (2-20)	100	50	47	M16	202	10	3.9
640.0199.040	50	ER 32 (2-20)	160	50	47	M16	262	10	4.8
697.0252.291	50	ER 40 (3-26)	80	63	53	M16	182	10	3.6
697.0253.291	50	ER 40 (3-26)	120	63	53	M16	222	10	4.0
640.0200.040	50	ER 40 (3-26)	160	63	53	M16	262	10	5.3
640.0234.040	60	ER 25 (1-16)	100	42	36	M16	262	10	13.8
640.0235.040	60	ER 25 (1-16)	160	42	36	M16	322	10	14.3
640.0212.040	60	ER 32 (2-20)	100	50	40	M16	262	10	13.2
640.0237.040	60	ER 32 (2-20)	160	50	40	M16	322	10	14.7
640.0238.040	60	ER 40 (3-26)	100	63	58	M16	262	10	13.5
640.0239.040	60	ER 40 (3-26)	160	63	58	M16	322	10	14.8

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使用: 用于夹持按DIN 1835 A型、B型、E型以及DIN 6535 HA型、HB型和HE型的直柄刀具。

Use: For clamping tools with straight shank according to DIN 1835 type A, B and E and DIN 6535 type HA, HB and HE.

说明: 夹头包括夹紧螺母, 标准配置夹紧螺母为国产配件, 如需进口配件需客户另外订购

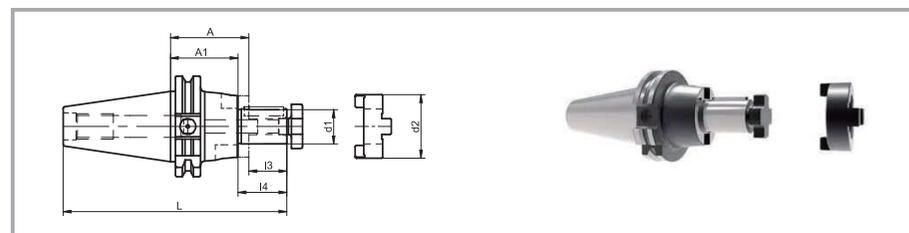
Standard Specification: Collet chuck including clamping nut.

备注: 其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

套式铣刀刀柄 (带平键和传动环)

Shell End Mill Arbors for milling cutters with longitudinal slot or tenon drive



No	SK	d1	A	d2	l3	l4	L	A1	kg
489.0211.292	40	16	55	32	17	27	141	45	1.0
489.0231.292	40	16	100	32	17	27	186	90	1.5
489.0212.292	40	22	55	40	19	31	143	43	1.1
489.0232.292	40	22	100	40	19	31	188	88	1.6
489.0213.292	40	27	55	48	21	33	145	43	1.3
489.0233.292	40	27	100	48	21	33	190	88	1.9
489.0204.292	40	32	60	58	24	38	153	46	1.4
489.0234.292	40	32	100	58	24	38	193	86	2.2
489.0205.292	40	40	60	70	27	41	156	46	1.6
489.0201.291	50	16	55	32	17	27	174	45	2.8
489.0202.291	50	22	55	40	19	31	176	43	2.9
489.0232.291	50	22	100	40	19	31	221	88	3.6
489.0203.291	50	27	55	48	21	33	178	43	3.1
489.0233.291	50	27	100	48	21	33	223	88	4.0
489.0204.291	50	32	55	58	24	38	181	41	3.3
489.0234.291	50	32	100	58	24	38	226	86	4.4
489.0205.291	50	40	55	70	27	41	184	41	3.5
489.0235.291	50	40	100	70	27	41	229	86	4.7
489.0206.291	50	50	70	90	30	46	202	54	4.5

使用: 用于夹持带有平键和传动环的面铣刀。

Use: For clamping shell end mills and milling cutters with longitudinal slot or tenon drive.

设计: 带有中心冷却功能, 传动环符合DIN 138。

Design: Central boring for coolant supply. Cutter drive according to DIN 138.

说明: 包括紧固螺钉、带有螺孔的平键和传动环。

Standard Specification: Cutter retaining screw, feather key with withdrawal thread and drive ring included.

备注: 其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

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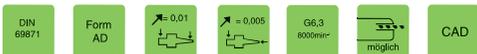


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端铣刀柄
Shell End Mill Arbors with enlarged contact diameter



No	SK	d1	A	d2	l3	L	W	夹刀螺钉	十字形扳手	kg
579.0205.292	40	16	35	40	17	120	8	M8	SK-00210-2	1.0
579.0201.292	40	22	35	50	19	122	10	M10	SK-00210-3	1.1
540.0023.004	40	22	90	50	19	177	10	M10	SK-00210-3	1.9
579.0202.292	40	27	35	60	21	124	12	M12	SK-00210-4	1.1
540.0025.004	40	27	90	60	21	179	12	M12	SK-00210-4	2.4
579.0203.292	40	32	50	80	24	142	14	M16	SK-00210-5	1.7
540.0027.004	40	32	90	80	24	182	14	M16	SK-00210-5	2.7
579.0201.291	50	22	35	50	19	156	10	M10	SK-00210-3	2.9
540.0089.004	50	22	90	50	19	211	10	M10	SK-00210-3	3.8
540.0031.004	50	22	150	50	19	271	10	M10	SK-00210-3	4.3
579.0202.291	50	27	40	60	21	163	12	M12	SK-00210-4	3.1
540.0033.004	50	27	90	60	21	213	12	M12	SK-00210-4	5.3
540.0034.004	50	27	150	60	21	273	12	M12	SK-00210-4	5.9
579.0203.291	50	32	50	80	24	176	14	M16	SK-00210-5	3.9
540.0036.004	50	32	120	80	24	246	14	M16	SK-00210-5	5.8

使用: 用于夹持带有端面键槽的面铣刀。

Use: For clamping shell end mills and milling cutters with tenon drive.

设计: 带有中心冷却功能, 刀具和主轴的安装尺寸符合DIN 2079。

Design: Central boring for coolant supply. Clamping $\phi 40$ and 60 with 4 threaded holes for holding cutters with tool holding according to DIN 2079.

说明: 包括紧固螺钉和传动键。

Standard Specification: Cutter retaining screw and tightened drive keys included.

备注: 其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

ACCESSORIES
配件



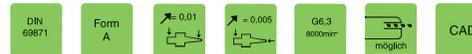
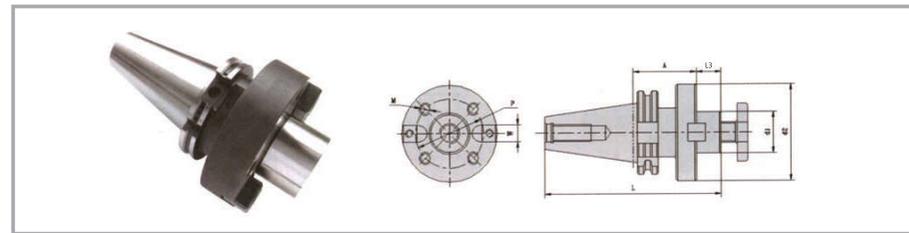
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端铣刀柄
Shell End Mill Arbors with enlarged contact diameter



No	SK	d1	A	d2	l3	L	W	夹刀螺钉	十字形扳手	kg
540.0028.004	40	40	60P	90	27	189	16	M20	BS-40	2.4
540.0037.004	50	40	75P	90	27	204	16	M20	BS-40	5.9
540.0038.004	50	40	105P	90	27	234	16	M20	BS-40	6.3
540.0039.004	50	60	75P	140	40	217	25.4	—	—	6.1
540.0040.004	60	40	75P	90	27	264	16	M20	BS-40	21.8
540.0041.004	60	60	75P	140	40	277	25.4	—	—	21.5
540.0042.004	60	60	75P	220	40	277	25.4	—	—	22.0

使用: 用于夹持带有端面键槽的面铣刀。

Use: For clamping shell end mills and milling cutters with tenon drive.

设计: 带有中心冷却功能, 刀具和主轴的安装尺寸符合DIN 2079。

Design: Central boring for coolant supply. Clamping $\phi 40$ and 60 with 4 threaded holes for holding cutters with tool holding according to DIN 2079.

说明: 包括紧固螺钉和传动键。

Standard Specification: Cutter retaining screw and tightened drive keys included.

备注: 其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

ACCESSORIES
配件



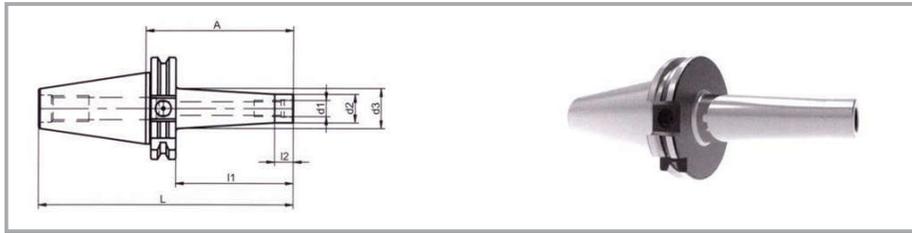
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KFS模块式铣刀柄
 Holders for screw-in milling cutters



DIN 69871 Form AD $\lambda = 0.005$ $\lambda = 0.005$ G2.5 20,000 min⁻¹ CAD

No	SK	d1	A	d2	d3	l1	l2	L	kg
571.0001.292	40	M8	44	12.8	15	25	12	113	0.9
571.0011.292	40	M8	69	12.8	23	50	12	138	0.9
571.0021.292	40	M8	94	12.8	23	75	12	163	1.0
571.0002.292	40	M10	44	17.8	20	25	12	113	0.9
571.0012.292	40	M10	69	17.8	25	50	12	138	1.0
571.0022.292	40	M10	94	17.8	25	75	12	163	1.0
571.0032.292	40	M10	119	17.8	32	100	12	188	1.2
571.0042.292	40	M10	169	17.8	35	150	12	238	1.4
571.0003.292	40	M12	44	20.8	24	25	12	113	0.9
571.0013.292	40	M12	69	20.8	28	50	12	138	1.0
571.0023.292	40	M12	94	20.8	31	75	12	163	1.1
571.0033.292	40	M12	119	20.8	33	100	12	188	1.2
571.0043.292	40	M12	169	20.8	40	150	12	238	1.6
571.0004.292	40	M16	44	28.8	-	25	-	113	0.9
571.0014.292	40	M16	69	28.8	34	50	12	138	1.1
571.0024.292	40	M16	94	28.8	34	75	12	163	1.2
571.0034.292	40	M16	119	28.8	36	100	12	188	1.3
571.0044.292	40	M16	169	28.8	42	150	12	238	1.8
571.0011.291	50	M 8	69	12.8	23	50	12	171	2.7
571.0012.291	50	M10	69	17.8	25	50	12	171	2.8
571.0022.291	50	M10	94	17.8	25	75	12	196	2.8
571.0032.291	50	M10	119	17.8	32	100	12	221	2.9
571.0042.291	50	M10	169	17.8	35	150	12	271	3.2
571.0013.291	50	M12	69	20.8	28	50	12	171	2.8
571.0023.291	50	M12	94	20.8	31	75	12	196	2.8
571.0033.291	50	M12	119	20.8	33	100	12	221	3.0
571.0043.291	50	M12	169	20.8	40	150	12	271	3.3
571.0014.291	50	M16	69	28.8	34	50	12	171	2.8
571.0024.291	50	M16	94	28.8	34	75	12	196	2.9
571.0034.291	50	M16	119	28.8	36	100	12	221	3.1
571.0044.291	50	M16	169	28.8	42	150	12	271	3.5

使用：用于夹紧以螺纹为连接的铣刀。

Use : For clamping screw-in milling cutters with thread.

备注：其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

ACCESSORIES
 配件



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带扁尾莫氏圆锥孔刀柄
 Reduction Sleeves for morse taper with tang



DIN 69871 Form A $\lambda = 0.008$ G6.3 8000min⁻¹ CAD

No	SK	MK	A	d1	D	L	kg
454.0001.292	40	1	50	25	12.065	118	0.9
440.0002.050	40	1	120	25	12.065	188	1.2
454.0002.292	40	2	50	32	17.780	118	0.9
440.0004.050	40	2	120	32	17.780	188	1.6
454.0003.292	40	3	70	40	23.825	138	1.1
440.0006.050	40	3	135	40	23.825	203	2.2
454.0004.292	40	4	95	63	31.267	163	1.9
440.0008.050	40	4	165	63	31.267	233	2.8
454.0001.291	50	1	45	25	12.065	147	2.7
440.0010.050	50	1	120	25	12.065	222	4.5
454.0002.291	50	2	60	32	17.780	162	2.7
440.0012.050	50	2	135	32	17.780	237	3.7
454.0003.291	50	3	65	40	23.825	167	2.8
440.0014.050	50	3	150	40	23.825	252	4.3
454.0004.291	50	4	95	48	31.267	197	3.1
440.0016.050	50	4	180	48	31.267	282	5.4
454.0005.291	50	5	105	63	44.399	207	3.2
440.0018.050	50	5	210	63	44.399	312	6.3
440.0027.050	60	2	190	32	17.780	352	10.1
440.0019.050	60	3	190	40	23.825	352	10.1
440.0020.050	60	3	250	40	23.825	412	10.3
440.0021.050	60	4	210	50	31.267	372	10.6
440.0022.050	60	4	270	50	31.267	432	10.8
440.0023.050	60	5	240	63	44.399	402	12.4
440.0024.050	60	5	300	63	44.399	462	13.0
440.0025.050	60	6	170	90	63.348	332	12.5
440.0026.050	60	6	310	90	63.348	472	15.4

备注：其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

ACCESSORIES
 配件



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无扁尾莫氏圆锥孔刀柄
Reduction Sleeves for morse taper with thread



No	SK	MK	A	d1	D	L	g	kg
458.0001.292	40	1	50	25	12.065	118	M6	0.9
458.0002.292	40	2	50	32	17.780	118	M10	1.0
458.0003.292	40	3	70	40	23.825	138	M12	1.1
440.0004.055	40	4	95	63	31.267	163	M16	2.0
458.0001.291	50	1	45	25	12.065	147	M6	2.7
458.0002.291	50	2	60	32	17.780	162	M10	2.8
458.0003.291	50	3	65	40	23.825	167	M12	2.9
440.0010.055	50	4	70	63	31.267	172	M16	3.4
440.0008.055	50	4	100	63	31.267	202	M16	3.8
440.0011.055	50	5	100	78	44.399	202	M20	4.2
440.0009.055	50	5	130	78	44.399	232	M20	4.8
440.0016.055	60	2	100	32	17.780	262	M10	9.7
440.0012.055	60	3	100	40	23.825	262	M12	9.7
440.0013.055	60	4	100	50	31.267	262	M16	9.9
440.0014.055	60	5	100	70	44.399	262	M20	9.9
440.0015.055	60	6	150	90	63.348	312	M24	12.1

说明: 包括紧固螺钉和螺纹挡环。

Standard Specification: Retaining screw and threaded ring included.

备注: 其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

ACCESSORIES
配件



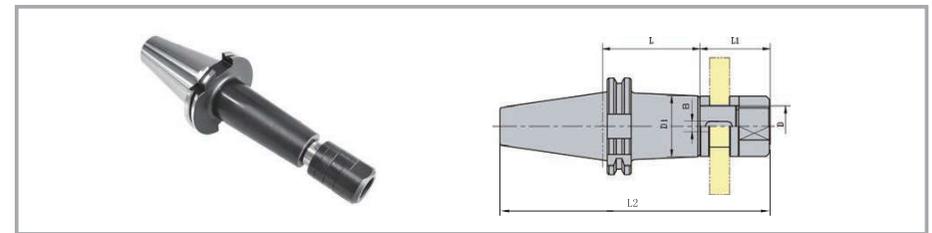
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三面刃铣刀柄
Side Milling Cutter Arbor



No	SK	D	D1	L	L1	L2	B	垫圈	三面刃铣刀直径	kg
440.0001.000	40	16	26	75	46	190	4	3J-310-16	Φ50	1.3
440.0002.000	40	16	26	105	46	220	4	3J-310-16	Φ50	1.5
440.0003.000	40	22	34	75	51	195	6	3J-310-22	Φ63	1.2
440.0004.000	40	22	34	120	51	240	6	3J-310-22	Φ63	2.0
440.0005.000	40	27	40	75	55	199	7	3J-310-27	Φ80	2.0
440.0006.000	40	27	40	120	55	244	7	3J-310-27	Φ80	2.7
440.0007.000	40	32	46	90	60	219	8	3J-310-32	Φ100, Φ125	2.5
440.0008.000	50	16	26	90	46	238	4	3J-310-16	Φ50	3.1
440.0009.000	50	16	26	120	46	268	4	3J-310-16	Φ50	3.4
440.0010.000	50	22	34	90	51	243	6	3J-310-22	Φ63	3.5
440.0011.000	50	22	34	135	51	288	6	3J-310-22	Φ63	3.9
440.0012.000	50	27	40	90	55	247	7	3J-310-27	Φ80	3.9
440.0013.000	50	27	40	135	55	292	7	3J-310-27	Φ80	4.5
440.0014.000	50	32	46	90	60	252	8	3J-310-32	Φ100, Φ125	5.5
440.0015.000	50	32	46	135	60	297	8	3J-310-32	Φ100, Φ125	5.6
440.0016.000	50	40	55	90	66	258	10	3J-310-40	Φ160, Φ200	5.3
440.0017.000	50	40	55	135	66	303	10	3J-310-40	Φ160, Φ200	5.7
440.0090.000	50	50	68	90	85	277	12	3J-310-50	Φ200, Φ250	6.1
440.0091.000	50	50	68	135	85	322	12	3J-310-50	Φ200, Φ250	6.6
440.0018.000	60	40	55	135	66	363	10	3J-310-40	Φ160, Φ200	14.7
440.0019.000	60	50	68	135	85	382	12	3J-310-50	Φ200, Φ250	14.8
440.0020.000	60	60	64	135	105	402	14	3J-310-60	Φ250, Φ315	15.4

注: 垫圈单独订货时, 成组供货, 每组6个, 芯轴直径为Φ16~Φ40的刀柄, 垫圈厚度分别为3、5、7、8、10、12, 芯轴直径为Φ50~Φ60的刀柄, 垫圈厚度为别为4、6、8、10、12、15。

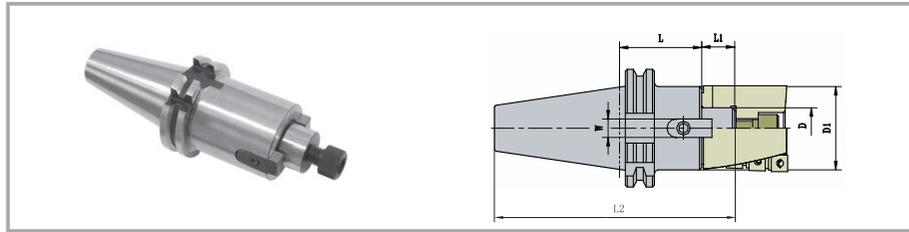
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套式立铣刀柄
Shell End Mill Arbors



No	SK	D	D1	L	L1	L2	W	紧固螺钉	套式立铣刀直径	kg
440.0001.001	40	16	32	75	17	161	8	M8	Φ40	1.2
440.0002.001	40	16	32	120	17	206	8	M8	Φ40	1.6
440.0003.001	40	22	40	75	19	163	10	M10	Φ50	1.5
440.0004.001	40	22	40	120	19	208	10	M10	Φ50	2.0
440.0005.001	40	27	48	75	21	165	12	M12	Φ63, Φ80	1.9
440.0006.001	40	27	48	105	21	195	12	M12	Φ63, Φ80	2.3
440.0007.001	40	32	58	75	24	168	14	M16	Φ100	2.2
440.0008.001	50	16	32	75	17	194	8	M8	Φ40	3.1
440.0009.001	50	16	32	120	17	239	8	M8	Φ40	3.9
440.0010.001	50	22	40	75	19	196	10	M10	Φ50	3.3
440.0011.001	50	22	40	120	19	241	10	M10	Φ50	3.8
440.0012.001	50	27	48	75	21	198	12	M12	Φ63, Φ80	3.7
440.0013.001	50	27	48	105	21	228	12	M12	Φ63, Φ80	4.1
440.0014.001	50	32	58	75	24	201	14	M16	Φ100	3.8
440.0015.001	50	40	70	75	27	204	16	M20	Φ125	5.4
440.0016.001	50	50	90	75	30	207	18	M24	Φ160	5.5
440.0017.001	60	32	58	75	24	261	14	M16	Φ100	13.2
440.0018.001	60	40	70	90	27	279	16	M20	Φ125	14.7
440.0019.001	60	50	90	120	30	312	18	M24	Φ160	14.8

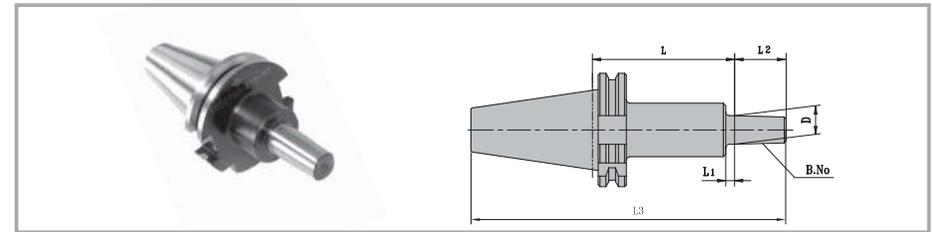
ACCESSORIES
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钻夹头刀柄
Drill Chuck Arbors



No	SK	B.No	L	L1	L2	L3	D	kg
440.0001.071	40	B10	45	3.5	14.5	128	10.094	0.9
440.0002.071	40	B10	90	3.5	14.5	173	10.094	1.2
440.0003.071	40	B12	45	3.5	18.5	132	12.065	0.9
440.0004.071	40	B12	90	3.5	18.5	177	12.065	0.9
440.0005.071	40	B16	45	5	24	138	15.733	1.0
440.0006.071	40	B16	90	5	24	183	15.733	1.2
440.0007.071	40	B18	45	5	32	146	17.780	1.0
440.0008.071	40	B18	90	5	32	191	17.780	1.4
440.0009.071	50	B10	45	3.5	14.5	162	10.094	2.7
440.0010.071	50	B10	105	3.5	14.5	222	10.094	3.1
440.0011.071	50	B12	45	3.5	18.5	166	12.065	2.7
440.0012.071	50	B12	105	3.5	18.5	226	12.065	3.1
440.0013.071	50	B16	45	5	24	171	15.733	2.8
440.0014.071	50	B16	105	5	24	231	15.733	3.1
440.0015.071	50	B18	45	5	32	179	17.780	2.8
440.0016.071	50	B18	105	5	32	239	17.780	3.1
440.0017.071	60	B16	105	5	24	291	15.733	12.5
440.0018.071	60	B18	105	5	32	299	17.780	12.5

ACCESSORIES
配件



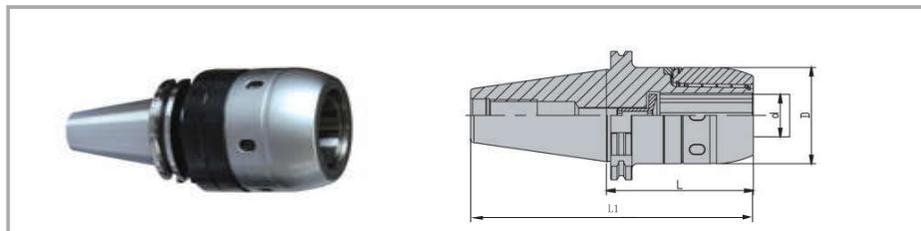
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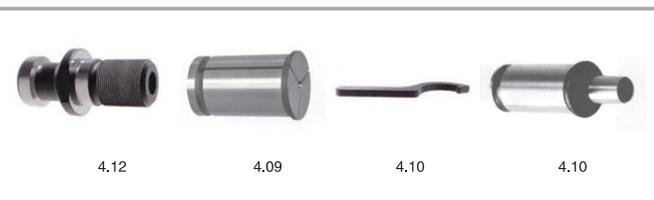
强力铣夹头刀柄
Strong Chuck Holder for Boring and Milling



No	SK	d	L	L1	D	配用扳手GB4625	Kg
740.0321.111	40	20	110	179	58	55-62	2.3
740.0322.111	40	20	160	229	58	55-62	3.1
740.0323.111	40	20	200	269	58	55-62	3.7
740.0324.111	40	25	110	179	65	68-72	2.6
740.0325.111	40	25	160	229	65	68-72	3.4
740.0326.111	40	25	200	269	65	68-72	4.2
740.0327.111	40	32	110	179	73	55-62	3.0
740.0328.111	40	32	160	229	73	55-62	4.5
740.0329.111	40	32	200	269	73	55-62	5.6
740.0330.111	50	20	110	212	58	55-62	4.1
740.0331.111	50	20	160	262	58	55-62	4.9
740.0332.111	50	20	200	302	58	55-62	5.7
740.0333.111	50	25	110	212	65	68-72	4.6
740.0334.111	50	25	160	262	65	68-72	5.6
740.0335.111	50	25	200	302	65	68-72	6.3
740.0336.111	50	32	110	212	73	68-72	4.7
740.0337.111	50	32	160	262	73	68-72	6.2
740.0338.111	50	32	200	302	73	68-72	6.9
740.0339.111	50	40	120	222	88	78-85	6.1
740.0340.111	50	40	160	262	88	78-85	7.7
740.0341.111	50	40	200	302	88	78-85	8.8
740.0285.111	50	50	120	222	105	100-110	5.9
740.0342.111	50	50	140	242	105	100-110	7.8
740.0343.111	50	50	160	262	105	100-110	8.6
740.0344.111	50	50	200	302	105	100-110	10.3
740.0345.111	60	20	130	292	58	55-62	11.0
740.0346.111	60	20	160	322	58	55-62	11.6
740.0347.111	60	20	200	362	58	55-62	12.4
740.0348.111	60	25	130	292	65	68-72	11.3
740.0349.111	60	25	160	322	65	68-72	12.1
740.0350.111	60	25	200	362	65	68-72	13.1
740.0351.111	60	32	130	292	73	68-72	11.7
740.0352.111	60	32	160	322	73	68-72	12.6
740.0353.111	60	32	200	362	73	68-72	13.9
740.0354.111	60	40	130	292	88	78-85	12.5
740.0355.111	60	40	160	322	88	78-85	13.9
740.0356.111	60	40	200	362	88	78-85	15.4
740.0357.111	60	50	140	292	105	100-110	13.9
740.0358.111	60	50	160	322	105	100-110	15.3
740.0359.111	60	50	200	362	105	100-110	18.0

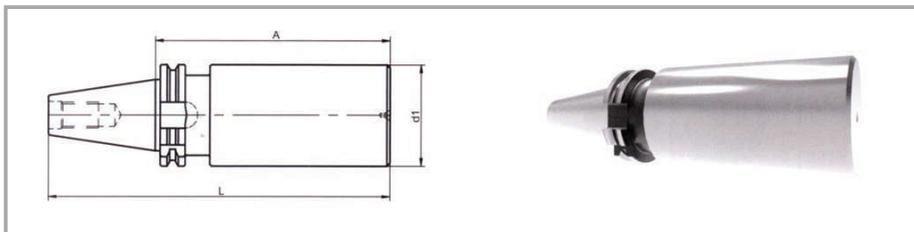
注：配用扳手需要单独订货；
被夹持直柄刀具的柄部公差为h6；
使用配用扳手夹紧直柄刀具时，不允许使用套管等辅助工具；
3倍直径处径向跳动精度≤0.007mm。

ACCESSORIES
配件



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毛坯刀柄
Tool Blanks



DIN 69882-4
Form A

No	SK	d1	A	L	kg
517.5001.292	40	63	150	218	3.8
517.6002.292	40	63	250	318	6.3
517.6002.291	50	63	315	417	9.5
517.5001.291	50	95	180	282	10.7
517.5002.291	50	95	315	417	18.2

使用: 用于制造特殊刀具及工具系统产品。

设计: 锥柄为磨制成品, 尺寸符合柄部标准, 维氏硬度 HV670±40 (近似于HRC58±2), 淬硬层在 0.5mm以上。预备精加工部分硬度HRC40-46。

材料: 合金钢

备注: 其他型号和尺寸可按订做要求制作。

Use: For own manufacture of special tools.

Design: The taper is finished with grinding, the dimensions are in accordance with the standard of the handle, HV670±40 (approximately HRC58±2), the hardened layer is above 0.5mm. Tool part is HRC40-46.

Material: Alloyed case-hardened steel.

Note: Other designs and sizes are available on request.

ACCESSORIES

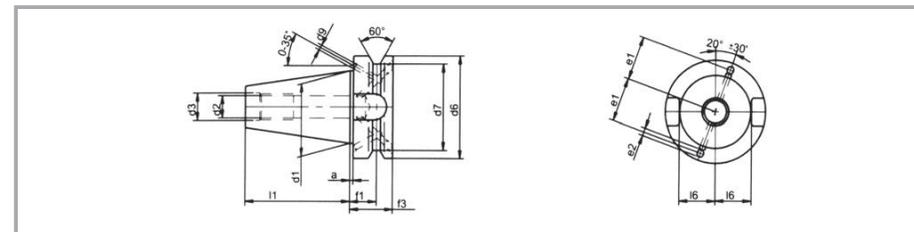
配件



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日本标准锥柄(BT)
Tool Holders JIS 6339



JIS 6339
MAS 403 BT
Form AD/B

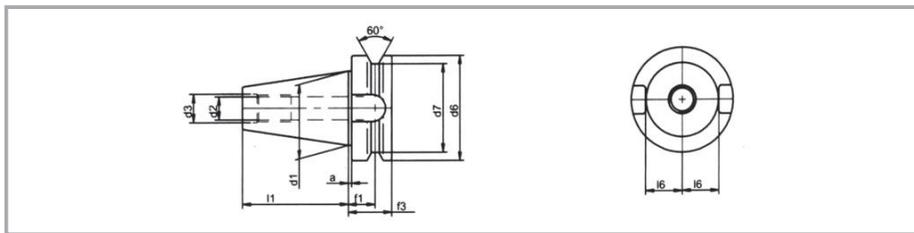
SK	d1	d2	d3 h8	d6 h8	d7	d9	f1 ±0.15	f6 -0.2
40	44.45	M16	17	63	53	4	65.40	22.6
50	69.85	M24	25	100	85	6	101.80	35.4

SK	e1 ±0.1	e2	a	f1	f3
40	27	5	2	16.6	27
50	42	7	3	23.2	38

符合JIS B 6339 AD/B型, 并且通过法兰进行内冷却和外冷却的锥柄同时也符合DIN 69871-AD/B型。其中B型冷却孔是由螺栓封堵的, 按实际需要也可以拆卸。

JIS B 6339 Type AD/B for, central coolant supply and lateral coolant supply via the tool flange according to DIN 69871-1 Type AD/B Coolant bores for type B are closed with threaded pins on delivery. If required, unscrew the threaded pins.

日本标准锥柄 (BT)
Tool Holders JIS 6339



JIS 6339 MAS 403 BT Form AD

SK	d1	d2	d3 h8	d6 h8	d7	l1 ±0.15	l6 -0.2
40	44.45	M16	17	63	53	65.40	22.6
50	69.85	M24	25	100	85	101.80	35.4

SK	a	f1	f3
40	2	16.6	27
50	3	23.2	38

内冷却符合 JIS B 6339 AD型

设计：硬度应满足较低的变形量，维氏度在 HV670 ± 40 (近似于HRC 58 ± 2)，淬硬（渗碳）层在0.5mm以上。锥度公差在AT3符合DIN 2080-1。

材料：一般要求：符合硬度要求的合金钢材料并且能承受扭矩980N/MM²

说明：价格和交付情况如有变化会在订单上实时更新。制造商保留对技术修改的权力。单位以mm。

Central coolant supply according to JIS B 6339 Type AD

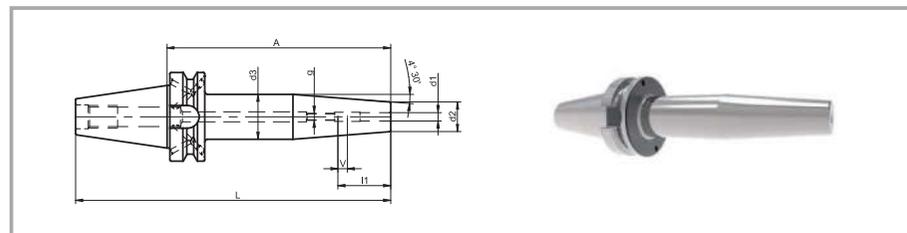
Design : Hardened by means as a special low-distortion haedening process.Vickers hardness 670 ± 40HV30 (HRC58 ± 2).Hardness depth Eht=min0.5mm Taperangle tolerance quality AT 3 according to DIN 2080-1.

For details of concentricity of steep taper to tool holder, refer to appropriate page of catalogue.

Material: If there is no other specification :Case-hardened alloy steel wiht a core tensite strength after case hardening of min.980N/MM².

