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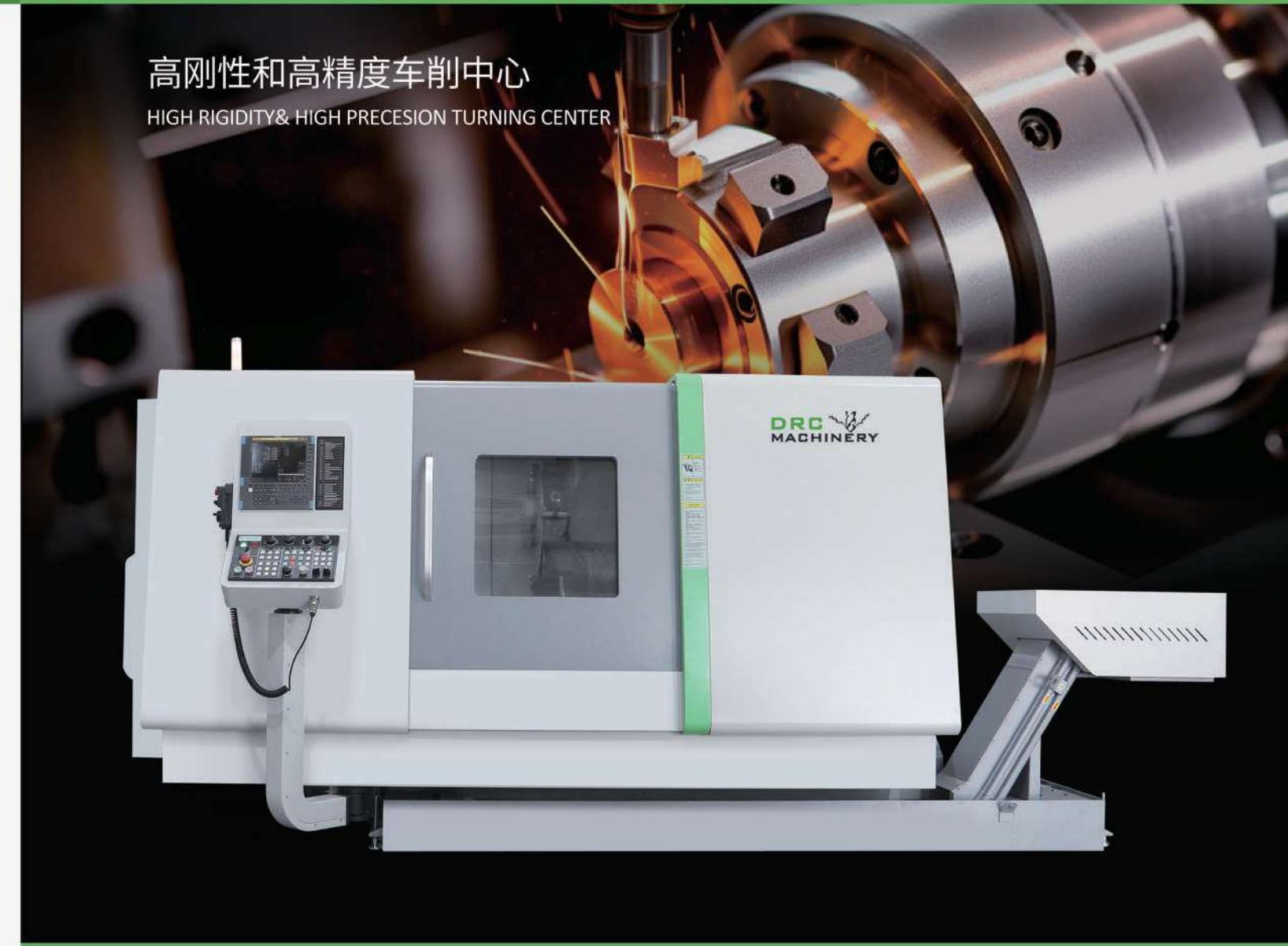
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4. INDUSTRY

HT 系列 series

高刚性和高精度车削中心

HIGH RIGIDITY & HIGH PRECISION TURNING CENTER



大连荣程机械有限公司
Dalian R&C Machinery Co., Ltd.

优势/ADVANTAGE

亮点/HIGHLIGHTS

机床与技术/MACHINE TOOLS AND TECHNOLOGY

环境/ENVIRONMENT

自动化解决方案/AUTOMATION SOLUTION

选项/OPTIONS

技术参数/TECHNICAL PARAMETERS



High rigidity roller type linear guides
高刚性滚柱式直线导轨



12/16 positions driven tools turret,
all positions ready for driven tools

12/16工位刀塔
所有刀位置均可用于铣削加工



Sub-spindle standard
副轴标准



Super rigidity wedge structure Y axis
高刚性滚柱式直线导轨

CT Series Universal Turning Center

CT系列通用车削中心

CT series universal turning center has excellent performance of processing small to middle size volume batch production, due to new configured sub-spindle, driven tools and Y axis functions. This new configuration realized more complicated and complex turning & milling applications with one machine one time clamping. Meanwhile, CT series shorten 25% of the processing time with new configured built-in motor spindle and new generation fast tool changing time turret, finally improved productivity, and economic benefits of our end-users.

CT系列万能车削中心由于新配置的副主轴、驱动刀具和Y轴功能，使其具有加工中小批量生产的优异性能。这种新配置实现了更复杂的车削和铣削应用，只需一台机床一次装夹。与此同时，CT系列通过新配置的内置电机主轴和新一代快速换刀刀架，缩短了25%的加工时间，最终提高了生产效率，为我们的最终用户带来了经济效益。

CT series universal turning center Customized options for stronger functions CT系列通用车削中心, 功能更强大的定制选项

Following daily growing flexibility and multi-functions requests from end users, CT series universal turning center provides abundant customized options, such as hollow shafts clamping cylinder, automatic part catcher, tool probe, part measuring system, special driven tool holder etc., continuously improving machine performance to satisfy all kinds of new demands from end users. The additional configuration of CT series universal turning centers enables a high level of flexible machining, which not only helps users maintain their competitive edge, but also provides more efficient and environmentally friendly solutions.

随着终端用户对灵活性和多功能性的要求不断提高，CT系列通用车削中心提供了丰富的定制选项，如空心轴夹紧气缸、自动零件抓取器、刀具测头、零件测量系统、特殊驱动刀架等，不断提高机器性能以满足终端用户的各种新需求。CT系列通用车削中心的额外配置实现了高水平的柔性加工，这不仅有助于用户保持竞争优势，而且还提供了更高效和环保的解决方案。

Built-in motor spindle
With high dynamic acceleration & braking performance

内置电机主轴, 具有高动态加速和制动性能

BMT servo driven tool turret with shorter T-T change time, with 12/16 positions(option), all positions ready for driven tools

Built-in motor designed Sub-spindle, without vibrations caused by factors such as pulley and belt, improves better turning roundness and machining surface accuracy without losing power output.

One-piece casting forming bed, good seismic structure, to ensure the stability of processing.

BMT伺服驱动刀架, T-T切换时间更短。有12/16个位置(可选), 所有位置都可用于铣削加工。
内置电机设计的副主轴, 没有因皮带轮和皮带等因素产生的振动, 在不损失功率输出的前提下, 提高了车削圆度和加工表面精度。
一体式铸造型床身, 抗震结构良好, 保证加工稳定性。



Sub-spindle Processing 副轴加工

优势/ADVANTAGE 亮点/HIGHLIGHTS

机床与技术/MACHINE TOOLS AND TECHNOLOGY
环境/ENVIRONMENT
自动化解决方案/AUTOMATION SOLUTION
选项/OPTIONS
技术参数/TECHNICAL PARAMETERS

极佳的刚性结构 EXCELLENT RIGID STRUCTURE

一体铸造型低重心床身,45°床鞍经过最优化设计,拥有较大的防震阻尼和较小的变形量,为主轴箱刀塔提供高刚性结构基础。
45°斜床身设计方便操作人员上下工件,同时也能保证顺畅的排屑。

The integrated low-center-of-gravity bed and 45° saddle are optimized for shock absorption and deformation resistance, providing a highly rigid structural foundation for the spindle head turret.
The 45° slant bed design facilitates the operator's access to the workpiece and ensures smooth chip removal.

