穆格精密工具（杭州）有限公司
MUGT PRECISION TOOLS (HANGZHOU) CO.LTD

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穆格精密工具

2022

TOOLING SYSTEM

www.pavo-tools.com

2022



TOOLING SYSTEM



CONTENTS
目录

001 公司简介 BORING TOOLS

002 孔加工系列 BORING TOOLS

064 铣加工系列 MILLING CUTTERS

101 刀柄系列 TOOL HOLDERS

127 非标系列 CUSTOM TOOL

134 周边附件 ACCESSORIES

140 技术资料 TECHNOLOGY DATA

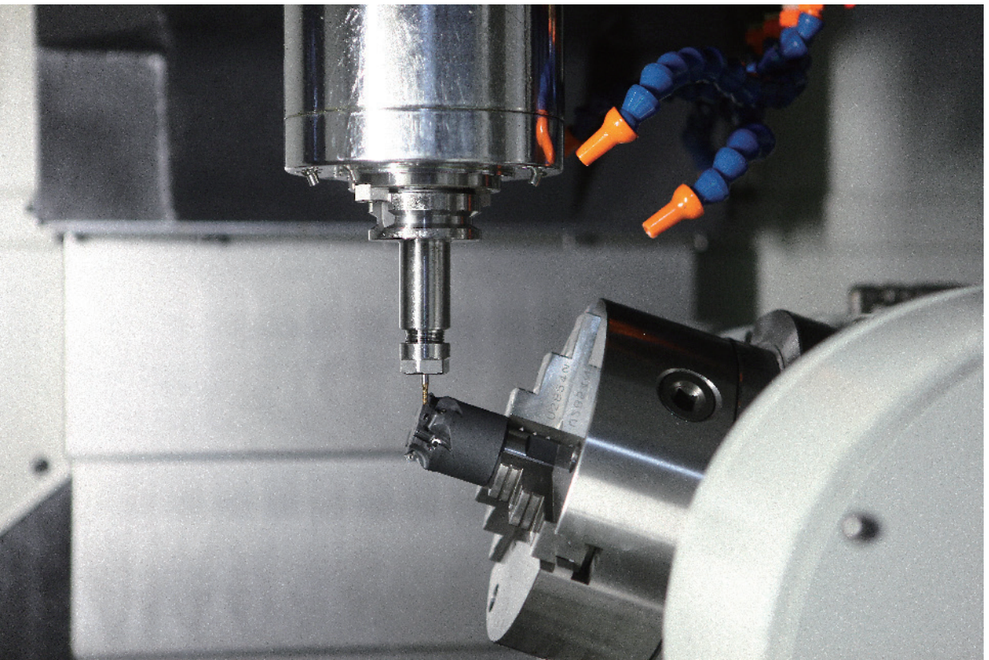
COMPANY PROFILE

公司简介

穆格精密工具（杭州）有限公司成立于2010年，公司坐落于素有“人间天堂”之称的美丽杭州，是一家专业从事数控刀具及非标刀具研发、生产、销售和服务的现代化创新型企业。

本公司注重工艺的完美及品质的精益求精，引进先进的加工检测设备，运用欧美先进的刀具技术及制造工艺。以“坚持技术创新，严抓产品品质”作为自身发展目标，以打造国内外一流的数控刀具知名品牌为企业愿景，不断勇攀高峰。公司坚持穆格人精神“技术创造未来，品牌常青永驻”。产品主要包括孔加工系列、铣削系列、刀柄系列、可转位非标刀等系列数控刀具。

公司拥有一支技术过硬的销售和技术服务队伍，为客户提供经济合理的加工方案，包括产品加工工艺方案设计、加工刀具配置、工艺节拍计算、加工方案调试，以及员工培训等。公司生产的刀具被大量应用在汽车、风电、工程机械、精密机械加工行业中，既为客户提高了加工精度，又大大提高了生产效率。

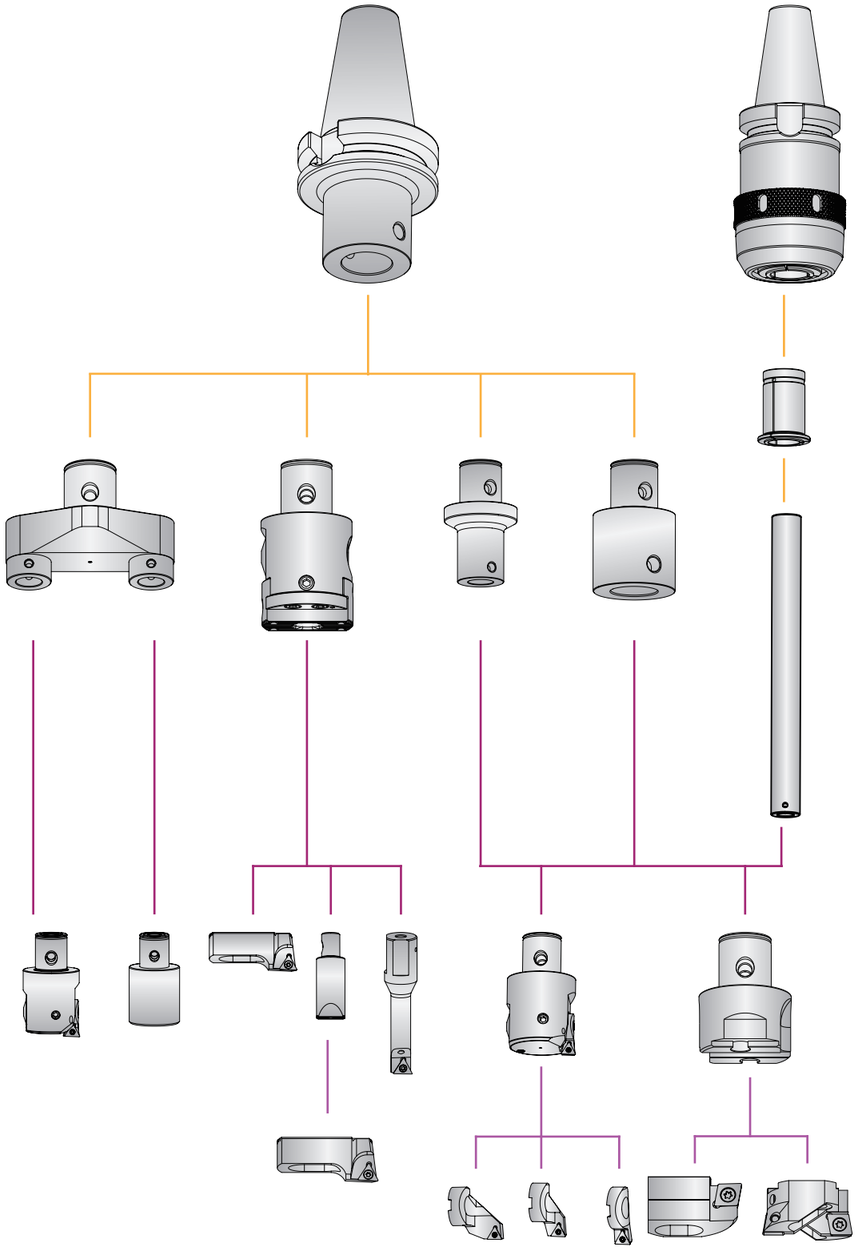


MUGT Precision Tools (Hangzhou) Co., Ltd. was founded in 2010, the company is located in the beautiful Hangzhou, known as "paradise on earth", is a professional in CNC tool research and development, production, sales and service of modern innovative enterprises.

The Division pays attention to technology and quality, strive for excellence, the introduction of advanced processing and testing equipment, ingenious use of advanced tool technology and manufacturing processes in Europe and the United States for manufacturing. To "adhere to technological innovation, strict lying on product quality" as its own development goals, to create domestic and foreign first-class CNC tool well-known brands for the enterprise vision, and constantly climb the peak in CNC tool area. Our Companies adhere to the spirit of the Mugt "technological innovation in the future, brand evergreen permanent residence", never blind pursue of the maximization of interests, only adhere to the quality assurance optimization. The company has a wide range of tool series, the products mainly include the Boring tool series, Milling series,Knife handle series and other series of CNC cutting tools.

The company has a highly skilled sales and technical service team, to provide customers with economic and reasonable processing programs, including product process design, tool configuration, cycle time calculation, program debugging processing, as well as staff training. The company cutting tools produced by the company are widely used in the automotive, wind power, construction machinery, precision machining industry, not only for customers to improve the accuracy of processing, but also greatly improve production efficiency.

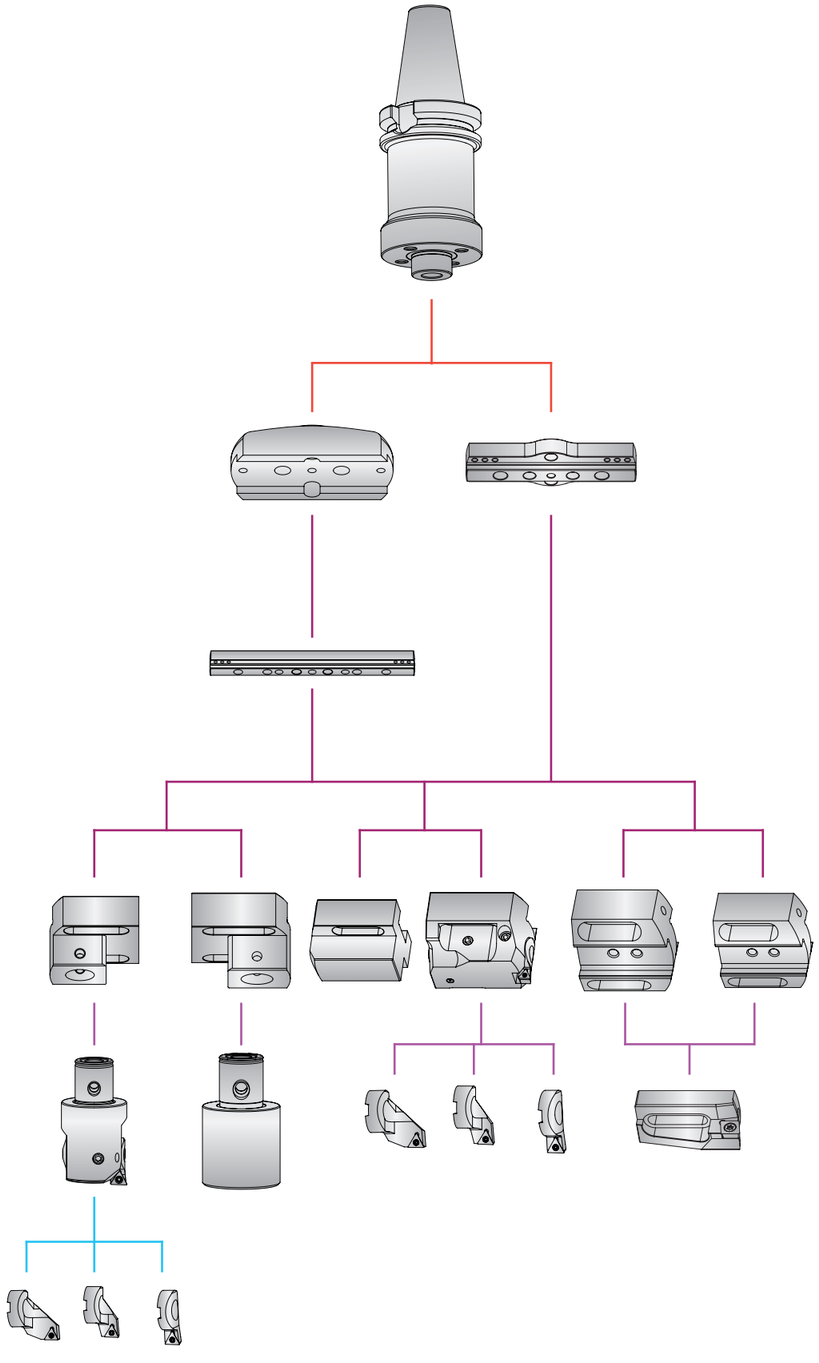
镗刀组合
Boring cutter combination



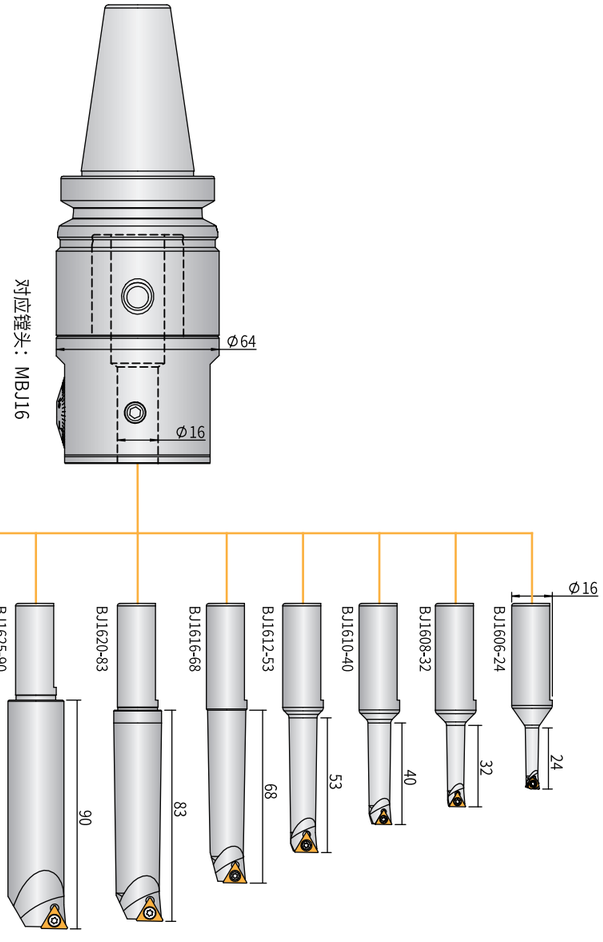
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镗刀组合
Boring cutter combination

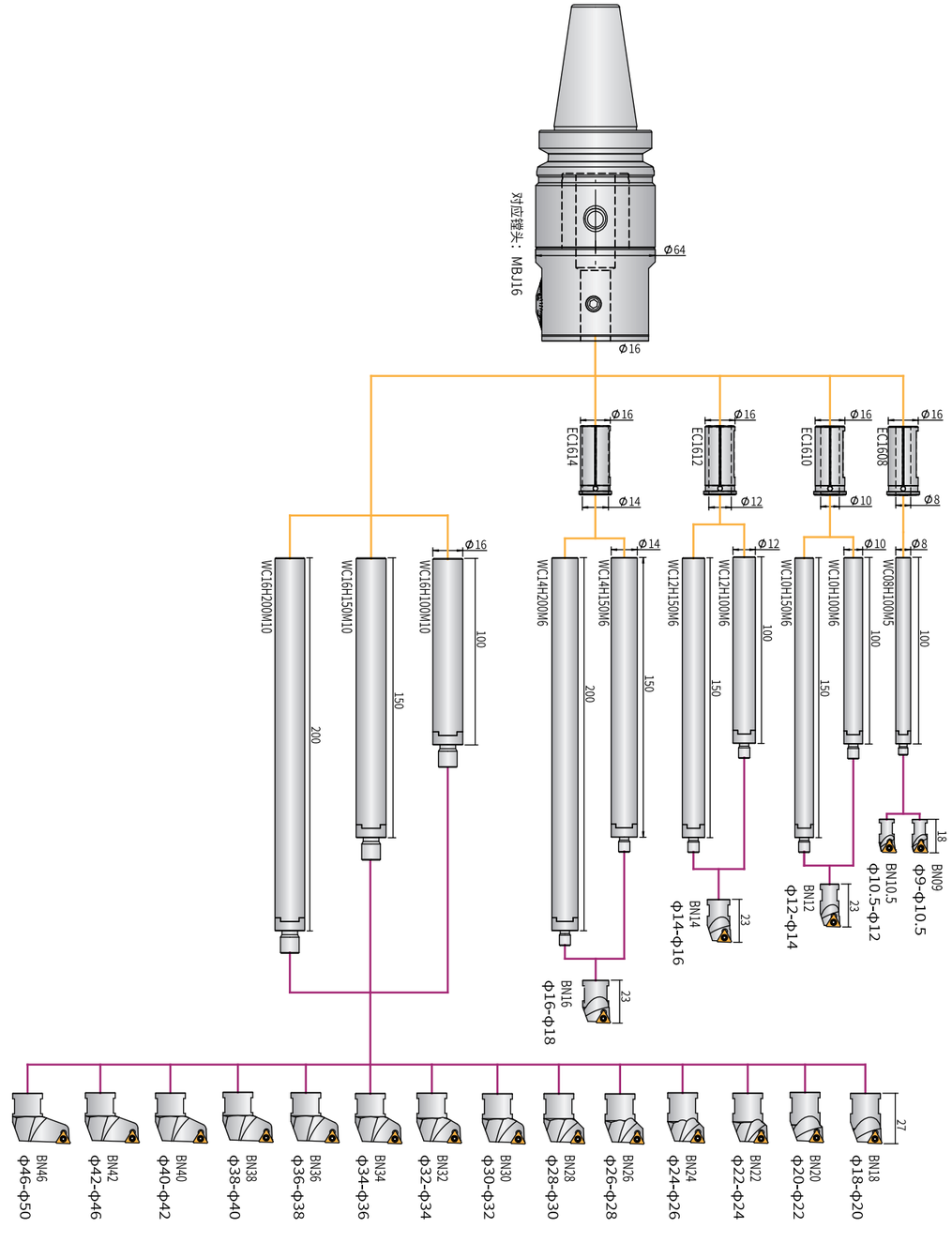
孔加工系列



小径镗刀组合
Small bore combination

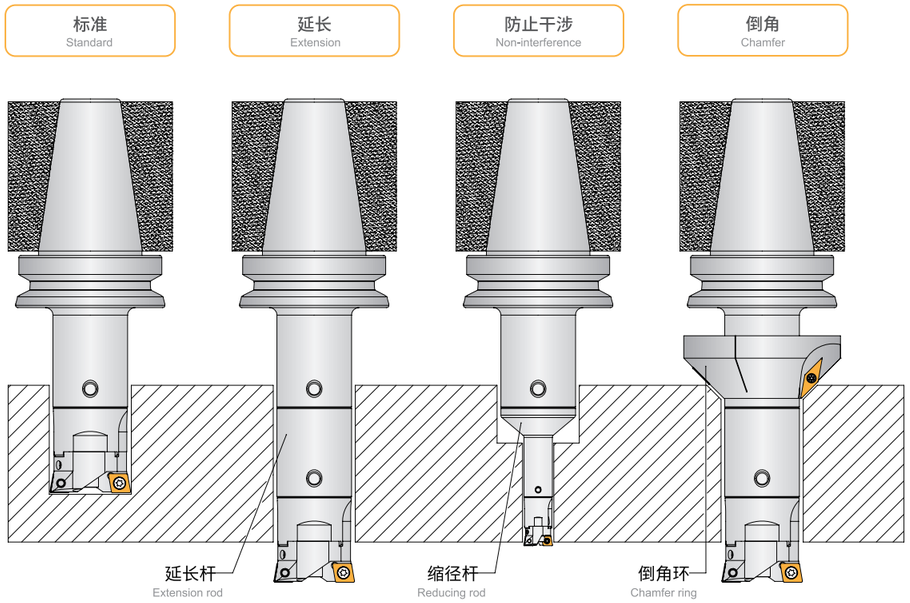


小径镗刀组合
Small bore combination

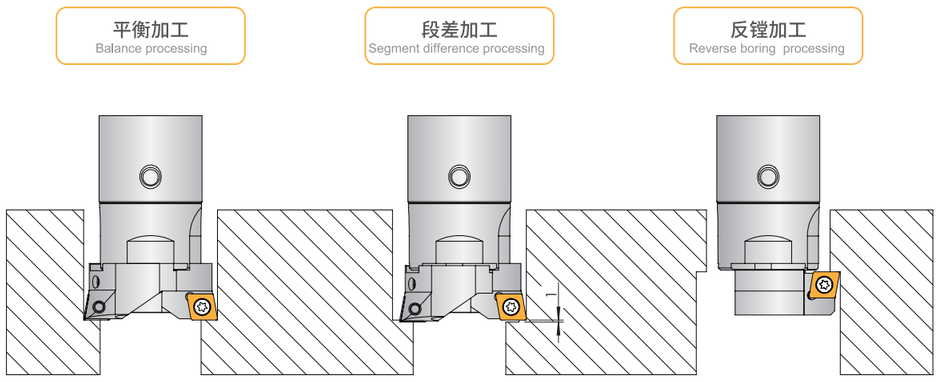


粗镗系列
Rough boring series

连接形式
Connection form



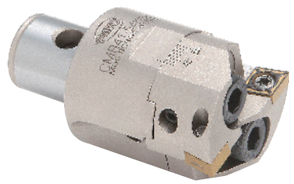
加工方式
Processing methods

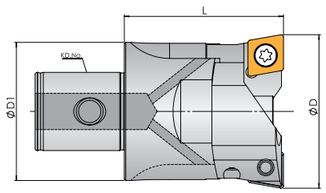


粗镗头
Rough boring head

加工范围Φ20-Φ203
processing range φ20-φ203

- 适用单双刃镗孔加工，最小加工直径Φ20
- 可依照各种不同加工需求，轻易调整镗刀做少量多样加工，加工深度可配合延长杆延伸至所需长度
- 清晰侧面刻度，协助使用者轻易调整到所需的范围，无须在刀具预定设定仪上预设
- Suitable for single and double edge boring , min processing diameter is 20 According to various processing
- Requirements, the boring tool can be easily adjusted to make small amount but various processing, the processing depth can be extended to the required length with the extension rod
- Clear side scales allow the user adjust to the required range easily, don't have to preset on the tool presetter



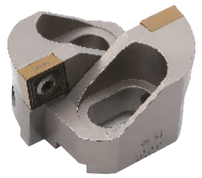


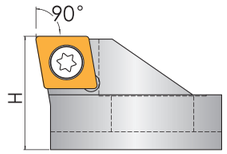
加工范围ΦD Processing range	镗刀型号 Designation	KD.NO.	适配刀片座 Adapted insert seat	ΦD1	L	锁紧螺丝 Locking screw	重量kg Weight
20-26	CMR20-26KD1	1	RS*-2026	18.7	32.5	RMM4x16	0.06
25-33	CMR25-33KD2	2	RS*-2533	23.5	35.5	RMM5x20	0.11
32-42	CMR32-42KD3	3	RS*-3242	30.5	40	RMM6x20	0.19
41-54	CMR41-54KD4	4	RS*-4154	38.5	47	RMM8x25	0.38
53-70	CMR53-70KD5	5	RS*-5370	49.5	57	RMM10x30	0.75
68-90	CMR68-110KD6	6	RS*-6890	63	71	RMM10x35	1.6
88-110			RS*-88110				1.73
98-126	CMR98-153KD6	6	RS*-98126	63	71	RMM12x40	2.32
125-153			RS*-125153				2.58
98-126	CMR98-153KD7	7	RS*-98126	90	87		3.85
125-153			RS*-125153				4.11
148-176	CMR148-203KD6	6	RS*-98126	63	71		2.9
175-203			RS*-125153				3.15

- 附带一组紧固螺丝，垫圈及L型扳手1把
- 不附带刀片，请另外选购
- 所有CMR镗刀都带内冷孔
- 标配附带盲孔型刀座
- Attached with a set of locking screw.shim and a L-shaped wrench
- No inserts attached,please purchase according to your needs
- All the CMR boring tools with internal coolant
- Blind hole type tool holder is included as standard

P.031-034

盲孔型粗镗刀片座
Blind hole type rough boring insert seat



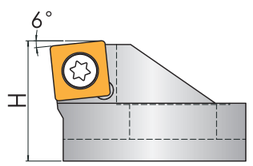


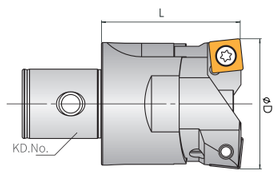
刀片座型号 Designation	适配镗头 Adapted boring head	适配刀片 Insert	刀片螺丝组合 Screw
RSC-2026	CMR20-26KD1	CC 0602	DM2.5x6-T8
RSC-2533	CMR25-33KD2		
RSC-3242	CMR32-42KD3	CC 09T3	DM4x6-T15
RSC-4154	CMR41-54KD4		
RSC-5370	CMR53-70KD5	CC 1204	DM5x12-T20
RSC-6890	CMR68-110KD6		
RSC-88110			
RSC-98126	CMR98-153KD6		
RSC-125153	CMR148-203KD6		

- 不附带刀片，请另外订购
- 各型号中包含刀片螺丝及扳手一把
- No inserts attached,please purchase according to your needs
- Attached with screw and wrench

P.059

通孔型粗镗刀片座
Through hole rough boring insert seat





刀片座型号 Designation	适配镗头 Adapted boring head	适配刀片 Insert	刀片螺丝组合 Screw
RSS-2026-B	CMR20-26KD1	SC 0602	DM2.5x6-T8
RSS-2533-B	CMR25-33KD2		
RSS-3242-B	CMR32-42KD3	SC 09T3	DM4x10-T15
RSS-4154-B	CMR41-54KD4		
RSS-5370-B	CMR53-70KD5	SC 1204	DM5x12-T20
RSS-6890-B	CMR68-110KD6		
RSS-88110-B			
RSS-98126-B	CMR98-153KD6		
RSS-125153-B	CMR148-203KD6		

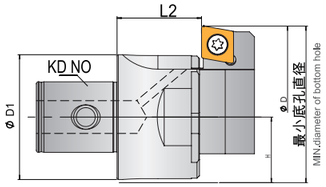
- 不附带刀片，请另外订购
- 各型号中包含刀片螺丝及扳手一把
- No inserts attached,please purchase according to your needs
- Attached with screw and wrench

P.060

粗镗头（反镗）
Rough boring head (revers boring)

加工范围Φ25-Φ153
processing range φ25-φ153

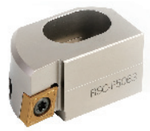




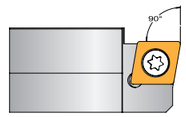
最小底孔直径=H+（反镗加工直径/2）
MIN.diameter of bottom hole=H+(Count Bore Diameter/2)

加工范围 ΦD Processing range φD	镗刀型号 Designation	KD.NO.	适配反镗刀座 Adapted reverse boring insert seat	φD1	L2	锁紧螺丝 Locking screw	H	重量kg Weight
25-31	CMR20-26KD1	KD1	RSC-F2531	18.7	21.5	RMM4x16	10	0.06
30-35			RSC-F3035					0.06
32-40	CMR25-33KD2	KD2	RSC-F3240	23.5	23.5	RMM5x20	12.5	0.11
39-47			RSC-F3947					0.11
41-51	CMR32-42KD3	KD3	RSC-F4151	30.5	23.5	RMM6x20	16	0.18
50-60			RSC-F5060					0.19
50-63	CMR41-54KD4	KD4	RSC-F5063	38.5	28.5	RMM8x25	20	0.36
61-74			RSC-F6174					0.38
65-82	CMR53-70KD5	KD5	RSC-F6582	49.5	33.5	RMM10x30	25.5	0.7
78-95			RSC-F7895					0.75
80-102	CMR68-110KD6	KD6	RSC-F80102	63	45.5	RMM10x35	32.5	1.5
100-122			RSC-F100122					1.6
98-126	CMR98-153KD6	KD6	RSC-F98126	63	45.5	RMM12x40	46.5	2.25
125-153			RSC-F125153					2.45

P.031-034



粗镗刀片座（反镗）
Rough boring blade holder (revers boring)



反镗刀座型号 Designation	适配镗刀 Adapted boring head	适配刀片 Insert	刀片螺丝组合 Screw
RSC-F2531	CMR20-26KD1	CC 0602	DM2.5x6-T8
RSC-F3035			
RSC-F3240	CMR25-33KD2		
RSC-F3947			
RSC-F4151	CMR32-42KD3	CC 09T3	DM4x10-T15
RSC-F5060			
RSC-F5063	CMR41-54KD4		
RSC-F6174			
RSC-F6582	CMR53-70KD5	CC 1204	DM5x12-T20
RSC-F7895			
RSC-F80102	CMR68-110KD6		
RSC-F100122			
RSC-F98126	CMR98-153KD6		
RSC-F125153			

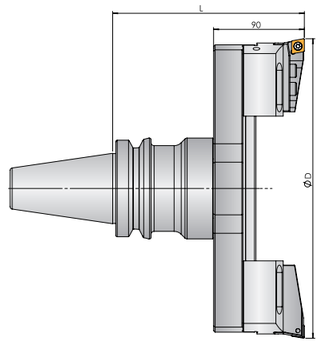
P.059

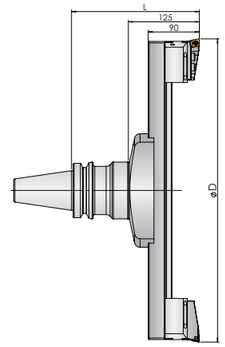
粗镗头(大孔径)
Rough boring head (large aperture)

加工范围Φ150-Φ850
processing range ϕ150-ϕ850

- 由于是模块式，只需组合各部件，即可对应各种范围的加工，从而简化工具管理。
- 另有铝合金桥架选购可以用于降低刀具重量
- Modular design simplifies tool management, for it only needs to combine the componets to meet various ranges of processing
- Aluminum alloy bridge rough boring tool available to reduce the weight of tool







标准型钢制桥式粗镗刀
Standard type steel bridge rough boring tool

加工范围ΦD Processing range	组合型号 Designation	重量kg Weight	连接盘 Link plate		钢制桥架 Steel bridge		粗镗滑块(2个一组) Rough boring slide		刀片座(2个一组) Insert seat(2 PCS)		适配刀片 Insert
			型号 Designabon	重量kg Weight	型号 Designabon	重量kg Weight	型号 Designabon	重量kg Weight	型号 Designabon	重量kg Weight	
150-210	CLR 150-210	5.5			CL 150-210	2.5					
210-290	CLR 210-290	6.7			CL 210-290	3.7					
290-370	CLR 290-370	8.05	/	/	CL 290-370	5.05					
370-450	CLR 370-450	9.8			CL 370-450	6.8					
450-530	CLR 450-530	11.4			CL 450-530	8.4	LR 150	1.9(一组)	RS 150	0.6(一组)	CC 1204
530-610	CLR 530-610	17.2			CL 530-610	9.5					
610-690	CLR 610-690	18.7	CL40-200	4.7	CL 610-690	11					
690-770	CLR 690-770	20.4			CL 690-770	12.7					
770-850	CLR 770-850	22.7			CL 770-850	15					

- 组合中不包含刀片，请另外订购
- 组合中不包含拉钉，请注意，机器不同使用的拉钉的形式也不一样
- 也可制作加长型桥式镗刀柄(非标)需要时请指示
- 标准品的刀尖和传动的方向是同相位
- No inserts attached,please purchase according to your needs
- No rivets attached. Please note it, different machines use different type rivets
- If you need, extended bridge type shank (Non-standard) is available.
- The tip and direction of otation of the standard product are in the same phase


P.035 P.059

轻量型铝制桥式粗镗刀
Lightweight aluminum bridge rough boring tool

加工范围ΦD Processing range	组合型号 Designation	重量kg Weight	连接盘 Link plate		铝制桥架 Aluminum bridge		粗镗滑块(2个一组) Rough boring slide		刀片座(2个一组) Insert seat(2 PCS)		适配刀片 Insert
			型号 Designabon	重量kg Weight	型号 Designabon	重量kg Weight	型号 Designabon	重量kg Weight	型号 Designabon	重量kg Weight	
150-210	CLR 150-210 AL	3.9			CL 150-210 AL	0.9					
210-290	CLR 210-290 AL	4.3			CL 210-290 AL	1.3					
290-370	CLR 290-370 AL	5	/	/	CL 290-370 AL	2					
370-450	CLR 370-450 AL	5.5			CL 370-450 AL	2.5					
450-530	CLR 450-530 AL	6			CL 450-530 AL	3	LR 150	1.9(一组)	RS 150	0.6(一组)	CC 1204
530-610	CLR 530-610 AL	11.2			CL 530-610 AL	3.5					
610-690	CLR 610-690 AL	12	CL40-200	4.7	CL 610-690 AL	4.3					
690-770	CLR 690-770 AL	13.2			CL 690-770 AL	5.5					
770-850	CLR 770-850 AL	13.9			CL 770-850 AL	6.2					

- 各部件也可以单独销售
- 更大范围可定制
- Componets can be sold separately
- OEM service available

双刃粗镗刀杆
Double-edged rough boring bar

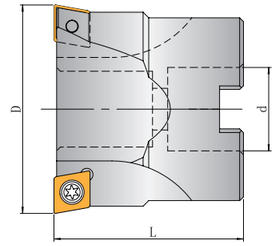




型号 Designation	刃数 Edge	D	d	L1	L	适配刀片 Insert	刀片螺钉 Screw	扳手 Wrench	重量kg Weight
C16-TB16-110	2	15.7	16	60	110	CCMT060204	DM2.5x6	T08	0.14
C16-TB17-110	2	16.7		40					0.15
C16-TB18-110	2	17.7							0.15
C16-TB19-110	2	18.7							0.15
C16-TB20-110	2	19.7							0.16
C20-TB21-120	2	20.7	20		120				0.26
C20-TB22-120	2	21.7							0.27
C20-TB23-120	2	22.7							0.27
C20-TB24-120	2	23.7							0.27
C20-TB25-120	2	24.7							0.28
C20-TB26-120	2	25.7							0.28
C20-TB27-120	2	26.7							0.28
C20-TB28-120	2	27.7				CCMT09T308	DM4x10	T15	0.29
C25-TB25-160	2	24.7	25	50	160	CCMT060204	DM2.5x6	T08	0.53
C25-TB30-160	2	29.7				CCMT09T308	DM4x10	T15	0.54
C25-TB30-190	2	29.7			190				0.69
C25-TB32-160	2	31.7			160				0.58
C25-TB35-160	2	34.7							0.61
C25-TB37-160	2	36.7							0.64
C25-TB40-160	2	39.7							0.64
C32-TB35-230	2	34.7	32		230				1.38
C32-TB40-250	2	39.7			250				1.54
C32-TB42-200	2	41.7			200				1.24
C32-TB45-200	2	44.7							1.26
C32-TB47-200	2	46.7							1.26
C32-TB50-200	2	49.7							1.32
C42-TB50-220	2	49.7	42		220				1.45
C42-TB52-220	2	51.7							1.53
C42-TB58-220	2	57.7							1.61
C42-TB60-220	2	59.7							1.8

P.059

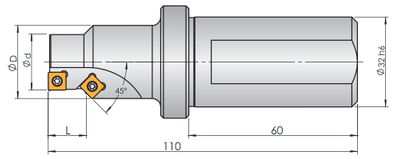
双刃粗镗刀杆
Double-edged rough boring bar



型号 Designation	刃数 Edge	D	d	L	适配刀片 Insert	刀片螺钉 Screw	扳手 Wrench	重量kg Weight
MR-45-FMB22	2	44.7	22	50	CCMT09T308	DM4x10	T15	0.25
MR-50-FMB22	2	49.7						0.3
MR-55-FMB22	2	54.7						0.35
MR-60-FMB22	2	59.7						0.47
MR-60-FMB27	2	59.7	27					0.55
MR-65-FMB27	2	64.7						0.61
MR-70-FMB27	2	69.7						0.8
MR-75-FMB27	2	74.7						0.85
MR-80-FMB27	2	79.7						0.95
MR-85-FMB27	2	84.7						1.05
MR-90-FMB27	2	89.7						1.1
MR-95-FMB27	2	94.7						1.12
MR-100-FMB27	2	99.7						1.2
MR-105-FMB32	2	104.7	32	63				1.9
MR-110-FMB32	2	109.7						2.15
MR-115-FMB32	2	114.7						2.2
MR-120-FMB32	2	119.7						2.3
MR-125-FMB32	2	124.7						2.4
MR-130-FMB32	2	129.7						2.6

P.059

机夹式沉头刀
Machine folder-Shentou

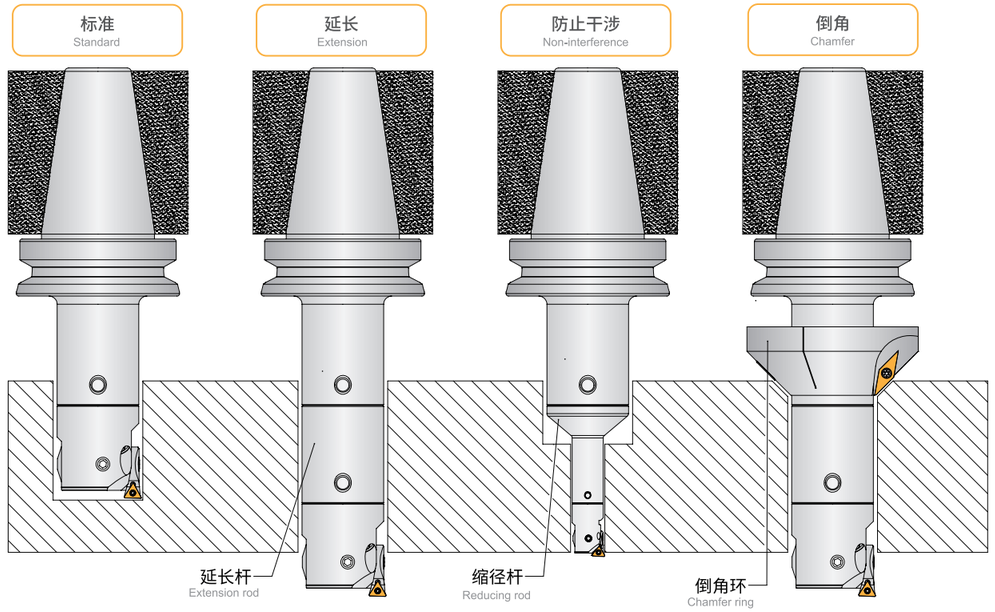


型号 Designation	d	D	L	C	适配刀片 Insert
MR-11-W32	11	19	7	1C	SP 0602
MR-14-W32	14	20	9		
MR-18-W32	18	24	11		
MR-20-W32	20	26	13.5		
MR-23-W32	23	31	15	2C	SP 1104
MR-26-W32	26	34	18		
MR-32-W32	32	40	22		
MR-39-W32	39	47	26		

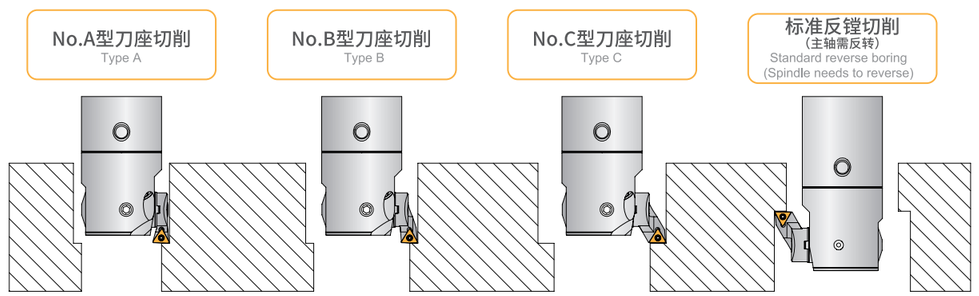
- 内孔和孔口倒角一次加工成型，提升加工效率
- 尺寸外可接受非标定做
- Inner hole and hole chamfer are processed at the same time to improve processing efficiency.
- OEM service available.

