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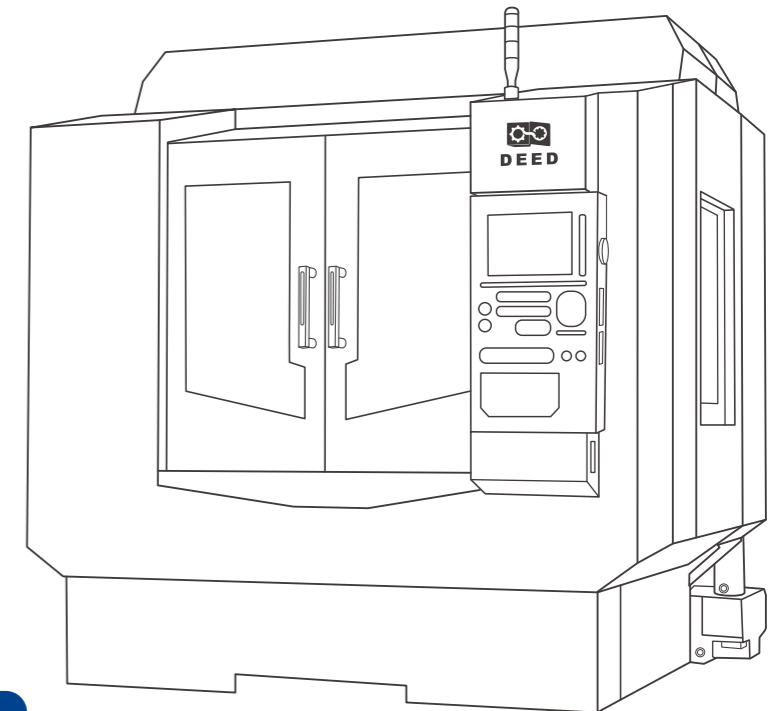


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VT立式钻攻

VT Vertical Tapping Machining Center



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 five-axis linkage 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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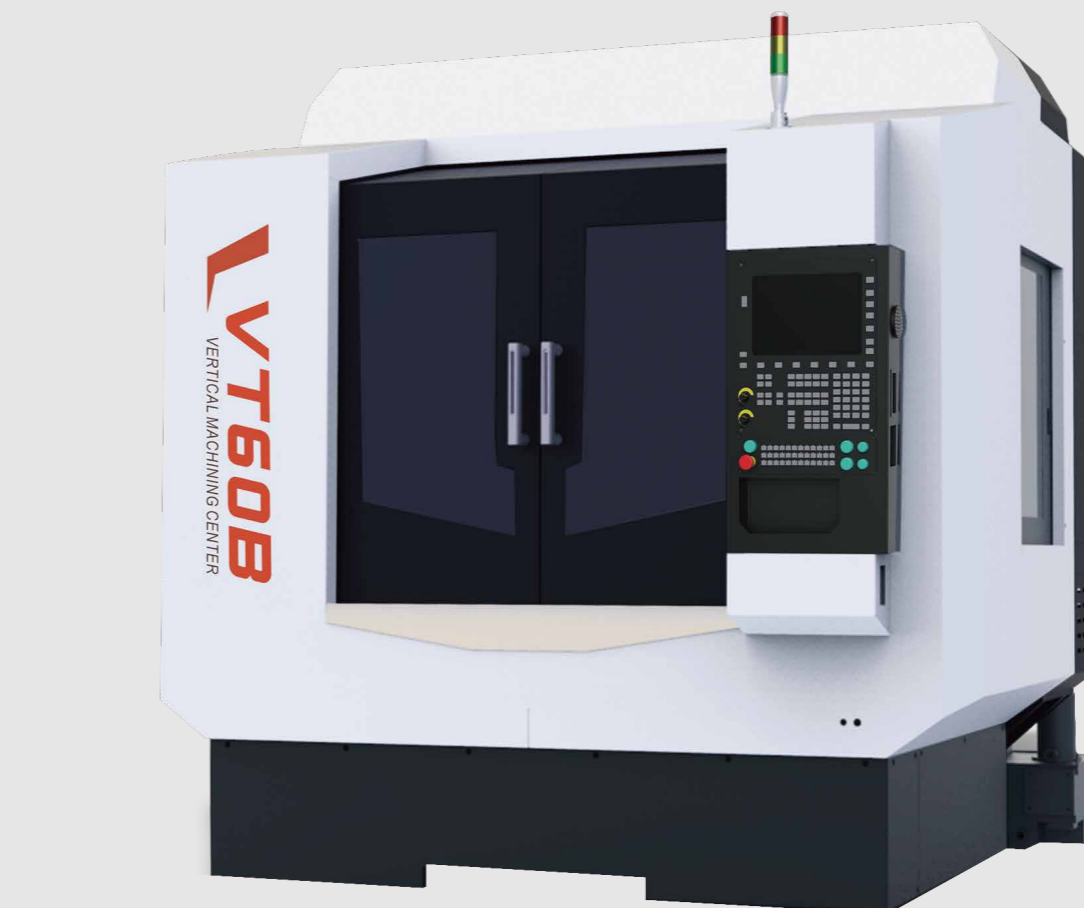
VT系列 龙门式高速钻攻中心 VT SERIES GANTRY TYPE HIGH-SPEED TAPPING CENTER