主流控制系统 MAINSTREAM CONTROL SYSTEM

HT系列配备最新的OI TF+数控系统,并已搭配客制化快捷功能界面,或Siemens828D标配Shopturn对话编程功能;标配10.4寸显示屏,并提供19寸大屏选项;全面支持针对客户具体应用需求的软件功能开通。

The HT series control system is equipped with the latest OI TF+ and has been equipped with a customized quick function interface, as well as Siemens 828D standard Shopturn dialogue programming function; it comes standard with a 10.4-inch display and offers a 19-inch large screen option; it fully supports the opening of software functions tailored to specific customer application needs.

丰富的配置 VARIOUS CONFIGURATION

伺服刀塔、动力刀塔;大功率电机、大扭矩电机;大通径中空油缸、卡盘;磁性排屑机;对刀仪;油雾分离器等选项可供选择。

Servo turret, power turret; high-power motor, high-torque motor; large diameter hollow cylinder, chuck; magnetic chip removal machine; tool setting instrument; oil mist separator and other options are available.

高效率组线作业(选配) HIGH-EFFICIENCY LINE OPERATION (OPTIONAL)

得益于先进的桁架传输装置,使得多机联合作业成为可能,大大缩短每道工序之间的传输时间,提高效率。

Thanks to the advanced truss transmission device, it is possible to conduct multi-machine joint operations, greatly shortening the transmission time between each process and improving efficiency.

HT2



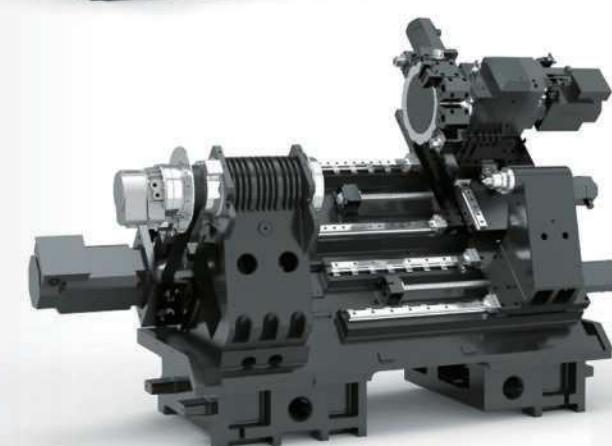
HT3



HT5



HT6



优势/ADVANTAGE 亮点/HIGHLIGHTS

机床与技术/MACHINE TOOLS AND TECHNOLOGY
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Product Highlights

产品亮点

Latest CNC control technologies 10' screen Fanuc 0i-TF plus/Siemens 828D Optional 15' touchscreen

最新CNC控制技术
10' 屏幕发那科0i-TF plus/西门子828D
可选15' 触摸屏



CT5 4-axis Universal Turning Center
4轴通用车削中心

- Highly dynamic spindle with 11 kW power and 168 Nm torque, maximum speed 4500 rpm;
高动态主轴, 功率11千瓦, 扭矩168牛米, 最高转速4500转/分
- Standard bar capacity ø51 mm and 12-position turret BMT55;
主轴通孔直径51毫米, 12位转塔BMT55
- Optimized bed structure and linear guides on all axes;
优化的床身结构和所有轴上的直线导轨
- Sub-spindle A2-5, 6' three-jaw hollow chuck, 5000 rpm;
副轴A2-5, 6' 三爪空心卡盘, 5000rpm
- Wedge structure Y axis, stroke ±45mm.
楔形结构Y轴, 行程±45mm

高可靠性 High reliability

高精度 High precision

高刚性 High rigidity

占地面积小 Small footprint

Maximum machining size 最大加工尺寸

CT5

CT8

CT10

Maximum diameter of disk type part ø300,
Maximum length of shaft type part 500
盘式零件最大直径300, 轴式零件最大长度500

Maximum diameter of disk type part ø400,
Maximum length of shaft type part 800
盘式零件最大直径400, 轴式零件最大长度800

Maximum diameter of disk type part ø400,
Maximum length of shaft type part 1000
盘式零件最大直径400, 轴式零件最大长度1000



CT8 4-axis Universal Turning Center
4轴通用车削中心

- Highly dynamic spindle with rated power 15-18.5 kW and torque 268 Nm, maximum speed 4000 rpm;
高动态主轴, 额定功率15-18.5 kW, 扭矩268 Nm, 最高转速4000 rpm;
- Standard bar capacity ø65mm and 12 positions turret BMT65, optional 16 stations BMT45;
主轴通孔直径为65mm和12刀位刀塔BMT65, 可选16个站位的BMT45,
- Optimized bed structure and linear guides on all axes (size=45mm);
优化的床身结构和所有轴上的直线导轨(尺寸=45mm)
- Sub-spindle A2-6, 8' three-jaw hollow chuck, 5000 rpm;
副轴A2-6, 8' 三爪空心卡盘, 5000rpm
- Wedge structure Y axis, stroke ±50mm.
楔形结构Y轴, 行程±50mm

CT10 4-axis Universal Turning Center
4轴通用车削中心

- Highly dynamic spindle with rated power 22-26 kW and torque 420 Nm, maximum speed 4000 rpm;
高动态主轴, 额定功率22-26 kW, 扭矩420 Nm, 最高转速4000 rpm
- Standard bar capacity ø65mm and 12-position turret BMT75, optional 16-station BMT45;
主轴通孔直径为65mm, 12刀位刀塔BMT75, 可选16位BMT45
- Optimized bed structure and linear guides on all axes (size=45mm);
优化的床身结构和所有轴上的直线导轨(尺寸=45mm)
- Sub-spindle A2-6, 8' three-jaw hollow chuck, 5000 rpm;
副轴A2-6, 8' 三爪空心卡盘, 5000rpm
- Wedge structure Y axis, stroke ±60mm.
楔形结构Y轴, 行程±60mm

优势/ADVANTAGE

亮点/HIGHLIGHTS

机床与技术/MACHINE TOOLS AND TECHNOLOGY

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自动化解决方案/AUTOMATION SOLUTION

选项/OPTIONS

技术参数/TECHNICAL PARAMETERS

High Stability

高稳定性

More stable machining accuracy is achieved through mechanical structure optimization and control technology upgrade

通过机械结构优化和控制技术升级,实现更稳定的加工精度

High Rigidity Spindle 高刚性主轴

The spindle adopts imported P4 class ultra-high precision bearings directly installed in the headstock to meet precision requirements and ensure large load capacity, and the bearing location arrangement with the optimized span two-point support design can meet the needs of smooth heavy cutting and long-term precision processing.

The enlarged bearing design ensures spindle accuracy while maximizing spindle rigidity.

主轴采用进口P4级超高精度轴承直接安装在主轴箱内,以满足精度要求并确保大负载能力,轴承位置布置采用优化的跨点支撑设计,可满足平稳重切削和长期精度加工的需要。扩大的轴承设计在确保主轴精度的同时最大限度地提高了主轴刚性。

高刚性整体主轴箱铸件

High Rigidity Integral Spindle Headstock Castings

The use of high rigidity integral molded spindle headstock casting, and the design of large area combined with the base, so that the rigidity of the machine head is greatly improved, and thus effectively suppresses vibration and improves processing accuracy.

采用高刚性整体模压主轴箱铸件,并结合底座的大面积设计,使机床头部的刚性大大提高,从而有效地抑制振动,提高加工精度。

所有轴均采用滚柱式直线导轨

All Axes Adopt Roller Type Linear Guides

While achieving high speed, durability and longevity, it ensures high-speed repeatability positioning accuracy and realizes long-term high-reliability processing and maintenance-free.

在实现高速、耐用和长寿的同时,它确保了高速状态下的重复定位精度,实现了长期高可靠的加工和免维护。



高刚性主轴

High-performance Servo Driven Tool Turrets

The ultra-high precision curved tooth clutch precision positioning tool disk ensures sufficient turret rigidity in any cutting situation, 12/16 stations optional, BMT/VDI optional.

超高精度曲面齿离合器精密定位刀盘,确保在任何切削情况下都有足够的刀架刚性,12/16工位可选,BMT/VDI可选。



高刚性结构分析概念

High Rigidity Structure Analysis Concept

Through structural analysis at the design stage, deformation (displacement) caused by heavy cutting and high-speed operation is minimized, and long-term stable high accuracy is maintained.

通过设计阶段的结构分析,最大限度地减少了重切削和高速操作引起的变形(位移),并保持了长期稳定的高精度。

The use of high-precision grinding C3 grade ball screw ensures high precision and durability, and the pre-stretched design can effectively prevent temperature rise deformation, ensuring a high level of positioning accuracy and durability.

