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BAOJI MACHINE TOOL GROUP CO.,LTD
宝鸡忠诚机床股份有限公司
BAOJI ZHONGCHENG MACHINE TOOL CO.,LTD

简式数控车床
CNC Lathe

匠 心 智 造 中 国 好 机 床



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本样册内所印各种说明及图片如有变动，恕不另行通知（202503版）
Design and specifications given herein are subject to change without prior（Version 202503）

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HK63B



01 典型样件 Typical Samples



典型样件1

典型样件2





典型样件3

02 产品概况 Product Instruction

简式数控车床包含TK/EK、SK、CBK、HK等系列数控车床，能够完成内外圆柱面、圆锥面、圆弧曲面、端面、公英制螺纹等车削加工。适合汽车、摩托车、石油、工程机械等行业对旋转体类零件多品种、大批量的加工。

TK/EK系列是伺服电机驱动，独立主轴结构的简式数控车床；

SK系列主轴箱采用齿轮传动,机型后加“P”为手动换挡机床，机型后加“S”为广数伺服电机驱动，机型后加“C”为主轴通孔孔径为φ105，机型后加“Q”为轻型数控机床；

CBK系列主轴箱采用齿轮传动，采用45°斜床身结构；

HK系列主轴箱采用齿轮传动，机型后加“B”为轻型手动换挡、分离式床身机床，机型后加“Q”为液压换挡、整体式床身轻型机床，机型后不带字母的为液压换挡、整体式床身机床。

Economic CNC lathe includes TK/EK, SK, CBK, HK and other series of CNC lathe, which can complete the turning processing of internal and external cylindrical surfaces, conical surfaces, circular curved surfaces, end surfaces, metric and imperial threads. Suitable for automobile, motorcycle, petroleum, engineering machinery and other industries on the rotate body work-pieces of multiple varieties, mass processing.

TK/EK series are economic CNC lathes with servo motor drive and cartridge type spindle structure;

SK series headstock adopts gear drive, model with "P" means manual shift machine tool, model with "S" means GSK brand servo motor drive, model with "C" means spindle through hole diameter is Φ105, and model with "Q" means light-duty CNC ma-chine;

CBK series headstock adopts gear drive and 45° slant bed structure;

HK series headstock adopts gear transmission. with "B" after the model means light-duty manual shift change and separated machine bed. with "Q" after the model means hydraulic shift change and light-duty integral machine bed. without letters means hydraulic shift change and integral machine bed.

03 性能优势 Performance Advantages

●采用高强度铸铁床身结构，强度高吸震性好，多次时效处理，有效抑制了加工过程中切削力导致的变形和应力。导轨副经超高频淬火和精密磨削及贴塑、刮研工艺，使摩擦阻力小，精度保持性长久；

●导轨、滚珠丝杠副采用集中自动稀油润滑，定时定量向各润滑部位注油，保证各滑动面均匀润滑，保证了滚珠丝杠副和导轨的使用寿命；

●机床采用国产电动刀架，换刀快，稳定可靠；

●TK/EK系列独立主轴结构，机床主轴转速高，SK、CBK、HK系列主轴箱采用齿轮传动，机床输出扭矩大；

●CBK系列斜床身结构排屑流畅。

●Adopting high strength cast iron bed structure with high strength and good shock absorption, and multiple aging treatment effectively suppresses the deformation and stress caused by cutting force during processing. The guideway is treated with hardening and grinding, also uses turcite and precision hand scraping processes, which can achieve small friction resistance and keep the precision for a long time .

