



-  中国总部
China Headquarter
-  德国总部
Germany Headquarter
-  全球代理商
Global sales centers
-  售后服务网点
After-sales service centers



中国销售中心
China Sales Center

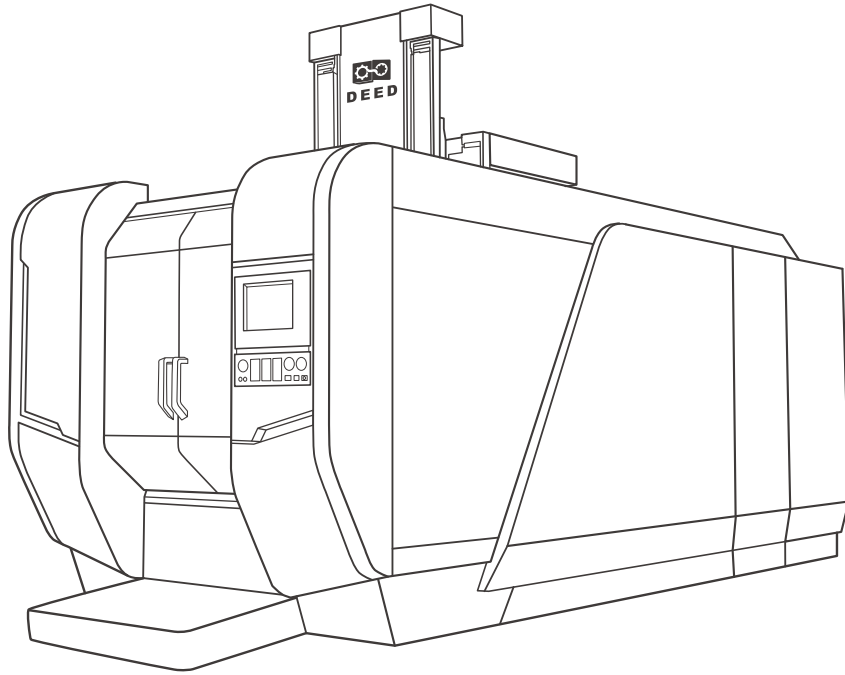
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德国 (Germany)
欧洲研发、销售中心
Europe R&D, Sales Center
地址 / Address: Stahlwerkstraße 32-D-57555 Mundersbach

五轴加工中心

5-Axis Machining Center



-  精 | Precise
-  大 | Large
-  特 | Customized

山东蒂德精密机床有限公司
SHANDONG DEED PRECISION MACHINE TOOL CO.,LTD.

蒂德简介

COMPANY PROFILE

山东蒂德精密机床有限公司是一家集高档数控机床研发、生产、销售为一体的高端装备企业，位于济宁市兖州区，现有员工500余人，目前是“中国机床工具工业协会理事单位”和“山东机床通用机械工业协会理事单位”。公司以高速立式加工中心、大型龙门加工中心、高效钻攻加工中心、高精度车削加工中心、高精度五轴联动加工中心、卧式铣镗加工中心及卧式加工中心为主导产品，广泛服务于国内外航空、航天、军工、船舶、汽车、工程机械、轨道交通、5G、精密模具等重点领域。公司大力实施“走出去，引进来”的发展战略，与德国知名数控机床制造企业ROTTLER达成全面战略合作，联合开发具有世界领先水平的高档精密机床，共同开拓全球高端市场，并在德国设立了高端机床研发中心及制造基地——“Hipreed Technology GmbH（汉普瑞德科技有限公司）”，全面实施国际化运营，实现了德国技术和中德制造的完美结合。公司建有国内外5大研发中心，拥有6大省市级创新平台，具备高档机床研发、新材料研制、先进技术测试和可靠性提升等全面的研发、实验、测试、制造优势。通过持续创新和不断突破，已承担24项重点政府科技项目，获得各类知识产权200余项（含发明专利9项）、科技成果奖14项，整体开发、创新能力行业领先。凭借强大的技术、创新优势，公司分别通过了ISO9001质量管理体系认证、ISO14001环境管理体系认证和ISO45001职业健康安全管理体系认证，荣获“国家高新技术企业”、“国家级专精特新‘小巨人’企业”、中国机床行业最高奖“春燕奖”、“中国机床工具行业‘产品质量十佳’”、“中国机械工业科技进步二等奖”等80多项重点荣誉。