The X and Z axes are designed with ultra-large spans, precision grinding processes are used during processing, and high-performance and high-precision linear guides are used to ensure that the machine tool has excellent performance such as high precision, high speed and low friction.

All headstock housings, bearing housings, counter-spindles, as well as the contact surfaces between ballscrew structure and base are hand-scraped, and the best assembly accuracy, structural rigidity and load balancing have been achieved.

使用高精度研磨C3级滚珠丝杠,确保高精度和耐用性,预拉伸设计可有效防止温度升高变形,确保高水平的定位精度和耐用性。
X轴和Z轴设计有超大跨度,加工过程中采用精密研磨工艺,并使用高性能和高精度的直线导轨,以确保机床具有高精度、高速度和低摩擦等优异性能。所有主轴箱外壳、轴承箱、反向主轴以及滚珠丝杠结构和底座之间的接触表面都是手工刮削的,达到了最佳的装配精度、结构刚度和负载平衡。

高强度结构

High-strength Structure

The bed adopts a 45° monolithic inclined bed design with a low center of gravity, one piece casting using Miannan cast iron with high-strength reinforcements.

Using the international advanced heat flow balance design technology, the mechanical strength is increased by 30% compared with the traditional design, this structure ensures that the bed has excellent vibration damping, and then can ensure that the machine tool has outstanding performance.

床身采用45°整体倾斜床设计,重心低,采用高强度筋的Miannan铸铁一体式铸造。

采用国际先进的热流平衡设计技术,机械强度比传统设计提高30%,这种结构确保床身具有优异的减振性能,进而可以保证机床具有出色的性能。

优势/ADVANTAGE

亮点/HIGHLIGHTS

机床与技术/MACHINE TOOLS AND TECHNOLOGY

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High Productivity 高生产率

High flexibility and cost-effective per single workpiece output

高灵活性和成本效益, 每件工件产量

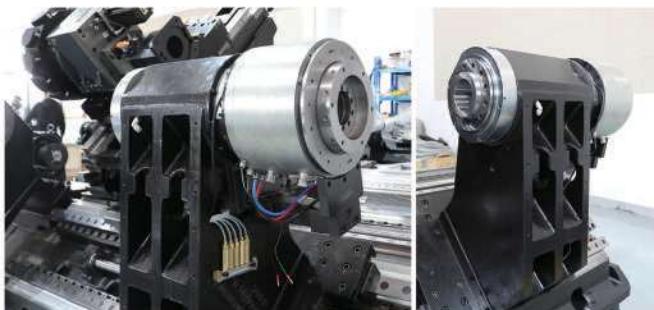
CT series universal turning centers provide solutions for advanced universal lathes with a wide range of machining tasks. Its excellence lies in the fact that in this type of machine tools it is a turning center equipped with a large number of high-tech components. Equipped with an electric spindle for dynamic acceleration and braking performance. The T-T time of the 12 servo-driven turret is 0.15 second, and the driven tool can be installed in all tool positions.

CT系列万能车削中心为先进的万能车床提供了广泛的加工任务解决方案。它的卓越之处在于, 在这类机床中, 它是一个配备大量高科技组件的车削中心。配备电动主轴, 具有动态加速和制动性能。12伺服驱动刀架的T-T时间为0.15秒, 驱动刀具可以安装在所有刀具位置。

Servo Driven Tool Turret 伺服驱动刀架

The 12-station/16-station turret with low interference and the non-lifting rotation method indexing reduce the interference with the workpiece and can be unclamped and clamped at high speed. In addition, the nearest path indexing method (random form) eliminates the need to calculate the tool rotation time during programming, which greatly shortens the tool setting time.

12工位/16工位刀塔采用低干涉和非升降旋转方式分度, 减少了与工件的干涉, 可以高速松开和夹紧。此外, 最近路径分度方法(随机形式)消除了在编程过程中计算刀具旋转时间的需要, 大大缩短了刀具设置时间。



Built-in Motor Spindle 内置电机主轴

Because there is no vibration caused by factors such as gears and belts, the roundness and accuracy of the machined surface are improved without losing power. There is no need to adjust the tightness of the belt like a belt drive, and high productivity and precision can be achieved through simple structure design.

由于没有齿轮和皮带等因素引起的振动, 在不影响功率的情况下, 加工表面的圆度和精度得到了提高。不需要像皮带传动那样调整皮带的松紧度, 通过简单的结构设计可以实现高生产率和精度。

Efficient C-axis Performance 高效的C轴性能

This series combines a CS axis with a disc brake system to achieve a C-axis function with high efficiency and rigidity.

该系列将CS轴与盘式制动系统相结合, 实现了高效、刚性高的C轴功能。



Torque Graph 扭矩图

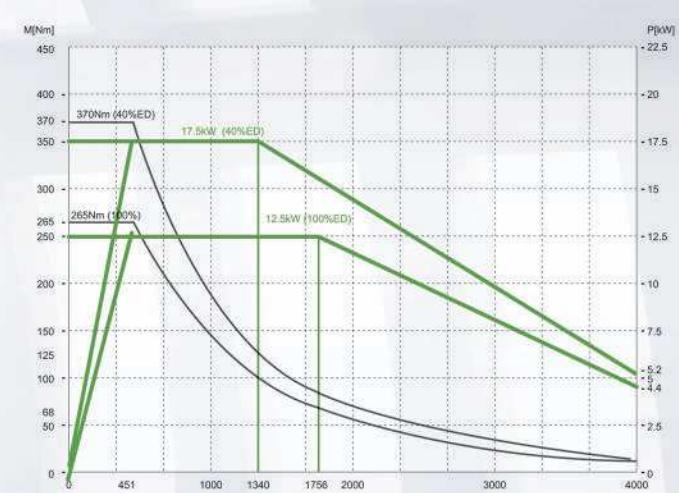
CT5 Series Spindle Torque Graph

CT5系列主轴扭矩图



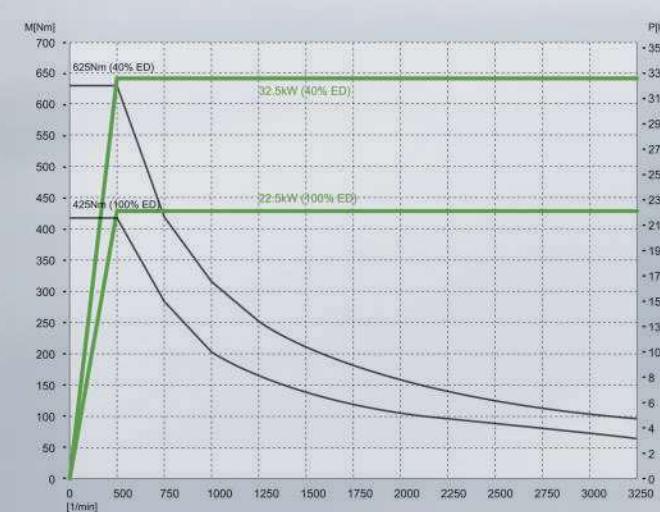
CT8/10 Series Spindle Torque Graph

CT8/10系列主轴扭矩图



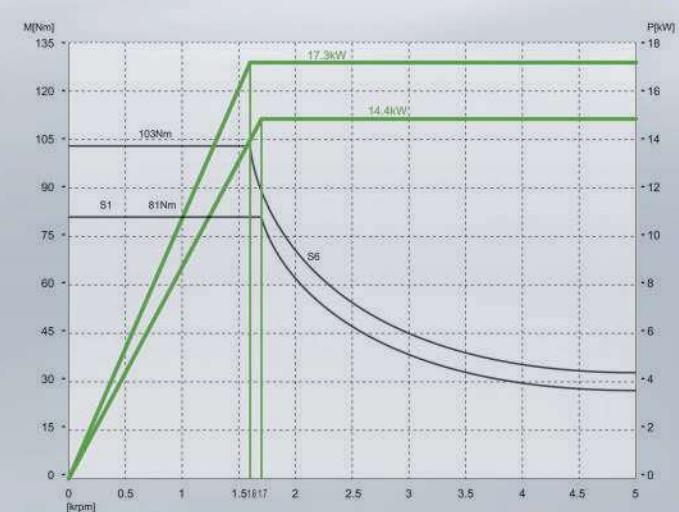
CT10 Series Enlarged Spindle Torque Graph