精镗系列
Precision boring series

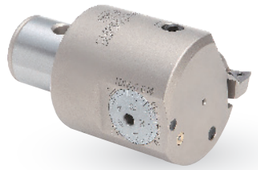
连接形式
Connection form



加工方式
Processing methods

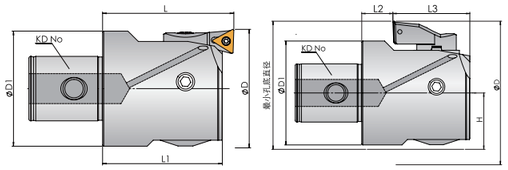


精镗头
Fine boring head



加工范围Φ20-Φ203
processing range φ20-φ203

- 标准对应反镗加工，使用范围广，增大附加值
- CMP精镗刀适用于精切削镗孔，最小加工范围Φ20
- 精密螺杆位于内部，不受铁屑、磨耗、生锈等影响，具有内部润滑，精准耐用
- Standard corresponds to the reverse processing, which has a wide range of use and increases the added value.
- CMP series is suitable for precision boring, min processing diameter is φ20.
- The precision screw is located inside,so it won;t affected by iron filings, abrasion, rust, etc. Internal lubrication makes it precision and durability.



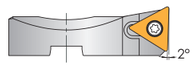
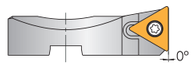
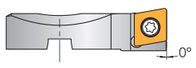
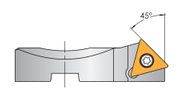
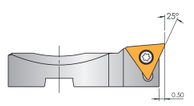
最小底 孔直径=H+（反镗加工直径/2）
MIN.diameter of bottom hole=H+(Count Bore Diameter/2)

型号 Designation	KD.NO.	刀片座 Insert seat	正镗 Boring				反镗 Reverse boring				重量kg Weight	适配刀片 Insert	
			加工范围ΦD	L	L1	D1	加工范围ΦD	L2	L3	H			
CMP20-36KD1	1	FS*-1A	20-26	32.5	30.5	19	/	10.5	20	10	0.07	TP 0802	/
		FS*-1B	25-31				30-31						
		FS*-1C	30-36				30-36						
CMP25-47KD2	2	FS*-2A	25-33	35.5	33	24	/	11.5	21.5	12.5	0.12		
		FS*-2B	32-40				36-40						
		FS*-2C	39-47				39-47						
CMP32-60KD3	3	FS*-3A	32-42	40	37	31	/	10	27	16	0.22		
		FS*-3B	41-51				46-51						
		FS*-3C	50-60				50-60						
CMP41-74KD4	4	FS*-4A	41-54	47	43	40	/	12	31	20	0.42	TC 1102	CC 0602
		FS*-4B	50-63				53-63						
		FS*-4C	61-74				61-74						
CMP53-95KD5	5	FS*-5A	53-70	57	52	50	62-70	15	37	25.5	0.85		
		FS*-5B	65-82				65-82						
		FS*-5C	78-95				78-95						
CMP68-150KD6	6	FS*-6A	68-100	71	67	64	80-100	23	44	32.5	1.85		CC 09T3
		FS*-6B	94-126				94-126						
		FS*-6C	118-150				118-150						
CMP100-203KD6	6	FS*-6A	100-153	71	67	93	112-153	23	44	46.5	2.7		
		FS*-6B	126-179				126-179						
		FS*-6C	150-203				150-203						
CMP100-203KD7	7	FS*-6A	100-153	87	83	93	112-153	39	44	46.5	4.0 5		
		FS*-6B	126-179				126-179						
		FS*-6C	150-203				150-203						

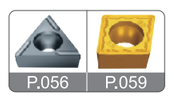
- 加工范围是指刀片的刀尖半径R0.2，TC11刀片的刀尖半径R0.4的值
- 不附带刀片，需另购
- 所有CMP镗头都内冷
- Processing range refers to the value of insert tip radius R0.2 and R0.4.
- No inserts attached,please purchase according to your needs
- All the CMP boring tools with internal coolant.


P.031-034

精镗刀片座(选购)
Precision boring blade seat(Optional)

	刀片座型号 Designation	适配镗头 Adapted boring head	加工范围ΦD Processing range	适配刀片 Insert	刀片螺丝组合 Screw
	FST-1A	CMP20-36KD1	/	TP 0802	DM2x4-T6
	FST-1B				
	FST-1C				
	FST-2A	CMP25-47KD2			
	FST-2B				
	FST-2C				
	FST-3A	CMP32-60KD3			
	FST-3B				
	FST-3C				
	FST-4A	CMP41-74KD4	/	TC 1102	DM2.5x6-T8
	FST-4B				
	FST-4C				
	FST-5A	CMP53-95KD5			
	FST-5B				
	FST-5C				
	FST-6A	CMP68-150KD6 CMP100-203KD6			
	FST-6B				
	FST-6C				
	FST-4A0	CMP41-74KD4	41-54	TC 1102	DM2.5x6-T8
	FST-5A0	CMP53-95KD5	53-70		
	FST-6A0	CMP68-150KD6	68-100		
		CMP100-203KD6	100-153		
	FSC-4A0	CMP41-74KD4	41-54	CC 0602	
	FSC-5A0	CMP53-95KD5	53-70		
	FSC-6A0	CMP68-150KD6	68-100	CC 09T3	DM4x8-T15
		CMP100-203KD6	100-153		
	FST-4A45	CMP41-74KD4	41-54	TC 1102	DM2.5x6-T8
	FST-5A45	CMP53-95KD5	53-70		
	FST-6A45	CMP68-150KD6	68-100		
		CMP100-203KD6	100-153		
	FST-3A25	CMP32-60KD3	32-42	TP 0802	DM2x4-T6
	FST-4A25	CMP41-74KD4	41-54		
	FST-5A25	CMP53-95KD5	53-70		
	FST-6A25	CMP68-150KD6	68-100	TC 1102	DM2.5x6-T8
		CMP100-203KD6	100-153		

- 不附带刀片，请另外订购
- 各型号中包含刀片螺丝及扳手一把
- No inserts attached,please purchase according to your needs
- Attached with screw and wrench.


P.056 P.059



润滑脂枪
GREASE GUN

- 可以用于本样本中的所有精镗头(枪中无润滑油脂)
- 定期的注入润滑脂可以延长精镗头的使用寿命
- Used for all kinds of precision boring heads in the catalog(without grease)
- Regular injection of grease to extend the tool's life

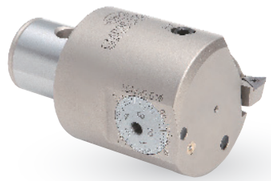
精镗头(自平衡系列)

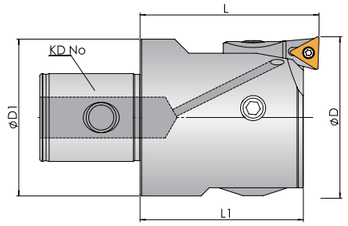
Fine boring head(Selfbalancing series)

加工范围Φ32-Φ105

processing range Φ32-Φ105

- 内置自平衡补偿机构,适用于高速加工领域中,实现稳定加工。
- 最小调整刻度为Φ0.01mm的精密精镗头。
- The built-in self-balancing compensation mechanism is suitable for high-speed machining to achieve stable machining.
- Precision fine boring head with the smallest adjustment scale of Φ0.01mm.





型号 Designation	KD.NO	刀片座	加工范围ΦD	L	L1	D1	重量kg	适配刀片
CMB32-42KD3	3	FST-3A	32-42	40	37	31	0.25	TP 0802
CMB41-54KD4	4	FST-4A	41-54	47	43	40	0.45	TC 1102
CMB53-70KD5	5	FST-5A	53-70	57	52	50	0.86	
CMB68-88KD6	6	FST-6A	68-88	71	67	64	1.85	
CMB85-105KD6			85-105				1.96	

- 加工范围是指刀片的刀尖半径R0.2,TC11刀片的刀尖半径RO.4的值
- 不推荐使用B/C刀片座,会影响自平衡效果
- 不附带刀片,需另购
- 所有CMB镗头都内冷

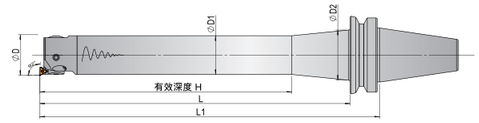
- Processing range refers to the value of insert tip radius R0.2 and R0.4.
- It is not recommended to use the B/C insert seat, which will affect the self-balancing effect
- No inserts attached,please purchase according to your needs
- All the CMP boring tools with internal coolant.


P.031-034

阻尼防震精镗头

Damping anti-vibration fine boring head





型号 Designation	刀座	加工范围D	D1	D2	有效深H	L	L1	质量kg	适配刀片
BBT50CMP41-74KH280	FS*-4A	41-54	40	55	280	320	358	7.4	TC** 1102**
	FS*-4B	50-63							
	FS*-4C	61-71							
BBT50CMP53-95KH350	FS*-5A	53-70	50	65	350	400	438	11	
	FS*-5B	65-82							
	FS*-5C	78-95							
BBT50CMP68-150KH450	FS*-6A	68-100	64	80	450	512	550	18.9	
	FS*-6B	94-126							
	FS*-6C	118-150							
BBT50CMP100-203KH525	FS*-6A	100-153	70	85	525	525	563	23.5	
	FS*-6B	126-179							
	FS*-6C	150-203							

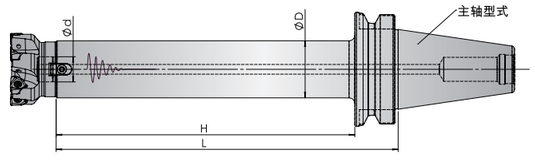
- 粗镗也可以接受定制
- 当遇到特殊情况时， 请根据现场情况提供表格中相应的刀具尺寸，并向穆格刀具工程师进行技术沟通

- Rough boring can also be customized
- When encountering special circumstances, please provide the corresponding tool size in the table according to the on-site situation, and carry out technical communication with the Mugt tool engineer

阻尼防震面铣刀柄

Damping anti-vibration face milling cutter handle





型号 Designation	d	D	H	L
BBT50D48-FMB22KH350	22	48	350	388
BBT50D48-FMB22KH400			400	438

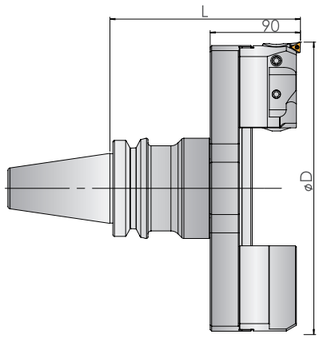
- 当遇到特殊情况时，请根据现场情况提供表格中相应的刀具尺寸，并向穆格刀具工程师进行技术沟通
- When encountering special circumstances, please provide the corresponding tool size in the table according to the on-site situation, and carry out technical communication with the Mugt tool engineer

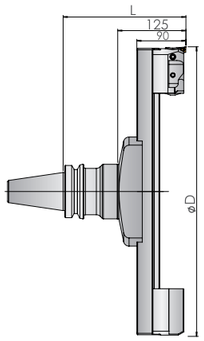
精镗头(大孔径)
Fine boring head(large aperture)

加工范围Φ150-Φ850
processing range φ150-φ850

- CLP系列的大孔径模块式精镗头，平衡性好、加工精度高。
- 粗精镗刀使用相同基础组件，且可另选配附件搭配使用。
- 另有铝合金桥架，配重块选购，可用于降低刀具重量。
- CLP series of large aperture modular fine boring head with good balance and high accuracy
- Same components with rough boring tools, so optional accessories can be used together
- Aluminum alloy bridge rough boring tool available to reduce the weight of tool.







标准型钢制桥式精镗刀
The standard type of steel bridge of fine boring

加工范围 ΦD Processing range	组合型号 Designation	重量 kg Weight	连接盘 Link plate		钢制桥架 Steel bridge		精镗微调滑块 Fine boring slide		精镗平衡块 Balance block		选购刀片座 Adapted insert seat			
			型号 Model	重量kg Weight	型号 Model	重量kg Weight	型号 Model	重量kg Weight	型号 Model	重量kg Weight	适配刀片座 Insert seat	适配刀片 Insert	适配刀片座 Insert seat	适配刀片 Insert
150-210	CLP 150-210	6.2	-	-	CL 150-210	2.5	LP 150	1.6	LM 150	1.05	FST-6A (标配) FST-6B FST-6C	TC 1102	FSC-6A FSC-6B FSC-6C	CC 09T3
210-290	CLP 210-290	7.5			CL 210-290	3.7			LM 200	1.6				
290-370	CLP 290-370	8.5			CL 290-370	5.05								
370-450	CLP 370-450	10.2			CL 370-450	6.8								
450-530	CLP 450-530	11.6			CL 450-530	8.4								
530-610	CLP 530-610	17.5	CL40-200	4.7	CL 530-610	9.5								
610-690	CLP 610-690	19			CL 610-690	11								
690-770	CLP 690-770	20.8			CL 690-770	12.7								
770-850	CLP 770-850	23			CL 770-850	15								

- 组合中不包含刀片，请另外订购
- 组合中不包含拉钉，请注意机器不同使用的拉钉的形式也不一样
- 也可制作加长型桥式镗刀柄(非标)需要时请指示
- No inserts attached,please purchase according to your needs
- No rivets attached, rivet type is different for different machines.
- OEM service available.


P.035

P.056/059

轻量型铝制桥式精镗刀
Lighweight aluminum bridge fine boring

加工范围 ΦD Processing range	组合型号 Designation	重量 kg Weight	连接盘 Link plate		铝制桥架 Aluminum bridge		精镗微调滑块 Fine boring slide		精镗平衡块 Balance block		选购刀片座 Adapted insert seat			
			型号 Designation	重量kg Weight	型号 Designation	重量kg Weight	型号 Designation	重量kg Weight	型号 Designation	重量kg Weight	适配刀片座 Insert seat	适配刀片 Insert	适配刀片座 Insert seat	适配刀片 Insert
150-210	CLP 150-210 AL	4.6	-	-	CL 150-210 AL	0.9	LP 150	1.6	LM 150	1.05	FST-6A (标配) FST-6B FST-6C	TC 1102	FSC-6A FSC-6B FSC-6C	CC 09T3
210-290	CLP 210-290 AL	5.1			CL 210-290 AL	1.3			LM 200	1.6				
290-370	CLP 290-370 AL	5.5			CL 290-370 AL	2								
370-450	CLP 370-450 AL	5.9			CL 370-450 AL	2.5								
450-530	CLP 450-530 AL	6.2			CL 450-530 AL	3								
530-610	CLP 530-610 AL	11.5	CL40-200	4.7	CL 530-610 AL	3.5								
610-690	CLP 610-690 AL	12.3			CL 610-690 AL	4.3								
690-770	CLP 690-770 AL	13.6			CL 690-770 AL	5.5								
770-850	CLP 770-850 AL	14.2			CL 770-850 AL	6.2								

更大范围可定制
OEM service available.

LP150精镗头的拓展功能

The expanding function of LP 150fine boring head

通过交换刀片座，增大镗头的加工范围。需反装刀片座即可进行反镗加工。提高加工效率和精度。
The processing range will increase by exchanging insert seat. A reverse installation achieves reverse boring, to improve efficiency and accuracy

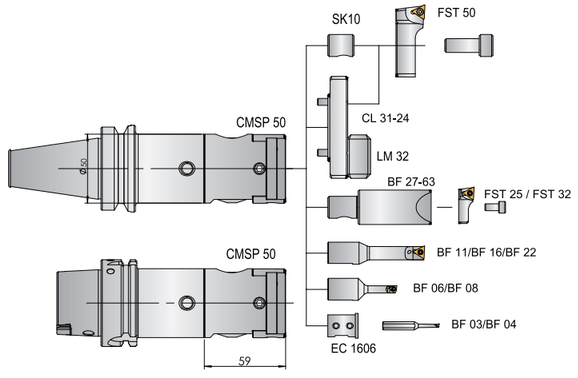
交换刀片座的加工范围

The machining range of the exchange blade holder

加工范围 Processing range	桥架 Bridge	刀片座 Insert seat	加工范围 Processing range	桥架 Bridge	刀片座 Insert seat	加工范围 Processing range	桥架 Bridge	刀片座 Insert seat
150-210	CL 150-210	FS*-6A	370-450	CL 370-450	FS*-6A	610-690	CL 610-690	FS*-6A
176-236		FS*-6B	396-476		FS*-6B	636-716		FS*-6B
200-260		FS*-6C	420-500		FS*-6C	660-740		FS*-6C
210-290	CL 210-290	FS*-6A	450-530	CL 450-530	FS*-6A	610-770	CL 690-770	FS*-6A
236-315		FS*-6B	476-556		FS*-6B	716-746		FS*-6B
260-340		FS*-6C	500-580		FS*-6C	740-820		FS*-6C
290-370	CL 290-370	FS*-6A	530-610	CL 530-610	FS*-6A	770-850	CL 770-850	FS*-6A
316-396		FS*-6B	556-636		FS*-6B	796-876		FS*-6B
340-420		FS*-6C	580-660		FS*-6C	820-900		FS*-6C

更大范围可定制
OEM service available.





小孔径精镗头

Fine boring head with small bore

加工范围Φ6-Φ108
processing range φ6-φ108

- CMSP精镗刀适用于精切削镗孔。
- 调整刻度每格调整尺寸为直径0.002mm。
- 刀片座由齿型结构固定，切削稳定，加工范围广范。
- CMSP Micro adjustment boring head is suitable for fineboring with working ranges.
- The dial adjustment is each 0.002mm on diameter.
- The insert holder is fixed by toothed instruction, proving high stability and width working range.

适配主轴柄型号 Designation of adapted spindle	重量kg Weight
BT30H060KD5	0.8
BT40H050KD5	1.2
BT50H065KD5	3.9
HSK63AH075KD5	1.35

名称 Name	型号 Designation	加工范围 Processing range	深度 Depth	适配刀片 Insert	螺丝 Screw	扳手 wrenchc	重量Kg Weight
精镗刀头	CMSP 50	Φ6-Φ108	59	–	–	–	0.95
转换套	EC 1606	配合BF03 or BF04使用	–	–	–	–	0.03
合金镗杆	BF 03	Φ3-Φ4	15	–	–	–	0.03
合金镗杆	BF 04	Φ4-Φ6	20	–	–	–	0.03
镗杆	BF 06	Φ6-Φ9	21	WBGT 0601..L	DM2x4	T6	0.04
镗杆	BF 08	Φ8-Φ12	28				0.04
镗杆	BF 11	Φ11-Φ17	40	TPGT 0902..L	DM2.5x6	T8	0.06
镗杆	BF 16	Φ16-Φ23	50				0.08
镗杆	BF 22	Φ22-Φ28	68				0.11
可拆卸镗杆	BF 27-63	配合FST 25 or FST 32使用	52				0.22
精镗刀座	FST 25	Φ28-Φ42	52+11				0.01
精镗刀座	FST 32	Φ36-Φ54	52+11				0.02
精镗刀座	FST 50	Φ54-Φ84	59+20	TPGT 1103..L	DM3x7	T10	0.08
连接桥块	CL 31-24	配合FST 50 使用 Φ80-Φ108	59+13+20	–	–	–	0.15
小配重	LM 32		–	–	–	–	0.04
锁紧块	SK 10		–	–	–	–	0.03

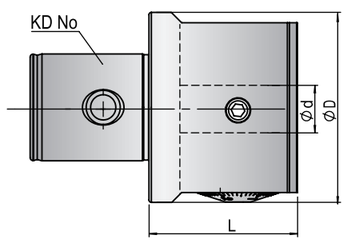
P.057-058

小孔径精镗头
Fine boring head with small bore

加工范围Φ6-Φ50
processing range φ6-φ50



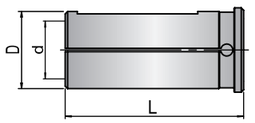
适配主轴柄型号 Designation of adapted spindle	重量 Kg Weight
BT30H070KD6	1.2
BT40H065KD6	1.3
BT50H095KD6	4.5
HSK63AH075KD6	2.3
HSK100AH095KD6	3.6



型号 Designation	KD NO.	D	d	L	行程 Trip	重量 Kg Weight
MBJ16	6	64	16	50	6	1.25

转换套
Conversion sieve

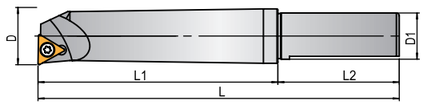




型号 Designation	D	d	L	组合钨钢刀杆 Combined tungsten steel cutter rod
EC1608	16	8	37	WC08*M5
EC1610	16	10	37	WC10*M6
EC1612	16	12	37	WC12*M6
EC1614	16	14	37	WC14*M6

钢制镗刀杆
Steel boring bar





型号 Designation	加工范围 Processing range	D	D1	L1	L2	L	适配刀片 Insert	刀片螺丝 Insert screw	刀片扳手 Insert spanner	重量 Kg Weight
BJ1606-24	6-8	6	16	24	42	66	WBGT 0601	DM2x4	T6	0.07
BJ1608-32	8-11	8		32	42	76	TBGT 0601			0.08
BJ1610-40	10-13	10		40	42	77				0.08
BJ1612-53	12-17	12		53	42	90	TPGH 0902	DM2.5x6	T8	0.11
BJ1616-68	16-21	16		68	42	102				0.14
BJ1620-83	20-26	20		83	42	120	TPGH 1103	DM3x7	T10	0.21
BJ1625-90	25-32	25		90	38	124				0.3
BJ1630-90	30-42	30		90	38	124				0.32
BJ1640-90	40-50	40		90	38	124				0.41

P.057-058

硬质合金抗震刀杆
Carbide anti-seismic shank

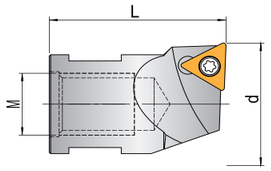




型号 Designation	D	L	M	转换套 Conversion sleeve	重量 Kg Weight	组合镗头 Combined boring head
WC08H100M5	8	100	M5	EC1608	0.08	BN09,BN10.5
WC10H100M6	10	100	M6	EC1610	0.15	BN12
WC10H150M6	10	150			0.23	
WC12H100M6	12	100		EC1612	0.24	BN14
WC12H150M6	12	150			0.33	
WC14H150M6	14	150		EC1614	0.43	BN16
WC14H200M6	14	200			0.58	
WC16H100M10	16	100	M10	-	0.42	BN18,BN20,BN22,BN24,BN26,BN28, BN30,BN32,BN34,BN36,BN38,BN40, BN42 ,BN46,
WC16H150M10	16	150	M10		0.61	
WC16H200M10	16	200	M10		0.82	

镗刀头
Boring cutter head

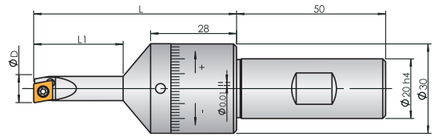




型号 Designation	加工范围 Processing range	d	L	M	适配刀片 Insert	刀片螺丝 Insert screw	刀片扳手 Insert spanner	重量 Kg Weight
BN09	9-10.5	9	18	M5	TPGT 0802	DM2x4	T6	0.03
BN10.5	10.5-12	10.5	18	M5				0.03
BN12	12-14	12	23	M6				0.03
BN14	14-16	14						0.03
BN16	16-18	16						0.04
BN18	18-20	18	27	M10				0.04
BN20	20-22	20						0.05
BN22	22-24	22						0.05
BN24	24-26	24						0.05
BN26	26-28	26						0.05
BN28	28-30	28						0.06
BN30	30-32	30						0.06
BN32	32-34	32						0.07
BN34	34-36	34						0.09
BN36	36-38	36						0.11
BN38	38-40	38						0.15
BN40	40-42	40						0.16
BN42	42-46	42						0.19
BN46	46-50	46						0.26



便携式精镗组合
Portable precision boring combination



型号 Designation	ΦD		L1	L	适配刀片 Insert
CMP-0618	6+0.1	5.9-6.1	18	57	CC 0301
CMP-0721	7+0.1	6.9-7.1	21	60	
CMP-0824	8+0.1	7.9-8.1	24	63	CC 0401
CMP-0927	9+0.1	8.9-9.1	27	65	
CMP-1030	10+0.1	99-10.1	30	68	CC 0602
CMP-1133	11+0.1	10.9-11.1	33	70	
CMP-1236	12+0.1	11.9-12.1	36	73	
CMP-1339	13+0.1	12.9-13.1	39	75	
CMP-1442	14+0.1	13.9-14.1	42	78	
CMP-1545	15+0.1	14.9-15.1	45	80	
CMP-1648	16+0.1	15.9-16.1	48	83	
CMP-1751	17+0.1	16.9-14.1	51	85	
CMP-1850	18+0.1	17.9-18.1	50	82	
CMP-1950	19+0.1	18.9-19.1			
CMP-2050	20+0.1	19.9-20.1			
CMP-2150	21+0.1	20.9-21.1			
CMP-2250	22+0.1	21.9-22.1			
CMP-2350	23+0.1	22.9-23.1			
CMP-2450	24+0.1	23.9-24.1			
CMP-2550	25+0.1	24.9-25.1			

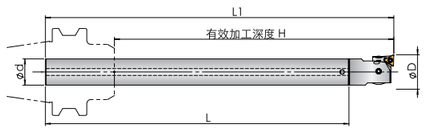
- 微调每格直径0.01mm，适用于精镗加工
- 可用于铣床、专机、非标刀具等场合
- 使用时操作直观简便
- 尺寸外可接受非标定做
- Fine-tuning each grid with a diameter of 0.01 for fine processing
- It can be used in milling machines, special machines, non-standard tools, etc.
- Easy to operate
- OEM service available.

硬质合金抗震刀杆
Carbide shock proof tool bar

加工范围Φ20-Φ60
processing range ϕ20-ϕ60

- 超硬碳化钨钢镗刀杆、坚硬耐用，实现高硬变，高钢性、高抗震性，可施行超深孔镗孔加工
- 各规格均有内冷水孔，深孔加工时排漏及内冷效果良好
- 直柄式结构，加工深度可根据加工深度自行调整
- Super-hard tungsten carbide boring bar, hard and durable, high hardness, high rigidity,high shock resistance, can be used to deep hole boring.
- With internal coolant, and the drainage and with good chip removal and internal cooling effect when deep hole processing.
- Straight shank,the machining depth can be adjusted according to your needs.





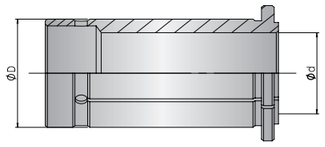
型号 Designation	Φd	加工范围ΦD Processing range	L1	L	H	适配精镗头 Fine
WC19H150KD1	19	20-36	182.5	150	130	CMP 20-36KD1
WC19H200KD1			232.5	200	170	
WC19H250KD1			282.5	250	210	
WC24H200KD2	24	25-47	235.5	200	170	CMP 25-47KD2
WC24H250KD2			285.5	250	210	
WC24H300KD2			335.5	300	260	
WC32H250KD3	32	32.5-60	290	250	180	CMP 32-60KD3
WC32H300KD3			340	300	230	
WC32H350KD3			390	350	300	

- 不附带CMP精镗头
- 注意：根据工件材质的不同，加工深度有可能不能达到(有效加工深度)
- No CMP fine boring head ,please purchase
- Note: The machining depth may not reach the effective machining depth depending on the material of the workpiece.

硬质合金直柄用强力筒夹
Carbide straight shank strong collet

型号 Designation	Φd	ΦD
C 32-19	19	32
C 32-24	24	
C 42-19	19	42
C 42-24	24	
C 42-32	32	

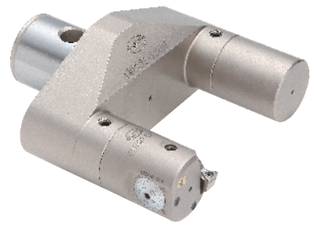


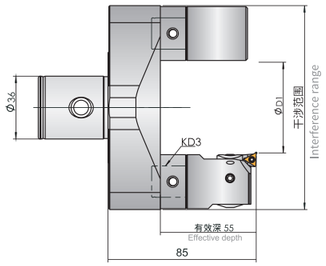


- 筒夹请用于强力铣刀柄上
- Collet should be used on the powerful milling shank

外圆套刀
Series of cylindrical sets of knives

加工范围Φ25-Φ102
processing range ϕ25-ϕ102





加工范围ΦD1 Processing range	连接架 Connection bracket			精镗头 Fine boring head		平衡块 Balance block		刀片座 Insert Seat	适配刀片 Insert
	型号 Designation	重量kg Weight	干涉范围 Interference range	型号 Designation	重量kg Weight	型号 Designation	重量kg Weight		
25-34	CMPT 25-52KD6	1.5kg	Φ118	CMP 32-60KD3	0.22kg	BZ-KD3	0.22kg	FS*-3C	TP 0802
34-43								FS*-3B	
43-52								FS*-3A	
50-59	CMPT 50-77KD6	1.8kg	Φ143					FS*-3C	
59-68								FS*-3B	
68-77								FS*-3A	
75-84	CMPT 75-102KD6	1.9kg	Φ168					FS*-3C	
84-93								FS*-3B	
93-102								FS*-3A	

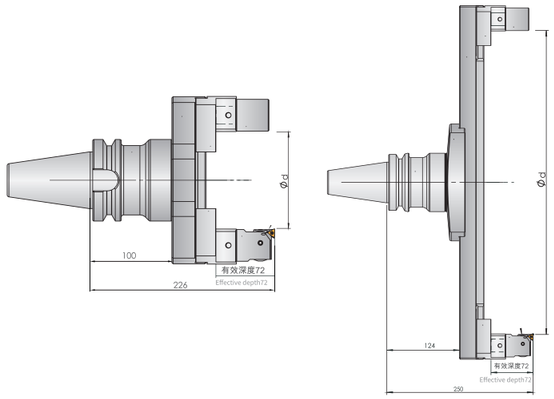
- 不包括刀片，需另购
- 外圆加工时主轴应反转
- 镗头反向装时可用于镗孔加工，此时主轴应正转
- Inserts are not included, please order it separately.
- Please reverse the spindle when machining the outer circle.
- When the fine is installed in the opposite direction, it can be used for boring At this time,the spindle should be rotated forward.

P.056

外圆套刀
Series of cylindrical sets of knives

加工范围Φ41-Φ720
processing range ϕ41-ϕ720





加工范围Φd Processing range	连接盘 Linkplate		桥架 Bridge		套镗滑块 Set block		精镗头 Fine boring head		精镗平衡块 Balance block	
	型号 Designation	重量kg Weight	型号 Designation	重量kg Weight	型号 Designation	重量kg Weight	型号 Designation	重量kg Weight	型号 Designation	重量kg Weight
41-96			CL 150-210	2.5						
80-160			CL 210-290	3.7						
160-240	/	/	CL 290-370	5.05			CMP 41-74KD4			
240-320			CL 370-450	6.8			刀片座			
320-400			CL 450-530	8.4	LP 150-KD4	0.75	FST-4A	0.42	BZ-KD4	0.43
400-480			CL 530-610	9.5			适用刀片			
480-560	CL 40-200	4.7	CL 610-690	11			TC 1102			
560-640			CL 690-770	12.7						
640-720			CL 770-850	15						

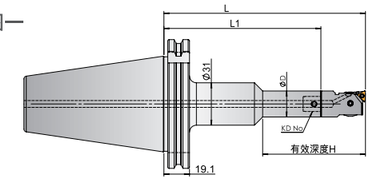
- 不包括刀片，需另购
- 外圆加工时主轴应反转
- 镗头反向装时可用于镗孔加工，此时主轴应正转
- Inserts are not included, please order it separately.
- Please reverse the spindle when machining the outer circle.
- When the fine is installed in the opposite direction, it can be used for boring At this time, the spindle should be rotated forward.



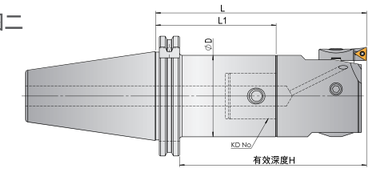
SK镗刀柄
DIN69871 boring cutter handle



图一



图二

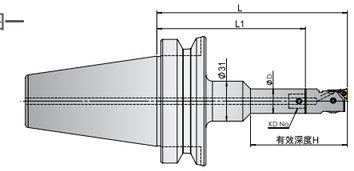


镗刀型号 Designation	图示 Picture	KD NO.	ΦD	L	L1	H(有效深) H(effective depth)	质量kg Weight (kg)
SK40H075KD1		1	19	107.5	75	88	0.8
SK40H085KD2		2	24	120.5	85	101	1.05
SK40H095KD3		3	31	135	95	115.5	1
SK40H125KD3				165	125	145.5	1.3
SK40H085KD4		4	39	132	85	112.5	1.2
SK40H130KD4	二			177	130	157.5	1.8
SK40H075KD5		5	50	132	75	112.5	1.2
SK40H125KD5				182	125	162.5	2.3
SK40H065KD6		6	64	136	65	116.5	1.25
SK40H115KD6				186	115	166.5	2.65
SK40H165KD6				236	165	216.5	3.85
SK50H115KD1	—	1	19	147.5	115	128	3.2
SK50H110KD2		2	24	145.5	110	126	3.2
SK50H090KD3		3	39	130	90	110.5	3.2
SK50H125KD3				165	125	145.5	3.4
SK50H115KD4		4	40	162	115	142.5	3.8
SK50H145KD4	二			192	145	172.5	4
SK50H105KD5		5	50	162	105	142.5	3.9
SK50H150KD5				207	150	187.5	4.5
SK50H095KD6		6	64	166	95	146.5	4
SK50H170KD6				241	170	221.5	5.8
SK50H230KD6				301	230	281.5	7.2

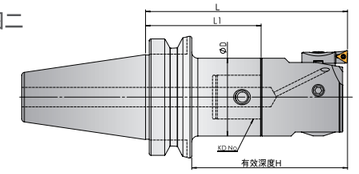
BT镗刀柄
BT boring cutter handle



图一



图二

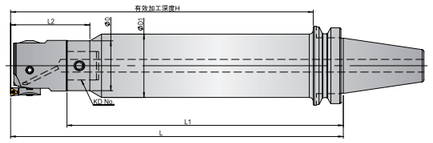


型号 Designation	图示 Picture	KD No.	ΦD	L	L1	H（有效深） H(effective depth)	重量kg Weight
BT30H070KD1	二	1	19	102.5	70	80.5	0.5
BT30H080KD2		2	24	115.5	80	93.5	0.6
BT30H080KD3		3	31	120	80	98	0.7
BT30H070KD4		4	39	117	70	95	0.8
BT30H070KD5		5	50	127	70	105	0.8
BT30H070KD6		6	64	141	70	119	1.2
BT40H075KD1	二	1	19	107.5	75	80.5	1
BT40H105KD1				137.5	105	110.5	1.2
BT40H085KD2		2	24	120.5	85	93.5	1.1
BT40H115KD2				150.5	115	123.5	1.4
BT40H095KD3		3	31	135	95	108	1.2
BT40H125KD3				165	125	138	1.5
BT40H085KD4		4	39	132	85	105	1.3
BT40H130KD4				177	130	150	1.9
BT40H175KD4				222	175	195	2.2
BT40H050KD5		5	50	107	50	80	1.2
BT40H075KD5				132	75	105	1.3
BT40H125KD5				182	125	155	2.4
BT40H175KD5				232	175	205	3
BT40H065KD6		6	64	136	65	109	1.3
BT40H115KD6				186	115	159	2.7
BT40H165KD6				236	165	209	3.9

型号 Designation	图示 Picture	KD No.	ΦD	L	L1	H（有效深） H(effective depth)	重量kg Weight
BT50H115KD1	一	1	19	147.5	115	75	4
BT50H085KD2	二	2	24	120.5	85	82.5	3.8
BT50H110KD2				145.5	110	107.5	3.9
BT50H090KD3	二	3	31	130	90	92	3.9
BT50H125KD3				165	125	127	4.1
BT50H115KD4	二	4	39	162	115	124	4.3
BT50H145KD4				192	145	154	4.5
BT50H175KD4				222	175	184	4.8
BT50H065KD5	二	5	50	122	65	84	3.85
BT50H105KD5				162	105	124	4.5
BT50H150KD5				207	150	169	5.1
BT50H180KD5				237	180	199	5.5
BT50H240KD5				297	240	259	6.2
BT50H095KD6	二	6	64	166	95	128	4.5
BT50H170KD6				241	170	203	6.3
BT50H230KD6				301	230	263	7.7
BT50H290KD6				361	290	323	9
BT50H170KD7	二	7	90	257	170	219	6.1
BT50H230KD7				317	230	279	11.8
BT50H290KD7				377	290	339	14.6
BT50H350KD7				437	350	399	17.45



加粗镗刀柄
Thickening boring cutter handle

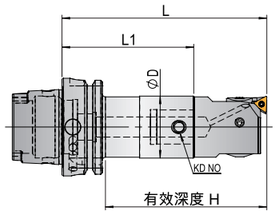


型号 Designation	KD No.	ΦD	ΦD1	L	L1	L2	H（有效深） H(effective depth)	重量kg Weight
BT50H190KD4-46	4	39	46	237	190	65	194	5.6
BT50H235KD4-46				282	235		239	6.2
BT50H240KD5-61	5	50	61	297	240	80	254	8.2
BT50H300KD5-61				357	300		314	9.6
BT50H260KD6-71	6	64	71	331	260	100	289	10.3
BT50H315KD6-71				386	315		343	12.2
BT50H290KD6-80			80	361	290		318	13.2
BT50H350KD6-80				421	350		378	15.3

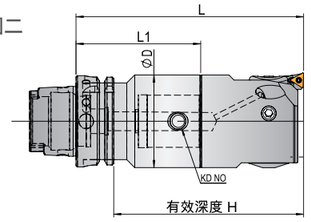
HSK镗刀柄
HSK boring and handle



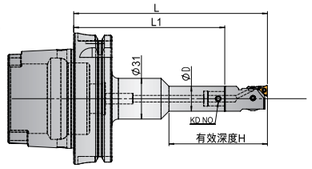
图一



图二



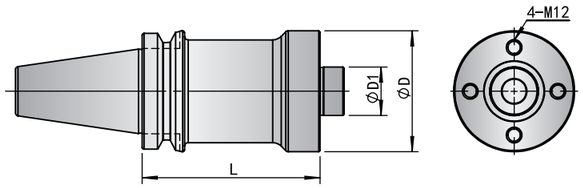
图三



型号 Designation	图示 Picture	KD NO.	ϕD	L	L1	H(有效深) H(effective depth)	重量 Kg Weight
HSK63AH075KD1	—	KD1	19	107.5	75	81.5	0.9
HSK63AH100KD1				132.5	100	106.5	1.3
HSK63AH085KD2		KD2	24	120.5	85	94.5	1.7
HSK63AH100KD2				135.5	100	109.5	2.2
HSK63AH095KD3		KD3	31	135	95	109	2.3
HSK63AH125KD3				165	125	139	2.6
HSK63AH085KD4		KD4	39	132	85	106	2.1
HSK63AH130KD4				177	130	151	2.7
HSK63AH075KD5		KD5	50	132	75	106	2.3
HSK63AH135KD5				192	135	166	2.8
HSK63AH075KD6	二	KD6	64	146	75	120	2.3
HSK63AH115KD6				186	115	160	2.8
HSK63AH165KD6				236	165	210	3.1
HSK100AH105KD1	三	KD1	19	137.5	105	75	2.6
HSK100AH115KD2	—	KD2	24	150.5	115	121.5	2.7
HSK100AH125KD3		KD3	31	165	125	136	2.9
HSK100AH120KD4		KD4	39	167	120	138	3.1
HSK100AH180KD4				227	180	198	3.7
HSK100AH110KD5		KD5	50	167	110	138	3.5
HSK100AH185KD5				242	185	213	4.6
HSK100AH095KD6		KD6	64	166	95	137	3.6
HSK100AH170KD6				241	170	212	5.5
HSK100AH230KD6				301	230	272	7.1

BT桥镗镗刀柄
BT bridge boring ang boring tool shank





型号 Designation	ΦD	ΦD1	L	固定螺丝组合 Screw	重量 Kg Weight
BT40H070CL40	100	40	70	CLM12x35	2.8
BT50H100CL40			100		6.1
BT50H150CL40			150		7.9
BT50H200CL40			200		9.7
BT50H250CL40			250		10.9
BT50H300CL40			300		12.5
BT50H350CL40			350		13.9



SK桥镗刀柄
SK bridre boring and boring tool shank

型号 Designation	ΦD	ΦD1	L	固定螺丝组合 Screw	重量 Kg Weight
SK50H080CL40	100	40	80	CLM12x35	5.1
SK50H150CL40			150		7.3
SK50H200CL40			200		9.4
SK50H250CL40			250		10.5

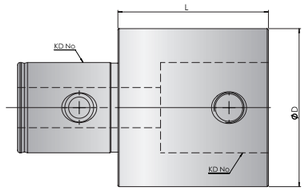


HSK桥镗刀柄
HSK bridre boring and boring tool shank

型号 Designation	ΦD	ΦD1	L	固定螺丝组合 Screw	重量 Kg Weight
HSK100AH080CL40	100	40	80	CLM12x35	5.1
HSK100AH150CL40			150		7.3
HSK100AH200CL40			200		9.3
HSK100AH250CL40			250		10.5

延长杆
Extension rod



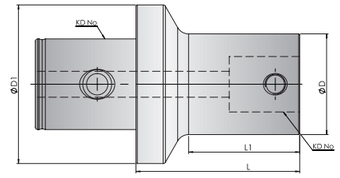


型号 Designation	KD No.	L	ΦD	重量 Kg Weight
KD11-30	1	30	19	0.07
KD22-30	2	30	24	0.1
KD33-30	3	30	31	0.15
KD44-45	4	45	39	0.4
KD44-60		60		0.53
KD55-60	5	60	50	0.8
KD55-90		90		1.25
KD66-60	6	60	64	1.4
KD66-100		100		2.33

- 请注意使用延长后，长径比增大，有可能影响加工条件
- 有内冷中心孔
- Please note that after using the extension bar,length to diameter ratio will becomes larger may affect processing conditions.
- With internal cooland

缩径杆
Reducing rod

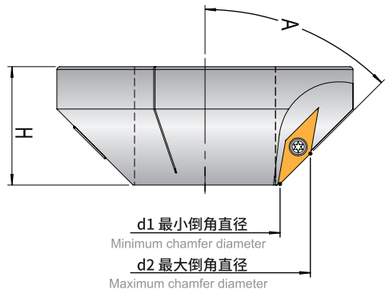




型号 Designation	KD No.（轴端）	KD No.（孔端）	ΦD	ΦD1	L	L1	重量 Kg Weight
KD21-36	2	1	19	24	36	30	0.1
KD31-41	3			31	41		0.15
KD32-37		2	24		37	25	
KD41-58	4	1	19	39	58	40	0.3
KD42-50		2	24		50	36	
KD43-50		3	31			37	0.35
KD51-60	5	1	19	50	60	40	0.45
KD52-54		2	24		54	35	
KD52-75					75	55	0.47
KD53-47		3	31		47	29	0.5
KD53-75					75	55	0.57
KD54-42		4	39		42	25	0.5
KD54-75					75	55	0.66
KD61-70	6	1	19	64	70	40	0.9
KD62-63		2	24		63	45	0.7
KD62-90					90	72	0.72
KD63-56		3	31		56	39	0.75
KD63-90					90	73	0.88
KD64-51		4	39		51	35	0.85
KD64-90					90	75	1.08
KD65-41		5	50		41	25	0.85
KD65-90					90	74	1.45
KD76-60-A90	7	6	64	90	60	25	2.3

- 请注意使用延长后，长径比增大，有可能影响加工条件
- 有内冷中心孔
- A90表示为头部的锁紧螺孔与柄部的锁紧锥孔为90°错开设计，便于特殊情况使用
- Please note that after using the extension bar,length to diameter ratio will becomes larger may affect processing conditions.
- With internal cooland
- A90 indicates that the locking screw hole of the handle are 90° staggered design, which is convenient for special situations.