Standard Specification: Prices and delivery conditions are shoen in the corresponding price list valid at the time in question.Manufactrer reserves the right to make technocal modifications.All dimensions in mm.

i-tec® 热装夹头 (标准型)
i-tec® Shrink-fit Chucks standard version



JIS R6339 MAS 403 BT Form AD/B 0.003 G2-E 25,000 min⁻¹ <10 mm möglich CAD

No	SK	d1	A	d2	d3	l1	g	L	v	kg
311.0111.265	40	3	80	12	17	—	—	146	10	1.1
311.0113.265	40	4	80	12	17	—	—	146	10	1.1
311.0115.265	40	5	80	12	17	—	—	146	10	1.1
311.0101.265	40	6	90	21	31	36	M 5	156	10	1.2
311.0151.265	40	6	160	21	32	36	M 5	226	10	1.7
311.0102.265	40	8	90	21	31	36	M 6	156	10	1.2
311.0152.265	40	8	160	21	32	36	M 6	226	10	1.7
311.0103.265	40	10	90	24	34	41	M 8 x 1	156	10	1.3
311.0153.265	40	10	160	24	34	41	M 8 x 1	226	10	1.7
311.0104.265	40	12	90	24	34	47	M10 x 1	156	10	1.3
311.0154.265	40	12	160	24	34	47	M10 x 1	226	10	1.7
311.0105.265	40	14	90	27	37	47	M10 x 1	156	10	1.3
311.0155.265	40	14	160	27	36	47	M10 x 1	226	10	1.8
311.0106.265	40	16	90	27	37	50	M12 x 1	156	10	1.3
311.0156.265	40	16	160	27	36	50	M12 x 1	226	10	1.8
311.0107.265	40	18	90	33	43	50	M12 x 1	156	10	1.4
311.0157.265	40	18	160	33	44	50	M12 x 1	226	10	2.2
311.0108.265	40	20	90	33	43	52	M16 x 1	156	10	1.4
311.0158.265	40	20	160	33	44	52	M16 x 1	226	10	2.1
311.0109.265	40	25	100	44	48	58	M16 x 1	166	10	1.8
311.0159.265	40	25	160	44	53	58	M16 x 1	226	10	2.7
311.0101.225	50	6	100	21	31	36	M 5	202	10	3.8
311.0151.225	50	6	160	21	32	36	M 5	262	10	4.2
311.0102.225	50	8	100	21	31	36	M 6	202	10	3.8
311.0152.225	50	8	160	21	32	36	M 6	262	10	4.2
311.0103.225	50	10	100	24	34	41	M 8 x 1	202	10	3.9
311.0153.225	50	10	160	24	34	41	M 8 x 1	262	10	4.3
311.0104.225	50	12	100	24	34	47	M10 x 1	202	10	3.8
311.0154.225	50	12	160	24	34	47	M10 x 1	262	10	4.2
311.0105.225	50	14	100	27	37	47	M10 x 1	202	10	3.9
311.0155.225	50	14	160	27	36	47	M10 x 1	262	10	4.3
311.0106.225	50	16	100	27	37	50	M12 x 1	202	10	3.8
311.0156.225	50	16	160	27	36	50	M12 x 1	262	10	4.3
311.0107.225	50	18	100	33	43	50	M12 x 1	202	10	4.0
311.0157.225	50	18	160	33	44	50	M12 x 1	262	10	4.6

No	SK	d1	A	d2	d3	l1	g	L	v	kg
311.0108.225	50	20	100	33	43	52	M16 x 1	202	10	4
311.0158.225	50	20	160	33	44	52	M16 x 1	262	10	4.5
311.0109.225	50	25	120	44	57	58	M16 x 1	222	10	4.6
311.0159.225	50	25	160	44	53	58	M16 x 1	262	10	5.1
311.0110.225	50	32	120	44	57	61	M16 x 1	222	10	4.4
311.0160.225	50	32	160	44	53	61	M16 x 1	262	10	4.9

设计: 被夹持刀具的柄部直径公差应为h6级。

Design: The clamping diameter is designed for a shank tolerance of h6.

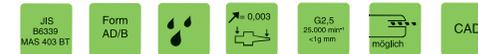
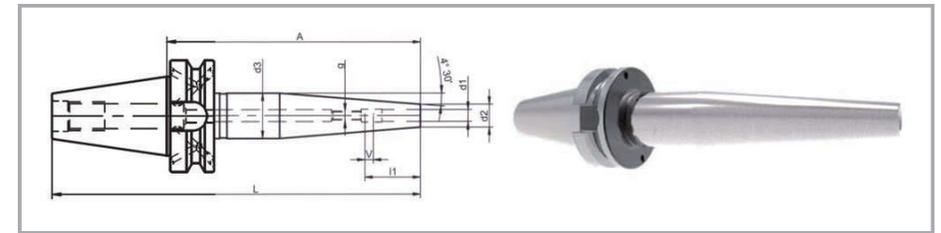
说明: 不包括调整长度用的调整螺钉。

Standard Specification: Adjusting screw for length adjustment is not included.

备注: 其他型号和尺寸可按订做要求制作。

Note: Other designs and sizes are available on request.

i-tec® 热装夹头 (细长型)
i-tec® Mandrins de frettage version fine



No	SK	d1	A	d2	d3	l1	g	L	v	kg
311.0700.265	40	3	120	9	25	—	—	186	—	1.1
311.0710.265	40	3	160	9	25	—	—	226	—	1.2
311.0701.265	40	4	120	9	25	—	—	186	—	1.1
311.0711.265	40	4	160	9	25	—	—	226	—	1.2
311.0702.265	40	5	120	9	25	—	—	186	—	1.1
311.0712.265	40	5	160	9	25	—	—	226	—	1.2
311.0703.265	40	6	120	15	31	36	M5	186	10	1.2
311.0713.265	40	6	160	15	30	36	M5	226	10	1.4
311.0704.265	40	8	120	15	31	36	M6	186	10	1.2
311.0714.265	40	8	160	15	30	36	M6	226	10	1.4
311.0705.265	40	10	120	18	34	41	M8 x 1	186	10	1.3
311.0715.265	40	10	160	18	32	41	M8 x 1	226	10	1.5
311.0706.265	40	12	120	18	34	47	M10 x 1	186	10	1.2
311.0716.265	40	12	160	18	32	47	M10 x 1	226	10	1.5
311.0700.225	40	3	120	9	25	—	—	222	—	3.7
311.0710.225	40	3	160	9	25	—	—	262	—	3.8
311.0701.225	40	4	120	9	25	—	—	222	—	3.7
311.0711.225	40	4	160	9	25	—	—	262	—	3.8
311.0702.225	40	5	120	9	25	—	—	222	—	3.7
311.0712.225	40	5	160	9	25	—	—	262	—	3.8
311.0703.225	40	6	120	15	31	36	M5	222	10	3.8
311.0713.225	40	6	160	15	30	36	M5	262	10	4.0
311.0704.225	40	8	120	15	31	36	M6	222	10	3.8
311.0714.225	40	8	160	15	30	36	M6	262	10	4.0
311.0705.225	40	10	120	18	34	41	M8 x 1	222	10	3.9
311.0715.225	40	10	160	18	32	41	M8 x 1	262	10	4.1
311.0706.225	40	12	120	18	34	47	M10 x 1	222	10	3.8
311.0716.225	40	12	160	18	32	47	M10 x 1	262	10	4.0

ACCESSORIES
配件



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设计: 被夹持刀具柄部直径公差应为h6级。

Design: The clamping diameter is designed for a shank tolerance of h6.

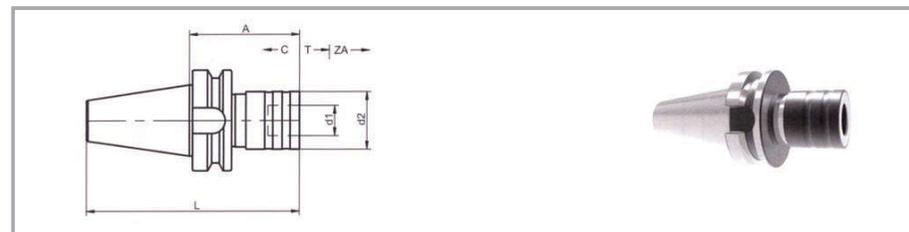
说明: 不包括调整长度用的调整螺钉(从Φ6起)。

Standard Specification: Adjusting screw for length adjustment(from Φ6) is not included.

备注: 其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

丝锥快换夹头
Quick Change Tapping Chucks



No	SK	M	A	d1	d2	L	C	T	kg
440.0001.265	40	M3-M12	66.5	19	36	131.9	6.5	7.5	3.4
440.0109.161	40	M3-M12	120	19	36	185.4	6.5	7.5	4.7
440.0002.265	40	M8-M20	93.5	31	53	158.9	8.5	15	3.9
440.0111.161	40	M8-M20	150	31	53	215.4	8.5	15	5.3
440.0003.225	50	M3-M12	82	19	36	183.8	6.5	7.5	4.0
440.0001.225	50	M8-M20	101.5	31	53	203.3	8.5	15	13.3
440.0113.161	50	M8-M20	180	31	53	281.8	8.5	15	18.4
440.0114.161	50	M14-M33	140	48	78	241.8	15	23	14.9
440.0115.161	50	M14-M33	200	48	78	301.8	15	23	19.0

使用: 用于夹持带或不带安全连接的快换丝锥夹套。

Use: For holding quick change inserts with or without safety clutch.

设计: 长度补偿在收缩和拉伸方向取决于进给和螺距的不同。压缩时能够保证当轴向力达到允许值时立即脱离攻丝状态, 拉力释放时能够保证丝锥夹头免于过大轴向拉力造成的损害。

Design: Length compensation on compression and tension to compensate the difference between feed and tap pitch. The pressure point mechanism guarantees that the tap immediately cuts the thread as soon as the permissible axial force is reached. The tension lock protects the tapping chuck against damage as a result of high axial tensile load.

备注: 其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

ACCESSORIES
配件

4.12 4.14

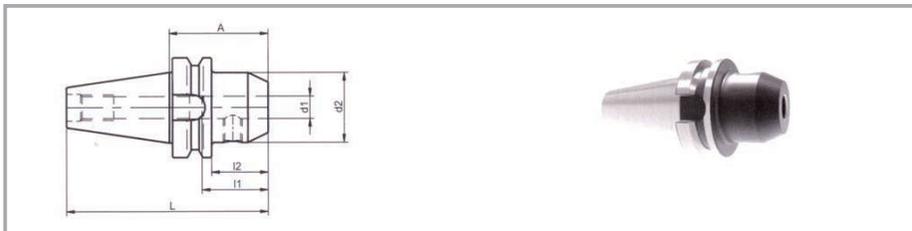
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ACCESSORIES
配件

4.13 4.08

PAGE
页数

削平型直柄立铣刀刀柄 (威尔顿型)
Reduction Sleeves for Straight Shanks with lateral driving surface (Weldon)



No	SK	d1	A	d2	l2	L	Tol/d1	kg
420.0011.265	40	6	50	25	23	116	+0.005	1.1
420.0012.265	40	8	50	28	23	116	+0.005	1.1
420.0003.265	40	10	63	35	35	129	+0.005	1.2
420.0004.265	40	12	63	42	36	129	+0.005	1.3
420.0044.265	40	14	63	44	36	129	+0.005	1.3
420.0005.265	40	16	63	48	36	129	+0.005	1.4
420.0048.265	40	18	63	50	36	129	+0.005	1.4
420.0006.265	40	20	63	52	36	129	+0.007	1.4
420.0007.265	40	25	90	65	63	156	+0.007	2.2
420.0008.265	40	32	100	72	73	166	+0.007	2.7
420.0011.225	50	6	63	25	25	165	+0.005	3.7
420.0012.225	50	8	63	28	25	165	+0.005	3.8
420.0013.225	50	10	63	35	25	165	+0.005	3.8
420.0004.225	50	12	80	42	42	182	+0.005	4.0
420.0044.225	50	14	80	44	42	182	+0.005	4.0
420.0005.225	50	16	80	48	42	182	+0.005	4.0
420.0048.225	50	18	80	50	42	182	+0.005	4.0
420.0006.225	50	20	80	52	42	182	+0.007	4.1
420.0007.225	50	25	100	65	62	202	+0.007	4.7
420.0018.225	50	32	105	72	67	207	+0.007	5.1
440.0044.009	50	40	125	90	87	227	+0.007	5.7
440.0045.009	50	50	125	100	87	227	+0.007	5.7
440.0047.009	60	25	111	35	62	272	+0.009	13.2
440.0048.009	60	32	125	72	77	287	+0.007	14.1
440.0049.009	60	40	125	90	77	287	+0.007	15.0
440.0050.009	60	50	150	100	102	312	+0.009	15.4
440.0051.009	60	63	150	130	132	342	+0.009	15.9

使用: 按DIN 1835 B型 (威尔顿型) 和DIN 6535 HB型夹持直柄铣刀:

说明: 包括配好的夹紧螺钉, 从d1=25mm的孔起提供2个紧固螺钉。

备注: 其他型号和尺寸可按订货要求制作。

Use: For holding shank tools with lateral driving surface, DIN 1835 type B and DIN 6535 type HB.

Standard Specification: With clamping screw. From location hole d1 = 25mm 2 clamping screws are included.

Note: Other designs and sizes are available on request.

ACCESSORIES

配件



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带2° 斜削平型 直柄立铣刀刀柄 (威斯尔巴口型)

Reduction Sleeves for Straight Shanks with inclined clamping surface (Whistle Notch)



No	SK	d1	A	d2	I1	I2	g	L	Tol/d1	V	kg
420.0506.265	40	6	50	25	38	23	M 5	116	+ 0,005	10	1,1
420.0508.265	40	8	50	28	38	23	M 6	116	+ 0,005	10	1,1
420.0510.265	40	10	63	35	41	36	M 8	129	+ 0,005	10	1,2
420.0512.265	40	12	63	42	47	36	M10	129	+ 0,005	10	1,3
420.0514.265	40	14	63	44	47	36	M10	129	+ 0,005	10	1,3
420.0516.265	40	16	63	48	50	36	M12	129	+ 0,005	10	1,4
420.0518.265	40	18	63	50	50	36	M12	129	+ 0,005	10	1,4
420.0520.265	40	20	63	52	52	36	M16	129	+ 0,007	10	1,4
420.0525.265	40	25	90	65	58	63	M20	156	+ 0,007	10	2,2
420.0532.265	40	32	100	72	61	73	M20	166	+ 0,007	10	2,7
420.0606.225	50	6	63	25	38	25	M 5	165	+ 0,005	10	3,7
420.0608.225	50	8	63	28	38	25	M 6	165	+ 0,005	10	3,7
420.0610.225	50	10	63	35	41	25	M 8	165	+ 0,005	10	3,8
420.0612.225	50	12	80	42	47	42	M10	182	+ 0,005	10	4,0
420.0614.225	50	14	80	44	47	42	M10	182	+ 0,005	10	4,0
420.0616.225	50	16	80	48	50	42	M12	182	+ 0,005	10	4,0
420.0618.225	50	18	80	50	50	42	M12	182	+ 0,005	10	4,1
420.0620.225	50	20	80	52	52	42	M16	182	+ 0,007	10	4,1
420.0625.225	50	25	100	65	58	62	M20	202	+ 0,007	10	4,8
420.0632.225	50	32	105	72	61	67	M20	207	+ 0,007	10	5,1

使用: 用于夹持带角度驱动面 (2°) 的直柄铣刀, DIN1835标准中的E型和DIN6535 HE型。

说明: 包括配好的夹紧螺钉和限位螺钉, 从d1=25 mm的孔起提供2个紧固螺钉。

备注: 带孔的止动螺钉用于内冷却, 其他型号和尺寸可按订货要求制作。配件及页数。

Use: For holding shank tools with inclined clamping surface (2°), DIN 1835 type E and DIN 6535 type HE.

Standard Specification: Clamping screw and adjusting screw included. From location hole d1 = 25mm 2 clamping screws are included.

Note: Bored through adjusting screw for coolant. Other designs and sizes are available on request.

ACCESSORIES

配件

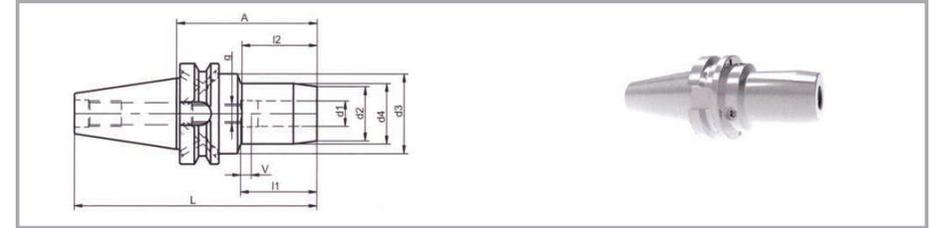


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页数

液压夹头

Hydraulic Expansion Chucks



No	SK	d1	A	d2	d3	d4	I1	I2	g	L	V	kg
702.0001.265	40	6	90	22	50	26	37	40	M 5	155	10	1,6
702.0002.265	40	8	90	24	50	28	37	40	M 6	155	10	1,6
702.0003.265	40	10	90	26	50	30	41	40	M 8x1	155	10	1,6
702.0004.265	40	12	90	28	50	32	46	40	M10x1	155	10	1,6
702.0005.265	40	14	90	30	50	34	46	40	M10x1	155	10	1,6
702.0006.265	40	16	90	34	50	38	49	46	M12x1	155	10	1,6
702.0007.265	40	18	90	36	50	40	49	46	M12x1	155	10	1,6
702.0008.265	40	20	90	38	50	42	51	46	M16x1	155	10	1,6
702.0009.265	40	25	90	45	55	50	57	63	M16x1	155	10	2,2
702.0010.265	40	32	110	56	63	63	61	68	M16x1	175	10	2,4
702.0001.225	50	6	110	22	50	26	37	40	M 5	212	10	4,2
702.0002.225	50	8	110	24	50	28	37	40	M 6	212	10	4,2
702.0003.225	50	10	110	26	50	30	41	40	M 8x1	212	10	4,2
702.0004.225	50	12	110	28	50	32	46	40	M10x1	212	10	4,2
702.0005.225	50	14	110	30	50	34	46	40	M10x1	212	10	4,2
702.0006.225	50	16	110	34	50	38	49	46	M12x1	212	10	4,2
702.0007.225	50	18	110	36	50	40	49	46	M12x1	212	10	4,2
702.0008.225	50	20	110	38	50	42	51	46	M16x1	212	10	4,2
702.0009.225	50	25	110	45	60	55	57	55	M16x1	212	10	5,6
702.0010.225	50	32	115	56	70	63	61	55	M16x1	217	10	5,8

使用: 用于夹持按DIN 1835 A、B型或DIN 6535 HA或HB型直柄刀具, DIN1835 C、DE型和DIN 6535 HE型刀柄, 仅能与缩径套共用。加持精度h6级, 粗糙度最小为Ra0.3, 对于φ25和φ32只有DIN 1835 A型和DIN 6535HA型可用。

说明: 带内置的限位螺钉。

备注: 其他型号和尺寸可按订货要求制作

Use: For shank tools according to DIN 1835 type A and B and DIN 6535 type HA and HB. Shanks according to DIN 6535 type HE are only applicable with reduction bushes. Shank quality h6, Ra min. = 0.3. For φ25 and φ32 only type A or HA can be used.

Standard Specification: Bored through adjusting screw included.

Note: Other designs and sizes are available on request.

ACCESSORIES

配件



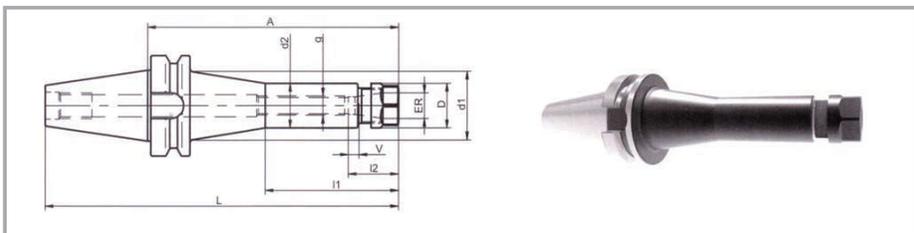
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ER/ESX ER-16弹簧夹头刀柄 (带调整螺钉孔)
Collet Chucks ER/ESX 16 with internal thread



No	SK	ER	A	d1	d2	D	I1	I2	g	L	V	kg
698.0001.265	40	ER16(0.5-10)	63	—	28	28	—	27	M 12	128	10	1.1
698.0002.265	40	ER16(0.5-10)	100	—	28	28	—	27	M 12	166	10	1.2
698.0003.265	40	ER16(0.5-10)	160	46	28	28	85	27	M 12	226	10	1.6
698.0001.225	50	ER16(0.5-10)	100	—	28	28	—	27	M 12	202	10	3.8
698.0002.225	50	ER16(0.5-10)	160	78	28	28	85	27	M 12	262	10	4.0

使用: 用于夹持按DIN 1835 A、B、E型或DIN 6535 HA、HBHE型的直柄刀具。

Use: For clamping tools with straight shank according to DIN 1835 type A, B and E and DIN 6535 type HA, HB and HE.

说明: 夹头包括夹紧螺母。

Standard Specification: Collet chuck including clamping nut.

备注: 弹簧夹头配有标准调整螺钉便于调节; 其他型号和尺寸可按订货要求制作。

Note: Collet chucks are equipped with internal thread for adjusting screws. Other designs and sizes are available on request.

ACCESSORIES
配件



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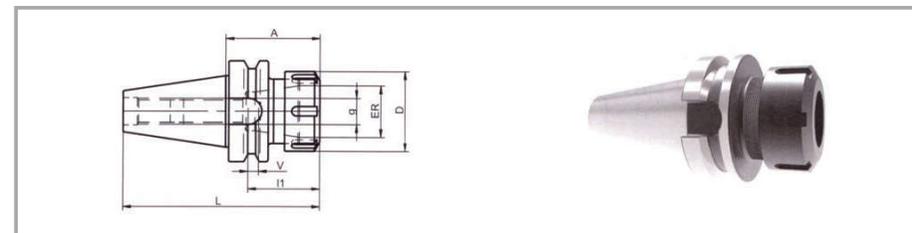
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ER/ESX ER-25/32/40弹簧夹头刀柄 (带调整螺钉孔)
Collet Chucks ER/ESX 25/32/40 with internal thread



No	SK	ER	A	D	I1	g	L	v	kg
640.0123.040	40	ER 20 (1 - 13)	70	34	40	M12	136	10	1.3
640.0240.040	40	ER 20 (1 - 13)	100	34	40	M12	166	10	1.5
640.0241.040	40	ER 20 (1 - 13)	160	34	40	M12	226	10	1.8
640.0125.040	40	ER 25 (1 - 16)	70	42	43	M16	136	10	1.3
697.0033.265	40	ER 25 (1 - 16)	100	42	43	M16	166	10	1.5
697.0043.265	40	ER 25 (1 - 16)	160	42	43	M16	226	10	2.2
640.0127.040	40	ER 32 (2 - 20)	70	50	47	M16	136	10	1.3
697.0031.265	40	ER 32 (2 - 20)	100	50	47	M16	166	10	1.7
697.0041.265	40	ER 32 (2 - 20)	160	50	47	M16	226	10	2.5
697.0002.265	40	ER 40 (3 - 26)	80	63	53	M16	146	10	1.8
697.0032.265	40	ER 40 (3 - 26)	120	63	53	M16	186	10	2.3
697.0042.265	40	ER 40 (3 - 26)	160	63	53	M16	226	10	3.2
640.0244.040	50	ER 20 (1 - 13)	70	34	40	M16	172	10	3.5
640.0133.040	50	ER 20 (1 - 13)	100	34	40	M16	202	10	3.9
640.0245.040	50	ER 20 (1 - 13)	160	34	40	M16	262	10	4.3
640.0246.040	50	ER 25 (1 - 16)	70	42	43	M16	172	10	3.6
640.0135.040	50	ER 25 (1 - 16)	100	42	43	M16	202	10	3.9
640.0247.040	50	ER 25 (1 - 16)	160	42	43	M16	262	10	4.5
697.0001.225	50	ER 32 (2 - 20)	70	50	47	M16	172	10	3.7
640.0137.040	50	ER 32 (2 - 20)	100	50	47	M16	202	10	3.9
640.0248.040	50	ER 32 (2 - 20)	160	50	47	M16	262	10	5.1
697.0002.225	50	ER 40 (3 - 26)	80	63	53	M16	182	10	3.8
640.0249.040	50	ER 40 (3 - 26)	120	63	53	M16	222	10	4.2
640.0250.040	50	ER 40 (3 - 26)	160	63	53	M16	262	10	5.5
640.0251.040	60	ER 25 (1 - 16)	100	42	43	M16	262	10	13.8
640.0252.040	60	ER 25 (1 - 16)	160	42	43	M16	322	10	14.3
640.0253.040	60	ER 32 (2 - 20)	100	50	47	M16	262	10	13.2
640.0254.040	60	ER 32 (2 - 20)	160	50	47	M16	322	10	14.7
640.0255.040	60	ER 40 (3 - 26)	100	63	53	M16	262	10	13.5
640.0256.040	60	ER 40 (3 - 26)	160	63	53	M16	322	10	14.8

使用: 用于夹持按DIN 1835 A、B、E型或DIN 6535 HA、HB、HE型的直柄刀具。

Use: For clamping tools with straight shank according to DIN 1835 type A, B and E and DIN 6535 type HA, HB and HE.

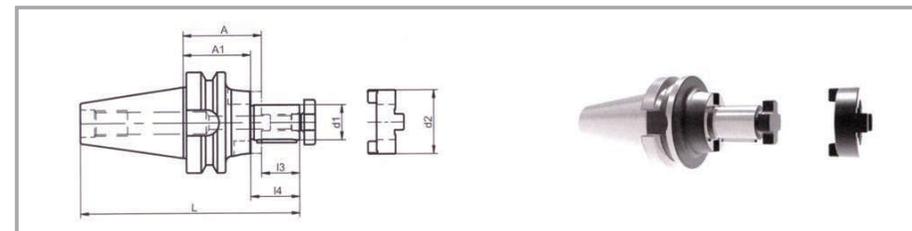
说明: 夹头包括夹紧螺母。

Standard Specification: Collet chuck including clamping nut.

备注: 弹簧夹头配有标准调整螺钉便于调节; 其他型号和尺寸可按订货要求制作。

Note: Collet chucks are equipped with internal thread for adjusting screws. Other designs and sizes are available on request.

套式铣刀刀柄 (带平键和传动环)
Shell End Mill Arbors for milling cutters with longitudinal slot or tenon drive



No	SK	d1	A	d2	l3	l4	L	A1	kg
489.0011.265	40	16	55	32	17	27	138	45	1.1
489.0012.265	40	22	55	40	19	31	140	43	1.2
489.0013.265	40	27	55	48	21	33	142	43	1.3
489.0004.265	40	32	60	58	24	38	150	46	1.5
489.0005.265	40	40	60	70	27	41	153	46	1.8
489.0011.225	50	16	70	32	17	27	189	60	3.8
489.0012.225	50	22	70	40	19	31	191	58	3.8
489.0013.225	50	27	70	48	21	33	193	58	4.0
489.0014.225	50	32	70	58	24	38	196	56	4.1
489.0015.225	50	40	70	70	27	41	199	56	4.3
489.0016.225	50	50	70	50	30	46	202	54	4.7

使用: 用于夹持带有平键和传动环的面铣刀。

Use: For clamping shell end mills and milling cutters with longitudinal slot or tenon drive.

设计: 带有中心冷却功能, 传动环符合DIN 138。

Design: Central boring for coolant supply. Cutter drive according to DIN 138.

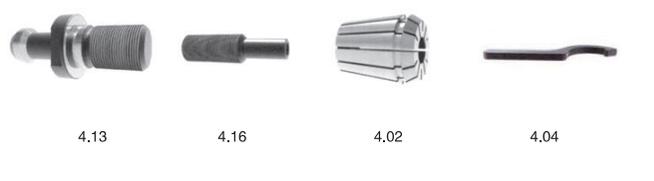
说明: 包括紧固螺钉、带有螺孔的平键和传动环

Standard Specification: Cutter retaining screw, feather key with withdrawal thread and drive ring included.

备注: 其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

ACCESSORIES
配件



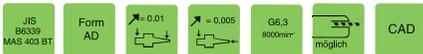
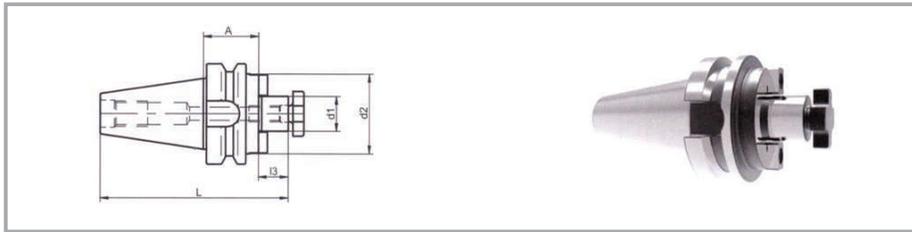
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端铣刀柄
Shell End Mill Arbors with enlarged contact diameter



No	SK	d1	A	d2	l3	L	W	夹刀螺钉	十字形扳手	kg
579.0001.265	40	22	35	50	19	120	10	M10	SK-00210-3	1.2
540.0002.004	40	22	90	50	19	175	10	M10	SK-00210-3	1.9
579.0002.265	40	27	35	60	21	122	12	M12	SK-00210-4	1.2
540.0004.004	40	27	90	60	21	177	12	M12	SK-00210-4	2.4
579.0003.265	40	32	50	80	24	140	14	M16	SK-00210-5	1.9
540.0006.004	40	32	90	80	24	180	14	M16	SK-00210-5	2.7
579.0001.225	50	22	50	50	19	171	10	M10	SK-00210-3	3.8
540.0088.004	50	22	90	50	19	211	10	M10	SK-00210-3	3.8
540.0010.004	50	22	150	50	19	271	10	M10	SK-00210-3	4.3
579.0002.225	50	27	50	60	21	173	12	M12	SK-00210-4	3.9
540.0012.004	50	27	90	60	21	213	12	M12	SK-00210-4	5.3
540.0013.004	50	27	150	60	21	273	12	M12	SK-00210-4	5.9
579.0003.225	50	32	50	80	24	176	14	M16	SK-00210-5	4.1
540.0015.004	50	32	120	80	24	246	14	M16	SK-00210-5	5.8

使用: 用于夹持带有端面键槽的面铣刀

Use For: clamping shell end mills and milling cutters with tenon drive.

设计: 带有中心冷却功能, 刀具和主轴的安装尺寸符合DIN 2079。

Design: Central boring for coolant supply. Clamping $\phi 40$ and 60 with 4 threaded holes for holding cutters with tool holding according to DIN 2079.

说明: 包括紧固螺钉和传动键。

Standard Specification: Cutter retaining screw and tightened drive keys included

备注: 其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

ACCESSORIES
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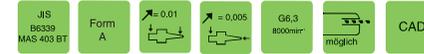
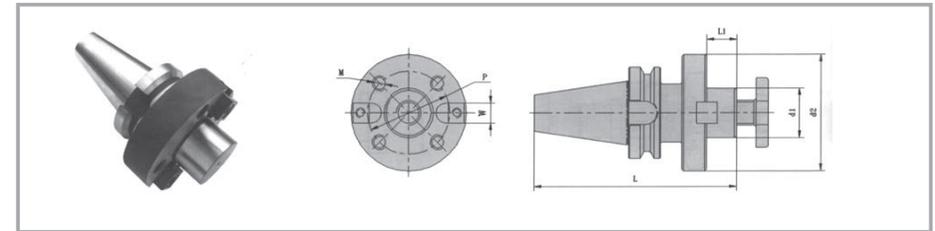


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端铣刀柄
Shell End Mill Arbors with enlarged contact diameter



No	SK	d1	A	d2	l1	L	P	M	W	夹刀螺钉	十字形扳手	kg
540.0007.004	40	40	60P	90	27	153	66.7	M12	16	M20	BS-40	2.4
540.0016.004	50	40	75P	90	27	204	66.7	M12	16	M20	BS-40	5.9
540.0017.004	50	40	105P	90	27	234	66.7	M12	16	M20	BS-40	6.3
540.0018.004	50	60	75P	140	40	217	101.6	M16	25.4	—	—	6.1
540.0019.004	60	40	75P	90	27	264	66.7	M12	16	M20	BS-40	21.8
540.0020.004	60	60	75P	140	40	277	101.6	M16	25.4	—	—	21.5
540.0021.004	60	60	75S	220	40	277	101.6+177.8	M16+M20	25.4	—	—	22.0

使用: 用于夹持带有端面键槽的面铣刀

Use: For clamping shell end mills and milling cutters with tenon drive.

设计: 带有中心冷却功能, $\phi 40$ 和 $\phi 60$ 两种规格需要4个或8个螺钉夹紧, 刀具和主轴的安装尺寸符合DIN 2079。

Design: Central boring for coolant supply. Clamping $\phi 40$ and 60 with 4 or 8 threaded holes for holding cutters with tool holding according to DIN 2079.

说明: 包括紧固螺钉和传动键。

Standard Specification: Cutter retaining screw and tightened drive keys included.