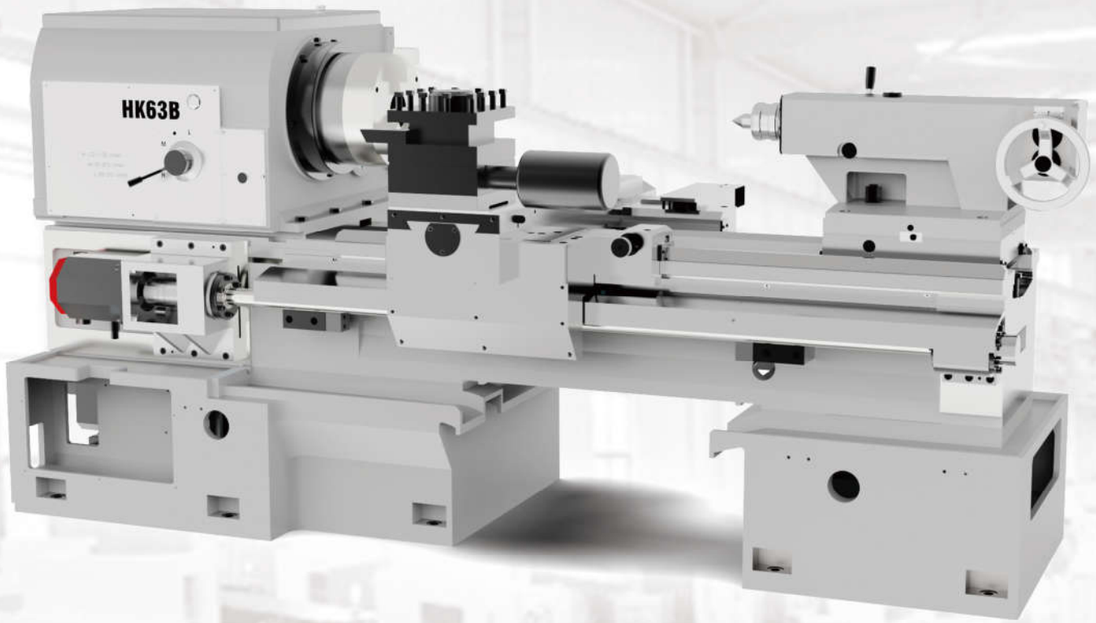
●The guideway and ball screw adopts centralized automatic low-viscosity lubricating oil, and oil is injected into each lubri-cation part at regular intervals to ensure uniform lubrication of each sliding surface, which ensures the service life of the ball screw and the guideway;

●The machine tool adopts domestic toolpost,the advantage is fast tool change, stable and reliable;

●TK/EK series have cartridge type spindle structure; machine spindle speed is high, SK, CBK, HK series headstock adopts gear drive, machine output torque is high;

●CBK series slant bed structure with smooth chip removal.

平床身系列
Flat bed series machine tool





床身：采用高强度铸铁铸造，导轨水平排布，床身经多次时效处理，有效抑制了加工过程中切削力导致的变形和应力，导轨副经高频淬火处理。

Bed: Adopting high strength cast iron, guideway are arranged horizontally, the bed is treated by multiple ageing treatments, which effectively suppresses the deformation and stress caused by the cutting force in the machining process, and the guideway is harden by high frequency.

手动尾座：手动旋转手轮驱动丝杠实现尾座套筒伸缩对工件的顶紧松开，还可用于工件轴向钻孔、中心孔加工。

Manual tailstock: Manually rotate the handwheel to drive the screw, which realized the tailstock quill advance and retreat of the workpiece tightening and loosening, but also can be used for workpiece axial drilling, center hole processing.

液压尾座：采用液压驱动套筒伸缩实现对工件的顶紧松开，保证加工的稳定性。

Hydraulic tailstock: Hydraulic drive sleeve advance and retreat of the workpiece tightening and loosening of the workpiece to ensure the stability of processing.