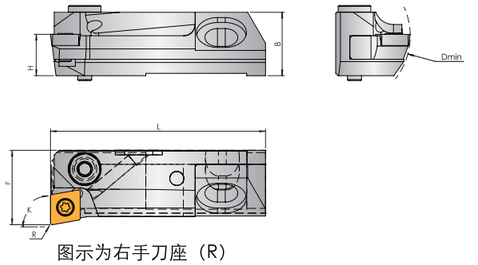
倒角环
Filler ring



型号 Designation	刃数 Teeht	角度 A Angle A	d1	d2	H	适配刀柄 Holder	适配刀片 Insert	刀片螺丝组合 Screw	锁紧螺丝 Locking screw	重量kg Weight
MC1-34-45	1	45	21	34	22	KD1	VCGT110302	DM3x7-T10	M5x16	0.06
MC2-39-45			26	39	25	KD2				0.12
MC3-54-45			34	54	35	KD3	VCGT 160404	DM4x10-T15	M6x20	0.52
MC4-62-45			42	62	38	KD4				0.7
MC5-93-45	2		53	93	43	KD5			M6x25	1.31
MC6-107-45			67	107	46	KD6			M8x25	1.82
MC6-138-45			98	138						3.85
MC6-160-45			120	160						5.58
MC1-41-30		30	23	41	30	KD1	VCGT110302	DM3x7-T10	M5x16	0.11
MC2-46-30			28	46	35	KD2				0.22
MC3-53-30			35	53		KD3			M6x20	0.35
MC4-61-30			43	61		KD4				0.42
MC5-84-30			56	84	48	KD5	VCGT 160404	DM4x10-T15	M8x25	1.3
MC6-98-30			70	98		KD6				1.2
MC6-120-30			92	120						3.05
MC6-142-30			114	142						4.1

微调刀座
Fine tuning tool holder





图示为右手刀座（R）
The picture is the right hand tool holder

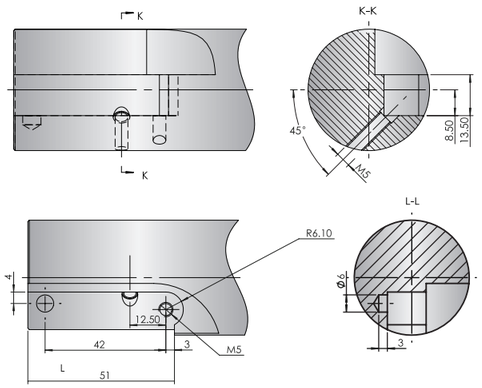
型号 Designation	Dmin	L	F	B	H	K	R	适配刀片 Insert	刀片螺丝组合 Screw
FSC-8516A0-06-R/L	28	45.8	16	13.5	8.5	90°	0.4	CC 0602	DM2.5x6-T8
FSC-8516A5-06-R/L						95°			
FST-8516A0-09-R/L						90°		TP 0902	DM2.5x6-T8
FST-8516A5-09-R/L						95°			
FSD-8516A30-07-R/L		47.5				120°		DC 0702	DM2.5x6-T8
FST-8520A0-11C-R/L	36	45.8	20			90°		TC 1102	
FST-8520A5-11C-R/L						95°			
FST-8520A0-11P-R/L						90°		TP 1103	DM3x6-T10
FST-8520A5-11P-R/L						95°			

- 刀片请单独订购
- 微调精度为直径φ0.01mm
- 径向调整行程0-φ0.6mm,轴向行程0-1.0mm
- Please order the insert separately
- Fine adjustment accuracy diameter is φ0.01mm
- Radial range:0-φ6mm，Axial range:0-10mm

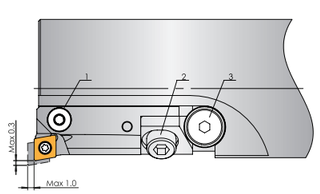
备件 Spare Parts	名称 Name	型号 Designation
	轴向调节块 Axial adjustment block	SV-12
	轴向调整螺丝 Axial adjustment screw	SVM5-20
	刀座固定螺丝 Tool holder fixing screw	SFM5-20
	刀座固定扳手 Tool holder fixing Wrench	SFS 4
	径向调整扳手 Radial adjustment Wrench	SRS 2.5
	轴向调整扳手 Axial adjustment Wrench	SRS 3

微调刀座说明
Fine tuning tool holder instructions

刀座安装尺寸说明
Cutter holder mounting dimension description



刀座调整说明
Tool holder adjustment instructions



1.径向调整螺丝
2.刀座固定螺丝
3.轴向调整螺丝
1. Screw for radial adjustment
2. Screw for tool holder fixing
3. Screw for adjust the axis direction

轴向调整操作
- 稍微松开刀座锁紧螺丝2。
- 顺时针旋转轴向调整螺丝3，刀座向前移动至所需尺寸。
- 拧紧刀座锁紧螺丝2。

直径调整操作
- 顺时针方向旋转径向调整螺丝1，刀具直径变大（每格φ0.01mm）
- 逆时针方向旋转径向调整螺丝1，刀具直径变小（每格φ0.01mm）

注意：若刀座需要轴向往后调整，应当松开刀座锁紧螺丝，并将刀座移至最后位置，然后逐渐向前调整至所需尺寸。

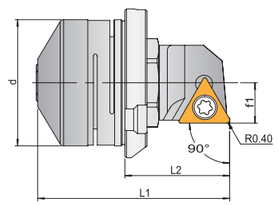
Adjust axis direction operation
- Slightly loosen the screw 2
- Turn clockwise the screw 3,Move the tool holder forward to the required size.
- Tighten the screw 2.

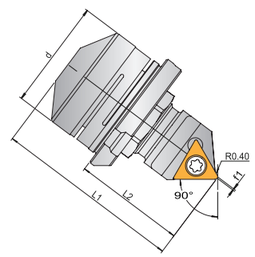
Adjust diameter operation
- Turn the screw 1 clockwise.tool diameter becomes larger(φ0.01mm/grid)
- Turn the screw 1 counterclockwise,tool diameter becomes smaller(φ0.01 mm/grid)

Notice:If the tool holder needs to adjust the axis direction backwards,you should loosen the screw 2, and move the tool holder to the last position,gradually move forward to the desired position

微调单元
Trimming unit



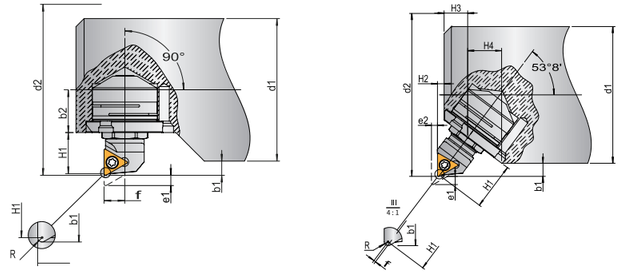




安装方式 Installation Method	型号 Designation	主偏角 Approach angle	切入角 Cutting edce angle	Dmin 最小加工直径 Minimum machining diameter	d	L1	L2	f1	适配刀片 Insert	刀片螺丝组 Screw
Side angle installation 角度安装	R/L148C-31-CC06	90°	0°	25.5	16	25.15	14.3	0.45	CC 0602	DM2.5x6-T8
	R/L148C-31-TC06			24.8		25.3	14.3	0.49	TC 06T1	DM2x4-T6
	R/L148C-31-TB06								TB 0601	
	R/L148C-32-TC09			32.5	20	33.7	19.1	0.9	TC 0902	DM2.2x6-T6
	R/L148C-32-TP09								TP 0902	DM2.5x6-T8
	R/L148C-33-TC1102			42	22	45.3	23	1.1	TC 1102	
	R/L148C-33-TP1103								TP 1103	DM3x7-T10
	R/L148C-34-TC16			59.5	32	62.3	33.3	1.2	TC 16T3	DM4x10-T15
Right angle installation 直角安装 	R/L148C-11-CC06	90°	0°	27	16	24.2	13.3	5.1	CC 0602	DM2.5x6-T8
	R/L148C-11-TC06								TC 06T1	DM2x4-T6
	R/L148C-11-TB06								TB 0601	
	R/L148C-12-TC09			36.5	20	32.9	18.3	6.3	TC 0902	DM2.2x6-T6
	R/L148C-12-TP09								TP 0902	DM2.5x6-T8
	R/L148C-13-TC1102			48.5	22	44.3	22.1	7.2	TC 1102	
	R/L148C-13-TP1103								TP 1103	DM3x7-T10
	R/L148C-14-TC16			68.4	32	62.7	32	10.3	TC 16T3	DM4x10-T15

- 刀片请单独订购
- 安装尺寸，请参照 P45页面
- 刀尖与最小镗孔直径的选择，请参照 P44页面
- Inserts are not included, please order it separately.
- Please refer to P37 for installation dimensions.
- For the choice of tool tip and minimum machining diameter, please refer to P36

微调单元安装尺寸
Trim unit mounting dimensions

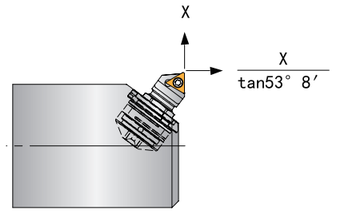


安装方式 Installation Method	刀片 Insert			d1	d2	b1	e1	e2	b2	H1	H2	H3	H4	f
		iC	R	min	min	min	max	max	min	min				
Right angle installation 直角安装	06	6.35	0.2	26	27.9	0.6	2.5	-	3.6	9.8	-	-	-	5.1
			0.4		27.6	0.55				9.6				
			0.8		27	0.5				9.1				
	06	3.96	0.2	24	25.9	0.6		-		8.8	-	-	-	5.1
			0.4		25.6	0.55				8.6				
			0.8		25	0.5				8.1				
	09	5.56	0.2	34.5	37.4	1.45	3.5	-	4.55	13.95	-	-	-	6.3
			0.4		37.1	1.3				13.6				
			0.8		36.5	1				12.9				
	11	6.35	0.2	46.5	49.7	1.45	6	-	7.75	16.75	-	-	-	7.2
			0.4		49.1	1.3				16.4				
			0.8		48.5	1				15.7				
	16	9.525	0.4	67	69.6	1.3	10	-	9.4	25	-	-	-	10.3
			0.8		69	1				24.3				
			1.2		68.4	0.7				23.6				
Side angle installation 角度安装	06	6.35	0.2	22	26.2	1.7	2	1.5	-	11	0.5	6.6	9.55	0.4
			0.4		25.9	1.65				10.7				0.4
			0.8		25.3	1.6				10.1				0.45
	06	3.96	0.2		25.7	1.5			-	10.9	0.5	6.6	9.55	0.4
			0.4		25.4	1.45				10.6				0.4
			0.8		24.8	1.4				10				0.45
	09	5.56	0.2	28.5	33.4	2.45	2.8	2.1	-	14.9	0.5	9.4	12.15	0.95
			0.4		33.1	2.3				14.5				1
			0.8		32.5	2				13.7				1.1
	11	6.35	0.2	38	42.9	2.45	4.8	3.6	-	17.6	0.5	11.2	14.85	1.15
			0.4		42.6	2.3				17.2				1.2
			0.8		42	2				16.4				1.3
	16	9.525	0.4	55	60.6	2.8	8	6	-	26.2	0.5	16.65	12.7	1.3
			0.8		60	2.5				25.4				1.4
			1.2		59.4	2.2				24.6				1.5

- 安装尺寸，请参照 P44 页面
- Please refer to P37 for installation dimensions

微调单元应用
Fine tuning unit application

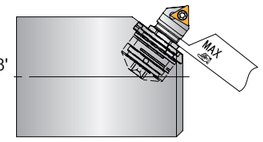
微调单元应用于非标刀具的精镗加工
Fine tuning device is applid to boring of nonstandard cutting tools

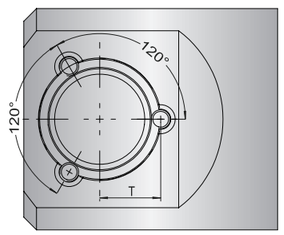


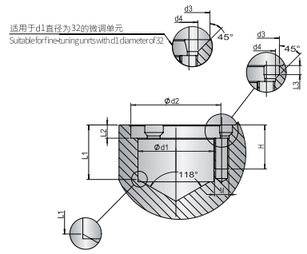
- 盲孔安装，不受加工直径大小的影响。
- 尺寸前端调节，操作方便简单。
- 微调单元能自锁，尺寸调节前无需解锁，调节后也无需锁定。
- 微调螺母有刻度盘，每一刻度值径向调整尺寸为φ0.02mm。
- Blind hole installation, not affected by the diameter of the machining
- Size can be adjusted at the front end, easy to operate
- The fine-tuning device can be self-locking, no need to unlock when adjusting the size, and no need to lock after adjustment
- The fine-tuning nut has a scale plate, and the radial adjustment of each scale is φ0.02mm

注意：
- 角度安装的微调单元其轴向移动量=径向移动量/tan53°8′
- 千万不要将刀头拧松到超出相应于微调单元的调整扳手所指示的调整范围。如果超出调整范围，会导致微调单元无法修理。

Notice:
- Axial movement amount of side angle installation's fine turning unit=Radial movement amount/tan53°8′
- Never loosen the cutter head beyond the adjustment range indicated by the wrench corresponding to
- the fine adjustment unit. If this happens, it will cause the fine tuning unit not to be repaired

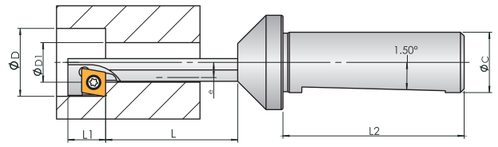






ΦD 直径 diameter	d1 H7	d2	d3	d4	L1	L2	L3	H	T	M
16	16	19	4.6	3.2	11.5	2.8	1.6	9	9.65±0.02	M3
20	20	25	4.6	3.2	15.5	4	1.6	9	12.5±0.05	M3
22	22	30	6.5	4.3	24	5	1.8	13	15.4±0.05	M4
32	32	46	11.9	5.4	33	6.3	——	16	23±0.05	M5

机夹式反拉刀
Machine folder type reverse pull knife



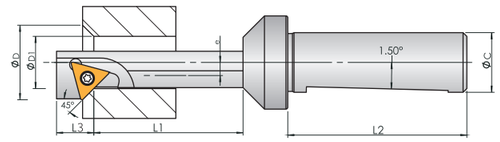
型号 Designation	D	D1	C	L2	L	L1	e	适配刀片 Insert
MRF-18-W16	18	10.5	16	48	35	10	4	CC 0602
MRF-20-W16	20	13	16	48	40		4	
MRF-23-W20	23	15	20	50	50		4.5	
MRF-26-W20	26	17	20	50	50	13	5	CC 09T3
MRF-33-W25	33	21	25	56	70		6.5	
MRF-40-W25	40	25	25	56	80		8	

- 减少二次装夹，保证孔的位置度要求
- 不用正反转，减少损坏几率
- 非标设计刀体刚性做到最佳
- 尺寸外可接受非标定做
- Avoid secondary clamping to ensure accurate position of the hole
- One direction tuming to reduce the chance of damage
- Non-standard design body with best rigidity
- Non-standard customization is acceptable

反拉加工步骤
Reverse pulling process step

1.主轴定向
2.偏心移位(e值)
3.Z轴下移
4.位移至孔中心(e值)
5.主轴正转向上反拉加工
6.主轴定向
7.偏心移位(e值)
8.向上移位至安全位置，加工完成
1. Spindle orientation
2. Eccentric shift (e value)
3. Z axis down
4. Displacement to the center of the hole (e value)
5. Spindle makes upward rotation and reverse pulling process.
6. Spindle orientation
7. Eccentric shift (e value)
8. Move up to a safe position and finish processing

机夹式反拉倒角刀
Machine folder anti-pull chamfering knife



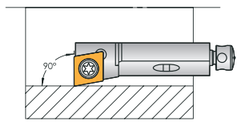
型号 Designation	D	D1	C	L2	L1	L3	e	适配刀片 Insert
MCF-14-W16	20	14	16	48	40	10	3.5	TC 1102
MCF-17-W20	23	17	20	50	50			
MCF-21-W25	27	21	25	56	70			
MCF-24-W25	31	24	25	56	80		4	

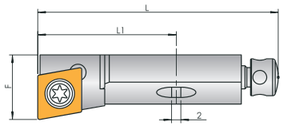
- 减少二次装夹，保证孔的位置度要求
- 不用正反转，减少损坏几率
- 非标设计刀体刚性做到最佳
- 尺寸外可接受非标定做
- Avoid secondary clamping to ensure accurate position of the hole
- One direction tuming to reduce the chance of damage
- Non-standard design body with best rigidity
- Non-standard customization is acceptable

反拉加工步骤
Reverse pulling process step

1.主轴定向
2.偏心移位(e值)
3.Z轴下移
4.位移至孔中心(e值)
5.主轴正转向上反拉加工
6.主轴定向
7.偏心移位(e值)
8.向上移位至安全位置，加工完成
1. Spindle orientation
2. Eccentric shift (e value)
3. Z axis down
4. Displacement to the center of the hole (e value)
5. Spindle makes upward rotation and reverse pulling process.
6. Spindle orientation
7. Eccentric shift (e value)
8. Move up to a safe position and finish processing

卡式刀座
Card holder

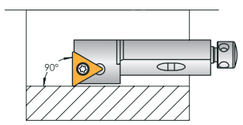


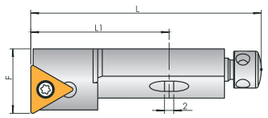




SCFCR

型号 Designation	L	L2	L1	F	H	最小加工直径 Dmin	刀尖R角 Radius	适配刀片 Insert
SCFCR-08CA-06	32	/	15	10	8	25	0.4	CC 0602
SCFCR-10CA-09	50		30	14	10	40	0.4	CC 09T3
SCFCR-12CA-12	55		35	20	12	50	0.8	CC 1204

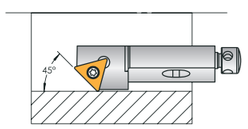


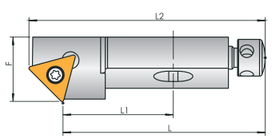




STFCR

型号 Designation	L	L2	L1	F	H	最小加工直径 Dmin	刀尖R角 Radius	适配刀片 Insert
STFCR-08CA-09	32	/	15	10	8	25	0.4	TC 0902
STFCR-10CA-11	50		30	14	10	40	0.4	TC 1102
STFCR-12CA-16	55		35	20	12	50	0.8	TC 16T3



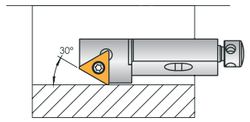


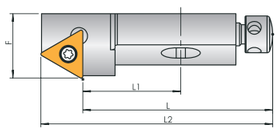


STSCR

型号 Designation	L	L2	L1	F	H	最小加工直径 Dmin	刀尖R角 Radius	适配刀片 Insert
STSCR-08CA-09	28	34.1	11	10	8	25	0.4	TC 0902
STSCR-10CA-11	44	51	24	14	10	40	0.4	TC 1102
STSCR-12CA-16	47	57	27	20	12	50	0.8	TC 16T3

卡式刀座
Card holder

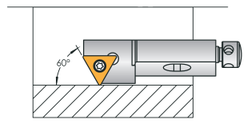


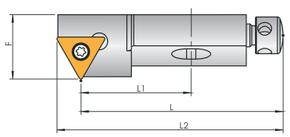


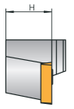


STTCR

型号 Designation	L	L2	L1	F	H	最小加工直径 Dmin	刀尖R角 Radius	适配刀片 Insert
STTCR-08CA-09	24.4	/	7.5	10	8	25	0.4	TC 0902
STTCR-10CA-11	41.3		21	14	10	40	0.4	TC 1102
STTCR-12CA-16	42.3		22	20	12	50	0.8	TC 16T3





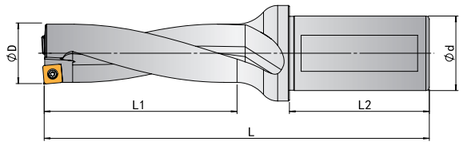


STWCR

型号 Designation	L	L2	L1	F	H	最小加工直径 Dmin	刀尖R角 Radius	适配刀片 Insert
STWCR-08CA-09	28	/	11	10	8	25	0.4	TC 0902
STWCR-10CA-11	44		24	14	10	40	0.4	TC 1102
STWCR-12CA-16	47		27	20	12	50	0.8	TC 16T3

2D-快速钻
2D-rapid drilling

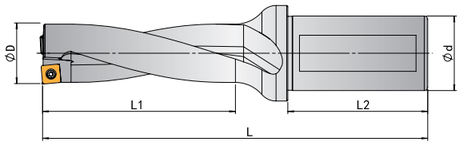




型号 Designation	D	L1	L	L2	d	适配刀片 Insert
SP05.D25.140.2D	14	28	106	56	25	SPMG050204
SP05.D25.145.2D	14.5	29	107			
SP05.D25.150.2D	15	30	108			
SP06.D25.155.2D	15.5	31	109			SPMG060204
SP06.D25.160.2D	16	32	110			
SP06.D25.165.2D	16.5	33	111			
SP06.D25.170.2D	17	34	112			
SP06.D25.175.2D	17.5	35	113			
SP06.D25.180.2D	18	36	114			
SP06.D25.185.2D	18.5	37	115			
SP06.D25.190.2D	19	38	116			
SP06.D25.195.2D	19.5	39	117			
SP06.D25.200.2D	20	40	119			
SP06.D25.205.2D	20.5	41	120			
SP06.D25.210.2D	21	42	121			
SP06.D25.215.2D	21.5	43	122			
SP07.D25.220.2D	22	44	123			SPMG07T308
SP07.D25.225.2D	22.5	45	124			
SP07.D25.230.2D	23	46	125			
SP07.D25.235.2D	23.5	47	126			
SP07.D25.240.2D	24	48	127			
SP07.D25.245.2D	24.5	49	128			
SP07.D32.250.2D	25	50	141	60	32	
SP07.D32.255.2D	25.5	51	142			
SP07.D32.260.2D	26	52	143			
SP07.D32.265.2D	26.5	53	144			
SP07.D32.270.2D	27	54	145			
SP09.D32.275.2D	27.5	55	146			SPMG090408
SP09.D32.280.2D	28	56	147			
SP09.D32.285.2D	28.5	57	148			
SP09.D32.290.2D	29	58	149			
SP09.D32.295.2D	29.5	59	150			
SP09.D32.300.2D	30	60	151			
SP09.D32.305.2D	30.5	61	152			
SP09.D32.310.2D	31	62	153			
SP09.D32.315.2D	31.5	63	154			

2D-快速钻
2D-rapid drilling

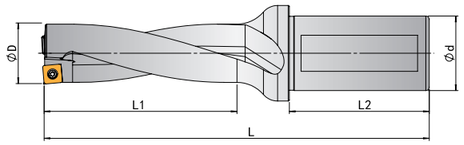




型号 Designation	D	L1	L	L2	d	适配刀片 Insert
SP09.D32.320.2D	32	64	155	60	32	SPMG090408
SP09.D32.325.2D	32.5	65	156			
SP09.D32.330.2D	33	66	157			
SP11.D32.335.2D	33.5	67	158			SPMG110408
SP11.D32.340.2D	34	68	159			
SP11.D32.345.2D	34.5	69	160			
SP11.D32.350.2D	35	70	161			
SP11.D32.355.2D	35.5	71	162			
SP11.D32.360.2D	36	72	163			
SP11.D32.365.2D	36.5	73	164			
SP11.D32.370.2D	37	74	165			
SP11.D32.375.2D	37.5	75	166			
SP11.D32.380.2D	38	76	167			
SP11.D32.385.2D	38.5	77	168			
SP11.D32.390.2D	39	78	169			
SP11.D32.395.2D	39.5	79	170			
SP11.D32.400.2D	40	80	171			
SP14.D32.410.2D	41	82	173			SPMG140512
SP14.D32.420.2D	42	84	175			
SP14.D40.430.2D	43	86	186	65	40	
SP14.D40.440.2D	44	88	188			
SP14.D40.450.2D	45	90	190			
SP14.D40.460.2D	46	92	192			
SP14.D40.470.2D	47	94	194			
SP14.D40.480.2D	48	96	196			
SP14.D40.490.2D	49	98	198			
SP14.D40.500.2D	50	100	200			
SP14.D40.510.2D	51	102	202			
SP09.D40.520.2D	52	104	204			SPMG090408
SP09.D40.530.2D	53	106	206			
SP09.D40.540.2D	54	108	208			
SP09.D40.550.2D	55	110	210			
SP09.D40.560.2D	56	112	212			
SP09.D40.570.2D	57	114	214			
SP09.D40.580.2D	58	116	216			
SP09.D40.590.2D	59	118	218			
SP09.D40.600.2D	60	120	220			

3D-快速钻
3D-rapid drilling

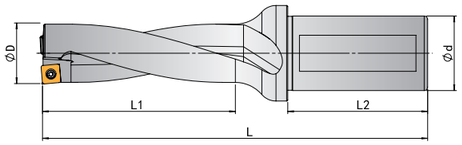




型号 Designation	D	L1	L	L2	d	适配刀片 Insert
SP05.D25.140.3D	14	42	120	56	25	SPMG050204
SP05.D25.145.3D	14.5	43.5	122			
SP05.D25.150.3D	15	45	123			
SP06.D25.155.3D	15.5	46.5	124			SPMG060204
SP06.D25.160.3D	16	48	126			
SP06.D25.165.3D	16.5	49.5	127			
SP06.D25.170.3D	17	51	129			
SP06 D25.175.3D	17.5	52.5	130			
SP06.D25.180.3D	18	54	132			
SP06.D25.185.3D	18.5	55.5	133			
SP06.D25.190.3D	19	57	135			
SP06.D25.195.3D	19.5	58.5	135			
SP06.D25.200.3D	20	60	139			
SP06.D25.205.3D	20.5	61.5	140			
SP06.D25.210.3D	21	63	142			
SP06.D25.215.3D	21.5	64.5	143			
SP07.D25.220.3D	22	66	145			SPMG07T308
SP07.D25.225.3D	22.5	67.5	148			
SP07.D25.230.3D	23	69	148			
SP07.D25.235.3D	23.5	70.5	149			
SP07.D25.240.3D	24	72	151			
SP07.D25.245.3D	24.5	73.5	152			
SP07.D32.250.3D	25	75	166	60	32	SPMG090408
SP07.D32.255.3D	25.5	76.5	167			
SP07.D32.260.3D	26	78	169			
SP07.D32.265.3D	26.5	79.5	170			
SP07.D32.270.3D	27	81	172			
SP09.D32.275.3D	27.5	82.5	173			
SP09.D32.280.3D	28	84	175			
SP09.D32.285.3D	28.5	85.5	176			
SP09.D32.290.3D	29	87	178			
SP09.D32.295.3D	29.5	88.5	179			
SP09.D32.300.3D	30	90	181			
SP09.D32.305.3D	30.5	91.5	182			
SP09.D32.310.3D	31	93	184			
SP09.D32.315.3D	31.5	94.5	185			

3D-快速钻
3D-rapid drilling

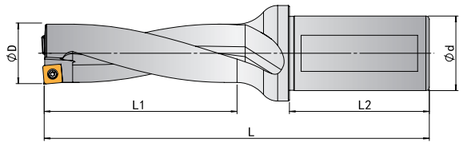




型号 Designation	D	L1	L	L2	d	适配刀片 Insert
SP09.D32.320.3D	32	96	187	60	32	SPMG090408
SP09.D32.325.3D	32.5	97.5	188			
SP09.D32.330.3D	33	99	190			
SP11.D32.335.3D	33.5	100.5	191			SPMG110408
SP11.D32.340.3D	34	102	193			
SP11.D32.345.3D	34.5	103.5	194			
SP11.D32.350.3D	35	105	196			
SP11 D32.355.3D	35.5	106.5	197			
SP11.D32.360.3D	36	108	199			
SP11.D32.365.3D	36.5	109.5	200			
SP11.D32.370.3D	37	111	202			
SP11.D32.375.3D	37.5	112.5	203			
SP11.D32.380.3D	38	114	205			
SP11.D32.385.3D	38.5	115.5	206			
SP11.D32.390.3D	39	117	206			
SP11.D32.395.3D	39.5	118.5	209			
SP11.D32.400.3D	40	120	211			
SP14.D32.410.3D	41	123	214			SPMG140512
SP14.D32.420.3D	42	126	217			
SP14.D40.430.3D	43	129	229	65	40	
SP14.D40.440.3D	44	132	232			
SP14.D40.450.3D	45	135	235			
SP14.D40.460.3D	46	138	238			
SP14.D40.470.3D	47	141	241			
SP14.D40.480.3D	48	144	244			
SP14.D40.490.3D	49	147	247			
SP14.D40.500.3D	50	150	250			
SP14.D40.510.3D	51	153	253			
SP09.D40.520.3D	52	156	256			SPMG090408
SP09.D40.530.3D	53	159	259			
SP09.D40.540.3D	54	162	262			
SP09.D40.550.3D	55	165	265			
SP09.D40.560.3D	56	168	268			
SP09.D40.570.3D	57	171	271			
SP09.D40.580.3D	58	174	274			
SP09.D40.590.3D	59	177	277			
SP09.D40.600.3D	60	180	280			

4D-快速钻
4D-rapid drilling

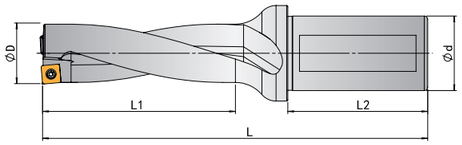




型号 Designation	D	L1	L	L2	d	适配刀片 Insert
SP05.D25.140.4D	14	56	134	56	25	SPMG050204
SP05.D25.145.4D	14.5	58	136			
SP05.D25.150.4D	15	60	138			
SP06.D25.155.4D	15.5	62	140			SPMG060204
SP06.D25.160.4D	16	64	142			
SP06.D25.165.4D	16.5	66	144			
SP06.D25.170.4D	17	68	146			
SP06.D25.175.4D	17.5	70	148			
SP06.D25.180.4D	18	72	150			
SP06.D25.185.4D	18.5	74	152			
SP06.D25.190.4D	19	76	154			
SP06.D25.195.4D	19.5	78	155			
SP06.D25.200.4D	20	80	159			
SP06.D25.205.4D	20.5	82	161			
SP06.D25.210.4D	21	84	163			
SP06.D25.215.4D	21.5	86	165			
SP07.D25.220.4D	22	88	167			SPMG07T308
SP07.D25.225.4D	22.5	90	169			
SP07.D25.230.4D	23	92	171			
SP07.D25.235.4D	23.5	94	173			
SP07.D25.240.4D	24	96	175			
SP07.D25.245.4D	24.5	98	177			
SP07.D32.250.4D	25	100	191	60	32	SPMG090408
SP07.D32.255.4D	25.5	102	193			
SP07.D32.260.4D	26	104	195			
SP07.D32.265.4D	26.5	106	197			
SP07.D32.270.4D	27	108	199			
SP09.D32.275.4D	27.5	110	201			
SP09.D32.280.4D	28	112	203			
SP09.D32.285.4D	28.5	114	205			
SP09.D32.290.4D	29	116	207			
SP09.D32.295.4D	29.5	118	209			
SP09.D32.300.4D	30	120	211			
SP09.D32.305.4D	30.5	122	213			
SP09.D32.310.4D	31	124	215			
SP09.D32.315.4D	31.5	126	217			

4D-快速钻
4D-rapid drilling

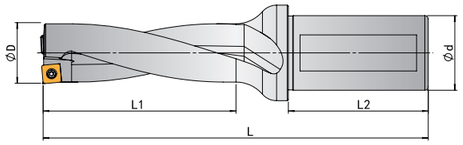




型号 Designation	D	L1	L	L2	d	适配刀片 Insert
SP09.D32.320.4D	32	128	219	60	32	SPMG090408
SP09.D32.325.4D	32.5	130	221			
SP09.D32.330.4D	33	132	223			
SP11.D32.335.4D	33.5	134	225			SPMG110408
SP11.D32.340.4D	34	136	227			
SP11.D32.345.4D	34.5	138	229			
SP11.D32.350.4D	35	140	231			
SP11.D32.355.4D	35.5	142	233			
SP11.D32.360.4D	36	144	235			
SP11.D32.365.4D	36.5	146	237			
SP11.D32.370.4D	37	148	239			
SP11.D32.375.4D	37.5	150	241			
SP11.D32.380.4D	38	152	243			
SP11.D32.385.4D	38.5	154	245			
SP11.D32.390.4D	39	156	247			
SP11.D32.395.4D	39.5	158	249			
SP11.D32.400.4D	40	160	251			
SP14.D32.410.4D	41	164	255			SPMG140512
SP14.D32.420.4D	42	168	259			
SP14.D40.430.4D	43	172	272	65	40	
SP14.D40.440.4D	44	176	276			
SP14.D40.450.4D	45	180	280			
SP14.D40.460.4D	46	184	284			
SP14.D40.470.4D	47	188	288			
SP14.D40.480.4D	48	192	292			
SP14.D40.490.4D	49	196	296			
SP14.D40.500.4D	50	200	300			
SP14.D40.510.4D	51	204	304			
SP09.D40.520.4D	52	208	308			SPMG090408
SP09.D40.530.4D	53	212	312			
SP09.D40.540.4D	54	216	316			
SP09.D40.550.4D	55	220	320			
SP09.D40.560.4D	56	224	324			
SP09.D40.570.4D	57	228	328			
SP09.D40.580.4D	58	232	332			
SP09.D40.590.4D	59	236	336			
SP09.D40.600.4D	60	240	340			