备注: 其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

ACCESSORIES
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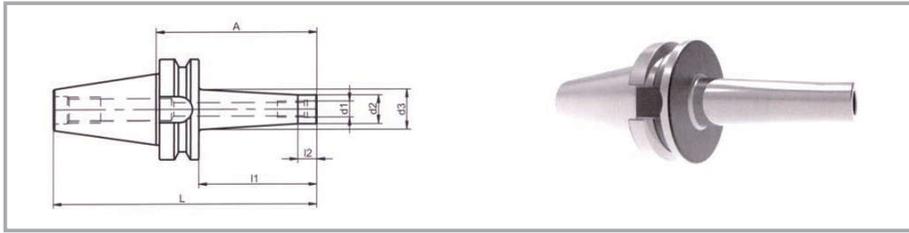


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KFS模块式铣刀柄
 Holders for screw-in milling cutters



No	SK	d1	A	d2	d3	I1	I2	L	kg
571.0001.265	40	M 8	32	13	15	25	12	98	1.0
571.0011.265	40	M 8	77	18	25	50	12	143	1.1
571.0021.265	40	M 8	102	13	23	75	12	168	1.1
571.0002.265	40	M10	32	18	20	25	12	98	1.1
571.0012.265	40	M10	77	18	25	50	12	143	1.1
571.0022.265	40	M10	102	18	25	75	12	168	1.2
571.0032.265	40	M10	127	18	32	100	12	193	1.3
571.0042.265	40	M10	177	18	35	150	12	243	1.6
571.0003.265	40	M12	52	21	24	25	12	118	1.1
571.0013.265	40	M12	77	21	28	50	12	143	1.1
571.0023.265	40	M12	102	21	31	75	12	168	1.2
571.0033.265	40	M12	127	21	33	100	12	193	1.4
571.0043.265	40	M12	177	21	40	150	12	243	1.7
571.0004.265	40	M16	52	29	—	25	—	118	1.1
571.0014.265	40	M16	77	29	34	50	12	143	1.2
571.0024.265	40	M16	102	29	34	75	12	168	1.3
571.0034.265	40	M16	127	29	36	100	12	193	1.5
571.0044.265	40	M16	177	29	42	150	12	243	1.9
571.0011.225	50	M 8	88	13	23	50	12	190	3.6
571.0012.225	50	M10	88	18	25	50	12	190	3.7
571.0022.225	50	M10	113	18	25	75	12	215	3.7
571.0032.225	50	M10	138	18	32	100	12	240	3.9
571.0042.225	50	M10	188	18	35	150	12	290	4.1
571.0013.225	50	M12	88	21	28	50	12	190	3.7
571.0023.225	50	M12	113	21	31	75	12	215	3.8
571.0033.225	50	M12	138	21	33	100	12	240	3.9
571.0043.225	50	M12	188	21	40	150	12	290	4.3
571.0014.225	50	M16	88	29	34	50	12	190	3.8
571.0024.225	50	M16	113	29	34	75	12	215	3.9
571.0034.225	50	M16	138	29	36	100	12	240	4.1
571.0044.225	50	M16	188	29	42	150	12	290	4.5

使用: 用于夹紧以螺纹连接的铣刀。
 备注: 其他型号和尺寸可按订货要求制作。

Use: For clamping screw-in milling cutters with thread.
 Note: Other designs and sizes are available on request.

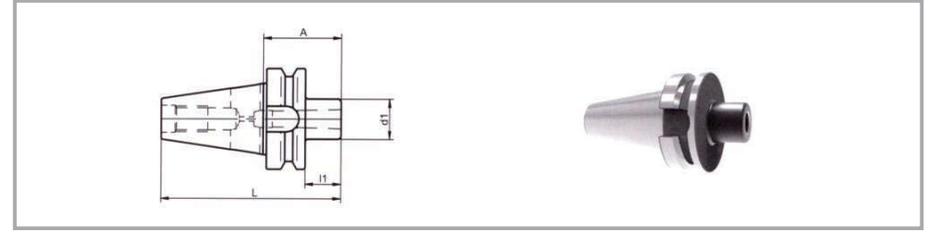
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带扁尾莫氏圆锥孔刀柄
 Reduction Sleeves for morse taper with tang



No	SK	MK	A	d1	L	kg
454.0001.265	40	1	50	25	116	1.1
440.0028.050	40	1	120	25	186	1.2
454.0012.265	40	2	50	32	116	1.1
440.0030.050	40	2	120	32	186	1.6
454.0013.265	40	3	70	40	136	1.2
440.0032.050	40	3	135	40	201	2.2
454.0014.265	40	4	95	63	161	2.1
440.0034.050	40	4	165	63	231	2.8
454.0011.225	50	1	45	25	147	3.6
440.0036.050	50	1	120	25	222	4.5
454.0002.225	50	2	60	32	162	3.6
440.0038.050	50	2	135	32	237	3.7
454.0013.225	50	3	65	40	167	3.6
440.0040.050	50	3	150	40	252	4.3
454.0014.225	50	4	95	48	197	3.8
440.0042.050	50	4	180	48	282	5.4
454.0005.225	50	5	105	63	207	3.8
440.0044.050	50	5	210	63	312	6.3
440.0045.050	60	3	190	40	352	10.1
440.0046.050	60	3	250	40	412	10.3
440.0047.050	60	4	210	50	372	10.6
440.0048.050	60	4	270	50	432	10.8
440.0049.050	60	5	240	63	402	12.4
440.0050.050	60	5	300	63	462	13.0
440.0051.050	60	6	170	90	332	12.5
440.0052.050	60	6	310	90	472	15.4

备注: 其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

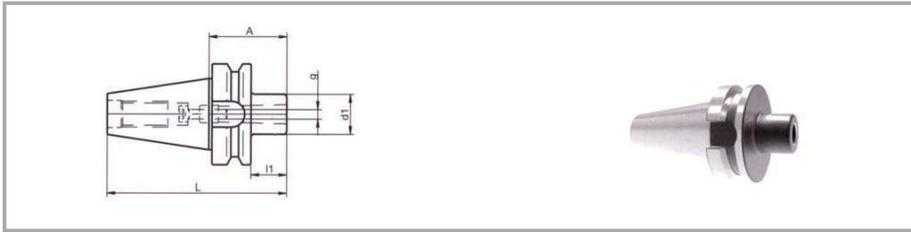
ACCESSORIES
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无扁尾莫氏圆锥孔刀柄
Reduction Sleeves for morse taper with thread



No	SK	MK	A	d1	L	kg
458.0001.265	40	1	50	25	116	0.9
458.0012.265	40	2	50	32	116	1.0
458.0013.265	40	3	70	40	136	1.1
440.0024.055	40	4	95	63	161	2.0
458.0011.225	50	1	45	25	147	2.7
458.0022.225	50	2	60	32	162	2.8
458.0023.225	50	3	65	40	167	2.9
440.0030.055	50	4	70	63	172	3.4
440.0028.055	50	4	100	63	202	3.8
440.0031.055	50	5	100	78	202	4.2
440.0029.055	50	5	130	78	232	4.8
440.0032.055	60	3	100	40	262	9.7
440.0033.055	60	4	100	50	262	9.9
440.0034.055	60	5	100	70	262	9.9
440.0035.055	60	6	150	90	312	12.1

说明: 包括紧固螺钉和螺纹挡环。

Standard Specification; Retaining screw and threaded ring included.

备注: 其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

ACCESSORIES
配件



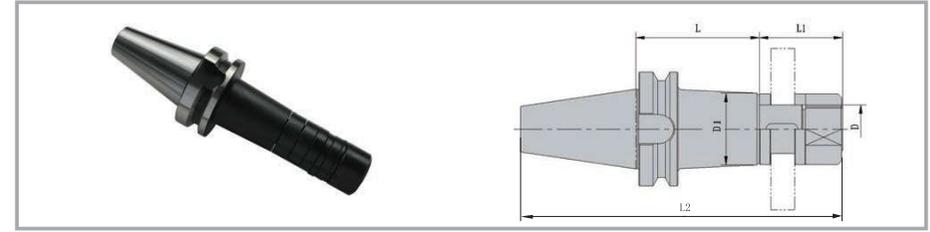
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三面刃铣刀柄
Side Milling Cutter Arbor



No	SK	D	D1	L	L1	L2	B	垫圈	三面刃铣刀直径	kg
440.0021.000	40	16	26	75	46	187	4	3J1-310-16	Φ50	1.3
440.0022.000	40	16	26	105	46	217	4	3J1-310-16	Φ50	1.5
440.0023.000	40	22	34	75	51	192	6	3J1-310-22	Φ63	1.2
440.0024.000	40	22	34	120	51	237	6	3J1-310-22	Φ63	2.0
440.0025.000	40	27	40	75	55	196	7	3J1-310-27	Φ80	2.0
440.0026.000	40	27	40	120	55	241	7	3J1-310-27	Φ80	2.7
440.0027.000	40	32	46	90	60	216	8	3J1-310-32	Φ100, Φ125	2.5
440.0028.000	50	16	26	90	46	238	4	3J1-310-16	Φ50	3.1
440.0029.000	50	16	26	120	46	268	4	3J1-310-16	Φ50	3.4
440.0030.000	50	22	34	90	51	243	6	3J1-310-22	Φ63	3.5
440.0031.000	50	22	34	135	51	288	6	3J1-310-22	Φ63	3.9
440.0032.000	50	27	40	90	55	247	7	3J1-310-27	Φ80	3.9
440.0033.000	50	27	40	135	55	292	7	3J1-310-27	Φ80	4.5
440.0034.000	50	32	46	90	60	252	8	3J1-310-32	Φ100, Φ125	5.5
440.0035.000	50	32	46	135	60	297	8	3J1-310-32	Φ100, Φ125	5.6
440.0036.000	50	40	55	90	66	258	10	3J1-310-40	Φ160, Φ200	5.3
440.0037.000	50	40	55	135	66	303	10	3J1-310-40	Φ160, Φ200	5.7
440.0092.000	50	50	68	90	85	277	12	3J1-310-50	Φ200, Φ250	6.1
440.0093.000	50	50	68	135	85	322	12	3J1-310-50	Φ200, Φ250	6.6
440.0038.000	60	40	55	135	66	263	10	3J1-310-40	Φ160, Φ200	14.7
440.0039.000	60	50	68	135	85	382	12	3J1-310-50	Φ200, Φ250	14.8
440.0040.000	60	60	84	135	105	402	14	3J1-310-60	Φ250, Φ315	15.4

注: 垫圈单独订货时, 成组供货, 每组6个, 芯轴直径为Φ16-Φ40的刀柄, 垫圈厚度分别为3、5、7、8、10、12, 芯轴直径为Φ50-Φ60的刀柄, 垫圈厚度分别为4、6、8、10、12、15。

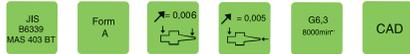
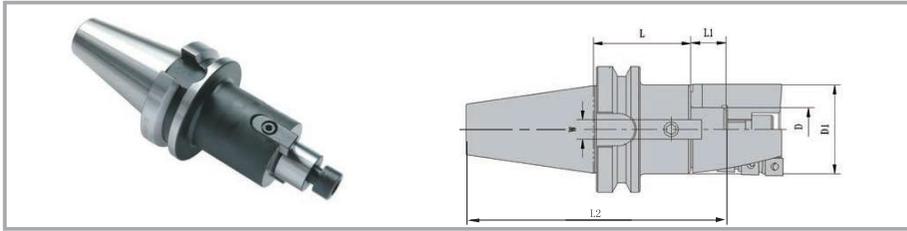
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套式立铣刀柄
Shell End Mill Arbors



No	SK	D	D1	L	L1	L2	W	紧固螺钉	套式立铣刀直径	kg
440.0020.001	40	16	32	75	17	158	8	M8	Φ40	1.2
440.0021.001	40	16	32	120	17	203	8	M8	Φ40	1.6
440.0022.001	40	22	40	75	19	160	10	M10	Φ50	1.5
440.0023.001	40	22	40	120	19	205	10	M10	Φ50	2.0
440.0024.001	40	27	48	75	21	162	12	M12	Φ63, Φ80	1.9
440.0025.001	40	27	48	105	21	192	12	M12	Φ63, Φ80	2.3
440.0026.001	40	32	58	75	24	165	14	M16	Φ100	2.2
440.0027.001	50	16	32	75	17	194	8	M8	Φ40	3.1
440.0028.001	50	16	32	120	17	239	8	M8	Φ40	3.9
440.0029.001	50	22	40	75	19	196	10	M10	Φ50	3.3
440.0030.001	50	22	40	120	19	241	10	M10	Φ50	3.8
440.0031.001	50	27	48	75	21	198	12	M12	Φ63, Φ80	3.7
440.0032.001	50	27	48	105	21	228	12	M12	Φ63, Φ80	4.1
440.0033.001	50	32	58	75	24	201	14	M16	Φ100	3.8
440.0034.001	50	40	70	75	27	204	16	M20	Φ125	5.4
440.0035.001	50	50	90	75	30	207	18	M24	Φ160	5.5
440.0036.001	60	32	58	105	24	261	14	M16	Φ100	13.2
440.0037.001	60	40	70	105	27	279	16	M20	Φ125	14.7
440.0038.001	60	50	90	120	30	312	18	M24	Φ160	14.8

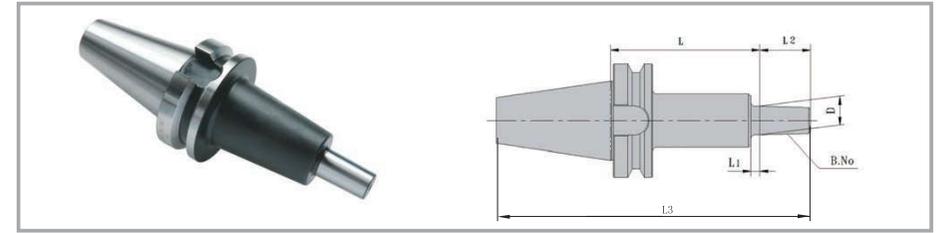
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钻夹头刀柄
Drill Chuck Arbors



No	SK	B.No	L	L1	L2	L3	D	kg
440.0019.071	40	B10	45	3.5	14.5	125	10.094	0.9
440.0020.071	40	B10	90	3.5	14.5	170	10.094	1.2
440.0021.071	40	B12	45	3.5	18.5	129	12.065	0.9
440.0022.071	40	B12	90	3.5	18.5	174	12.065	0.9
440.0023.071	40	B16	45	5	24	135	15.733	1.0
440.0024.071	40	B16	90	5	24	180	15.733	1.2
440.0025.071	40	B18	45	5	32	143	17.780	1.0
440.0026.071	40	B18	90	5	32	188	17.780	1.4
440.0027.071	50	B10	45	3.5	14.5	162	10.094	2.7
440.0028.071	50	B10	105	3.5	14.5	222	10.094	3.1
440.0029.071	50	B12	45	3.5	18.5	166	12.065	2.7
440.0030.071	50	B12	105	3.5	18.5	226	12.065	3.1
440.0031.071	50	B16	45	5	24	171	15.733	2.8
440.0032.071	50	B16	105	5	24	231	15.733	3.1
440.0033.071	50	B18	45	5	32	179	17.780	2.8
440.0034.071	50	B18	105	5	32	239	17.780	3.1
440.0035.071	60	B16	105	5	24	291	15.733	12.5
440.0036.071	60	B18	105	5	32	299	17.780	12.5

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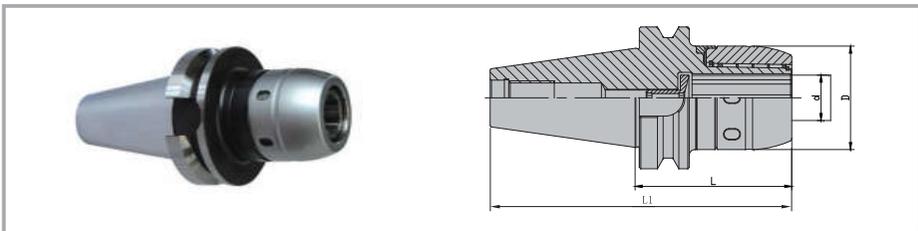
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强力铣夹头刀柄
Strong Chuck Holder for Boring and Milling



No	SK	d	L	L1	D	配用扳手GB4625	Kg
740.0219.111	30	20	90	138	58	55-62	1.1
740.0220.111	30	20	110	158	58	55-62	1.3
740.0221.111	40	20	110	176	58	55-62	2.5
740.0222.111	40	20	160	226	58	55-62	3.3
740.0223.111	40	20	200	266	58	55-62	3.9
740.0224.111	40	25	110	176	65	68-72	2.8
740.0225.111	40	25	160	226	65	68-72	3.8
740.0226.111	40	25	200	266	65	68-72	4.6
740.0227.111	40	32	110	176	73	68-72	3.2
740.0228.111	40	32	160	226	73	68-72	4.4
740.0229.111	40	32	200	266	73	68-72	5.3
740.0230.111	50	20	110	212	58	55-62	4.4
740.0231.111	50	20	160	262	58	55-62	5.9
740.0232.111	50	20	200	302	58	55-62	7.1
740.0233.111	50	25	110	212	65	68-72	4.9
740.0234.111	50	25	160	262	65	68-72	6.2
740.0235.111	50	25	200	302	65	68-72	7.6
740.0236.111	50	32	110	212	73	68-72	5.4
740.0245.111	50	32	140	242	73	68-72	6.3
740.0237.111	50	32	160	262	73	68-72	7.0
740.0238.111	50	32	200	302	73	68-72	8.3
740.0239.111	50	40	120	222	88	78-85	5.2
740.0240.111	50	40	160	262	88	78-85	6.9
740.0241.111	50	40	200	302	88	78-85	7.8
740.0242.111	50	50	140	242	105	100-110	8.6
740.0243.111	50	50	160	262	105	100-110	9.8
740.0244.111	50	50	200	302	105	100-110	11.7
740.0261.111	60	20	110	272	58	55-62	14.1
740.0262.111	60	20	160	322	58	55-62	15.6
740.0263.111	60	20	200	362	58	55-62	16.5
740.0264.111	60	25	110	272	65	68-72	14.9
740.0265.111	60	25	160	322	65	68-72	16.1

No	KS	d	L	L1	D	配用扳手GB4625	Kg
740.0266.111	60	25	200	362	65	68-72	17.3
740.0267.111	60	32	130	292	73	68-72	15.8
740.0268.111	60	32	160	322	73	68-72	16.9
740.0269.111	60	32	200	362	73	68-72	18.2
740.0270.111	60	40	130	292	88	78-85	16.6
740.0271.111	60	40	160	322	88	78-85	18.7
740.0272.111	60	40	200	362	88	78-85	20.1
740.0273.111	60	50	140	292	105	100-110	18.7
740.0274.111	60	50	160	322	105	100-110	20.3
740.0275.111	60	50	200	362	150	100-110	22.6

注：配用扳手需要单独订货；
被夹持直柄刀具的柄部公差为h6；
使用配用扳手夹紧直柄刀具时，不允许使用套管等辅助工具；
3倍直径处径向跳动精度≤0.007mm。

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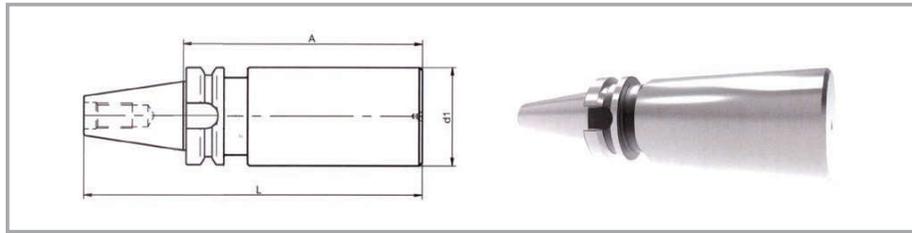
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毛坯刀柄
Tool Blanks



JIS
B6339
MAS 403 BT

Form
A

No	SK	d1	A	L	kg
517.5001.285	30	45	150	198,4	2,0
517.5001.265	40	63	150	215,4	4,1
517.5002.265	40	63	250	315,4	6,5
517.5001.225	50	95	180	281,8	11,5
517.5002.225	50	95	315	416,8	19,0

使用: 用于制造特殊刀具及工具系统产品。

Use : For own manufacture of special tools.

设计: 锥柄为磨制成品, 尺寸符合柄部标准, 维氏硬度 HV670±40 (近似于HRC58±2), 淬硬层在 0,5mm以上。预备精加工部分硬度HRC40-46。

Design:The taper Is finished with grinding,the dimensions are in accordance with the standard of the handle, HV670±40 (approximately HRC58±2), the hardened layer is above 0.5mm.Tool part is HRC40-46.

材料: 合金钢

Material: Alloyed case-hardened steel.

备注: 其他型号和尺寸可按订做要求制作。

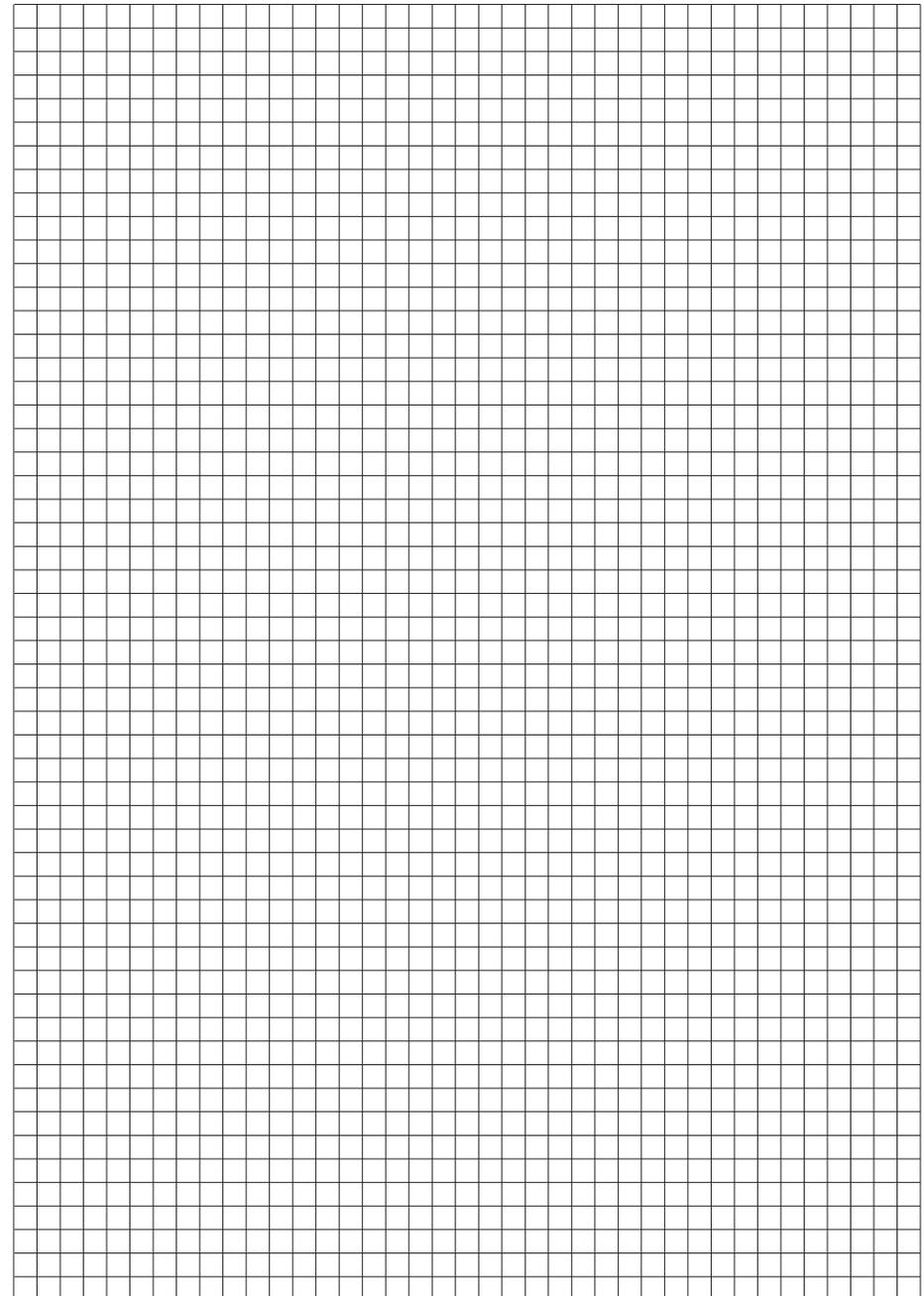
Note : Other designs and sizes are available on request.

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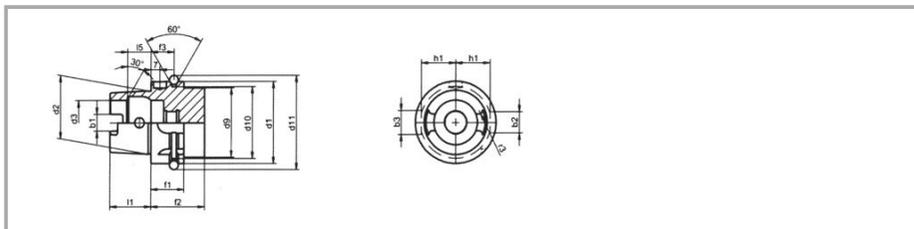
HSK 精密刀柄

HSK-Hollow Taper Shanks



	HSK A 型精密刀柄	HSK A-ISO 12164-1
203-205	i-tec® 热装夹头 (标准型)	i-tec® Shrink-fit Chucks standard version
206	i-tec® 热装夹头 (细长型)	i-tec® Shrink-fit Chucks slim version
207	i-tec® 热装夹头 (超短型)	i-tec® Shrink-fit Chucks ultra short version
208	丝锥快换夹头	Quick Change Tapping Chucks
209-212	削平型直柄立铣刀刀柄	Reduction Sleeves for Straight Shanks
213	削平型直柄立铣刀刀柄 (细长型)	Sleeves for Straight Shanks slim version
214	削平型浅孔钻头柄	Indexable Drill Holders
215-216	液压夹头	Hydraulic Expansion Chucks
217-220	弹簧夹头刀柄	Collet Chucks
221-224	套式铣刀刀柄	Shell End Mill Arbors
225	KFS模块式铣刀刀柄	Holders for screw-in milling cutters
226	带扁尾莫氏圆锥孔刀柄	Reduction Sleeves for morse taper with tang
227	无扁尾莫氏圆锥孔刀柄	Reduction Sleeves for morse taper with thread
228-229	毛坯刀柄	Tool Blanks

HSK A 型刀柄
HSK-A Tool Holders



HSK-A	b1 ±0.04	b2 H10	b3 H10	d1 H10	d2	d3 H10	d9 max	d10 -0.1
32	7.05	7	9	32	24	17	26	26.5
40	8.05	9	11	40	30	21	34	34.8
50	10.54	12	14	50	38	26	42	43
63	12.54	16	18	63	48	34	53	55
80	16.04	18	20	80	60	42	67	70
100	20.02	20	22	100	75	53	85	92

HSK-A	d11 -0.1	f1 -0.1	f2 min	f3 ±0.1	h1 -0.2	l1 -0.2	l5 js10	r3 ±0.5
32	37	20	35	16	13	16	8.92	1.38
40	45	20	35	16	17	20	11.42	1.88
50	59.3	26	42	18	21	25	14.13	2.38
63	72.3	26	42	18	26.5	32	18.13	2.88
80	88.8	26	42	18	34	40	22.85	3.88
100	109.75	29	45	20	44	50	28.56	4.88

设计: HSK 锥柄符合ISO 12164-1HE DIM 69893-1, 其中A型带有数据孔。一般要求: 硬度应满足较低的变形量, 维氏硬度在HV670 ± 40(近似于HRC58 ± 2), 淬硬(渗碳)层0.3-0.6mm。对于HSK柄部同轴度等参数参见于上表。

材料: 一般要求: 符合硬度要求的合金钢材料, 并且能承受扭矩980N/mm²。

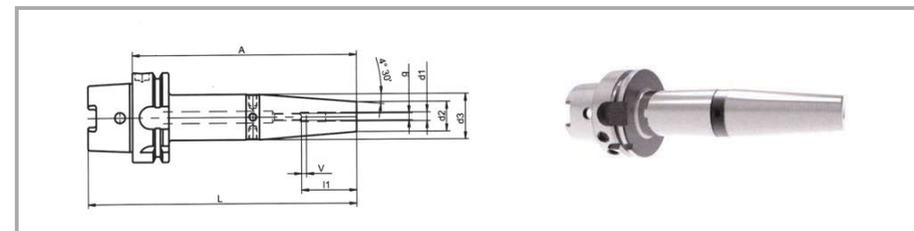
说明: 价格和交付情况如有变化会在单上实时变更。制造商保留对技术修改的权力。单位以mm。柄部冷却管需另行定制。

Design: Hollow taper shank acc.To ISO 12164-1 DIN 69893-1 type A with bore for identification chip.If not otherwise specified :Hardened by means of a special low-distortion hardening process Vickers hardness 670 ± 40 HV30(HRC58 ± 2).Hardaess depth Eht=min.0.5mm.

Material: If not otherwise specified:Case-hardened alloy steel with a core tensile strength after case hardening of min.980N/mm².

Standard Specification: Prices and delivery conditions are shown in the corresponding price list valid at the time in question.Manufacturer reserves the right to make technical modifications.All dimensions in mm.Coolant tube for tool holders has to be ordered separately

i-tec®热装夹头(标准型)
i-tec® Shrink-fit Chucks standard version



No	HSK-A	d1	A	d2	d3	f1	g	L	v	kg
311.0011.320	40	3	65	12	17	—	—	85	—	0.3
311.0012.320	40	4	65	12	17	—	—	85	—	0.3
311.0013.320	40	5	65	12	17	—	—	85	—	0.3
311.0001.320	40	6	80	21	31	36	M5	100	10	0.5
311.0002.320	40	8	80	21	31	36	M6	100	10	0.5
311.0003.320	40	10	80	24	34	41	M8 × 1	100	10	0.5
311.0004.320	40	12	90	24	34	47	M10 × 1	110	10	0.5
311.0005.320	40	14	90	27	34	47	M10 × 1	110	10	0.6
311.0006.320	40	16	90	27	34	50	M12 × 1	110	10	0.6
311.0011.321	50	3	65	12	17	—	—	90	—	0.4
311.0012.321	50	4	65	12	17	—	—	90	—	0.4
311.0013.321	50	5	65	12	17	—	—	90	—	0.4
311.0001.321	50	6	80	21	30	36	M5	105	10	0.6
311.0002.321	50	8	80	21	30	36	M6	105	10	0.6
311.0003.321	50	10	85	24	33	41	M8 × 1	110	10	0.7
311.0004.321	50	12	90	24	34	47	M10 × 1	115	10	0.7
311.0005.321	50	14	90	27	37	47	M10 × 1	115	10	0.8
311.0006.321	50	16	95	27	38	50	M12 × 1	120	10	0.8
311.0007.321	50	18	95	33	42	50	M12 × 1	120	10	0.9
311.0008.321	50	20	100	33	42	52	M16 × 1	125	10	0.9
311.0011.322	63	3	80	12	17	—	—	112	—	0.7
311.0012.322	63	3	120	12	17	—	—	152	—	0.9
311.0013.322	63	3	160	12	17	—	—	192	—	1.0
311.0014.322	63	4	80	12	17	—	—	112	—	0.7
311.0015.322	63	4	120	12	17	—	—	152	—	0.9
311.0016.322	63	4	160	12	17	—	—	192	—	1.0
311.0017.322	63	5	80	12	17	—	—	112	—	0.7
311.0018.322	63	5	120	12	17	—	—	152	—	0.9
311.0019.322	63	5	160	12	17	—	—	192	—	1.0
311.0001.322	63	6	80	21	30	36	M5	112	10	0.9
311.0031.322	63	6	120	21	32	36	M5	152	10	1.1
311.0041.322	63	6	160	21	32	36	M5	192	10	1.3
311.0021.322	63	6	200	21	32	36	M5	232	10	1.4
311.0002.322	63	8	80	21	30	36	M6	112	10	0.9
311.0032.322	63	8	120	21	32	36	M6	152	10	1.1
311.0042.322	63	8	160	21	32	36	M6	192	10	1.3
311.0022.322	63	8	200	21	32	36	M6	232	10	1.4

No	HSK-A	d1	A	d2	d3	l1	g	L	v	kg
311.0003.322	63	10	85	24	33	41	M8 × 1	117	10	0.9
311.0033.322	63	10	120	24	34	41	M8 × 1	152	10	1.2
311.0043.322	63	10	160	24	34	41	M8 × 1	192	10	1.5
311.0023.322	63	10	200	24	34	41	M8 × 1	232	10	1.7
311.0004.322	63	12	90	24	34	47	M10 × 1	122	10	1.0
311.0034.322	63	12	120	24	34	47	M10 × 1	152	10	1.2
311.0044.322	63	12	160	24	34	47	M10 × 1	192	10	1.5
311.0024.322	63	12	200	24	34	47	M10 × 1	232	10	1.7
311.0005.322	63	14	90	27	37	47	M10 × 1	122	10	1.0
311.0035.322	63	14	120	27	36	47	M10 × 1	152	10	1.2
311.0045.322	63	14	160	27	36	47	M10 × 1	192	10	1.6
311.0025.322	63	14	200	27	36	47	M10 × 1	232	10	1.9
311.0006.322	63	16	95	27	38	50	M12 × 1	127	10	1.1
311.0036.322	63	16	120	27	36	50	M12 × 1	152	10	1.2
311.0046.322	63	16	160	27	36	50	M12 × 1	192	10	1.6
311.0026.322	63	16	200	27	36	50	M12 × 1	232	10	1.9
311.0007.322	63	18	95	33	44	50	M12 × 1	127	10	1.2
311.0047.322	63	18	160	33	44	50	M12 × 1	192	10	1.9
311.0097.322	63	18	200	33	44	50	M12 × 1	232	10	2.3
311.0008.322	63	20	100	33	45	52	M16 × 1	132	10	1.2
311.0048.322	63	20	160	33	44	52	M16 × 1	192	10	1.9
311.0098.322	63	20	200	33	44	52	M16 × 1	232	10	2.3
311.0009.322	63	25	115	44	53	58	M16 × 1	147	10	1.7
311.0049.322	63	25	160	44	53	58	M16 × 1	192	10	2.5
311.0099.322	63	25	200	44	53	58	M16 × 1	232	10	3.2
311.0010.322	63	32	120	44	53	61	M16 × 1	152	10	1.6
311.0050.322	63	32	160	44	53	61	M16 × 1	192	10	2.3
311.0100.322	63	32	200	44	53	61	M16 × 1	232	10	3.0
311.0001.323	80	6	85	21	30	36	M5	125	10	1.3
311.0002.323	80	8	85	21	30	36	M6	125	10	1.3
311.0003.323	80	10	90	24	34	41	M8 × 1	130	10	1.4
311.0004.323	80	12	95	24	35	47	M10 × 1	135	10	1.4
311.0005.323	80	13	95	27	38	47	M10 × 1	135	10	1.5
311.0006.323	80	16	100	27	39	50	M12 × 1	140	10	1.5
311.0007.323	80	18	100	33	45	50	M12 × 1	140	10	1.6
311.0008.323	80	20	105	33	45	52	M16 × 1	145	10	1.7
311.0009.323	80	25	115	44	53	58	M16 × 1	155	10	2.1
311.0010.323	80	32	120	44	56	61	M16 × 1	160	10	2.1
311.0001.324	100	6	85	21	30	36	M5	135	10	2.2
311.0031.324	100	6	120	21	32	36	M5	170	10	2.4
311.0041.324	100	6	160	21	32	36	M5	210	10	2.7
311.0021.324	100	6	200	21	32	36	M5	250	10	2.8
311.0002.324	100	8	85	21	30	36	M6	135	10	2.2
311.0032.324	100	8	120	21	32	36	M6	170	10	2.4
311.0042.324	100	8	160	21	32	36	M6	210	10	2.7
311.0022.324	100	8	200	21	32	36	M6	250	10	2.8
311.0003.324	100	10	90	24	34	41	M8 × 1	140	10	2.3
311.0033.324	100	10	120	24	34	41	M8 × 1	170	10	2.6
311.0043.324	100	10	160	24	34	41	M8 × 1	210	10	2.9
311.0023.324	100	10	200	24	34	41	M8 × 1	250	10	3.2
311.0004.324	100	12	95	24	35	47	M10 × 1	145	10	2.3
311.0034.324	100	12	120	24	34	47	M10 × 1	170	10	2.6
311.0044.324	100	12	160	24	34	47	M10 × 1	210	10	2.9
311.0024.324	100	12	200	24	34	47	M10 × 1	250	10	3.2

No	HSK-A	d1	A	d2	d3	l1	g	L	v	kg
311.0005.324	100	14	95	27	38	47	M10 × 1	145	10	2.3
311.0035.324	100	14	120	27	36	47	M10 × 1	170	10	2.6
311.0045.324	100	14	160	27	36	47	M10 × 1	210	10	3.0
311.0025.324	100	14	200	27	36	47	M10 × 1	250	10	3.3
311.0006.324	100	16	100	27	39	50	M12 × 1	150	10	2.4
311.0036.324	100	16	160	27	36	50	M12 × 1	210	10	3.0
311.0026.324	100	16	200	27	36	50	M12 × 1	250	10	3.3
311.0007.324	100	18	100	33	45	50	M12 × 1	150	10	2.5
311.0037.324	100	18	160	33	44	50	M12 × 1	210	10	3.3
311.0027.324	100	18	200	33	44	50	M12 × 1	250	10	3.8
311.0008.324	100	20	105	33	45	52	M16 × 1	155	10	2.5
311.0038.324	100	20	160	33	44	52	M16 × 1	210	10	3.3
311.0028.324	100	20	200	33	44	52	M16 × 1	250	10	3.8
311.0009.324	100	25	115	44	53	58	M16 × 1	165	10	3.0
311.0049.324	100	25	160	44	53	58	M16 × 1	210	10	3.8
311.0099.324	100	25	200	44	53	58	M16 × 1	250	10	4.5
311.0010.324	100	32	120	44	59	61	M16 × 1	170	10	3.0
311.0050.324	100	32	160	44	53	61	M16 × 1	210	10	3.7
311.0100.324	100	32	200	44	53	61	M16 × 1	250	10	4.3

设计：被夹持刀具的柄部直径公差应为h6级。

Design: The clamping diameter is designed for a shank tolerance of h6.