Shandong Deed Precision Machine Tool Co., Ltd. is a high-end equipment enterprise integratd with R&D, production and sales. It is located in Yanzhou District, Jining City, with more than 500 people, is currently the governing unit of "China Machine Tool Industry Association " and the governing unit of "Shandong Machine Tool General Machinery Industry Association". The company takes high-speed vertical machining center, large gantry machining center, high-efficiency drilling and tapping machining center, high-precision turning center, high-precision 5-axis simultaneous machining center, horizontal milling and boring machining center and horizontal machining center as the leading products, and serves a wide range of domestic and foreign key industries such as aviation, aerospace, military, shipbuilding, automobile, construction machinery, rail transit, 5G, precision mold and other key fields. The company vigorously implements the development strategy of "going out and bringing in", and has reached a comprehensive strategic cooperation with the well-known German CNC machine tool manufacturing enterprise ROTTLER to jointly develop high-grade precision machine tools and jointly explore the global high-end market. It has set up a high-end machine tool R & D center and manufacturing base in Germany - "Hipreed Technology GmbH", fully implemented international operations, and achieved perfect combination of German technology and Chinese-German manufacturing. The company has set up five domestic and foreign R & D centers, and six provincial and municipal innovation platforms, with high-grade machine tool research and development, new material development, advanced technology testing and reliability improvement and comprehensive R & D, experiment, testing, manufacturing advantages. Through continuous innovation and breakthrough, it has undertaken 24 key governmental science and technology projects, obtained more than 200 intellectual property rights (including 9 invention patents), and 14 scientific and technological achievement awards, and leading overall development and innovation ability of the industry. With strong technology and innovation advantages, the company has passed the ISO9001 quality management system certification, ISO14001 environmental management system certification and ISO45001 occupational health and safety management system certification. It has won the "National High-Tech Enterprise", "National Special New 'little giant' Enterprise", the highest award of China's machine tool industry "Spring Swallow Award", "China Machine Tool Industry 'Top 10 Product Quality'", "China Machinery Industry Science and Technology Progress 2nd Award" and more than 80 key honors.



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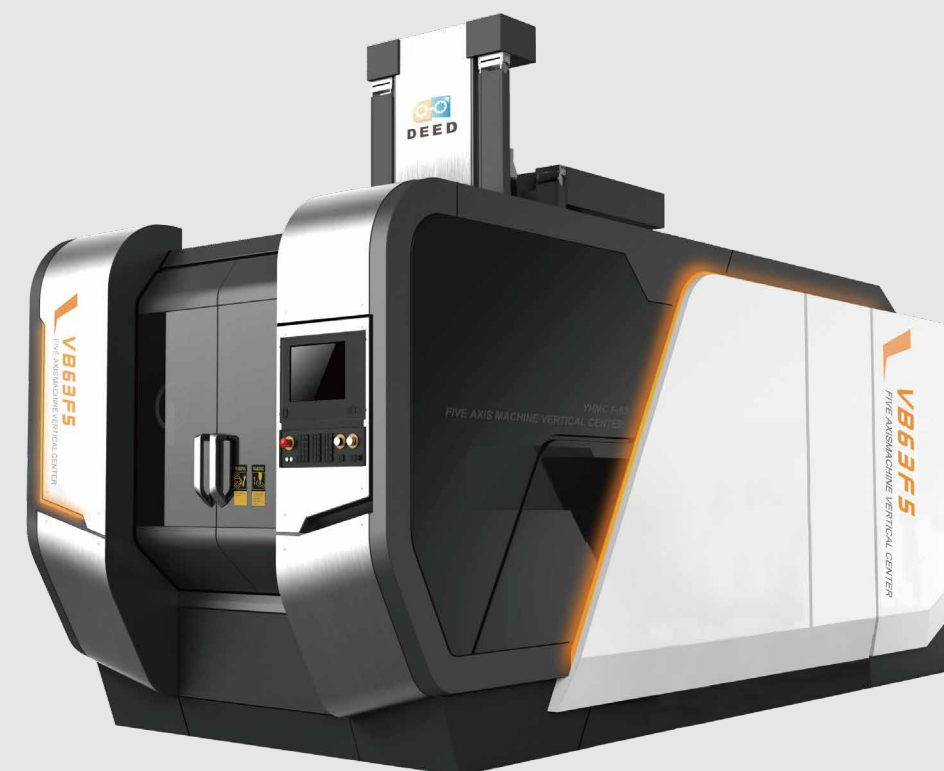
VF系列立式摇篮五轴加工中心 VF SERIES VERTICAL 5-AXIS SIMULTANEOUS MACHINING CENTER