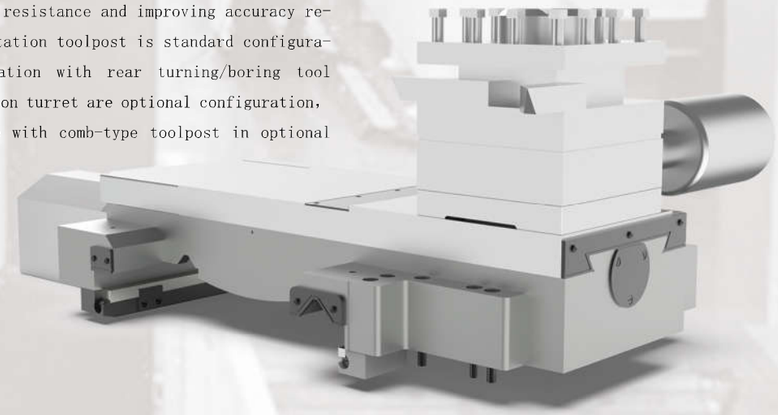


主轴箱：伺服电机驱动，通过齿轮传动，输出扭矩大。可配置手动卡盘，中实、中空液压卡盘，能满足不同零件加工需求。

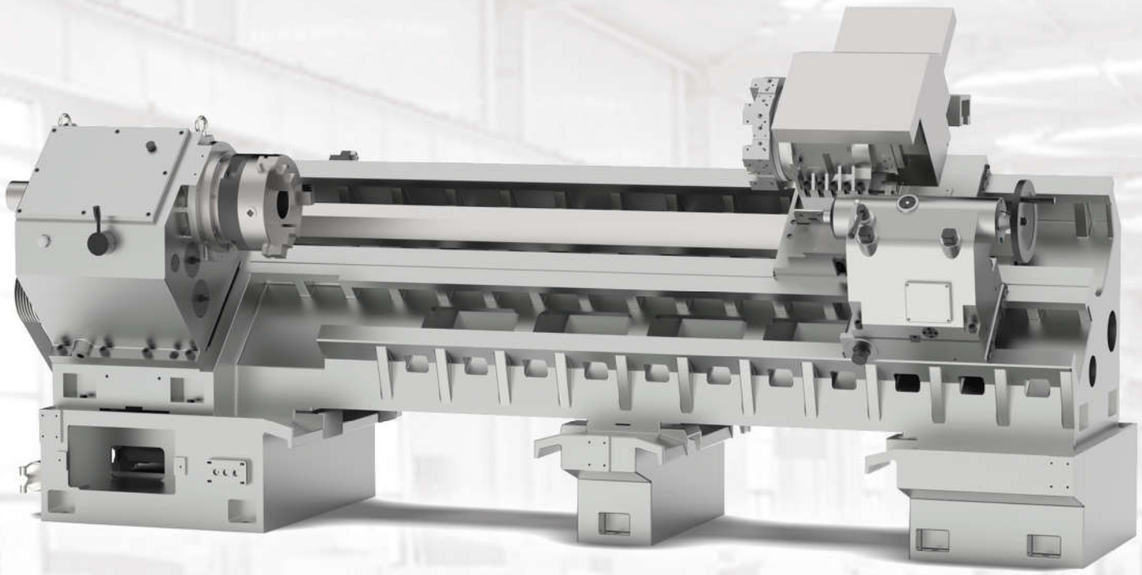
Headstock: Servo motor drive plus the gear drive, the output torque is high. It is available with manual chuck, solid or hollow hydraulic chuck in optional configuration, which can meet different parts processing needs.

床鞍：采用人工刮研工艺，保证各导轨副接触均匀，采用间歇式润滑泵进行润滑，使导轨副拥有良好的润滑效果，降低摩擦阻力，提高精度保持性。配备立式四工位电动刀架，可加配后置车/镗刀座；可选配卧式六工位电动刀架；部分机型可选配排式刀架。

Saddle: Adopting precision hand scraping processes to ensure uniform contact of each guideway, using intermittent lubrication pump for lubrication, so that the guideway has good lubrication effect, reducing friction resistance and improving accuracy retention. The vertical 4-station toolpost is standard configuration additional configuration with rear turning/boring tool holder, horizontal 6-station turret are optional configuration, some models are available with comb-type toolpost in optional configuration.



斜床身系列
Slant bed series machine tool



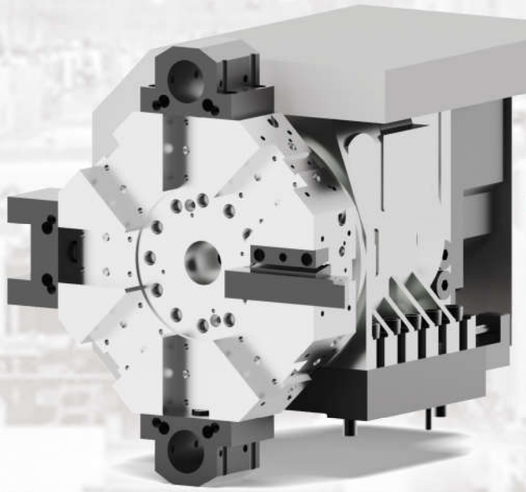
手动尾座： 手动旋转手轮驱动丝杠实现尾座套筒伸缩对工件的顶紧松开。

Manual tailstock: Manually rotate the handwheel to drive the screw to realize the tailstock quill advance and retreat of the workpiece tightening and loosening.

液压尾座： 采用液压驱动套筒伸缩实现对工件的顶紧松开，保证加工的稳定性。

Hydraulic tailstock: Hydraulic driven sleeve advance and retreat of the workpiece tightening and loosening of the workpiece to ensure the stability of processing.