说明：不包括调整长度用的调整螺钉（从Φ6起）。

Standard Specification: Adjusting screw for length adjustment is not included.

备注：在套装部分制作有动平衡用螺孔，可用螺钉进行再次动平衡（至HSK63）。其他型号和尺寸可按订货要求制作。

Note: For further fine balancing of the chucks threaded holes are fitted on the circumference (up to HSK 63 from Φ 6). Can be rebalanced with threaded pins. Other designs and sizes are available on request.

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i-tec® 热装夹头 (细长型)
i-tec® Shrink-fit Chucks slim version



No	HSK-A	d1	A	d2	d3	l1	g	L	v	kg
311.0703.322	63	6	120	15	30	36	M 5	152	10	1.0
311.0713.322	63	6	160	15	30	36	M 5	192	10	1.2
311.0791.322	63	6	200	15	30	36	M 5	232	10	1.4
311.0704.322	63	8	120	15	30	36	M 6	152	10	1.0
311.0714.322	63	8	160	15	30	36	M 6	192	10	1.2
311.0792.322	63	8	200	15	30	36	M 6	232	10	1.4
311.0705.322	63	10	120	18	33	41	M 8 x 1	152	10	1.0
311.0715.322	63	10	160	18	32	41	M 8 x 1	192	10	1.3
311.0793.322	63	10	200	18	32	41	M 8 x 1	232	10	1.5
311.0706.322	63	12	120	18	33	47	M10 x 1	152	10	1.0
311.0716.322	63	12	160	18	32	47	M10 x 1	192	10	1.3
311.0794.322	63	12	200	18	32	47	M10 x 1	232	10	1.5
311.0703.324	100	6	120	15	30	36	M 5	170	10	2.3
311.0713.324	100	6	160	15	30	36	M 5	210	10	2.5
311.0791.324	100	6	200	15	30	36	M 5	250	10	2.7
311.0704.324	100	8	120	15	30	36	M 6	170	10	2.3
311.0714.324	100	8	160	15	30	36	M 6	210	10	2.5
311.0792.324	100	8	200	15	30	36	M 6	250	10	2.7
311.0705.324	100	10	120	18	33	41	M 8 x 1	170	10	2.4
311.0715.324	100	10	160	18	32	41	M 8 x 1	210	10	2.6
311.0793.324	100	10	200	18	32	41	M 8 x 1	250	10	2.8
311.0706.324	100	12	120	18	33	47	M10 x 1	170	10	2.4
311.0716.324	100	12	160	18	32	47	M10 x 1	210	10	2.6
311.0794.324	100	12	200	18	32	47	M10 x 1	250	10	2.8

设计：被夹持刀具的柄部直径公差应为h6级。

Design: The clamping diameter is designed for a shank tolerance of h6.

说明：不包括调整长度用的调整螺钉（从Φ6起）。

Standard Specification : Adjusting screw for length adjustment is not included.

备注：其他型号和尺寸可按订货要求制作。

Note : Other designs and sizes are available on request.

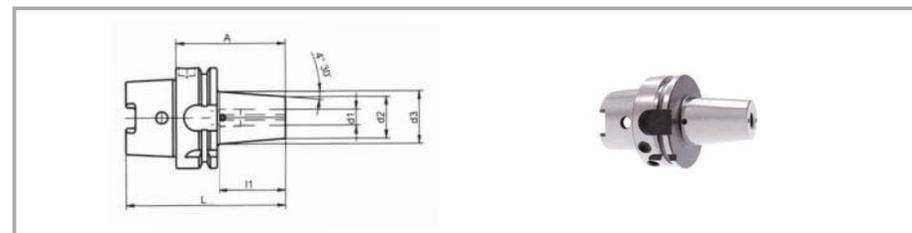
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i-tec® 热装夹头 (超短型)
i-tec® Shrink-fit Chucks ultra short version



No	HSK-A	d1	A	d2	d3	l1	L	g
311.4353.322	63	10	70	26	33	41	102	0.9
311.4354.322	63	12	70	26	33	45	102	0.9
311.4356.322	63	16	75	29	37	50	107	0.9
311.4358.322	63	20	75	35	43	50	107	1.0
311.4359.322	63	25	85	45	53	59	117	1.3

设计：被夹持刀具的柄部直径公差应为h6级。带有内冷功能。

Design: The clamping diameter is designed for a shank tolerance of h6. With closable Cool Stream bores.

备注：其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

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丝锥快换夹头
Quick Change Tapping Chucks



No	HSK-A	M	A	d1	d2	L	C	T	ZA	kg
440.0011.320	40	M3-M14	73	19	36	93	5.0	8	2.1	0.6
440.0011.321	50	M3-M14	77	19	36	102	5.0	8	2.1	0.9
440.0011.322	63	M3-M14	79	19	36	111	5.0	8	2.1	1.2
440.0012.322	63	M8-M20	113	31	53	145	8.5	15	2.8	2.1
440.0011.323	80	M3-M14	83.5	19	36	123.5	5.0	8	2.1	2.0
440.0012.323	80	M8-M20	117.5	31	53	157.5	8.5	15	2.8	2.9
440.0011.324	100	M8-M20	119.5	31	53	169.5	8.5	15	2.8	4.0

使用: 用于夹持带或不带安全连接的快换丝锥夹套。

Use: For holding quick change inserts with or without safety clutch.

设计: 长度补偿在收缩和拉伸方向取决于进给和螺距的不同。压缩时能够保证当轴向力达到临界值时立即脱离攻丝状态, 拉力释放时能够保证丝锥夹头免于过大轴向拉力造成的损害。

Design: Length compensation on compression and tension to compensate the difference between feed and tap pitch. The pressure point mechanism guarantees that the tap immediately cuts the thread as soon as the permissible axial force is reached. The tension lock protects the tapping chuck against damage as a result of high axial tensile load.

备注: 其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

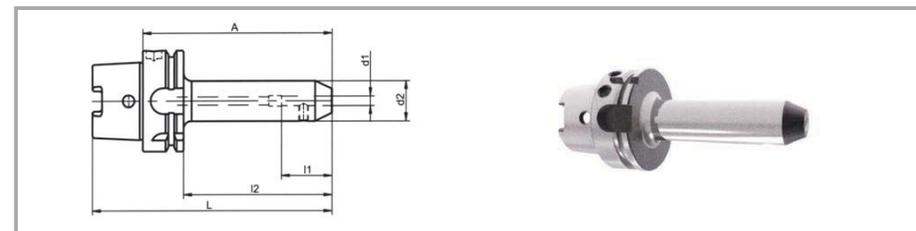
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削平型直柄立铣刀刀柄 (威尔顿型)
Reduction Sleeves for Straight Shanks with lateral driving surface (Weldon)



No	HSK-A	d1	A	d2	l1	l2	L	Tol./d1	kg
420.0001.320	40	6	60	25	35	40	80	+0.005	0.6
420.0002.320	40	8	60	28	35	40	80	+0.005	0.7
420.0003.320	40	10	60	35	39	40	80	+0.005	0.7
420.0004.320	40	12	70	42	44	50	90	+0.005	1.0
420.0005.320	40	14	75	44	44	55	95	+0.005	1.1
420.0006.320	40	16	75	48	47	55	95	+0.005	1.1
420.0001.321	50	6	65	25	35	39	90	+0.005	0.7
420.0002.321	50	8	65	28	35	39	90	+0.005	0.8
420.0003.321	50	10	65	35	39	39	90	+0.005	0.8
420.0004.321	50	12	80	42	44	54	105	+0.005	0.9
420.0005.321	50	14	80	44	44	54	105	+0.005	1.0
420.0006.321	50	16	80	48	47	54	105	+0.005	1.0
420.0007.321	50	18	80	50	47	54	105	+0.005	1.0
420.0008.321	50	20	80	52	49	54	105	+0.007	1.0
420.0001.322	63	6	65	25	35	39	97	+0.005	0.8
420.0003.322	63	6	120	25	35	94	152	+0.005	1.0
420.0002.322	63	8	65	28	35	39	97	+0.005	0.8
420.0003.322	63	8	120	28	35	94	152	+0.005	1.1
420.0003.322	63	10	65	35	39	39	97	+0.005	0.9
420.0003.322	63	10	120	35	39	94	152	+0.005	1.3
420.0004.322	63	12	80	42	44	54	112	+0.005	1.2
420.0004.322	63	12	120	42	44	94	152	+0.005	1.6
420.0005.322	63	14	80	44	44	54	112	+0.005	1.2
420.0005.322	63	14	120	44	44	94	152	+0.005	1.7
420.0006.322	63	16	80	48	47	54	112	+0.005	1.3
420.0006.322	63	16	120	48	47	94	152	+0.005	1.8
420.0007.322	63	18	80	50	47	54	112	+0.005	1.3
420.0007.322	63	18	120	50	47	94	152	+0.005	1.9
420.0008.322	63	20	80	52	49	54	112	+0.007	1.4
420.0008.322	63	20	120	52	49	94	152	+0.007	2.0
420.0009.322	63	25	110	65	54	84	142	+0.007	2.3
420.0010.322	63	32	110	72	58	84	142	+0.007	2.5

No	HSK-A	d1	A	d2	l1	l2	L	Tol./d1	kg
420.0001.323	80	6	80	25	35	54	120	+0.005	1.5
420.0002.323	80	8	80	28	35	54	120	+0.005	1.5
420.0003.323	80	10	80	35	39	54	120	+0.005	1.7
420.0004.323	80	12	80	42	44	54	120	+0.005	1.8
420.0005.323	80	14	80	44	44	54	120	+0.005	1.9
420.0006.323	80	16	100	48	47	74	140	+0.005	2.1
420.0007.323	80	18	100	50	47	74	140	+0.005	2.3
420.0008.323	80	20	100	52	49	74	140	+0.005	2.4
420.0009.323	80	25	100	65	54	74	140	+0.005	2.9
420.0010.323	80	32	110	72	58	84	150	+0.005	3.4
420.0001.324	100	6	80	25	35	51	130	+0.005	2.0
420.0041.324	100	6	160	25	35	131	210	+0.005	2.5
420.0002.324	100	8	80	28	35	51	130	+0.005	2.2
420.0042.324	100	8	160	28	35	131	210	+0.005	2.6
420.0003.324	100	10	80	35	39	51	130	+0.005	2.4
420.0043.324	100	10	160	35	39	131	210	+0.005	3.0
420.0004.324	100	12	80	42	44	51	130	+0.005	2.5
420.0044.324	100	12	160	42	44	131	210	+0.005	3.4
420.0005.324	100	14	80	44	44	51	130	+0.005	2.5
420.0045.324	100	14	160	44	44	131	210	+0.005	3.5
420.0006.324	100	16	100	48	47	71	150	+0.005	2.9
420.0046.324	100	16	160	48	47	131	210	+0.005	3.8
420.0007.324	100	18	100	50	47	71	150	+0.005	2.9
420.0047.324	100	18	160	50	47	131	210	+0.005	4.0
420.0008.324	100	20	100	52	49	71	150	+0.007	3.0
420.0048.324	100	20	160	52	49	131	210	+0.007	4.1
420.0009.324	100	25	100	65	54	71	150	+0.007	3.5
420.0049.324	100	25	160	65	54	131	210	+0.007	5.0
420.0010.324	100	32	100	72	58	71	150	+0.007	3.7
420.0050.324	100	32	160	72	58	131	210	+0.007	5.6
420.0011.324	100	40	120	80	75	91	170	+0.007	5.9

使用: 按DIN 1835 B型(威尔顿型)和DIN 6535 HB型夹持直柄铣刀。

说明: 包括配好的夹紧螺钉, 对于大于25mm的孔, 提供2个紧固螺钉。

备注: 其他型号和尺寸可按订货要求制作。

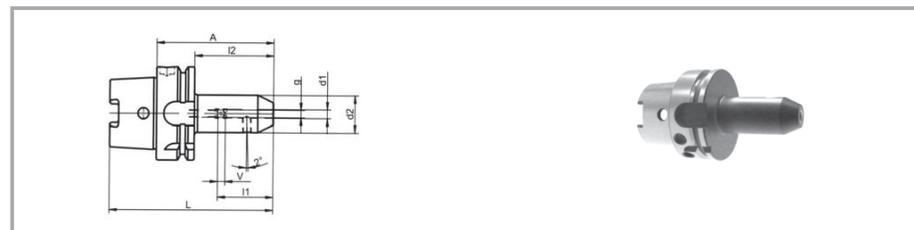
Use: For holding shank tools with lateral driving surface, DIN 1835 type B and DIN 6535 type HB.

Standard Specification: Clamping screw included. From location hole d1 = 25mm 2 clamping screws are included.

Note: Other designs and sizes are available on request.

带2°斜削平型直柄立铣刀刀柄(威斯尔凹口型)

Reduction Sleeves for Straight Shanks with inclined clamping surface (Whistle Notch)



No	HSK-A	d1	A	d2	l1	l2	g	L	Tol./d1	v	kg
420.0151.320	40	6	80	25	38	60	M5	100	+0.005	10	0.6
420.0152.320	40	8	80	28	38	60	M6	100	+0.005	10	0.7
420.0153.320	40	10	80	35	41	60	M8	100	+0.005	10	0.7
420.0154.320	40	12	90	42	47	70	M10	110	+0.005	10	1.1
420.0155.320	40	14	90	44	47	70	M10	110	+0.005	10	1.2
420.0156.320	40	16	90	48	50	70	M12	110	+0.005	10	1.2
420.0151.321	50	6	80	25	38	54	M5	105	+0.005	10	0.8
420.0152.321	50	8	80	28	38	54	M6	105	+0.005	10	0.9
420.0153.321	50	10	80	35	41	54	M8	105	+0.005	10	0.9
420.0154.321	50	12	90	42	47	64	M10	115	+0.005	10	1.3
420.0155.321	50	14	90	44	47	64	M10	115	+0.005	10	1.4
420.0156.321	50	16	90	48	50	64	M12	115	+0.005	10	1.4
420.0157.321	50	18	90	50	50	64	M12	115	+0.005	10	1.6
420.0158.321	50	20	100	52	52	74	M16	125	+0.007	10	1.7
420.0151.322	63	6	80	25	38	54	M5	112	+0.005	10	0.9
420.0152.322	63	8	80	28	38	54	M6	112	+0.005	10	0.9
420.0153.322	63	10	80	35	41	54	M8	112	+0.005	10	1.0
420.0154.322	63	12	90	42	47	64	M10	122	+0.005	10	1.3
420.0155.322	63	14	90	44	47	64	M10	122	+0.005	10	1.3
420.0156.322	63	16	100	48	50	74	M12	132	+0.005	10	1.6
420.0157.322	63	18	100	50	50	74	M12	132	+0.005	10	1.6
420.0158.322	63	20	100	52	52	74	M16	132	+0.007	10	1.7
420.0159.322	63	25	110	65	58	84	M20	142	+0.007	10	2.2
420.0160.322	63	32	110	72	61	84	M20	142	+0.007	10	2.5
420.0151.323	80	6	90	25	38	64	M5	130	+0.005	10	1.6
420.0152.323	80	8	90	28	38	64	M6	130	+0.005	10	1.6
420.0153.323	80	10	90	35	41	64	M8	130	+0.005	10	2.0
420.0154.323	80	12	100	42	47	74	M10	140	+0.005	10	2.1
420.0155.323	80	14	100	44	47	74	M10	140	+0.005	10	2.1
420.0156.323	80	16	100	48	50	74	M12	140	+0.005	10	2.3
420.0157.323	80	18	100	50	50	74	M12	140	+0.005	10	2.4
420.0158.323	80	20	110	52	52	84	M16	150	+0.007	10	2.6
420.0159.323	80	25	110	65	58	94	M20	160	+0.007	10	3.1
420.0160.323	80	32	120	72	61	94	M20	160	+0.007	10	3.7

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No	HSK-A	d1	A	d2	l1	l2	g	L	Tol./d1	v	kg
420.0151.324	100	6	90	25	38	61	M5	140	+0.005	10	2.2
420.0152.324	100	8	90	28	38	61	M6	140	+0.005	10	2.3
420.0153.324	100	10	90	35	41	61	M8	140	+0.005	10	2.4
420.0154.324	100	12	100	42	47	71	M10	150	+0.005	10	2.7
420.0155.324	100	14	100	44	47	71	M10	150	+0.005	10	2.8
420.0156.324	100	16	100	48	50	71	M12	150	+0.005	10	2.9
420.0157.324	100	18	100	50	50	71	M12	150	+0.005	10	2.9
420.0158.324	100	20	110	52	52	81	M16	160	+0.007	10	3.1
420.0159.324	100	25	120	65	58	91	M20	170	+0.007	10	3.9
420.0160.324	100	32	120	72	61	91	M20	170	+0.007	10	4.3

使用：用于夹持带角度驱动面（2°）的直柄铣刀，DIN1835标准中的E型和DIN6535 HE型。

说明：包括配好的夹紧螺钉和限位螺钉，对于大于25mm的孔，提供2个紧固螺钉。

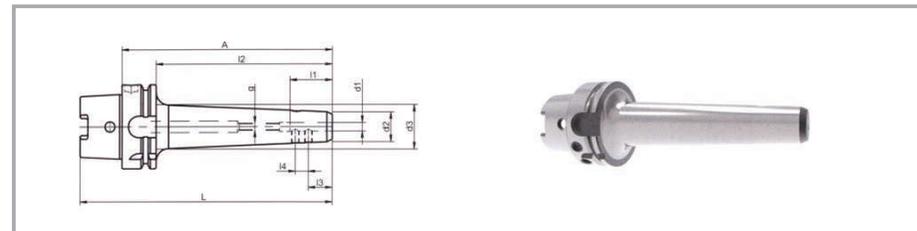
备注：带孔的止动螺钉用于内冷却，其他型号和尺寸可按订货要求制作。

Use: For holding shank tools with inclined clamping surface (2°), DIN 1835 type E and DIN 6535 type HE.

Standard Specification: Clamping screw and adjusting screw included. From location hole d1 = 25mm 2 clamping screws are included.

Note: Bored through adjusting screw for coolant. Other designs and sizes are available on request.

削平型直柄立铣刀刀柄 (细长型)
Sleeves for Straight Shanks slim version



No	HSK-A	d1	A	d2	d3	l1	l2	l3	l4	g	L	Tol./d1	kg
420.0701.322	63	6	100	22	27	38	74	18	10.0	M5	132	+ 0.005	0.9
420.0702.322	63	6	160	22	32	38	134	18	10.0	M5	192	+ 0.005	1.2
420.0703.322	63	8	100	24	29	38	74	18	10.0	M6	132	+ 0.005	1.0
420.0704.322	63	8	160	24	34	38	134	18	10.0	M6	192	+ 0.005	1.3
420.0705.322	63	10	100	25	31	41	74	20	10.0	M8	132	+ 0.005	1.0
420.0706.322	63	10	160	25	38	41	134	20	10.0	M8	192	+ 0.005	1.4
420.0707.322	63	12	100	26	34	47	74	22.5	10.0	M10	132	+ 0.005	1.1
420.0708.322	63	12	160	26	42	47	134	22.5	10.0	M10	192	+ 0.005	1.6
420.0709.322	63	14	100	28	37	47	74	22.5	12.0	M10	132	+ 0.005	1.1
420.0710.322	63	14	160	28	46	47	134	22.5	12.0	M10	192	+ 0.005	1.7
420.0711.322	63	16	100	30	38	50	74	24	12.0	M12	132	+ 0.005	1.2
420.0712.322	63	16	160	30	44	50	134	24	12.0	M12	192	+ 0.005	1.8
420.0713.322	63	18	100	32	39	50	74	24	12.0	M12	132	+ 0.005	1.2
420.0714.322	63	18	160	32	46	50	134	24	12.0	M12	192	+ 0.005	1.9
420.0715.322	63	20	100	34	42	52	74	25	12.0	M16	132	+ 0.005	1.3
420.0716.322	63	20	160	34	50	52	134	25	12.0	M16	192	+ 0.005	1.9

使用：用于夹持直柄铣刀，接DIN1835-1B型（威尔顿型）和DIN1835-1E型（威斯特凹口型）以及DIN6535 HB和HE型。

说明：包括配好的夹紧螺钉和限位螺钉。

备注：带孔的止动螺钉用于内冷却，其他型号和尺寸可按订货要求制作。

Use: For holding shank tools with lateral driving surface, DIN 1835-1 type B and inclined clamping surface (2°), DIN 1835-1 type E, DIN 6535 type HB and HE.

Standard Specification: Clamping screw and adjusting screw included.

Note: Bored through adjusting screw for coolant. Other designs and sizes are available on request.

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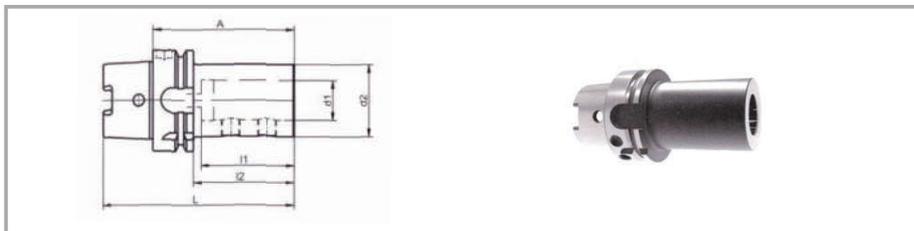
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削平型浅孔钻头柄
Indexable Drill Holders



No	HSK-A	d1	A	d2	l1	L	kg
590.0001.322	63	20	80	40	54	112	1.1
590.0002.322	63	25	90	45	59	122	1.2
590.0003.322	63	32	90	52	63	122	1.3
590.0001.324	100	20	90	40	54	140	2.5
590.0002.324	100	25	95	45	59	145	2.6
590.0003.324	100	32	100	52	63	150	2.8
590.0004.324	100	40	110	60	73	160	3.4

使用: 用于夹持的浅孔钻头柄符合DIN 6595和ISO 9766。

Use: For holding Indexable Drills with shaft according to DIN 6595 and ISO 9766.

设计: 螺纹孔的位置与夹持的浅孔钻头柄根据DIN 6595有0.4mm的错位间隙, 是为了在通过螺钉连接时拉紧浅孔钻。

Design: Position of the front threaded pin in straight shank offset by 0.4mm according to DIN 6595. The offset allows the flange of the drill to be clamped against the contact face of the tool holder when the threaded pin is tightened.

说明: 包括夹紧螺钉。

Standard Specification: Clamping screw included.

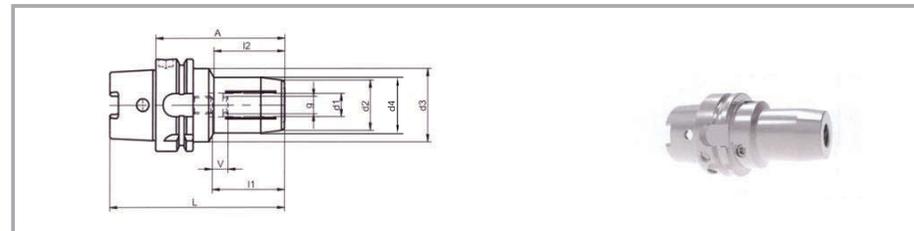
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液压夹头
Hydraulic Expansion Chucks



No	HSK-A	d1	A	d2	d3	d4	l1	l2	g	L	v	kg
702.0001.321	50	6	70	22	40	26	37	26	M 5	95	10	0.8
702.0002.321	50	8	70	24	40	28	37	26	M 6	95	10	0.8
702.0003.321	50	10	75	26	40	30	41	35	M8 x 1	100	10	0.8
702.0004.321	50	12	85	28	40	32	46	40	M10 x 1	110	10	0.8
702.0005.321	50	14	85	30	40	34	46	40	M10 x 1	110	10	0.8
702.0006.321	50	16	90	34	42	38	49	46	M12 x 1	115	10	1.1
702.0007.321	50	18	90	36	42	40	49	46	M12 x 1	115	10	1.1
702.0008.321	50	20	90	38	42	42	51	64	M16 x 1	115	10	1.1

702.0001.322	63	6	70	22	50	26	37	26	M 5	102	10	1.1
702.0031.322	63	6	150	22	50	26	37	105	M 5	182	10	1.5
702.0032.322	63	6	200	22	50	26	37	155	M 5	232	10	1.7
702.0002.322	63	8	70	24	50	28	37	26	M 6	102	10	1.1
702.0033.322	63	8	150	24	50	28	37	105	M 6	182	10	1.5
702.0034.322	63	8	200	24	50	28	37	155	M 6	232	10	1.7
702.0003.322	63	10	80	26	50	30	41	35	M 8 x 1	112	10	1.1
702.0035.322	63	10	150	26	50	30	41	105	M 8 x 1	182	10	1.5
702.0036.322	63	10	200	26	50	30	41	155	M 8 x 1	232	10	1.8
702.0004.322	63	12	85	28	50	32	46	40	M10 x 1	117	10	1.1
702.0037.322	63	12	150	28	50	32	46	105	M10 x 1	182	10	1.5
702.0038.322	63	12	200	28	50	32	46	155	M10 x 1	232	10	1.8
702.0005.322	63	14	85	30	50	34	46	40	M10 x 1	117	10	1.3
702.0039.322	63	14	150	30	50	34	46	105	M10 x 1	182	10	1.7
702.0040.322	63	14	200	30	50	34	46	155	M10 x 1	232	10	2.0
702.0006.322	63	16	90	34	50	38	49	46	M12 x 1	122	10	1.3
702.0041.322	63	16	150	34	50	38	49	105	M12 x 1	182	10	1.8
702.0042.322	63	16	200	34	50	38	49	155	M12 x 1	232	10	2.2
702.0007.322	63	18	90	36	50	40	49	46	M12 x 1	122	10	1.3
702.0043.322	63	18	150	36	50	40	49	105	M12 x 1	182	10	1.9
702.0044.322	63	18	200	36	50	40	49	155	M12 x 1	232	10	2.3
702.0008.322	63	20	90	38	50	42	51	46	M16 x 1	122	10	1.3
702.0045.322	63	20	150	38	50	42	49	105	M16 x 1	182	10	1.9
702.0046.322	63	20	200	38	50	42	49	155	M16 x 1	232	10	2.5
702.0009.322	63	25	120	53	55	50	57	52	M16 x 1	152	10	2.3
702.0010.322	63	32	125	56	63	63	61	83	M16 x 1	157	10	2.9

No	HSK-A	d1	A	d2	d3	d4	l1	l2	g	L	v	kg
702.0001.324	100	6	75	22	50	26	37	26	M 5	125	10	2.4
702.0002.324	100	8	75	24	50	28	37	26	M 6	125	10	2.4
702.0003.324	100	10	90	26	50	30	41	40	M 8 x 1	140	10	2.5
702.0004.324	100	12	95	28	50	32	46	40	M10 x 1	145	10	2.5
702.0005.324	100	14	95	30	50	34	46	40	M10 x 1	145	10	2.5
702.0006.324	100	16	100	34	50	38	49	46	M12 x 1	150	10	2.7
702.0007.324	100	18	100	36	50	40	49	46	M12 x 1	150	10	2.7
702.0008.324	100	20	105	38	75	42	51	46	M16 x 1	155	10	3.2
702.0009.324	100	25	115	51	75	57	57	86	M16 x 1	165	10	3.3
702.0010.324	100	32	120	60	75	64	61	91	M16 x 1	170	10	3.8

使用：用于夹持按DIN 1835 A、B型或DIN 6535 HA或HB型直柄刀具，DIN1835 C、DE型和DIN 6535 HE型刀柄，仅能与缩径套共用。夹持精度h6级，粗糙度最小为Ra0.3，对于φ25和φ32只有DIN 1835 A型和DIN 6535HA型可用。

说明：带内置的限位螺钉。

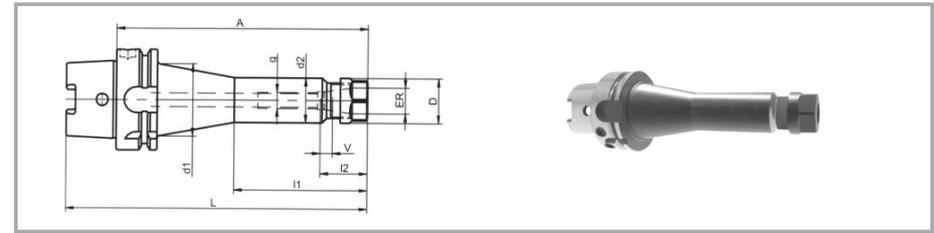
备注：其他型号和尺寸可按订货要求制作。

Use: For shank tools according to DIN 1835 type A and B and DIN 6535 type HA and HB. Shanks according to DIN 6535 type HE are only applicable with reduction bushes. Shank quality h6, Ra min. = 0.3. For φ25 and φ32 only type A or HA can be used.

Standard Specification: Bored through adjusting screw included.

Note: Other designs and sizes are available on request.

ER/ESX ER-16弹簧夹头刀柄 (带调整螺钉孔)
Collet Chucks ER/ESX 16 with internal thread



No	HSK-A	ER	A	d1	d2	D	l1	l2	g	L	v	kg
698.0001.320	40	ER16 (0.5-10)	80	-	28	32	-	27	M10	100	10	0.4
698.0001.321	50	ER16 (0.5-10)	100	-	28	32	-	27	M10	125	10	0.6
698.0011.322	63	ER16 (0.5-10)	75	-	28	32	-	27	M10	107	10	0.8
698.0001.322	63	ER16 (0.5-10)	100	-	28	32	-	27	M10	132	10	1.0
698.0002.322	63	ER16 (0.5-10)	160	45	28	32	85	27	M10	192	10	1.7
698.0001.324	100	ER16 (0.5-10)	100	-	28	32	-	27	M12	150	10	2.9
698.0002.324	100	ER16 (0.5-10)	160	60	28	32	85	27	M12	210	10	3.4

使用：用于夹持按DIN 1835 A、B、E型或DIN 6535 HA、HB、HE型的直柄刀具。

说明：夹头包括夹紧螺母。

备注：弹簧夹头配有标准调整螺钉便于调节；其他型号和尺寸可按订货要求制作。

Use: For clamping tools with straight shank according to DIN 1835 type A, B and E and DIN 6535 type HA, HB and HE.