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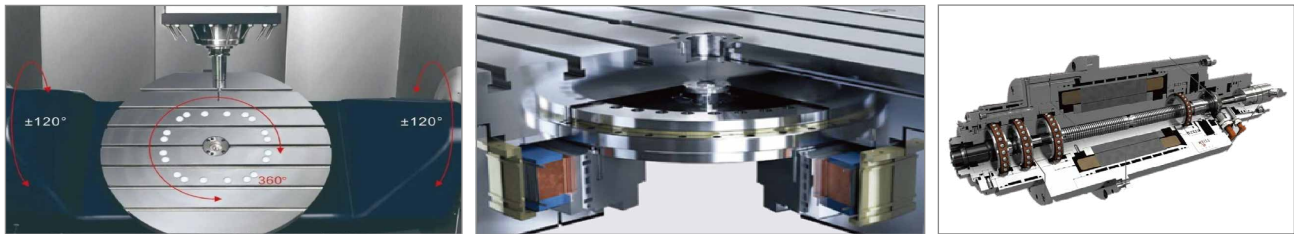
VB系列 摇篮五轴联动加工中心 VB Series 5-axis Simultaneous Machining Center 便利的操作 极佳的五轴加工能力 Easy operation Excellent 5-axis machining performance

本设备是由欧洲知名机床设计公司设计、在中国制造的一款中小规格的立式五轴加工中心，采用桥式结构，并结合我公司多年的机床设计及制造经验、大量用户的使用要求特点等，全新开发的新一代高速、高精度产品。本设备可广泛适用于叶片、叶轮、模具工业等各种类型的机械加工行业中的复杂曲面零件加工，能满足中、小型箱体零件和空间曲面多品种加工的需要，广泛使用在航空航天、模具、高精密仪器等民用工业和军工企业等领域。

This is medium and small size 5-axis vertical machining center which is designed in Europe and made in China, taking in long term design and manufacture experience, after lots of research on customers' machining demands, it is designed into gantry structure and upgraded to new generation with higher-speed, higher-precision. It can be widely used in various machinery industries for complex curve surface parts machining such as blades, impeller and molds etc. It can also meet the machining demand for medium and small box-type parts, space curves faces and other various special machining cases, can be widely used in civil industry and military industry for parts machining in aerospace, mold and high-precision instrument instrument industries etc.