电动刀架： 采用端齿盘作为分度定位单元，精度高、稳定可靠。可选配伺服刀架，液压刀架。

Electric turret: Adopting hirth coupling as indexing and positioning unit, high precision, stable and reliable. It is available with servo turret and hydraulic turret in optional configuration.

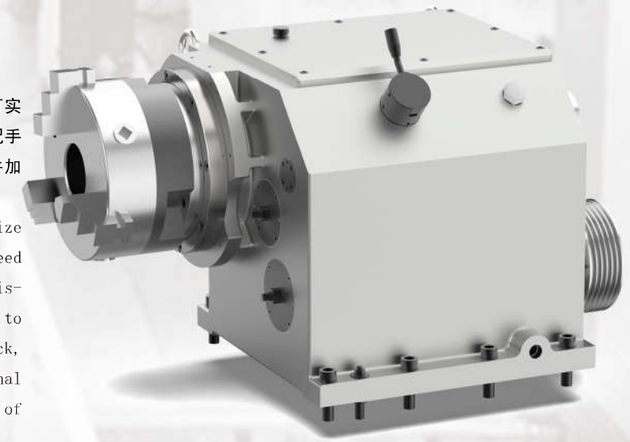


床身： 采用45°斜床身+底座结构，排屑流畅，装夹工件方便。多次时效处理，有效抑制了加工过程中切削力导致的变形和应力。导轨副经中频淬火和精密磨削及贴塑、刮研工艺，使摩擦阻力小，精度保持性长久。

Bed: 45° slant bed + base structure, smooth chip removal and convenient workpiece clamping. Multiple aging treatment effectively suppresses the deformation and stress caused by cutting force during machining. The guideway is treated with hardening and grinding, also adopts turcite and precision hand scraping processes, the low friction resistance and long accuracy retention.

床头箱： 机床的主轴箱通过手动三档变速，档内无级，可实现恒线速切削，主轴最高转速达1600r/min。可配手动卡盘，中实、中空液压卡盘，能满足不同零件加工需求。

Headstock: The headstock of the machine tool can realize constant line speed cutting by manual 3-speed gear change, continuously variable transmission, and the maximum speed of spindle is up to 1600r/min. It is available with manual chuck, solid or hollow hydraulic chuck in optional configuration, which can meet the needs of



项目 Item		单位 Unit	TK36S	EK40	TK50	SK40P(S)	SK50P(S)	SK50C	SK66Q
加工范围 Capacity	床身最大回转直径 Max. swing diameter over bed	mm	Φ360	Φ400	Φ500	Φ400	Φ500	Φ500	Φ660
	最大工件长度 Max. workpiece length	mm	750	750/1000	1100/1600/2100/3100	750/1000/1500/2000/3000			750/1000/1500/2000
	最大加工长度 Max. turning length	mm	600	580/830	1000/1500/2000/3000	570/820/1320/1820/2820			570/820/1320/1820
	最大加工直径 Max. processing diameter	mm	Φ320	Φ400	Φ500	Φ400	Φ500		Φ550
	床鞍上最大回转直径 Max. Swing diameter over slide	mm	Φ180	Φ200	Φ280	Φ200	Φ280		Φ440
	卡盘直径 chuck diameter	mm	Φ200		Φ250			Φ315	Φ250
主轴 Spindle	主轴头形式 Spindle nose type	GB5900.1	A2-6		A2-8				
	主轴孔径 Spindle bore diameter	mm	Φ57		Φ87	Φ82		Φ105	Φ82
	主轴转速 Spindle speed	r/min	140～3000(无级)		30～2500(无极)	21-1620手动3档(档内无级) L:21～210 M:66～660 H:162～1620		21.7-1600手动3档(档内无级) L:21.7～217 M:65～650 H:160～1600	21-1620手动3档(档内无级) L:21～210 M:66～660 H:162～1620
	主电机功率 Spindle motor power	kW	5.5		15	7.5			
尾座 Tailstock	套筒直径×行程 Quill diameter×Travel	mm	Φ55×120 (液压尾座100)	Φ65×120 (液压尾座100)	Φ75×150(液压尾座Φ80×130)				
	顶尖锥度 center taper	MTNo	4#		5#				
床鞍进给 Saddle Feed	移动距离X/Z Travelx/z	mm	200/610	X:230/Z:590/840	X:275/Z:1000/1500/2000/3000	X:275/Z:600/850/1350/1850/2850			X:275/Z:600/850/1350/1850
	快速移动距离X/Z Rapid speedX/Z	mm/min	6/8		6/8（3000为6）	6/8（2000及以上为6）			6/8（2000为6）
刀架 Turret	刀位数 Tool number		4						
	刀具尺寸车削 Tool size(Turning)	mm	20×20		25×25				
其他 Other	电源总容量 power	kVA	12		30	15			
	机床尺寸 (长×宽×高) Dimension(L*W*H)	mm	2150×1280×1600	2150/2400×1280×1600	2760/3260/3760/4760×1520×1740	2450/2700/3200/3700/4700×1500×1700			2450/2700/3200/3700×1500×1700
	机床重量 weight	kg	1700	1700/2100	2800/3200/3600/4600	2480/2600/2850/3100/3600			2480/2600/2850/3100
精度 accuracy	定位精度X/Z Position accuracy	mm	0.026/0.032	0.026/0.032、0.036(1000)	0.026/0.036(1000)、0.040(1500及以上)	0.026/0.032(750)、0.036(1000)、0.040(1500及以上)			
	重复定位精度X/Z Repeat position accuracy x/z	mm	0.007/0.009	0.007/0.009、0.011(1000)	0.007/0.011(1000)、0.014(1500及以上)	0.007/0.009(750)、0.011(1000)、0.014(1500及以上)			
	圆度 roundnes	mm	≦0.004						