Standard Specification: Collet chuck including clamping nut

Note: Collet chucks are equipped with internal thread for adjusting screws. Other designs and sizes are available on request.

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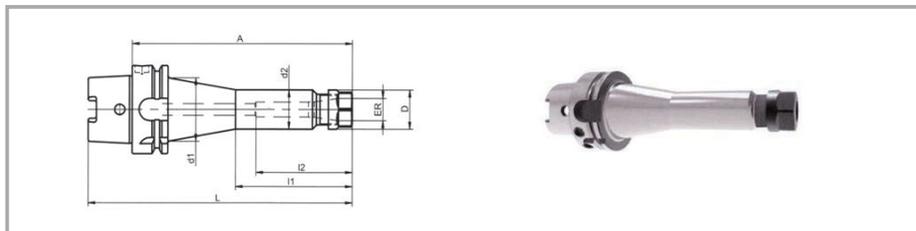
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ER/ESX ER-11/16弹簧夹头刀柄 (不带调整螺钉孔)
Collet Chucks ER/ESX 11/16 without internal thread



No	HSK-A	ER	A	d1	d2	D	I1	I2	L	kg
698.0211.320	40	ER 11 (0.5 - 7)	80	-	18.5	19	-	42	100	0.3
698.0201.320	40	ER 16 (0.5 - 10)	80	-	28	28	-	61	100	0.4
698.0201.321	50	ER 16 (0.5 - 10)	100	-	28	28	-	70	125	0.6
698.0201.322	63	ER 16 (0.5 - 10)	100	-	28	28	-	70	132	1.0
698.0202.322	63	ER 16 (0.5 - 10)	160	46	28	28	85	70	192	1.7
698.0201.324	100	ER 16 (0.5 - 10)	100	-	28	28	-	70	150	2.9
698.0202.324	100	ER 16 (0.5 - 10)	160	45	28	28	85	70	210	3.4

使用: 用于夹持按DIN 1835 A、B、E型或DIN 6535 HA、HB、HE型直柄刀具。

Use: For clamping tools with straight shank according to DIN 1835 type A, B and E and DIN 6535 type HA, HB and HE.

说明: 夹头包括夹紧螺母。

Standard Specification: Collet chuck including clamping nut.

备注: 其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request

ACCESSORIES

配件



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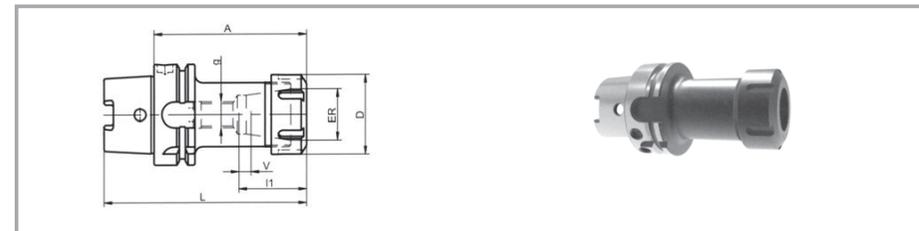
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ER/ESX ER-25/32/40弹簧夹头刀柄 (带调整螺钉孔)
Collet Chucks ER/ESX 25/32/40 with internal thread



No	HSK-A	ER	A	D	I1	g	L	v	kg
697.0003.320	40	ER 25 (1 - 16)	80	42	43	M10	100	10	0.5
697.0004.321	50	ER 25 (1 - 16)	100	42	43	M10	125	10	1.2
697.0014.322	63	ER 25 (1 - 16)	75	42	43	M10	107	10	0.9
697.0004.322	63	ER 25 (1 - 16)	100	42	43	M10	132	10	1.2
697.0044.322	63	ER 25 (1 - 16)	160	42	43	M10	172	10	1.8
697.0011.322	63	ER 32 (2 - 20)	75	50	47	M16	107	10	1.0
697.0001.322	63	ER 32 (2 - 20)	100	50	47	M16	132	10	1.2
697.0041.322	63	ER 32 (2 - 20)	160	50	47	M16	173	10	1.7
697.0012.322	63	ER 40 (3 - 26)	90	63	53	M16	122	10	1.4
697.0002.322	63	ER 40 (3 - 26)	120	63	53	M16	152	10	1.7
697.0003.323	80	ER 25 (1 - 16)	100	42	43	M10	140	10	3.0
697.0001.323	80	ER 32 (2 - 20)	100	50	47	M16	140	10	2.7
697.0002.323	80	ER 40 (3 - 26)	120	63	53	M16	160	10	3.2
697.0004.324	100	ER 25 (1 - 16)	100	42	43	M10	150	10	2.6
697.0044.324	100	ER 25 (1 - 16)	160	42	43	M10	210	10	3.2
697.0001.324	100	ER 32 (2 - 20)	100	50	47	M16	150	10	2.7
697.0041.324	100	ER 32 (2 - 20)	160	50	47	M16	210	10	3.6
697.0002.324	100	ER 40 (3 - 26)	120	63	53	M16	170	10	3.4
697.0042.324	100	ER 40 (3 - 26)	160	63	53	M16	210	10	4.2

使用: 用于夹持按DIN 1835 A、B、E型或DIN 6535 HA、HB、HE型直柄刀具。

Use: For clamping tools with straight shank according to DIN 1835 type A, B and E and DIN 6535 type HA, HB and HE.

说明: 夹头包括夹紧螺母。

Standard Specification: Collet chuck including clamping nut.

备注: 弹簧夹头配有标准调整螺钉便于调节; 其他型号和尺寸可按订货要求制作。

Note: Collet chucks are equipped with internal thread for adjusting screws. Other designs and sizes are available on request.

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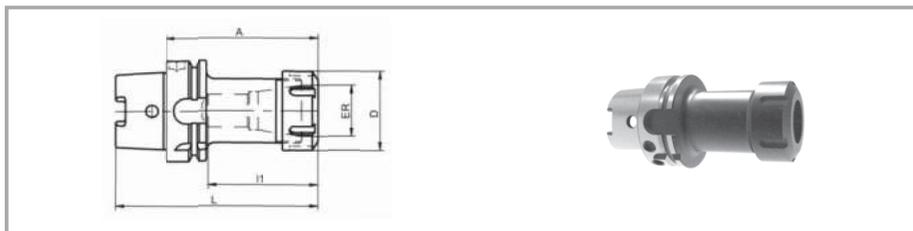
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ER/ESX ER-25/32/40弹簧夹头刀柄 (不带调整螺钉孔)
Collet Chucks ER/ESX 25/32/40 without internal thread



No	HSK-A	ER	A	D	H	L	kg
697.0203.320	40	ER 25 (1 - 16)	80	42	60	100	0.5
697.0204.321	50	ER 25 (1 - 16)	100	42	72	125	1.2
697.0201.321	50	ER 32 (2 - 20)	100	50	73	125	1.2
697.0204.322	63	ER 25 (1 - 16)	100	42	69	132	1.2
697.0244.322	63	ER 25 (1 - 16)	160	42	69	172	1.8
697.0201.322	63	ER 32 (2 - 20)	100	50	74	132	1.2
697.0241.322	63	ER 32 (2 - 20)	160	50	73	173	1.7
697.0202.322	63	ER 40 (3 - 26)	120	63	87	152	1.7
697.0242.322	63	ER 40 (3 - 26)	160	63	87	192	2.3
697.0204.324	100	ER 25 (1 - 16)	100	42	69	150	2.6
697.0244.324	100	ER 25 (1 - 16)	160	42	69	210	3.2
697.0201.324	100	ER 32 (2 - 20)	100	50	70	150	2.7
697.0241.324	100	ER 32 (2 - 20)	160	50	70	210	3.6
697.0202.324	100	ER 40 (3 - 26)	120	63	87	170	3.4
697.0242.324	100	ER 40 (3 - 26)	160	63	87	210	4.2

使用: 用于夹持按DIN 1835 A、B、E型或DIN 6535 HA、HB、HE型直柄刀具。

Use: For clamping tools with straight shank according to DIN 1835 type A, B and E and DIN 6535 type HA, HB and HE.

说明: 夹头包括夹紧螺母。

Standard Specification: Collet chuck including clamping nut.

备注: 其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request

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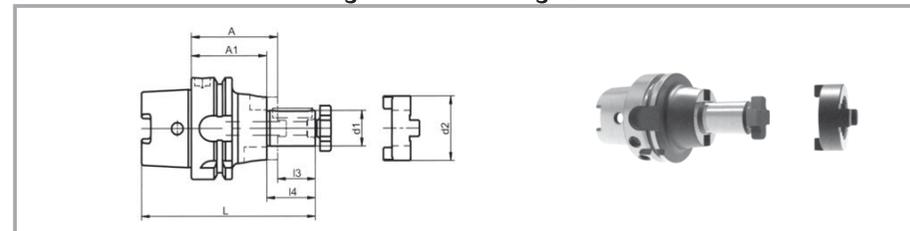
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套式铣刀刀柄 (带平键和传动环)
Shell End Mill Arbors for milling cutters with longitudinal slot or tenon drive.



No	HSK-A	d1	A	d2	l3	l4	L	A1	kg
489.0001.320	40	16	50	32	17	27	87	40	0.5
489.0002.320	40	22	50	40	19	31	89	38	0.6
489.0003.320	40	27	65	48	21	33	106	53	0.8
489.0001.321	50	16	50	32	17	27	92	40	0.7
489.0002.321	50	22	50	40	19	31	94	38	0.8
489.0003.321	50	27	65	48	21	33	111	53	1.0
489.0004.321	50	32	65	58	24	38	114	51	1.2
489.0001.322	63	16	60	32	17	27	109	50	0.9
489.0031.322	63	16	100	32	17	27	149	90	1.2
489.0041.322	63	16	160	32	17	27	209	50	2.0
489.0002.322	63	22	60	40	19	31	111	48	1.0
489.0032.322	63	22	100	40	19	31	151	88	1.5
489.0042.322	63	22	160	40	19	31	211	48	2.2
489.0003.322	63	27	60	48	21	33	113	48	1.1
489.0033.322	63	27	100	48	21	33	153	88	1.6
489.0043.322	63	27	160	48	21	33	213	48	2.4
489.0004.322	63	32	60	58	24	38	116	46	1.2
489.0034.322	63	32	100	58	24	38	156	86	2.0
489.0044.322	63	32	160	58	24	38	216	46	3.2
489.0005.322	63	40	70	70	27	41	129	56	1.5
489.0035.322	63	40	100	70	27	41	159	86	2.4
489.0045.322	63	40	160	70	27	41	219	46	4.2
489.0001.323	80	16	60	32	17	27	117	50	1.5
489.0002.323	80	22	60	40	19	31	119	48	1.8
489.0003.323	80	27	60	48	21	33	121	48	2.0
489.0004.323	80	32	60	58	24	38	124	46	2.4
489.0005.323	80	40	70	70	27	41	137	56	2.9
489.0006.323	80	50	80	90	30	46	150	64	3.3

No	HSK-A	d1	A	d2	l3	l4	L	A1	kg
489.0001.324	100	16	60	32	17	27	127	50	2.0
489.0031.324	100	16	100	32	17	27	167	90	2.6
489.0041.324	100	16	160	32	17	27	227	150	3.4
489.0002.324	100	22	60	40	19	31	129	48	2.3
489.0032.324	100	22	100	40	19	31	169	88	2.8
489.0042.324	100	22	160	40	19	31	229	148	3.9
489.0003.324	100	27	60	48	21	33	131	48	2.4
489.0033.324	100	27	100	48	21	33	171	88	3.1
489.0043.324	100	27	160	48	21	33	231	148	3.8
489.0004.324	100	32	60	58	24	38	134	46	2.5
489.0034.324	100	32	100	58	24	38	174	86	3.5
489.0044.324	100	32	160	58	24	38	234	146	4.5
489.0005.324	100	40	70	70	27	41	147	56	3.2
489.0035.324	100	40	100	70	27	41	177	86	3.9
489.0045.324	100	40	160	70	27	41	237	146	5.8
489.0006.324	100	50	80	90	30	46	160	64	3.8

使用: 用于夹持带有平键和传动环的面铣刀。

Use: For clamping shell end mills and milling cutters with longitudinal slot or tenon drive.

设计: 带有中心冷却功能, 传动环符合DIN 138。

Design: Central boring for coolant supply. Cutter drive according to DIN 138.

说明: 包括紧固螺钉、带有螺孔的平键和传动环。

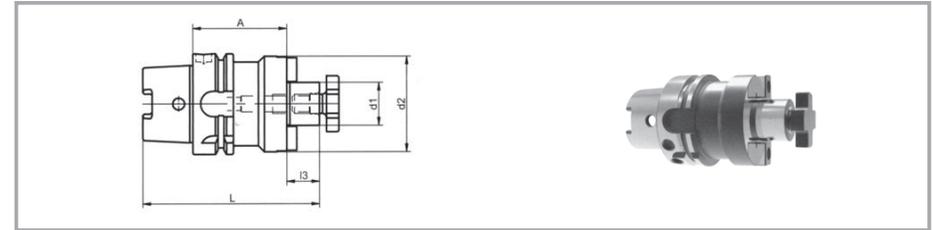
Standard Specification: Cutter retaining screw, feather key with withdrawal thread and drive ring included.

备注: 其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

端铣刀柄

Shell End Mill Arbors with enlarged contact diameter



DIN 69882-3
Form B
↑ = 0.006
↓ = 0.005
G2,5 25,000 mm² <1g mm²
möglich
CAD

No	HSK-A	d1	A	d2	l3	L	kg
579.0009.321	50	16	50	40	17	94	0.8
579.0001.321	50	22	60	50	19	104	0.9
579.0002.321	50	27	60	60	21	106	1.1
579.0009.322	63	16	50	40	17	99	0.9
579.0039.322	63	16	100	40	17	149	1.4
579.0049.322	63	16	160	40	17	209	2.0
579.0001.322	63	22	50	50	19	101	1.1
579.0031.322	63	22	100	50	19	151	1.8
579.0041.322	63	22	160	50	19	211	2.7
579.0002.322	63	27	60	60	21	113	1.4
579.0032.322	63	27	100	60	21	153	2.2
579.0042.322	63	27	160	60	21	213	3.5
579.0003.322	63	32	60	78	24	116	1.6
579.0033.322	63	32	100	78	24	156	3.0
579.0043.322	63	32	160	78	24	216	5.2
579.0004.322	63	40	60	89	27	119	1.8
579.0034.322	63	40	100	89	27	159	3.9
579.0001.323	80	22	50	50	19	109	2.1
579.0002.323	80	27	50	60	21	111	2.3
579.0003.323	80	32	60	78	24	114	2.5
579.0004.323	80	40	60	89	27	117	3.3

ACCESSORIES

配件



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No	HSK-A	d1	A	d2	l3	L	kg
579.0009.324	100	16	50	40	17	117	2.2
579.0039.324	100	16	100	40	17	167	2.7
579.0049.324	100	16	160	40	17	227	3.3
579.0001.324	100	22	50	50	19	119	2.4
579.0031.324	100	22	100	50	19	169	3.1
579.0041.324	100	22	160	50	19	229	4.0
579.0002.324	100	27	50	60	21	121	2.5
579.0032.324	100	27	100	60	21	171	3.6
579.0042.324	100	27	160	60	21	231	4.7
579.0003.324	100	32	50	78	24	124	2.9
579.0033.324	100	32	100	78	24	174	4.7
579.0043.324	100	32	160	78	24	234	6.9
579.0004.324	100	40	60	89	27	137	3.5
579.0034.324	100	40	100	89	27	177	5.4
579.0044.324	100	40	160	89	27	237	8.3
579.0005.324	100	50	70	120	30	150	5.4
579.0035.324	100	50	100	120	30	180	7.1
579.0045.324	100	50	160	120	30	240	9.3
579.0006.324	100	60	70	140	40	160	6.3
579.0036.324	100	60	100	140	40	190	8.2

使用：用于夹持带有端面键槽的面铣刀。

Use: For clamping shell end mills and milling cutters with tenon drive.

设计：带有中心冷却功能， $\phi 40$ 和 $\phi 60$ 两种规格需要4个螺钉夹紧，刀具和主轴的安装尺寸符合DIN 2079。

Design: Central boring for coolant supply. Clamping $\phi 40$ and 60 with 4 threaded holes for holding cutters with tool holding according to DIN 2079.

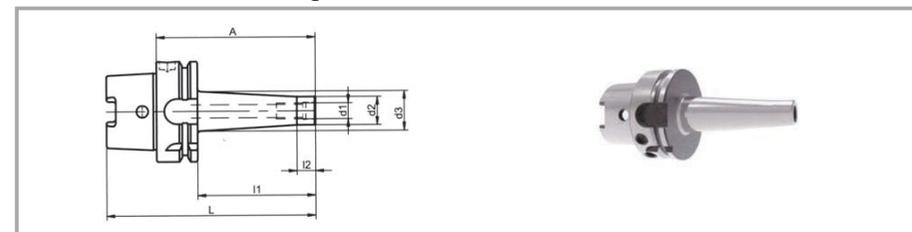
说明：包括紧固螺钉和传动键。

Standard Specification: Cutter retaining screw and tightened drive keys included.

备注：其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

快换铣刀刀柄
Holders for screw-in milling cutters



No	HSK-A	d1	A	d2	d3	l1	l2	L	kg
571.0001.322	63	M 8	51	12.8	15	25	12	83	0.7
571.0011.322	63	M 8	76	12.8	23	50	12	109	0.8
571.0021.322	63	M 8	101	12.8	23	75	12	133	0.8
571.0022.322	63	M10	51	17.8	20	25	12	83	0.7
571.0012.322	63	M10	76	17.8	25	50	12	109	0.8
571.0022.322	63	M10	101	17.8	25	75	12	133	0.9
571.0032.322	63	M10	126	17.8	32	100	12	158	1.0
571.0042.322	63	M10	176	17.8	35	150	12	208	1.3
571.0003.322	63	M12	51	20.8	24	25	12	83	0.7
571.0013.322	63	M12	76	20.8	28	50	12	109	0.8
571.0023.322	63	M12	101	20.8	31	75	12	133	0.9
571.0033.322	63	M12	126	20.8	33	100	12	158	1.1
571.0043.322	63	M12	176	20.8	40	150	12	208	1.4
571.0004.322	63	M16	51	28.8	—	25	—	83	0.8
571.0014.322	63	M16	76	28.8	34	50	12	109	0.9
571.0024.322	63	M16	101	28.8	34	75	12	133	1.0
571.0034.322	63	M16	126	28.8	36	100	12	158	1.2
571.0044.322	63	M16	176	28.8	42	150	12	208	1.7
571.0011.324	100	M 8	79	12.8	23	50	12	129	2.2
571.0012.324	100	M10	79	17.8	25	50	12	129	2.2
571.0022.324	100	M10	104	17.8	25	75	12	154	2.3
571.0032.324	100	M10	129	17.8	32	100	12	179	2.4
571.0042.324	100	M10	179	17.8	35	150	12	229	2.6
571.0013.324	100	M12	79	20.8	28	50	12	129	2.2
571.0023.324	100	M12	104	20.8	31	75	12	154	2.3
571.0033.324	100	M12	129	20.8	33	100	12	179	2.4
571.0043.324	100	M12	179	20.8	40	150	12	229	2.8
571.0014.324	100	M16	79	28.8	34	50	12	129	2.3
571.0024.324	100	M16	104	28.8	34	75	12	154	2.4
571.0034.324	100	M16	129	28.8	36	100	12	179	2.6
571.0044.324	100	M16	179	28.8	42	150	12	229	3.0

使用：用于夹紧以螺纹连接的铣刀。

Use: For clamping screw-in milling cutters with thread.

备注：其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

ACCESSORIES
配件

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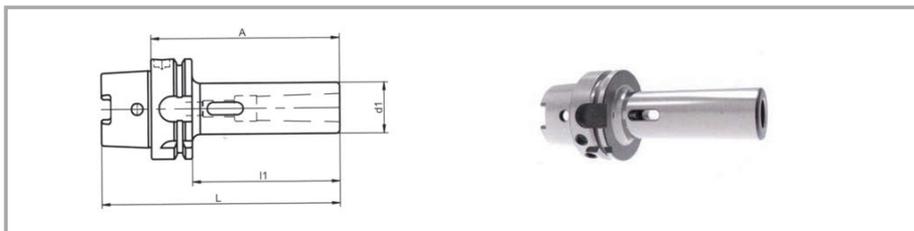
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页数

ACCESSORIES
配件

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带扁尾莫氏圆锥孔刀柄
Eduction Sleeves for morse taper with tang



No	HSK-A	MK	A	d1	l1	L	kg
454.0001.321	50	1	100	25	74	125	1.0
454.0002.321	50	2	120	32	94	145	1.1
454.0003.321	50	3	140	40	114	165	1.6
454.0001.322	63	1	100	25	74	132	1.0
454.0002.322	63	2	120	32	94	152	1.2
454.0003.322	63	3	140	40	114	172	1.5
454.0004.322	63	4	160	48	134	192	2.0
454.0001.323	80	1	110	25	84	150	1.9
454.0002.323	80	2	120	32	94	160	2.4
454.0003.323	80	3	150	40	114	190	2.6
454.0004.323	80	4	170	48	144	210	3.2
454.0005.323	80	5	200	63	184	240	4.0
454.0001.324	100	1	110	25	81	160	2.0
454.0002.324	100	2	120	32	91	170	2.6
454.0003.324	100	3	150	40	121	200	2.9
454.0004.324	100	4	170	48	141	220	3.5
454.0005.324	100	5	200	63	171	250	4.2

备注：其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

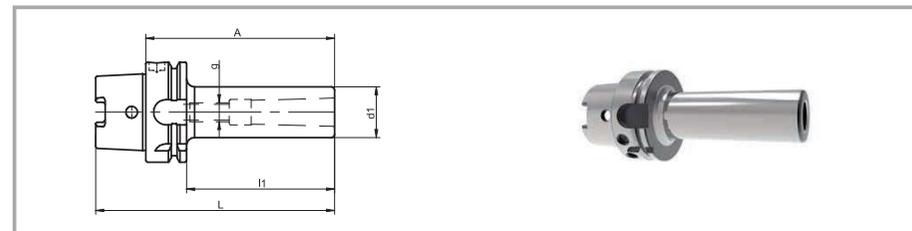
ACCESSORIES
配件



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页数

无扁尾莫氏圆锥孔刀柄
Reduction Sleeves for morse taper with thread



No	HSK-A	MK	A	d1	l1	L	g	kg
458.0001.321	50	1	100	25	74	125	M6	1.0
458.0002.321	50	2	120	32	94	145	M10	1.1
458.0003.321	50	3	130	40	104	155	M12	1.5
458.0001.322	63	1	100	25	74	132	M6	1.0
458.0002.322	63	2	120	32	94	152	M10	1.2
458.0003.322	63	3	130	40	104	162	M12	1.4
458.0004.322	63	4	160	48	134	192	M16	2.0
458.0001.323	80	1	120	25	94	160	M6	2.0
458.0002.323	80	2	120	32	94	160	M10	2.4
458.0003.323	80	3	140	40	104	180	M12	2.5
458.0004.323	80	4	170	48	144	210	M16	3.2
458.0005.323	80	5	200	63	184	240	M20	4.0
458.0001.324	100	1	120	25	91	170	M6	2.1
458.0002.324	100	2	120	32	91	170	M10	2.6
458.0003.324	100	3	140	40	111	190	M12	2.7
458.0004.324	100	4	170	48	141	220	M16	3.5
458.0005.324	100	5	200	63	171	250	M20	4.2

说明：包括紧固螺钉和螺纹挡环。

Standard Specification: Retaining screw and threaded ring included.

备注：其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

ACCESSORIES
配件



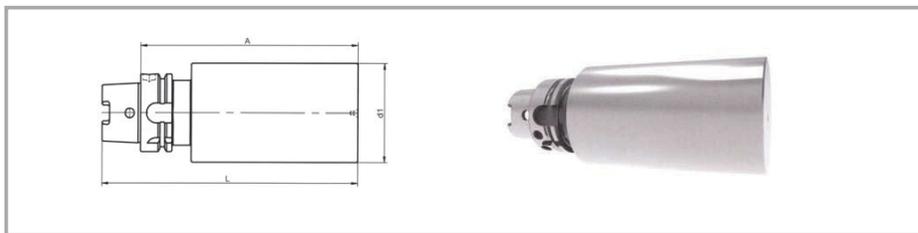
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毛坯刀柄
Tool Blanks



ISO
12164-1

Form
A

No	HSK-A	d1	A	L	kg
517.6001.320	40	40	200	220	1.92
517.5001.321	50	50	150	175	2.22
517.5002.321	50	50	200	225	2.99
517.5003.321	50	63	150	175	3.20
517.6001.321	50	63	200	225	4.42
517.5001.322	63	63	150	182	3.56
517.5002.322	63	63	200	232	4.79
517.5003.322	63	63	250	282	6.01
517.5004.322	63	80	150	182	5.18
517.5005.322	63	80	200	232	7.16
517.6001.322	63	80	250	282	9.13
517.5001.323	80	80	150	190	5.80
517.5002.323	80	80	200	240	7.78
517.6001.323	80	80	250	290	9.75
517.5001.324	100	95	150	200	8.61
517.5002.324	100	95	200	250	11.40
517.6001.324	100	95	250	300	13.01

使用: 用于制造特殊刀具及工具系统产品。

Use: For own manufacture of special tools.

设计: 锥柄为磨制成品, 尺寸符合柄部标准, 维氏硬度 HV670±40 (近似于HRC58±2), 淬硬层在 0.5mm以上。预备精加工部分硬度HRC40-46。

Design: The taper is finished with grinding, the dimensions are in accordance with the standard of the handle, HV670±40 (approximately HRC58±2), the hardened layer is above 0.5mm. Tool part is HRC40-46.

材料: 合金钢

Material: Alloyed case-hardened steel.

备注: 其他型号和尺寸可按订做要求制作。

Note: Other designs and sizes are available on request.

ACCESSORIES

配件



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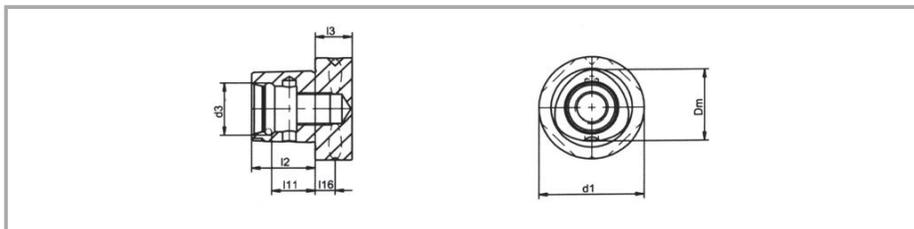
PSC精密刀柄

PSC–Polygonal Taper Shanks



	PSC 精密刀柄	PSC–Polygonschaftkegel
3.03–3.05	i-tec® 热装夹头	i-tec® Shrink-fit Chucks standard version
3.06	丝锥快换夹头	Quick Change Tapping Chucks
3.07–3.08	削平型直柄立铣刀刀柄 (威尔顿型)	Reduction Sleeves for Straight Shanks with lateral driving surface(Weldon)
3.09–3.10	带2° 斜削平型直柄立铣刀刀柄 (威尔逊凹口型)	Reduction Sleeves for Straight Shanks with inclined clamping surface(Weldon Notch)
3.11	液压刀柄	Hydraulic Expansion Chucks
3.12	ER/ESX ER-16弹簧夹头刀柄 (带调整螺丝孔)	Collet Chucks ER/ESX 16
3.13–3.14	ER/ESX ER-25/32/40弹簧夹头刀柄 (带调整螺丝孔)	Collet Chucks ER/ESX 25/32/40
3.15–3.16	套式铣刀刀柄 (带平键和传动环)	Shell End Mill Arbors for milling cutters with longitudinal slot or tenon drive
3.17	套式铣刀刀柄	Shell End Mill Arbors
3.18	KFS模块式铣刀柄	Holders for screw-in milling cutters
3.19	带扁尾莫氏圆锥孔刀柄	Reduction Sleeves for morse taper taper with tang
3.20–3.21	毛坯刀柄	Tool Blanks

PSC 刀柄
PSC Tool Holders



ISO 26623-1

PSC	d1	d3 ± 0.05	l2 ± 0.1	l3	l11 ± 0.1	l16	Dm
32	32	16.5	19	15	13.5	9	22
40	40	20	24	20	17.5	12	28
50	50	24	30	20	22	12	35
63	63	32	38	22	26	12	44
80	80	38	48	30	34	12	55

设计: 无数据孔的三棱锥柄符合ISO 26623-1, 一般要求: 硬度应满足较低的变形量, 维氏硬度在HV670±40(近似于HRC58±2), 淬硬(渗碳)层0.3-0.6mm。对于PSC柄部其他参数参见于上表。

材料: 一般要求: 符合硬度要求的合金钢材料, 并且能承受扭矩980N/mm²。

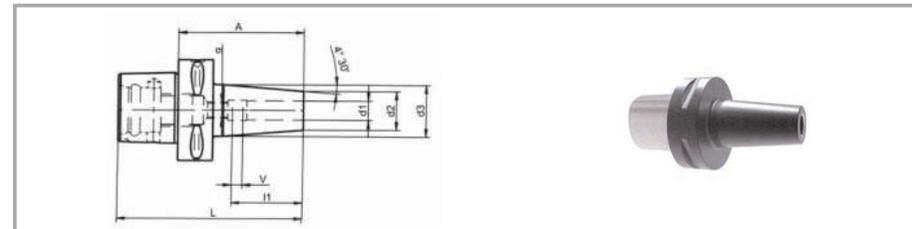
说明: 价格和交付情况如有变化会在订单上实时变更。制造商保留对技术修改的权力。单位以mm。

Design: Polygonal taper shanks according to ISO 26623-1 without bore for identification chip.If not otherwise specified: Hardened by means of a special lowdistortion hardening process Vickers hardness 670±40 HV30(HRC58±2).Hardness depth Eht=min0.3-0.6mm.For details of concentricity of PSC to tool holder, refer to appropriate page of catalogue.

Material: If not otherwise specified:Case-hardened alloy steel with a core tensile strength after case hardening of min.980N/mm².