简介、产品介绍、加工范围、技术参数
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售后服务 AFTER-SALES SERVICE

24/7 全天候不间断服务
24/7 NON-STOP SERVICE



VT系列 龙门式高速钻攻中心 VT series Gantry Type High-Speed Tapping Center

本产品是我公司独立设计研发的一款立式钻攻中心，该产品具有高速度、高精度、高刚性、高可靠性的结构特点，在规定的条件下能连续正常工作精度稳定。该机床广泛应用于 3C 行业、5G、IT、航空航天、汽车配件、小型模具加工、医疗器械等行业的精密加工，特别适用于大产量零部件及有色金属的高效加工。

This product is vertical tapping center independently designed and developed by our company. It has the structural advantages of high-speed, high-precision, high-rigidity and high reliability, can work continuously and normally with stable accuracy under specified environmental conditions. It can be widely used in 3C, 5G, IT, aerospace, automotive parts, small molds, medical equipment etc. for precise machining, particularly suitable for high-efficiency machining of large production capacity components and non-ferrous metals.

产品介绍

PRODUCT INTRODUCTION

极强的吸振性

Strong Vibration Absorption

吸振性是铸铁的 10 倍，在大幅动态载荷下，保证了机床精度的稳定性，工件表面加工质量提高 20%，刀具使用寿命提高 15%。

The vibration absorption is 10 times that of cast iron, under large dynamic load, it can help ensure machine precision stability. The surface processing quality of the workpiece can be improved by 20%, and the tool life can be increased by 15%.

极佳的热稳定性

Excellent Thermal Stability

热传导是铸铁的 1/20，比热容是铸铁的 2.1 倍，极佳的热稳定性和热惯性，有效地控制了机床因温度变化引起的变形，保证了机床加工的精度的稳定性。

Thermal conductivity is 1/20 of cast iron, and the specific heat capacity is 2.1 times of cast iron. With excellent thermal stability and thermal inertia, it can effectively control the deformation of the machine tool caused by temperature changes, thus the stability of the machining accuracy.

高刚性

High Rigidity

移动部件鞍座、工作台、主轴箱由高强度低合金钢焊接而成，其材料弹性模量约为铸铁的 1.4 倍，结构整体刚性提高 20%。

The moving parts saddle, worktable and spindle box are welded from high-strength low alloy steel, and their material elastic modulus is about 1.4 times of cast iron, the overall rigidity of the structure can be increased by 20%.

轻量化

Light Weight

质量较铸铁材料相比降20%-30%，固有频率提升10%，降低切削过程中共振的可能性，提高切削稳定性及加工精度。

Compared to cast iron materials, the weight is reduced by 20% -30%, natural frequency is increased by 10%, the possibility of resonance during cutting is reduced and the cutting stability and machining precision are improved.

横梁部分

Crossbeam

横梁采用矿物铸件一体铸造，具备优异的吸振性和热稳定性，有效提高工件表面加工质量和刀具使用寿命；

横梁采用一体式、45°斜背横梁结构，滑座及主轴箱采用钢板焊接结构轻量化控制，有效提高动态响应速度和运动精度。

The crossbeam is casted in 1-piece from mineral castings, which have excellent vibration absorption and thermal stability, it can effectively improve the surface processing quality of the workpiece and the cutting tool life time;

The crossbeam adopts 1-piece 45 ° inclined back structure, the saddle and spindle box adopt steel plate welded structure for lightweight control, can effectively improve dynamic response speed and motion accuracy.

