Conscious
环境友善

品质赢得发展 . 科技创新未来

QUALITY WINS DEVELOPMENT FUTURE OF TECHNOLOGICAL INNOVATION

就续工业自动化　CONTINUING INDUSTRIAL AUTOMATION

面对设备更新汰换、生产线自动化改造等需求，让您从容应对。以更合理的运营成本，提升生产力。
Facing the needs of equipment updates, replacement, and automation transformation of production lines, let you calmly respond. Improve productivity with more reasonable operating costs.

工具机全周期服务　TOOL MACHINE FULL CYCLE SERVICE

周期维护增值方案，以提高服务水准、快速响应、优惠价格，服务客户为先。
Periodic maintenance value-added plan, aiming to improve service level, respond quickly, offer preferential prices, and prioritize customer service.

产融结合，促进技术革新
INTEGRATION OF INDUSTRY AND FINANCE, PROMOTING TECHNOLOGICAL INNOVATION

符合条件*的客户可申请购机融资租赁服务，通过分期付款轻松完成设备升级换代，降低资本占用，快速取得产销效能。
Customers who meet the conditions * can apply for purchase financing leasing services, which can easily upgrade and replace equipment through installment payments, reduce capital occupation, and quickly achieve production and sales efficiency.

杭州上翔精密机械有限公司
Hangzhou Fitgood Machinery Co., Ltd

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上翔机械
SHANGXIANG JIXIE

※注：由于本公司技术不断的研发改良，样本中部分机型参数，技术规格如有变更，具体规格以业务商谈时为准，样本中的图片参数仅供参考。
※ Note: Due to the continuous research and development and improvement of our company's technology, if there are any changes in the parameters and technical specifications of some models in the sample, the specific specifications will be subject to business negotiations. The image parameters in the sample are for reference only.

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卧式数控斜车车铣复合

HORIZONTAL CNC INCLINED LATHE
TURNING AND MILLING COMPOSITE

效率、精度、耐用的TS EFFICIENT, PRECISE, AND DURABLE TS

TS系列机床在紧凑的结构框架和极具竞争优势的加工区间内融合了多种配置，以使加工效率、加工精度和机床耐用性得以提升。

The Ts series machine tools integrate multiple configurations within a compact structural framework and highly competitive machining range to improve machining efficiency, precision, and machine durability.

1 更高的加工效率 HIGHER PROCESSING EFFICIENCY

- 更快的加工循环时间，更低的非切削时间;
  Faster processing cycle time and lower non cutting time;
- 主轴转速高，TS150D机床4500rpm TS200机床4500rpm，TS 250机床3500rpm，TS250L机床3500rpm;
  High spindle speed, TS150D machine tool 4500rpm, TS200 machine tool 4500rpm, TS 250 machine tool 3500rpm, TS250L machine tool 3500rpm;
- 快速移动速度快，X、Z轴的快移速度可达30m/min;
  Fast moving speed, the fast moving speed of the X and Z axes can reach 30m/min;
- 换刀速度快，TS系列机床采用伺服式刀塔，TS150D和TS200 机床的换刀时间为0.09秒（仅旋转），TS250和TS250L机床的换刀时间为0.10秒（仅旋转）。
  The tool change speed is fast, and the TS series machine tools use servo turrets. The tool change time for TS150D and TS200 machine tools is 0.09 seconds (rotation only), while the tool change time for TS250 and TS250L machine tools is 0.10 seconds (rotation only).

2 高刚性的机床结构 HIGH RIGIDITY MACHINE TOOL STRUCTURE

- 更长的刀具寿命和更大的重载切削能力;
  Longer tool life and greater heavy-duty cutting ability;
- 坚固的高刚性床身采用的是整体式斜床身结构，优质灰铸铁材料，粗壮的加强筋结构，TS150和TS200机床床身为45° 斜床身TS250和TS250L机床床身为30度斜床身;
  The sturdy and high rigidity bed body adopts an integral inclined bed body structure, high-quality gray cast iron material, and a thick reinforced rib structure. The TS150 and TS200 machine bed bodies are 45 ° inclined bed bodies, and the TS250 and TS250L machine bed bodies are 30 ° inclined bed bodies;
- 工程团队在设计过程中使用FEA（有限元分析）技术，使机床整体的刚性平衡，确保优异的机床刚性和寿命;
  The engineering team uses FEA (Finite Element Analysis) technology in the design process to ensure the overall rigidity balance of the machine tool, ensuring excellent machine tool rigidity and lifespan;
- C2级精密滚珠丝杆，带预紧的双螺母结构，淬硬并精磨，降低噪音和热膨胀;
  C2 grade precision ball screw with pre tightened double nut structure, quenched and finely ground to reduce noise and thermal expansion;
- 重载型线性导轨，可提高30%以上的刚性和更长的机床寿命。
  The heavy-duty linear guide rail can increase rigidity by more than 30% and prolong the lifespan of the machine tool.

3 优秀并稳定的精度 EXCELLENT AND STABLE ACCURACY

- 稳定的静态和动态切削精度;
  Stable static and dynamic cutting accuracy;
- X/Z轴全形成定位精度0.01mm（ISO 230-2）;
  X/Z-axis full formation positioning accuracy of 0.01mm (ISO 230-2);
- X/Z轴全行程重复定位精度0.005mm（ISO 230-2）;
  X/Z-axis full stroke repeated positioning accuracy of 0.005mm (ISO 230-2);
- 加工实例：材料BsB，主轴转速1250rpm;
  Processing example: Material BsB, spindle speed 1250rpm;
- 加工圆度0.7μm,表面粗糙度Ra0.2μm。
  Processing roundness 0.7μm. Surface roughness Ra0.2 μM .