5D-快速钻
5D-rapid drilling





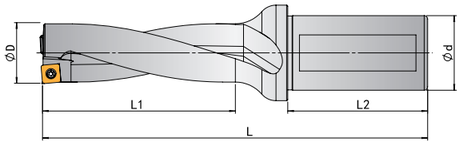
型号 Designation	D	L1	L	L2	d	适配刀片 Insert
SP06.D25.200.5D	20	100	179	56	25	SPMG060204
SP06.D25.205.5D	20.5	102.5	181			
SP06.D25.210.5D	21	105	184			
SP06.D25.215.5D	21.5	107.5	186			
SP07.D25.220.5D	22	110	189			SPMG07T308
SP07.D25.225.5D	22.5	112.5	193			
SP07.D25.230.5D	23	115	194			
SP07 D25.235.5D	23.5	117.5	196			
SP07.D25.240.5D	24	120	199			
SP07.D25.245.5D	24.5	122.5	201			
SP07.D32.250.5D	25	125	216	60	32	
SP07.D32.255.5D	25.5	127.5	218			
SP07.D32.260.5D	26	130	221			
SP07.D32.265.5D	26.5	132.5	223			
SP07.D32.270.5D	27	135	226			
SP09.D32.275.5D	27.5	137.5	228			SPMG090408
SP09.D32.280.5D	28	140	231			
SP09.D32.285.5D	28.5	142.5	233			
SP09.D32.290.5D	29	145	236			
SP09.D32.295.5D	29.5	147.5	238			
SP09.D32.300.5D	30	150	241			
SP09.D32.305.5D	30.5	152.5	243			
SP09.D32.310.5D	31	155	246			
SP09.D32.315.5D	31.5	157.5	248			
SP09.D32.320.5D	32	160	251			
SP09.D32.325.5D	32.5	162.5	253			
SP09.D32.330.5D	33	165	256			
SP11.D32.335.5D	33.5	167.5	258			SPMG110408
SP11.D32.340.5D	34	170	261			
SP11.D32.345.5D	34.5	172.5	263			
SP11.D32.350.5D	35	175	266			
SP11.D32.355.5D	35.5	177.5	268			
SP11.D32.360.5D	36	180	271			
SP11.D32.365.5D	36.5	182.5	273			
SP11.D32.370.5D	37	185	276			
SP11.D32.375.5D	37.5	187.5	278			

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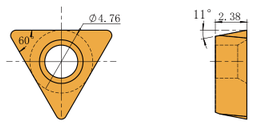
5D-快速钻
5D-rapid drilling





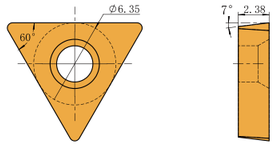
型号 Designation	D	L1	L	L2	d	适配刀片 Insert
SP11.D32.380.5D	38	190	281	60	32	SPMG110408
SP11.D32.385.5D	38.5	192.5	283			
SP11.D32.390.5D	39	195	284			
SP11.D32.395.5D	39.5	197.5	288			
SP14.D32.400.5D	40	200	291			SPMG140512
SP14.D32.410.5D	41	205	296			
SP14.D32.420.5D	42	210	301			
SP14 D40.430.5D	43	215	315	65	40	
SP14.D40.440.5D	44	220	320			
SP14.D40.450.5D	45	225	325			
SP14.D40.460.5D	46	230	330			
SP14.D40.470.5D	47	235	335			
SP14.D40.480.5D	48	240	340			
SP14.D40.490.5D	49	245	345			
SP14.D40.500.5D	50	250	350			
SP14.D40.510.5D	51	255	355			SPMG090408
SP09.D40.520.5D	52	260	360			
SP09.D40.530.5D	53	265	365			
SP09.D40.540.5D	54	270	370			
SP09.D40.550.5D	55	275	375			
SP09.D40.560.5D	56	280	380			
SP09.D40.570.5D	57	285	385			
SP09.D40.580.5D	58	290	390			
SP09.D40.590.5D	59	295	395			
SP09.D40.600.5D	60	300	400			

TP08



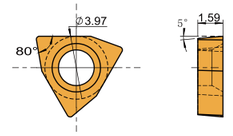
型号 Designation	刀片材质 Insert material	刀尖半径R Blade radius	P	M	K	N	H
TPGT 080202FB	MG1510P	0.2	●	◎			
TPGT 080204FB		0.4					
TPGT 080202FN	CN1000	0.2					●
TPGT 080204FN		0.4					
TPGT 080202FN	MG3610K	0.2			●		
TPGT 080204FN		0.4					
TPGT 080202FN	CN2000	0.2			●		
TPGT 080204FN		0.4					
TPGT 080202FA	MG4610N	0.2				●	
TPGT 080204FA		0.4					
TPGT 080202FN	PD1000	0.2				●	
TPGT 080204FN		0.4					

TC11



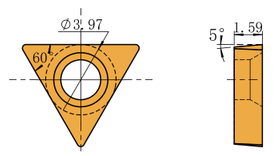
型号 Designation	刀片材质 Insert material	刀尖半径R Blade radius	P	M	K	N	H
TCGT 110202FB	MG1510P	0.2	●	◎			
TCGT 110204FB		0.4					
TCGT 110208FB		0.8					
TCGT 110202FN	CN1000	0.2					●
TCGT 110204FN		0.4					
TCGT 110208FN		0.8					
TCGT 110202FN	MG3610K	0.2			●		
TCGT 110204FN		0.4					
TCGT 110208FN		0.8					
TCGT 110202FN	CN2000	0.2			●		
TCGT 110204FN		0.4					
TCGT 110208FN		0.8					
TCGT 110202FA	MG4610N	0.2				●	
TCGT 110204FA		0.4					
TCGT 110208FA		0.8					
TCGT 110202FN	PD1000	0.2				●	
TCGT 110204FN		0.4					
TCGT 110208FN		0.8					

WB06



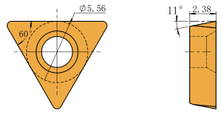
型号 Designation	刀片材质 Insert material	刀尖半径R Blade radius	P	M	K	N	H
WBGT 060102FB	MG1510P	0.2	●	◎			
	MG1610P		●	◎			
WBGT 060102FN	CN1000						●
WBGT 060102FB	MG3610K				●		
WBGT 060102FN	CN2000				●		
WBGT 060102FA	MG4610N					●	
WBGT 060102FN	PD1000					●	

TB06



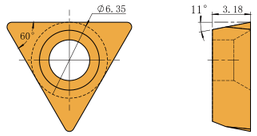
型号 Designation	刀片材质 Insert material	刀尖半径R Blade radius	P	M	K	N	H
TBGT 060102FB	MG1510P	0.2	●	◎			
	MG1610P		●	◎			
TBGT 060102FN	CN1000						●
TBGT 060102FB	MG3610K				●		
TBGT 060102FN	CN2000				●		
TBGT 060102FA	MG4610N					●	
TBGT 060102FN	PD1000					●	

TP09



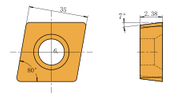
型号 Designation	刀片材质 Insert material	刀尖半径R Blade radius	P	M	K	N	H
TPGH 090202FB	MG1510P	0.2	●	◎			
TPGH 090204FB		0.4					
TPGH 090202FB	MG1610P	0.2	●	◎			
TPGH 090204FB		0.4					
TPGH 090202FN	CN1000	0.2					●
TPGH 090204FN		0.4					
TPGH 090202FB	MG3610K	0.2			●		
TPGH 090204FB		0.4					
TPGH 090202FN	CN2000	0.2			●		
TPGH 090204FN		0.4					
TPGH 090202FA	MG4610N	0.2				●	
TPGH 090204FA		0.4					
TPGH 090202FN	PD1000	0.2				●	
TPGH 090204FN		0.4					

TP11



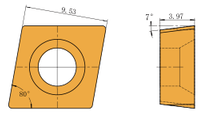
型号 Designation	刀片材质 Insert material	刀尖半径R Blade radius	P	M	K	N	H
TPGH 110302FB	MG1510P	0.2	●	◎			
TPGH 110304FB		0.4					
TPGH 110308FB		0.8					
TPGH 110302FB	MG1610P	0.2	●	◎			
TPGH 110304FB		0.4					
TPGH 110308FB		0.8					
TPGH 110302FN	CN1000	0.2					●
TPGH 110304FN		0.4					
TPGH 110308FN		0.8					
TPGH 110302FB	MG3610K	0.2			●		
TPGH 110304FB		0.4					
TPGH 110308FB		0.8					
TPGH 110302FN	CN2000	0.2			●		
TPGH 110304FN		0.4					
TPGH 110308FN		0.8					
TPGH 110302FA	MG4610N	0.2				●	
TPGH 110304FA		0.4					
TPGH 110308FA		0.8					
TPGH 110302FN	PD1000	0.2				●	
TPGH 110304FN		0.4					
TPGH 110308FN		0.8					

CC06



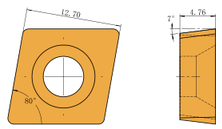
型号 Designation	刀片材质 Insert material	刀尖半径R Blade radius	P	M	K	N	H
CCMT 060204RB	MG1010P	0.4	●	◎			
CCMT 060204RB	MG3010K				●		
CCGT 060204RA	MG4010N					●	

CC09



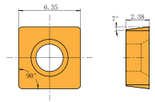
型号 Designation	刀片材质 Insert material	刀尖半径R Blade radius	P	M	K	N	H
CCMT 09T304RB	MG1010P	0.4	●	◎			
CCMT 09T308RB		0.8					
CCMT 09T304RB	MG3010K	0.4			●		
CCMT 09T308RB		0.8					
CCGT 09T304RA	MG4010N	0.4				●	
CCGT 09T308RA		0.8					

CC12



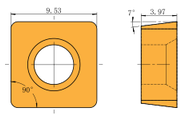
型号 Designation	刀片材质 Insert material	刀尖半径R Blade radius	P	M	K	N	H
CCMT 120404RB	MG1010P	0.4	●	◎			
CCMT 120408RB		0.8					
CCMT 120404RB	MG3010K	0.4			●		
CCMT 120408RB		0.8					
CCGT 120404RA	MG4010N	0.4				●	
CCGT 120408RA		0.8					

SC06



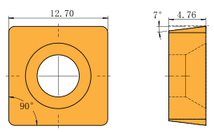
型号 Designation	刀片材质 Insert material	刀尖半径R Blade radius	P	M	K	N	H
SCMT 060204RB	MG1010P	0.4	●	◎			
SCMT 060204RB	MG3010K				●		
SCGT 060204RA	MG4010N					●	

SC09



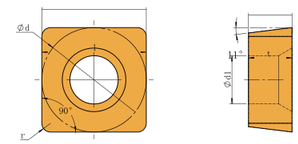
型号 Designation	刀片材质 Insert material	刀尖半径R Blade radius	P	M	K	N	H
SCMT 09T304RB	MG1010P	0.4	●	◎			
SCMT 09T308RB		0.8					
SCMT 09T304RB	MG3010K	0.4			●		
SCMT 09T308RB		0.8					
SCGT 09T304RA	MG4010N	0.4				●	
SCGT 09T308RA		0.8					

SC12



型号 Designation	刀片材质 Insert material	刀尖半径R Blade radius	P	M	K	N	H
SCMT 120404RB	MG1010P	0.4	●	◎			
SCMT 120408RB		0.8					
SCMT 120404RB	MG3010K	0.4			●		
SCMT 120408RB		0.8					
SCGT 120404RA	MG4010N	0.4				●	
SCGT 120408RA		0.8					

SP快速钻刀片
SP fast drilling blade

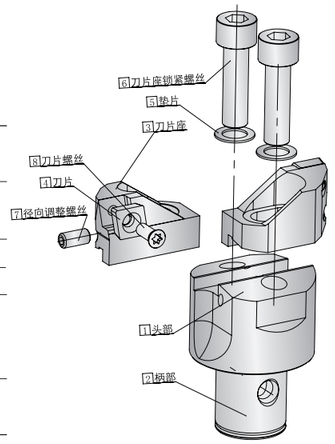


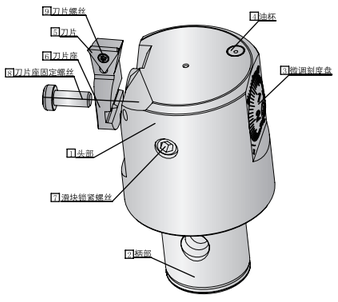
型号 Designation	d	1	d1	t	r	刀片材质 Insert material	P	M	K	N	H
SPMG 050204-OPM	5	5	2.2	2.38	0.4	MG1215	●	◎			
						MG3320			●		
SPMG 060204-OPM	6	6	2.6	2.38	0.4	MG1215	●	◎			
						MG3320			●		
SPMG 07T308-OPM	7.94	7.94	2.8	3.97	0.8	MG1215	●	◎			
						MG3320			●		
SPMG 090408-OPM	9.8	9.8	4.2	4.3	0.8	MG1215	●	◎			
						MG3320			●		
SPMG 110408-OPM	11.5	11.5	4.4	4.76	0.8	MG1215	●	◎			
						MG3320			●		
SPMG 140512-OPM	14.3	14.3	5.75	5.2	1.2	MG1215	●	◎			
						MG3320			●		

各种镗头各部分螺丝名称
Various boring heads of all part of the screw name

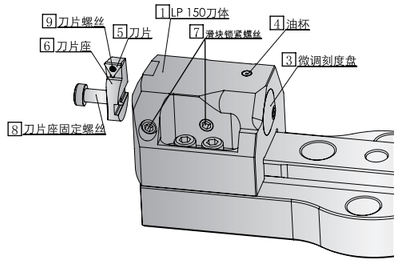
CMR 粗镗头
CMR rough boring head

镗刀型号 Designation	⑧刀片螺丝 Insert Screw	⑦径向调整螺丝 Radial Adjustable Screw	径向调整扳手 Radial Adjustable Wrench
RSC-2026	DM2.5x6 (CC06)	PMM3x6	PS-1.5B
RSC-2533			
RSC-3242	DM4x10 (CC09)	PMM4x8	PS-2B
RSC-4154		PMM5x10	PS-2.5B
RSC-5370	DM5x12 (CC12)	PMM6x12	PS-3B
RSC-6890		PMM6x14	
RSC-88110		PMM6x20	
RSC-98126		PMM8x20	PS-4B
RSC-125153		PMM8x25	





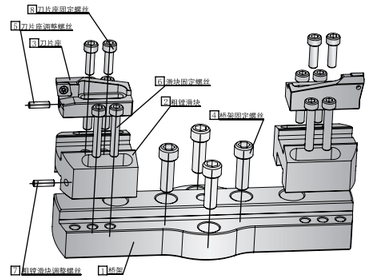
CMP精镗头
CMP Fine Bore Head

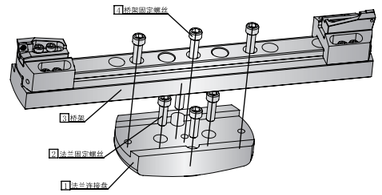


CLP精镗头
CMP Fine Bore Head

CMP/CLP 精镗头
CMR/CLP fine boring head

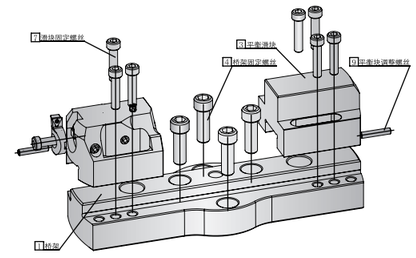
镗刀型号 Designation	⑦滑块固定螺丝 Slide Fixed Screw	滑块固定板手 Slide Fixed Wrench	⑧刀座固定螺丝 Seat Fixed Wrench	刀座固定扳手 Seat Fixed Wrench	⑨刀片螺丝
CMP20-36KD1	PMM4x4	TS2	SFM3x4.5	TS2	DM2x4 (TP08)
CMP25-47KD2	PMM4x6		SFM3x6		
CMP32-60KD3	PMM5x8	TS2.5	SFM4x8	TS2.5	
CMP41-74KD4	PMM6x10	TS3	SFM5x10	TS3	DM2.5x6 (TC1102)
CMP53-95KD5	PMM8x12	TS4	SFM5x12	TS4	
CMP68-150KD6	PMM10x16	TS5	SFM8x12	TS5	
CMP100-203KD6			SFM8x20		
LP 150	PMM10x16	PS-5B	SFM8x20	PS-5B	
	PMM10x8				

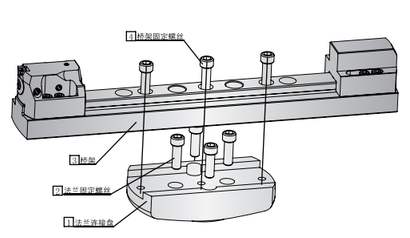




CLR 粗镗头
CLR rough boring head

镗刀型号 Designation	②法兰固定螺丝 Flange Fixed Screw	④桥架固定螺丝 Bridge Fixed Screw	⑥滑块固定螺丝 Slide Fixed Screw	⑧刀座固定螺丝 Seat Fixed Screw	⑦滑块调整螺丝 Slide Adjustable Screw	⑤刀座调整螺丝 Seat Adjustable Screw
CLR150-530	/	CLM12x35	LM8x45	LRM8x30	PMM6x20	PMM6x20
CLR530-850	CLM12x35	CLM12x70				



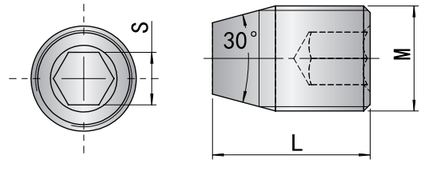


CLP 精镗头
CLP fine boring head

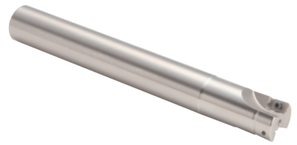
镗刀型号 Designation	②法兰固定螺丝 Flange Fixed Screw	④桥架固定螺丝 Bridge Fixed Screw	⑦滑块固定螺丝 Slide Fixed Screw	⑧微调滑块调整螺丝 Adjustable Screwof fine-tuningBlock	⑨平衡块调整螺丝 Adjustable Screwof Balance Block
CLP150-210	/	CLM12x35	LM8x45	PMM6x30	PMM6x16
CLP210-530	/				PMM6x20
CLP530-850	CLM12x35	CLM12x70			PMM6x20

KD连接螺丝
KD connection screw

型号	KD NO.	扳手/S	M	L
KM4x5	KD1	PS-2B	M4x0.5	5
KM5x6.5	KD2	PS-2.5B	M5x0.5	6.5
KM6x8.5	KD3	PS-3B	M6x0.75	8.5
KM8x11	KD4	PS-4B	M8x0.75	13.5
KM10x14	KD5	PS-5B	M10x1	14
KM12x18	KD6	PS-6B	M12x1	18
KM20x31	KD7	PS-10B	M20x1.5	31



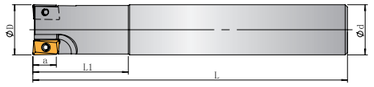
直角高速立铣刀
Right angle high-speed end mill



图一



图二



型号 Designation	刃数 Flutes	图示 Picture	D	d	a	L1	L2	L	适配刀片 Insert	刀片螺钉 Screw	扳手 Wrench	重量kg Weight
300R-C10-10-100-1T	1	一	10	10	9	25	/	100	APMT1135	SRM2.5	T08	0.05
300R-C12-12-130-1T	1	一	12	12	9	25	/	130				0.1
300R-C16-16-180-2T	2	二	16	16	9	60	90	180				0.26
300R-C16-16-200-2T	2	二	16	16	9	60	100	200				0.29
300R-C20-20-120-2T	2	一	20	20	9	50	/	120				0.26
300R-C20-20-160-2T	2	一	20	20	9	60	/	160				0.36
300R-C20-20-200-2T	2	二	20	20	9	70	100	200				0.46
400R-C25-25-160-2T	2	一	25	25	14	70	/	160	APMT1604	SRM4.0	T15	0.55
400R-C25-25-200-2T	2	二	25	25	14	70	100	200				0.7
400R-C25-25-250-2T	2	二	25	25	14	80	115	250				0.89
400R-C25-25-300-2T	2	二	25	25	14	80	165	300				1.07
400R-C25-30-160-2T	2	一	30	25	14	48	/	160				0.81
400R-C25-30-200-2T	2	二	30	25	14	48	100	200				1.11
400R-C25-30-250-2T	2	二	30	25	14	48	115	250				1.42
400R-C32-32-160-2T	2	一	32	32	14	48	/	160				0.86
400R-C32-32-200-2T	2	二	32	32	14	48	100	200				1.16
400R-C32-32-250-2T	2	二	32	32	14	48	115	250				1.47
400R-C32-32-300-2T	2	二	32	32	14	48	165	300				1.77
400R-C32-35-160-2T	2	一	35	32	14	48	/	160				0.95
400R-C32-35-200-2T	2	一	35	32	14	48	/	200				1.2
400R-C32-35-250-2T	2	一	35	32	14	60	/	250				1.51
400R-C32-35-300-2T	2	一	35	32	14	60	/	300				1.83
400R-C32-35-160-3T	3	一	35	32	14	60	/	160				0.94
400R-C32-35-200-3T	3	一	35	32	14	60	/	200				1.2
400R-C32-35-250-3T	3	一	35	32	14	60	/	250				1.51
400R-C32-35-300-3T	3	一	35	32	14	60	/	300				1.82
400R-C32-35-350-3T	3	一	35	32	14	60	/	350				2.13
400R-C32-35-400-3T	3	一	35	32	14	60	/	400				2.46
400R-C32-35-450-3T	3	一	35	32	14	60	/	450				2.78
400R-C32-35-500-3T	3	一	35	32	14	60	/	500				3.07
400R-C32-40-200-3T	3	一	40	32	14	60	/	200				1.24
400R-C32-40-250-3T	3	一	40	32	14	60	/	250				1.55
400R-C32-40-300-3T	3	一	40	32	14	60	/	300				1.88
300R-C12-13-130-1T	1	一	13	12	9	25	130	/	APMT1135	SRM2.5	T08	0.11
300R-C15-16-120-2T	2	一	16	15	9	40	120	/				0.15
300R-C15-16-160-2T	2	一	16	15	9	40	160	/				0.21

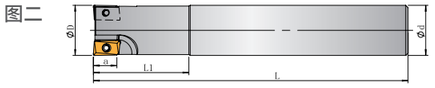
直角高速立铣刀
Right angle high-speed end mill



图一

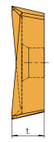


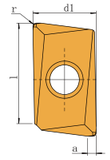
图二



型号 Designation	刃数 Flutes	图示 Picture	D	d	a	L1	L2	L	适配刀片 Insert	刀片螺钉 Screw	扳手 Wrench	重量kg Weight
300R-C15-16-180-2T	2	一	16	15	9	40	180	/	APMT1135	SRM2.5	T08	0.24
300R-C15-16-200-2T	2	一	16	15	9	40	200	/				0.26
300R-C15.6-16-160-2T	2	一	16	15.6	9	50	160	/				0.22
300R-C15.6-16-200-2T	2	一	16	15.6	9	50	200	/				0.28
300R-C16-17-120-2T	2	一	17	16	9	50	120	/				0.17
300R-C16-17-160-2T	2	一	17	16	9	50	160	/				0.24
300R-C16-17-180-2T	2	一	17	16	9	50	180	/				0.27
300R-C16-17-200-2T	2	一	17	16	9	50	200	/				0.3
300R-C19-20-120-2T	2	一	20	19	9	50	160	/				0.33
300R-C19-20-200-2T	2	一	20	19	9	50	200	/				0.42
300R-C20-21-160-2T	2	一	21	20	9	50	160	/				0.39
300R-C20-21-200-2T	2	一	21	20	9	50	200	/				0.47
400R-C24-25-160-2T	2	一	25	24	14	50	160	/				0.51
400R-C24-25-200-2T	2	一	25	24	14	50	200	/	APMT1604	SRM4.0	T15	0.65
400R-C24-25-250-2T	2	一	25	24	14	50	250	/				0.83
400R-C25-26-160-2T	2	一	26	25	14	50	160	/				0.56
400R-C25-26-200-2T	2	一	26	25	14	50	200	/				0.71
400R-C25-26-250-2T	2	一	26	25	14	50	250	/				0.9

- 标准刀杆不带内冷
- 刀片需单独订购
- Standard shank without internal cooling
- Insert to be ordered separately



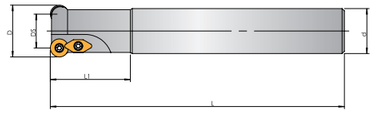


型号 Designation	d1	l	t	a	r	刀片材质 Insert material	P	M	K	N	H
APMT 1135PDER-XDU	6.2	11.39	2.8	1.2	0.8	MG1315	●	●			
						MG1220	●				
						MG3320			●		
APMT 1604PDER-XDU	9.2	17.12	4.76	3	0.8	MG1315	●	●			
						MG1220	●				
						MG3320			●		

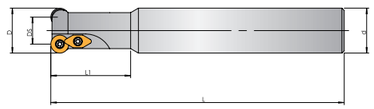
圆鼻铣刀
Round nose milling cutter



图一



图二

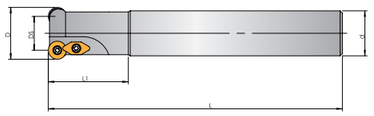


型号 Designation	刃数 Flutes	图示 Picture	D	DS	d	L1	L2	L	适配刀片 Insert	刀片螺钉 Screw	压板 Clamp Plate	压板螺钉 Clamp Screw	扳手 Wrench	重量kg Weight
C12-4R12-130-1T	1	—	12	4	12	30	/	130	RPMW0802	SRM3.0	/	/	T10	0.11
C16-4R16-160-2T	2	—	16	8	16	40	/	160			YS-34	SRM3.0		0.23
C16-4R16-200-2T	2	二	16	8	16	40	100	200						0.23
C20-4R20-160-2T	2	—	20	12	20	60	/	160						0.36
C20-4R20-200-2T	2	二	20	12	20	70	100	200						0.44
C20-5R20-160-2T	2	—	20	10	20	60	/	160	RPMW1003	SRM4.0	YS-39	SRM3.5	T15	0.35
C20-5R20-200-2T	2	二	20	10	20	70	100	200						0.45
C20-5R25-160-2T	2	—	25	15	20	40	/	160		SRM4.0	YS-43	SRM4.0	T15	0.36
C20-5R25-200-2T	2	—	25	15	20	40	/	200						0.56
C25-5R25-160-2T	2	—	25	15	25	60	/	160						0.54
C25-5R25-180T	2	二	25	15	25	60	90	180						0.62
C25-5R25-200-2T	2	二	25	15	25	70	100	200						0.7
C25-5R25-250-2T	2	二	25	15	25	80	115	250						0.86
C3/4-5R30-110-2T	2	—	30	20	3/4	30	/	110						0.28
C20-5R30-110-2T	2	—	30	20	20	30	/	110						0.27
C25-5R30-160-2T	2	—	30	20	25	35	/	160						0.57
C25-5R30-200-2T	2	—	30	20	25	35	/	200						0.75
C25-5R30-250-2T	2	—	30	20	25	35	/	250						0.92
C25-5R30-300-2T	2	—	30	20	25	35	/	300						1.11
C32-5R35-160-2T	2	—	35	25	32	48	/	160						0.95
C32-5R35-200-2T	2	—	35	25	32	48	/	200						1.2
C32-5R35-250-2T	2	—	35	25	32	48	/	250						1.5
C32-5R35-300-2T	2	—	35	25	32	48	/	300						1.8
C32-5R35-350-2T	2	—	35	25	32	48	/	350						2.13
C32-5R35-160-3T	2	—	35	25	32	48	/	160						0.91
C32-5R35-200-3T	2	—	35	25	32	48	/	200						1.17
C32-5R35-250-3T	2	—	35	25	32	48	/	250						1.49
C32-5R35-300-3T	2	—	35	25	32	48	/	300						1.79
C32-5R35-350-3T	2	—	35	25	32	48	/	350						2.11
C32-6R32-160-2T	2	—	32	20	32	48	/	160	RPMW1204					0.89
C32-6R32-200-2T	2	—	32	20	32	48	/	200						1.16
C32-6R32-250-2T	2	—	32	20	32	48	/	250						1.46
C32-6R40-160-3T	3	—	40	28	32	48	/	160						0.93
C32-6R40-200-3T	3	—	40	28	32	48	/	200						1.2
C32-6R40-250-3T	3	—	40	28	32	48	/	250						1.51
C32-6R40-300-3T	3	—	40	28	32	48	/	300						1.81

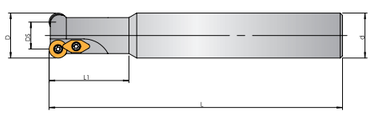
圆鼻铣刀
Round nose milling cutter



图一

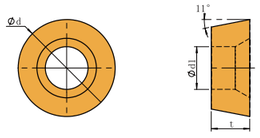


图二



型号 Designation	刃数 Flutes	图示 Picture	D	DS	d	L1	L2	L	适配刀片 Insert	刀片螺钉 Screw	压板 Clamp Plate	压板螺钉 Clamp Screw	扳手 Wrench	重量kg Weight
C32-6R50-160-4T	4	—	50	38	32	48	/	160	RPMW 0802	SRM3.0	YS-34	SRM3.0	T10	1.03
C32-6R50-200-4T	4	—	50	38	32	48	/	200						1.29
C32-6R50-250-4T	4	—	50	38	32	48	/	250						1.59
C15-4R16-160-2T	2	—	16	8	15	40	/	160						0.2
C15-4R16-200-2T	2	—	16	8	15	40	/	200						0.25
C16-4R17-160-2T	2	—	17	9	16	40	/	160						0.23
C16-4R17-200-2T	2	—	17	9	16	40	/	200						0.29
C19-4R20-160-2T	2	—	20	12	19	60	/	160						0.32
C19-4R20-200-2T	2	—	20	12	19	70	/	200						0.41
C20-4R21-160-2T	2	—	21	13	20	60	/	160						0.36
C20-4R21-200-2T	2	—	21	13	20	70	/	200						0.45
C20-5R21-160-2T	2	—	21	11	20	60	/	160	RPMW 1003	SRM4.0	YS-43	SRM4.0	T15	0.38
C20-5R21-200-2T	2	—	21	11	20	70	/	200						0.47
C24-5R25-160-2T	2	—	25	15	24	60	/	160						0.51
C24-5R25-200-3T	2	—	25	15	24	70	/	200						0.65
C24-5R25-250-2T	2	—	25	15	24	80	/	250						0.83
C25-5R26-160-2T	2	—	26	16	25	60	/	160						0.55
C25-5R26-200-2T	2	—	26	16	25	70	/	200						0.7
C25-5R26-250-2T	2	—	26	16	25	80	/	250						0.89

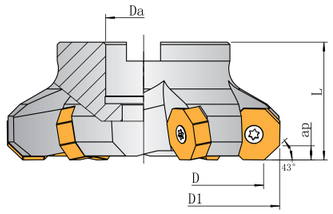
- 标准刀杆不带内冷
- 刀片需单独订购
- Standard shank without internal cooling
- Insert to be ordered separately



型号 Designation	d	t	d1	刀片材质 Insert material	P	M	K	N	H
RPMW 0802MO-BG	8	2.38	3.5	MG1315	●	●			
				MG1220	●		●		
RPMW 1003MO-BG	10	3.18	4.6	MG1315	●	●			
				MG1220	●		●		
RPMW 1204MO-BG	12	4.76	4.6	MG1315	●	●			
				MG1220	●		●		

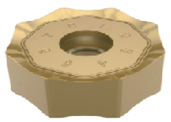
43°面铣刀盘
43° face milling cutter head

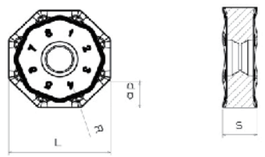




型号 Designation	刃数 Flutes	D	D1	L	ap	Da	接口类型 Interface type	适配刀片 Insert	刀片螺丝 Insert screw	扳手 spanner	重量 Kg Weight
FL43ON-563A22R-07	5	63	78	40	6	22	A	ONKU 0707	CSG5012	CTS20W	0.6
FL43ON-663A22R-07	6	63	78	40	6	22	A				0.6
FL43ON-680A27R-07	6	80	95	50	6	27	A				1.1
FL43ON-780A27R-07	7	80	95	50	6	27	A				1.1
FL43ON-7100B32R-07	7	100	115	50	6	32	B				1.8
FL43ON-8100B32R-07	8	100	115	50	6	32	B				1.8
FL43ON-8125B40R-07	8	125	140	63	6	40	B				3.0
FL43ON-10125B40R-07	10	125	140	63	6	40	B				3.0
FL43ON-10160C40R-07	10	160	175	63	6	40	C				4.4
FL43ON-12160C40R-07	12	160	175	63	6	40	C				4.4
FL43ON-12200C60R-07	12	200	215	63	6	60	C				6.2
FL43ON-16250C60R-07	16	250	265	63	6	60	C				13.5
FL43ON-20315D60R-07	20	315	330	80	6	60	D				27.8

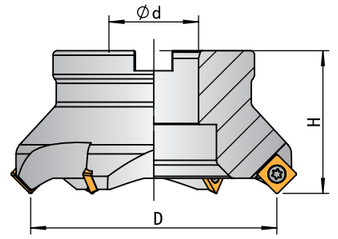
- 标准刀盘不带内冷
- 刀片需单独订购
- Standard cutter head without internal cooling
- Insert to be ordered separately





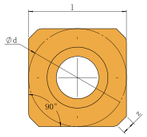
型号 Designation	L	s	r	刀片材质 Insert material	P	M	K	N	H
ONKU 070708-M	19.0	7.0	0.8	MG1215	●				
				MG2315		●			
				MG3320			●		

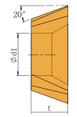
45度高速平面铣刀盘
45° degree high-speed piane milling head



型号 Designation	刃数 Flutes	D	d	H	适配刀片 Insert	刀片螺钉 Screw	扳手 Wrench	重量kg Weight
SE45-50-22-4T	4	50	22	50	SEKT1204	SRM5.0	T20	0.5
SE45-63-22-5T	5	63	22	50				0.75
SE45-80-27-5T	5	80	27	50				1.15
SE45-100-32-6T	6	100	32	50				1.75
SE45-125-40-6T	6	125	40	63				3.15
SE45-160-40-8T	8	160	40	63				5.1
SE45-200-40-10T	10	200	60	63				8.4

- 标准刀盘不带内冷
- 刀片需单独订购
- Standard cutter head without internal cooling
- Insert to be ordered separately

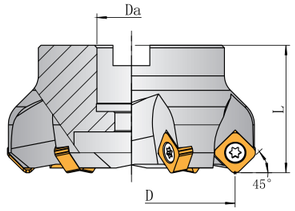




型号 Designation	d1	l	t	d1	z	刀片材质 Insert material	P	M	K	N	H
SEKT 1204AFTN	12.7	12.7	4.76	5.5	1.7	MG1315	●	●			
						MG3320			●		

45°面铣刀盘
45° face milling cutter head





型号 Designation	刃数 Flutes	D	Da	L	ap	接口类型 Interface type	适配刀片 Insert	刀片螺丝 Insert screw	扳手 spanner	重量 Kg Weight
FL45SN-350-22R-12	3	50	22	40	6	A	SNKX 1206	CST4010	CTS15W	0.3
FL45SN-450-22R-12	4	50	22	40	6	A				0.3
FL45SN-550-22R-12	5	50	22	40	6	A				0.3
FL45SN-463-22R-12	4	63	22	40	6	A				0.5
FL45SN-563-22R-12	5	63	22	40	6	A				0.5
FL45SN-663-22R-12	6	63	22	40	6	A				0.5
FL45SN-580-27R-12	5	80	27	50	6	A				1.2
FL45SN-680-27R-12	6	80	27	50	6	A				1.2
FL45SN-1080-27R-12	10	80	27	50	6	A				1.2
FL45SN-6100-32R-12	6	100	32	50	6	B				1.8
FL45SN-8100-32R-12	8	100	32	50	6	B				1.8
FL45SN-12100-32R-12	12	100	32	50	6	B				1.8
FL45SN-7125-40R-12	7	125	40	63	6	B				3.0
FL45SN-10125-40R-12	10	125	40	63	6	B				3.0
FL45SN-16125-40R-12	16	125	40	63	6	B				3.0
FL45SN-8160-40R-12	8	160	40	63	6	C				4.6
FL45SN-12160-40R-12	12	160	40	63	6	C				4.6
FL45SN-20160-40R-12	20	160	40	63	6	C				4.6
FL45SN-10200-60R-12	10	200	60	63	6	C				6.5
FL45SN-18200-60R-12	18	200	60	63	6	C				6.5
FL45SN-22200-60R-12	22	200	60	63	6	C				6.5
FL45SN-12250-60R-12	12	250	60	63	6	C				10.2
FL45SN-20250-60R-12	20	250	60	63	6	C				10.2
FL45SN-24250-60R-12	24	250	60	63	6	C				10.2
FL45SN-15315-60R-12	15	315	60	63	6	D				18.0
FL45SN-22315-60R-12	22	315	60	63	6	D				18.0
FL45SN-26315-60R-12	26	315	60	63	6	D				18.0

- 标准刀盘不带内冷
- 刀片需单独订购
- Standard cutter head without internal cooling
- Insert to be ordered separately

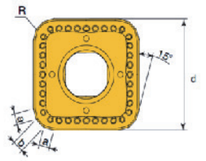
TOOLING SYSTEM
www.pavo-tools.com

铣加工系列

45°面铣刀盘
45° face milling cutter head

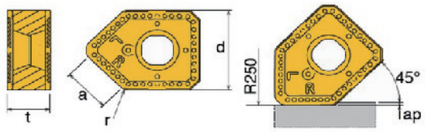






型号 Designation	d	t	a	b	r	刀片材质 Insert material	P	M	K	N	H
SNKX 1206XTN	12.7	6.35	1.25	1.3	0.4	MG1315	●	●			
						MG3320			●		
						MG2320		●			
						MG1220	●				

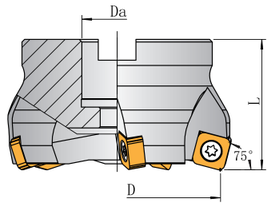




型号 Designation	d	t	a	b	r	刀片材质 Insert material	P	M	K	N	H
SNKX 1206ANSN-W	12.7	6.45	6.9	-	0.4	MG3320			●		