CT10系列加大主轴扭矩图



CT10 Series Enlarged Sub-spindle Torque Graph

CT10系列倍加副轴扭矩图



Y-axis Machining Capability **Y轴加工能力**

large span track and low center of gravity structure design Rigidity can be greatly improved

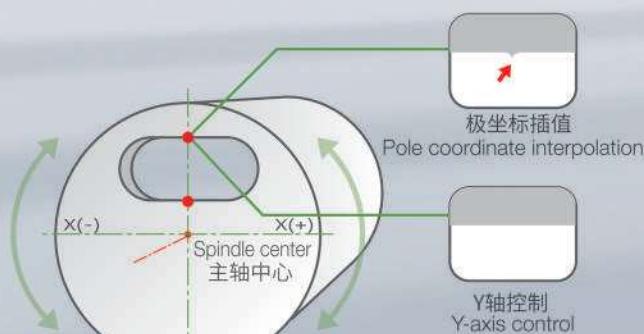
大跨度轨道和低重心结构设计, 提供可靠的刚性

CT series universal turning center has Y-axis function, and realizes Y-axis function through wedgeaxis and X-axis linkage, characterized by low center of gravity and good rigidity. it can greatly improve the machining capacity of complex workpieces and improve the machining accuracy of parts in multiple processes. For example, high-precision grooving and X-axis eccentric drilling can be carried out.

CT系列万能车削中心具有Y轴功能, 通过楔轴和X轴联动实现Y轴功能, 具有重心低、刚性好的特点。它可以大大提高复杂工件的加工能力, 提高零件在多个工序中的加工精度。例如, 可以进行高精度开槽和X轴偏心钻孔。



极坐标插值V.S Y轴控制
Pole coordinate interpolation V.S Y-axis control



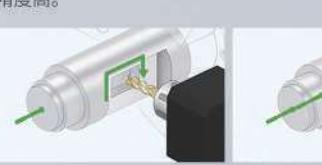
- With the traditional pole coordinate interpolation function for grooving or contour machining, the X-axis travel is reversed at the intersection of the workpiece centerline and the profile to be machined, so that the tool is not completely full contour milling, and the accuracy is low.

用传统的极坐标插补功能进行铣槽或轮廓加工, 在工件中心线与被加工轮廓相交处, X轴行程是反向的, 使刀具不能完全实现全轮廓铣削, 精度较低。

- Using Y axis control, the above situation can be avoided, and the accuracy is high.



侧面铣削
Side Milling

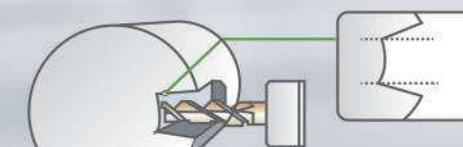


偏心切槽
Eccentric Grooving

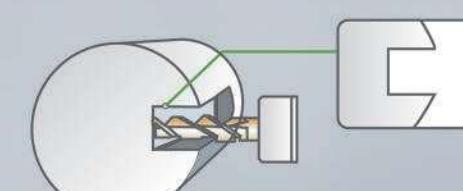


偏心钻孔
Eccentric Drilling

外部铣削槽
External Milling Groove



- Without Y-axis control, the slot width is not easy to be consistent, and the accuracy is poor.
不采用Y轴控制, 开槽宽度不易一致, 精度差



- With Y-axis control, the slot width can be consistent and the accuracy is high.
采用Y轴控制, 开槽宽度一致, 精度高

Operability and Maintenance

可操作性和维护

Based on ergonomic design

The pursuit of operability design is operator-oriented

基于人体工程学设计追求操作者导向的可操作性设计

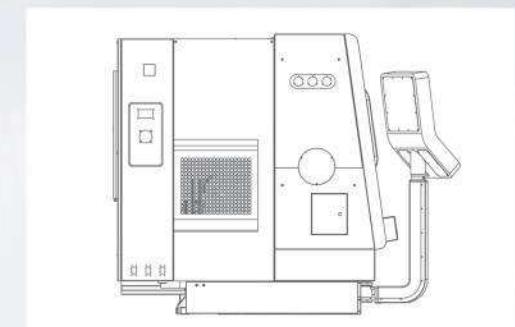
The one-piece operation door and large top opening make it easy to work with a crane.
一体式操作门和宽阔的顶部开口使起重机易于操作。



Large Viewing Window with A Focus on Visibility
大视窗设计, 专注于视觉效果

A large viewing window is installed on the operation door to improve the visibility of cutting conditions.

操作门上安装了一个宽阔的观察窗, 以提高切割条件的可视性。



Easy-to-access Spindle Position
易于接近的主轴位置

Operators can easily reach the center of the chuck, the space under the machine can be entered freely, and allows easy loading and unloading of workpieces and reduces fatigue.

操作员可以轻松到达卡盘的中心, 机器下方的空间可以自由进入, 可以轻松装卸工件并减少疲劳。



Color Separation Cable
分色电缆

All electrical wiring cables are separated according to the purpose of use, so that maintenance is easy and fault repair time is shortened.

所有电气布线电缆均根据使用目的进行分离, 便于维护, 缩短故障修复时间,



Swivel, Tilt Operator Panel
旋转、倾斜操作面板

The operation panel adopts a tilting structure. The panel can be adjusted to a convenient viewing angle for the operator, making it easy to operate the machine or program.

操作面板采用倾斜结构, 面板可以调整到方便操作员的视角, 使操作机器或程序变得容易。

优势/ADVANTAGE
亮点/HIGHLIGHTS
机床与技术/MACHINE TOOLS AND TECHNOLOGY
环境/ENVIRONMENT
自动化解决方案/AUTOMATION SOLUTION
选项/OPTIONS
技术参数/TECHNICAL PARAMETERS

环保功能设计

Eco-friendly Functional Design

The environment is more friendly Energy saving and environmental protection technology

环境更好
节能环保技术

升级油脂润滑系统 Upgrade Grease Lubrication System

All series are equipped with grease lubrication system as standard, which reduces oil consumption and reduces customer costs.

所有系列均标配润滑脂润滑系统，减少了机油消耗，降低了客户成本。

便于维护的芯片抽空设计

Maintenance-friendly Chip Evacuation Design

The standard side-exit chip conveyor is equipped with an adjustable timer that adjusts the working time to the actual cutting situation, thereby reducing excessive coolant consumption.

The integrated chip removal tank design can not only ensure sufficient water output, but also effectively prevent water leakage during rapid cutting of the machine tool.

标准侧出口排屑器配备了可调节的计时器，可根据实际切削情况调整工作时间，从而减少过度的冷却液消耗。

一体式排屑槽设计，不仅能保证足够的出水量，还能有效防止机床快速切削时漏水。

高性能液压系统

High Performance Hydraulic System

Optimize the hydraulic system design to ensure high stability, low failure rate, low noise, and excellent energy saving.

优化液压系统设计，确保高稳定性、低故障率、低噪音，以及优异的节能性。

优化储罐过滤系统

Optimize the Tank Filtration System

Optimize the cutting water tank filtration system, so that the coolant can be efficiently and quickly reflowed, rapid cooling, thereby improving the cutting performance of the machine tool and improving the service life of the tool.

The external chip filter design can quickly clean iron filings, and at the same time improve the tank filtration function, minimizing the overall cleaning times.

优化切削水箱过滤系统，使冷却液能够高效快速回流，快速冷却，从而提高机床的切削性能，提高刀具的使用寿命。外部切屑过滤器设计可以快速清洁铁屑，同时提高水箱过滤功能，最大限度地减少整体清洁时间。



优势/ADVANTAGE
亮点/HIGHLIGHTS
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自动化解决方案/AUTOMATION SOLUTION
选项/OPTIONS
技术参数/TECHNICAL PARAMETERS

Supports Automated Extension

支持自动扩展



Truss manipulator system

桁架机械手系统

By combining advanced truss manipulator systems, flexible operation modes such as configuring conveyor belts, adding measuring instruments, and connecting multiple machine tools can be realized.

结合先进的特拉斯机械手系统，可以实现配置输送带、增加测量仪器、连接多台机床等灵活的操作方式。



Rotating Workpiece Storage Pallets

旋转工件存储托盘

During the chuck operation, the pallet rotates and moves the workpiece to the workpiece holding position. Support multi-layer stacking of workpieces, and a large number of workpieces can be stacked.