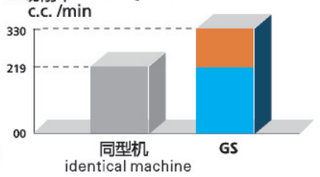
4 结构紧凑 COMPACT

- 最小化的占地面积，最大化的工作空间;
  Minimize footprint and maximize workspace;
- 紧凑的机床外观
  TS150D机床长度1840mm，TS200机床长度1937mm，
  TS250机床长度2690mm；TS250L机床长度3350mm；
  Compact machine tool appearance
  TS150D machine tool length 1840mm, TS200 machine tool length 1937mm,
  TS250 machine tool length 2690mm; TS250L machine tool length 3350mm;
- 空间的高效利用
  工作空间/机床占地面积比高达3.5%，优于一般同业的平面值2.94%。
  Efficient utilization of space
  The ratio of workspace to machine tool footprint is as high as 3.5%, which is better than the average planar value of 2.94% in the industry.

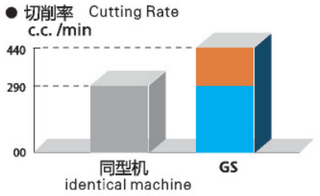
加工实例 PROCESSING EXAMPLES

机型 MODEL	TS150	TS200	TS250	TS250L
	重载加工 Heavy load machining	重载加工 Heavy load machining	重载加工 Heavy load machining	重载加工 Heavy load machining
工件材料 Workpiece material	S45C	S45C	S45C	S45C
线速度 linear velocity	150m/min	150m/min	150m/min	150m/min
切削深度 Cutting Depth	3.5mm	4mm	5mm	6mm
进给速度 Feed Speed	0.45mm/rev	0.45mm/rev	0.45mm/rev	0.45mm/rev
材料去除率 material removal rate	235cc/min	270cc/min	270cc/min	270cc/min

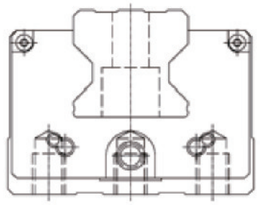
● 切削率 Cutting Rate c.c. /min



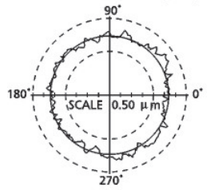
● 切削率 Cutting Rate c.c. /min



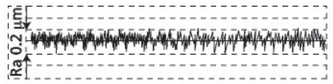
● 滚柱型线性导轨 Roller type linear guide rail



● 圆度加工检测实例
Example of roundness machining inspection



● 表面粗糙度 Surface roughness



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QUALITY • INTEGRITY • INNOVATION

保证整台机器达到最佳的精度

产品检测

ENSURE THAT THE ENTIRE MACHINE ACHIEVES OPTIMAL ACCURACY IN PRODUCT TESTING

为确保每台机床的精准度，我们认真把握每个细节每个步骤。

FIRST-CLASS PROCESSING EQUIPMENT TO ENSURE HIGH QUALITY AND PRECISION

机床结构 MACHINE TOOL STRUCTURE

TS系列机床在紧凑的结构框架和极具竞争优势的加工区间内融合了多种配置，以使加工效率、加工精度和机床耐用性得以提升。

The Ts series machine tools integrate multiple configurations within a compact structural framework and highly competitive machining range to improve machining efficiency, precision, and machine durability.

TS150 D/TS200

上面列出的配置和优势同样也适用与TS250和TS250L机型。

The configurations and advantages listed above also apply to the TS250 and TS250L models.

1 标配8工位的T型刀塔，VDI型刀塔带或不带动力刀具功能可作为选项。

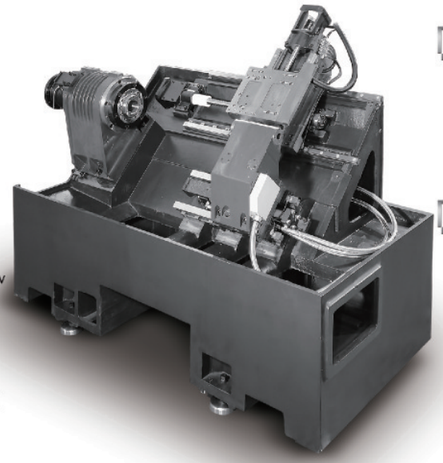
A T–shaped turret with 8 workstations is standard, and the VDI turret with or without power tool function can be used as an option.

2 高等级的双螺母滚珠丝杠，保证出色的机床精度和重复性。

High grade double nut ball screw ensures excellent machine tool accuracy and repeatability.

3 采用加强筋额外加强的45度整体斜床身设计。

A 45 degree overall inclined bed design with additional reinforcement ribs.



4 完全可编程控制的莫氏4号液压尾座，同其它形式的尾座相比，消除了人工的干预。

The fully programmable Morse No. 4 hydraulic tailstock eliminates manual intervention compared to other forms of tailstock.

5 高品质的线性导轨，确保了更高的机床定位精度、更快的进给速率、更小的机床磨损、延长机床使用寿命和全面的加工连续性。

High quality linear guide rails ensure higher machine positioning accuracy, faster feed rate, less machine wear, extended machine service life, and comprehensive machining continuity.

所有机床均按照严格的质量标准进行激光检测。

All machine tools undergo laser testing in accordance with strict quality standards.

TS250L/TS250SMY

1 标配12刀位的T型刀塔，BMT型刀塔带或不带动力刀具功能可作为选项。

A T–shaped turret with 12 tool positions is standard, and the BMT turret with or without power tool function can be used as an option.

2 非接触式的磁性编码器不需要皮带，提高了整体的可靠性。

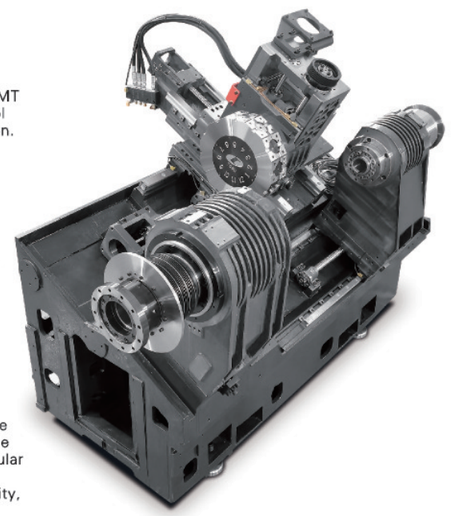
The non–contact magnetic encoder does not require a belt, improving overall reliability.