75°面铣刀盘
75 ° face milling cutter head





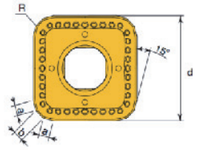
型号 Designation	刃数 Flutes	D	Da	L	ap	接口类型 Interface type	适配刀片 Insert	刀片螺丝 Insert screw	扳手 spanner	重量 Kg Weight
FL75SN-350-22R-12	3	50	22	40	9.5	A	SNKX 1206	CST4010	CTS15W	0.3
FL75SN-450-22R-12	4	50	22	40	9.5	A				0.3
FL75SN-550-22R-12	5	50	22	40	9.5	A				0.3
FL75SN-463-22R-12	4	63	22	40	9.5	A				0.5
FL75SN-563-22R-12	5	63	22	40	9.5	A				0.5
FL75SN-663-22R-12	6	63	22	40	9.5	A				0.5
FL75SN-580-27R-12	5	80	27	50	9.5	A				1.2
FL75SN-680-27R-12	6	80	27	50	9.5	A				1.2
FL75SN-1080-27R-12	10	80	27	50	9.5	A				1.2
FL75SN-6100-32R-12	6	100	32	50	9.5	B				1.8
FL75SN-8100-32R-12	8	100	32	50	9.5	B				1.8
FL75SN-12100-32R-12	12	100	32	50	9.5	B				1.8
FL75SN-7125-40R-12	7	125	40	63	9.5	B				3.0
FL75SN-10125-40R-12	10	125	40	63	9.5	B				3.0
FL75SN-16125-40R-12	16	125	40	63	9.5	B				3.0
FL75SN-8160-40R-12	8	160	40	63	9.5	C				4.6
FL75SN-12160-40R-12	12	160	40	63	9.5	C				4.6
FL75SN-20160-40R-12	20	160	40	63	9.5	C				4.6
FL75SN-10200-60R-12	10	200	60	63	9.5	C				6.5
FL75SN-18200-60R-12	18	200	60	63	9.5	C				6.5
FL75SN-22200-60R-12	22	200	60	63	9.5	C				6.5
FL75SN-12250-60R-12	12	250	60	63	9.5	C				10.2
FL75SN-20250-60R-12	20	250	60	63	9.5	C				10.2
FL75SN-24250-60R-12	24	250	60	63	9.5	C				10.2
FL75SN-15315-60R-12	15	315	60	63	9.5	D				18.0
FL75SN-22315-60R-12	22	315	60	63	9.5	D				18.0
FL75SN-26315-60R-12	26	315	60	63	9.5	D				18.0

- 标准刀盘不带内冷
- 刀片需单独订购
- Standard cutter head without internal cooling
- Insert to be ordered separately

75°面铣刀盘
75 ° face milling cutter head



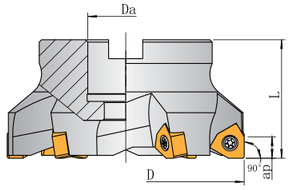




型号 Designation	d	t	a	b	r	刀片材质 Insert material	P	M	K	N	H
SNKX 1206XTN	12.7	6.35	1.25	1.3	0.4	MG1315	●	●			
						MG3320			●		
						MG2320		●			
						MG1220	●		◎		

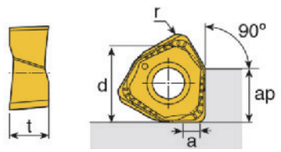
直角平面铣刀盘
Right angle plane milling cutter head





型号 Designation	刃数 Flutes	D	Da	L	ap	接口类型 Interface type	适配刀片 Insert	刀片螺丝 Insert screw	扳手 spanner	重量 Kg Weight
FL90XN-440A16R-06	4	40	16	40	6.2	A	XNGU 0604	CSC3080	CTS08W	0.3
FL90XN-450A22R-06	4	50	22	40	6.2	A				0.4
FL90XN-650A22R-06	6	50	22	40	6.2	A				0.4
FL90XN-463A22R-06	4	63	22	40	6.2	A				0.5
FL90XN-663A22R-06	6	63	22	40	6.2	A				0.5
FL90XN-763A22R-06	7	63	22	40	6.2	A				0.5
FL90XN-580A27R-06	5	80	27	50	6.2	A				1.0
FL90XN-780A27R-06	7	80	27	50	6.2	A				1.0
FL90XN-980A27R-06	9	80	27	50	6.2	A				1.0
FL90XN-6100B32R-06	6	100	32	50	6.2	B				1.9
FL90XN-8100B32R-06	8	100	32	50	6.2	B				1.9
FL90XN-11100B32R-06	11	100	32	50	6.2	B				1.9
FL90XN-7125B40R-06	7	125	40	63	6.2	B				3.2
FL90XN-11125B40R-06	11	125	40	63	6.2	B				3.2
FL90XN-14125B40R-06	14	125	40	63	6.2	B				3.2

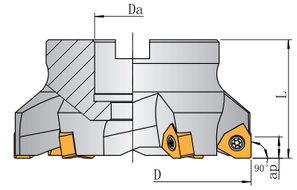
- 标准刀盘不带内冷
- 刀片需单独订购
- Standard cutter head without internal cooling
- Insert to be ordered separately



型号 Designation	d	t	a	r	进给mm/齿	刀片材质 Insert material	P	M	K	N	H
XNGU 060408-M	9.26	4.76	1.96	0.8	0.08-0.15	MG1315	●	●			
						MG3320			●		
						MG2320		●			
						MG1220	●		◎		

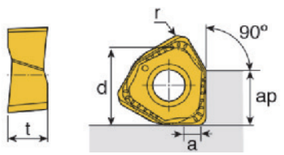
直角平面铣刀盘
Right angle plane milling cutter head





型号 Designation	刃数 Flutes	D	Da	L	ap	接口类型 Interface type	适配刀片 Insert	刀片螺丝 Insert screw	扳手 spanner	重量 Kg Weight
FL90XN-450A22R-09	4	50	22	40	9.2	A	XNGU 0905	DRM4x10 (D6.0)	CTS15W	0.3
FL90XN-550A22R-09	5	50	22	40	9.2	A				0.4
FL90XN-463A22R-09	4	63	22	40	9.2	A				0.5
FL90XN-663A22R-09	6	63	22	40	9.2	A				0.5
FL90XN-763A22R-09	7	63	22	40	9.2	A				0.5
FL90XN-580A27R-09	5	80	27	50	9.2	A				1.0
FL90XN-780A27R-09	7	80	27	50	9.2	A				1.1
FL90XN-980A27R-09	9	80	27	50	9.2	A				1.1
FL90XN-6100B32R-09	6	100	32	50	9.2	A				1.9
FL90XN-8100B32R-09	8	100	32	50	9.2	B				1.8
FL90XN-11100B32R-09	11	100	32	50	9.2	B				1.9
FL90XN-7125B40R-09	7	125	40	63	9.2	B				3.1
FL90XN-11125B40R-09	11	125	40	63	9.2	B				3.1
FL90XN-14125B40R-09	14	125	40	63	9.2	B				3.2
FL90XN-12160C40R-09	12	160	40	63	9.2	C				4.3
FL90XN-16160C40R-09	16	160	40	63	9.2	C				4.3
FL90XN-14200C60R-09	14	200	60	63	9.2	C				5.9
FL90XN-18200C60R-09	18	200	60	63	9.2	C				5.9
FL90XN-18250C60R-09	18	250	60	63	9.2	C				10.7
FL90XN-22250C60R-09	22	250	60	63	9.2	C				10.8

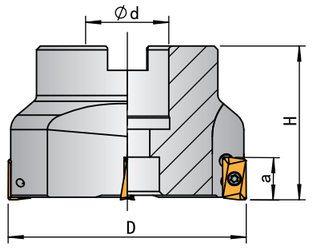
- 标准刀盘不带内冷
- 刀片需单独订购
- Standard cutter head without internal cooling
- Insert to be ordered separately



型号 Designation	d	t	a	r	进给mm/齿	刀片材质 Insert material	P	M	K	N	H
XNGU 090508-M	13.05	6.7	2	0.8	0.1-0.2	MG1315	●	●			
						MG1215	●	●			
						MG3320			●		
						MG3325			●		
XNGU 090508-ML	13.05	6.7	2	0.8	0.05-0.1	MG1315	●	●			
						MG1215	●	●			
						MG3320			●		
						MG3325			●		

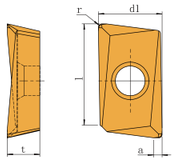
直角平面铣刀盘
Right angle plane milling cutter head





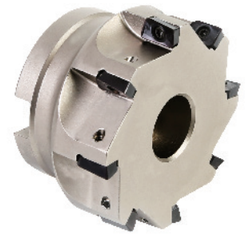
型号 Designation	刃数 Flutes	D	d	a	H	适配刀片 Insert	刀片螺钉 Screw	扳手 Wrench	重量kg Weight
400R-50-22-4T	4	50	22	16	50	APMT1604	SRM4.0	T15	0.4
400R-63-22-4T	4	63	22	16	50				0.65
400R-63-22-5T	5	63	22	16	50				0.65
400R-80-27-6T	6	80	27	16	50				1
400R-100-32-6T	6	100	32	16	50				1.25
400R-125-40-8T	8	125	40	16	63				3.1
400R-160-40-8T	8	160	40	16	63				5.1

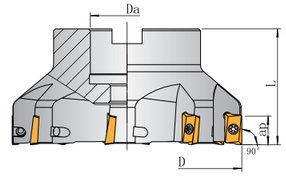
- 标准刀盘不带内冷
- 刀片需单独订购
- Standard cutter head without internal cooling
- Insert to be ordered separately



型号 Designation	d1	1	t	a	r	刀片材质 Insert material	P	M	K	N	H
APMT 1604PDER-XDU	9.2	17.12	4.76	3	0.8	MG1315	●	●			
						MG1220	●				
						MG3320			●		
APMT 160408PDER-N						MG4220				●	

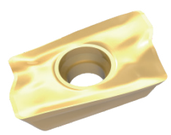
直角平面铣刀盘
Right angle plane milling cutter head

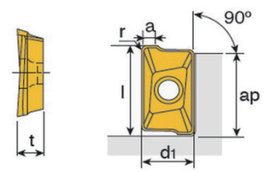




型号 Designation	刃数 Flutes	D	Da	L	ap	接口类型 Interface type	适配刀片 Insert	刀片螺丝 Insert screw	扳手 spanner	重量 Kg Weight
FL90AP 350-22R-17-B	3	50	22	40	16.1	A	APKT 1705	CSC4090	CTS15W	0.4
FL90AP 450-22R-17-B	4	50	22	40	16.1	A				0.3
FL90AP 550-22R-17	5	50	22	40	16.1	A				0.4
FL90AP 463-22R-17-B	4	63	22	40	16.1	A				0.5
FL90AP 663-22R-17	6	63	22	40	16.1	A				0.5
FL90AP 480-27R-17-B	4	80	27	50	16.1	A				0.8
FL90AP 680-27R-17	6	80	27	50	16.1	A				0.9
FL90AP 780-27R-17	7	80	27	50	16.1	A				0.9
FL90AP 6100-32R-17-B	6	100	32	50	16.1	B				1.3
FL90AP 8100-32R-17	8	100	32	50	16.1	B				1.5
FL90AP 7125-40R-17-B	7	125	40	63	16.1	B				2.9
FL90AP 8125-40R-17	8	125	40	63	16.1	B				3.0
FL90AP 9125-40R-17	9	125	40	63	16.1	B				3.1
FL90AP 8160-40R-17-B	8	160	40	63	16.1	C				4.1
FL90AP 10160-40R-17	10	160	40	63	16.1	C				4.2
FL90AP 12200-60R-17	12	200	60	63	16.1	C				6.1

- 标准刀盘不带内冷
- 刀片需单独订购
- Standard cutter head without internal cooling
- Insert to be ordered separately

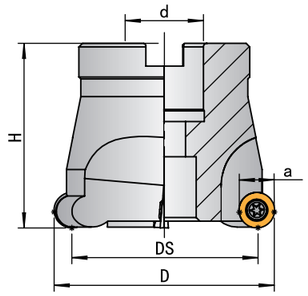




型号 Designation	d	l	t	a	r	刀片材质 Insert material	P	M	K	N	H
APKT 170508-EM	10.7	18.5	5.56	3.0	0.8	MG1315	●	●			
						MG3320			●		
						MG2320		●			

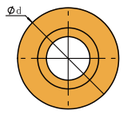
圆鼻铣刀盘
Round nose milling cutter





型号 Designation	刃数 Flutes	D	DS	d	H	a	适配刀片 Insert	刀片螺钉 Screw	压板 Clamp Plate	压板螺钉 Clamp Screw	扳手 Wrench	重量 Kg Weight
FLR-5R50-22-4T	4	50	40	22	50	10	RC*T10T3	SRM3.5	/	/	T15	0.35
FLR-5R63-22-4T	4	63	53	22	50	10			/	/		0.55
FLR-6R50-22-4T	4	50	38	22	50	12	RC*T1204		/	/		0.35
FLR-6R50-22-P-4T	4	50	38	22	50	12			YD-14	SRM3.5		0.35
FLR-6R63-22-4T	4	63	51	22	50	12			/	/		0.55
FLR-6R63-22-P-4T	4	63	51	22	50	12			YD-14	SRM3.5		0.55

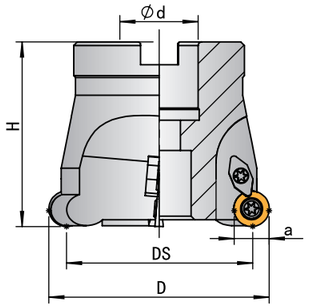
- 标准刀盘不带内冷
- 刀片需单独订购
- Standard cutter head without internal cooling
- Insert to be ordered separately



型号 Designation	d	t	d1	刀片材质 Insert material	P	M	K	N	H
RCKT 10T3MO-OPR	10	3.97	3.9	MG1315	●	●			
				MG1220	●		●		
RCKT 1204MO-OPR	12	4.76	3.9	MG1315	●	●			
				MG1220	●		●		

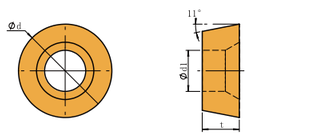
圆鼻铣刀盘
Round nose milling cutter





型号 Designation	刃数 Flutes	D	DS	d	H	a	适配刀片 Insert	刀片螺钉 Screw	压板 Clamp Plate	压板螺钉 Clamp Screw	扳手 Wrench	重量kg Weight
FLRY-5R50-22-4T	4	50	40	22	50	10	RPMW1003	SRM4.0	YS-43	SRM4.0	T15	0.35
FLRY-5R63-22-4T	4	63	53	22	50	10						0.55
FLRY-5R63-22-5T	5	63	53	22	50	10						0.55
FLRY-5R80-27-5T	5	80	70	27	50	10						0.35
FLRY-5R80-27-6T	6	80	70	27	50	10						0.35
FLRY-5R100-32-5T	5	100	90	32	50	10						0.3
FLRY-5R100-32-6T	6	100	90	32	50	10						0.3
FLRY-6R50-22-4T	4	50	38	22	50	12	RPMW1204					0.5
FLRY-6R63-22-4T	4	63	51	22	50	12						0.75
FLRY-6R63-22-5T	5	63	51	22	50	12						0.75
FLRY-6R80-27-5T	5	80	68	27	50	12						1.05
FLRY-6R80-27-6T	6	80	68	27	50	12						1.05
FLRY-6R100-32-5T	5	100	88	32	50	12						1.25
FLRY-6R100-32-6T	6	100	88	32	50	12						1.25

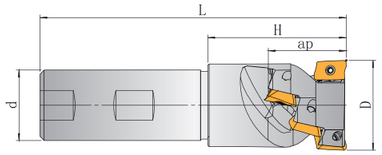
- 标准刀盘不带内冷
- 刀片需单独订购
- Standard cutter head without internal cooling
- Insert to be ordered separately



型号 Designation	d	t	d1	刀片材质 Insert material	P	M	K	N	H
	10	3.18	4.6	MG1315	●	●			
				MG1220	●		●		
	12	4.76	4.6	MG1315	●	●			
				MG1220	●		●		

玉米铣刀
Corn milling cutter

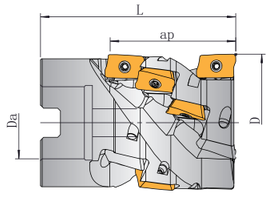




型号 Designation	刃数 Flutes	齿数 Tooth number	D	d	H	L	ap	适配刀片 Insert	刀片螺丝 Insert screw	扳手 spanner	重量 Kg Weight
ML90AP-2232L120Z32-17	2	4	32	32	50	120	30	APKT 1705	CSG4011-P	CTS15W-P	0.82
ML90AP-2340L140Z32-17	2	6	40	32	65	140	44				1.15

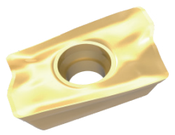
- 标准刀盘不带内冷
- 刀片需单独订购
- Standard cutter head without internal cooling
- Insert to be ordered separately

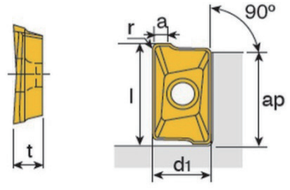




型号 Designation	刃数 Flutes	齿数 Tooth number	D	L	ap	Da	接口类型 Interface type	适配刀片 Insert	刀片螺丝 Insert screw	扳手 spanner	重量 Kg Weight
ML90AP-2350H44A22R-17	2	6	50	60	44	22	A	APKT 1705	CSG4011-P	CTS15W-P	0.5
ML90AP-3363H44A27R-17	3	9	63	63	44	27	A				0.9
ML90AP-4363H44A27R-17	4	12	63	63	44	27	A				0.9
ML90AP-4480H58A32R-17	4	16	80	75	58	32	A				1.9
ML90AP-56100H88A40R-17	5	30	100	110	88	40	A				4.8

- 标准刀盘不带内冷
- 刀片需单独订购
- Standard cutter head without internal cooling
- Insert to be ordered separately

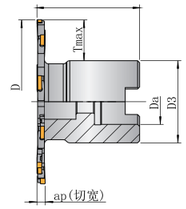


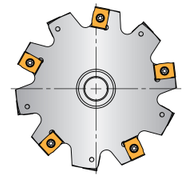


型号 Designation	d	l	t	a	r	刀片材质 Insert material	P	M	K	N	H
APKT 170508-EM	10.7	18.5	5.56	3.0	0.8	MG1315	●	●			
						MG3320			●		

法兰式三面刃铣刀盘
Flange type three edge milling cutter head



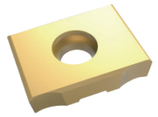


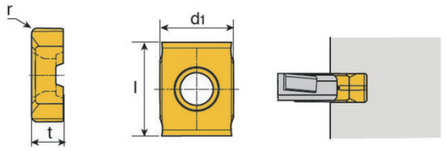


型号 Designation	刃数 Flutes	ap (mm)	D	da	D3	L	Tmax	接口类型 Interface type	适配刀片 Insert	刀片螺丝 Insert screw	扳手 spanner	重量 Kg Weight
SMFZN-1080W04A22R-023	5+5	4	80	22	40	50	20.0	A	ZNHT 023	CSX2531	CTS08W	0.4
SMFZN-12100W04A27R-023	6+6	4	100	22	48	50	26.0	A				0.6
SMFZN-1080W05A22R-028	5+5	5	80	22	40	50	20.0	A	ZNHT 028	CSX2542	CTS08W	0.5
SMFZN-12100W05A27R-028	6+6	5	100	27	48	50	26.0	A				0.7
SMFZN-1080W06A22R-033	5+5	6	80	22	40	50	20.0	A	ZNHT 033	CSX2553	CTS08W	0.6
SMFZN-12100W06A27R-033	6+6	6	100	27	48	50	26.0	A				0.7
SMFZN-14125W06B40R-033	7+7	6	125	40	70	50	25.0	B				1.2
SMFZN-18160W06B40R-033	9+9	6	160	40	70	50	43.0	B				1.5
SMFZN-880W07A22R-038	4+4	7	80	22	40	50	20.0	A	ZNHT 038	CSX4051	CTS15W	0.5
SMFZN-10100W07A27R-038	5+5	7	100	27	48	50	25.5	A				0.7
SMFZN-12125W07B40R-038	6+6	7	125	40	70	50	24.5	B				1.2
SMFZN-16160W07B40R-038	8+8	7	160	40	70	50	42.0	B				1.5
SMFZN-880W08A22R-043	4+4	8	80	22	40	50	20.0	A	ZNHT 043	CSX4061	CTS15W	0.5
SMFZN-10100W08A27R-043	5+5	8	100	27	48	50	25.5	A				0.8
SMFZN-12125W08B40R-043	6+6	8	125	40	70	50	24.5	B				1.2
SMFZN-16160W08B40R-043	8+8	8	160	40	70	50	42.0	B				1.6
SMFZN-10100W09A27R-048	5+5	9	100	27	48	50	26.0	A	ZNHT 048	CSX4070	CTS15W	0.8
SMFZN-12125W09B40R-048	6+6	9	125	40	70	50	24.5	B				1.3
SMFZN-16160W09B40R-048	8+8	9	160	40	70	50	42.0	B				1.7
SMFZN-10100W10A27R-053	5+5	10	100	27	48	50	26.0	A	ZNHT 053	CSX4080	CTS15W	0.8
SMFZN-12125W10B40R-053	6+6	10	125	40	70	50	24.5	B				1.4
SMFZN-16160W10B40R-053	8+8	10	160	40	70	50	42.0	B				1.9

- 标准刀盘不带内冷
- 刀片需单独订购
- Standard cutter head without internal cooling
- Insert to be ordered separately

法兰式三面刃铣刀盘
Flange type three edge milling cutter head

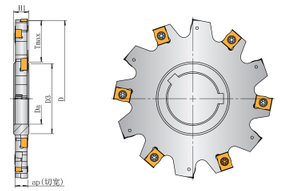




型号 Designation	l	d1	t	r	进给mm/齿	刀片材质 Insert material	P	M	K	N	H
ZNHT 018-04-ML	10	7.5	1.8	0.4	0.05～0.08	MG1315	●	●			
ZNHT 023-04-ML	10	7.5	2.3	0.4	0.05～0.08	MG1315	●	●			
ZNHT 028-04-ML	10	7.5	2.8	0.4	0.05～0.08	MG1315	●	●			
ZNHT 033-04-ML	10	7.5	3.3	0.4	0.05～0.12	MG1315	●	●			
ZNHT 038-04-ML	13	10	3.8	0.4	0.05～0.12	MG1315	●	●			
ZNHT 043-04-ML	13	10	4.3	0.4	0.05～0.12	MG1315	●	●			
ZNHT 048-04-ML	13	10	4.8	0.4	0.05～0.12	MG1315	●	●			
ZNHT 053-04-ML	13	10	5.3	0.4	0.05～0.12	MG1315	●	●			

单片式三面刃铣刀盘
Single piece three edge milling cutter head

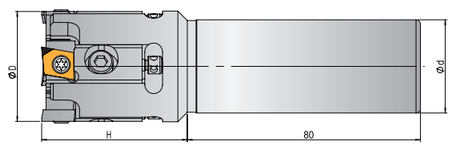




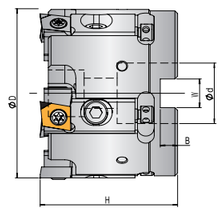
型号 Designation	刃数 Flutes	ap (mm)	D	da	D3	H1	Tmax	适配刀片 Insert	刀片螺丝 Insert screw	扳手 spanner	重量 Kg Weight
SMFZN-863W04H22-023	4+4	4	63	22	34	8	12.0	ZNHT 023	CSX2531	CTS08W	0.1
SMFZN-1080W04H22-023	5+5	4	80	22	34	8	21.0				0.1
SMFZN-12100W04H27-023	6+6	4	100	27	41	12	27.0				0.2
SMFZN-14125W04H40-023	7+7	4	125	40	55	12	32.0				0.4
SMFZN-18160W04H40-023	9+9	4	160	40	55	12	50.0				0.6
SMFZN-863W05H22-028	4+4	5	63	22	34	8	13.0	ZNHT 028	CSX2542	CTS08W	0.1
SMFZN-1080W05H22-028	5+5	5	80	22	34	8	21.0				0.2
SMFZN-12100W05H27-028	6+6	5	100	27	41	12	27.0				0.3
SMFZN-14125W05H40-028	7+7	5	125	40	55	12	33.0				0.4
SMFZN-18160W05H40-028	9+9	5	160	40	55	12	50.0				0.7
SMFZN-863W06H22-033	4+4	6	63	22	34	8	13.0	ZNHT 033	CSX2553	CTS08W	0.1
SMFZN-1080W06H22-033	5+5	6	80	22	34	8	21.5				0.2
SMFZN-12100W06H27-033	6+6	6	100	27	41	12	27.0				0.3
SMFZN-14125W06H40-033	7+7	6	125	40	55	12	33.0				0.5
SMFZN-18160W06H40-033	9+9	6	160	40	55	12	50.0				0.8
SMFZN-20200W06H50-033	10+10	6	200	50	69	12	63.0				1.2
SMFZN-24250W06H50-033	12+12	6	250	50	69	12	88.0				2.0
SMFZN-880W07H22-038	4+4	7	80	22	34	12	20.0	ZNHT 038	CSX4051	CTS15W	0.2
SMFZN-10100W07H27-038	5+5	7	100	27	41	12	26.5				0.3
SMFZN-12125W07H40-038	6+6	7	125	40	55	12	32.0				0.5
SMFZN-16160W07H40-038	8+8	7	160	40	55	12	49.5				0.8
SMFZN-18200W07H50-038	9+9	7	200	50	69	12	62.5				1.3
SMFZN-24250W07H50-038	12+12	7	250	50	69	12	87.5				2.1
SMFZN-880W08H22-043	4+4	8	80	22	34	12	20.5	ZNHT 043	CSX4061	CTS15W	0.2
SMFZN-10100W08H27-043	5+5	8	100	27	41	12	27.0				0.3
SMFZN-12125W08H40-043	6+6	8	125	40	55	12	32.5				0.9
SMFZN-16160W08H40-043	8+8	8	160	40	55	12	50.0				0.9
SMFZN-18200W08H50-043	9+9	8	200	50	69	12	63.0				1.4
SMFZN-24250W08H50-043	12+12	8	250	50	69	12	88.0				2.3
SMFZN-10100W09H27-048	5+5	9	100	27	41	12	27.5	ZNHT 048	CSX4070	CTS15W	0.4
SMFZN-12125W09H40-048	6+6	9	125	40	55	12	33.0				0.6
SMFZN-16160W09H40-048	8+8	9	160	40	55	12	50.5				1.0
SMFZN-18200W09H50-048	9+9	9	200	50	69	12	63.5				1.6
SMFZN-24250W09H50-048	12+12	9	250	50	69	12	88.5				2.6
SMFZN-10100W10H27-053	5+5	10	100	27	41	12	28.0	ZNHT 053	CSX4080	CTS15W	0.4
SMFZN-12125W10H40-053	6+6	10	125	40	55	12	33.5				0.6
SMFZN-16160W10H40-053	8+8	10	160	40	55	12	51.0				1.1
SMFZN-18200W10H50-053	9+9	10	200	50	69	12	64.0				1.8
SMFZN-24250W10H50-053	12+12	10	250	50	69	12	89.0				2.9

- 标准刀盘不带内冷
- 刀片需单独订购
- Standard cutter head without internal cooling
- Insert to be ordered separately

铝合金高速加工铣刀盘
High speed milling cutter for aluminum alloy



图一



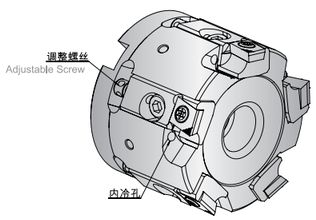
图二

型号 Designation	图示 Picture	刃数 Flutes	D	d	H	W	B	适配刀夹 Blade	重量kg Weight
CAL 04004	—	4	40	32	50	-	-	XCALBSS	0.9
CAL 05005	二	5	50	22		10.4	6.3		0.3
CAL 06305		5	63	22		10.4	6.3		0.4
CAL 08008		8	80	25.4		9.5	6.3		0.7
CAL 10010		10	100	31.75	54.8	12.7	8		1.1
CAL 12512		12	125	38.1		15.9	10		1.6

- 标准刀盘不带内冷
- 刀片需单独订购
- Standard cutter head without internal cooling
- Insert to be ordered separately

可换刀夹
Convertible tool holder

名称 Name	型号 Designation	形状 Shape	适配刀片(PCD) Insert	刀片螺丝组合 Screw
刀夹	XCALBSS		XCBGW 09T3-R	SRM4-T15



- 通过简单调整（调整螺丝）可保证刀尖跳动0.01mm以内。
- 刀体有内冷孔，可以准确的喷到刀 尖提供冷却。
- Through simple adjust(adjust screw) can assure tip runout within 0.01mm
- Tool body with inside coolant, can provide coolant to tip accurately

45度定位倒角刀
45 degree positioning chamfering knife

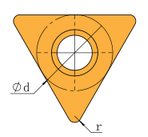


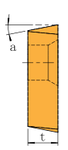


型号 Designation	刃数 Flutes	D	D1	d	a	L1	L	倒角范围 Chamfer Range	适配刀片 Insert	刀片螺钉 Screw	扳手 Wrench	重量kg Weight
MCT-C20-20-130-1T	1	20	6	20	11.3	20	130	6-20	TCMX16T308	SRM4.0	T15	0.28

- 标准刀杆不带内冷
- 刀片需单独订购
- Standard shank without internal cooling
- Insert to be ordered separately



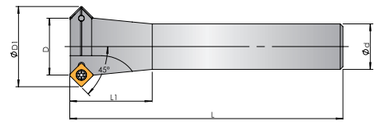




型号 Designation	d	t	a	r	刀片材质 Insert material	P	M	K	N	H
TCMX 16T308	9.525	3.97	7°	0.8	MG1315	●	●			
					MG3320			●		

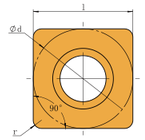
45度内外倒角刀
45 degree inside and outside chamfering knife

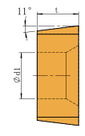




型号 Designation	刃数 Flutes	D	D1	d	L1	L	适配刀片 Insert	刀片螺钉 Screw	扳手 Wrench	重量kg Weight
MCT45-C3/4-25-110-2T	2	25	38	19.05	45	110	SPMW090304	SRM4.0	T15	0.26
MCT45-C20-25-110-2T	2	25	38	20	45	110				0.4
MCT45-C25-25-150-2T	2	25	38	25	45	150				0.55
MCT45-C25-30-150-2T	2	30	43	25	45	150				0.59

- 标准刀杆不带内冷
- 刀片需单独订购
- Standard shank without internal cooling
- Insert to be ordered separately

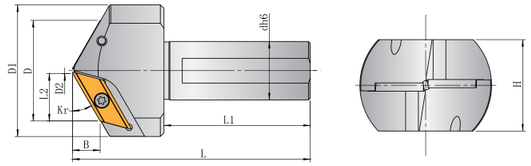




型号 Designation	d	l	t	r	刀片材质 Insert material	P	M	K	N	H
SPMW 090304	9.525	9.525	3.18	0.4	MG1610	●	◎	◎		

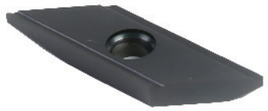
C型倒角刀
Type C chamfering tool

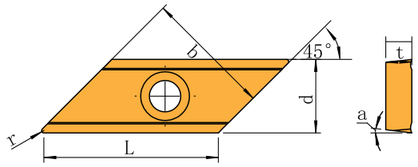




型号 Designation	刃数 Flutes	Kr	B	L2	D	D1	D2	L	L1	d	H	适配刀片 Insert	刀片螺丝 Insert screw	扳手 spanner
CCF60XC-134L130W32R-31	1	60	25.5	14.5	34	40	5	130	80	32	—	XCET310404	CSG5012-P	CTS20W-P
CCF45XC-246L130W32R-31	2	45	20.5	20.5	46	56	5	130	80	32	45			
CCF30XC-255L130W32R-31	2	30	14.5	25.5	55	72	5	130	80	32	50			

- 标准刀杆不带内冷，刀片需单独订购
- 最小加工孔径ϕ5mm
- Standard shank without internal cooling, Insert to be ordered separately
- Minimum machining aperture ϕ5mm

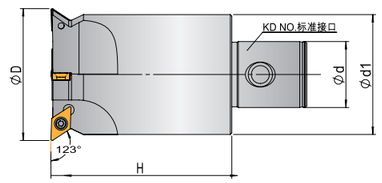




型号 Designation	L	b	d	t	a	r	刀片材质 Insert material	P	M	K	N	H
XCET 310404	29.2	22	12.7	4.5	7°	0.4	MG1315	●	●			
							MG3320			●		

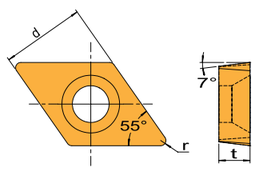
燕尾槽铣刀
Dovetail milling cutter



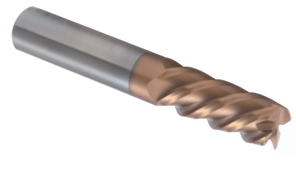


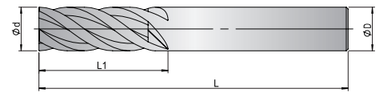
型号 Designation	刃数	D	d	d1	H	KD NO	适配刀片	刀片螺丝	扳手	重量 kg
FL123DC-444KD4-07	4	44	22	40	60	KD4	DCMT 070204	DM2.5x6	T08	0.3
FL123DC-463KD5-07	4	63	28	55	80	KD5				1.35
FL123DC-594KD6-07	4	94	36	85.5	93	KD6				3.1

型号 Designation	d	t	r	刀片材质 Insert material	P	M	K	N	H
DCMT 070204	6.35	2.38	0.4	MG1215	●	◎			
				MG3320			●		



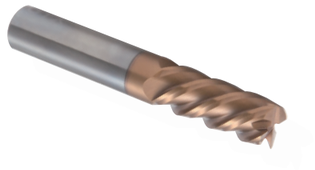
55度平铣刀
55 degree flat milling cutter

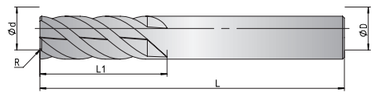




型号	刃数	刃径mm(d)	柄径mm(D)	刃长mm(L1)	全长mm（L）
XFP01003L050	2/4	1	4	3	50
XFP01504L050	2/4	1.5	4	4	50
XFP02005L050	2/4	2	4	5	50
XFP02506L050	2/4	2.5	4	6	50
XFP03008L050	2/4	3	3/4	8	50
XFP03509L050	2/4	3.5	4	9	50
XFP04010L050	2/4	4	4	10	50
XFP05013L050	2/4	5	5/6	13	50
XFP06015L050	2/4	6	6	15	50
XFP07018L060	2/4	7	8	18	60
XFP08020L060	2/4	8	8	20	60
XFP09022L060	2/4	9	10	22	60
XFP10025L075	2/4	10	10	25	75
XFP06015L075	2/4	11	12	25	75
XFP12030L075	2/4	12	12	30	75
XFP14035L100	2/4	14	14	35	100
XFP16040L100	2/4	16	16	40	100
XFP18040L100	2/4	18	18	40	100
XFP20045L100	2/4	20	20	45	100
XFP03012L075	2/4	3	3/4	12	75
XFP04016L075	2/4	4	4	16	75
XFP05020L075	2/4	5	5/6	20	75
XFP06024L075	2/4	6	6	24	75
XFP03012L100	2/4	3	3/4	12	100
XFP04016L100	2/4	4	4	16	100
XFP05020L100	2/4	5	5/6	20	100
XFP06024L100	2/4	6	6	24	100
XFP08032L100	2/4	8	8	32	100
XFP10040L100	2/4	10	10	40	100
XFP12045L100	2/4	12	12	45	100
XFP06024L150	2/4	6	6	24	150
XFP08032L150	2/4	8	8	32	150
XFP10040L150	2/4	10	10	40	150
XFP12060L150	2/4	12	12	60	150
XFP16065L150	2/4	16	16	65	150
XFP20075L150	2/4	20	20	75	150

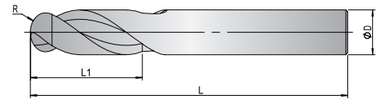
55度圆鼻铣刀
55 degree circular nose milling cutter





型号	刃数	刃径mm(d)	R角mm(D)	柄径mm(D)	刃长mm(L1)	全长mm (L)
XFR01003L050	4	1	R0.2	4	3	50
XFR01504L050	4	1.5	R0.2	4	4	50
XFR02005L050	4	2	R0.2	4	5	50
XFR02506L050	4	2.5	R0.2	4	6	50
XFR0250605L050	4	2.5	R0.5	4	6	50
XFR03008L050	4	3	R0.5	4	8	50
XFR0300810L050	4	3	R1.0	4	8	50
XFR04010L050	4	4	R0.5	4	10	50
XFR0401010L050	4	4	R1.0	4	10	50
XFR05013L050	4	5	R0.5	6	13	50
XFR0501310L050	4	5	R1.0	6	13	50
XFR06015L050	4	6	R0.5	6	15	50
XFR0601510L050	4	6	R1.0	6	15	50
XFR08020L050	4	8	R0.5	8	20	50
XFR0802010L060	4	8	R1.0	8	20	60
XFR10025L060	4	10	R0.5	10	25	60
XFR1002510L075	4	10	R1.0	10	25	75
XFR100251020L075	4	10	R2.0	10	25	75
XFR12030L075	4	12	R0.5	12	30	75
XFR1203010L075	4	12	R1.0	12	30	75
XFR1203020L075	4	12	R2.0	12	30	75
XFR04010L075	4	4	R0.5	4	10	75
XFR04010L100	4	4	R0.5	4	10	100
XFR06015L075	4	6	R0.5	6	15	75
XFR06015L100	4	6	R0.5	6	15	100
XFR06015L150	4	6	R0.5	6	15	150
XFR08020L075	4	8	R0.5	8	20	75
XFR08020L100	4	8	R0.5	8	20	100
XFR08020L150	4	8	R0.5	8	20	150
XFR10025L100	4	10	R0.5	10	25	100
XFR10025L150	4	10	R0.5	10	25	150
XFR12030L100	4	12	R0.5	12	30	100
XFR12030L150	4	12	R0.5	12	30	150
XFR0401010L075	4	4	R1	4	10	75
XFR0601510L100	4	6	R1	6	15	100
XFR0802010L100	4	8	R1	8	20	100
XFR1002510L100	4	10	R1	10	25	100
XFR1002510L150	4	10	R1	10	25	150

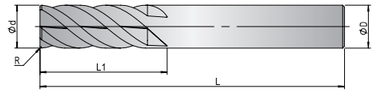
65度球型铣刀
65 degree ball type milling cutter