Standard Specification: Prices and delivery conditions are shown in the corresponding price list valid at the time in question.Manufacturer reserves the right to make technical modifications.All dimensions in mm.

i-tec® 热装夹头
i-tec® Shrink-fit Chucks standard version



ISO 26623-1



± 0.003

G6.3 15.000mm²



möglich

CAD

No	PSC	d1	A	d2	d3	l1	g	L	v	kg
311.0001.381	32	6	65	21	27	36	M5	84	10	0.3
311.0002.381	32	8	65	21	27	36	M6	84	10	0.3
311.0003.381	32	10	70	24	32	41	M8x1	89	10	0.4
311.0004.381	32	12	75	24	32	47	M10x1	94	10	0.4
311.0001.382	40	6	75	21	27	36	M5	99	10	0.5
311.0002.382	40	8	75	21	27	36	M6	99	10	0.5
311.0003.382	40	10	75	24	32	41	M 8x1	99	10	0.5
311.0004.382	40	12	75	24	32	47	M10x1	99	10	0.5
311.0005.382	40	14	80	27	34	47	M10x1	104	10	0.6
311.0006.382	40	16	80	27	34	50	M12x1	104	10	0.6
311.0007.382	40	18	80	33	42	50	M12x1	104	10	0.7
311.0008.382	40	20	85	33	42	52	M16x1	109	10	0.7
311.0011.383	50	3	65	12	17	—	—	95	—	0.5
311.0014.383	50	4	65	12	17	—	—	95	—	0.5
311.0017.383	50	5	65	12	17	—	—	95	—	0.5
311.0001.383	50	6	75	21	30	36	M5	105	10	0.7
311.0031.383	50	6	120	21	32	36	M5	150	10	0.9
311.0002.383	50	8	75	21	30	36	M6	105	10	0.7
311.0032.383	50	8	120	21	32	36	M6	150	10	0.9
311.0003.383	50	10	75	24	33	41	M8x1	105	10	0.7
311.0033.383	50	10	120	24	34	41	M8x1	150	10	1.0
311.0004.383	50	12	75	24	33	47	M10x1	105	10	0.7
311.0034.383	50	12	120	24	34	47	M10x1	150	10	1.0
311.0005.383	50	14	80	27	34	47	M10x1	110	10	0.8
311.0035.383	50	14	120	27	36	47	M10x1	150	10	1.1
311.0006.383	50	16	80	27	34	50	M12x1	110	10	0.7
311.0036.383	50	16	120	27	36	50	M12x1	150	10	1.0
311.0007.383	50	18	80	33	42	50	M12x1	110	10	0.9
311.0037.383	50	18	120	33	42	50	M12x1	150	10	1.3
311.0008.383	50	20	85	33	42	52	M16x1	115	10	0.9
311.0038.383	50	20	120	33	42	52	M16x1	150	10	1.3
311.0009.383	50	25	90	44	53	58	M16x1	120	10	1.2
311.0039.383	50	25	120	44	53	58	M16x1	150	10	1.6

No	PSC	d1	A	d2	d3	l1	g	L	v	kg
311.0011.384	63	3	80	12	17	—	—	118	—	0.9
311.0014.384	63	4	80	12	17	—	—	118	—	0.9
311.0017.384	63	5	80	12	17	—	—	118	—	0.9
311.0001.384	63	6	80	21	27	36	M5	118	10	1.0
311.0031.384	63	6	120	21	32	36	M5	158	10	1.2
311.0041.384	63	6	160	21	32	36	M5	198	10	1.5
311.0002.384	63	8	80	21	27	36	M6	118	10	1.0
311.0032.384	63	8	120	21	32	36	M6	158	10	1.2
311.0042.384	63	8	160	21	32	36	M6	198	10	1.5
311.0003.384	63	10	80	24	32	41	M8x1	118	10	1.0
311.0033.384	63	10	120	24	32	41	M8x1	158	10	1.3
311.0043.384	63	10	160	24	34	41	M8x1	198	10	1.6
311.0004.384	63	12	80	24	32	47	M10x1	118	10	1.0
311.0034.384	63	12	120	24	32	47	M10x1	158	10	1.3
311.0044.384	63	12	160	24	34	47	M10x1	198	10	1.6
311.0005.384	63	14	85	27	34	47	M10x1	123	10	1.1
311.0035.384	63	14	120	27	36	47	M10x1	158	10	1.4
311.0045.384	63	14	160	27	36	47	M10x1	198	10	1.7
311.0006.384	63	16	85	27	34	50	M12x1	123	10	1.1
311.0036.384	63	16	120	27	36	50	M12x1	158	10	1.3
311.0046.384	63	16	160	27	36	50	M12x1	198	10	1.6
311.0007.384	63	18	85	33	42	50	M12x1	123	10	1.2
311.0037.384	63	18	120	33	44	50	M12x1	158	10	1.6
311.0047.384	63	18	160	33	44	50	M12x1	198	10	2.1
311.0008.384	63	20	85	33	42	52	M16x1	123	10	1.2
311.0038.384	63	20	120	33	44	52	M16x1	158	10	1.6
311.0048.384	63	20	160	33	44	52	M16x1	198	10	2.0
311.0009.384	63	25	90	44	53	58	M16x1	128	10	1.6
311.0039.384	63	25	120	44	53	58	M16x1	158	10	2.0
311.0049.384	63	25	160	44	53	58	M16x1	198	10	2.7
311.0010.384	63	32	95	44	53	61	M16x1	133	10	1.5
311.0040.384	63	32	120	44	53	61	M16x1	158	10	1.9
311.0050.384	63	32	160	44	53	61	M16x1	198	10	2.5
311.0001.385	80	6	85	21	27	36	M5	133	10	2.0
311.0031.385	80	6	120	21	32	36	M5	168	10	2.2
311.0002.385	80	8	85	21	27	36	M6	133	10	2.0
311.0032.385	80	8	120	21	32	36	M6	168	10	2.2
311.0003.385	80	10	85	24	32	41	M8x1	133	10	2.0
311.0033.385	80	10	120	24	34	41	M8x1	168	10	2.2
311.0004.385	80	12	85	24	32	47	M10x1	133	10	2.0
311.0034.385	80	12	120	24	34	47	M10x1	168	10	2.2
311.0005.385	80	14	90	27	34	47	M10x1	138	10	2.1
311.0035.385	80	14	120	27	36	47	M10x1	168	10	2.3
311.0006.385	80	16	90	27	34	50	M12x1	138	10	2.0
311.0036.385	80	16	120	27	36	50	M12x1	168	10	2.3
311.0007.385	80	18	90	33	42	50	M12x1	138	10	2.2
311.0037.385	80	18	120	33	44	50	M12x1	168	10	2.5
311.0008.385	80	20	90	33	42	52	M16x1	138	10	2.1
311.0038.385	80	20	120	33	44	52	M16x1	168	10	2.5
311.0009.385	80	25	95	44	53	58	M16x1	143	10	2.5
311.0039.385	80	25	120	44	53	58	M16x1	168	10	2.9
311.0010.385	80	32	100	44	53	61	M16x1	148	10	2.4
311.0040.385	80	32	120	44	53	61	M16x1	168	10	2.7

设计: 夹紧直径应按照柄部尺寸公差精度h6。

Design: The clamping diameter is designed for a shank tolerance of h6.

说明: 调整螺钉长度的调整不包括在内。

Standard Specification: Adjusting screw for length adjustment is not included.

备注: 其他设计及尺寸规定按实际需要做出调整。

Note: Other designs and sizes are available on request.

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配件



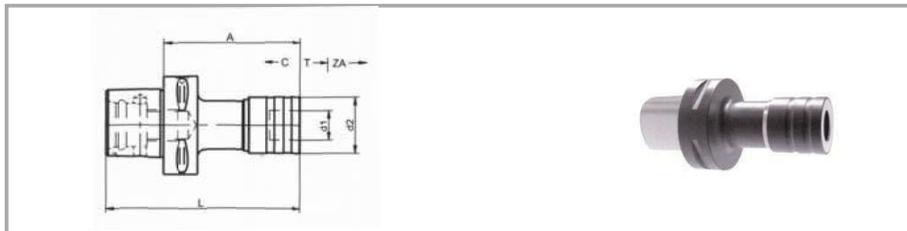
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丝锥快换夹头
Quick Change Tapping Chucks



No	PSC	M	A	d1	d2	L	C	T	ZA	kg
440.0001.381	32	M 3— M14	90	19	36	109	5	8	2.1	0.7
440.0001.382	40	M 3— M14	90	19	36	114	5	8	2.1	0.8
440.0002.382	40	M 4.5— M24	125	31	53	149	8.5	15	2.8	1.2
440.0001.383	50	M 3— M14	90	19	36	120	5	8	2.1	1.2
440.0002.383	50	M 4.5— M24	130	31	53	160	8.5	15	2.8	1.8
440.0001.384	63	M 3— M14	90	19	36	128	5	8	2.1	2.1
440.0002.384	63	M 4.5— M24	135	31	53	173	8.5	15	2.8	2.6
440.0001.385	80	M 3— M14	90	19	36	138	5	8	2.1	3.5
440.0002.385	80	M 4.5— M24	125	31	53	169	8.5	15	2.8	4.0

使用: 用于夹持带或不带安全连接的快换丝锥夹套。

Use: For holding quick change inserts with or without safety clutch.

设计: 长度补偿在收缩和拉伸方向取决于进给和螺距的不同。压缩时能够保证当轴向力达到临界值时立即脱离攻丝状态, 拉力释放时能够保证丝锥夹头免于过大轴向拉力造成的损害。

Design: Length compensation on compression and tension to compensate the difference between feed and tap pitch. The pressure point mechanism guarantees that the tap immediately cuts the thread as soon as the permissible axial force is reached. The tension lock protects the tapping chuck against damage as a result of high axial tensile load.

备注: 其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

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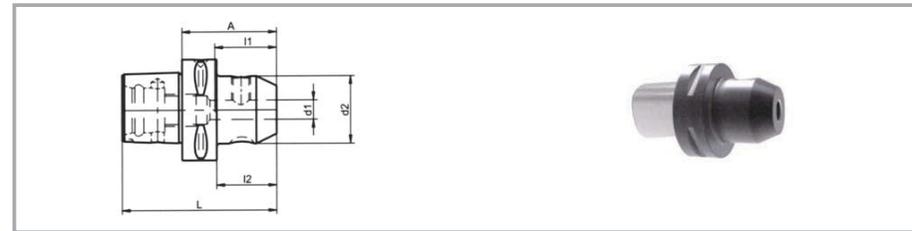
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削平型直柄立铣刀刀柄 (威尔顿型)
Reduction Sleeves for Straight Shanks with lateral driving surface (Weldon)



No	PSC	d1	A	d2	I1	I2	L	Tol/d1	kg
420.0001.381	32	6	45	25	35	30	64	+0.005	0.3
420.0002.381	32	8	45	28	35	30	64	+0.005	0.3
420.0003.381	32	10	50	35	39	35	69	+0.005	0.4
420.0004.381	32	12	55	42	44	40	74	+0.005	1.1
420.0001.382	40	6	50	25	35	30	74	+0.005	0.4
420.0002.382	40	8	50	28	35	30	74	+0.005	0.4
420.0003.382	40	10	50	35	39	30	74	+0.005	0.5
420.0004.382	40	12	55	42	44	35	79	+0.005	1.1
420.0005.382	40	14	55	44	44	35	79	+0.005	0.6
420.0006.382	40	16	55	48	47	35	79	+0.005	0.7
420.0001.383	50	6	50	25	35	30	80	+0.005	0.6
420.0002.383	50	8	50	28	35	30	80	+0.005	0.6
420.0003.383	50	10	55	35	39	35	85	+0.005	0.7
420.0004.383	50	12	60	42	44	40	90	+0.005	1.1
420.0005.383	50	14	60	44	44	40	90	+0.005	1.1
420.0006.383	50	16	60	48	47	40	90	+0.005	0.9
420.0007.383	50	18	60	50	47	50	90	+0.005	0.9
420.0008.383	50	20	60	52	47	40	90	+0.007	0.9
420.0009.383	50	25	85	65	54	60	110	+0.007	1.6
420.0001.384	63	6	55	25	35	33	93	+0.005	0.9
420.0002.384	63	8	55	28	35	33	93	+0.005	0.9
420.0003.384	63	10	60	35	39	38	98	+0.005	1.0
420.0004.384	63	12	60	42	44	38	98	+0.005	1.1
420.0005.384	63	14	60	44	44	38	98	+0.005	1.2
420.0006.384	63	16	65	48	47	43	103	+0.005	1.3
420.0007.384	63	18	65	50	47	43	103	+0.005	1.3
420.0008.384	63	20	65	52	49	43	103	+0.007	1.3
420.0009.384	63	25	80	65	54	58	118	+0.007	1.9
420.0010.384	63	32	90	72	58	68	128	+0.007	2.4
420.0011.384	63	40	100	80	75	78	138	+0.007	2.8

No	PSC	d1	A	d2	l1	l2	L	Tol/d1	kg
420.0001.385	80	6	70	25	35	40	118	+0.005	1.9
420.0002.385	80	8	70	28	35	40	118	+0.005	1.9
420.0003.385	80	10	70	35	39	40	118	+0.005	2.0
420.0004.385	80	12	70	42	44	40	118	+0.005	1.1
420.0005.385	80	14	70	44	44	40	118	+0.005	2.1
420.0006.385	80	16	70	48	47	50	118	+0.005	2.2
420.0007.385	80	18	70	50	47	40	118	+0.005	2.2
420.0008.385	80	20	70	52	49	40	118	+0.007	2.2
420.0009.385	80	25	80	65	54	50	128	+0.007	2.7
420.0010.385	80	32	80	72	58	50	128	+0.007	2.8
420.0011.385	80	40	110	80	75	80	158	+0.007	3.9
420.0012.385	80	50	120	100	83	90	168	+0.007	5.4

使用: 按DIN 1835 B型(威尔顿型)和DIN 6535 HB型夹持直柄铣刀。

说明: 包括配好的夹紧螺钉, 对于大于25mm的孔, 提供2个紧固螺钉。

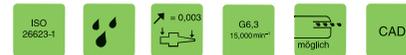
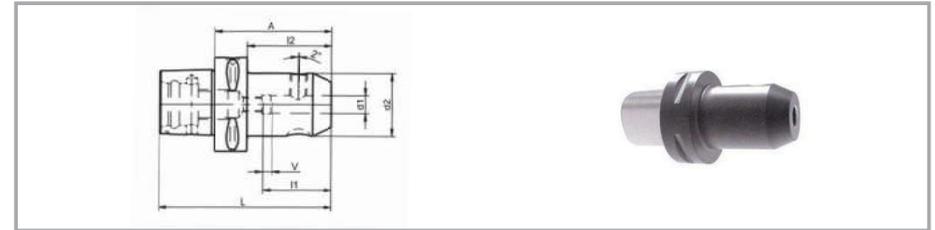
备注: PSC80 d1=40/50mm 未作动平衡, 其他型号和尺寸可按订货要求制作。

Use: For holding shank tools with lateral driving surface, DIN 1835 type B and DIN 6535 type HB.

Standard Specification: Clamping screw included. From location hole d1 = 25mm 2 clamping screws are included.

Note: PSC 80 d1= 40/50 mm are not balanced. Other designs and sizes are available on request.

带2° 斜削平型直柄立铣刀刀柄 (威尔斯凹口型)
Reduction Sleeves for Straight Shanks with inclined clamping surface (Whistle Notch)



No	PSC	d1	A	d2	l1	l2	g	L	Tol/d1	V	kg
420.0151.381	32	6	70	25	38	55	M5	89	+0.005	10	0.3
420.0152.381	32	8	70	28	38	55	M6	89	+0.005	10	0.4
420.0153.381	32	10	70	35	41	55	M8	89	+0.005	10	0.5
420.0154.381	32	12	75	42	47	60	M10	94	+0.005	10	0.7
420.0151.382	40	6	70	25	38	50	M5	94	+0.005	10	0.5
420.0152.382	40	8	70	28	38	50	M6	94	+0.005	10	0.5
420.0153.382	40	10	70	35	41	50	M8	94	+0.005	10	0.6
420.0154.382	40	12	75	42	47	55	M10	99	+0.005	10	0.8
420.0155.382	40	14	75	44	47	55	M10	99	+0.005	10	0.8
420.0151.383	50	6	70	25	38	50	M5	100	+0.005	10	0.6
420.0152.383	50	8	70	28	38	50	M6	100	+0.005	10	0.7
420.0153.383	50	10	70	35	41	50	M8	100	+0.005	10	0.8
420.0154.383	50	12	75	42	47	55	M10	100	+0.005	10	1.0
420.0155.383	50	14	75	44	47	55	M10	105	+0.005	10	1.0
420.0156.383	50	16	80	48	50	60	M12	110	+0.005	10	1.2
420.0157.383	50	18	80	50	50	50	M12	110	+0.005	10	1.2
420.0158.383	50	20	85	52	52	65	M16	115	+0.005	10	1.3
420.0151.384	63	6	75	25	38	53	M5	113	+0.005	10	1.0
420.0152.384	63	8	75	28	38	53	M6	113	+0.005	10	1.0
420.0153.384	63	10	75	35	41	53	M8	113	+0.005	10	1.1
420.0154.384	63	12	80	42	47	58	M10	118	+0.005	10	1.3
420.0155.384	63	14	80	44	47	58	M10	118	+0.005	10	1.4
420.0156.384	63	16	80	48	50	58	M12	118	+0.005	10	1.5
420.0157.384	63	18	80	50	50	58	M12	118	+0.007	10	1.5
420.0158.384	63	20	85	52	52	63	M16	123	+0.007	10	1.6
420.0159.384	63	25	90	65	58	90	M16	128	+0.007	10	2.2
420.0160.384	63	32	95	72	61	95	M16	133	+0.007	10	2.5

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No	PSC	d1	A	d2	l1	l2	g	L	Tol/d1	V	kg
420.0151.385	80	6	65	25	38	35	M5	113	+0.005	10	1.9
420.0152.385	80	8	65	28	38	35	M6	113	+0.005	10	1.9
420.0153.385	80	10	65	35	41	35	M8	113	+0.005	10	2.0
420.0154.385	80	12	70	42	47	40	M10	118	+0.005	10	2.1
420.0155.385	80	14	70	44	47	40	M10	118	+0.005	10	2.2
420.0156.385	80	16	75	48	50	45	M12	123	+0.005	10	2.3
420.0157.385	80	18	75	50	50	45	M12	123	+0.005	10	2.3
420.0158.385	80	20	80	52	52	50	M16	128	+0.007	10	2.4
420.0159.385	80	25	90	65	58	60	M16	138	+0.007	10	2.9
420.0160.385	80	32	95	72	61	65	M16	143	+0.007	10	3.3

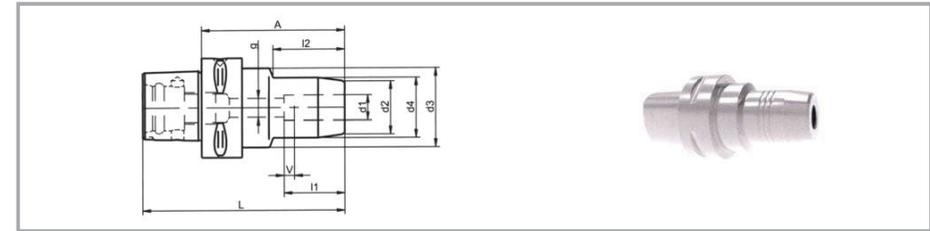
使用: 对于带2°斜削平型工具刀柄, 符合德国标准DIN 1835 E类型和DIN 6535 HE类型。

备注: 带孔的止动螺钉用于内冷却, 其他型号和尺寸可按订货要求制作。

Use: For holding shank tools with inclined clamping surface (2°), DIN 1835 type E and DIN 6535 type HE.

Note: Bored through adjusting screw for coolant. Other designs and sizes are available on request.

液压刀柄
Hydraulic Expansion Chucks



ISO 26623-1, ISO 20003, G2,5 20,000/min, CAD

No	PSC	d1	A	d2	d3	d4	l1	l2	g	L	V	kg
702.0001.382	40	6	80	22	50	26	37	40	M 5	104	10	0.5
702.0002.382	40	8	80	24	50	28	37	40	M 6	104	10	0.5
702.0003.382	40	10	85	26	50	30	41	40	M 8 x 1	109	10	0.6
702.0004.382	40	12	85	28	50	32	46	40	M 8 x 1	109	10	0.7
702.0001.383	50	6	65	522	250	26	37	730	M 5	95	10	0.8
702.0002.383	50	8	65	524	450	28	37	730	M 6	95	10	0.8
702.0003.383	50	10	75	26	50	30	41	40	M 8 x 1	105	10	1.0
702.0004.383	50	12	80	28	50	32	46	40	M10 x 1	110	10	1.0
702.0005.383	50	14	80	30	50	34	46	40	M10 x 1	110	10	1.1
702.0006.383	50	16	85	34	50	38	49	46	M12 x 1	115	10	1.1
702.0007.383	50	18	85	36	50	40	49	46	M12 x 1	115	10	1.1
702.0008.383	50	20	85	38	50	42	51	46	M16 x 1	115	10	1.1
702.0001.384	63	6	65	22	50	26	37	25	M 5	103	10	1.3
702.0002.384	63	8	65	24	50	28	37	25	M 6	103	10	1.3
702.0003.384	63	10	75	26	50	30	41	35	M 8 x 1	113	10	1.3
702.0004.384	63	12	80	28	50	32	46	40	M10 x 1	118	10	1.3
702.0005.384	63	14	80	30	50	34	46	40	M10 x 1	118	10	1.3
702.0006.384	63	16	85	34	50	38	49	46	M12 x 1	123	10	1.5
702.0007.384	63	18	85	36	50	40	49	46	M12 x 1	123	10	1.3
702.0008.384	63	20	85	38	50	42	51	46	M16 x 1	123	10	1.6
702.0009.384	63	25	95	45	55	50	57	50	M16 x 1	133	10	2.4
702.0010.384	63	32	100	52	63	56	61	60	M16 x 1	138	10	2.8

使用: 用于夹持按DIN 1835 A、B型或DIN 6535 HA或HB型直柄刀具, DIN1835 C、DE型和DIN 6535 HE型刀柄, 仅能与缩径套共用。加持精度h6级, 粗糙度最小为Ra0.3, 对于φ25和φ32只有DIN 1835 A型和DIN 6535HA型可用。

说明: 带内置的限位螺钉。

备注: 其他型号和尺寸可按订货要求制作。

Use: For shank tools according to DIN 1835 type A and B and DIN 6535 type HA and HB. Shanks according to DIN 6535 type HE can only be used together with reduction bushes. Shank quality h6, Ra min. = 0.3. For φ 25 and φ 32 only type A or HA can be used.

Standard Specification: Bored through adjusting screw included.

Note: Other designs and sizes are available on request.

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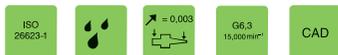
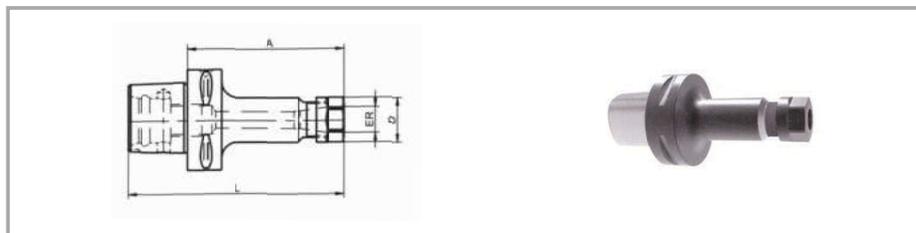
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ER/ESX ER-16弹簧夹头刀柄 (带调整螺钉孔)
Collet Chucks ER/ESX 16 without internal thread



No	PSC	ER	A	D	L	kg
698.0001.381	32	ER 16 (0.5 - 10)	45	28	52	0.2
698.0001.382	40	ER 16 (0.5 - 10)	55	28	67	0.3
698.0001.383	50	ER 16 (0.5 - 10)	60	28	78	0.5
698.0031.383	50	ER 16 (0.5 - 10)	100	28	118	0.7
698.0001.384	63	ER 16 (0.5 - 10)	60	28	98	0.9
698.0031.384	63	ER 16 (0.5 - 10)	100	28	138	1.1
698.0001.385	80	ER 16 (0.5 - 10)	60	28	96	1.8
698.0031.385	80	ER 16 (0.5 - 10)	100	28	136	2.0

使用: 用于夹持按DIN 1835 A、B、E型或DIN 6535 HA、HB、HE型的直柄刀具。

说明: 夹头包括夹紧螺母。

备注: 弹簧夹头配有标准调整螺钉便于调节; 其他型号和尺寸可按订货要求制作。

Use: For clamping tools with straight shank according to DIN 1835 type A, B and E and DIN 6535 type HA, HB and HE.

Standard Specification: Collet chuck including clamping nut.

Note: Collet chucks are equipped with internal thread for adjusting screws. Other designs and sizes are available on request.

ACCESSORIES

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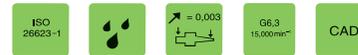
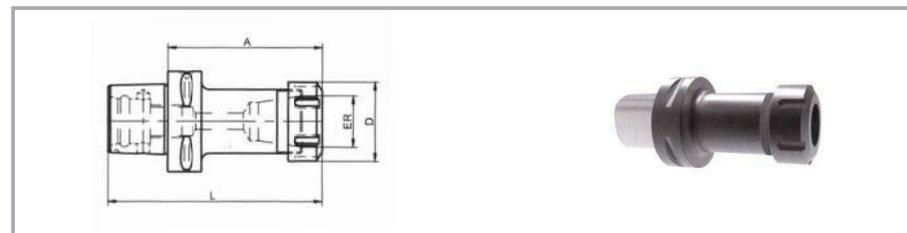
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ER/ESX ER-25/32/40弹簧夹头刀柄 (带调整螺钉孔)
Collet Chucks ER/ESX 25/32/40 without internal thread



No	PSC	ER	A	D	L	kg
697.0001.381	32	ER 20 (1 - 13)	45	34	53	0.2
697.0001.382	40	ER 20 (1 - 13)	55	34	68	0.3
697.0002.382	40	ER 25 (1 - 16)	55	42	67	0.4
697.0003.382	40	ER 32 (2 - 20)	55	50	66	0.4
697.0001.383	50	ER 20 (1 - 13)	60	34	79	0.5
697.0031.383	50	ER 20 (1 - 13)	100	34	119	0.7
697.0002.383	50	ER 25 (1 - 16)	60	42	78	0.6
697.0032.383	50	ER 25 (1 - 16)	100	42	118	0.8
697.0003.383	50	ER 32 (2 - 20)	60	50	77	0.6
697.0033.383	50	ER 32 (2 - 20)	100	50	117	0.9
697.0004.383	50	ER 40 (3 - 26)	65	63	80	0.6
697.0034.383	50	ER 40 (3 - 26)	100	63	115	1.2
697.0001.384	63	ER 20 (1 - 13)	60	34	98	0.9
697.0031.384	63	ER 20 (1 - 13)	100	34	138	1.0
697.0002.384	63	ER 25 (1 - 16)	60	42	98	0.9
697.0032.384	63	ER 25 (1 - 16)	100	42	138	1.1
697.0003.384	63	ER 32 (2 - 20)	60	50	98	0.9
697.0033.384	63	ER 32 (2 - 20)	100	50	138	1.3
697.0004.384	63	ER 40 (3 - 26)	65	63	113	1.0
697.0034.384	63	ER 40 (3 - 26)	100	63	138	1.5
697.0001.385	80	ER 20 (1 - 13)	65	34	102	1.8
697.0031.385	80	ER 20 (1 - 13)	100	34	137	1.9
697.0002.385	80	ER 25 (1 - 16)	70	42	106	1.9
697.0032.385	80	ER 25 (1 - 16)	100	42	136	2.0
697.0003.385	80	ER 32 (2 - 20)	70	50	105	1.9
697.0033.385	80	ER 32 (2 - 20)	100	50	135	2.1
697.0004.385	80	ER 40 (3 - 26)	80	63	113	2.0
697.0034.385	80	ER 40 (3 - 26)	100	63	133	2.3

使用: 用于夹持按DIN 1835 A、B、E型或DIN 6535 HA、HB、HE型的直柄刀具。

说明: 夹头包括夹紧螺母。

备注: 弹簧夹头配有标准调整螺钉便于调节; 其他型号和尺寸可按订货要求制作。

Use: For clamping tools with straight shank according to DIN 1835 type A, B and E and DIN 6535 type HA, HB and HE.

Standard Specification: Collet chuck including clamping nut.

Note: Collet chucks are equipped with internal thread for adjusting screws. Other designs and sizes are available on request.

套式铣刀刀柄 (带平键和传动环)

Shell End Mill Arbors for milling cutters with longitudinal slot or tenon drive



No	PSC	d1	A	d2	l3	L	kg
489.0001.382	40	16	28	40	17	69	0,4
489.0031.382	40	16	63	40	17	104	0,7
489.0002.382	40	22	40	50	19	83	0,6
489.0032.382	40	22	63	50	19	106	0,9
489.0001.383	50	16	28	40	17	75	0,6
489.0031.383	50	16	63	40	17	110	0,9
489.0002.383	50	22	28	50	19	77	0,6
489.0032.383	50	22	63	50	19	112	1,1
489.0003.383	50	27	32	50	21	83	0,8
489.0033.383	50	27	63	50	21	114	1,3
489.0004.383	50	32	40	63	24	94	1,0
489.0034.383	50	32	63	63	24	117	1,4
489.0031.384	63	16	63	40	17	118	1,2
489.0002.384	63	22	28	63	19	85	0,9
489.0032.384	63	22	63	50	19	120	1,4
489.0003.384	63	27	28	58	21	87	1,0
489.0033.384	63	27	63	58	21	122	1,7
489.0004.384	63	32	22	63	24	84	0,9
489.0034.384	63	32	86	63	24	148	2,3
489.0005.384	63	40	40	70	27	105	1,5
489.0031.385	80	16	63	40	17	128	2,2
489.0002.385	80	22	30	50	19	97	1,7
489.0032.385	80	22	63	50	19	130	2,4
489.0003.385	80	27	30	58	21	99	1,8
489.0033.385	80	27	63	58	21	132	2,6
489.0004.385	80	32	30	63	24	102	1,8
489.0034.385	80	32	86	62	24	158	3,2
489.0005.385	80	40	40	70	27	115	2,3

ACCESSORIES

配件



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使用: 用于夹持带有平键和传动环的面铣刀。

设计: 传动环符合DIN 138。

说明: 包括紧固螺钉、带有螺孔的平键和传动环。

备注: 其他型号和尺寸可按订货要求制作。

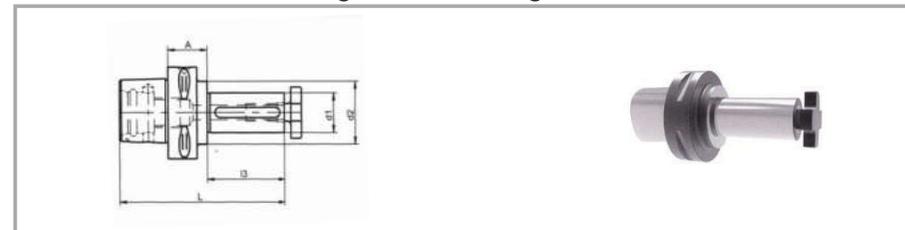
Use: For clamping shell end mills and milling cutters with longitudinal slot or tenon drive.

Design: Cutter drive according to DIN 138.

Standard Specification: Cutter retaining screw, feather key and drive keys included.

Note: Other designs and sizes are available on request.

套式铣刀柄
Shell End Mill Arbors for milling cutters with longitudinal slot



No	PSC	d1	A	d2	l3	L	kg
422.0001.381	32	16	20	28	30	69	0.2
422.0001.382	40	16	25	28	30	79	0.4
422.0002.382	40	22	25	36	40	89	0.4
422.0003.382	40	27	25	40	60	109	0.6
422.0001.383	50	16	25	28	30	85	0.5
422.0002.383	50	22	25	36	40	95	0.6
422.0003.383	50	27	25	43	60	115	0.7
422.0004.383	50	32	25	50	60	115	0.8
422.0001.384	63	16	30	28	30	98	0.9
422.0002.384	63	22	30	36	40	108	1.0
422.0003.384	63	27	30	43	60	128	1.1
422.0004.384	63	32	25	48	60	123	1.1
422.0005.384	63	40	25	56	60	123	1.3
422.0001.385	80	16	40	28	30	118	1.9
422.0002.385	80	22	40	36	40	128	1.9
422.0003.385	80	27	30	43	60	138	2.0
422.0004.385	80	32	30	48	60	138	2.0
422.0005.385	80	40	30	56	60	138	2.2
422.0006.385	80	50	30	70	60	138	2.5
422.0007.385	80	60	30	60	60	138	2.7

使用: 用于夹持带有平键和传动环的面铣刀。

设计: 传动环符合DIN 138。

说明: 包括紧固螺钉、带有螺孔的平键。

备注: 其他型号和尺寸可按订货要求制作。

Use: For clamping shell end mills and milling cutters with longitudinal slot.

Design Cutter drive according to DIN 138.

Standard Specification: Cutter retaining screw and feather key included.

Note: Other designs and sizes are available on request.

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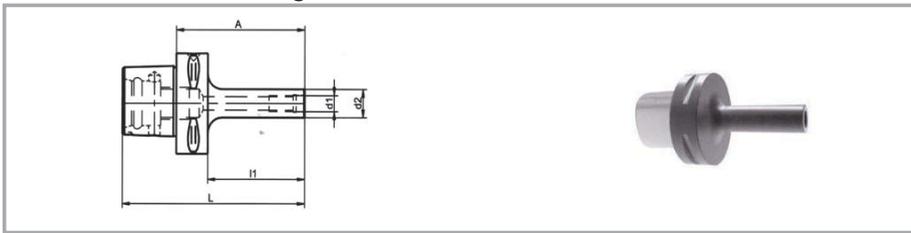
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KFS模块式铣刀柄
 Holders for screw-in milling cutters



No	PSC	d1	A	d2	l1	L	kg
571.0001.381	32	M 8	60	13	45	79	0.2
571.0002.381	32	M10	70	18	55	89	0.2
571.0001.382	40	M 8	70	13	50	94	0.3
571.0002.382	40	M10	80	18	60	104	0.4
571.0003.382	40	M12	80	21	60	104	0.4
571.0001.383	50	M 8	70	13	50	100	0.5
571.0002.383	50	M10	80	18	60	110	0.6
571.0003.383	50	M12	80	21	60	110	0.6
571.0004.383	50	M16	80	29	60	110	0.7
571.0001.384	63	M 8	70	13	48	108	0.8
571.0002.384	63	M10	90	18	68	128	0.9
571.0003.384	63	M12	100	21	78	138	1.0
571.0004.384	63	M16	100	29	78	138	1.1

使用: 用于夹紧以螺纹为连接的铣刀。

Use: For clamping screw-in milling cutters with thread.