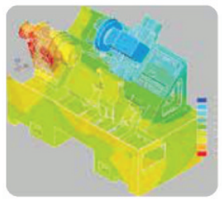
3 同级最优的主轴设计整合了两个双列滚子轴承和两个角接触球轴承，可以保证出色的刚性、热稳定性和主轴使用寿命。

The optimal spindle design at the same level integrates two double row roller bearings and two angular contact ball bearings, ensuring excellent rigidity, thermal stability, and spindle service life.

4 机床床身和所有的铸件都采用高质量的灰铸件制造，具有优异的刚性、耐用度和热稳定性。

The machine bed and all castings are made of high–quality gray castings, which have excellent rigidity, durability, and thermal stability.





5 重载型的线性导轨系统提供了最优化的抗挠性和刚性，直接的优点就是最大的重载切削能力和更长的机床使用寿命。

The heavy–duty linear guide system provides optimal resistance to flexibility and rigidity, with the direct advantage of maximum heavy–duty cutting capacity and longer machine tool lifespan.

6 带有固定预紧拉伸的重载型双螺母丝杠，采用C2级，保证出色的刚性、机床精度和重复性。

A heavy–duty double nut lead screw with fixed pre tension, using C2 grade, ensuring excellent rigidity, machine accuracy, and repeatability.

7 采用加强筋额外加强的30度整体斜床身设计。

A 30 degree overall inclined bed design with additional reinforcement ribs.

8 可编程控制的莫氏5号液压尾座，采用粗大的矩形硬轨设计，使尾座具有最优化的刚性。

The programmable Morse No. 5 hydraulic tailstock adopts a thick rectangular hard rail design, which optimizes the rigidity of the tailstock.

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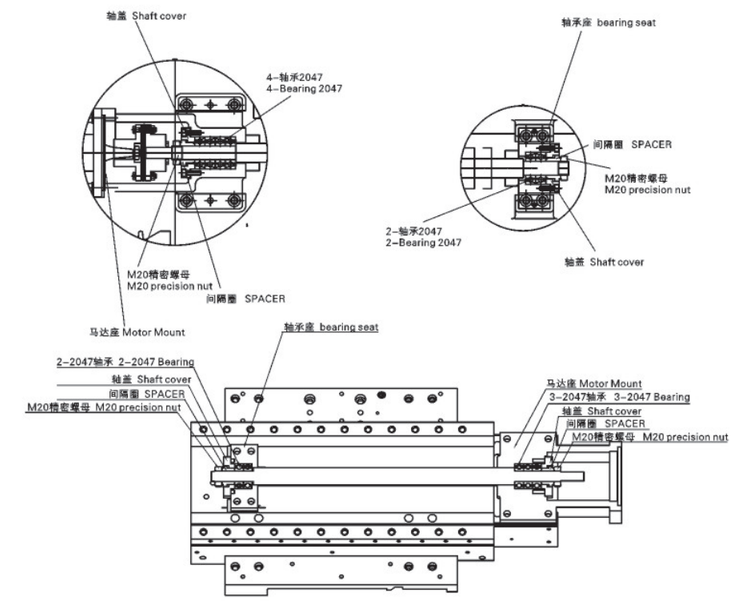
TS–200系列X/Z两轴丝杆传动机构采用欧系装配标准：

The TS–200 series X/Z two axis screw drive mechanism adopts European assembly standards:

X轴3+2的轴承排列电机座端3个轴承、轴承座2轴承；Z轴4+2的轴承排列电机座4个轴承、轴承座2个轴承！增加机床的车削刚性及稳定性，适用于各复杂零件多重切削功能，提高效率！

The bearing arrangement of X–axis 3+2 includes 3 bearings at the motor seat end and 2 bearings at the bearing seat; The bearing arrangement of Z–axis 4+2 includes 4 bearings for the motor seat and 2 bearings for the bearing seat! Increase the turning rigidity and stability of the machine tool, suitable for multiple cutting functions of various complex parts, and improve efficiency!

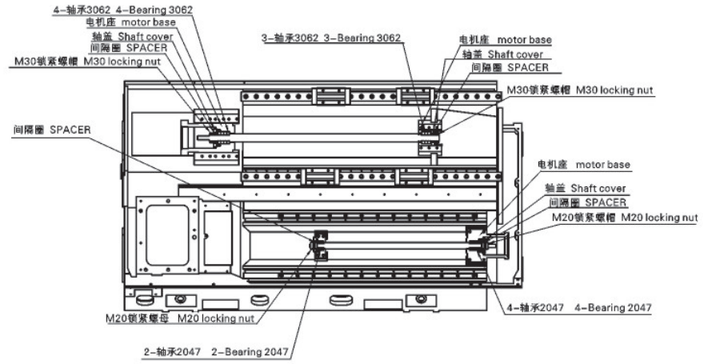


TS–250系列X/Z两轴丝杆传动机构采用欧系装配标准：

The TS–250 series X/Z two axis screw drive mechanism adopts European assembly registration:

X轴3+3的轴承排列电机座端3个轴承、轴承座3轴承；Z轴4+3的轴承排列电机座4个轴承、轴承座3个轴承！增加机床的车削刚性及稳定性，适用于各复杂零件多重切削功能，提高效率！

The bearing arrangement of X–axis 3+3 includes 3 bearings at the motor seat end and 3 bearings at the bearing seat; The bearing arrangement of Z–axis 4+3 includes 4 bearings for the motor seat and 3 bearings for the bearing seat! Increase the turning rigidity and stability of the machine tool, suitable for multiple cutting functions of various complex parts, and improve efficiency!



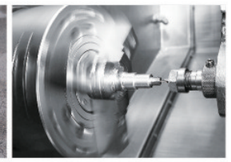
TS-150P/150D/150M

卧式数控车床
Horizontal CNC lathe

TS-150是最小型的新一代数控车床，可配车铣；
它占地面积小，但最大加工直径可达200mm，工件最大回转直径可达400mm；
高强度照明灯、伺服自动门样样俱全。

TS-150 is the smallest new generation CNC lathe that can be equipped with turning and milling;
It occupies a small area, but the maximum processing diameter can reach 200mm, and the maximum rotation diameter of the workpiece can reach 400mm;
High intensity lighting and servo automatic doors are all available.