型号	刃数	刃径mm(d)	柄径mm(D)	刃长mm(L1)	全长mm (L)
XLQ00502L050	2	R0.5	4	2	50
XLQ007503L050	2	R0.75	4	3	50
XLQ01004L050	2	R1.0	4	4	50
XLQ012505L050	2	R1.25	4	5	50
XLQ01506L050	2	R1.5	3/4	6	50
XLQ02008L050	2	R2.0	4	8	50
XLQ02510L050	2	R2.5	5/6	10	50
XLQ03012L050	2	R3.0	6	12	50
XLQ04016L060	2	R4.0	8	16	60
XLQ05020L075	2	R5.0	10	20	75
XLQ06024L075	2	R6.0	12	24	75
XLQ07020L100	2	R7.0	14	28	100
XLQ08032L100	2	R8.0	16	32	100
XLQ10040L100	2	R10	20	40	100
XLQ01506L075	2	R1.5	3/4	6	75
XLQ02008L075	2	R2.0	4	8	75
XLQ01004L100	2	R1.0	6	4	100
XLQ01506L100	2	R1.5	3/4	6	100
XLQ02008L100	2	R2.0	6	8	100
XLQ02510L100	2	R2.5	5/6	10	100
XLQ03012L075	2	R3.0	6	12	75
XLQ03012L100	2	R3.0	6	12	100
XLQ03012L150	2	R3.0	6	12	150
XLQ04016L100	2	R4.0	8	16	100
XLQ04016L150	2	R4.0	8	16	150
XLQ05020L100	2	R5.0	10	20	100
XLQ05020L150	2	R5.0	10	20	150
XLQ06024L100	2	R6.0	12	24	100
XLQ06024L150	2	R6.0	12	24	150
XLQ08032L150	2	R8.0	16	32	150
XLQ10040L150	2	R10	20	40	150

65度圆鼻铣刀
65 degree circular nose milling cutter

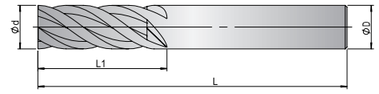




型号	刃数	刃径mm(d)	R角mm(D)	柄径mm(D)	刃长mm(L1)	全长mm（L）
XLR01003L050	4	1	R0.2	4	3	50
XLR01504L050	4	1.5	R0.2	4	4	50
XLR02005L050	4	2	R0.2	4	5	50
XLR02506L050	4	2.5	R0.2	4	6	50
XLR0250506L050	4	2.5	R0.5	4	6	50
XLR03008L050	4	3	R0.5	4	8	50
XLR0301008L050	4	3	R1.0	4	8	50
XLR04010L050	4	4	R0.5	4	10	50
XLR0401010L050	4	4	R1.0	4	10	50
XLR05013L050	4	5	R0.5	6	13	50
XLR0501013L050	4	5	R1.0	6	13	50
XLR06015L050	4	6	R0.5	6	15	50
XLR0601015L050	4	6	R1.0	6	15	50
XLR08020L050	4	8	R0.5	8	20	50
XLR0801020L060	4	8	R1.0	8	20	60
XLR10025L060	4	10	R0.5	10	25	60
XLR1001025L075	4	10	R1.0	10	25	75
XLR1002025L075	4	10	R2.0	10	25	75
XLR12030L075	4	12	R0.5	12	30	75
XLR1201030L075	4	12	R1.0	12	30	75
XLR1202030L075	4	12	R2.0	12	30	75
XLR04010L075	4	4	R0.5	4	10	75
XLR04010L100	4	4	R0.5	4	10	100
XLR06015L075	4	6	R0.5	6	15	75
XLR06015L100	4	6	R0.5	6	15	100
XLR06015L150	4	6	R0.5	6	15	150
XLR08020L075	4	8	R0.5	8	20	75
XLR08020L100	4	8	R0.5	8	20	100
XLR08020L150	4	8	R0.5	8	20	150
XLR10025L100	4	10	R0.5	10	25	100
XLR10025L150	4	10	R0.5	10	25	150
XLR12030L100	4	12	R0.5	12	30	100
XLR12030L150	4	12	R0.5	12	30	150
XLR0401010L075	4	4	R1	4	10	75
XLR0601015L100	4	6	R1	6	15	100
XLR0801020L100	4	8	R1	8	20	100
XLR1001025L100	4	10	R1	10	25	100
XLR1001025L150	4	10	R1	10	25	150
XLR1201030L100	4	12	R1	12	30	100
XLR1002025L100	4	10	R2	10	25	100
XLR1003025L100	4	10	R3	10	25	100
XLR1202030L100	4	12	R2	12	30	100

65度平铣刀
65 degree flat milling cutter

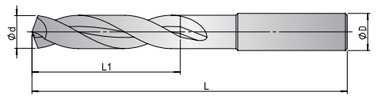




型号	刃数	刃径mm(d)	柄径mm(D)	刃长mm(L1)	全长mm（L）
XLP01003L050	2/4	1	4	3	50
XLP01504L050	2/4	1.5	4	4	50
XLP02005L050	2/4	2	4	5	50
XLP02506L050	2/4	2.5	4	6	50
XLP03008L050	2/4	3	3/4	8	50
XLP03509L050	2/4	3.5	4	9	50
XLP04010L050	2/4	4	4	10	50
XLP05013L050	2/4	5	5/6	13	50
XLP06015L050	2/4	6	6	15	50
XLP07018L060	2/4	7	8	18	60
XLP08020L060	2/4	8	8	20	60
XLP09022L060	2/4	9	10	22	60
XLP10025L075	2/4	10	10	25	75
XLP06015L075	2/4	11	12	25	75
XLP12030L075	2/4	12	12	30	75
XLP14035L100	2/4	14	14	35	100
XLP16040L100	2/4	16	16	40	100
XLP18040L100	2/4	18	18	40	100
XLP20045L100	2/4	20	20	45	100
XLP03012L075	2/4	3	3/4	12	75
XLP04016L075	2/4	4	4	16	75
XLP05020L075	2/4	5	5/6	20	75
XLP06024L075	2/4	6	6	24	75
XLP03012L100	2/4	3	3/4	12	100
XLP04016L100	2/4	4	4	16	100
XLP05020L100	2/4	5	5/6	20	100
XLP06024L100	2/4	6	6	24	100
XLP08032L100	2/4	8	8	32	100
XLP10040L100	2/4	10	10	40	100
XLP12045L100	2/4	12	12	45	100
XLP06024L150	2/4	6	6	24	150
XLP08032L150	2/4	8	8	32	150
XLP10040L150	2/4	10	10	40	150
XLP12060L150	2/4	12	12	60	150
XLP16065L150	2/4	16	16	65	150
XLP20075L150	2/4	20	20	75	150

硬质合金钻头3D
Carbide drill 3D





型号 Designation	刃径 d	刃长 L1	柄径 D	总长 L	冷却
ZH-D033-3D	3.3	20	6	62	外冷
ZH-D034-3D	3.4				
ZH-D035-3D	3.5				
ZH-D036-3D	3.6				
ZH-D037-3D	3.7				
ZH-D038-3D	3.8	24	6	66	外冷
ZH-D039-3D	3.9				
ZH-D040-3D	4.0				
ZH-D041-3D	4.1				
ZH-D042-3D	4.2				
ZH-D043-3D	4.3				
ZH-D044-3D	4.4				
ZH-D045-3D	4.5				
ZH-D046-3D	4.6				
ZH-D047-3D	4.7				
ZH-D048-3D	4.8	28	6	66	外冷
ZH-D049-3D	4.9				
ZH-D050-3D	5.0				
ZH-D051-3D	5.1				
ZH-D052-3D	5.2				
ZH-D053-3D	5.3				
ZH-D054-3D	5.4				
ZH-D055-3D	5.5				
ZH-D056-3D	5.6				
ZH-D057-3D	5.7				
ZH-D058-3D	5.8				
ZH-D059-3D	5.9				
ZH-D060-3D	6.0				
ZH-D061-3D	6.1	34	8	79	外冷
ZH-D062-3D	6.2				
ZH-D063-3D	6.3				
ZH-D064-3D	6.4				
ZH-D065-3D	6.5				
ZH-D066-3D	6.6				
ZH-D067-3D	6.7				
ZH-D068-3D	6.8				
ZH-D069-3D	6.9				
ZH-D070-3D	7.0				

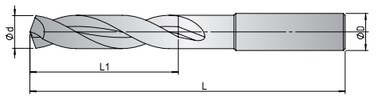
型号 Designation	刃径 d	刃长 L1	柄径 D	总长 L	冷却
ZH-D071-3D	7.1	41	8	79	外冷
ZH-D072-3D	7.2				
ZH-D073-3D	7.3				
ZH-D074-3D	7.4				
ZH-D075-3D	7.5				
ZH-D076-3D	7.6				
ZH-D077-3D	7.7				
ZH-D078-3D	7.8				
ZH-D079-3D	7.9				
ZH-D080-3D	8.0				
ZH-D081-3D	8.1	47	10	89	外冷
ZH-D082-3D	8.2				
ZH-D083-3D	8.3				
ZH-D084-3D	8.4				
ZH-D085-3D	8.5				
ZH-D086-3D	8.6				
ZH-D087-3D	8.7				
ZH-D088-3D	8.8				
ZH-D089-3D	8.9				
ZH-D090-3D	9.0				
ZH-D091-3D	9.1				
ZH-D092-3D	9.2				
ZH-D093-3D	9.3				
ZH-D094-3D	9.4				
ZH-D095-3D	9.5				
ZH-D096-3D	9.6				
ZH-D097-3D	9.7				
ZH-D098-3D	9.8				
ZH-D099-3D	9.9				
ZH-D100-3D	10.0				

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硬质合金钻头3D
Carbide drill 3D



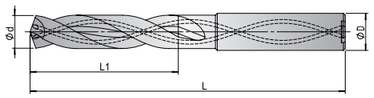


型号 Designation	刃径 d	刃长 L1	柄径 D	总长 L	冷却
ZH-D101-3D	10.1	55	12	102	外冷
ZH-D102-3D	10.2				
ZH-D103-3D	10.3				
ZH-D104-3D	10.4				
ZH-D105-3D	10.5				
ZH-D106-3D	10.6				
ZH-D107-3D	10.7				
ZH-D108-3D	10.8				
ZH-D109-3D	10.9				
ZH-D110-3D	11.0				
ZH-D111-3D	11.1				
ZH-D112-3D	11.2				
ZH-D113-3D	11.3				
ZH-D114-3D	11.4				
ZH-D115-3D	11.5				
ZH-D116-3D	11.6				
ZH-D117-3D	11.7				
ZH-D118-3D	11.8				
ZH-D119-3D	11.9				
ZH-D120-3D	12.0				
ZH-D121-3D	12.1	60	14	107	外冷
ZH-D122-3D	12.2				
ZH-D123-3D	12.3				
ZH-D124-3D	12.4				
ZH-D125-3D	12.5				
ZH-D126-3D	12.6				
ZH-D127-3D	12.7				
ZH-D128-3D	12.8				
ZH-D129-3D	12.9				
ZH-D130-3D	13.0				

型号 Designation	刃径 d	刃长 L1	柄径 D	总长 L	冷却
ZH-D071-3D	13.1	60	14	107	外冷
ZH-D072-3D	13.2				
ZH-D073-3D	13.3				
ZH-D074-3D	13.4				
ZH-D075-3D	13.5				
ZH-D076-3D	13.6				
ZH-D077-3D	13.7				
ZH-D078-3D	13.8				
ZH-D079-3D	13.9				
ZH-D080-3D	14.0				
ZH-D081-3D	14.1	65	16	115	外冷
ZH-D082-3D	14.2				
ZH-D083-3D	14.3				
ZH-D084-3D	14.4				
ZH-D085-3D	14.5				
ZH-D086-3D	14.6				
ZH-D087-3D	14.7				
ZH-D088-3D	14.8				
ZH-D089-3D	14.9				
ZH-D090-3D	15.0				
ZH-D091-3D	15.1				
ZH-D092-3D	15.2				
ZH-D093-3D	15.3				
ZH-D094-3D	15.4				
ZH-D095-3D	15.5				
ZH-D096-3D	15.6				
ZH-D097-3D	15.7				
ZH-D098-3D	15.8				
ZH-D099-3D	15.9				
ZH-D100-3D	16.0				

硬质合金钻头内冷3D
Carbide drill Internal cooling 3D





型号 Designation	刃径 d	刃长 L1	柄径 D	总长 L	冷却
ZH-D033-3D-C	3.3	20	6	62	内冷
ZH-D034-3D-C	3.4				
ZH-D035-3D-C	3.5				
ZH-D036-3D-C	3.6				
ZH-D037-3D-C	3.7				
ZH-D038-3D-C	3.8	24	4	58	内冷
ZH-D039-3D-C	3.9				
ZH-D040-3D-C	4.0				
ZH-D041-3D-C	4.1	24	6	66	内冷
ZH-D042-3D-C	4.2				
ZH-D043-3D-C	4.3				
ZH-D044-3D-C	4.4				
ZH-D045-3D-C	4.5				
ZH-D046-3D-C	4.6				
ZH-D047-3D-C	4.7				
ZH-D048-3D-C	4.8	28	6	66	内冷
ZH-D049-3D-C	4.9				
ZH-D050-3D-C	5.0				
ZH-D051-3D-C	5.1				
ZH-D052-3D-C	5.2				
ZH-D053-3D-C	5.3				
ZH-D054-3D-C	5.4				
ZH-D055-3D-C	5.5				
ZH-D056-3D-C	5.6				
ZH-D057-3D-C	5.7				
ZH-D058-3D-C	5.8				
ZH-D059-3D-C	5.9				
ZH-D060-3D-C	6.0				
ZH-D061-3D-C	6.1	34	8	79	内冷
ZH-D062-3D-C	6.2				
ZH-D063-3D-C	6.3				
ZH-D064-3D-C	6.4				
ZH-D065-3D-C	6.5				
ZH-D066-3D-C	6.6				
ZH-D067-3D-C	6.7				
ZH-D068-3D-C	6.8				
ZH-D069-3D-C	6.9				
ZH-D070-3D-C	7.0				

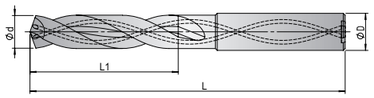
型号 Designation	刃径 d	刃长 L1	柄径 D	总长 L	冷却
ZH-D071-3D-C	7.1	41	8	79	内冷
ZH-D072-3D-C	7.2				
ZH-D073-3D-C	7.3				
ZH-D074-3D-C	7.4				
ZH-D075-3D-C	7.5				
ZH-D076-3D-C	7.6				
ZH-D077-3D-C	7.7				
ZH-D078-3D-C	7.8				
ZH-D079-3D-C	7.9				
ZH-D080-3D-C	8.0				
ZH-D081-3D-C	8.1	47	10	89	内冷
ZH-D082-3D-C	8.2				
ZH-D083-3D-C	8.3				
ZH-D084-3D-C	8.4				
ZH-D085-3D-C	8.5				
ZH-D086-3D-C	8.6				
ZH-D087-3D-C	8.7				
ZH-D088-3D-C	8.8				
ZH-D089-3D-C	8.9				
ZH-D090-3D-C	9.0				
ZH-D091-3D-C	9.1				
ZH-D092-3D-C	9.2				
ZH-D093-3D-C	9.3				
ZH-D094-3D-C	9.4				
ZH-D095-3D-C	9.5				
ZH-D096-3D-C	9.6				
ZH-D097-3D-C	9.7				
ZH-D098-3D-C	9.8				
ZH-D099-3D-C	9.9				
ZH-D100-3D-C	10.0				

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硬质合金钻头内冷3D
Carbide drill Internal cooling 3D



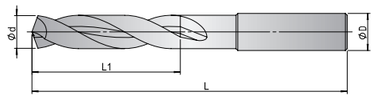


型号 Designation	刃径 d	刃长 L1	柄径 D	总长 L	冷却
ZH-D101-3D-C	10.1	55	12	102	内冷
ZH-D102-3D-C	10.2				
ZH-D103-3D-C	10.3				
ZH-D104-3D-C	10.4				
ZH-D105-3D-C	10.5				
ZH-D106-3D-C	10.6				
ZH-D107-3D-C	10.7				
ZH-D108-3D-C	10.8				
ZH-D109-3D-C	10.9				
ZH-D110-3D-C	11.0				
ZH-D111-3D-C	11.1				
ZH-D112-3D-C	11.2				
ZH-D113-3D-C	11.3				
ZH-D114-3D-C	11.4				
ZH-D115-3D-C	11.5				
ZH-D116-3D-C	11.6				
ZH-D117-3D-C	11.7				
ZH-D118-3D-C	11.8				
ZH-D119-3D-C	11.9				
ZH-D120-3D-C	12.0				
ZH-D121-3D-C	12.1	60	14	107	内冷
ZH-D122-3D-C	12.2				
ZH-D123-3D-C	12.3				
ZH-D124-3D-C	12.4				
ZH-D125-3D-C	12.5				
ZH-D126-3D-C	12.6				
ZH-D127-3D-C	12.7				
ZH-D128-3D-C	12.8				
ZH-D129-3D-C	12.9				
ZH-D130-3D-C	13.0				

型号 Designation	刃径 d	刃长 L1	柄径 D	总长 L	冷却
ZH-D131-3D-C	13.1	60	14	107	内冷
ZH-D132-3D-C	13.2				
ZH-D133-3D-C	13.3				
ZH-D134-3D-C	13.4				
ZH-D135-3D-C	13.5				
ZH-D136-3D-C	13.6				
ZH-D137-3D-C	13.7				
ZH-D138-3D-C	13.8				
ZH-D139-3D-C	13.9				
ZH-D140-3D-C	14.0				
ZH-D141-3D-C	14.1	65	16	115	内冷
ZH-D142-3D-C	14.2				
ZH-D143-3D-C	14.3				
ZH-D144-3D-C	14.4				
ZH-D145-3D-C	14.5				
ZH-D146-3D-C	14.6				
ZH-D147-3D-C	14.7				
ZH-D148-3D-C	14.8				
ZH-D149-3D-C	14.9				
ZH-D150-3D-C	15.0				
ZH-D151-3D-C	15.1				
ZH-D152-3D-C	15.2				
ZH-D153-3D-C	15.3				
ZH-D154-3D-C	15.4				
ZH-D155-3D-C	15.5				
ZH-D156-3D-C	15.6				
ZH-D157-3D-C	15.7				
ZH-D158-3D-C	15.8				
ZH-D159-3D-C	15.9				
ZH-D160-3D-C	16.0				

硬质合金钻头5D
Carbide drill 5D





型号 Designation	刃径 d	刃长 L1	柄径 D	总长 L	冷却
ZH-D033-5D	3.3	28	6	66	外冷
ZH-D034-5D	3.4				
ZH-D035-5D	3.5				
ZH-D036-5D	3.6				
ZH-D037-5D	3.7				
ZH-D038-5D	3.8	36	6	74	外冷
ZH-D039-5D	3.9				
ZH-D040-5D	4.0				
ZH-D041-5D	4.1				
ZH-D042-5D	4.2				
ZH-D043-5D	4.3				
ZH-D044-5D	4.4				
ZH-D045-5D	4.5				
ZH-D046-5D	4.6				
ZH-D047-5D	4.7				
ZH-D048-5D	4.8	44	6	82	外冷
ZH-D049-5D	4.9				
ZH-D050-5D	5.0				
ZH-D051-5D	5.1				
ZH-D052-5D	5.2				
ZH-D053-5D	5.3				
ZH-D054-5D	5.4				
ZH-D055-5D	5.5				
ZH-D056-5D	5.6				
ZH-D057-5D	5.7				
ZH-D058-5D	5.8				
ZH-D059-5D	5.9				
ZH-D060-5D	6.0				
ZH-D061-5D	6.1	53	8	91	外冷
ZH-D062-5D	6.2				
ZH-D063-5D	6.3				
ZH-D064-5D	6.4				
ZH-D065-5D	6.5				
ZH-D066-5D	6.6				
ZH-D067-5D	6.7				
ZH-D068-5D	6.8				
ZH-D069-5D	6.9				
ZH-D070-5D	7.0				

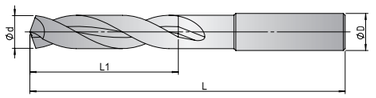
型号 Designation	刃径 d	刃长 L1	柄径 D	总长 L	冷却
ZH-D071-5D	7.1	53	8	91	外冷
ZH-D072-5D	7.2				
ZH-D073-5D	7.3				
ZH-D074-5D	7.4				
ZH-D075-5D	7.5				
ZH-D076-5D	7.6				
ZH-D077-5D	7.7				
ZH-D078-5D	7.8				
ZH-D079-5D	7.9				
ZH-D080-5D	8.0				
ZH-D081-5D	8.1	61	10	103	外冷
ZH-D082-5D	8.2				
ZH-D083-5D	8.3				
ZH-D084-5D	8.4				
ZH-D085-5D	8.5				
ZH-D086-5D	8.6				
ZH-D087-5D	8.7				
ZH-D088-5D	8.8				
ZH-D089-5D	8.9				
ZH-D090-5D	9.0				
ZH-D091-5D	9.1				
ZH-D092-5D	9.2				
ZH-D093-5D	9.3				
ZH-D094-5D	9.4				
ZH-D095-5D	9.5				
ZH-D096-5D	9.6				
ZH-D097-5D	9.7				
ZH-D098-5D	9.8				
ZH-D099-5D	9.9				
ZH-D100-5D	10.0				

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硬质合金钻头5D
Carbide drill 5D



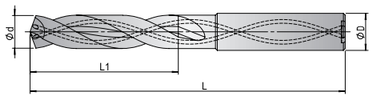


型号 Designation	刃径 d	刃长 L1	柄径 D	总长 L	冷却
ZH-D101-5D	10.1	71	12	118	外冷
ZH-D102-5D	10.2				
ZH-D103-5D	10.3				
ZH-D104-5D	10.4				
ZH-D105-5D	10.5				
ZH-D106-5D	10.6				
ZH-D107-5D	10.7				
ZH-D108-5D	10.8				
ZH-D109-5D	10.9				
ZH-D110-5D	11.0				
ZH-D111-5D	11.1				
ZH-D112-5D	11.2				
ZH-D113-5D	11.3				
ZH-D114-5D	11.4				
ZH-D115-5D	11.5				
ZH-D116-5D	11.6				
ZH-D117-5D	11.7				
ZH-D118-5D	11.8				
ZH-D119-5D	11.9				
ZH-D120-5D	12.0				
ZH-D121-5D	12.1	77	14	124	外冷
ZH-D122-5D	12.2				
ZH-D123-5D	12.3				
ZH-D124-5D	12.4				
ZH-D125-5D	12.5				
ZH-D126-5D	12.6				
ZH-D127-5D	12.7				
ZH-D128-5D	12.8				
ZH-D129-5D	12.9				
ZH-D130-5D	13.0				

型号 Designation	刃径 d	刃长 L1	柄径 D	总长 L	冷却
ZH-D131-5D	13.1	77	14	127	外冷
ZH-D132-5D	13.2				
ZH-D133-5D	13.3				
ZH-D134-5D	13.4				
ZH-D135-5D	13.5				
ZH-D136-5D	13.6				
ZH-D137-5D	13.7				
ZH-D138-5D	13.8				
ZH-D139-5D	13.9				
ZH-D140-5D	14.0				
ZH-D141-5D	14.1	83	16	133	外冷
ZH-D142-5D	14.2				
ZH-D143-5D	14.3				
ZH-D144-5D	14.4				
ZH-D145-5D	14.5				
ZH-D146-5D	14.6				
ZH-D147-5D	14.7				
ZH-D148-5D	14.8				
ZH-D149-5D	14.9				
ZH-D150-5D	15.0				
ZH-D151-5D	15.1				
ZH-D152-5D	15.2				
ZH-D153-5D	15.3				
ZH-D154-5D	15.4				
ZH-D155-5D	15.5				
ZH-D156-5D	15.6				
ZH-D157-5D	15.7				
ZH-D158-5D	15.8				
ZH-D159-5D	15.9				
ZH-D160-5D	16.0				

硬质合金钻头内冷5D
Carbide drill Internal cooling 5D



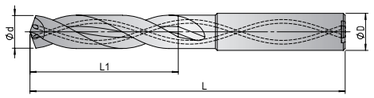


型号 Designation	刃径 d	刃长 L1	柄径 D	总长 L	冷却
ZH-D033-5D-C	3.3	28	4	58	内冷
ZH-D034-5D-C	3.4				
ZH-D035-5D-C	3.5				
ZH-D036-5D-C	3.6				
ZH-D037-5D-C	3.7				
ZH-D038-5D-C	3.8	36	4	66	内冷
ZH-D039-5D-C	3.9				
ZH-D040-5D-C	4.0				
ZH-D041-5D-C	4.1	36	6	74	内冷
ZH-D042-5D-C	4.2				
ZH-D043-5D-C	4.3				
ZH-D044-5D-C	4.4				
ZH-D045-5D-C	4.5				
ZH-D046-5D-C	4.6				
ZH-D047-5D-C	4.7				
ZH-D048-5D-C	4.8	44	6	82	内冷
ZH-D049-5D-C	4.9				
ZH-D050-5D-C	5.0				
ZH-D051-5D-C	5.1				
ZH-D052-5D-C	5.2				
ZH-D053-5D-C	5.3				
ZH-D054-5D-C	5.4				
ZH-D055-5D-C	5.5				
ZH-D056-5D-C	5.6				
ZH-D057-5D-C	5.7				
ZH-D058-5D-C	5.8				
ZH-D059-5D-C	5.9				
ZH-D060-5D-C	6.0				
ZH-D061-5D-C	6.1	53	8	91	内冷
ZH-D062-5D-C	6.2				
ZH-D063-5D-C	6.3				
ZH-D064-5D-C	6.4				
ZH-D065-5D-C	6.5				
ZH-D066-5D-C	6.6				
ZH-D067-5D-C	6.7				
ZH-D068-5D-C	6.8				
ZH-D069-5D-C	6.9				
ZH-D070-5D-C	7.0				

型号 Designation	刃径 d	刃长 L1	柄径 D	总长 L	冷却
ZH-D071-5D-C	7.1	53	8	91	内冷
ZH-D072-5D-C	7.2				
ZH-D073-5D-C	7.3				
ZH-D074-5D-C	7.4				
ZH-D075-5D-C	7.5				
ZH-D076-5D-C	7.6				
ZH-D077-5D-C	7.7				
ZH-D078-5D-C	7.8				
ZH-D079-5D-C	7.9				
ZH-D080-5D-C	8.0				
ZH-D081-5D-C	8.1	61	10	103	内冷
ZH-D082-5D-C	8.2				
ZH-D083-5D-C	8.3				
ZH-D084-5D-C	8.4				
ZH-D085-5D-C	8.5				
ZH-D086-5D-C	8.6				
ZH-D087-5D-C	8.7				
ZH-D088-5D-C	8.8				
ZH-D089-5D-C	8.9				
ZH-D090-5D-C	9.0				
ZH-D091-5D-C	9.1				
ZH-D092-5D-C	9.2				
ZH-D093-5D-C	9.3				
ZH-D094-5D-C	9.4				
ZH-D095-5D-C	9.5				
ZH-D096-5D-C	9.6				
ZH-D097-5D-C	9.7				
ZH-D098-5D-C	9.8				
ZH-D099-5D-C	9.9				
ZH-D100-5D-C	10.0				

硬质合金钻头内冷5D
Carbide drill Internal cooling 5D





型号 Designation	刃径 d	刃长 L1	柄径 D	总长 L	冷却
ZH-D101-5D-C	10.1	71	12	118	内冷
ZH-D102-5D-C	10.2				
ZH-D103-5D-C	10.3				
ZH-D104-5D-C	10.4				
ZH-D105-5D-C	10.5				
ZH-D106-5D-C	10.6				
ZH-D107-5D-C	10.7				
ZH-D108-5D-C	10.8				
ZH-D109-5D-C	10.9				
ZH-D110-5D-C	11.0				
ZH-D111-5D-C	11.1				
ZH-D112-5D-C	11.2				
ZH-D113-5D-C	11.3				
ZH-D114-5D-C	11.4				
ZH-D115-5D-C	11.5				
ZH-D116-5D-C	11.6				
ZH-D117-5D-C	11.7				
ZH-D118-5D-C	11.8				
ZH-D119-5D-C	11.9				
ZH-D120-5D-C	12.0				
ZH-D121-5D-C	12.1	77	14	124	内冷
ZH-D122-5D-C	12.2				
ZH-D123-5D-C	12.3				
ZH-D124-5D-C	12.4				
ZH-D125-5D-C	12.5				
ZH-D126-5D-C	12.6				
ZH-D127-5D-C	12.7				
ZH-D128-5D-C	12.8				
ZH-D129-5D-C	12.9				
ZH-D130-5D-C	13.0				

型号 Designation	刃径 d	刃长 L1	柄径 D	总长 L	冷却
ZH-D131-5D-C	13.1	77	14	124	内冷
ZH-D132-5D-C	13.2				
ZH-D133-5D-C	13.3				
ZH-D134-5D-C	13.4				
ZH-D135-5D-C	13.5				
ZH-D136-5D-C	13.6				
ZH-D137-5D-C	13.7				
ZH-D138-5D-C	13.8				
ZH-D139-5D-C	13.9				
ZH-D140-5D-C	14.0				
ZH-D141-5D-C	14.1	83	16	133	内冷
ZH-D142-5D-C	14.2				
ZH-D143-5D-C	14.3				
ZH-D144-5D-C	14.4				
ZH-D145-5D-C	14.5				
ZH-D146-5D-C	14.6				
ZH-D147-5D-C	14.7				
ZH-D148-5D-C	14.8				
ZH-D149-5D-C	14.9				
ZH-D150-5D-C	15.0				
ZH-D151-5D-C	15.1				
ZH-D152-5D-C	15.2				
ZH-D153-5D-C	15.3				
ZH-D154-5D-C	15.4				
ZH-D155-5D-C	15.5				
ZH-D156-5D-C	15.6				
ZH-D157-5D-C	15.7				
ZH-D158-5D-C	15.8				
ZH-D159-5D-C	15.9				
ZH-D160-5D-C	16.0				

硬质合金钻头切削参数(推荐)
Carbide drill cutting parameters (recommended)

直径mm Diameter mm	进给系列mm/r Feed series mm/r								
	A	B	C	D	E	F	G	H
3.00	0.03	0.04	0.05	0.06	0.08	0.10	0.12	0.15
4.00	0.04	0.05	0.06	0.08	0.10	0.12	0.15	0.18
5.00	0.05	0.06	0.07	0.09	0.10	0.12	0.16	0.18
6.00	0.05	0.07	0.08	0.10	0.12	0.15	0.18	0.20
8.00	0.06	0.08	0.10	0.12	0.15	0.18	0.20	0.25
10.00	0.08	0 10	0.12	0.15	0.18	0.20	0.25	0.30
12.00	0.10	0.12	0.15	0.18	0.20	0.25	0.30	0.35
16.00	0.12	0.15	0.18	0.20	0.25	0.30	0.35	0.40
20.00	0 15	0 18	0.20	0.25	0 30	0 35	0.40	0 50

- 硬质合金钻头应在高刚性大功率机床上使用
- 应保证主轴—刀柄—刀尖跳动误差在0.02范围内
- 使用内冷麻花钻头时，应保证内冷压力不小于:
  φ5时20kgf/cm', φ10时15kgf/cm',
  φ15时10kgf/cm',φ20 时7kgf/cm';
  内冷直槽钻由于排屑困难，内冷压力还应相应提高
- 本推荐参数需根据实际加工情况进行调整

加工材料组ISO Processed material group ISO	被加工材料 Material being processed	硬度 hardness		强度 Strength	材料举例 Examples of materials		3xD外冷		3xD内冷		5xD外冷		5xD内冷	
		HB	HRC	N/mm²	中国 China	国际 International	Vc	f	Vc	f	Vc	f	Vc	f
1.P钢	易切钢	<150		<700	Y12, Y15Pb	10S20, 11SMnPb36	130	E	150	E	117	E	135	E
		>150		>700	Y35, Y40Mn	35S520, 44SMn28	110	D	125	D	99	D	113	D
	碳素结构钢	<200		<700	Q235A, Q275	S235JR, S275J2G3	105	E	120	E	95	E	108	E
		<250		<850	35#, 45#	C35E4, C45E4	90	E	105	E	81	E	95	E
		<300	<31	<1000	55#, 65#	C55E4, C60E4,	80	E	90	E	72	E	81	E
	合金结构钢	<300	<31	<1000	20Cr, 20CrMo	20Cr4, 18CrMo4	85	E	100	E	77	E	90	E
		<350	<37	<1200	40Cr, 42CrMo	41Cr4, 42CrMo4	75	D	85	D	68	D	77	D
	模具钢	<300	<31	<1000	Cr12, Cr12MoV1	210Cr12, 160CrMoV12	85	D	100	D	77	D	90	D
		<350	<37	<1200	CrWMn, 3CrW8V	105WCr1, 30WCrV9	75	D	85	D	68	D	77	D
	工具钢	<300	<31	<1000	9SiCr, [r2	100Cr2,	60	D	70	D	54	D	63	D
	铁素体不锈钢	<200		<700	0Cr13Al, 1Cr17	X6CrA[13, X6Cr17-1	55	C	63	C	50	C	57	C
	马氏体不锈钢	<240		<820	2Cr13, 1Cr17Ni2	X20Cr13, X17CrNi16-2	55	C	63	C	50	C	57	C
2.M不锈钢	奥氏体不锈钢	<250		<850	0Cr19Ni9	X5CrNi18-10,	45	B	50	B			45	B
					0Cr17Ni17Mo2	X5CrNiCrM017-12-2								
	双相不锈钢	<250		<850	0Cr 26Ni5Mo2		45	B	50	B			45	B
3.K铸铁	灰铸铁	<240			HT250, HT350	250, 350	160	G	180	G	144	G	162	G
	球墨铸铁	<300			QT500, QT600	500-7, 600-3	120	F	135	F	108	F	122	F
	可锻铸铁	<300			KTH350-10,KTB400-05	B35-10, W40-05	90	F	105	F	81	F	95	F
4.N铝及铝合金	纯铝	<120		<400	1A50/L3	A199.5								
	变形铝合金≤0.5Si	<120		<400	LF5-1, LD30	AlMg5, AlMg1SiCu								
	铸造铝合金≤10Si	<160		<550	ZL101, ZL104	AlSi7Mg, AlSi9Cu3	160	G	180	G	144	G	162	G
	铸造铝合金> 10Si	<160		<550	ZL102, ZL109	AlSi12, AlSi12Cu	140	G	160	G	126	G	144	G
5.N铜及铜合金	紫铜, 低合金铜	<120		<400	Tu2, H96	Cu-0F, CuSn5								
	黄铜	<160		<550	HPb63, HPb59	CuZn35Pb1, CuZn39Pb3	160	G	180	G	144	G	162	G
	青铜	<160		<550	QSn8, BSn18-26	CuSn8, CuNi18Zn27	90	G	105	G	81	G	95	G
6.S难加工材料 优质耐热合金	纯钛, 钛合金			<400	TA2	Ti99.5								
	Alpha+beta钛合金			<1050	TC4, -	TiAl6V4, TiAl6Zr5								
	铁基耐热合金	<280		<950										
	镍铬、镍钼、镍钴合金、钴铬合金	<350		<1200		Hastelloy, Monel, Inconel								
7.H高硬材料	淬硬钢		<48											
			<62											
	冷硬铸铁		<55											

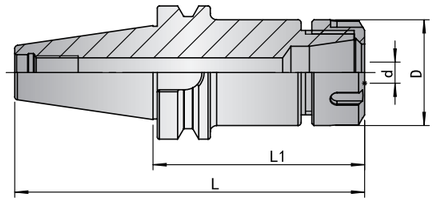
刀柄系列
Toolholder Series



BT筒夹刀柄
BT collet holder

- BT NO锥柄锥度执行AT3标准
- 内外锥同轴度0.005mm
- 预测动平衡设计
- BT NO taper holder execute AT3 standard
- Concentration of internal and external taper 0.005MM



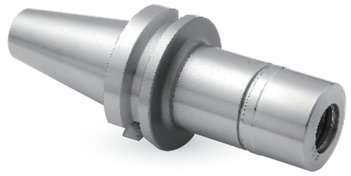


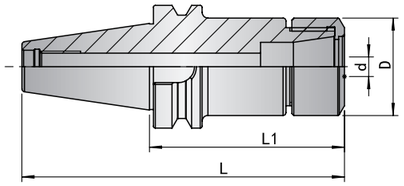
型号 Designation	夹持范围d Clamping Range d	L	L1	D	重量 Kg Weight
BT30H060ER11	0.5-7	108.4	60	19	0.45
BT30H100ER11		148.4	100		0.50
BT30H060ER16	1-10	108.4	60	28	
BT30H100ER16		148.4	100		0.64
BT30H060ER20	2-13	108.4	60	34	0.55
BT30H100ER20		148.4	100		0.76
BT30H060ER25	2-16	108.4	60	42	0.64
BT30H100ER25		148.4	100		0.98
BT30H060ER32	3-20	108.4	60	50	0.70
BT30H100ER32		148.4	100		1.14
BT40H070ER11	0.5-7	135.4	70	19	1.00
BT40H100ER11		165.4	100		1.15
BT40H070ER16	1-10	135.4	70	28	1.08
BT40H100ER16		165.4	100		1.21
BT40H150ER16		215.4	150		1.44
BT40H070ER20	2-13	135.4	70	34	1.12
BT40H100ER20		165.4	100		1.33
BT40H150ER20		215.4	150		1.65
BT40H070ER25	2-16	135.4	70	42	1.22
BT40H100ER25		165.4	100		1.49
BT40H150ER25		215.4	150		1.97
BT40H070ER32	3-20	135.4	70	50	1.27
BT40H100ER32		165.4	100		1.70
BT40H150ER32		215.4	150		2.39
BT40H080ER40	3-26	145.4	80	63	1.62
BT40H100ER40		165.4	100		2.08
BT40H150ER40		215.4	150		2.55

型号 Designation	夹持范围d Clamping Range d	L	L1	D	重量 Kg Weight
BT50H070ER16	1-10	171.8	70	28	3.67
BT50H100ER16		201.8	100		3.77
BT50H150ER16		251.8	150		4.00
BT50H070ER20	2-13	171.8	70	34	3.66
BT50H100ER20		201.8	100		3.75
BT50H150ER20		251.8	150		4.22
BT50H200ER20		301.8	200		4.66
BT50H070ER25	2-16	171.8	70	42	3.64
BT50H100ER25		201.8	100		4.02
BT50H150ER25		251.8	150		4.54
BT50H200ER25		301.8	200		5.01
BT50H070ER32	3-20	171.8	70	50	3.75
BT50H100ER32		201.8	100		4.07
BT50H150ER32		251.8	150		4.82
BT50H200ER32		301.8	200		5.32
BT50H250ER32		351.8	250		5.92
BT50H300ER32		401.8	350		6.60
BT50H080ER40	3-26	181.8	80	63	3.93
BT50H100ER40		201.8	100		4.38
BT50H150ER40		251.8	150		5.51
BT50H200ER40		301.8	200		6.30

BT筒夹刀柄
BT collet holder

- BT NO锥柄锥度执行AT3标准
- 内外锥同轴度0.005mm
- 动平衡设定：G2.5; 25000rpm
- BT NO taper holder execute AT3 standard
- Concentration of internal and external taper 0.005MM
- Balanced:G2.5;25000rpm