在卡盘操作过程中，托盘旋转并将工件移动到工件固定位置。支持多层堆叠工件，可以堆叠大量工件。



Bar Feeder

棒材送料机

Bar feeder for bar material supply can be installed. Equipped with a common bar feeder interface, compatible with various models of bar feeders from mainstream manufacturers.

Variant variable production and complete mass production can also be carried out via the bar feeder schedule function (optional).

可安装用于棒材供应的棒材进料器。配备了通用棒材进料器接口，兼容主流制造商的各种型号的棒材进料器。通过棒材进料器调度功能(可选)，可以实现各种变型生产和完整的大批量生产。



Automatic Part Catcher

自动零件抓取器

A device that automatically transports the processed workpiece to a collecting box outside the machine and can be automated in combination with a bar feeder.

一种自动将加工好的工件输送到机器外部收集箱的设备，可以与棒材进料机结合使用实现自动化。

Options 选项

• Tool Probe 工具探头

Simply touch the tip of the tool with the sensor during process switching or tool change, and the tool data is automatically logged into the CNC, reducing tool preparation time.

在过程切换或工具更换期间，只需用传感器触摸工具的尖端，工具数据就会自动记录到CNC中，从而缩短了工具准备时间。



• Chuck High/ Low Pressure Conversion 卡盘高压/低压转换

When there are many kinds of workpieces and it is necessary to switch the clamping force of the chuck, the clamping force of the chuck is automatically switched with the M codes.

当工件种类较多，需要切换卡盘夹紧力时，卡盘夹紧力通过M代码自动切换。

• Duplex Foot Switch (Standard) 双脚开关(标准)

Two foot switches are used to open and close the main & sub spindle jaws.

使用两个脚踏开关打开和关闭主轴和副轴卡爪。



• Automatic Door 自动门

The front door automatically opens and closes using an electric actuator that can set 3 opening and closing speeds. Built-in safety device, sensed by a touch pressure sensor, automatically stops when touched.

前门使用电动执行器自动打开和关闭，该执行器可以设置3种打开和关闭速度，内置安全装置，由触摸压力传感器感应，触摸时自动停止。

• Workpiece Automatic Measuring System 工件自动测量系统

Using the touch sensor mounted on the turret, the inner and outer diameter, height difference, etc. of the workpiece are automatically calculated, and the tool compensation is adjusted outto maintain continuous machining accuracy.



• Cooling System (Standard) 冷却系统(标准)

The coolant in the tank isdrawn by a coolant pumpmounted on the tank andsprayed from the nozzleson the turret.



• Coolant Nozzle on the Spindle Head Side 主轴头侧冷却液喷嘴

A nozzle above the chuck sprays cutting water to remove chips that accumulate on the chuck and the workpiece.

卡盘上方的喷嘴喷出切削水，以清除卡盘和工件上积聚的切屑。



• Steady Rest 中心架

In order to process with high precision and efficiency, steady rest can be installed according to the customer's needs. Automatic movement is achieved by connecting the turret unit with a connecting pin.



为了实现高精度和高效加工，可根据客户需要安装中心架，通过将刀塔单元与连接销连接来实现自动移动。

Configuration Option List 配置选项列表

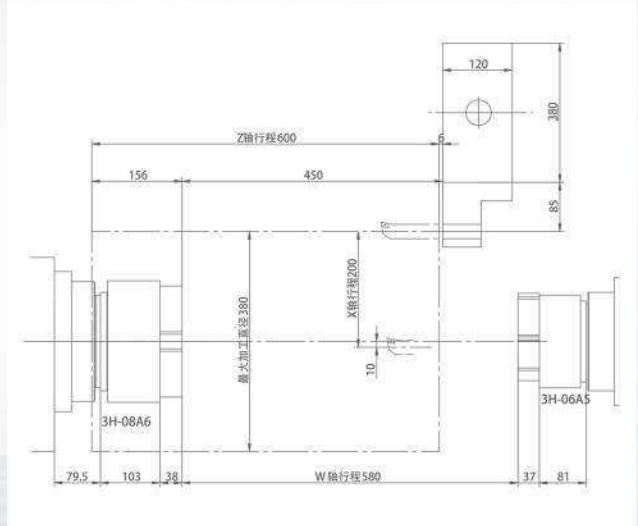
配置选项列表

		标准 ● Standard	可选择 ○ Optional	不可用 ○ Not available
		CT5	CT8	CT10
Machine body	8' hollow chuck(main spindle)	8'空心卡盘(主轴)	●	○
机体	10' hollow chuck(main spindle)	10'空心卡盘(主轴)	○	●
	12' hollow chuck(main spindle)	12'空心轴(主轴)	-	○
	15' hollow chuck(main spindle)	15'空心卡盘(主轴)	-	○
	8' closed chuck(main spindle)	8'闭合卡盘(主轴)	○	○
	10' closed chuck(main spindle)	10'闭合卡盘(主轴)	○	○
	12' closed chuck(main spindle)	12'闭合卡盘(主轴)	-	○
	15' closed chuck(main spindle)	15'闭合卡盘(主轴)	-	○
	6' hollow chuck(sub-spindle)	6'空心卡盘(副轴)	●	○
	8' hollow chuck(sub-spindle)	8'空心卡盘(副轴)	○	●
	10' hollow chuck(sub-spindle)	10'空心卡盘(副轴)	-	○
	6' closed chuck(sub-spindle)	6'闭合卡盘(副轴)	○	○
	8' closed chuck(sub-spindle)	8'闭合卡盘(副轴)	○	○
	10' closed chuck(sub-spindle)	10'闭合卡盘(副轴)	-	○
Option	12-station BMT55 turret	12.BMT55刀塔站	●	○
选项	16-station BMT55 turret	16.BMT55刀塔	-	○
	12-station BMT65 turret	12.BMT65刀塔式机床	-	●
	16-station BMT65 turret	16.BMT65涡轮	-	○
	12-station VDI30 turret	12.工位VDI30刀塔	○	○
	12-station VDI40 turret	12.工位VDI40刀塔	-	○
	Tool measuring system(Tool probe)	刀具测量系统(刀具探头)	●	●
	Workpiece measuring system	工作测量系统	○	○
	Part catcher (main spindle)	零件抓取器(主轴)	○	○
	Part catcher (sub-spindle)	零件抓取器(副主轴)	○	○
	Preparation of bar feeder	棒材喂料器的准备	○	○
	Bar feeder	棒条喂料机	○	○
	Automatic door(front)	自动门(前)	○	○
	Automatic door(roof only)	自动门(仅车顶)	○	○
	Duplex foot switch	双脚开关	○	○
	Oil mist collector	油雾收集器	○	○
	Oil-water separator	油水分离器	○	○
	Balancing pressure (low pressure regulation)	平衡压力(低压调节器)	○	○
	#2 Steady rest	#2 中心架	-	○
	#3 Steady rest	#3 中心架	-	○
	#3.1 Steady rest	#3.1 中心架	-	○
	#3.2 Steady rest	#3.2 中心架	-	○
	Servo tailstock	伺服尾架	○	○
	Spindle air purge protection (main spindle)	主轴空气净化保护(主轴)	○	●
	Chuck air blow (main spindle)	卡盘气吹(主轴)	○	○
	Chuck coolant flushing (main spindle)	卡盘冷却液冲洗(主轴)	○	○
	Chuck air purge protection (sub-spindle)	夹具空气净化保护(副主轴)	○	●
	Chuck air blow (sub-spindle)	气动夹紧装置(副主轴)	○	○
	Chuck coolant flushing (sub-spindle)	切削液冲洗装置(副主轴)	○	○
	Spindle chiller	主轴冷却器	●	●
	Electric cabinet heat exchanger	电控柜换热器	●	●
	Electric cabinet air conditioner	电控柜空调	○	○
	Free M codes	自定义M代码	○	○