1 更高的加工效率
Direct programming

2 高刚性的机床结构
Direct programming

3 优秀并稳定的精度
Direct programming

4 结构紧凑
Direct programming

伺服电机 快启快停
Servo motor fast start and stop

95% ↑
高传动效率
High transmission efficiency

低成本维护
Low cost maintenance

适用于多种应用
Suitable for various applications

280mm
最大加工长度
Maximum processing length

TS150P/150D/150M技术规格参数 Technical specifications and parameters

主轴 main shaft		单位/unit	TS-150P	TS-150D	TS-150M
主轴鼻端形式	Spindle nose end form	–	A2-5	A2-5	A2-5
主轴通孔直径	Main spindle through-hole diameter	mm	56	56	56
三爪卡盘夹持能力	Three jaw chuck clamping capacity	mm	6" /Φ150	6" /Φ150	6" /Φ150
拉杆动作形式	Rod action form	–	液压	液压	液压
驱动系统 driving system					
系统	system	–	新代6TA	新代6TA	新代22TA
主轴电机功率	Spindle motor power	kW	7.5/11	7.5/11	7.5/11
主轴最高转速	Maximum spindle speed	rpm	4500	4500	4500
X轴伺服电机功率	X-axis servo motor power	kW	1.7	1.7	1.7
Z轴伺服电机功率	Z-axis servo motor power	kW	1.7	1.7	1.7
加工范围 machine range					
最大床身旋径	Maximum bed rotation diameter	mm	400	400	400
最大加工工件长度	Maximum length of processed workpiece	mm	350	280	260
最大加工工件直径	Maximum machining workpiece diameter	mm	Φ120	Φ300	Φ200
最大拉杆通孔直径	Maximum pull rod through-hole diameter	mm	Φ46	Φ46	Φ46
X/Z轴 X/Z axis					
X轴行程	X-axis travel	mm	800	200	150
Z轴行程	Z-axis travel	mm	350	330	320
X/Z轴快移速率	X/Z-axis fast movement rate	mm	24	24	24

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精度 accuracy		单位/unit	TS-150P	TS-150D	TS-150M
定位精度	positioning accuracy	mm	±0 .003	±0 .004	±0 .004
重复定位精度	Repetitive positioning accuracy	mm	±0.002	±0.002	±0.002
排刀 Knife arrangement					
中心高	Center height	mm	63	80	80
刀塔驱动形式	Knife tower drive form	mm	排刀	伺服电机	动力刀塔
刀位数	Knife number	T	9T	8/12T	BMT45-12T
方刀座规格	Specification of square knife holder	mm	25	25	25
镗刀座规格	Boring tool holder specifications	mm	Φ25	Φ32	Φ32
换刀时间(T-T)	Tool change time (T-T)	s	–	0.3	0.3
水箱 water tank					
切削水箱容量	Cutting water tank capacity	L	80	80	80
切削水水压力	Cutting water pressure	kg	0.75	0.75	0.75
电力需求 Power demand					
电压	voltage	V	380	380	380
功率	power	KVA	15	20	22
机床尺寸 MACHINE SIZE					
长×宽×高	Length x width x height	cm	1920x1550x1650	1800x1450x1650	1800x1450x1650
重量	weight	kg	1800	2500	2600

TS-200/200M/200MY

卧式数控斜车/车铣复合

Horizontal CNC oblique turning/turning milling composite

1
更高的加工效率
Direct programming

2
高刚性的机床结构
Direct programming

3
优秀并稳定的精度
Direct programming

4
结构紧凑
Direct programming

伺服电机 快启快停
Servo motor fast start and stop

95%↑
高传动效率
High transmission efficiency

低成本维护
Low cost maintenance

适用于多种应用
Suitable for various applications

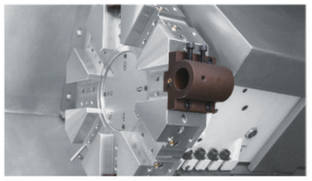
420mm
最大加工长度
Maximum processing length

占地面积仅有3m² 而且加工能力强，最大加工直径260mm，工件最大回转直径可达480mm，具备快移速度高，换刀精度高，换刀时间短等系列优点；

8″ 液压卡盘转速可达4500rpm，11KW主轴驱动系统可提供70Nm的扭矩。

It only covers an area of 3m² and has strong processing capacity, with a maximum processing diameter of 260mm and a maximum workpiece rotation diameter of 480mm. It has a series of advantages such as high fast moving speed, high tool changing accuracy, and short tool changing time;

The speed of the 8 "hydraulic chuck can reach 4500rpm, and the 11KW spindle drive system can provide a torque of 70Nm.



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TS-200M技术规格参数 Technical specifications and parameters

主轴 main shaft		单位/unit	TS-200	TS-200M	TS-200MY
主轴鼻端形式	Spindle nose end form	–	A2-6	A2-6	A2-6
主轴通孔直径	Main spindle through-hole diameter	mm	61	61	61
三爪卡盘夹持能力	Three jaw chuck clamping capacity	mm	8 ″ / Φ210	8 ″ / Φ210	8 ″ / Φ210
拉杆动作形式	Rod action form	–	液压	液压	液压
驱动系统 driving system					
系统	system	–	FANUC-OI-TF	FANUC-OI-TF	FANUC-OI-TF
主轴电机功率	Spindle motor power	kW	11 / 15	11 / 15	11 / 15
主轴最高转速	Maximum spindle speed	rpm	4500	4500	4500
X轴伺服电机功率	X-axis servo motor power	kW	1.8	1.8	1.8
Y轴伺服电机功率	Y-axis servo motor power	kW	1.8	1.8	1.8
Z轴伺服电机功率	Z-axis servo motor power	kW	/	/	2.4
加工范围 machine range					
最大床身旋径	Maximum bed rotation diameter	mm	500	500	450
最大加工工件长度	Maximum length of processed workpiece	mm	440	400	400
最大加工工件直径	Maximum machining workpiece diameter	mm	300	200	200
最大拉杆通孔直径	Maximum pull rod through-hole diameter	mm	Φ52	Φ52	Φ52
X/Z轴 X/Z axis					
X轴行程	X-axis travel	mm	220	220	220
Z轴行程	Z-axis travel	mm	450	450	450
Y轴行程	Travel Y-axis	mm	/	/	±35
X/Z轴快移速率	X/Z-axis fast movement rate	m/ min	30	30	30