产品优势

PRODUCT ADVANTAGES

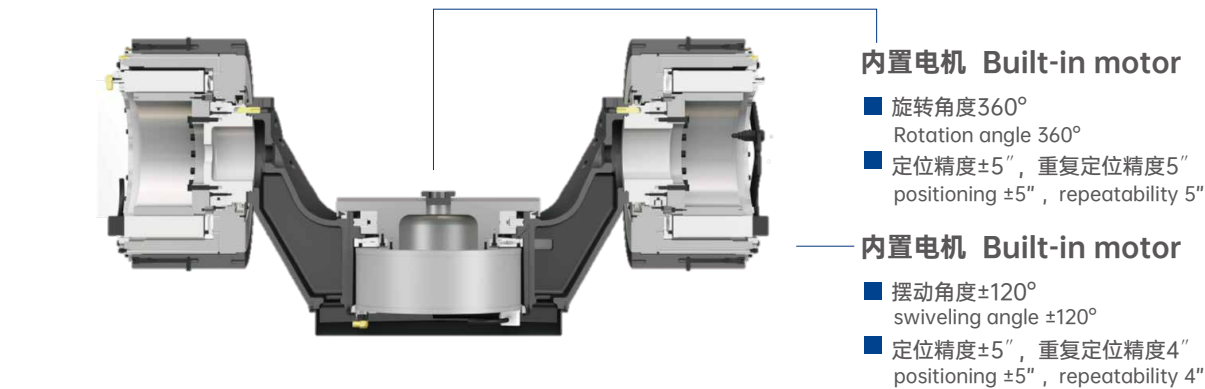


直驱转台 Direct drive rotary table

- 采用双摆角转台结构，可进行五轴联动加工；
Double swiveling rotary table structure, 5-axis simultaneous is available;
- 任意角度定位精度加工，满足复杂曲面零部件的加工需求；
Angle-free positioning precise machining, meet machining demands for complex curve surface parts;
- 采用力矩电机直接驱动技术，省去传动齿轮，大幅度提高运行精度和速度；
Torque motor direct-drive technology, greatly improve running precision and speed without driving gear;
- 采用液压夹紧系统，可实现高精度定位加工；
Hydraulic clamping system, can easily achieve high-precision positioning machining;
- A轴摆动角度±120°，C轴连续360°旋转；
A-axis swiveling angel ±120°， C-axis continuous rotation 360°;
- 配置高精度时栅，提高精度及精度保持性。
High-precision time grating, help improve precision and good precision maintenance.

- 大功率高速电主轴（功率：35kW；
扭矩：95Nm；最高转速：18000rpm），
适合各类工件的高速高精加工。

High power high-speed motorized spindle
(Power: 35KW, Torque: 95Nm, Maximum
speed: 18000 rpm), Suitable for high-speed
and high-precision machining for various
workpieces.



Configuration 配置 型号 Model	台面 Table (mm)	最大回转旋径 Max. Swiveling dia. (mm)	载重 load capacity (Kg)	最大转速(rpm) Max. speed		额定力矩(Nm) Rated torque		最大力矩 (Nm) Max. torque	
				A	C	A	C	A	C
VB50F5	Φ500	Φ700	500	100	120	2×543	543	2×1030	1030
VB63F5	Φ630	Φ850	1000	80	120	2×1300	1370	2×2200	2420
VB80F5	Φ800	Φ1000	1500	60	80	2×2210	2120	2×3510	3460

技术参数

TECHNICAL PARAMETER

配置 Configuration		型号 Model	单位 Unit	VB50F5	VB63F5	VB80F5
加工范围 Processing range	X轴行程 X axis travel	mm	550	800	900	
	Y轴行程 Y axis travel	mm	600	800	1000	
	Z轴行程 Z axis travel	mm	450	600	650	
	主轴鼻端至工作台面距离 Spindle nose to table distance	mm	120-570	150-750	150-800	
	A轴 A axis	°	±120°	±120°	±120°	
	C轴 C axis	°	连续360° Continuous 360°	连续360° Continuous 360°	连续360° Continuous 360°	
工作台 Table	工作台尺寸 Table size	mm	Φ500	Φ630	Φ800	
	最大工件回转直径 Max. workpiece swing dia.	mm	Φ700	Φ850	Φ1000	
	工作台最大载重 Table max. load	kg	500	1000	1500	
进给 Feed	X/Y/Z轴快速进给速度 X/Y/Z axis fast feedrate	m/min	50	50	36	
	A/C轴转速 A/C axis rotation speed	rpm	100/120	80/120	60/80	
电主轴 Electric spindle	主轴锥度 Spindle taper	-	HSK-A63			
	最高转速 Max. speed	rpm	18000	18000	18000	
	功率(额定) Power(Rated)	kW	30	35	35	
	扭矩(额定) Torque(Rated)	N·m	72	95	95	
精度 Precision	X/Y/Z轴定位精度 X/Y/Z axis positioning	mm	0.008	0.008	0.01	
	X/Y/Z轴重复精度 X/Y/Z axis repeatability	mm	0.004	0.004	0.005	
	A/C轴定位精度 A/C axis positioning	''	±5	±5	±5	
	A/C轴重复精度 A/C axis repeatability	''	4	4	4	