注：此页参数为标准配置时参数，配置变更时部分参数可能会随之改变 Note: The parameters on this page are standard configuration parameters, and some parameters may change with configuration changes

项目 Item		单位 Unit	HK63B	HK80B	HK80	HK100Q	HK100	HK125	CBK50	CBK63
加工范围 Capacity	床身最大回转直径 Max. swing diameter over bed	mm	Φ630	Φ800	Φ800	Φ1000	Φ1040	Φ1250	Φ500	Φ630
	最大工件长度 Max. workpiece length	mm	1000/1500/2000/3000		1000/1500/2000/3000/4000/5000	1000/1500/2000/3000	1500/3000/4000/5000		1000/1500	1000/2000/3000
	最大加工长度 Max. turning length	mm	710/1260/1760/2760		710/1300/1800/2800/3800/4800	710/1300/1800/2800	1300/2800/3800/4800		980/1500	800/1800/2800
	最大加工直径 Max. processing diameter	mm	Φ630	Φ740	Φ800	Φ1000	Φ984	Φ1234	Φ420	Φ400
	床鞍上最大回转直径 Max. swing diameter over slide	mm	Φ360	Φ500	Φ480	Φ650	Φ650	Φ900	Φ350	Φ445
	卡盘直径 chuck diameter	mm	Φ315				Φ630		Φ250	Φ315
主轴 Spindle	主轴头形式 Spindle nose type	GB5900.1	A2-11				A2-15		A2-8	A2-11(手动)/A2-8(液压)
	主轴孔径 Spindle bore diameter	mm	Φ105				Φ130		Φ82	Φ84
	主轴转速 Spindle speed	r/min	20～1120手动3档(档内无级) 20-1120 3 shifts(Stepless in shift) L:20～210 M:37～373 H:112～1120		20～1000液压4档(档内无级) 20-1000 4 shifts(Stepless in shift) Ⅰ:20～204 Ⅱ:39～354 Ⅲ:71～642 Ⅳ:124～1000	20～1000液压4档(档内无级) 20-1000 4 shifts(Stepless in shift) Ⅰ:20～204 Ⅱ:39～354 Ⅲ:71～642 Ⅳ:124～1000	3.5～500液压4档（档内无级） 20-1000 4 shifts(Stepless in shift) Ⅰ:3.5～160 Ⅱ:5～233 Ⅲ:7～345 Ⅳ:11～500		21～1620手动3档(档内无级) 21-1620 3 shifts(Stepless in shift) L:21～210 M:66～660 H:162～1620	20～1600手动3档(档内无级) 21-1620 3 shifts(Stepless in shift) L:20～210 M:20～250 H:155～1600
	主电机功率 Spindle motor power	kW	11		15	15	22		7.5	11
尾座 Tailstock	套筒直径×行程 Quill diameter×Travel	mm	Φ100×250		Φ100×250 (4000及以上Φ140×200)	Φ140×250	Φ160×300		Φ90×100	Φ100×150
	顶尖锥度 center taper	MTNo	5#		5#(4000及以上6#)	6#	6#		5#	
床鞍进给 Saddle Feed	移动距离X/Z Travelx/z	mm	X:370 Z:760/1310/1810/2810	X:390 Z:760/1310/1810/2810	X:430 Z:760/1350/1850/2850/3850/4850	X:540 Z:760/1350/1850/2850	X:520 Z:1300/2800/3800/4800	X:630 Z:1300/2800/3800/4800	X:255/Z:1000/1500	X:270/Z:800/1800/2800
	快移速度X/Z move rapidly	mm/min	6/7		6/7(4000及以上5)	6/7	3/6(4000及以上5)		6/8	8/8
刀架 Turret	刀位数 Tool number		4						8	
	刀具尺寸车削 Tool size(Turning)	mm	32×32			32×32	40×40		25×25	32×32
其他 Other	电源总容量 power	kVA	25		30	30	40		15	30
	机床尺寸 （长×宽×高） Dimension(L*W*H)	mm	3250/3650/4150/5150×2000×1850	3250/3650/4150/5150×2000×2000	4280/4880/5800/6800×2200×2050 7650×2250×2050（4000） 7650×2400×2100（5000）	4180/4780/5670/6670×2200×2150	4640/6140/7140/8140×2310×2420		3120/3720×1900×1910	2720/3990/5060×1810×1890
	机床重量 weight	kg	4600/5100/5600/6100	4800/5300/5800/6400	7200/8000/8600/9600/11000/12500	7600/8400/9000/1000	10500/12000/13000/14000		3800/4100	5000/5500/7500 （含液压系统）
精度 accuracy	定位精度X/Z Position accuracy	mm	0.026/0.036(1000)、0.040(1500及以上)		0.026/0.036(1000)、0.040(1500、2000)、0.048（3000及以上）		0.036/0.040		0.026/0.036	0.026/0.036(1000) 0.040(2000)、0.048(3000)
	重复定位精度X/Z Repeat position accuracy x/z	mm	0.007/0.011(1000)、0.014(1500及以上)		0.007/0.011(1000)、0.014(1500、2000)、0.02（3000及以上）		0.01/0.016		0.010/0.013	0.007/0.009(1000) 0.014(2000)、0.020(3000)
	圆度 roundness	mm	≦0.004			≦0.004	≦0.010		≦0.004	