排屑、冷却部分

Chip Removal&Cooling Part

采用后排屑结构床身，高倾斜度加宽排屑槽便于切屑的收集及清理；大容量外露集屑盘，积屑清理更加方便；

可调节的大流量喷嘴设计，保证工件钻孔攻丝时积屑的有效清洁，保证工件、刀具的有效冷却；排屑方式采用后置冲水结构。

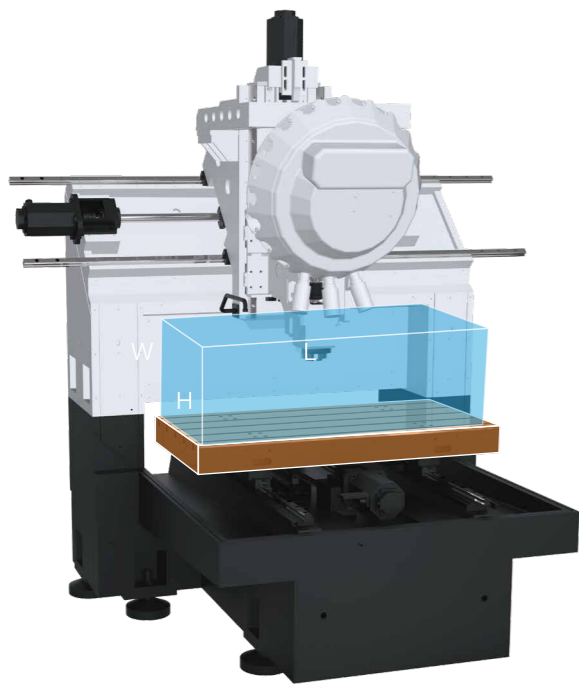
Adopting rear chip removal structure bed, with high inclination and widened chip chute for easy collecting and cleaning ; Large capacity exposed chip collection tray makes chip cleaning more convenient;

The adjustable high flow nozzle design ensures effective cleaning of accumulated chips during drilling and tapping , can help realize effective cooling of workpieces and cutting tools; this chip removal method will match with rear flushing structure.



加工范围

MACHINING RANGE



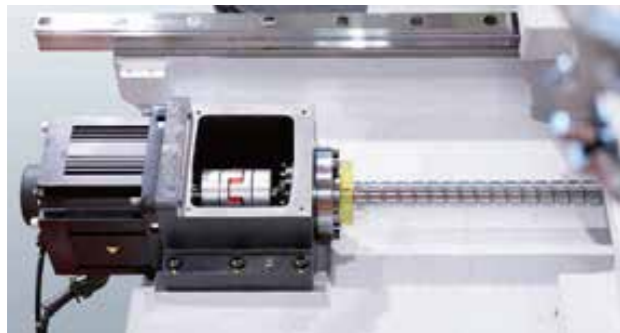
工作台

Worktable

使用1200x600mm的宽阔的工作台，光滑的工作台表面可以快速清理铁屑和切削液。

1200x600mm wide and smooth-surface worktable can help quickly clean iron chips and cutting fluid.

载重		400kg
工件尺寸	L	1100mm
	W	600mm
	H	350mm



滚珠丝杠

Ball Screw

丝杠与交流伺服电机直联，保证机床各轴的高动态性能，并经过预拉降低因温度上升而造成的传动误差，保证其传动精度。

The screw is directly connected to the AC servo motor to ensure the high dynamic performance of each axis of the machine tool, and the transmission error caused by temperature rise is reduced through pre tensioning to ensure its transmission accuracy.



高精度高刚性的一体型和快速铁屑处理的高倾斜度底座结构

High-precision and high-rigidity one-piece casting and high inclination for fast-chip-removal base structure

采用龙门式结构的总体布局方案，关键零部件高刚性和轻量化协同设计，实现各轴的高速、精确运动，高倾斜度后排屑床身结构，便于切屑的收集及清理。

The overall layout scheme is made with gantry structure, and key components are designed with high rigidity and lightweight coordinately to achieve high-speed and high-precision movement of each axis. The high inclination rear chip removal bed structure make it easier to collect and clean chips.

技术参数

TECHNICAL PARAMETER

配置	型号	单位	VT60B
Configuration	Model	Unit	
行程	X轴行程	mm	1100
	Y轴行程	mm	600
	Z轴行程	mm	350
	主轴鼻端至工作台面距离	mm	250~600
	主轴中心至立柱距离	mm	468
工作台	工作台尺寸	mm	1200×600
	工作台最大载重	kg	400
	T型槽(尺寸x数量x间距)	mm	14×5×120
进给	X/Y/Z轴快速进给速度	m/min	60/60/60
	X/Y/Z轴进给速度	m/min	20/20/20
	加速度	G	1
主轴	驱动方式	-	直联式 Direct drive
	主轴锥度	-	BT30
	最高转速	rpm	12000
	功率(额定/最大)	kW	3.7/7.5
	扭矩(额定/最大)	N.m	23.6/47.7
精度	X/Y/Z轴定位精度(半闭环)	mm	0.008(全长 Full length)
	X/Y/Z轴重复精度(半闭环)	mm	0.005(全长 Full length)
ATC	刀库形式	-	转塔式 Turret Type
	刀库容量	把 T	21
	最大刀具尺寸(满刀直径/空邻刀直径/长度)	mm	Φ100/Φ140/250
	最大刀具重量	kg	3
其他	气源压力	MPa	0.65
	电源容量	kVA	25
	机床外形尺寸(长*宽*高)	mm	2760*2600*2720
	机床重量	kg	6000

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