GF系列 摇篮五轴联动加工中心

GF Series 5-axis Simultaneous Machining Center

便利的操作 极佳的五轴加工能力

Easy operation Excellent 5-axis machining performance

本系列产品是由德国设计，在中国制造的一款小型立式五轴联动加工中心，整机采用改良型高刚性龙门结构，克服了传统十字滑台精度不稳定性问题；整机为热对称设计，确保良好的热稳定性；特别适用于航空航天、精密模具、新能源汽车与半导体等行业零部件的高刚性、高精度加工。

This series of product is a small vertical 5-axis simultaneous machining center designed in Germany and manufactured in China, the whole machine adopts improved high-rigidity gantry structure to overcome the problem of unstable accuracy of traditional cross slide structure, the whole machine takes in thermal-symmetry design to ensure good thermal stability; It is especially suitable for high-rigidity and high-precision machining of parts in aerospace, precision molds, new energy vehicle and semiconductor industries etc.

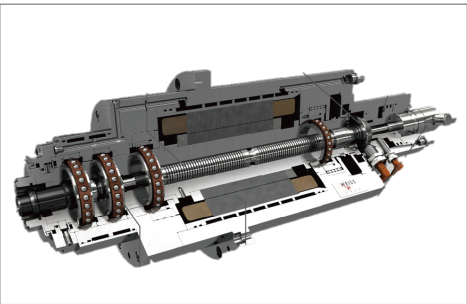
产品优势

PRODUCT ADVANTAGES



- 整机采用龙门框架结构，结构紧凑。
Whole machine gantry frame compact structure.
- 主轴箱采用等悬臂设计，全行程支撑，加工刚性强。
Spindle box--- equal cantilever design, full stroke support, strong processing rigidity.
- 整机对称结构设计，具有良好的结构刚性和热稳定性。
Whole machinesymmetrical structure design, good structural rigidity and thermal stability.

■ 大功率高速电主轴（功率：30kW；扭矩：72Nm；最高转速：18000rpm），适合各类工件的高速高精加工。
Big power high-speed electrical spindle (power: 30kW; torque: 72Nm; Max. speed: 18000rpm),Suitable for high-speed, hig- precision machining of various workpieces.