注：此页参数为标准配置时参数，配置变更时部分参数可能会随之改变 Note: The parameters on this page are standard configuration parameters, and some parameters may change with configuration changes

04 机床数据 Machine Data

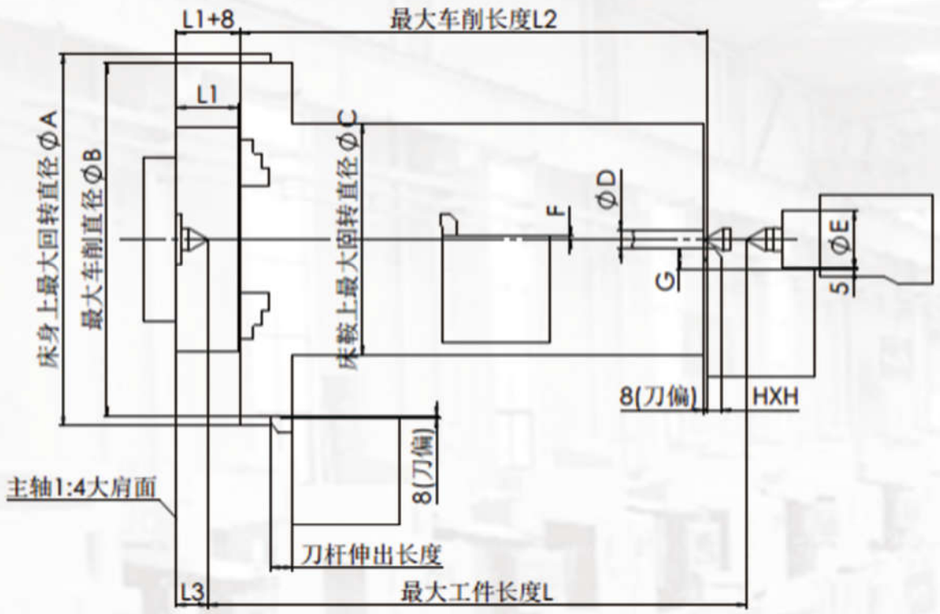
机床配置表 ●标配 ○选配 -没有
Configuration table

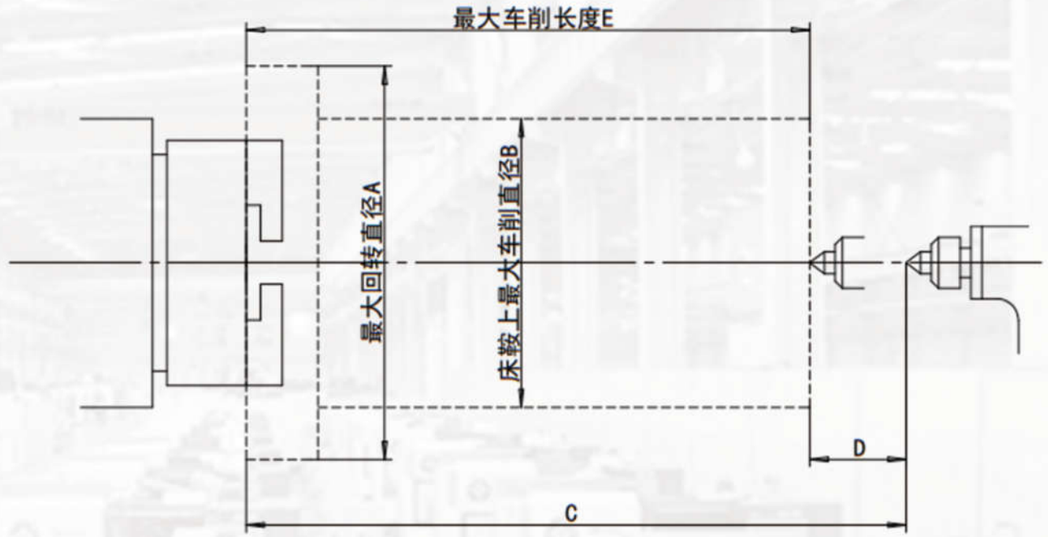
主要配置 Main Specification	品牌厂家 Brand manufacturers		TK36	EK40	TK50	SK40P(S)	SK50P(S)	SK50C	SK66Q	HK63B	HK80B	HK80	HK100Q	HK100	HK125	CBK50	CBK63
控制系统 control system	标配 Standard		GSK980TD	GSK980TD	GSK980TD	GSK980TD	GSK980TD	GSK980TD	GSK980TD	GSK980TD	GSK980TD	GSK980TD	GSK980TD	GSK980TD	GSK980TD	GSK980TD	GSK980TD
	选配 Optional		FANUC□ 西门子□ KND□ 宝机□ FANUC□ SIEMENS□ KND□ BOCHI□														
卡盘 chuck	标配 Standard	手动（mm） manual	Φ200三爪	Φ200三爪	Φ250三爪	Φ250三爪	Φ250三爪	Φ315三爪	Φ250三爪	Φ315三爪	Φ315三爪	Φ315三爪	Φ315三爪	Φ630三爪	Φ630三爪	Φ250三爪	Φ315三爪
	选配 Optional	手动（mm） manual	Φ250	Φ250	Φ320	Φ315/Φ400	Φ315/Φ400	Φ400	Φ315/Φ400	Φ400/Φ500	Φ400/Φ500	Φ400/Φ500/Φ630	Φ400/Φ500/Φ630	Φ800/Φ1000	Φ800/Φ1000	-	-
		液压中空(寸) hydraulic hollow	6/8	6/8	8/10	8/10	8/10	10/12	8/10	12	12	12	12	18	18	10/12	12/15
		液压中实(寸) hydraulic solid	6/8	6/8	8/10/12	8/10/12	8/10/12	10/12	8/10/12	12/15/18	12/15/18	12/15/18	12/15/18	18/21	18/21	10/12	12/15
刀架 turret	立式 vertical	4工位 4-station	●	●	●	●	●	●	●	●	●	●	●	●	●	-	○
	卧式 horizontal	6工位 6-station	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-
		8工位 8-station	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●