精度 accuracy		单位/unit	TS-200	TS-200M	TS-200MY
定位精度	positioning accuracy	mm	±0 .004	±0 .004	±0 .004
重复定位精度	Repetitive positioning accuracy	mm	±0 .002	±0 .002	±0 .002
动力刀塔 Power knife tower					
中心高	Center height	mm	80	80	80
刀塔驱动形式	Knife tower drive form	–	伺服电机	动力电机	动力电机
刀位数	Knife number	T	8/12	12	12
方刀座规格	Specification of square knife holder	mm	25	20	20
镗刀座规格	Boring tool holder specifications	mm	32	32	32
动力刀座规格	Power knife holder specifications	–	/	BMT45	BMT45
动力刀座转速	Power knife holder speed	rpm	/	4000	4000
水箱 water tank					
切削水箱容量	Cutting water tank capacity	L	120	120	150
切削水水压力	Cutting water pressure	kw	1	1	1
电力需求 Power demand					
电压	voltage	V	380 ± 10%	380 ± 10%	380 ± 10%
功率	power	kVA	22	25	28
频率	frequency	HZ	50/60	50/60	50/60
机床尺寸 Machine Size					
长×宽×高	Length x width x height	cm	2070x1580x1750	2070x1580x1750	2300x1600x2100
重量	weight	kg	3000	3000	3700

TS-250/250M/250MY

卧式数控斜车/车铣复合

Horizontal CNC oblique turning/turning milling composite

1
更高的加工效率
Direct programming

2
高刚性的机床结构
Direct programming

3
优秀并稳定的精度
Direct programming

4
结构紧凑
Direct programming

伺服电机 快启快停
Servo motor fast start and stop

95% ↑
高传动效率
High transmission efficiency

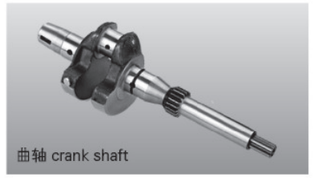
低成本维护
Low cost maintenance

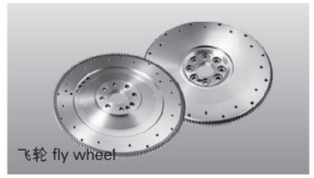
适用于多种应用
Suitable for various applications

620mm
最大加工长度
Maximum processing length

高性能的数控车床与车铣复合的设计，从根本上实现了安装设定的便捷性，极强的刚性和极佳的稳定性，标准配备了12工位的伺服刀塔、动力刀塔、Y刀塔。

The design of high-performance CNC lathes combined with turning and milling fundamentally realizes the convenience of installation and setting, with extremely strong rigidity With excellent stability, the standard is equipped with a 12 station servo turret, power turret, and Y-turret.


曲轴 crank shaft


飞轮 fly wheel

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TS-250技术规格参数 Technical specifications and parameters

主轴 main shaft		单位/unit	TS-250	TS-250M	TS-250MY
主轴鼻端形式	Spindle nose end form	–	A2-8	A2-8	A2-6
主轴通孔直径	Main spindle through-hole diameter	mm	87	87	87
三爪卡盘夹持能力	Three jaw chuck clamping capacity	mm	10 " / Φ254	10 " / Φ254	10 " / Φ254
拉杆动作形式	Rod action form	–	液压	液压	液压
驱动系统 driving system					
系统	system	–	FANUC-OI-TF	FANUC-OI-TF	FANUC-OI-TF
主轴电机功率	Spindle motor power	–	11/15	15/18.5	15/18.5
主轴最高转速	Maximum spindle speed	kW	3500	3500	3500
X轴伺服电机功率	X-axis servo motor power	rpm	1.8	1.8	1.8
Y轴伺服电机功率	Y-axis servo motor power	kW	2.5	2.5	2.5
Z轴伺服电机功率	Z-axis servo motor power	kW	/	/	1.4
动力轴伺服电机功率	Power shaft servo motor power	kW	/	2.7	2.7
加工范围 machine range					
最大床身旋径	Maximum bed rotation diameter	mm	650	650	650
最大加工工件长度	Maximum length of processed workpiece	mm	620	620	620
最大加工工件直径	Maximum machining workpiece diameter	mm	Φ500	Φ500	Φ500
最大拉杆通孔直径	Maximum pull rod through-hole diameter	mm	Φ72	Φ72	Φ72
X/Z轴 X/Z axis					
X轴行程	X-axis travel	mm	300	300	300
Z轴行程	Z-axis travel	mm	630	630	630
Y轴行程	Travel Y-axis	mm	/	/	±50
X/Z轴快移速率	X/Z-axis fast movement rate	m/ min	24	24	24

精度 accuracy		单位/unit	TS-250	TS-250M	TS-250MY
定位精度	positioning accuracy	mm	±0 .004	±0 .004	±0 .004
重复定位精度	Repetitive positioning accuracy	mm	±0 .002	±0 .002	±0 .002
刀塔 turret					
中心高	Center height	mm	100	100	100
刀塔驱动形式	Knife tower drive form	–	伺服电机	动力刀塔	动力刀塔
刀位数	Knife number	T	8/12	12	12
方刀座规格	Specification of square knife holder	mm	25	25	25
镗刀座规格	Boring tool holder specifications	mm	40	40	40
动力刀座规格	Power knife holder specifications	BMT	/	BMT55	BMT55
动力刀座转速	Power knife holder speed	rpm	/	4000	4000
尾座 tailstock					
顶尖规格	Top spec	–	Mt5	Mt5	Mt5
尾座行程	Tail seat travel	mm	120/480	120/480	120/480
水箱 water tank					
切削水箱容量	Cutting water tank capacity	L	150	150	150
切削水水压力	Cutting water pressure	kw	1	1	1
电力需求 Power demand					
电压	voltage	V	380±10%	380±10%	380±10%
功率	power	kVA	25	28	32
频率	frequency	HZ	50/60	50/60	50/60
机床尺寸 Machine Size					
长×宽×高	Length x width x height	cm	2800x1800x1960	2800x1800x2160	2800x1800x2160
重量	weight	kg	5000	5000	5000