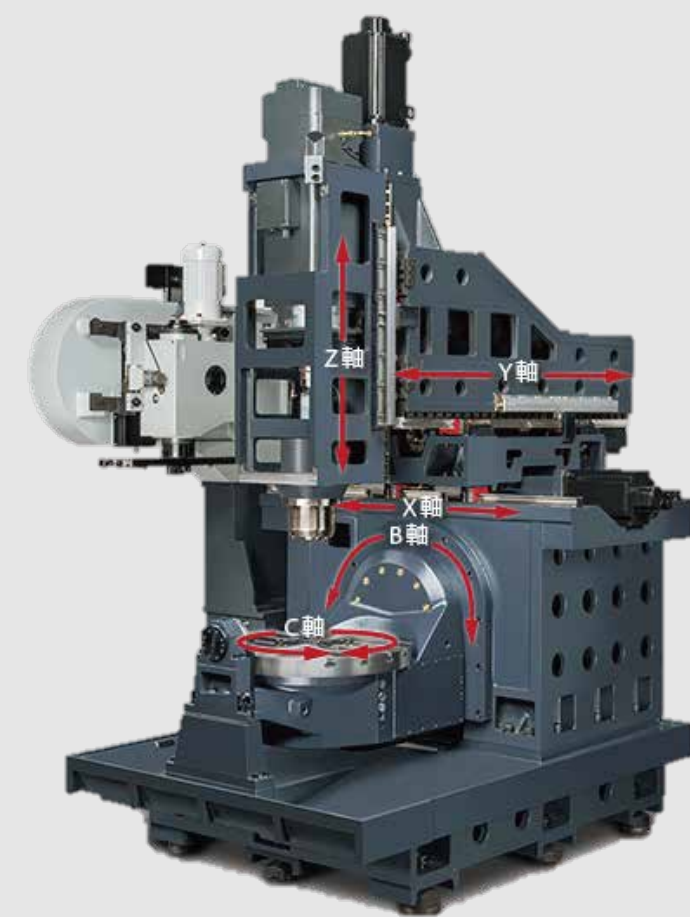


- 采用力矩电机直接驱动技术，省去传动齿轮，大幅度提高运行精度和速度；
Adopting torque motor direct drive technology help greatly improve the working precision and speed without transmission gear support；
- 任意角度定位精度加工，满足复杂曲面零部件的加工需求；
Arbitrary angle positioning precision machining, can meet processing needs of complex curved surface parts;
- 采用气动夹紧系统，可实现高精度定位加工；
Pneumatic clamping system can realize high-precision positioning machining;
- B轴摆动角度±110°，C轴连续360°旋转；
B-axis swiveling angel ±110°，C-axis continuous rotation 360°;
- 配置高精度时栅，提高精度及精度保持性。
High precision time grating is configured to improve precision and precision stability.

项目 Item	台面直径 Table dia. (mm)	最高转速 Max. speed (rpm)	载重 load capacity (Kg)	最大 回转直径 Max.swing dia. (mm)	定位精度 positioning (")	基准孔径 Benchmark aperture (mm)	额定力矩 Rated torque (Nm)	最大力矩 Max. Torque (Nm)
B	Φ400	80	350	Φ600	±5	Φ50H7	543	1030
C		120			4		363	685

技术参数
TECHNICAL PARAMETER

配置 Configuration		型号 Model	单位 Unit	参数 Parameter
加工范围 Processing range	X轴行程 X axis travel	mm	550	
	Y轴行程 Y axis travel	mm	600	
	Z轴行程 Z axis travel	mm	400	
	主轴鼻端至工作台面距离 Spindle nose to table distance	mm	150-550	
	B轴 B axis	°	±110°	
	C轴 C axis	°	连续360° Continuous 360°	
工作台 Table	工作台尺寸 Table size	mm	φ400	
	工作台最大载重 Table max. load	kg	350	
	X/Y/Z轴快速进给速度 X/Y/Z axis fast feedrate	m/min	36/36/32	
进给 Feed	B/C轴转速 B/C axis rotation speed	rpm	80/120	
	主轴锥度 Spindle taper	-	HSK-A63	
电主轴 Electrical spindle	最高转速 Max. rotation speed	rpm	18000	
	功率(额定) Power(rated)	kW	30	
	扭矩(额定) Torque(rated)	N·m	72	
	X/Y/Z轴定位精度 X/Y/Z axis positioning	mm	0.006	
精度 Precision	X/Y/Z轴重复精度 X/Y/Z axis repeatability	mm	0.004	
	B/C轴定位精度 B/C axis positioning	''	±5	
	B/C轴重复精度 B/C axis repeatability	''	4	



VF系列 立式摇篮五轴加工中心
VF Series Vertical 5-axis Simultaneous Machining Center
高精度定位加工
High accuracy positioning machining

本系列产品是由德国设计，在中国制造的一款小型立式五轴加工中心，整机采用动柱式结构，结构紧凑，占地面积小，主要用于加工异形件、座、壳等工序复杂、精度要求高的零件，适用于精密模具、精密零件、五金、汽配、医疗器械、刀具等领域零部件的高效、高精度加工。

This series of product is a small-size vertical 5-axis simultaneous machining center designed in Germany and manufactured in China. With moving column structure, it is compacted and takes small space. It can be mainly used for processing special-shape parts, seats, housing parts and other parts with complex procedure and high-precision requirements. It is suitable for high-efficiency and high-precision machining of precision molds, precision parts, hardwares, auto parts, medical equipment, tools and other industries.