	排刀 comb-type toolpost		○	○	○	○	○	○	○	○	○	-	-	-	-	-	-
	后置镗刀座(立式4工位) rear boring toolholder		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
尾座 Tailstock	手动 manual		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	液压 hydraulic		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
手动中心架 Manual steady rest	规格大小 type		Φ20-Φ140	/	Φ20-Φ125 Φ120-Φ260	Φ20-Φ125	Φ20-Φ125 Φ120-Φ260	Φ20-Φ125 Φ120-Φ260	Φ20-Φ125 Φ120-Φ260	Φ20-Φ200 Φ60-Φ300 Φ120-Φ350	Φ20-Φ200 Φ120-Φ420 Φ370-Φ500	Φ50-Φ250 Φ120-Φ380 Φ230-Φ400 Φ370-Φ500	Φ50-Φ250 Φ120-Φ380	Φ135-Φ470 Φ320-Φ640	Φ135-Φ470 Φ320-Φ640	Φ20-Φ120	Φ50-Φ140
手动跟刀架 Manual following rest	规格大小 type		Φ20-Φ80	/	Φ20-Φ80	Φ20-Φ80	Φ20-Φ80	Φ20-Φ80	Φ20-Φ80	Φ15-Φ100 Φ20-Φ150	Φ30-Φ120	Φ20-Φ120	Φ20-Φ120	Φ50-Φ220	Φ50-Φ220	-	-
电柜 Electric cabinet	热交换机 heat exchanger		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	空调 air conditioner		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
独立水箱 independent water tank			●	●	●	○	○	○	○	●	●	●	●	●	●	●	●
排屑器 chip conveyor			-	-	○	○	○	○	○	○	○	○	○	○	○	○	○
液压单元 hydraulic unit			○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
润滑单元 lubrication unit			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
气动门 pneumatic doors			○	○	○	○	○	○	○	○	○	-	-	-	-	-	-
液压中心架			-	-	○	○	○	○	○	○	○	○	○	○	○	○	○
油水分离器 oil scraper			-	-	-	-	-	-	-	○	○	○	○	○	○	-	-
气枪、水枪 air gun、water gun			○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