TS-250L/250LM/250LMY

卧式数控斜车/车铣复合

Horizontal CNC oblique turning/turning milling composite

1
更高的加工效率
Direct programming

2
高刚性的机床结构
Direct programming

3
优秀并稳定的精度
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4
结构紧凑
Direct programming

伺服电机 快启快停
Servo motor fast start and stop

95% ↑
高传动效率
High transmission efficiency

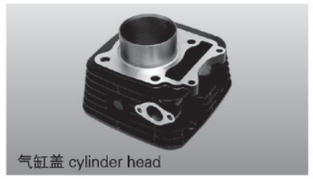
低成本维护
Low cost maintenance

适用于多种应用
Suitable for various applications

1100mm
最大加工长度
Maximum processing length

动力伺服刀塔换刀速度快，能一次性完成较复杂、高难度、高精密的零件加工，减少加工辅助时间，提高生产效率。

The power servo turret has a fast tool changing speed and can complete complex, difficult, and high-precision parts processing at once, reducing processing auxiliary time and improving production efficiency.


气缸盖 cylinder head


主轴 spindle

TS-250L技术规格参数 Technical specifications and parameters

主轴 main shaft		单位/unit	TS-250L	TS-250LM	TS-250LMY
主轴鼻端形式	Spindle nose end form	-	A2-8	A2-8	A2-8
主轴通孔直径	Main spindle through-hole diameter	mm	87	87	87
三爪卡盘夹持能力	Three jaw chuck clamping capacity	mm	10"/ Φ254	10 "/ Φ254	10 "/ Φ254
拉杆动作形式	Rod action form	-	液压	液压	液压
驱动系统（FANUC-TF)					
系统	system	-	FANUC-OI-TF	FANUC-OI-TF	FANUC-OI-TF
主轴电机功率	Spindle motor power	kW	15/18.5	15/18.5	15/18.5
主轴最高转速	Maximum spindle speed	rpm	3500	3500	3500
X轴伺服电机功率	X-axis servo motor power	kW	1.8	1.8	1.8
Z轴伺服电机功率	Z-axis servo motor power	kW	2.5	2.5	2.5
Y轴伺服电机功率	Y-axis servo motor power	kW	/	/	1.4
动力轴伺服电机功率	Power shaft servo motor power	kW	/	2.7	2.7
加工范围 machine range					
最大床身旋径	Maximum bed rotation diameter	mm	Φ650	Φ700	Φ700
最大加工工件长度	Maximum length of processed workpiece	mm	1100	1100	1100
最大加工工件直径	Maximum machining workpiece diameter	mm	Φ500	Φ500	Φ500
最大拉杆通孔直径	Maximum pull rod through-hole diameter	mm	Φ72	Φ72	Φ72
X/Z轴 X/Z axis					
X轴行程	X-axis travel	mm	280	280	280
Z轴行程	Z-axis travel	mm	1150	1150	1150
Y轴行程	Travel Y-axis	mm	/	/	±50
X/Z轴快移速率	X/Z-axis fast movement rate	m/ min	24	24	24

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精度 accuracy		单位/unit	TS-250L	TS-250LM	TS-250LMY
定位精度	positioning accuracy	mm	±0.005	±0.005	±0.005
重复定位精度	Repetitive positioning accuracy	mm	±0.003	±0.003	±0.003
刀塔 turret					
中心高	Center height	mm	100	100	100
刀塔驱动形式	Knife tower drive form	-	伺服电机	动力刀塔	动力刀塔
刀位数	Knife number	T	8/12	12	12
方刀座规格	Specification of square knife holder	mm	25	25	25
镗刀座规格	Boring tool holder specifications	mm	40	40	40
动力(刀塔)刀具规格	Power knife holder specifications	BMT	/	BMT55	BMT55
动力刀座最高转速	Power knife holder speed	rpm	/	4000	4000
尾座 tailstock					
尾座顶尖规格	Tailstock tip specifications	-	Mt5	Mt5	Mt5
尾座行程	Tail seat travel	mm	120/980	120/980	120/980
顶持工件长度	Top holding workpiece length	mm	320/1300	320/1300	320/1300
水箱 water tank					
切削水箱容量	Cutting water tank capacity	L	150	150	150
切削泵浦功率	Cutting pump power	kW	1	1	1
电力需求 Power demand					
电压	voltage	V	380±10%	380±10%	380±10%
功率	power	kVA	28	30	32
频率	frequency	HZ	50/60	50/60	50/60
机床尺寸 Machine Size					
长×宽×高	Length x width x height	cm	3350×1800×2000	3350×1800×2000	3350×1800×2000
重量	weight	kg	6500	6500	6500

TS-200SM/250SMY

卧式数控斜车/车铣复合

Horizontal CNC oblique turning/turning milling composite

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高刚性的机床结构
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结构紧凑
Direct programming

伺服电机 快启快停
Servo motor fast start and stop

95%↑
高传动效率
High transmission efficiency

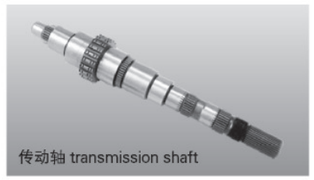
¥
低成本维护
Low cost maintenance

适用于多种应用
Suitable for various applications

530mm
最大加工长度
Maximum processing length

双主轴车铣复合机床可以一次加工多件产品，减少装夹时间，提高加工精度，避免了主位基准转换引起的误差累积，提高生产效率！

The dual spindle turning and milling composite machine tool can process multiple products at once, reducing clamping time and improving machining accuracy,Avoiding error accumulation caused by master position benchmark conversion and improving production efficiency!