产品优势

PRODUCT ADVANTAGES



- B/C轴采用蜗轮蜗杆传动;
B/C axis is driven by worm and worm wheel;
- 任意角度定位精度加工, 满足复杂曲面零部件的加工需求;
Arbitrary angle positioning precision machining, meet processing demands of complex curved surface parts;
- B轴摆动角度-30°/+110°, C轴连续360°旋转;
B-axis swiveling angel -30°/+110°, C-axis continuous rotation 360°;
- 可选配圆光栅, 提高精度及精度保持性。
High precision time grating is configured to improve precision and precision stability.

型号 Model	Configuration 配置	V40SF5	V50SF5	V63SF5
台面尺寸 Table size		Φ400mm	Φ500mm	Φ630mm
B轴 B axis		-30°/+110°		
C轴 C axis		360°		
最大载重 Max. Load		150kg	200kg	300kg

技术参数

TECHNICAL PARAMETER

配置 Configuration		型号 Model	单位 Unit	V40SF5	V50SF5	V65SF5
加工范围 Processing range	X轴 X axis	mm	500	600	700	
	Y轴 Y axis	mm	350	400	500	
	Z轴 Z axis	mm	350	400	450	
	B轴 B axis	°	-30 °/+110 °			
	C轴 C axis	°	360 °			
	主轴鼻端至工作台面距离 Spindle nose to table distance	mm	120-470	120-520	120-570	
进给 Feed	X/Y/Z轴快速进给速度 X/Y/Z fast feedrate	m/min	40/40/40	40/40/40	40/40/40	
	B/C轴转速 B/C axis rotation speed	rpm	10/25	10/25	10/25	
主轴 Spindle	主轴锥度 Spindle taper	-	BBT40			
	最高转速 Max. rotation speed	rpm	15000	15000	15000	
	功率(额定/最大) Power(Rated/Max.)	kW	11/18.5	11/18.5	11/18.5	
	扭矩(额定/最大) Torque(Rated/Max.)	Nm	52.5/105	52.5/105	52.5/105	
工作台 Table	台面尺寸 Table size	mm	Φ400	Φ500	Φ650	
	最大载重 Max. load	kg	150	200	300	
精度 Precision	X/Y/Z轴定位精度 X/Y/Z axis positioning	mm	0.006	0.008	0.008	
	X/Y/Z轴重复精度 X/Y/Z axis repeatability	mm	0.004	0.004	0.004	
	B/C轴定位精度 B/C axis positioning	"	60/15	45/15	45/15	
	B/C轴重复精度 B/C axis repeatability	"	8/6	8/6	8/6	
刀库 Tool Magazine	型式 Type	-	圆盘 Disc			
	刀库容量 Capacity	把	24			
	最大刀具尺寸 Max. tool size	mm	Φ78/Φ150/350			
	(满刀直径/空邻刀直径/长度) Full tools dia./Empty adjacent tool dia./Length					
	最大刀具重量 Max. tool weight	kg	7			

24/7 全天候不间断服务

24/7 NON-STOP SERVICE

- 售后服务工程师平均具有 10 年机床维修经验, 客户故障 2 小时响应回复;
After-sales engineers averagely have over 10 years machine tool industry service experience, can respond to customer failure within 2 hours ;
- 全国设有 30 个销售及售后服务网点, 售后网点覆盖范围 24 小时内到场服务;
30 sales& serve centers inside of China, can give on-site service within 24 hours in near covering range;
- 提供完善的客户培训计划及操作指南;
Comprehensive training system and operation guidance ;
- 标准化的售后交机及售后服务流程;
Standardized machine delivery and after-sales service process;
- 购买机床, 终身服务。
1-time purchase, life-time service.

NOTES