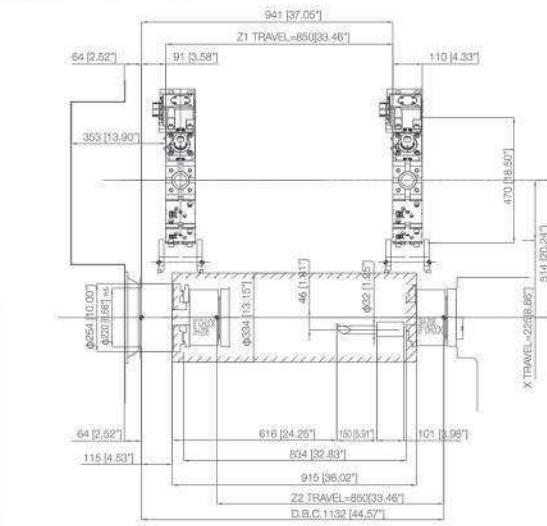
优势/ADVANTAGE
 亮点/HIGHLIGHTS
 机床与技术/MACHINE TOOLS AND TECHNOLOGY
 环境/ENVIRONMENT
 自动化解决方案/AUTOMATION SOLUTION
 选项/OPTIONS
技术参数/TECHNICAL PARAMETERS

Working Area 工作区

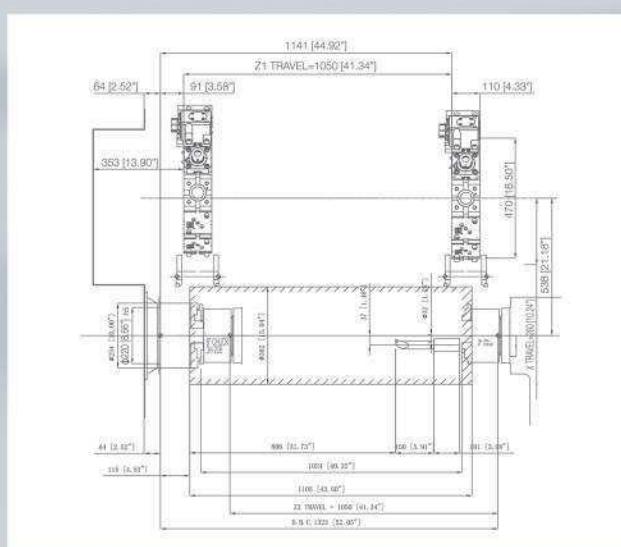
CT5 Series /CT5系列



CT8 Series /CT8系列

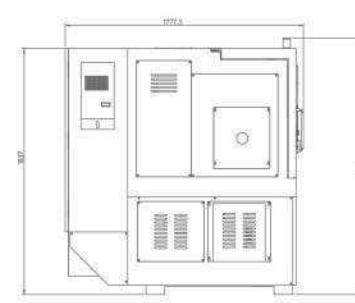
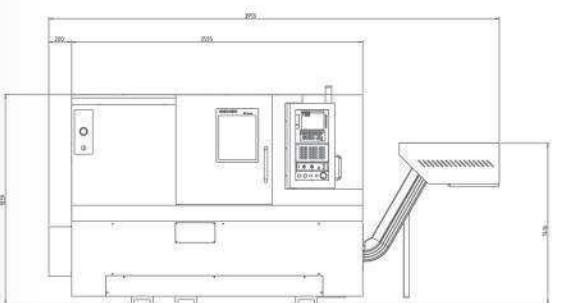


CT10 Series /CT10系列

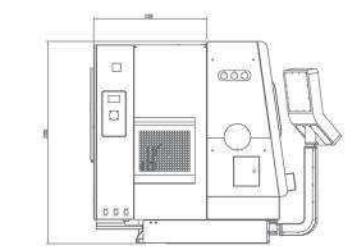
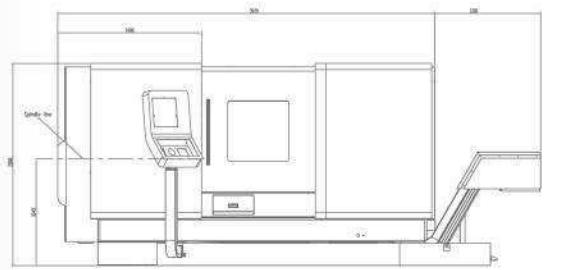


Floor Plans 机床平面图

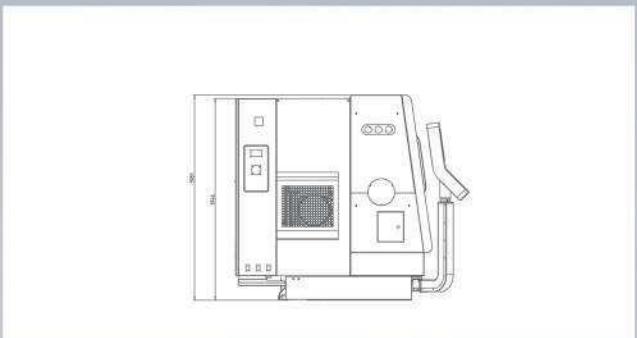
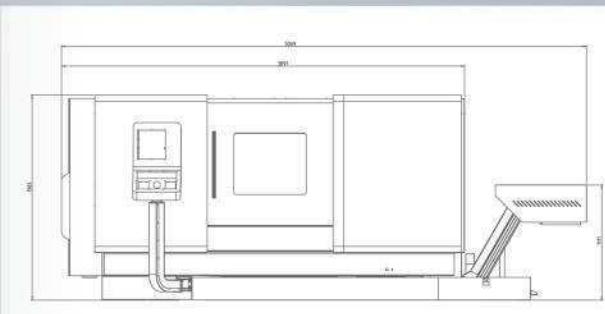
CT5 Series /CT5系列



CT8 Series /CT8系列



CT10 Series /CT10系列



Technical Parameters 技术参数

	CT5	CT8	CT10
技术参数 Technical Parameters			
加工区 Working Area	-	-	-
床身上方回转直径 Swing Diameter over Bed	550 mm	680 mm	700 mm
X轴滑座上方回转直径 Swing Diameter over X-slide	200 mm	450 mm	450 mm
最大车削直径 Max. Turning Diameter	300 mm	400 mm	400 mm
推荐的最大车削直径 Recommended max. turning diameter	210 mm	250 mm	310 mm
卡盘直径 - 主轴 Clamping Chuck Diameter - main spindle	210 mm	250 mm	304 mm
X轴行程 X travel	190+10 mm	225 mm	255 mm
Y轴行程 Y travel	±45 mm	±50 mm	±60 mm
Z轴行程 Z travel	550 mm	850 mm	1050 mm
进给驱动 Feed drive			
快移速度 Rapid Traverse X/Y/Z	30/12/30m/min	30/12/30m/min	30/12/30m/min
主轴 Main spindle			
主轴尖 Spindle nose	A2-8	FL170/A2-8/FL220	A2-8/FL220
前轴承直径 Front Bearing Diameter	100 mm	130/140 mm	130/140 mm
主轴孔直径 Spindle bore diameter	74 mm	87/102 mm	87/102 mm
最大棒料尺寸 Max. bar capacity	51 mm	65/75/90 mm	65/75/90 mm
主驱动 Max. Installed Power			
功率 Power	11/15 kW	15/18.5 kW	15/18.5 kW
最大扭矩 Max Torque	168 Nm	268/420 Nm	268/420 Nm
最高主轴转速 Max. spindle Speed	4500 rpm	4000 rpm	4000/3000 rpm
刀塔 Turret			
BMT刀位数 Number of BMT65 Tool Stations	12 pcs	12 pcs	12 pcs
刀座 标准 Tool Reception according to BMT65	-	-	-
刀柄直径 Shank diameter	25/40 mm	25/40 mm	25/40 mm
分度定位时间30° 带锁 Indexing Time 30° with locking	0.35 sec.	0.35 sec.	0.35 sec.
分度定位时间30° 无锁 Indexing Time 30° without locking	0.12 sec.	0.12 sec.	0.12 sec.
动力刀特性 Driven tools characteristic			
动力刀数量 Number of Driven Tools	12	12	12
额定功率 Rated Power	3/3.7-5.5 KW	3/3.7-5.5 KW	3/3.7-5.5 KW
最大扭矩(40% /DC) Max. Torque (40% DC)	45 Nm	45 Nm	45 Nm
最高转速 Max Speed	4000/6000 rpm	4000/600 rpm	4000/600 rpm
接口 Coupling	BMT55	BMT65	BMT65
C轴 - 主轴 C-Axis - Main spindle	-	-	-
转速范围 Speed Range	100 rpm	100 rpm	100 rpm
扭矩 Torque	168 Nm	268 Nm	268 Nm