传动轴 transmission shaft


活塞
piston

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TS-250SMY双轴技术规格参数

主轴 main shaft		单位/unit	TS-200SM	TS-250SMY
主轴鼻端形式(副主轴)	Spindle nose end form (secondary spindle)	–	A2-5（A2-5）	A2-8（A2-6）
主轴通孔直径(副主轴)	Main spindle through-hole diameter (secondary spindle)	mm	62(62)	87(72)
三爪卡盘夹持能力(副主轴)	Three jaw chuck clamping capacity (secondary spindle)	mm	6"/Ø160(6"/Ø160)	10"/Ø254(8"/Ø210)
拉杆动作形式	Rod action form	–	液压	液压
驱动系统（FANUC-TF）				
系统	system	–	新代22TB	FANUC-OI-TF Plus
主轴电机功率	Spindle motor power	KW	11/15	15/18.5
主轴最高转速(副主轴)	Maximum spindle speed (secondary spindle)	rpm	4500(5000)	3500(4500)
X轴伺服电机功率	X-axis servo motor power	kW	2.4	1.8
Z/Z1轴伺服电机功率	Z/Z1 axis servo motor power	kW	2.4	2.5
动力轴伺服电机功率	Power shaft servo motor power	kW	2.4	2.5
加工范围 machine range				
最大床身旋径	Maximum bed rotation diameter	mm	Φ450	Φ620
最大加工工件长度	Maximum length of processed workpiece	mm	400	530
最大加工工件直径	Maximum machining workpiece diameter	mm	Φ200	Φ460
X/Z轴 X/Z axis				
X轴行程	X-axis travel	mm	220	240
Z轴行程	Z-axis travel	mm	450/300	630/500
Y轴行程	Travel Y-axis	mm	/	100(±50)
X/Z/Y轴快移速率	X/Z-axis fast movement rate	m/ min	24/24	24/24/12

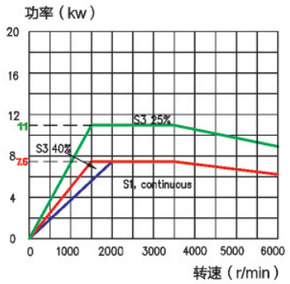
精度 accuracy		单位/unit	TS-200SM	TS-250SMY
定位精度	positioning accuracy	mm	±0.005	±0.005
重复定位精度	Repetitive positioning accuracy	mm	±0.003	±0.003
刀塔 Power knife tower				
中心高	Center height	mm	80	100
刀塔驱动形式	Knife tower drive form	–	动力电机	动力电机
刀位数	Knife number	T	12	12
方刀座规格	Specification of square knife holder	mm	20	25
镗刀座规格	Boring tool holder specifications	mm	32	32
动力(刀塔)刀具规格	Power knife holder specifications	–	BMT45	BMT55
动力刀座最高转速	Power knife holder speed	rpm	4000	4000
水箱 water tank				
切削水箱容量	Cutting water tank capacity	L	120	150
切削水水压力	Cutting water pressure	kW	1	1
电力需求 Power demand				
电压	voltage	V	380±10%	380±10%
功率	power	kVA	32	55
频率	frequency	HZ	50/60	50/60
机床尺寸 Machine Size				
长×宽×高	Length x width x height	cm	2100×1600×1800	3900×1700×2000
重量	weight	kg	4200	6500

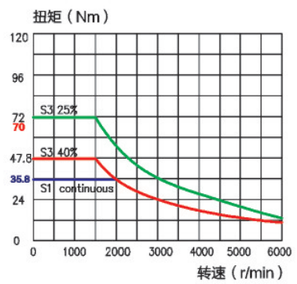
主轴驱动系统 SPINDLE DRIVE SYSTEM

强劲的主轴驱动系统提升TS机床的加工能力和效率

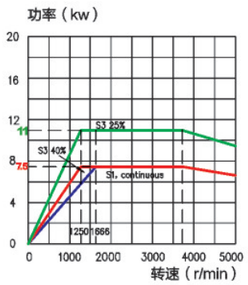
powerful spindle drive system enhances the processing capability and efficiency of ts machine tools