注：1.手动中心架：HK63B机型3000规格标配Φ120～Φ350、HK80B机型3000规格标配Φ120～Φ420、HK80机型3000及以上规格标配Φ120～Φ380、HK1000/HK125机型3000及以上规格标配Φ135～Φ470，其余各机型均为选择配置；Note: 1. Manual steady rest: HK63B model with 3000 length comes with a 120 to 350 steady rest as standard accessory, HK80B model with 3000 length comes with a 120 to 420 steady rest as standard accessory, HK80 model over 3000 length comes with a 120 to 380 steady rest as standard accessory, HK1000/HK125 model over 3000 length comes with a 135 to 470 steady rest as standard accessory . All other models are optional accessories.

2.手动跟刀架：HK80机型4000及以上规格标配Φ20～Φ120，其余各机型均为选择配置。 2. Manual following rest: HK80 models over 4000 length with a 20 to 120 following rest as standard accessory , while all other models are as optional accessories.

05 机床加工示意图





项目 Item	A	B	C	D	E	F	G	H	L	L1	L2	L3
TK36	360	320	180	13	55	10	30	20	750	147	600	95
EK40	400	400	200	15	65	12	30	20	750/1000	147	580/830	95
TK50	500	500	280	15	75	20	42	25	1100/1600/2100/3100	105	1000/1500/2000/3000	115
SK40P(S)	400	400	200	20	75	20	33	25	750/1000/1500/2000/3000	120	570/820/1320/1820/2820	115
SK50P(S)	500	500	280	20	75	20	33	25	750/1000/1500/2000/3000	120	570/820/1320/1820/2820	115
SK50C	500	500	280	20	75	20	33	25	750/1000/1500/2000/3000	120	570/820/1320/1820/2820	115
SK66Q	660	550	440	20	75	5	33	25	750/1000/1500/2000	120	570/820/1320/1820	115
HK63B	630	630	360	10	100	37	48	32	1000/1500/2000/3000	161	710/1260/1760/2760	122
HK80B	800	740	500	10	100	12	48	32	1000/1500/2000/3000	161	710/1260/1760/2760	122
HK80	800	800	480	10/50	100/140	8	48	32	1000/1500/2000/3000/4000/5000	161	710/1300/1800/2800/3800/4800	122
HK100Q	1000	1000	650	50	140	32	48	32	1000/1500/2000/3000	161	710/1300/1800/2800	122
HK100	1040	984	660	50	160	19	60	40	1500/3000/4000/5000	170	1300/2800/3800/4800	128
HK125	1250	1234	900	50	160	19	60	40	1500/3000/4000/5000	170	1300/2800/3800/4800	128

型号 Model	规格 Specifications	A	B	C	D	E
CBK50	1000	500	350	1000	100	980
	1500	500	350	1500	100	1480
CBK63	1000	630	400	1000	150	800
	2000	630	400	2000	150	1800
	3000	630	400	3000	150	2800