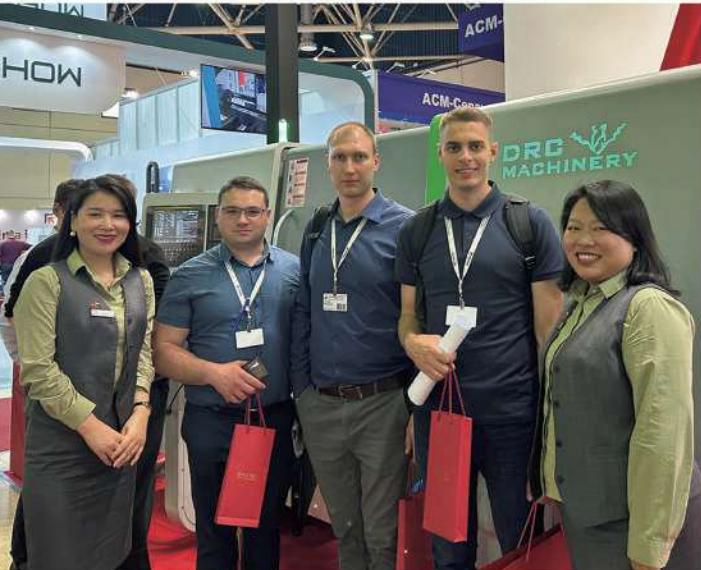
	CT5	CT8	CT10
副主轴 Sub-spindle			
类型 内藏式 Type	Built-in	Built-in	Built-in
副主轴行程 Sub-spindle travel	490 mm	850 mm	1050 mm
副主轴鼻端 Sub-spindle nose	A2-5	A2-6	A2-6
前端轴承直径 Front Bearing Diameter	-	100 mm	100 mm
副主轴最高转速 Max.speed of sub-spindle	6000 rpm	5000 rpm	5000 rpm
额定功率 Rated power	11 KW	15 KW	15 KW
最大扭矩 Max.torque	-	103 Nm	-
定位精度标准 VDI 3441. Positioning Accuracy according to VDI 3441			
X/Y/Z1轴定位精度 Accuracy of positioning in X/Y/Z1 Axes	≤ 6 / 8 / 8 μm	≤ 6 / 8 / 10 μm	≤ 6 / 8 / 12 μm
(间接测量系统) (Indirect Measuring System)	-	-	-
X/Y/Z1轴重复定位精度 Accuracy of repeatability in X/Y/Z1 Axes	≤ 4 / 5 / 5 μm	≤ 5 / 5 / 8 μm	≤ 5 / 5 / 8 μm
(间接测量系统) (Indirect Measuring System)	-	-	-
C轴定位精度 Accuracy of positioning in C Axes	≤ 20 arcsec.	≤ 20 arcsec.	≤ 20 arcsec.
液压单元 Hydraulic Unit			
箱容量 Tank Capacity	25 L	25 L	25 L
压力最大 Max. Pressure	55 bar	55 bar	55 bar
冷却设备 Coolant Equipment	-	-	-
冷却液箱容量 Coolant tank capacity	180 L	200 L	220 L
排屑器排屑能力 Chip conveyor capacity	170 L	180 L	200 L
冷却液泵功率 Pump Power	0.85 kW	0.85 kW	0.85 kW
冷却液泵名义流量 Pump nominal flow rate at 5 bar	20 L/min.	20 L/min.	20 L/min.
电气连接 Electrical Connection			
连接的功率最大 Max.installed Power	50 kVA	50 kVA	50 kVA
电压 Voltage	400 V	400 V	400 V
频率 Frequency	50/60 Hz	50/60 Hz	50/60 Hz
保险丝(慢速) 标准 Fusing (slow-blowing) according to VDE 0100	50 A	50 A	50 A
允许的电压波动 Allowed Voltage Fluctuation at 400 V	±10%	±10%	±10%
验收 Acceptance			
机床验收测试 标准 Machine Acceptance Test	according to VDI 3441	according to VDI 3441	according to VDI 3441
气动 Pneumatics			
空气压力 Air Pressure	6 bar	6 bar	6 bar
空气消耗 Air consumption	15 m3/h	15 m3/h	15 m3/h
环境条件 Environment Conditions	-	-	-
室温 Room Temperature	+ 15 to + 35°C	+ 15 to + 35°C	+ 15 to + 35°C
最大相对空气湿度 Max. relative air humidity	75%	75%	75%
最大海拔安装高度 Max. Installation Height above msl	1000 m	1000 m	1000 m
重量 Weights			
带排屑器机床净重 Net weight of the machine with chip conveyor approx.	400 kg	6500 kg	8000 kg
尺寸 Dimensions			
带排屑器机床 Machine with Chip Conveyor (L x W x H)	3630 x 1720 x 1740 mm	4820 x 2250 x 2150 mm	5020 x 2250 x 2150 mm
右侧排屑 Conveyor from thr right side	-	-	-

Technical Parameters 技术参数

	HT2	HT3	HT5	HT5L	HT6	HT6L
技术参数 Parameter						
主轴头 Spindle head	类型 Type	A2-5	FL140 h5/A2-6	FL140 /A2-6	FL 140 /A2-6	FL 170 h5
主轴最高转速 Spindle maximum speed	rpm	5000	4500	4500	4500	4000
最大扭矩 Max. Torque	N·m	76	90	112	112	300
主轴功率 Spindle power	kW	5.5-7.5/7.5-11	7.5-11/11-15	11/15	11/15	15-18.5
自定心夹盘直径 Chuck diameter	mm	165	165/210	210	210	250/310
主轴孔径 Spindle bore	mm	56	74	74	74	87
前轴承直径 Front bearing diameter	mm	80	100	100	100	130
主轴轴承润滑剂 Spindle bearing lubrication	类型 Type	Grease	Grease	Grease	Grease	Grease
导轨润滑 Guideway Lubrication	类型 Type	Oil	Oil	Oil	Oil	润滑油 Oil
速度范围 Speed range	rpm	5-5000	5-4500	5-4500	5-4000	5-3000
工作区域 Work area						
床身上直径 Swing Diameter over the bed	mm	520	558	576	576	670
可加工最大直径 Maximum cutting diameter	mm	260	340/328	390/348	390/348	450/420
推荐最大加工直径 Suggest Max.cutting diameter	mm	150	180	200	200	250
可加工最大长度 Maximum cutting length	mm	200	350	500	800	550
棒料最大直径 Maximum Bar Diameter	mm	41	42/51/65	51/65	51/65	65/75
Z轴行程 Travel of Z-axis	mm	250	380	525	850	600
X轴行程 Travel of X-axis	mm	150	180	225	225	267
滚珠丝杠 Ball screw						
X/Z轴滚珠丝杠 D x P X/Z axis ballscrew D x P	mm	32 x 10	32 x 10	32 x 10	32 x 10	40 x 10
进给Feed						
Z轴快移 Rapid traverse Z	m/min	30	30	30	30	30
X轴快移 Rapid traverse X	m/min	30	30	30	30	30
轴推力 Feed force of axis						
X/Z轴推力 Feed force X/Z	N	3200	4500	4500	4500	7500
轴数 Number of axis	-	2	2	2	2	2
测量系统 Measuring system						
X/Z轴测量系统 X/Z axis measuring system	-	Absolute rotative	Absolute rotative	Absolute rotative	Absolute rotative	Absolute rotative
最高定位精度(X/Z);VDI/DGQ 3441 Positioning	mm	0.008/0.008	0.008/0.008	0.008/0.008	0.008/0.008	0.008/0.008
重复定位精度(X/Z);VDI/DGQ 3441 Repeatability	mm	0.004/0.005	0.004/0.005	0.005/0.005	0.005/0.005	0.005/0.005
尾坐 Tailstock						
尾坐行程 Travel of tailstock	mm	-	350	500	800	500
移动尾坐型式 Tailstock moving type	-	-	液压可编程 Hydraulic Programmable	液压可编程 Hydraulic Programmable	液压可编程 Hydraulic Programmable	液压可编程 Hydraulic Programmable
最大尾坐推力 Max. pressure of tailstock	N	-	4000	4000	4000	8000
尾坐顶尖套筒 Tailstock top sleeve	Type	-	MT 4	MT 4	MT 5	MT 5