备注: 其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

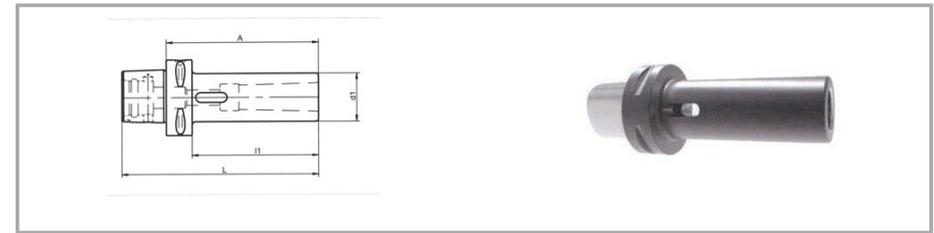
ACCESSORIES
 配件



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带扁尾莫氏孔刀柄
 Reduction Sleeves for morse taper with tang



No	PSC	MK	A	d1	l1	L	kg
454.0002.382	40	2	110	32	90	134	0.7
454.0003.382	40	3	130	40	119	154	1.1
454.0002.383	50	2	110	32	90	140	0.9
454.0003.383	50	3	130	40	110	160	1.2
454.0004.383	50	4	150	48	132	180	1.6
454.0002.384	63	2	110	32	88	148	1.2
454.0003.384	63	3	130	40	108	168	1.5
454.0004.384	63	4	150	48	128	188	1.9
454.0002.385	80	2	120	32	90	168	2.2
454.0003.385	80	3	140	40	110	188	2.5
454.0004.385	80	4	160	48	130	208	2.9

备注: 其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

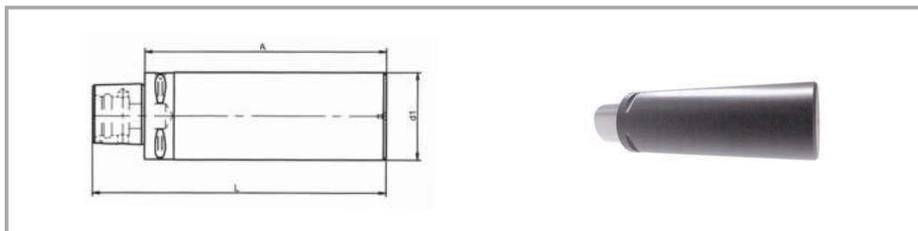
ACCESSORIES
 配件



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毛坯刀柄
Tool Blanks



ISO
26623-1

No	PSC	d1	A	L	kg
517.6010.382	40	40	95	119	1.0
517.6011.382	40	40	120	144	1.3
517.6012.382	40	60	165	189	3.5
517.6013.382	40	80	75	99	2.5
517.6014.382	40	80	120	144	4.2
517.6015.382	40	100	85	109	4.3
517.6010.383	50	50	125	155	2.1
517.6011.383	50	50	150	180	2.5
517.6012.383	50	75	175	205	5.8
517.6013.383	50	90	80	110	3.5
517.6014.383	50	95	150	180	7.7
517.6015.383	50	110	90	120	5.7
517.6010.384	63	63	180	218	4.7
517.6011.384	63	75	195	233	6.8
517.6012.384	63	110	85	123	5.5
517.6013.384	63	120	180	218	14.8
517.6014.384	63	130	95	133	8.4
517.6010.385	80	80	200	248	8.5
517.6011.385	80	120	160	208	13.3
517.6012.385	80	130	90	138	8.0
517.6013.385	80	145	200	248	23.8

使用: 用于制造特殊刀具及工具系统产品。

Use: For own manufacture of special tools.

设计: 锥柄为磨制成品, 尺寸符合柄部标准, 维氏硬度 HV670±40 (近似于HRC58±2), 淬硬层在 0.5mm以上。预备精加工部分硬度HRC40-46。

Design: The taper is finished with grinding, the dimensions are in accordance with the standard of the handle, HV670±40 (approximately HRC58±2), the hardened layer is above 0.5mm. Tool part is HRC40-46.

材料: 合金钢

Material: Alloyed case-hardened steel.

备注: 其他型号和尺寸可按订做要求制作。

Note: Other designs and sizes are available on request.

ACCESSORIES
配件



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配件

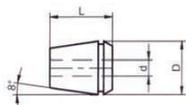
Accessories and Spare Parts



	夹套、夹紧螺母及配件	Collets Clamping Nuts and Accessories
4.02-4.03	ER 夹套	ER-collets according to ISO 15488(DIN 6499)
4.04	ER夹紧螺母	ER Clamping Nuts
4.04	ER夹紧螺母扳手	Eclamping Keys for ER clamping nuts
4.05	带内冷ER夹紧螺母	ER Clamping Nuts for internal coolant supply
4.06-4.08	密封垫圈	Sealing Disks
4.08	丝锥夹套	Tapping Holders
4.09	弹性直夹套	Reduction Sleeve
4.10	钻头刀杆	Drill Chuck Bars
4.10	自紧钻头	Drilling Chuck
4.10	强力铁夹头扳手	Clamping Keys for Strong Chuck Holder for Boring and Milling

	冷却管、螺钉、键和备用配件	Collant Tubes,Screws,Keys and Spare Parts
4.11	冷却管	Coolant Tubes
4.12	国际标准拉钉	Pull Stud International ISO 7388/2
4.12	德国标准拉钉	pull Studs DIN 69872 Type A
4.13	MAS拉钉	pull Studs MAS
4.13	JS B 6339 型拉钉	pull Studs JIS B 6339
4.14-4.16	调整螺钉	Adjusting Screws
4.17	用于液压刀柄的变径套	Reduction Bushes for hydraulic expansion chucks
4.18	刀具夹紧螺钉扳手	Keys for cutter retaining screws
4.18	平键	Feather Keys
4.19	铣刀柄的衬套	Rings for mill arbors
4.20	SK莫氏锥柄变径套的紧固螺钉	Retaining Screws for reduction sleeves SK
4.20	内六角扳手	Allen Keys for retaining screws
4.21	用于PSC刀柄的紧固螺栓	Retaining Screws for PSC

符合ISO 15488 (DIN6499)的ER夹套。
R-Collets according to DIN ISO 15488 (DIN 6499).



No	ER	d	D	L
153.201	ER 11	1 - 0.5	11.5	18
153.208	ER 11	1.5 - 1	11.5	18
153.202	ER 11	2 - 1.5	11.5	18
153.209	ER 11	2.5 - 2	11.5	18
153.203	ER 11	3 - 2.5	11.5	18
153.210	ER 11	3.5 - 3	11.5	18
153.204	ER 11	4 - 3.5	11.5	18
153.211	ER 11	4.5 - 4	11.5	18
153.205	ER 11	5 - 4.5	11.5	18
153.212	ER 11	5.5 - 5	11.5	18
153.206	ER 11	6 - 5.5	11.5	18
153.213	ER 11	6.5 - 6	11.5	18
153.207	ER 11	7 - 6.5	11.5	18
153.301	ER 16	1 - 0.5	17	27
153.302	ER 16	2 - 1	17	27
153.303	ER 16	3 - 2	17	27
153.304	ER 16	4 - 3	17	27
153.305	ER 16	5 - 4	17	27
153.306	ER 16	6 - 5	17	27
153.307	ER 16	7 - 6	17	27
153.308	ER 16	8 - 7	17	27
153.309	ER 16	9 - 8	17	27
153.310	ER 16	10 - 9	17	27
153.101	ER 20	1 - 0.5	21	32
153.102	ER 20	2 - 1	21	32
153.103	ER 20	3 - 2	21	32
153.104	ER 20	4 - 3	21	32
153.105	ER 20	5 - 4	21	32
153.106	ER 20	6 - 5	21	32
153.107	ER 20	7 - 6	21	32
153.108	ER 20	8 - 7	21	32
153.109	ER 20	9 - 8	21	32
153.110	ER 20	10 - 9	21	32
153.111	ER 20	11 - 10	21	32
153.112	ER 20	12 - 11	21	32
153.113	ER 20	13 - 12	21	32
153.252	ER 25	2 - 1	26	34
153.253	ER 25	3 - 2	26	34
153.254	ER 25	4 - 3	26	34
153.255	ER 25	5 - 4	26	34
153.256	ER 25	6 - 5	26	34
153.257	ER 25	7 - 6	26	34
153.258	ER 25	8 - 7	26	34
153.259	ER 25	9 - 8	26	34
153.260	ER 25	10 - 9	26	34
153.261	ER 25	11 - 10	26	34
153.262	ER 25	12 - 11	26	34
153.263	ER 25	13 - 12	26	34

No	ER	d	D	L
153.264	ER25	14-13	26	34
153.265	ER25	15-14	26	34
153.266	ER25	16-15	26	34
153.403	ER32	3- 2	33	40
153.404	ER32	4- 3	33	40
153.405	ER32	5- 4	33	40
153.406	ER32	6- 5	33	40
153.407	ER32	7- 6	33	40
153.408	ER32	8- 7	33	40
153.409	ER32	9- 8	33	40
153.410	ER32	10- 9	33	40
153.411	ER32	11-10	33	40
153.412	ER32	12-11	33	40
153.413	ER32	13-12	33	40
153.414	ER32	14-13	33	40
153.415	ER32	15-14	33	40
153.416	ER32	16-15	33	40
153.417	ER32	17-16	33	40
153.418	ER32	18-17	33	40
153.419	ER32	19-18	33	40
153.420	ER32	20-19	33	40
153.504	ER40	4- 3	41	46
153.505	ER40	5- 4	41	46
153.506	ER40	6- 5	41	46
153.507	ER40	7- 6	41	46
153.508	ER40	8- 7	41	46
153.509	ER40	9- 8	41	46
153.510	ER40	10- 9	41	46
153.511	ER40	11-10	41	46
153.512	ER40	12-11	41	46
153.513	ER40	13-12	41	46
153.514	ER40	14-13	41	46
153.515	ER40	15-14	41	46
153.516	ER40	16-15	41	46
153.517	ER40	17-16	41	46
153.518	ER40	18-17	41	46
153.519	ER40	19-18	41	46
153.520	ER40	20-19	41	46
153.521	ER40	21-20	41	46
153.522	ER40	22-21	41	46
153.523	ER40	23-22	41	46
153.524	ER40	24-23	41	46
153.525	ER40	25-24	41	46
153.526	ER40	26-25	41	46

设计: 表面硬化和磨制。外锥与内孔同心度允差0.005mm。

Design: Hardened and ground. Permissible concentricity deviation of outer taper to bore 0.005 mm.

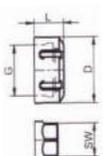
材料: 弹簧钢。

Material: Spring steel.

备注: 孔直径d的夹紧公差在括号内提到。

Note: The clamping tolerance results from the bore diameter d minus the value mentioned in brackets.

ER夹紧螺母
ER Clamping Nuts



No	ER	D	L	G	SW	kg
095.400	ER 11 (0.5- 7)	19	12.0	M 14x0.75	17	0.02
095.401	ER 16 (0.5- 10)	28	18.0	M 22x1.5	25	0.04
095.405	ER 20 (1 - 13)	34	19.5	M 25x1.5	30	0.08
095.406	ER 25 (1 - 16)	42	20.5	M 32x1.5	-	0.10
095.402	ER 32 (2 - 20)	50	23.5	M 40x1.5	-	0.15
095.403	ER 40 (3 - 26)	63	26.0	M 50x1.5	-	0.28

使用：用于ER/ESX夹头。

Use: For ER/ESX collet chucks.

ER...C型-内冷夹紧螺母
ER...C Clamping Nuts for Coolant Through Tools

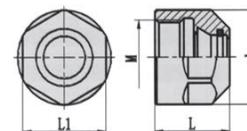


图1

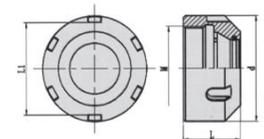


图2

No	型号	M	d	L	l1	配用密封垫套	图例
195.100	ER16C	M22 X 1.5	28	22.5	17	DS/ER16	图1
195.101	ER20C	M25 X 1.5	34	24.0	25	DS/ER20	图1
195.102	ER25C	M32 X 1.5	42	25.0	36	DS/ER25	图2
195.103	ER32C	M40 X 1.5	50	27.5	44	DS/ER32	图2
195.104	ER40C	M50 X 1.5	63	30.5	57	DS/ER40	图2

ER...C型-内冷夹紧螺母特色优势

- 1、适用于直柄刀具，具有内冷却功能，夹紧螺母搭配密封垫圈使用，等同于密封夹簧。
- 2、能承受高达150bar的冷却液压力。
- 3、防止灰尘和切削屑进入夹头。
- 4、夹紧螺母适用于标准的ER夹簧。
- 5、推荐使用扭矩扳手，最大扭矩值应不超过推荐扭矩值的1.25倍，详见下表。

夹簧型号	夹持直径	推荐扭矩
ER16	3	20
ER16	4	40
ER16	5-10	56
ER20	3-6	32
ER20	7-13	80
ER25	3	24
ER25	4	56
ER25	5-7	80
ER25	8-16	104
ER32	3-20	136
ER40	3-26	176

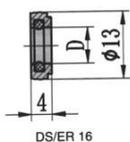
ER夹紧螺母扳手
Clamping Keys for ER clamping nuts



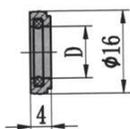
No	ER	B/ER	Typ
032.307	ER 11 (0.5- 7)	B/ER11	HSK/PSC/SK
032.308	ER 16 (0.5- 10)	B/ER16	HSK/PSC/SK
032.309	ER 20 (1 - 13)	B/ER20	HSK/PSC/SK

No	ER	for	Typ
032.808	ER 25 (1 - 16)	38-42	HSK/PSC/SK
032.809	ER 32 (2 - 20)	45-52	HSK/PSC/SK
032.810	ER 40 (3 - 26)	55-62	HSK/PSC/SK

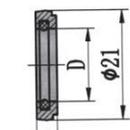
密封垫圈
Sealing Disks



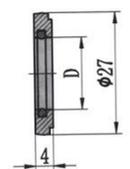
DS/ER 16



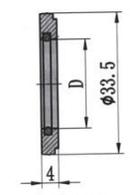
DS/ER 20



DS/ER 25



DS/ER 32



DS/ER 40

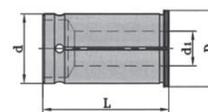
No	ER	D	kg
195.200	DS/ER16-3.0	3.0-2.5	0.04
195.201	DS/ER16-3.5	3.5-3.0	0.04
195.202	DS/ER16-4.0	4.0-3.5	0.04
195.203	DS/ER16-4.5	4.5-4.0	0.04
195.204	DS/ER16-5.0	5.0-4.5	0.04
195.205	DS/ER16-5.5	5.5-5.0	0.04
195.206	DS/ER16-6.0	6.0-5.5	0.04
195.207	DS/ER16-6.5	6.5-6.0	0.04
195.208	DS/ER16-7.0	7.0-6.5	0.04
195.209	DS/ER16-7.5	7.5-7.0	0.04
195.210	DS/ER16-8.0	8.0-7.5	0.04
195.211	DS/ER16-8.5	8.5-8.0	0.04
195.212	DS/ER16-9.0	9.0-8.5	0.04
195.213	DS/ER16-9.5	9.5-9.0	0.04
195.214	DS/ER16-10.0	10.0-9.5	0.04
195.215	DS/ER20-3.0	3.0-2.5	0.06
195.216	DS/ER20-3.5	3.5-3.0	0.06
195.217	DS/ER20-4.0	4.0-3.5	0.06
195.218	DS/ER20-4.5	4.5-4.0	0.06
195.219	DS/ER20-5.0	5.0-4.5	0.06
195.220	DS/ER20-5.5	5.5-5.0	0.06
195.221	DS/ER20-6.0	6.0-5.5	0.06
195.222	DS/ER20-6.5	6.5-6.0	0.06
195.223	DS/ER20-7.0	7.0-6.5	0.06
195.224	DS/ER20-7.5	7.5-7.0	0.06
195.225	DS/ER20-8.0	8.0-7.5	0.06
195.226	DS/ER20-8.5	8.5-8.0	0.06
195.227	DS/ER20-9.0	9.0-8.5	0.06
195.228	DS/ER20-9.5	9.5-9.0	0.06
195.229	DS/ER20-10.0	10.0-9.5	0.06
195.230	DS/ER20-10.5	10.5-10.0	0.06
195.231	DS/ER20-11.0	11.0-10.5	0.06
195.232	DS/ER20-11.5	11.5-11.0	0.06
195.233	DS/ER20-12.0	12.0-11.5	0.06
195.234	DS/ER20-12.5	12.5-12.0	0.06
195.235	DS/ER20-13.0	13.0-12.5	0.06
195.236	DS/ER25-3.0	3.0-2.5	0.10
195.237	DS/ER25-3.5	3.5-3.0	0.10
195.238	DS/ER25-4.0	4.0-3.5	0.10
195.239	DS/ER25-4.5	4.5-4.0	0.10
195.240	DS/ER25-5.0	5.0-4.5	0.10
195.241	DS/ER25-5.5	5.5-5.0	0.10
195.242	DS/ER25-6.0	6.0-5.5	0.10
195.243	DS/ER25-6.5	6.5-6.0	0.10
195.244	DS/ER25-7.0	7.0-6.5	0.10
195.245	DS/ER25-7.5	7.5-7.0	0.10
195.246	DS/ER25-8.0	8.0-7.5	0.10
195.247	DS/ER25-8.5	8.5-8.0	0.10
195.248	DS/ER25-9.0	9.0-8.5	0.10
195.249	DS/ER25-9.5	9.5-9.0	0.10
195.250	DS/ER25-10.0	10.0-9.5	0.10
195.251	DS/ER25-10.5	10.5-10.0	0.10
195.252	DS/ER25-11.0	11.0-10.5	0.10
195.253	DS/ER25-11.5	11.5-11.0	0.10
195.254	DS/ER25-12.0	12.0-11.5	0.10
195.255	DS/ER25-12.5	12.5-12.0	0.10
195.256	DS/ER25-13.0	13.0-12.5	0.10
195.257	DS/ER25-13.5	13.5-13.0	0.10
195.258	DS/ER25-14.0	14.0-13.5	0.10

No	ER	D	kg
195.259	DS/ER25-14.5	14.5-14.0	0.10
195.260	DS/ER25-15.0	15.0-14.5	0.10
195.261	DS/ER25-15.5	15.5-15.0	0.10
195.262	DS/ER25-16.0	16.0-15.5	0.10
195.263	DS/ER32-3.0	3.0-2.5	0.15
195.264	DS/ER32-3.5	3.5-3.0	0.15
195.265	DS/ER32-4.0	4.0-3.5	0.15
195.266	DS/ER32-4.5	4.5-4.0	0.15
195.267	DS/ER32-5.0	5.0-4.5	0.15
195.268	DS/ER32-5.5	5.5-5.0	0.15
195.269	DS/ER32-6.0	6.0-5.5	0.15
195.270	DS/ER32-6.5	6.5-6.0	0.15
195.271	DS/ER32-7.0	7.0-6.5	0.15
195.272	DS/ER32-7.5	7.5-7.0	0.15
195.273	DS/ER32-8.0	8.0-7.5	0.15
195.274	DS/ER32-8.5	8.5-8.0	0.15
195.275	DS/ER32-9.0	9.0-8.5	0.15
195.276	DS/ER32-9.5	9.5-9.0	0.15
195.277	DS/ER32-10.0	10.0-9.5	0.15
195.278	DS/ER32-10.5	10.5-10.0	0.15
195.279	DS/ER32-11.0	11.0-10.5	0.15
195.280	DS/ER32-11.5	11.5-11.0	0.15
195.281	DS/ER32-12.0	12.0-11.5	0.15
195.282	DS/ER32-12.5	12.5-12.0	0.15
195.283	DS/ER32-13.0	13.0-12.5	0.15
195.284	DS/ER32-13.5	13.5-13.0	0.15
195.285	DS/ER32-14.0	14.0-13.5	0.15
195.286	DS/ER32-14.5	14.5-14.0	0.15
195.287	DS/ER32-15.0	15.0-14.5	0.15
195.288	DS/ER32-15.5	15.5-15.0	0.15
195.289	DS/ER32-16.0	16.0-15.5	0.15
195.290	DS/ER32-16.5	16.5-16.0	0.15
195.291	DS/ER32-17.0	17.0-16.5	0.15
195.292	DS/ER32-17.5	17.5-17.0	0.15
195.293	DS/ER32-18.0	18.0-17.5	0.15
195.294	DS/ER32-18.5	18.5-18.0	0.15
195.295	DS/ER32-19.0	19.0-18.5	0.15
195.296	DS/ER32-19.5	19.5-19.0	0.15
195.297	DS/ER32-20.0	20.0-19.5	0.15
195.298	DS/ER40-3.0	3.0-2.5	0.28
195.299	DS/ER40-3.5	3.5-3.0	0.28
195.300	DS/ER40-4.0	4.0-3.5	0.28
195.301	DS/ER40-4.5	4.5-4.0	0.28
195.302	DS/ER40-5.0	5.0-4.5	0.28
195.303	DS/ER40-5.5	5.5-5.0	0.28
195.304	DS/ER40-6.0	6.0-5.5	0.28
195.305	DS/ER40-6.5	6.5-6.0	0.28
195.306	DS/ER40-7.0	7.0-6.5	0.28
195.307	DS/ER40-7.5	7.5-7.0	0.28
195.308	DS/ER40-8.0	8.0-7.5	0.28
195.309	DS/ER40-8.5	8.5-8.0	0.28
195.310	DS/ER40-9.0	9.0-8.5	0.28
195.311	DS/ER40-9.5	9.5-9.0	0.28
195.312	DS/ER40-10.0	10.0-9.5	0.28
195.313	DS/ER40-10.5	10.5-10.0	0.28
195.314	DS/ER40-11.0	11.0-10.5	0.28
195.315	DS/ER40-11.5	11.5-11.0	0.28
195.316	DS/ER40-12.0	12.0-11.5	0.28
195.317	DS/ER40-12.5	12.5-12.0	0.28

No	ER	D	kg
195.318	DS/ER40-13.0	13.0-12.5	0.28
195.319	DS/ER40-13.5	13.5-13.0	0.28
195.320	DS/ER40-14.0	14.0-13.5	0.28
195.321	DS/ER40-14.5	14.5-14.0	0.28
195.322	DS/ER40-15.0	15.0-14.5	0.28
195.323	DS/ER40-15.5	15.5-15.0	0.28
195.324	DS/ER40-16.0	16.0-15.5	0.28
195.325	DS/ER40-16.5	16.5-16.0	0.28
195.326	DS/ER40-17.0	17.0-16.5	0.28
195.327	DS/ER40-17.5	17.5-17.0	0.28
195.328	DS/ER40-18.0	18.0-17.5	0.28
195.329	DS/ER40-18.5	18.5-18.0	0.28
195.330	DS/ER40-19.0	19.0-18.5	0.28
195.331	DS/ER40-19.5	19.5-19.0	0.28
195.332	DS/ER40-20.0	20.0-19.5	0.28
195.333	DS/ER40-20.5	20.5-20.0	0.28
195.334	DS/ER40-21.0	21.0-20.5	0.28
195.335	DS/ER40-21.5	21.5-21.0	0.28
195.336	DS/ER40-22.0	22.0-21.5	0.28
195.337	DS/ER40-22.5	22.5-22.0	0.28
195.338	DS/ER40-23.0	23.0-22.5	0.28
195.339	DS/ER40-23.5	23.5-23.0	0.28
195.340	DS/ER40-24.0	24.0-23.5	0.28
195.341	DS/ER40-24.5	24.5-24.0	0.28
195.342	DS/ER40-25.0	25.0-24.5	0.28
195.343	DS/ER40-25.5	25.5-25.0	0.28
195.344	DS/ER40-26.0	26.0-25.5	0.28

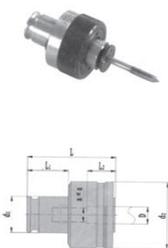
注：适用于手柄内冷刀具，与ER.C内冷夹紧螺帽搭配使用，密封垫片的密封范围：0.5mm。

弹性直夹套
Reduction Sleeve



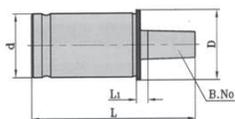
No	ZQH	d	d1	D	L
253.100	ZQH20- 4	20	4	23	53
253.101	ZQH20- 5	20	5	23	53
253.102	ZQH20- 6	20	6	23	53
253.103	ZQH20- 8	20	8	23	53
253.104	ZQH20-10	20	10	23	53
253.105	ZQH20-12	20	12	23	53
253.106	ZQH20-14	20	14	23	53
253.107	ZQH20-16	20	16	23	53
253.108	ZQH25- 4	25	4	28	60
253.109	ZQH25- 5	25	5	28	60
253.110	ZQH25- 6	25	6	28	60
253.111	ZQH25- 8	25	8	28	60
253.112	ZQH25-10	25	10	28	60
253.113	ZQH25-12	25	12	28	60
253.114	ZQH25-14	25	14	28	60
253.115	ZQH25-16	25	16	28	60
253.116	ZQH25-18	25	18	28	60
253.117	ZQH25-20	25	20	28	60
253.118	ZQH32- 5	32	5	36	65
253.119	ZQH32- 6	32	6	36	65
253.120	ZQH32- 8	32	8	36	65
253.121	ZQH32-10	32	10	36	65
253.122	ZQH32-12	32	12	36	65
253.123	ZQH32-14	32	14	36	65
253.124	ZQH32-16	32	16	36	65
253.125	ZQH32-18	32	18	36	65
253.126	ZQH32-20	32	20	36	65
253.127	ZQH32-25	32	25	36	65
253.128	ZQH40- 6	40	6	44	74
253.129	ZQH40- 8	40	8	44	74
253.130	ZQH40-10	40	10	44	74
253.131	ZQH40-12	40	12	44	74
253.132	ZQH40-16	40	16	44	74
253.133	ZQH40-18	40	18	44	74
253.134	ZQH40-20	40	20	44	74
253.135	ZQH40-25	40	25	44	74
253.136	ZQH40-32	40	32	44	74
253.137	ZQH50- 6	50	6	55	85
253.138	ZQH50- 8	50	8	55	85
253.139	ZQH50-10	50	10	55	85
253.140	ZQH50-12	50	12	55	85
253.141	ZQH50-14	50	14	55	85
253.142	ZQH50-16	50	16	55	85
253.143	ZQH50-18	50	18	55	85
253.144	ZQH50-20	50	20	55	85
253.145	ZQH50-25	50	25	55	85
253.146	ZQH50-32	50	32	55	85
253.147	ZQH50-40	50	40	55	85

丝锥夹套
Tapping Holders



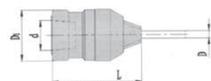
No	M	d1	d2	L	L1	L2	a	D	配用丝锥	
									粗柄	细柄
149.110	G3-M3	19	35	48	23	21	1.80	2.24	-	M3
149.111	G3-M4	19	35	48	23	21	2.50	3.15	M3	M4
149.112	G3-M5	19	35	48	23	21	3.15	4.00	M4	M5, M5.5
149.113	G3-M6	19	35	48	23	21	3.55	4.50	M4.5	M6
149.114	G3-M8	19	35	48	23	21	5.00	6.30	M6	M8
149.115	G3-M10	19	35	48	23	21	6.30	8.00	M8	M10, M11
149.116	G3-M12	19	35	48	23	21	7.10	9.00	M9	M12
149.117	G8-M8	31	54	71	37	34	5.00	6.30	M6	M8
149.118	G8-M9	31	54	71	37	34	5.60	7.10	M7	M9
149.119	G8-M10	31	54	71	37	34	6.30	8.00	M8	M10, M11
149.120	G8-M12	31	54	71	37	34	7.10	9.00	M9	M12
149.121	G8-M14	31	54	71	37	34	9.00	11.20	-	M14, M15
149.122	G8-M16	31	54	71	37	34	10.00	12.50	-	M16, M17
149.123	G8-M20	31	54	71	37	34	11.20	14.00	-	M18, M20
149.124	G14-M14	48	75	102	57	45	9.00	11.20	-	M14, M15
149.125	G14-M16	48	75	102	57	45	10.00	12.50	-	M16, M17
149.126	G14-M18	48	75	102	57	45	11.20	14.00	-	M18, M20
149.127	G14-M22	48	75	102	57	45	12.50	16.00	-	M22
149.128	G14-M24	48	75	102	57	45	14.00	18.00	-	M24, M25, M26
149.129	G14-M27	48	75	102	57	45	16.00	20.00	-	M27, M28, M30
149.130	G14-M33	48	75	102	57	45	18.00	22.40	-	M32, M33

钻夹头刀杆
Drill Chuck Bars



No	ZJT	d	L	d1	D	MT.No	夹持范围
253.200	ZJT20-Z10-6	20	71	6	23	B10	0.6-6
253.201	ZJT20-Z12-6	20	75	6	23	B12	0.6-6, 1-10
253.202	ZJT20-Z16-7.5	20	82	7.5	23	B16	1-10, 1-13
253.203	ZJT25-Z12-6	25	82	6	28	B12	0.6-10, 1-10
253.204	ZJT25-Z16-75	25	89	7.5	28	B16	1-10, 1-13
253.205	ZJT25-Z18-75	25	97	7.5	28	B18	1-13, 1-16
253.206	ZJT32-Z12-6.5	32	87	6.5	36	B12	0.6-6, 1-10
253.207	ZJT32-Z16-8	32	94	8	36	B16	1-10, 3-13
253.208	ZJT32-Z18-8	32	102	8	36	B18	1-13, 3-16
253.209	ZJT32-Z22-8	32	110.5	8	36	B22	5-20
253.210	ZJT40-Z12-6.5	40	96	6.5	44	B12	0.6-6, 1-10
253.211	ZJT40-Z16-8	40	103	8	44	B16	1-10, 1-13
253.212	ZJT40-Z18-8	40	111	8	44	B18	1-13, 3-16
253.213	ZJT40-Z22-8	40	119.5	8	44	B22	5-20
253.214	ZJT50-Z12-6.5	50	107	6.5	55	B12	0.6-6, 1-10
253.215	ZJT50-Z16-8	50	114	8	55	B16	1-10, 1-13
253.216	ZJT50-Z18-8	50	122	8	55	B18	1-13, 3-16
253.217	ZJT50-Z22-8	50	130.5	8	55	B22	5-20

自紧钻夹头
Drilling Chuck



No	ZJM	D	D1	d	L
253.300	ZJM6	0.6-6	31	B10	64
253.301	ZJM10	1-10	42	B12	91
253.302	ZJM13	1-13	48	B16	106
253.303	ZJM16	3-16	53	B18	108

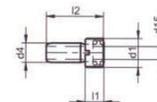
强力铣夹头扳手
Clamping Keys for Stornig
Chuck Holder for Boring
and Milling



No	XJT	for
032.810	XJT20	55-62
032.811	XJT25/XJT32	68-72
032.812	XJT40	78-85
032.813	XJT50	100-110

冷却管、螺钉、键和备用配件
Coolant Tubes, Screws, Keys and Spare Parts

冷却管
Coolant Tubes



No	HSK-A/E	HSK-B/F	d	d15	d4 f8	l1	l2
159.714	32	40	M 10 x 1	3.5	6	5.5	26.0
159.715	40	50	M 12 x 1	5	8	7.5	29.1
159.711	50	63	M 16 x 1	6.4	10	9.5	32.7
159.712	63	80	M 18 x 1	8	12	11.5	36.0
159.710	80	100	M 20 x 1.5	10	14	13.5	39.6
159.713	100	125	M 24 x 1.5	12	16	15.5	43.6

使用: 为HSK工具供应最佳的内部冷却液。

Use: To optimise the internal coolant supply of HSK tools.

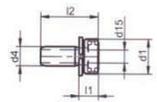
设计: 要求冷却管相对于轴向中心位置做±1°微小的往复运动。

Design: Minimum, easy-running angular movement of the coolant tube ± 1°, centred neutrally, sealed axially.

说明: 带螺纹套和符合DIN3770标准的O型密封圈

Standard Specification: With O-ring seals DIN 3770 and swivel nut.

冷却管
Coolant Tubes



No	HSK-A	d	d15	d4 f8	l1	l2
159.732	63	M 22 x 1	8	12	11.5	36.5
159.733	100	M 28 x 1.5	12	16	15.5	43.6

使用: 为716.0103.322, 716.0104.324, 716.0105.324提供冷却液选用。

Use: To optimise the internal coolant supply of adapters 716.0103.322, 716.0104.324 und 716.0105.324.

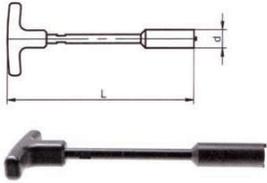
设计: 要求冷却管相对于轴向中心位置做±1°微小的往复运动。

Design: Minimum, easy-running angular movement of the coolant tube ± 1°, centred neutrally, sealed axially.

说明: 带螺纹套和符合DIN3770标准的O型密封圈

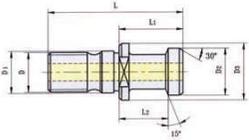
Standard Specification: With O-ring seals DIN 3770 and swivel nut.

冷却管扳手
Keys for coolant tubes



No	HSK-A/E	HSK-B/F	d	L
032.511	32	40	9	186
032.512	40	50	11	186
032.513	50	63	15	186
032.514	63	80	17	186
032.515	80	100	18.5	186
032.516	100	125	22.5	186

国际标准A型拉钉
Pull Stud International
Type A 国际ISO 7388/2-1984(E)

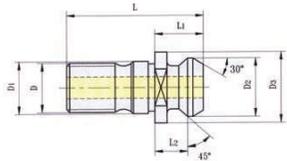


No	SK	D	D1	D2	D3	L	L1	L2	kg
499.0002.293	LDA30	M12	13	13	17	44	24	19	0.04
499.0002.292	LDA40	M16	17	19	23	54	26	20	0.08
499.0002.291	LDA50	M24	25	28	36	74	34	25	0.23
499.0002.290	LDA60	M30	32	40	52	90	40	30	0.51

备注：带冷却孔。

Note: Bored through.

国际标准B型拉钉
Pull Stud International
Type B 国际ISO 7388/2-1984(E)

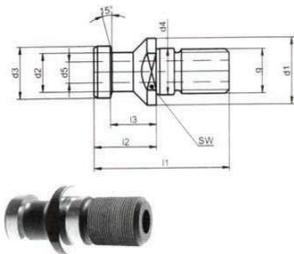


No	SK	D	D1	D2	D3	L	L1	L2	kg
499.0012.293	LDB30	M12	13	13.35	16.5	31.8	11.80	8.15	0.04
499.0011.292	LDB40	M16	17	18.95	22.5	44.4	16.40	11.15	0.08
499.0010.291	LDB50	M24	25	29.10	37.0	65.55	25.55	17.95	0.23
499.0009.290	LDB60	M30	32	37.25	50	88.15	38.15	27.65	0.51

备注：带冷却孔。

Note: Bored through.