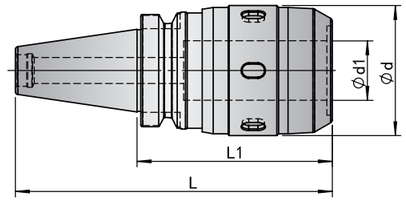


型号 Designation	夹持范围d Clamping Range d	L	L1	D	重量 Kg Weight
BT30H070GSK06	2-6	118.4	70	20	0.90
BT30H100GSK06		148.4	100		0.95
BT30H070GSK10	2-10	118.4	70	27	
BT30H100GSK10		148.4	100		1.00
BT30H100GSK16	3-16			40	
BT30H120GSK16		168.4	120		1.10
BT30H100GSK25	16-25.4	148.4	100	54	
BT40H070GSK06	2-6	135.4	70	20	
BT40H100GSK06		165.4	100		1.20
BT40H070GSK10	2-10	135.4	70	27	1.60
BT40H100GSK10		165.4	100		1.70
BT40H120GSK10		185.4	120		1.80
BT40H070GSK16	3-16	135.4	70	40	1.60
BT40H100GSK16		165.4	100		1.70
BT40H120GSK16		185.4	120		1.80
BT40H070GSK25	16-25.4	135.4	70	54	1.60
BT40H100GSK25		165.4	100		1.70
BT40H120GSK25		185.4	120		1.80
BT50H070GSK06	2-6	171.8	70	20	3.60
BT50H100GSK06		201.8	100		3.90
BT50H100GSK10	3-10			27	4.00
BT50H130GSK10		231.8	130		4.10
BT50H160GSK10		261.8	160		4.40
BT50H100GSK16	3-16	201.8	100	40	4.30
BT50H130GSK16		231.8	130		4.60
BT50H160GSK16		261.8	160		4.80
BT50H100GSK25	16-25.4	201.8	100	54	4.30
BT50H130GSK25		231.8	130		4.60
BT50H160GSK25		261.8	160		4.80

BT强力刀柄
BT milling chunk

- BT NO锥柄锥度执行AT3标准
- BT NO taper holder execute AT3 standard



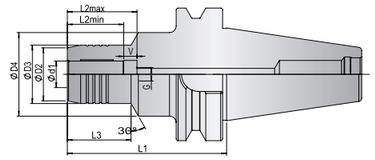


型号 Designation	L	L1	d1	d	重量 Kg Weight
BT30H085PAC20	133.4	85	20	53	1.6
BT40H090PAC25	155.4	90	25	58	1.8
BT40H130PAC25	195.4	130			2.6
BT40H105PAC32	170.4	105	32	68	2.3
BT50H105PAC25	206.8	105	25	58	4.5
BT50H150PAC25	251.8	150			5.4
BT50H110PAC32	211.8	110	32	68	5.1
BT50H135PAC32	236.8	135			5.8
BT50H165PAC32	266.8	165			6.6
BT50H110PAC42	211.8	110	42	84	5.5
BT50H135PAC42	236.8	135			6.5
BT50H165PAC42	266.8	165			7.6

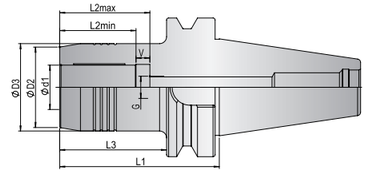
BT液压刀柄
BT Hydraulic tool hold



图一



图二



型号 Designation	图示 Icon	d1	D2	D3	D4	L1	L2max	L2min	V	L3	G
BT40H065HDC10		10	29	32		65	42.5	32.5	10	23	M8x1
BT40H090HDC10						90				42	
BT40H140HDC10						140					
BT40H065HDC12		12	31	34		65	47.5	37.5	10	23	M8x1
BT40H090HDC12						90				44	
BT40H140HDC12						140					
BT40H065HDC14		14	33	36		65	47.5	37.5	10	23	M10x1
BT40H095HDC14	—					95				44	
BT40H135HDC14						135					
BT40H065HDC16		16	36	40		65	52.5	42.5	10	23	M10x1
BT40H090HDC16						90				46	
BT40H140HDC16						140					
BT40H065HDC18		18	38	42		65	52.5	42.5	10	23	M10x1
BT40H095HDC18						95				46	
BT40H135HDC18						135					
BT40H065HDC20		20	40	44		65	52.5	42.5	10	23	M10x1
BT40H075HDC20			41	49.5		75				31.5	
BT40H090HDC20			40	44		90				48	
BT40H140HDC20						140					
BT40H100HDC25		25	55	60	—	100	61	51	10	73	M16x1
BT40H135HDC25						135					
BT40H105HDC32	二	32	58	63		105	65	55	10	78	M16x1
BT40H135HDC32						135					

型号 Designation	图示 Icon	d1	D2	D3	D4	L1	L2max	L2min	V	L3	G
BT50H090HDC10		10	29	32		90	42.5	32.5	10	30	M8x1
BT50H120HDC10						120				42	
BT50H140HDC10						140					
BT50H090HDC12		12	31	34		90	47.5	37.5	10	30	M8x1
BT50H120HDC12						120				44	
BT50H140HDC12						140					
BT50H090HDC14		14	33	36		90	47.5	37.5	10	30	M10x1
BT50H120HDC14						120				44	
BT50H140HDC14	—				63	140					
BT50H090HDC16		16	36	40		90	52.5	42.5	10	30	M10x1
BT50H120HDC16						120				46	
BT50H140HDC16						140					
BT50H090HDC18		18	38	42		90	52.5	42.5	10	30	M10x1
BT50H120HDC18						120				46	
BT50H140HDC18						140					
BT50H090HDC20		20	40	44		90	52.5	42.5	10	30	M10x1
BT50H120HDC20						120				48	
BT50H140HDC20						140					
BT50H105HDC25	二	25	55	60	—	105	61	51	10	67	M16x1
BT50H150HDC25						150					
BT50H090HDC32		32	58	63		90	65	55	10	52	M16x1
BT50H115HDC32						115				77	
BT50H150HDC32						150				112	

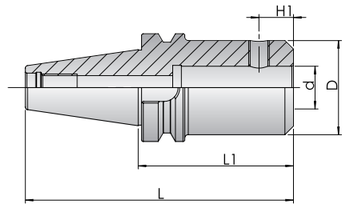
BT侧固式刀柄

BT Side solid handle

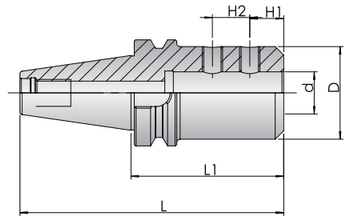
- BT NO锥柄锥度执行AT3标准
- 内孔d公差H5
- 预测动平衡设计
- BT NO taper holder execute AT3 standard
- Inside hole tolerance H5
- Pre-indicated dynamic balance design



图一



图二



型号 Designation	图示 Icon	L	L1	H1	H2	D	d	重量 Kg Weight
BT30H75SLN16	1	123.4	75	24	-	48	16	1.05
BT30H75SLN20	1	123.4	75	25	-	52	20	1.10
BT30H90SLN25	2	138.4	90	24	25	65	25	1.70
BT40H100SLN20	1	165.4	100	25	-	52	20	2.10
BT40H100SLN25	2	165.4	100	24	25	65	25	2.32
BT40H100SLN32	2	165.4	100	24	28	72	32	3.80
BT40H105SLN40	1	170.4	105	30	32	80	40	4.10
BT50H100SLN20	2	201.8	100	25	-	52	20	4.45
BT50H150SLN20	2	251.8	150	25	-	52	20	5.30
BT50H100SLN25	2	201.8	100	24	25	65	25	4.62
BT50H150SLN25	2	251.8	150	24	25	65	25	5.92
BT50H105SLN32	2	206.8	105	24	28	72	32	4.80
BT50H150SLN32	2	251.8	150	24	28	72	32	6.60
BT50H115SLN40	2	216.8	115	30	32	80	40	5.42
BT50H150SLN40	2	251.8	150	30	32	80	40	6.78
BT50H120SLN42	2	221.8	120	30	32	82	42	6.14
BT50H120SLN50	2	221.8	120	35	35	90	50	6.30
BT50H150SLN50	2	251.8	150	35	35	90	50	8,20

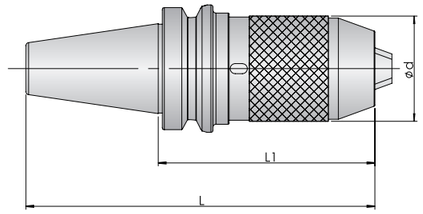
BT钻夹头刀柄

BT drill chuck handle

- BT NO锥柄锥度执行AT3标准

BT NO taper holder execute AT3 standard





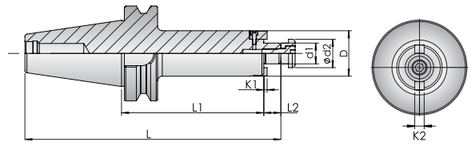
型号 Designation	L	L1	d	重量 Kg Weight
BT30H080APU8	128.4	80	37	0.72
BT30H100APU13	148.4	100	49	1.4
BT30H115APU16	163.4	115	54	1.75
BT40H085APU8	150.4	85	37	1.36
BT40H105APU13	170.4	105	49	1.8
BT40H120APU16	185.4	120	54	2.35
BT50H095APU8	196.8	95	37	4.45
BT50H120APU13	221.8	120	49	5.4
BT50H130APU16	231.8	130	54	5.24
BT50H165APU16	266.8	165		6.15
BT50H190APU16	291.8	190		6.66

BT 面铣刀柄
BT face milling cutter handle

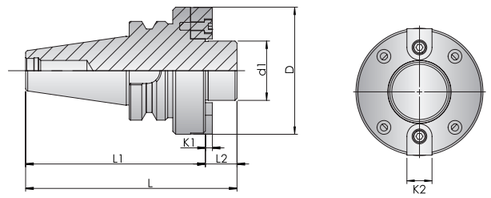
- BT NO锥柄锥度执行AT3标准
- d1外圆执行公差h5
- BT NO Taper holder comply with AT3 standard
- d1 external round tolerance h5



图一



图二



型号 Designation	图示 Icon	d1	d2	D	L	L1	L2	K1	K2	重量 Kg Weight
BT30H045FMB22	—	22	26	45	109.9	45	16.5	4.8	10	0.84
BT30H060FMB22					124.9	60				1.03
BT30H045FMB27		27	33	54	111.9	45	18.5	5.8	12	1.20
BT30H060FMB27					126.9	60				1.30
BT30H060FMB32		32	41	58	130.4		20	6.8	14	2.00
BT40H045FMB22		22	26	48	126.9	45	16.5	4.8	10	1.43
BT40H060FMB22					141.9	60				1.51
BT40H100FMB22					181.9	100				1.94
BT40H150FMB22					231.9	150				2.70
BT40H200FMB22					281.9	200				3.43
BT40H045FMB27		27	33	60	128.9	45	18.5	5.8	12	1.52
BT40H060FMB27					143.9	60				1.86
BT40H100FMB27					183.9	100				2.75
BT40H150FMB27					233.9	150				3.02
BT40H060FMB32		32	41	62	147.4	60	20	6.8	14	2.32
BT40H100FMB32					187.4	100				3.25
BT40H150FMB32					237.4	150				3.52
BT40H200FMB32					287.4	200				4.03
BT40H060FMB40		40	48	80	150.4	60	23	8	16	2.47
BT40H100FMB40					190.4	100				3.15
BT40H150FMB40					240.4	150				3.85
BT40H200FMB40					290.4	200				4.56

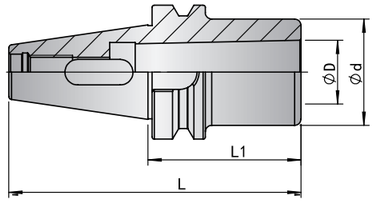
型号 Designation	图示 Icon	d1	d2	D	L	L1	L2	K1	K2	重量 Kg Weight
BT50H060FMB22	—	22	26	48	178.3	60	16.5	4.8	10	4.41
BT50H100FMB22					218.3	100				4.57
BT50H150FMB22					268.3	150				5.27
BT50H200FMB22					318.3	200				5.97
BT50H300FMB22					418.3	300				7.37
BT50H060FMB27		27	33	60	180.3	60	18.5	5.8	12	4.24
BT50H100FMB27					220.3	100				5.13
BT50H150FMB27					270.3	150				6.25
BT50H200FMB27					320.3	200				7.73
BT50H060FMB32		32	41	73	183.8	60	20	6.8	14	5.38
BT50H100FMB32					223.8	100				5.98
BT50H150FMB32					273.8	150				7.1
BT50H200FMB32					323.8	200				7.95
BT50H060FMB40		40	48	80	186.8	60	23	8	16	5.2
BT50H100FMB40					226.8	100				6.6
BT50H150FMB40					276.8	150				8.1
BT50H200FMB40					326.8	200				9.6
BT50H075FMB60	二	60		140	201.8	75		12.5	25.4	8.9

BT莫氏刀柄(扁尾型)

BT Morse shank (flat tail type)

- BT NO锥柄锥度执行AT3标准
- 内外锥同轴度0.005mm
- BT NO taper holder execute AT3 standard
- Concentration of internal and external round 0.005MM



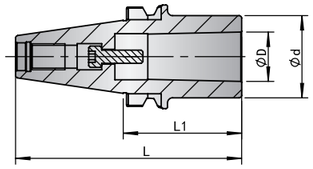


型号 Designation	L	L1	D	d	重量 Kg Weight
BT30H045MTA1	93.4	45	12.065	25	0.55
BT30H060MTA2	108.4	60	17.780	32	0.60
BT30H080MTA3	128.4	80	23.825	40	0.80
BT40H045MTA1	110.4	45	12.065	25	1.05
BT40H120MTA1	185.4	120			1.28
BT40H060MTA2	125.4	60	17.780	32	1.10
BT40H120MTA2	185.4	120			1.41
BT40H075MTA3	140.4	75	23.825	40	1.20
BT40H135MTA3	200.4	135			1.75
BT40H095MTA4	160.4	95	31.267	48	1.35
BT40H165MTA4	230.4	165			2.30
BT50H045MTA1	146.8	45	12.065	25	3.59
BT50H120MTA1	221.8	120			3.88
BT50H060MTA2	161.8	60	17.780	32	3.64
BT50H135MTA2	236.8	135			4.17
BT50H180MTA2	281.8	180			5.00
BT50H075MTA3	176.8	75	23.825	40	3.90
BT50H150MTA3	251.8	150			4.40
BT50H180MTA3	281.8	180			5.50
BT50H075MTA4	176.8	75	31.267	48	3.80
BT50H150MTA4	251.8	150			5.00
BT50H180MTA4	281.8	180			5.00
BT50H105MTA5	211.8	105	44.399	63	3.80

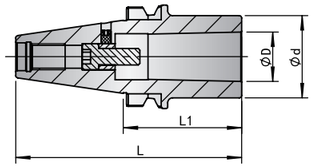
BT莫氏刀柄(无扁尾)

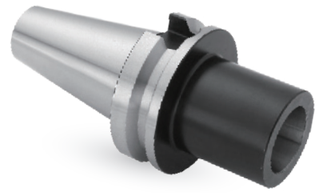
BT Morse shank (without flat tail)

图一



图二



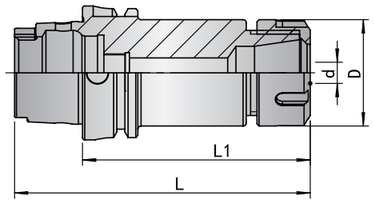


型号 Designation	图示 Icon	L	L1	D	d	重量 Kg Weight
BT30H045MTB1	一	93.4	45	12.065	25	0.55
BT30H060MTB2	二	108.4	60	17.78	32	0.6
BT30H080MTB3		128.4	80	23.825	40	0.8
BT40H045MTB1	一	110.4	45	12.065	25	1
BT40H050MTB2		115.4	50	17.78	32	1.02
BT40H075MTB3	二	140.4	75	23.825	40	1.19
BT40H090MTB4		155.4	90	31.267	48	1.33
BT50H045MTB1	一	146.8	45	12.065	25	3.3
BT50H045MTB2				17.78	32	3.5
BT50H060MTB3		161.8	60	23.825	40	3.61
BT50H075MTB4		176.8	75	31.267	48	3.92
BT50H120MTB5	二	221.8	120	44.399	63	4.1

HSK筒夹刀柄
HSK collet holder

- 动平衡设定：G2.5; 25000rpm
- **Balanced:G2.5;25000rpm**





型号 Designation	夹持范围d Clamping Range d	L	L1	D	螺母 Nut	重量 Kg Weight
HSK63AH080ER16	0.5-10	112	80	28	ER16-A	1.5
HSK63AH100ER16		132	100			1.55
HSK63AH160ER16		192	160			1.85
HSK63AH080ER20	1.0-12	112	80	34	ER20-A	1.6
HSK63AH100ER20		132	100			1.75
HSK63AH160ER20		192	160			2.2
HSK63AH080ER25	1.0-16	112	80	42	ER25-UM	1.7
HSK63AH100ER25		132	100			1.9
HSK63AH160ER25		192	160			2.55
HSK63AH080ER32	2.0-20	112	80	50	ER32-UM	2.5
HSK63AH100ER32		132	100			2.8
HSK63AH160ER32		192	160			3.75
HSK63AH080ER40	3.0-26	112	80	63	ER40-UM	2.7
HSK63AH100ER40		132	100			3.2
HSK63AH160ER40		192	160			4.65
HSK100AH100ER16	0.5-10	150	100	28	ER16-A	2.95
HSK100AH160ER16		210	160			3.3
HSK100AH100ER20	1.0-12	150	100	34	ER20-A	3
HSK100AH160ER20		210	160			3.45
HSK100AH100ER25	1.0-16	150	100	42	ER25-UM	3.3
HSK100AH160ER25		210	160			3.95
HSK100AH100ER32	2.0-20	150	100	50	ER32-UM	3.4
HSK100AH160ER32		210	160			4.3
HSK100AH100ER40	3.0-26	150	100	63	ER40-UM	3.9
HSK100AH160ER40		210	160			5.3

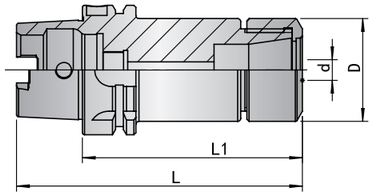
TOOLING SYSTEM
www.pavo-tools.com

刀柄系列

HSK筒夹刀柄
HSK collet holder

- 动平衡设定：G2.5; 25000rpm
- **Balanced:G2.5;25000rpm**



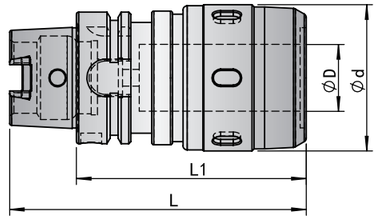


型号 Designation	夹持范围d Clamping Range d	L	L1	D	重量 Kg Weight
HSK63AH080GSK06	2-6	112	80	20	0.85
HSK63AH080GSK10	2-10			27	1.10
HSK63AH100GSK10		132	100		1.40
HSK63AH080GSK16	3-16	112	80	40	2.00
HSK63AH100GSK16		132	100		2.20
HSK63AH100GSK25	6-25.4			54	2.30
HSK100AH105GSK06	2-6	155	105	20	1.20
HSK100AH105GSK10	2-10			27	2.60
HSK100AH105GSK16	3-16			10	2.80
HSK100AH120GSK20	4-20	170	120	48	3.50
HSK100AH120GSK25	6-25.4			54	3.50

HSK强力刀柄
HSK Full back arbor

- 动平衡设定：G2.5; 25000rpm
- **Balanced:G2.5;25000rpm**

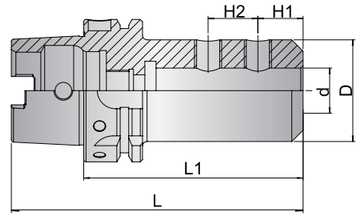




型号 Designation	L	L1	D	d	重量 Kg Weight
HSK63AH095PAC20	127	95	20	55	2
HSK63AH110PAC20	142	110			2.1
HSK63AH100PAC25	132	100	25	60	2
HSK63AH130PAC25	162	130			2.3
HSK63AH110PAC32	142	110	32	73	2.3
HSK63AH130PAC32	162	130			2.7
HSK100AH105PAC20	155	105	20	55	3
HSK100AH135PAC20	185	135			3.8
HSK100AH105PAC25	155	105	25	60	3.2
HSK100AH135PAC25	185	135			4.1
HSK100AH105PAC32	155	105	32	73	3.3
HSK100AH135PAC32	185	135			4.3
HSK100AH165PAC32	215	165			4.8
HSK100AH135PAC42	185	135	42	95	5.1

HSK侧固刀柄
HSK Side shank

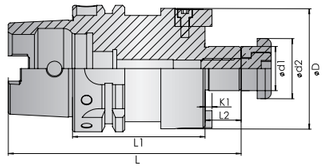


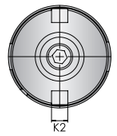


型号 Designation	L	L1	H1	H2	D	d	重量 Kg Weight
HSK63AH080SLN16	112	80	24	-	48	16	1.8
HSK63AH160SLN16	192	160					2.9
HSK63AH080SLN20	112	80	25	-	52	20	1.7
HSK63AH160SLN20	192	160					2.95
HSK63AH110SLN25	142	110	24	25	65	25	2.5
HSK63AH160SLN25	192	160					3.95
HSK63AH110SLN32	142	110		28	72	32	2.7
HSK63AH160SLN32	192	160					4.45
HSK100AH100SLN16	150	100	24	-	48	16	3.8
HSK100AH100SLN20	150	100	25	-	52	20	3.9
HSK100AH160SLN20	210	160					4.8
HSK100AH110SLN25	160	110	24	25	65	25	4
HSK100AH160SLN25	210	160					5.5
HSK100AH110SLN32	160	110		28	72	32	4.2
HSK100AH160SLN32	210	160					5.9
HSK100AH120SLN40	170	120	30	32	90	40	4.6
HSK100AH160SLN40	210	160					6.4

HSK面铣刀柄
HSK face milling handle

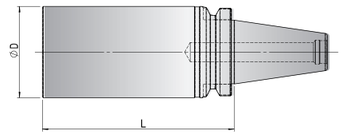






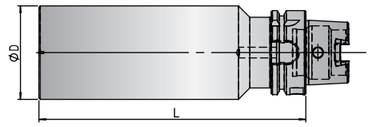
型号 Designation	L	L1	L2	d1	d2	D	K1	K2	螺钉 screw	重量 Kg Weight
HSK63AH050FMB16	98.5	50	16.5	16	-	40	3.8	8	M8X25	1.2
HSK63AH050FMB22		50		22	26	48	4.8	10	M10X30	1.3
HSK63AH100FMB22	148.5	100								2
HSK63AH150FMB22	198.5	150								2.7
HSK63AH200FMB22	248.5	200								3.4
HSK63AH060FMB27	110.5	60	18.5	27	33	60	5.8	12	M12X30	1.6
HSK63AH100FMB27	150.5	100								2.5
HSK63AH150FMB27	200.5	150								3.6
HSK63AH060FMB32	114	60	22	32	41	62	6.8	14	M16X35	2
HSK63AH100FMB32	154	100								2.95
HSK63AH150FMB32	204	150								4.1
HSK63AH060FMB40	117	60	25	40	48	80	8.3	116	M16X35	2.35
HSK100AH050FMB22	116.5	50	16.5	22	26	48	4.8	10	M10X30	2.7
HSK100AH100FMB22	166.5	100								3.4
HSK100AH150FMB22	216.5	150								4.1
HSK100AH200FMB22	266.5	200								4.8
HSK100AH050FMB27	118.5	50	18.5	27	33	60	5.8	12	M12X30	2.9
HSK100AH100FMB27	168.5	100								4
HSK100AH150FMB27	218.5	150								5.1
HSK100AH050FMB32	122	50	22	32	41	73	6.8	14	M16X35	3
HSK100AH100FMB32	172	100								4.2
HSK100AH150FMB32	222	150								5.4
HSK100AH060FMB40	135	60	25	40	48	80	18.3	16	M16X35	4
HSK100AH100FMB40	175	100								5.6
HSK100AH150FMB40	225	150								7.55

BT毛坯柄
BTblank handle



型号 Designation	D	L
BT40-D80-150	80.0	150
BT40-D80-200		200
BT40-D80-250		250
BT50-D100-150	100.0	150
BT50-D100-200		200
BT50-D100-250		250
BT50-D100-300		300

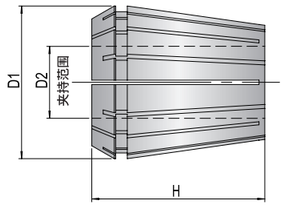
HSK毛坯柄
HSKblank handle



型号 Designation	D	L
HSK63A-D80-150	80.0	150
HSK63A-D80-200		200
HSK63A-D80-250		250
HSK63A-D80-300		300
HSK100A-D100-200	100.0	200

ER筒夹
ER bucket clamp

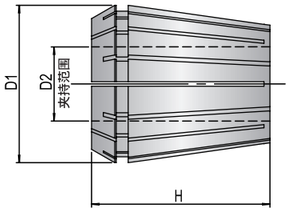




ER11		ER16		ER20		ER25		ER32		ER40	
型号 Designation	D2	型号 Designation	D2	型号 Designation	D2	型号 Designation	D2	型号 Designation	D2	型号 Designation	D2
ER11-1	1-0.5	ER16-1	1-0.5	ER20-1	1-0.5	ER25-1	1-0.5	ER32-1	1-0.5	ER40-3	3-2
ER11-1.5	1.5-1	ER16-1.5	1.5-1	ER20-1.5	1.5-1	ER25-1.5	1.5-1	ER32-1.5	1.5-1	ER40-4	4-3
ER11-2	2-1.5	ER16-2	2-1.5	ER20-2	2-1.5	ER25-2	2-1.5	ER32-2	2-1.5	ER40-5	5-4
ER11-2.5	2.5-2	ER16-2.5	2.5-2	ER20-2.5	2.5-2	ER25-2.5	2.5-2	ER32-2.5	2.5-2	ER40-6	6-5
ER11-3	3-2.5	ER16-3	3-2	ER20-3	3-2	ER25-3	3-2	ER32-3	3-2	ER40-7	7-6
ER11-3.5	3.5-3	ER16-4	4-3	ER20-4	4-3	ER25-4	4-3	ER32-4	4-3	ER40-8	8-7
ER11-4	4-3.5	ER16-5	5-4	ER20-5	5-4	ER25-5	5-4	ER32-5	5-4	ER40-9	9-8
ER11-4.5	4.5-4	ER16-6	6-5	ER20-6	6-5	ER25-6	6-5	ER32-6	6-5	ER40-10	10-9
ER11-5	5-4.5	ER16-7	7-6	ER20-7	7-6	ER25-7	7-6	ER32-7	7-6	ER40-11	11-10
ER11-5.5	5.5-5	ER16-8	8-7	ER20-8	8-7	ER25-8	8-7	ER32-8	8-7	ER40-12	12-11
ER11-6	6-5.5	ER16-9	9-8	ER20-9	9-8	ER25-9	9-8	ER32-9	9-8	ER40-13	13-12
ER11-6.5	6.5-6	ER16-10	10-9	ER20-10	10-9	ER25-10	10-9	ER32-10	10-9	ER40-14	14-13
ER11-7	7-6.5			ER20-11	11-10	ER25-11	11-10	ER32-11	11-10	ER40-15	15-14
				ER20-12	12-11	ER25-12	12-11	ER32-12	12-11	ER40-16	16-15
				ER20-13	13-12	ER25-13	13-12	ER32-13	13-12	ER40-17	17-16
						ER25-14	14-13	ER32-14	14-13	ER40-18	18-17
						ER25-15	15-14	ER32-15	15-14	ER40-19	19-18
						ER25-16	16-15	ER32-16	16-15	ER40-20	20-19
								ER32-17	17-16	ER40-21	21-20
								ER32-18	18-17	ER40-22	22-21
								ER32-19	19-18	ER40-23	23-22
								ER32-20	20-19	ER40-24	24-23
										ER40-25	25-24
										ER40-26	26-25

ER止水筒夹
ER Sealing up collet

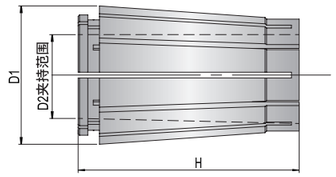




ER11C		ER16C		ER20C		ER25C		ER32C		ER40C	
型号 Designation	D2	型号 Designation	D2	型号 Designation	D2	型号 Designation	D2	型号 Designation	D2	型号 Designation	D2
ER11-3C	3-2.9	ER16-3C	3-2.9	ER20-3C	3-2.9	ER25-3C	3-2.9	ER32-3C	3-2.9	ER40-4C	4-3.9
ER11-4C	4-3.9	ER16-4C	4-3.9	ER20-4C	4-3.9	ER25-4C	4-3.9	ER32-4C	4-3.9	ER40-5C	5-4.9
ER11-4.5C	4.5-4.4	ER16-4.5C	4.5-4.4	ER20-5C	5-4.9	ER25-5C	5-4.9	ER32-5C	5-4.9	ER40-6C	6-5.9
ER11-5C	5-4.9	ER16-5C	5-4.9	ER20-5.5C	5.5-5.4	ER25-6C	6-5.5	ER32-6C	6-5.9	ER40-7C	7-6.9
ER11-5.5C	5.5-5.4	ER16-5.5C	5.5-5.4	ER20-6C	6-5.5	ER25-6.5C	6.5-6	ER32-7C	7-6.9	ER40-8C	8-7.9
ER11-6C	6-5.9	ER16-6C	6-5.5	ER20-6.5C	6.5-6	ER25-7C	7-6.5	ER32-8C	8-7.5	ER40-9C	9-8.9
ER11-6.5C	6.5-6.4	ER16-6.5C	6.5-6	ER20-7C	7-6.5	ER25-7.5C	7.5-7	ER32-8.5C	8.5-8	ER40-10C	10-9.5
ER11-7C	7-6.9	ER16-7C	7-6.5	ER20-7.5C	7.5-7	ER25-8C	8-7.5	ER32-9C	9-8.5	ER40-10.5C	10.5-10
		ER16-7.5C	7.5-7	ER20-8C	8-7.5	ER25-8.5C	8.5-8	ER32-9.5C	9.5-9	ER40-11C	11-10.5
		ER16-8C	8-7.5	ER20-8.5C	8.5-8	ER25-9C	9-8.5	ER32-10C	10-9.5	ER40-11.5C	11.5-11
		ER16-8.5C	8.5-8	ER20-9C	9-8.5	ER25-9.5C	9.5-9	ER32-10.5C	10.5-10	ER40-12C	12-11.5
		ER16-9C	9-8.5	ER20-9.5C	9.5-9	ER25-10C	10-9.5	ER32-11C	11-10.5	ER40-12.5C	12.5-12
		ER16-9.5C	9.5-9	ER20-10C	10-9.5	ER25-10.5C	10.5-10	ER32-11.5C	11.5-11	ER40-13C	13-12.5
		ER16-10C	10-9.5	ER20-10.5C	10.5-10	ER25-11C	11-10.5	ER32-12C	12-11.5	ER40-13.5C	13.5-13
				ER20-11C	11-10.5	ER25-11.5C	11.5-11	ER32-12.5C	12.5-12	ER40-14C	14-13.5
				ER20-11.5C	11.5-11	ER25-12C	12-11.5	ER32-13C	13-12.5	ER40-14.5C	14.5-14
				ER20-12C	12-11.5	ER25-12.5C	12.5-12	ER32-13.5C	13.5-13	ER40-15C	15-14.5
				ER20-12.5C	12.5-12	ER25-13C	13-12.5	ER32-14C	14-13.5	ER40-15.5C	15.5-15
				ER20-13C	13-12.5	ER25-13.5C	13.5-13	ER32-14.5C	14.5-14	ER40-16C	16-15.5
						ER25-14C	14-13.5	ER32-15C	15-14.5	ER40-16.5C	16.5-16
						ER25-14.5C	14.5-14	ER32-15.5C	15.5-15	ER40-17C	17-16.5
						ER25-15C	15-14.5	ER32-16C	16-15.5	ER40-17.5C	17.5-17
						ER25-15.5C	15.5-15	ER32-16.5C	16.5-16	ER40-18C	18-17.5
						ER25-16C	16-15.5	ER32-17C	17-16.5	ER40-18.5C	18.5-18
								ER32-17.5C	17.5-17	ER40-19C	19-18.5
								ER32-18C	18-17.5	ER40-19.5C	19.5-19
								ER32-18.5C	18.5-18	ER40-20C	20-19.5
								ER32-19C	19-18.5	ER40-20.5C	20.5-20
								ER32-19.5C	19.5-19	ER40-21C	21-20.5
								ER32-20C	20-19.5	ER40-21.5C	21.5-21
										ER40-22C	22-21.5
										ER40-22.5C	22.5-22
										ER40-23C	23-22.5
										ER40-23.5C	23.5-23
										ER40-24C	24-23.5
										ER40-24.5C	24.5-24
										ER40-25C	25-24.5
										ER40-25.5C	25.5-25
										ER40-26C	26-25.5

GSK筒夹
GSK Bucket clamp

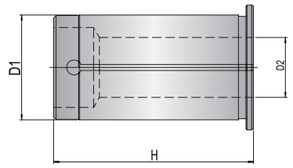




GSK 06		GSK10		GSK16		GSK25	
型号 Designation	D2	型号 Designation	D2	型号 Designation	D2	型号 Designation	D2
GSK06-2	2-1.75	GSK10-2	2-1.75	GSK16-3	3-2.75	GSK25-6	6-5.5
GSK06-2.5	2.-2.25	GSK10-2.5	2.-2.25	GSK16-3.175	3.175-2.7	GSK25-8	8-7.5
GSK06-3	3-2.75	GSK10-3	3-2.75	GSK16-3.5	3.5-3	GSK25-10	10-9.5
GSK06-3.5	3.5-3	GSK10-3.175	3.175-2.7	GSK16-4	4-3.5	GSK25-12	12-11.5
GSK06-4	4-3.5	GSK10-3.5	3.5-3	GSK16-4.5	4.5-4	GSK25-14	14-13.5
GSK06-4.5	4.5-4	GSK10-4	4-3.5	GSK16-5	5-4.5	GSK25-16	16-15.5
GSK06-5	5-4.5	GSK10-4.5	4.5-4	GSK16-5.5	5.5-5	GSK25-16.5	16.5-16
GSK06-5.5	5.5-5	GSK10-5	5-4.5	GSK16-6	6-5.5	GSK25-17	17-16.5
GSK06-6	6-5.5	GSK10-5.5	5.5-5	GSK16-6.5	6.5-6	GSK25-17.5	17.5-17
		GSK10-6	6-5.5	GSK16-7	7-6.5	GSK25-18	18-17.5
		GSK10-6.5	6.5-6	GSK16-7.5	7.5-7	GSK25-18.5	18.5-18
		GSK10-7	7-6.5	GSK16-8	8-7.5	GSK25-19	19-18.5
		GSK10-7.5	7.5-7	GSK16-8.5	8.5-8	GSK25-19.5	19.5-19
		GSK10-8	8-7.5	GSK16-9	9-8.5	GSK25-20	20-19.5
		GSK10-8.5	8.5-8	GSK16-9.5	9.5-9	GSK25-20.5	20.5-20
		GSK10-9	9-8.5	GSK16-10	10-9.5	GSK25-21	21-20.5
		GSK10-9.5	9.5-9	GSK16-10.5	10.5-10	GSK25-21.5	21.5-21
		GSK10-10	10-9.5	GSK16-11	11-10.5	GSK25-22	22-21.5
				GSK16-11.5	11.5-11	GSK25-22.5	22.5-22
				GSK16-12	12-11.5	GSK25-23	23-22.5
				GSK16-12.5	12.5-12	GSK25-23.5	23.5-22
				GSK16-13	13-12.5	GSK25-24	24-23.5
				GSK16-13.5	13.5-13	GSK25-24.5	24.5-24
				GSK16-14	14-13.5	GSK25-25	25-24.5
				GSK16-14.5	14.5-14		
				GSK16-15	15-14.5		
				GSK16-15.5	15.5-15		
				GSK16-16	16-15.5		

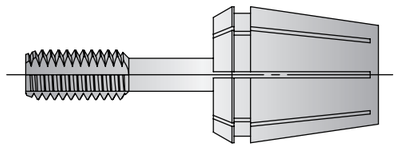
强力筒夹
Strong ucket clamp

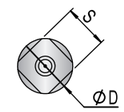




型号 Designation	D1	D2	H
C12	12	3,4,5,6,7,8,9,10	40
C16	16	4,5,6,7,8,9,10,11,12,13,14	
C20	20	6,8,10,12,14,16	64
C25	25	6,8,10,12,16,20	
C32	32	6,8,10,12,16,20,25	71
C42	42	6,8,10,12,16,20,25,32	

攻丝筒夹
Tapping collet

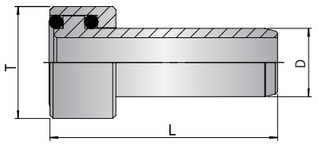


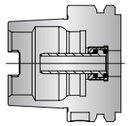


型号 Designation		φd	S	JIS	DIN371	DIN374/ DIN376	IS0529	IS0529/ IS02283
20ER 0.04KGS/PC	20ER 0.04KGS/PC	柄径	扁方					
20ER-4B3.2		4	3.2	3M3				
20ER-4.5B3.4		4.5	3.4		M4	M6		
20ER-5B4.0	32ER-5B4.0	5	4	M4			M5	
20ER-5.5B4.5	32ER-5.5B4.5	5.5	4.5	M5				
20ER-6B4.9	32ER-6B4.9	6	4.9	M6，W1/4"	M5，M6	M8		
20ER-6.3B5	32ER-6.3B5	6.3	5	M8			M6	M8
20ER-7B5.5	32ER-7B5.5	7	5.5	M10		M10		
20ER-8B6.3	32ER-8B6.3	8	6.3		M8		M8	M10
20ER-8.5B6.5	32ER-8.5B6.5	8.5	6.5	M12				
20ER-9B7.1	32ER-9B7.1	9	7.1			M12		M12
20ER-10B8	32ER-10B8	10	8		M10		M10	
	32ER-12B9.0	12	9	W5/8"		M16		
	32ER-12.5B10	12.5	10	M16				M16
	32ER-14B11.2	14	11.2	M18，W3/4"		M18		M18，M20
	32ER-15B12	15	12	M20				
	32ER-16B12.5	16	12.5			M20		M22

HSK内冷管
Hsk Inner cooling pipe



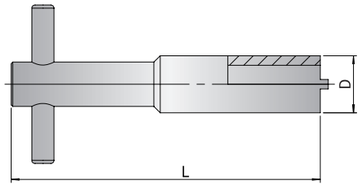




型号 Designation	L	l1	D	T	重量 Kg Weight
HSK63-CP	36.6	11.5	12	M18x1.0	0.02
HSK100-CP	44	15.5	16	M24x1.0	0.06

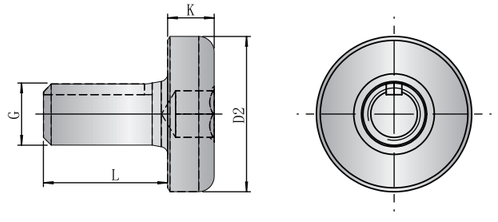
内冷管专用扳手
Special wrench for inner cooling pipe