	HT2	HT3	HT5	HT5L	HT6	HT6L
刀具附件 Tool attachments						
伺服刀塔 Servo turret	Type	Pragati/Sauter	-	-	-	SAUTER
刀具数 Number of Tools	-	8/12	-	-	-	12
刀具尺寸 Size of Tools	mm	20/25	-	-	-	25
伺服刀塔 Servo turret						
刀具数 Number of Tools	-	1/12	8/12	12	12	-
刀盘类型 Turret disk type	-	VDI30	Slot disk	Slot disk	Slot disk	-
刀具尺寸 Size of Tools	mm	20/25	25	25	25	-
电气参数 Electrical specifications						
电压 Voltage	V	380 ±10%	380 ±10%	380 ±10%	380 ±10%	380 ±10%
频率 Frequency	Hz	50 ± 1%	50 ± 1%	50 ± 1%	50 ± 1%	50 ± 1%
最大安装功率 Max. installed power	KVA	20	20/25	25	25	35
400V线保护熔断器 400v line protection fuses	A	63	63	63	63	63
400V线自动电路断路器 400v line automatic circuit breaker	A	33	33	33	33	-
连接电缆部分 Connection cables section	mm ²	4 x 10				
液压系统 Hydraulic system						
最大工作压力 Max. working pressure	bar	45/50	45	45/50	45/50	45/50
储油槽容量 Reservoir capacity	L	15	35	35	35	35
泵流量 Pump flow	L/min	24	24	24	24	24
冷却系统 Coolant system						
水箱的容量(大约) Capacity with tank	L	100	150	180	180	180
水泵传输 Pump delivery	L/min	30	30	30	30	30
冷却液泵压力 Pump pressure	bar	5	5	5	5	5
噪音水平 Noise level						
噪声水平 Noise Level	dB (A)	≤80	≤80	≤80	≤80	≤80
控制系统 Control system						
发那科 FANUC		0i-TF + SIEMEN828D	0i-TF + SIEMEN828D	0i-TF + SIEMEN828D	0i-TF + SIEMEN828D	0iT plus
重量 Net weight	kg	About 2800	About 3500	About 4000	About 4800	About 5200
床身倾斜角度,材质 Slant angle, Material	°	45°, HT300				
尺寸 Size(L/W/H)	mm	1600 x 1500 x 1750	2550 x 1600 x 1850	2750 x 1700 x 1850	3100 x 1700 x 1850	2800 x 1850 x 1950

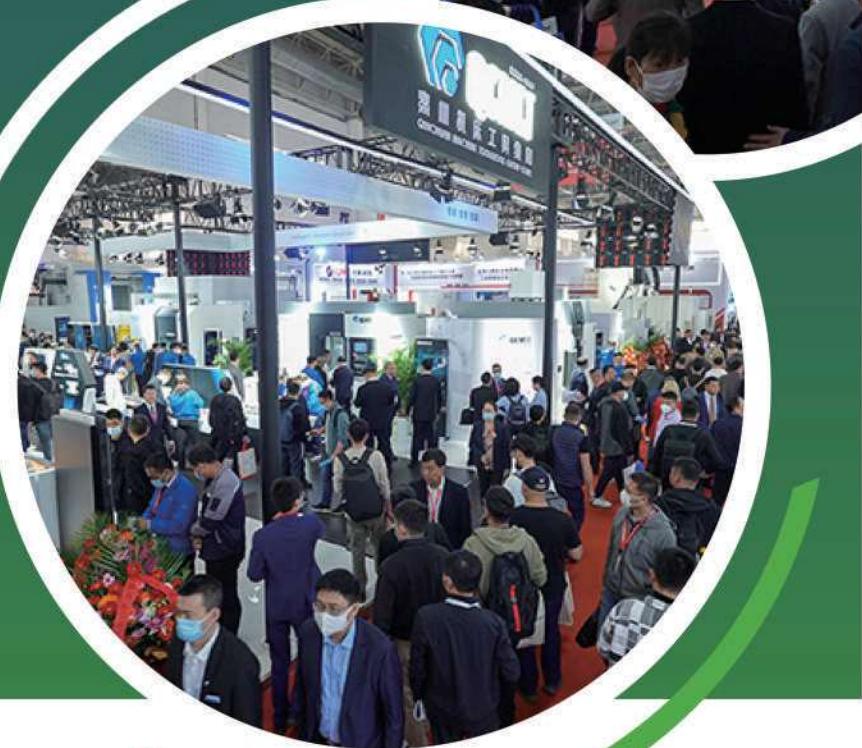
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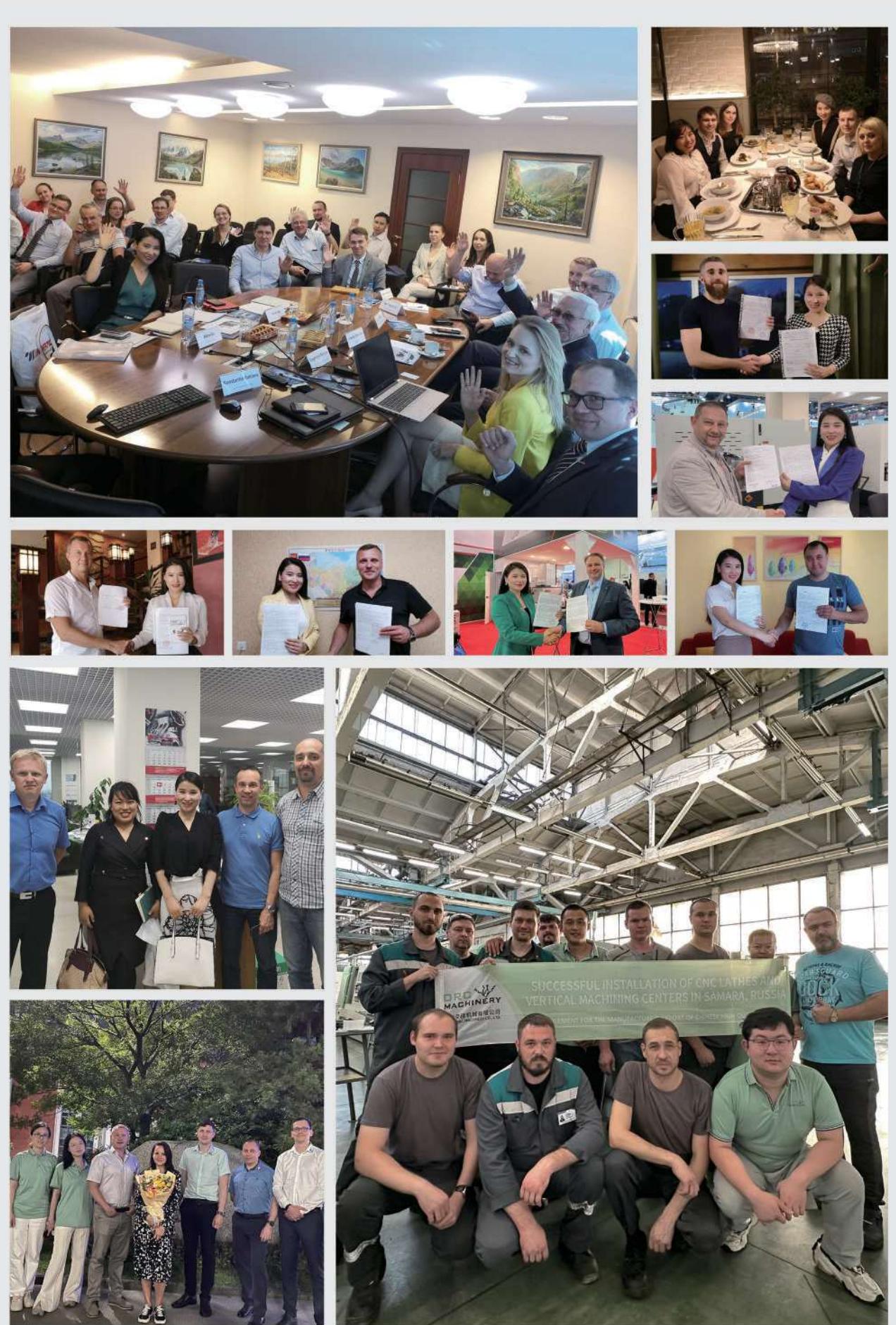


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-Innovation-创新

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Our enterprise mission is to pursue the happiness of all our partners while creating a Chinese precision industry and trade platform that impresses customers and contributes to the development of the country and social progress.

Our enterprise vision is to ensure a century of prosperity, promote China's precision equipment worldwide, and strive to realize the dream of becoming a century-old powerhouse.