拉钉DIN 69872 A型
Pull Studs DIN 69872 Type A

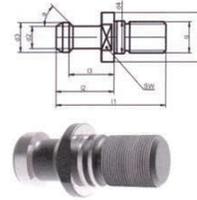


No	SK	d1	d2	d3	d4	d5	l1	l2	l3	SW	g	kg
499.0001.293	D30	17	9	13	13	—	44	24	19	14	M12	0.05
499.0001.292	D40	23	14	19	17	7	54	26	20	19	M16	0.07
499.0001.291	D50	36	21	28	25	11.5	74	34	25	30	M24	0.21
499.0001.290	D60	52	30	40	32	14	90	40	30	46	M30	0.51

备注：带冷却孔。

Note: Bored through.

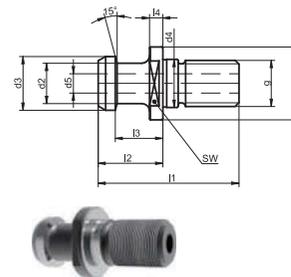
MAS拉钉
Pull Studs MAS



No	SK	d1	d2	d3	d4	d5	l1	l2	l3	a	SW	g	kg
499.0011.293	P30TI	16.5	7	11	12.5	—	43	23	18	45°	13	M12	0.02
499.0021.293	P30TI-JD	16.5	7	11	12.5	2.5	43	23	18	45°	13	M12	0.02
499.0010.293	P30TII	16.5	7	11	12.5	—	43	23	18	60°	13	M12	0.02
499.0020.293	P30TII-JD	16.5	7	11	12.5	2.5	43	23	18	60°	13	M12	0.02
499.0006.293	P30TIII	16.6	7	11	12.5	—	43	23	18	90°	13	M12	0.02
499.0016.293	P30TIII-JD	16.5	7	11	12.5	2.5	43	23	18	90°	13	M12	0.02
499.0001.265	P40TI	23	10	15	17	—	60	35	28	45°	19	M16	0.08
499.0011.265	P40TI-JD	23	10	15	17	4	60	35	28	45°	19	M16	0.08
499.0002.265	P40TII	23	10	15	17	—	60	35	28	60°	19	M16	0.08
499.0012.265	P40TII-JD	23	10	15	17	4	60	35	28	60°	19	M16	0.08
499.0006.265	P40TIII	23	10	15	17	—	60	35	28	90°	19	M16	0.08
499.0016.265	P40TIII-JD	23	10	15	17	4	60	35	28	90°	19	M16	0.08
499.0002.225	P50TI	38	17	23	25	—	85	45	35	45°	30	M24	0.28
499.0012.225	P50TI-JD	38	17	23	25	8.5	85	45	35	45°	30	M24	0.28
499.0005.225	P50TII	38	17	23	25	—	85	45	35	60°	30	M24	0.28
499.0015.225	P50TII-JD	38	17	23	25	8.5	85	45	35	60°	30	M24	0.28
499.0006.225	P50TIII	38	17	23	25	—	85	45	35	90°	30	M24	0.28
499.0016.225	P50TIII-JD	38	17	23	25	8.5	85	45	35	90°	30	M24	0.28
499.0008.290	P60TI	56	24	32	31	—	115	65	53	45°	46	M30	0.52
499.0018.290	P60TI-JD	56	24	32	31	14	115	65	53	45°	46	M30	0.52
499.0005.290	P60TII	56	24	32	31	—	115	65	53	60°	46	M30	0.52
499.0015.290	P60TII-JD	56	24	32	31	14	115	65	53	60°	46	M30	0.52

备注：d5为通水孔尺寸

JIS B 6339 型拉钉
Pull Studs JIS B 6339



No	SK	d1	d2	d3	d4	d5	l1	l2	l3	l4	SW	g	kg
499.0007.293	30P	16.5	8	12	12.5	—	43	23.4	18.4	5	13	M12	0.04
499.0007.265	40P	23	14	19	17	7	54	29	23	7	19	M16	0.08
499.0007.225	50P	38	21	28	25	10	74	34	25	7	30	M24	0.22
499.0007.290	60P	48	27	36	31	12	98	48	36	41	41	M30	0.52

备注：带冷却孔。

Note: Bored through.

用于热装刀柄的调整螺钉
Adjusting Screws for shrink fit chucks and i-tec® SLOTT



No	for	d1	Typ
159.550	311.../420...	6/7	HSK/PSC/SK/Zyl.
159.551	311.../420...	8/9	HSK/PSC/SK/Zyl.
159.552	311...	10	HSK 32 C/E
159.553	311...	10/11	HSK/PSC/SK/Zyl.
159.554	311...	12/14	HSK C
159.555	311...	12/14	HSK/PSC/SK/Zyl.
159.557	311...	16/18	HSK/PSC/SK/Zyl.
159.558	311...	20/25/32	HSK/PSC/SK/Zyl.

使用：在刀具切削过程中对尺寸补偿的调整。
 Use: For length adjustment of cutting tools.

设计：为细牙螺纹。
 Design: With fine thread.

用于HSK-A型和SK变径套的调整螺钉
Adjusting Screws for reduction sleeves HSK-A and SK



No	for	d1	Typ
159.365	420...	6	HSK-A/ Zyl./ SK 40/50
159.366	420...	8	HSK-A/ Zyl./ SK 40/50
159.367	420...	10	HSK-A/ SK 40/50
159.367	420...	12/14	HSK-A40
159.368	420...	12/14	HSK-A50/63/80/100/SK40/50
159.358	420...	16	HSK-A40
159.369	420...	16/18	HSK-A50/63/80/100/SK40/50
159.355	420...	20	HSK-A50/63/ SK 40/50
159.370	420...	20	HSK-A80/100
159.354	420...	25/32	HSK-A63/80/ SK 40/50
159.371	420...	25/32	HSK-A100

使用：在刀具切削过程中对尺寸补偿的调整。
 Use: For length adjustment of cutting tools.

用于液压刀柄的调整螺钉
Adjusting Screws for hydraulic expansion chucks



No	for	d	Typ
159.372	702...	6	HSK / SK
159.373	702...	8	HSK / SK
159.374	702...	10	HSK / SK
159.375	702...	12/14	HSK / SK
159.379	702...	16/18	HSK / SK
159.380	702...	20/25/32	HSK / SK

使用：在刀具切削过程中对尺寸补偿的调整。
 Use: For length adjustment of cutting tools.

用于HSK-C型和PSC变径套的调整螺钉
Adjusting Screws for reduction



No	for	d1	Typ
159.378	420...	6	HSK40/50/63/100/PSC32/40/50/63/80
159.385	420...	8	HSK40/80/100/PSC32/40/50/63/80
159.386	420...	8	HSK50/63
159.389	420...	10	HSK40/100
159.377	420...	10	HSK50/63/ PSC 32/40/50/63/80
159.382	420...	12/14	HSK40/100/ PSC 32/40/50/63/80
159.388	420...	12/14	HSK50/63
159.384	420...	16/18	HSK40/80/100/ PSC 50/63/80
159.390	420...	16/18	HSK50/63
159.391	420...	20	HSK80/100
159.361	420...	20	HSK50/63/ PSC 50/63/80
159.361	420...	25/32	PSC63/80
159.363	420...	25/32	HSK63/80/100

使用：在刀具切削过程中对尺寸补偿的调整。
 Use: For length adjustment of cutting tools.

用于HSK-A, E 和 F型 ER 16弹簧夹头的调整螺钉
Adjusting Screws for collet chucks HSK-A, E and F - ER 16



No	for	ER	Typ	d
159.633	698...	ER16(0.5-10)	HSK 40	2.8 - 5
159.612	698...	ER16(0.5-10)	HSK 50	2.8 - 5
159.612	698...	ER16(0.5-10)	HSK 63	2.8 - 5
159.602	698...	ER16(0.5-10)	HSK 80/ SK 40/50	2.8 - 5
159.602	698...	ER16(0.5-10)	HSK 100	2.8 - 5
159.644	698...	ER16(0.5-10)	HSK 32	4.8 - 7
159.634	698...	ER16(0.5-10)	HSK 40	4.8 - 7
159.636	698...	ER16(0.5-10)	HSK 50	4.8 - 7
159.636	698...	ER16(0.5-10)	HSK 63	4.8 - 7
159.601	698...	ER16(0.5-10)	HSK 80/ SK 40/50	4.8 - 7
159.601	698...	ER16(0.5-10)	HSK 100	4.8 - 7
159.645	698...	ER16(0.5-10)	HSK 32	6.8 - 10
159.635	698...	ER16(0.5-10)	HSK 40	6.8 - 10
159.637	698...	ER16(0.5-10)	HSK 50	6.8 - 10
159.637	698...	ER16(0.5-10)	HSK 63	6.8 - 10
159.638	698...	ER16(0.5-10)	HSK 80/ SK 40/50	6.8 - 10
159.638	698...	ER16(0.5-10)	HSK 100	6.8 - 10

使用：在刀具切削过程中对尺寸补偿的调整。
 Use: For length adjustment of cutting tools.

用于HSK-A, E, F型和SK ER 25/32/40弹簧夹头的调整螺钉
Adjusting Screws for collet chucks HSK-A, E and F and SK - ER 25/32/40.

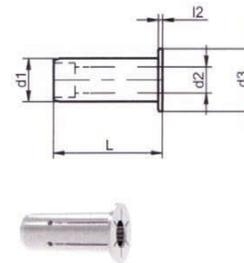


No	for	ER	Typ	d
159.650	697...	ER 25(1 - 16)	HSK 40	3.8 - 7
159.616	697...	ER 32(2 - 20)	HSK 40	3.8 - 7
159.650	697...	ER 25(1 - 16)	HSK 50	3.8 - 7
159.616	697...	ER 32(2 - 20)	HSK 50	3.8 - 7
159.650	697...	ER 25(1 - 16)	HSK 63	3.8 - 7
159.616	697...	ER 32(2 - 20)	HSK 63	3.8 - 7
159.616	697...	ER 40(3 - 26)	HSK 63	3.8 - 7
159.604	697...	ER 25(1 - 16)	SK 40/50	3.8 - 7
159.604	697...	ER 32(2 - 20)	HSK 80/ SK 40/50	3.8 - 7
159.604	697...	ER 40(3 - 26)	HSK 80/ SK 40/50	3.8 - 7
159.604	697...	ER 32(2 - 20)	HSK 100	3.8 - 7
159.604	697...	ER 40(3 - 26)	HSK 100	3.8 - 7
159.651	697...	ER 25(1 - 16)	HSK 40	6.8 - 10
159.617	697...	ER 32(2 - 20)	HSK 40	6.8 - 10
159.651	697...	ER 25(1 - 16)	HSK 50	6.8 - 10
159.617	697...	ER 32(2 - 20)	HSK 50	6.8 - 10
159.651	697...	ER 25(1 - 16)	HSK 63	6.8 - 10
159.617	697...	ER 32(2 - 20)	HSK 63	6.8 - 10
159.617	697...	ER 40(3 - 26)	HSK 63	6.8 - 10
159.603	697...	ER 25(1 - 16)	SK 40/50	6.8 - 10
159.603	697...	ER 32(2 - 20)	HSK 80/ SK 40/50	6.8 - 10
159.603	697...	ER 40(3 - 26)	HSK 80/ SK 40/50	6.8 - 10
159.603	697...	ER 32(2 - 20)	HSK 100	6.8 - 10
159.603	697...	ER 40(3 - 26)	HSK 100	6.8 - 10
159.652	697...	ER 25(1 - 16)	HSK 40	9.8 - 13
159.639	697...	ER 32(2 - 20)	HSK 40	9.8 - 13
159.652	697...	ER 25(1 - 16)	HSK 50	9.8 - 13
159.639	697...	ER 32(2 - 20)	HSK 50	9.8 - 13
159.652	697...	ER 25(1 - 16)	HSK 63	9.8 - 13
159.639	697...	ER 32(2 - 20)	HSK 63	9.8 - 13
159.639	697...	ER 40(3 - 26)	HSK 63	9.8 - 13
159.64	697...	ER 25(1 - 16)	SK 40/50	9.8 - 13
159.64	697...	ER 32(2 - 20)	HSK 80/ SK 40/50	9.8 - 13
159.64	697...	ER 40(3 - 26)	HSK 80/ SK 40/50	9.8 - 13
159.64	697...	ER 32(2 - 20)	HSK 100	9.8 - 13
159.64	697...	ER 40(3 - 26)	HSK 100	9.8 - 13
159.641	697...	ER 32(2 - 20)	HSK 40	2.8 - 20
159.641	697...	ER 32(2 - 20)	HSK 50	2.8 - 20
159.641	697...	ER 32(2 - 20)	HSK 63	2.8 - 20
159.641	697...	ER 40(3 - 26)	HSK 63	2.8 - 20
159.642	697...	ER 32(2 - 20)	HSK 80/ SK 40/50	2.8 - 20
159.642	697...	ER 40(3 - 26)	HSK 80/ SK 40/50	2.8 - 20
159.642	697...	ER 32(2 - 20)	HSK 100	2.8 - 20
159.642	697...	ER 40(3 - 26)	HSK 100	2.8 - 20
159.362	697...	ER 40(3 - 26)	HSK 63	9.8 - 26
159.336	697...	ER 40(3 - 26)	HSK 80	9.8 - 26
159.336	697...	ER 40(3 - 26)	HSK 100	9.8 - 26

使用：在刀具切削过程中对尺寸补偿的调整。

Use: For length adjustment of cutting tools.

用于液压刀柄的变径套
Reduction Bushes for hydraulic expansion chucks



No	d1	d2	d3	l2	l	kg
302.521	12	3	16	4	44	0.1
302.522	12	4	16	4	44	0.1
302.523	12	5	16	4	44	0.1
302.524	12	6	16	4	44	0.1
302.525	12	8	16	4	44	0.1
302.507	20	3	25	4	54	0.1
302.508	20	4	25	4	54	0.1
302.509	20	5	25	4	54	0.1
302.501	20	6	25	4	54	0.1
302.510	20	7	25	4	54	0.1
302.502	20	8	25	4	54	0.1
302.526	20	9	25	4	54	0.1
302.503	20	10	25	4	54	0.1
302.527	20	11	25	4	54	0.1
302.504	20	12	25	4	54	0.1
302.528	20	13	25	4	54	0.1
302.505	20	14	25	4	54	0.1
302.529	20	15	25	4	54	0.1
302.506	20	16	25	4	54	0.1
302.531	32	6	36	4	64	0.3
302.532	32	8	36	4	64	0.3
302.533	32	10	36	4	64	0.3
302.534	32	12	36	4	64	0.3
302.535	32	14	36	4	64	0.3
302.536	32	16	36	4	64	0.3
302.537	32	18	36	4	64	0.3
302.538	32	20	36	4	64	0.3
302.539	32	25	36	4	64	0.3

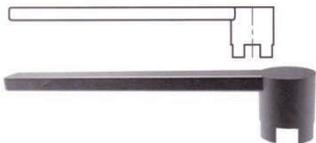
使用：用于减小液压刀柄的夹紧直径。

Use: To reduce the clamping diameter of hydraulic expansion chucks.

设计：加工键槽利于减少衬套和冷却并且最大满足80个毛坯件同时加工。对于直径在6-8mm的刀柄满足公差等级h6，直径在直径在9-25mm的刀柄满足公差等级h7。

Design: Slotted reduction bushes, coolant proof up to max. 80 bar. For the following shank tolerances: h6 for ϕ 6 - ϕ 8 mm, h7 for ϕ 9 - ϕ 25 mm.

面铣刀夹紧螺钉扳手
Keys for cutter face milling



No	for	d1	BS
032.003	032.003197.../489.../579...	16	BS-16
032.004	197.../489.../579...	22	BS-22
032.005	197.../489.../579...	27	BS-27
032.006	197.../489.../579...	32	BS-32
032.007	197.../489.../579...	40	BS-40
032.008	489.../579...	50	BS-50
032.009	489.../579...	60	BS-60

使用: 应用于套式立铣刀柄的紧固螺钉的装卸。
Use: For tightening and releasing cutter retaining screws on shell end mill arbors.

设计: 承受力尽量保持在1200 N/mm²以上, 并且保证紧密性。
Design: Tempered to min. 1200 N/mm² and welded.

套式立铣刀柄的平键
Feather Keys for shell end mill arbors



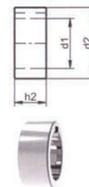
No	for	d1
047.501	197.../489...	16
047.502	489...	22
047.503	197.../489...	27
047.504	197.../489...	32
047.505	197.../489...	40
047.506	489...	50

PSC型套式立铣刀柄的平键
Feather Keys for shell end mill arbors PSC



No	for	d1
047.203	422...	16
047.204	422...	22
047.205	422...	27
047.206	422...	32
047.207	422...	40
047.208	422...	50
047.209	422...	60
047.601	489...	16
047.602	489...	22
047.603	489...	27
047.604	489...	32
047.605	489...	40

铣刀柄的衬套
Rings for mill arbors

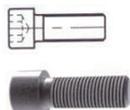


No	d1	d2	h2
045.011	16	25	2
045.012	16	25	3
045.013	16	25	4
045.014	16	25	5
045.015	16	25	6
045.016	16	25	10
045.017	16	25	20
045.018	16	25	30
045.021	22	33	2
045.022	22	33	3
045.023	22	33	4
045.024	22	33	5
045.025	22	33	6
045.026	22	33	10
045.027	22	33	20
045.028	22	33	30
045.031	27	39	2
045.032	27	39	3
045.033	27	39	4
045.034	27	39	5
045.035	27	39	6
045.036	27	39	10
045.037	27	39	20
045.038	27	39	30
045.041	32	45	2
045.042	32	45	3
045.043	32	45	4
045.044	32	45	5
045.045	32	45	6
045.046	32	45	10
045.047	32	45	20
045.048	32	45	30
045.051	40	54	2
045.052	40	54	3
045.053	40	54	4
045.054	40	54	5
045.055	40	54	6
045.056	40	54	10
045.057	40	54	20
045.058	40	54	30
045.061	50	67	2
045.062	50	67	3
045.063	50	67	4
045.064	50	67	5
045.065	50	67	6
045.066	50	67	10
045.067	50	67	20
045.068	50	67	30
045.071	60	83	2
045.072	60	83	3
045.073	60	83	4
045.074	60	83	5
045.075	60	83	6
045.076	60	83	10
045.077	60	83	20
045.078	60	83	30

使用: 套式立铣刀柄应遵循DIN6354和DIN6355。

设计: 具有互换性和良好地力学性能。

SK莫氏锥柄变径套的紧固螺钉
Retaining Screws for reduction sleeves SK for morse tapers



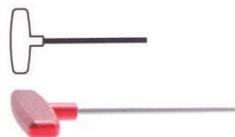
No	for	SK	MK
059.703	458...	40	1
059.552	458...	40	2
059.532	458...	40	3
059.704	458...	40	4
059.554	458...	50	1
059.555	458...	50	2
059.532	458...	50	3
059.588	458...	50	4
059.707	458...	50	5

用于HSK刀柄内六角扳手
Allen Keys for retaining screws HSK



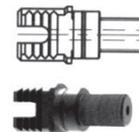
No	for	HSK	MK
032.405	458...	50	1
032.407	458...	50	2
032.407	458...	50	3
032.405	458...	63	1
032.407	458...	63	2
032.502	458...	63	3
032.502	458...	63	4
032.501	458...	80	1
032.414	458...	80	2
032.502	458...	80	3
032.502	458...	80	4
032.502	458...	80	5
032.501	458...	100	1
032.407	458...	100	2
032.502	458...	100	3
032.504	458...	100	4
032.502	458...	100	5

用于SK刀柄的内六角扳手
Allen Keys for retaining screws SK



No	for	SK	MK
032.414	458...	40	1
032.501	458...	40	2
032.503	458...	40	3
032.504	458...	40	4
032.501	458...	50	1
032.502	458...	50	2
032.503	458...	50	3
032.504	458...	50	4
032.505	458...	50	5

用于PSC的锁紧螺栓
Clamping bolts PSC



No	for	PSC
499.0001.381	706.../707.../716.../316...	32
499.0001.382	706.../707.../716.../316...	40
499.0001.383	706.../707.../716.../316...	50
499.0001.384	706.../707.../716.../316...	63
499.0001.385	706.../707.../716.../316...	80

应用：应用于PSC刀柄的径向夹紧。

Use: Required in order to clamp PSC holders in holders with radial clamping.

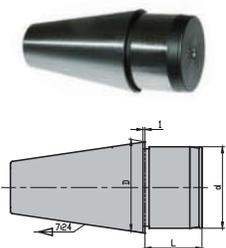
机床功能部件及刀柄附件

Accessories Of NC Machines And Arbors

	机床功能部件及刀柄附件	Accessories Of NC Machines And Arbors
5.02	定位芯轴	Location Shaft
5.02	过度套	Taper Reduction Sleeves
5.02	精密莫氏变径套	Precision Morse Taper Reduction Sleeves
5.03	7: 24圆锥检验棒	Test Bars with 7: 24 Taper
5.03	莫氏圆锥检验棒	Test Bars with Morse Taper
5.03	直柄小弹簧夹头	Small Collet Chucks With Parallel Shanks
5.04-5.05	热缩变径杆	i-tec® Shrink-fit Chuck Extensions
5.06	卸刀器	Tool Mounting Fixture
5.07	轴向对刀器	Axial Tool Adjusters
5.07	径向对刀器	Tool Adjusters Radial

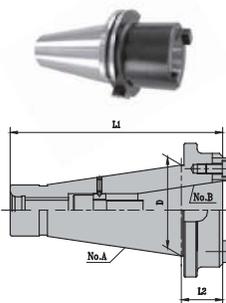


定位芯轴
Location Shaft



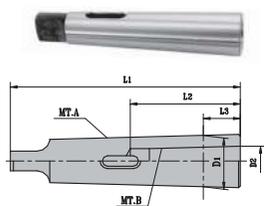
No	型号	圆锥号	D	d	L
440.0025.018	WST40/40-28	40	44.45	40	28
440.0020.018	WST50/40-28	50	69.85	40	28
440.0021.018	WST50/60-40	50	69.85	60	40
440.0023.018	WST60/40-28	60	107.95	40	28
440.0034.018	WST60/60-40	60	107.95	60	40
440.0024.018	ST40/40-28	40	44.45	40	28
440.0027.018	ST50/40-28	50	69.85	40	28
440.0011.018	ST50/60-40	50	69.85	60	40
440.0030.018	ST60/40-28	60	107.95	40	28
440.0035.018	ST60/60-40	60	107.95	60	40

过渡套
Taper Reduction Sleeves



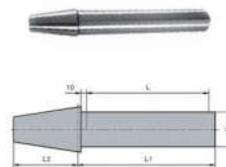
No	型号	No.A	No.B	D	d	L1	L2
440.0020.016	JT50-JT40	JT50	JT40	69.85	44.45	150	48
440.0021.016	JT60-JT50	JT60	JT50	107.95	69.85	242	80
440.0012.016	BT50-BT40	BT50	BT40	69.85	44.45	150	48
440.0037.016	BT60-BT50	BT60	BT50	107.95	69.85	232	70
440.0011.016	ST50-ST40	ST50	ST40	69.85	44.45	162	60
440.0017.016	ST60-ST50	ST60	ST50	107.95	69.85	257	50
440.0040.016	JT50-ST50	JT50	ST50	69.85	44.45	232	130
440.0014.016	JT60-ST50	JT60	ST50	107.95	69.85	247	85

精密莫氏变径套
Precision Morse Taper Reduction Sleeves



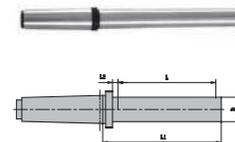
No	型号	MT.A	D1	MT.B	D2	L1	L2	L3
440.0001.060	MT2-MT1	2	17.780	1	12.065	95	56	20.5
440.0002.060	MT3-MT1	3	23.825	1	12.065	115	56	21.5
440.0003.060	MT3-MT2	3	23.825	2	17.780	115	67	21.5
440.0004.060	MT4-MT1	4	31.267	1	12.085	140	56	22.5
440.0005.060	MT4-MT2	4	31.267	2	17.780	140	67	22.5
440.0006.060	MT4-MT3	4	31.267	3	23.825	140	84	22.5
440.0032.060	MT5-MT3	5	44.399	4	31.267	170	84	20.5
440.0033.060	MT5-MT4	5	44.399	5	44.399	158	107	20.5
440.0034.060	MT6-MT5	6	63.348	6	44.399	218	135	8

7:24圆锥检验棒
Test Bars with 7:24 Taper



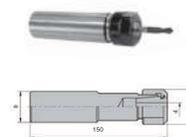
No	型号	圆锥号	D	L	L1	L2	径向圆跳动
JYB-061	JYB30×32×200-I	30	32	200	235	47.8	0.003
JYB-144	JYB30×32×200-II	30	32	200	235	48.4	0.003
JYB-148	JYB40×40×200-I	40	40	200	235	68.4	0.003
JYB-074	JYB40×40×200-II	40	40	200	235	65.4	0.003
JYB-055	JYB50×63×200	50	63	200	235	101.8	0.003
JYB-088	JYB60×80×200	60	80	200	235	161.8	0.003
JYB-142	JYB30×32×300-I	30	32	300	335	47.8	0.003
JYB-145	JYB30×32×300-II	30	32	300	335	48.4	0.003
JYB-056	JYB40×40×300-I	40	40	300	335	68.4	0.003
JYB-022	JYB40×40×300-II	40	40	300	335	65.4	0.003
JYB-023	JYB50×63×300	50	63	300	335	101.8	0.003
JYB-058	JYB60×80×400	60	80	400	435	161.8	0.003

莫氏圆锥检验棒
Test Bars with Morse Taper



No	型号	莫氏圆锥号	D	L	L1	L2	径向圆跳动
JYB-065	MS 2×150	2	24	150	175	5	0.003
JYB-018	MS 3×200	3	32	200	235	5	0.003
JYB-019	MS 4×300	4	40	300	335	10	0.003
JYB-020	MS 5×300	5	40	300	335	10	0.003
JYB-021	MS 6×300	6	63	300	335	10	0.003

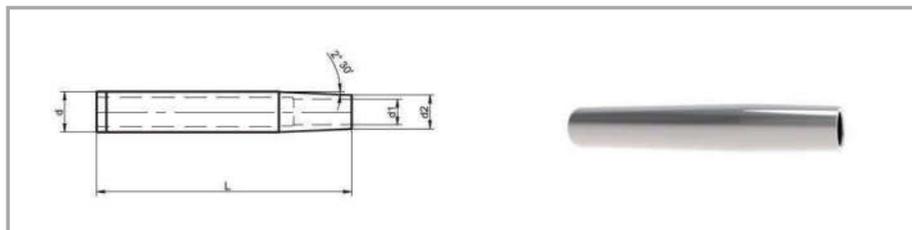
直柄小弹簧夹头
Small Collet Chucks With Parallel Shanks



No	型号	D	D1	d	勾扳手规格	配用卡簧
440.0201.040	ZB20-ER16	20	28	3-10	28-35	ER16
440.0202.040	ZB20-ER20	20	34	3-13	38-42	ER20
440.0203.040	ZB25-ER16	25	28	3-10	28-35	ER16
440.0204.040	ZB25-ER20	25	34	3-13	38-42	ER20
440.0205.040	ZB25-ER25	25	42	4-16	45-52	ER25
440.0206.040	ZB32-ER20	32	34	3-13	38-42	ER20
440.0207.040	ZB32-ER25	32	42	4-16	45-52	ER25
440.0208.040	ZB32-ER32	32	50	4-20	55-62	ER32

热缩变径杆

i-tec® Shrink-fit Chuck Extensions , extremely slim version



No	d	d1	L	d2	kg
311.610	12	3	160	8	0.1
311.611	12	4	160	9	0.1
311.620	16	3	160	8	0.2
311.621	16	4	160	9	0.2
311.622	16	5	160	10	0.2
311.623	16	6	160	11	0.2
311.633	20	6	160	11	0.3
311.663	20	6	300	11	0.5
311.634	20	8	160	13	0.3
311.664	20	8	300	13	0.5
311.635	20	10	160	15	0.2
311.636	20	12	160	17	0.2
311.645	25	10	160	15	0.3
311.675	25	10	300	15	0.8
311.646	25	12	160	17	0.4
311.676	25	12	300	17	0.7
311.648	25	14	160	19	0.4
311.677	25	16	300	21	0.6
311.688	32	20	300	25	1.0

使用：代替热缩刀柄，可以使用液压刀柄或弹簧夹头刀柄。

Use: To be used in i-tec® shrink fit chucks, hydraulic expansion chucks or collet chucks.

规格：细长型。
刀具柄部应符合h6公差。

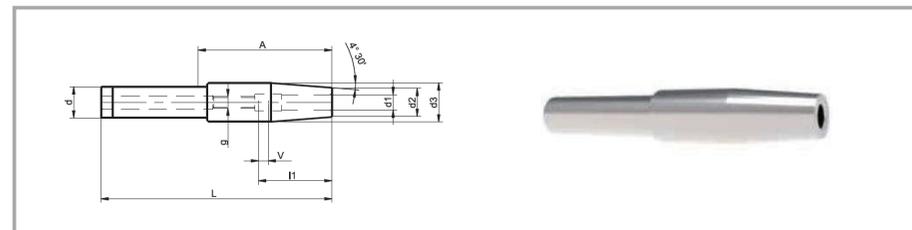
Design: Slim version The clamping diameter is designed for a shank tolerance of h6.

备注：其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

热缩变径杆

i-tec® Shrink-fit Chuck Extensions



No	d	d1	L	d2	d3	L1	g	A	V	kg
311.804	16	6	120	15	20	36	M5	70	10	0.3
311.805	16	8	120	15	20	36	M6	70	10	0.3
311.811	20	6	160	15	19.9	36	M5	110	10	0.4
311.812	20	8	160	15	19.9	36	M6	110	10	0.4
311.813	20	10	160	18	24	41	M8 × 1	110	10	0.5
311.863	25	10	160	18	24.9	41	M8 × 1	110	10	0.4
311.864	25	12	160	18	24.9	47	M10 × 1	110	10	0.4
311.823	32	12	160	18	32	47	M10 × 1	—	10	0.5
311.829	32	14	160	21	32	47	M10 × 1	—	10	0.5
311.824	32	16	160	21	32	53	M12 × 1	—	10	0.6
311.825	32	20	160	27	32	55	M16 × 1	—	10	0.5

使用：代替热缩刀柄，可以使用液压刀柄或弹簧夹头刀柄。

Use: To be used in i-tec® shrink fit chucks, hydraulic expansion chucks or collet chucks.

规格：细长型。
刀具柄部应符合h6公差。

Design: Slim version The clamping diameter is designed for a shank tolerance of h6.

说明：不带限位螺钉。

Standard Specification: Adjusting screw for length adjustment is not included.

备注：其他型号和尺寸可按订货要求制作。

Note: Other designs and sizes are available on request.

卸刀器
Tool Mounting Fixture



使用说明：卸刀器包括主体和法兰两部分，主体包括铝制底座和用来夹紧法兰的卡套，卡套可根据安装需要旋转90度，法兰可根据实际使用的刀柄进行选配。

注 意：卸刀器的主体需要用四个螺钉固定在工作台上。



主体



法兰

No	型 号	长x宽 x高	重量 (KG)
126.801	XDQ-HP SK01	330x160x230	6.5

No	型 号
126.811	HSK 32 / PSC 32
126.812	HSK 40 / PSC 40
126.813	HSK 50 / PSC 50 / SK 30
126.814	HSK 63 / PSC 63 / SK 40
126.815	HSK 80 / PSC 80
126.816	HSK 100 / PSC 100 / SK 50
126.831	VDI 30
126.832	VDI 40
126.833	VDI 50
126.834	VDI 60

轴向对刀器 型号: SL001 货号: 440.0006.220
Axial Toll Adjusters



使用说明

- 1、首先用手按压住校对棒压下测头，使测头与基准面处于同一面。同时调整百分表刻度盘，使其归零。
- 2、再分别用参与加工的刀具压下测头，使百分表归零，这时各个刀具与机床工作台距离都为120mm。

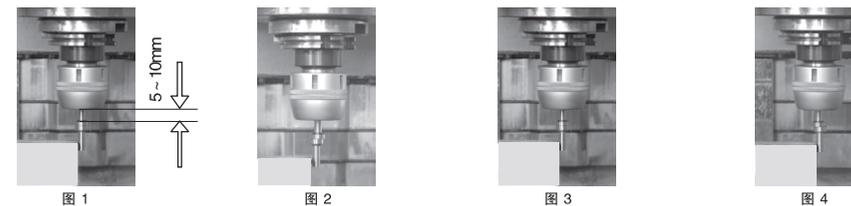
轴向对刀器(寻边器) 型号: SL002 货号: 440.0001.220
Toll Adjusters Radial



注意事项

- 1、不要弯曲，拉伸。
- 2、使用最高转速不得超过600rpm。
- 3、滑动面不允许有灰尘。

使用方法:



1、用能够夹持 $\phi 10$ 直柄的强力铁夹头或弹簧夹头，夹紧此测量杆。如图1

2、用手轻轻按测头侧面，使其偏心0.5mm。如图2，转速采用400-580rpm，使测头接触工件端面。

3、如图3所示，使测头无径向跳动，即恰好静止。

4、再以微进给使之与工件接触上，如图4所示，侧头向一侧滑动，这滑动起始点即是所测的基准位。机床上显示的实际坐标减去侧头半径5mm，即为工件主体端面坐标位置。