型号 Designation	L	D	重量 Kg Weight
HSK63-CPW	100	18	0.14
HSK100-CPW	125	24	0.32

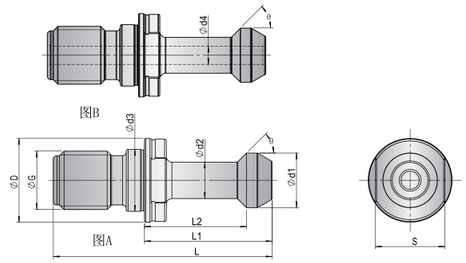
出水螺丝-用于面铣刀柄
Outlet screw - for face milling tool shank



型号 Designation	FMB	G	D2	K	L
FMB32C	32	M16	42	9	26
FMB40C	40	M20	52	10	30
FMB50C	50	M24	63	12	36

BT 日标拉钉
BT Japanese standard rivet

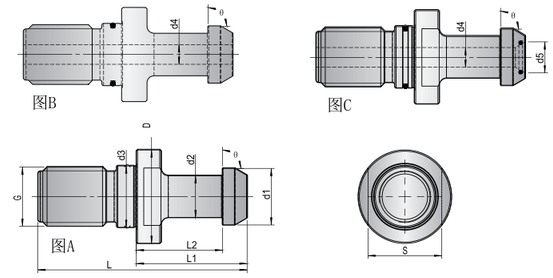




型号 Designation	图示 Icon	d4	D	d1	d2	d3	L1	L2	L	θ	G	S	重量 Kg Weight
BT30-45°	A	-	16.5	11	7	12.5	23	18	43	45	M12	13	0.03
BT30-60°										60			0.03
BT40-45°	A	-	23	15	10	17	35	28	60	45	M16	19	0.07
BT40-45°T	B	4											0.08
BT40-60°	A	-								60			0.07
BT40-60°T	B	4											0.08
BT40-90°	A	-								90			0.07
BT40-90°T	B	4											0.08
BT50-45°	A	-	38	23	17	25	45	35	85	45	M24	30	0.26
BT50-45°T	B	5											0.25
BT50-60°	A	-								60			0.26
BT50-60°T	B	5											0.25
BT50-90°	A	-								90			0.26
BT50-90°T	B	5											0.25

DMG森精机专用拉钉
Special broaching nail for DMG seizing machine



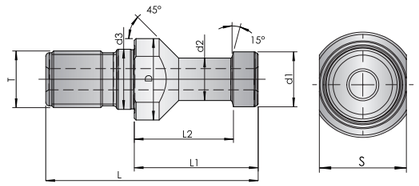


型号 Designation	图示 Icon	D	d1	d2	d3	d4	d5	L1	L2	L	θ	G	S	重量 Kg Weight
POM50	A	38	23	17	25	-	-	45	35	85	90	M24	30	0.26
POM50H	B					8								0.25
POM50H1	C						11							

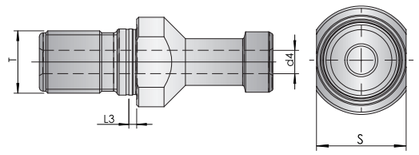
SK 拉钉
SK rivet



图一



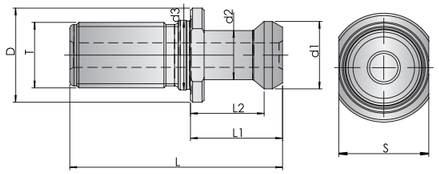
图二



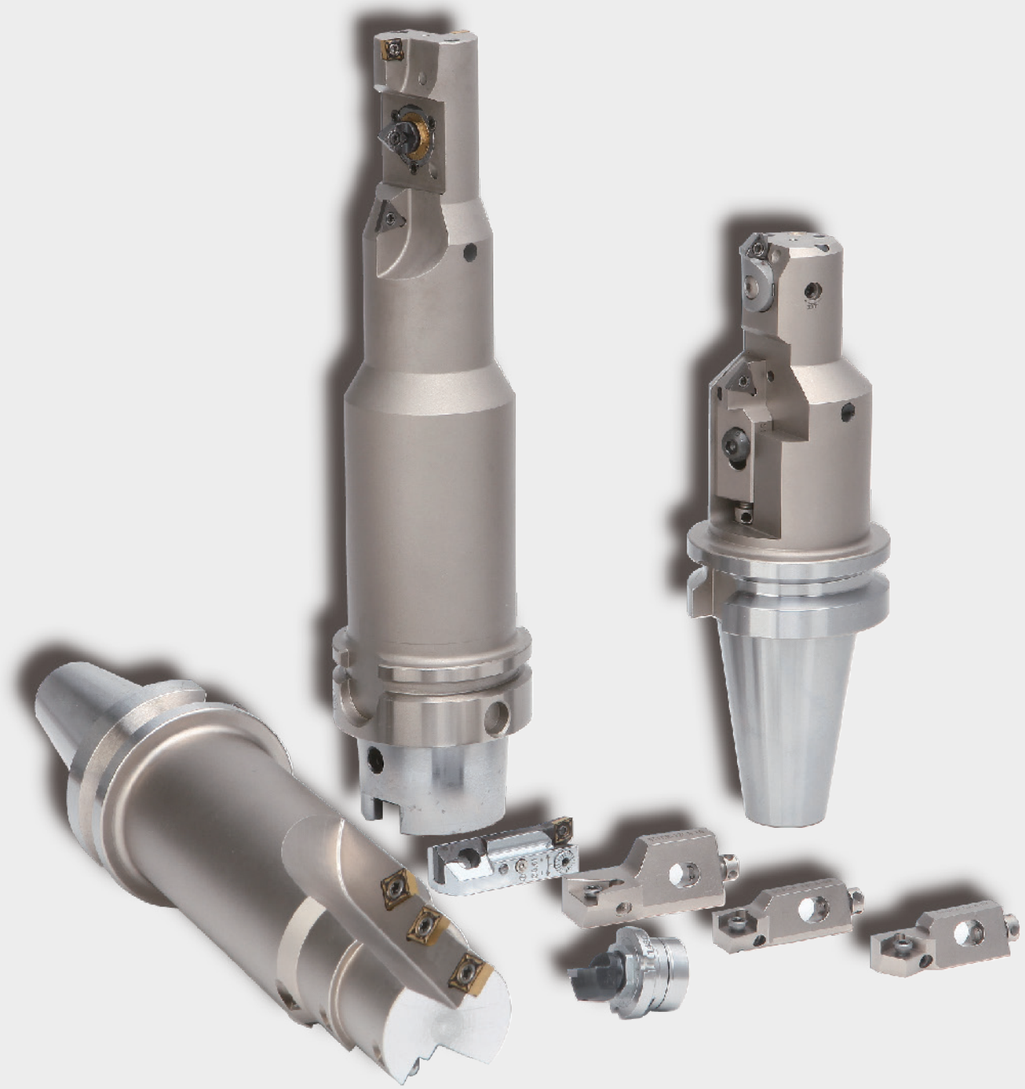
型号 Designation	图示 Icon	D	d1	d2	d3	d4	L1	L2	L3	L	S	T	重量 Kg Weight
SK-30A	一	17	13	9	13	/	24	19	/	44	14	M12	0.03
SK-40A		23	19	14	17	7	26	20	3	54	19	M16	0.05
SK-50A		36	28	21	25	11.5	34	25	4.5	74	30	M24	0.25
SK-40B	二	23	19	14	17	7	26	20	3	54	19	M16	0.05
SK-50B		36	28	21	25	11.5	34	25	4.5	74	30	M24	0.28

MAZAK 拉钉
MAZAK rivet

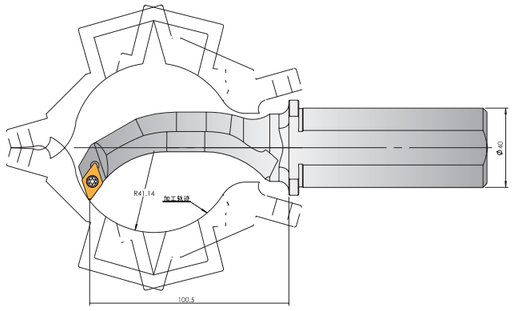




型号 Designation	D	d1	d2	d3	L	L1	L2	S	T	重量 Kg Weight
MAZAK 40	22	18.8	12.4	17	44.1	19.1	16.4	19	M16	0.02
MAZAK 50	37	28.9	20.8	25	65.2	25.2	25.5	30	M24	0.1

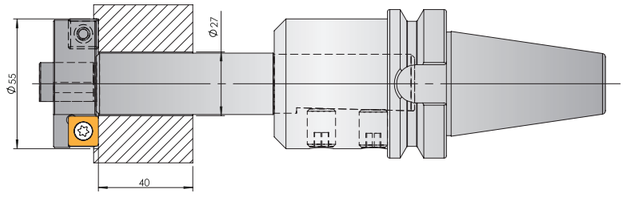


异形仿形车刀
Abnormity copying turning tool

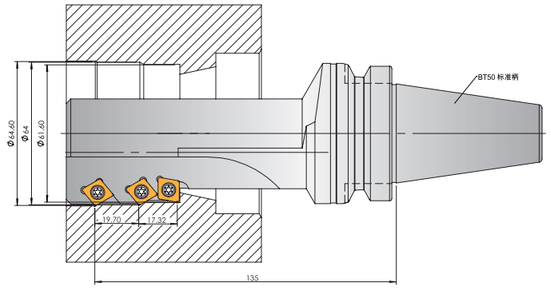


非标系列

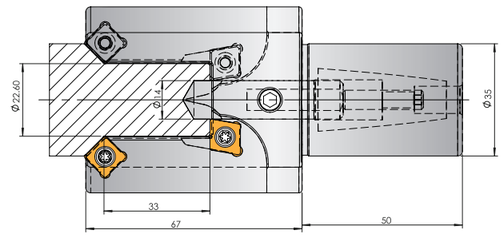
快换式刀头反刮端面
Quick change type cutter head anti scraping end face



粗加工反镗台阶孔
Roughing boring step hole

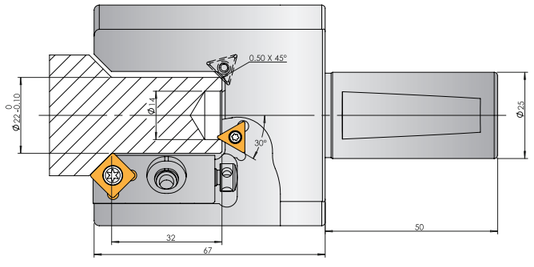


压缩机缸体粗套外圆、平端面及定中心孔
Compressor cylinder block,rough sleeve,excircle,flat end face and centering hole



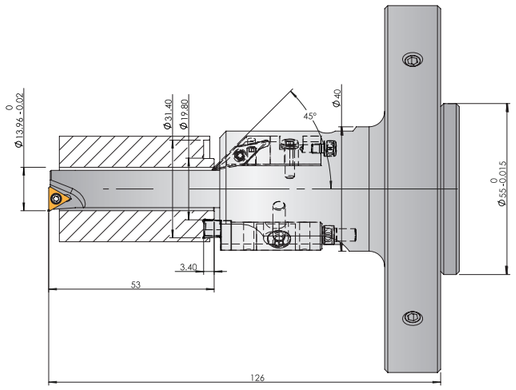
非标系列

压缩机缸体精套外圆及内外倒角
Compressor cylinder block,outer sleeve and inside and outside chamfer



压缩机缸体曲轴孔精镗、倒角及凹槽端面精刮

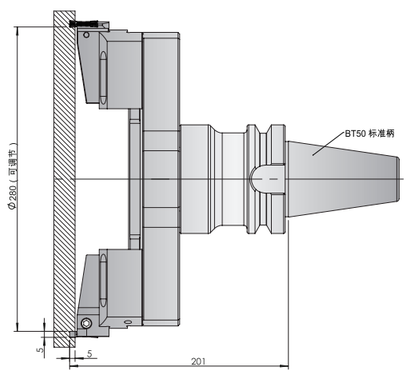
The crankshaft hole on the compressor cylinder,chamfer and groove face scraping fine



非标系列

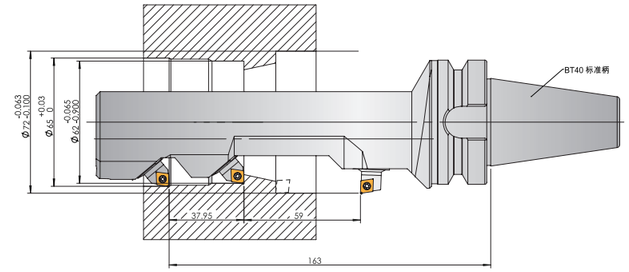
大直径端面槽加工

Machining of large diameter end face groove



精加工同心度要求高的正反多段台阶孔

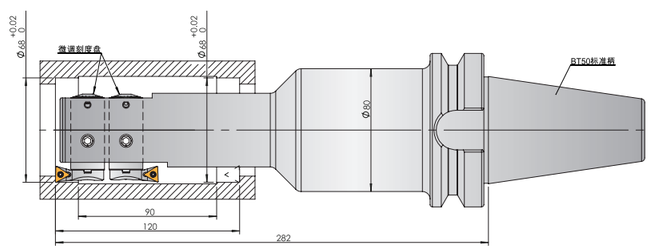
A high degree of positive and negative cross section holes with high concentricity



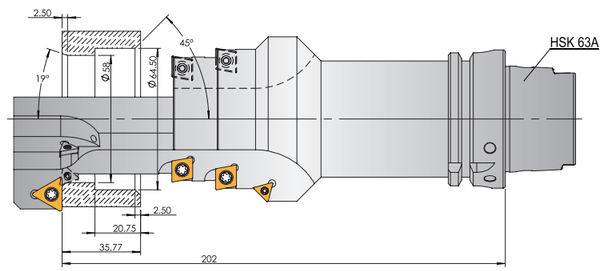
非标系列

精加工同心度要求高的正反台阶孔

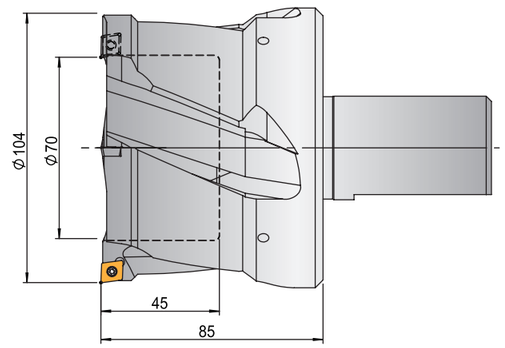
Reverse and positive step holes with high concentricity required for finishing



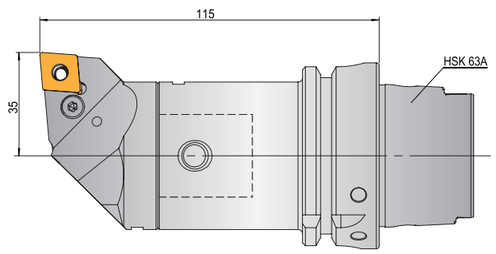
正反粗镗孔带锪面、倒角复合
And with the end milling,rough boring chamfering compound



电梯行业用套槽刀
Slot knife for elevatorindustry

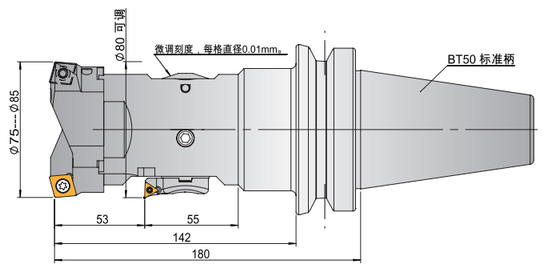


复合加工机用刀具
Cutter for compound machining machine



粗精镗一体式可调镗刀
Coarse fine boring one type adjustable boring tool

Ajustable Boring Tool Integrated with Counter Bore



ER扳手
ER wrench



型号 Designation	螺帽外径 Out-Diameter of Nut
ER16-A	28
ER20-A	34
ER11-M	16
ER16-M	23
ER20-M	28
ER25-M	35
ER25-UM	42
ER32-UM	50
ER40-UM	63

GSK扳手
GSK wrench



型号 Designation	适用螺帽 Out-Diameter of Nut
GSK06	GSK6
GSK10	GSK10
GSK16	GSK16
GSK25	GSK25

强力刀柄专用扳手
Special wrench for strong handle



型号 Designation	适用刀柄 Out-Diameter of Nut
C20	C20
C32	C32
C42	C42

量表式Z轴设定器
Meter type Z axis setter



型号 Designation	形式 Style	高度 highly
EDS-50	量表式	50

- 将平行规置于标准面，转动百分表，使长针归零。
- 将平行规移开。
- 将Z轴设定器置于工件上，刀具接触操作面，慢速进刀到秒针指在“0”，则刀具与工件的距离是50mm。
- Place the parallel gauge on the standard surface and turn the dial indicator to make the long needle return to zero.
- Remove the parallel gauge.
- Place the z-axis setter on the workpiece, the tool contacts the operation surface, and the distance between the tool and the workpiece is 50 mm when the slow feeding speed reaches the second finger at "0".

机械式寻边器
Mechanical edge finder



型号 Designation
ME-1020
ME-420

- 10直柄安装在夹头上，以手指轻推测定子，使其偏心0.5mm以400-600/min的速度转动，使测定子于加工物端面想接触，点点的碰触移动，是测定子不在振动，宛如静止状态。
- 再以微动进给碰触，测定子就会朝一方向滑移，这个滑移起点是所需求的基准位置。
- 不适合在卧式计备上使用。
- 10. The straight handle is installed on the collet, and the stator is speculated by finger light, so that the eccentricity is 0.5mm and the speed is 400-600 / min, so as to measure the stator
- If you want to touch the end face of the workpiece, the touch movement of the dots is that the detector is not vibrating, just like the static state.
- Then touch with inching feed, the measuring stator will slide in one direction, and the sliding starting point is the required reference position.
- It is not suitable for horizontal meter.

主轴清洁棒
Spindle clerning rod



型号 Designation	斜度 Slant angle
STC30	BT30
STC40	BT40
STC50	BT50

锁刀座
Locking knife seat



型号 Designation	型号 Designation
TL-BT30	TL-SK30
TL-BT40	TL-SK40
TL-BT50	TL-SK50

锁刀座
Locking knife seat



型号 Designation
TL-HSK50
TL-HSK63
TL-HSK100

刀具车
Cutter car



型号 Designation	装刀数 Amount	说明 Explain
TTH-30	36	上面大板24支BT30， 下面2组，每组6支BT30
TTH-40	36	上面大板24支BT40， 下面2组，每组6支BT40
TTH-50	24	上面大板16支BT50， 下面2组，每组4支BT50
TTH-63	24	上面大板16支HSK63， 下面2组，每组4支HSK63
外尺寸	宽920*深475*高775mm	

刀具车(带柜)
Cutter car (with cabinet)



型号 Designation	装刀数 Amount	说明 Explain
DTH-30	54	柜顶30支BT30， 抽屉24支BT30
DTH-40	54	柜顶30支BT40， 抽屉24支BT40
DTH-50	36	柜顶20支BT50， 抽屉16支BT50
DTH-63	36	柜顶20支HSK63， 抽屉16支HSK63
外尺寸	宽600*深600*高915mm	

对刀仪
Tool aligner

- 用途：本仪器主要用于预调镗铣类切削刀具的孔径及刀长，可节省上机对刀时间。
- Purpose: this instrument is mainly used to pre adjust the hole diameter and length of boring and milling cutting tools, which can save the time of tool setting on the machine.



型号 Designation	电源	径向测量范围X	轴向测量范围Z	数据解析度-X	数据解析度-Z	主轴维度	重量 Kg Weight
MG-3400	AC220V 60HZ	300mm	30-400mm	0.005mm	0.005mm	BT50	30-400mm
MG-4400		400mm					

检测棒
Detection rod

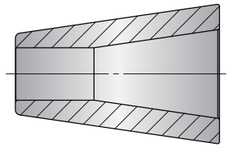
- 用途：用于对刀仪校准数据用
- Purpose: for calibration data of tool setting instrument



型号 Designation	D	L
BT50-196	42	196

变径转换套
Reducer conversion sleeve

- 用途：用于不同主轴的切换
- Purpose: switch between different spindles



型号 Designation
BT50-30
BT50-40
BT50-HSK63

注意事项及使用说明
Operations And Notice

A.为使本仪充分发挥功能，敬请详阅以下的操作说明，确保本仪器的准确性：
Before operating,please read folowing points carefuly：
1.检查木箱在运输中是否受损，并检查仪器外观是否良好；
2.拆箱后请将地盘固定螺丝松脱，并锁上随机附送的调整螺丝；
3.请确保清洗防锈油，切记不可使用汽油、丙酮类溶剂。
1.Check if the package is intact and presetter is in good condition;
2.UNfasten the set screws, and fasten it with adjusting screws included in packag;
3.Clean with anti-rust oil. No gasoline, nor any solvent with acetone.
B.操作前请确认下列事项：
Checking the following points before operating：
1.松开X轴固定螺丝。（请参照本仪器上黄色贴纸）；
2.松开Z轴固定配重块螺丝。（请参考本仪器上黄色贴纸）；
3.圆检查润滑系统是否正常；
4.主轴务必确保清洁；
5.测试棒擦拭干净；
6.上述4,5两项于每次操作前必须得底清洁，使用后请保持防锈及清洁杂物、灰尘、铁屑等。
1.Unfasten the set screw on X axis (See yellow pasters on this equipment) ;
2.Unfasten the set screw on Z axis (See yellow pasters on this equipment);
3.Check the lubrication system;
4.Clean the spindle;
5.Clean the test bar;
6.Before every operation, Procedures 4 and 5 aforementioned shall be done.
C.操作中注意事项:
Notices:
1.本仪器Z轴升降时为手动快速移位装置；
2.操作Z轴快速移位时请勿大力拉扯，请将把手往内压下，在移至接近刀具时，再使用微调手输；
3.量测刀具时请以刀背接触测头，避免损坏测头及量表。
1.Move the Z-axis with one hand;
2.No pulling nor pushing Z-axis brutally: Please push the Z-axis gently approaching the tool and then micro adjust with one hand;
3.Please don't touch probe with the cutting edge to avoid any damage to probe and meter.

nstructions
使用说明
A.X轴归零"0"：
Return X-axis to Zero:
1.请同时拭擦清洁主轴及测试棒；
2.将Z轴（升降）百分表架，向顺时针方向移90度，以免x轴归“0”时撞击测试棒；
3.将X轴量表测头调至接触测试棒，使量表指针向顺时针方向接触第一个0的位置；
4.将x轴显示数据设定为举测试棒半径尺寸相同之数字，即完成归0。
1.Clean the spindle and test bar;
2.Move Z-axis to an angle of 90 in clock-wise direction, to avoid the bump between test bar and ■X-axIs,
3.Adjust the probe of X-axis to the test bar and make indicator touch the "0"in clock-wise direction;
4.Set the display data of X-axial same as the radius of testing bar, which means it is ready for testing.
B.量测程序:
Measuring procedures:
1.测试棒之归“0”动作务必落实、确定；
2.将刀具置入主轴，并用锁紧螺帽固定住；
3.旋转主轴，使刀具之刀尖接触到X轴测头，让量表指针转至第一个0的位置；
4.于显示器上设定刀具所需之尺寸，X轴请输入半径值，此时即完成刀具预调值；
5.取下刀具时，请以逆时针方向松脱主固定螺帽。
1.Make sure X-axis to Zero;
2.lock the tool with set screw on Z-axis;
3.Move the spindle and make the cutting edge touch the probe of X-axis Indicator points to the firstZero position;
4.Set the required sizes of tools and the value of radius on X-axis;
5.Unfasten the locking nut anti-clock-wisely and dismantle the tool.

粗镗头
Rough boring head

切削参数表
Ctting parameter table

- 本表是切削条件的选择基准。请根据机床、工件、铁屑的排出情况等作适当调整
- This table is a selection principle for cutting parameter, please varies to the terms of machine,piece,chipetc.

BT40

镗头型号 Designation	工件材质 Workpiece Material	有效加工深度 Effective Depth of Cutting	刀尖R Tip Corner	切削速度 Cutting Speed	切削量mm/Φ Depth of Cutting		进给量mm/r Feed	
					推荐值	MAX	推荐值	MAX
CMR20-26KD1	合金钢	80	0.4	110	1.2	2	0.15	0.25
	不锈钢			60	1.3	2	0.16	0.25
	铸铁			100	1.5	2.5	0.2	0.25
	铝合金			150	1.8	2.5	0.22	0.3
CMR25-33KD2	合金钢	93	0.4	110	1.8	3	0.15	0.3
	不锈钢			60	2	3	0.18	0.3
	铸铁			100	2.5	4	0.2	0.3
	铝合金			150	2.8	4	0.25	0.35
CMR32-42KD3	合金钢	108	0.8	150	3	4	0.2	0.35
	不锈钢			70	2.8	4	0.22	0.35
	铸铁			90	3.5	5	0.25	0.4
	铝合金			150	4	5	0.25	0.4
CMR41-54KD4	合金钢	105	0.8	150	3.8	5	0.25	0.4
	不锈钢			70	3.2	5	0.25	0.4
	铸铁			90	5	8	0.28	0.45
	铝合金			150	6	8	0.35	045
CMR53-70KD5	合金钢	105	0.8	160	5.5	7	0.3	0.45
	不锈钢			80	7.5	7	0.3	0.5
	铸铁			100	8.5	10	0.35	0.55
	铝合金			150	6.5	10	0.4	0.45
CMR68-110KD6	合金钢	109	0.8	160	6.5	10	0.3	0.45
CMR98-153KD6	不锈钢			80	6.5	9	0.3	0.45
	铸铁			100	9.5	12	0.35	0.5
CMR148203KD6	铝合金			150	10	12	0.4	0.55

BT50

镗头型号 Designation	工件材质 Workpiece Material	有效加工深度 Effective Depth of Cutting	刀尖R Tip Corner	切削速度 Cutting Speed	切削量mm/Φ Depth of Cutting		进给量mm/r Feed	
					推荐值	MAX	推荐值	MAX
CMR20-26KD1	合金钢	75	0.4	110	1.2	2	0.15	0.25
	不锈钢			60	1.3	2	0.16	0.25
	铸铁			100	1.5	2.5	0.2	0.25
	铝合金			150	1.8	2.5	0.22	0.3
CMR25-33KD2	合金钢	107.5	0.4	110	1.8	3	0.15	0.3
	不锈钢			60	2	3	0.18	0.3
	铸铁			100	2.5	4	0.2	0.3
	铝合金			150	2.8	4	0.25	0.35
CMR32-42KD3	合金钢	127	0.8	150	3	4	0.2	0.35
	不锈钢			70	2.8	4	0.22	0.35
	铸铁			90	3.5	5	0.25	0.4
	铝合金			150	4	5	0.25	0.4
CMR41-54KD4	合金钢	124	0.8	150	3.8	5	0.25	0.4
	不锈钢			70	3.2	5	0.25	0.4
	铸铁			90	5	8	0.28	0.45
	铝合金			150	6	8	0.35	0.45
CMR53-70KD5	合金钢	124	0.8	160	6	8	0.3	0.45
	不锈钢			80	5.5	7	0.3	0.5
	铸铁			100	8	12	0.35	0.55
	铝合金			150	8.5	12	0.4	0.45
CMR68-110KD6	合金钢	128	0.8	160	7.5	10	0.3	0.45
	不锈钢			80	6.5	9	0.3	0.45
	铸铁			100	9.5	14	0.35	0.5
	铝合金			150	10	12	0.4	0.55
CMR98-153KD6	合金钢	128	0.8	160	8.5	12	0.3	0.45
	不锈钢			80	6.5	9	0.3	0.45
CMR148203KD6	铸铁			100	9.5	14	0.35	0.5
	铝合金			150	10	12	0.4	0.55
大于370(CLR系列)	合金钢	152	0.8	160	8.5	12	0.3	0.45
	不锈钢			80	6.5	9	0.3	0.45
	铸铁			100	9.5	14	0.35	0.5
	铝合金			150	10	12	0.4	0.55
大于370(CLR系列)	合金钢	152	0.8	160	5.5	8	0.3	0.45
	不锈钢			80	4.5	6	0.3	0.45
	铸铁			100	7	10	0.35	0.5
	铝合金			150	7.5	8	0.4	0.55

精镗头
Fine boring head

切削参数表
Ctting parameter table

- 本表是切削条件的选择基准。请根据机床、工件等具体情况，进行适当调整
- 高压内冷加工可能会使用刀柄挠曲。公差要求很严格时，请降低冷却液的压强
- 作为钢件加工的磨损对策，建议用金属陶瓷涂层
- 使用CBN材质，建议用干式切削
- This chart is the principle for selecting cutting parameters. please adjust consider m achine,work pieceetc.
- High pressure inside coolant might cause holder bend. As tolerance is strict, reduce coolant pressure
- As a solution aimed at wear out of machining steel,we suggest adopt alloy ceram icinsert with coating
- Use CBN insert, recom mend dry cutting

BT40

镗头型号 Designation	工件材质 Workpiece Material	有效加工深度 Effective Depth of Cutting	刀尖R Tip Corner	切削速度 Cutting Speed	切削量mm/Φ Depth of Cutting		进给量mm/r Feed	
					推荐值	MAX	推荐值	MAX
CMP20-36KD1	合金钢	80	0.2	140	0.2	0.4	0.06	0.15
	不锈钢			80	0.2	0.4	0.06	0.15
	铸铁			90	0.25	0.5	0.06	0.15
	铝合金			180	0.25	0.5	0.06	0.15
CMP25-47KD2	合金钢	93	0.2	150	0.2	0.4	0.06	0.15
	不锈钢			90	0.2	0.4	0.06	0.15
	铸铁			100	0.25	0.5	0.06	0.15
	铝合金			180	0.25	0.5	0.06	0.15
CMP32-60KD3	合金钢	108	0.4	150	0.25	0.5	0.06	0.15
	不锈钢			120	0.25	0.5	0.06	0.15
	铸铁			110	0.3	0.6	0.06	0.15
	铝合金			250	0.3	0.6	0.08	0.15
CMP41-74KD4	合金钢	105	0.4	150	0.3	0.5	0.06	0.15
	不锈钢			120	0.3	0.5	0.06	0.15
	铸铁			110	0.35	0.6	0.06	0.15
	铝合金			250	0.35	0.6	0.08	0.15
CMP53-95KD5	合金钢	105	0.4	150	0.3	0.5	0.08	0.15
	不锈钢			120	0.3	0.5	0.08	0.15
	铸铁			110	0.35	0.6	0.08	0.15
	铝合金			250	0.35	0.6	0.10	0.2
CMP68-150KD6	合金钢	109	0.4	150	0.3	0.5	0.08	0.15
	不锈钢			120	0.3	0.5	0.08	0.15
CMP100-203KD6	铸铁			110	0.35	0.6	0.08	0.15
	铝合金			250	0.35	0.6	0.10	0.2

BT50

镗头型号 Designation	工件材质 Workpiece Material	有效加工深度 Effective Depth of Cutting	刀尖R Tip Corner	切削速度 Cutting Speed	切削量mm/Φ Depth of Cutting		进给量mm/r Feed	
					推荐值	MAX	推荐值	MAX
CMP20-36KD1	合金钢	75	0.2	140	0.2	0.4	0.06	0.15
	不锈钢			80	0.2	0.4	0.06	0.15
	铸铁			90	0.25	0.5	0.06	0.15
	铝合金			180	0.25	0.5	0.06	0.15
CMP25-47KD2	合金钢	107.5	0.2	150	0.2	0.4	0.06	0.15
	不锈钢			90	0.2	0.4	0.06	0.15
	铸铁			100	0.25	0.5	0.06	0.15
	铝合金			180	0.25	0.5	0.06	0.15
CMP32-60KD3	合金钢	127	0.4	150	0.25	0.5	0.06	0.15
	不锈钢			120	0.25	0.5	0.06	0.15
	铸铁			110	0.3	0.6	0.06	0.15
	铝合金			250	0.3	0.6	0.08	0.15
CMP41-74KD4	合金钢	124	0.4	150	0.3	0.5	0.06	0.15
	不锈钢			120	0.3	0.5	0.06	0.15
	铸铁			110	0.35	0.6	0.06	0.15
	铝合金			250	0.35	0.6	0.08	0.15
CMP53-95KD5	合金钢	124	0.4	150	0.3	0.5	0.08	0.15
	不锈钢			120	0.3	0.5	0.08	0.15
	铸铁			110	0.35	0.6	0.08	0.15
	铝合金			250	0.35	0.6	0.10	0.2
CMP68-150KD6	合金钢	128	0.4	150	0.3	0.5	0.08	0.15
	不锈钢			120	0.3	0.5	0.08	0.15
CMP100-203KD6	铸铁			110	0.35	0.6	0.08	0.15
	铝合金			250	0.35	0.6	0.10	0.2
CLP系列	合金钢	152	0.4	150	0.3	0.5	0.08	0.15
	不锈钢			120	0.3	0.5	0.08	0.15
	铸铁			110	0.35	0.6	0.08	0.15
	铝合金			250	0.35	0.6	0.10	0.2

硬质合金直柄刀柄
Straight shank carbide tool

切削参数表
Ctting parameter table

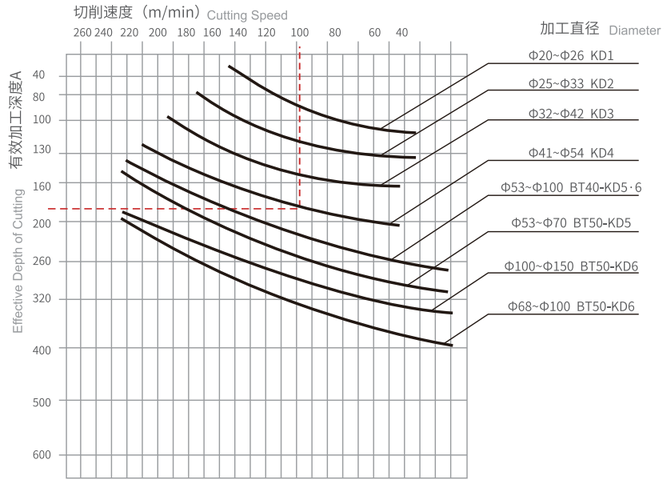
- 本表是切削条件的选择基准。请根据机床、工件等具体情况，进行适当调整
- 高压内冷加工可能会使用刀柄挠曲。公差要求很严格时，请降低冷却液的压强
- 作为钢件加工的磨损对策，建议用金属陶瓷涂层
- 以下推荐条件是在使用强力铣刀夹头时的值
- This chart is the principle for selecting cutting parameters. please adjust consider machine,workpiece etc.
- High pressure inside coolant might cause holder bend. As tolerance is strict, reduce coolant pressure.
- As a solution aimed at wear out of machining steel,we suggest adopt alloy ceramic insert with coating.
- Following date in thi chart is under terms of using power milling holder.

BT40

镗头型号 Designation	工件材质 Workpiece Material	有效加工深度 Effective Depth of Cutting	刀尖R Tip Corner	切削速度 Cutting Speed	切削量mm/Φ Depth of Cutting		进给量mm/r Feed	
					推荐值	MAX	推荐值	MAX
CMP20-36KD1	碳钢	90	0.4	150	0.25	0.3	0.07	0.15
		135	0.2	90	0.25	0.3	0.05	0.15
		160	0.2	45	0.2	0.3	0.05	0.1
		190	0.2	20	0.18	0.25	0.05	0.1
	铸铁	90	0.4	120	0.25	0.3	0.07	0.15
		135	0.2	90	0.25	0.3	0.05	0.12
		160	0.2	45	0.2	0.3	0.05	0.1
		190	0.2	20	0.18	0.25	0.05	0.08
	铝合金	100	0.4	150	0.3	0.4	0.07	0.15
		150	0.2	75	0.25	0.35	0.05	0.15
		190	0.2	30	0.2	0.3	0.05	0.1
		210	0.2	20	0.16	0.22	0.04	0.08
CMP25-47KD2	碳钢	120	0.4	150	0.25	0.3	0.07	0.15
		160	0.2	90	0.25	0.3	0.05	0.15
		190	0.2	45	0.2	0.3	0.05	0.1
		235	0.2	20	0.18	0.25	0.05	0.1
	铸铁	120	0.4	120	0.25	0.3	0.07	0.15
		160	0.2	90	0.25	0.3	0.05	0.12
		190	0.2	45	0.2	0.3	0.05	0.1
		235	0.2	20	0.18	0.25	0.05	0.08
	铝合金	125	0.4	150	0.25	0.3	0.07	0.15
		160	0.2	90	0.25	0.3	0.05	0.15
		190	0.2	45	0.2	0.3	0.05	0.1
		235	0.2	20	0.18	0.25	0.05	0.08
CMP32-60KD3	碳钢	120	0.4	120	0.25	0.3	0.07	0.15
		160	0.2	90	0.25	0.3	0.05	0.15
		190	0.2	45	0.2	0.3	0.05	0.1
		235	0.2	20	0.18	0.25	0.05	0.1
	铸铁	145	0.4	150	0.3	0.4	0.07	0.15
		190	0.2	75	0.25	0.35	0.07	0.12
		245	0.2	30	0.2	0.3	0.05	0.1
		300	0.2	20	0.16	0.22	0.04	0.08
	铝合金	140	0.4	150	0.3	0.4	0.07	0.15
		170	0.2	75	0.25	0.35	0.07	0.15
		220	0.2	30	0.2	0.3	0.05	0.1
		260	0.2	20	0.16	0.22	0.04	0.08

切削钢件时的切削速度选择图
Choice of cutt ing speed for cutting steel parts

- 镗孔加工时经常会发生振动(颤振)。从右图可以看出，镗杆加长切削速度(转速)就必须降低
- 请参考右图及前面的切削条件表，选择最合适的加工条件
- 铸铁加工时有效深度相对右图约可提高10%~20%左右
- It often happen to shake(vibrate) when boring.from this chart,boring bar length increase, accordingly cutting speed must decrease.
- Please refer to right chart and mentioned situation,select suitable manufacturing terms
- When manufacturing cast iron, effective depth can improve 10%--20% related to right chart



参考例 EXAMPLE

如果有效加工深度H=182，加工直径Φ45(Φ41~Φ54KD4)，图中与H=182红线的点118/即为合适的切削速度。请参考此例，选择合适的切削速度。

Take effective depth H=182 for example,diameter D45 (D41--D54 KD4), in chart, intersect point of red line H=182 and D45 is suitable cutting speed. please refer to this sample,select suitable cutting speed.

刀尖半径R和有效加工深度的关系
The relationship between R tip radius and the effective depth of processing

- 刀尖半径R与镗杆长度(加工深度的极限)之间也有很深的关系
- 参考下图选择合适的刀柄及刀片(刀尖半径)
- 铁加工时有效深度约可提高1.1-1.3倍
- There is a closely relation between insert tip R and depth of cut
- Select fitable holder and insert(tip corner) refer to following chart
- Manufacturing steel can improve effective depth 1.1-1.3 times