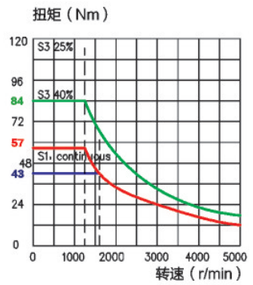
TS150P/150D/150M



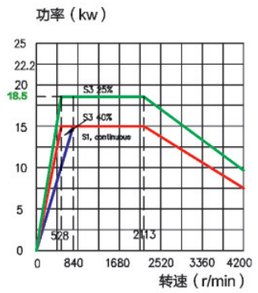


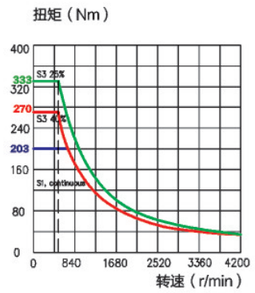
TS200/200M/200MY



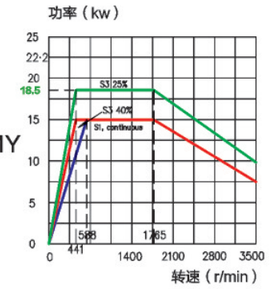


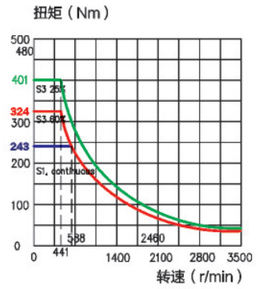
TS250/250M/250MY



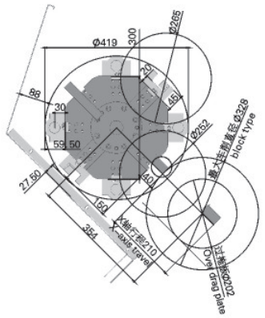


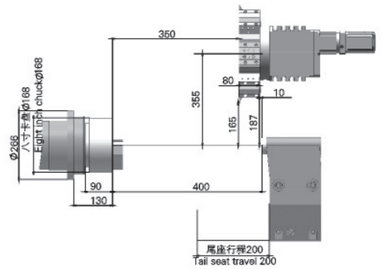
TS250L/250LM/250LMY



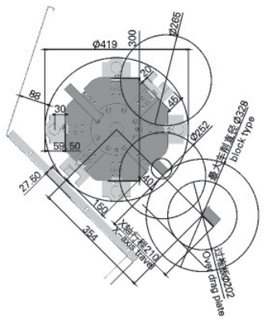


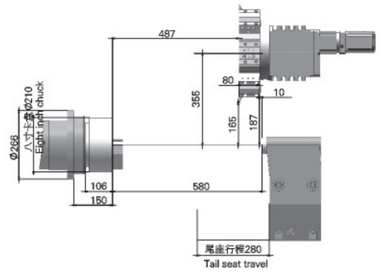
TS–150D干涉图、行程图 S–150D interferogram, stroke diagram



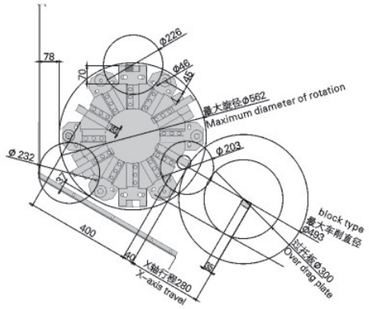


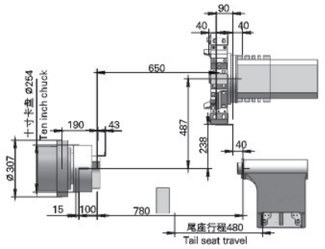
TS–200干涉图、行程图 TS–200 interferogram and stroke diagram



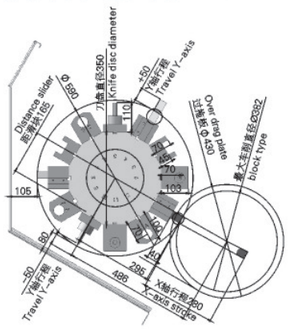


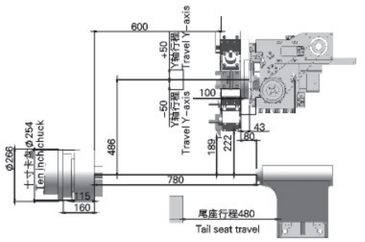
TS–250干涉图、行程图 TS–250 interferogram and stroke diagram





TS–250MY干涉图、行程图 TS–250MY interferogram and stroke diagram





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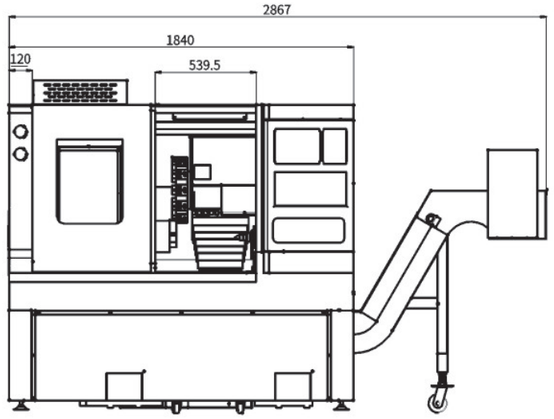
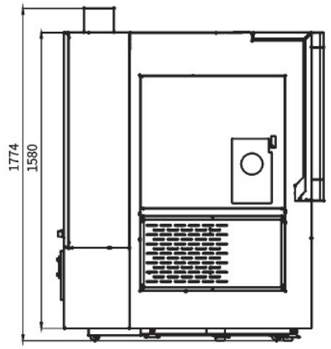
TS–150D外观尺寸图

单位：mm

TS–150D Appearance Dimensional Drawing

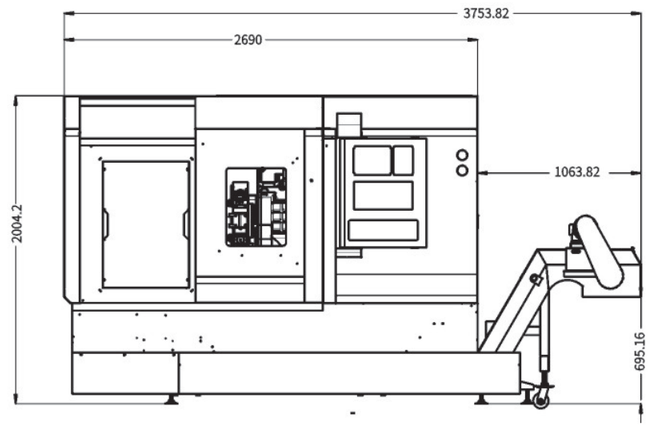


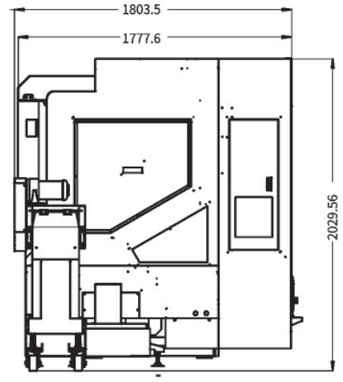


TS–250MY外观尺寸图

单位：mm

TS–250MY Appearance Dimensional Drawing

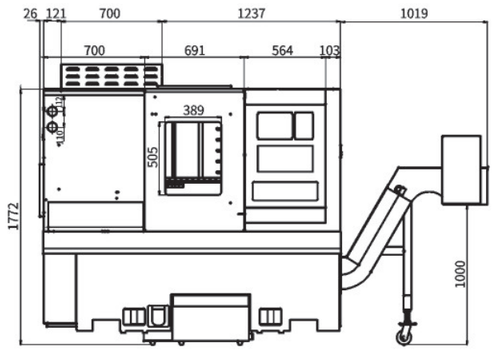


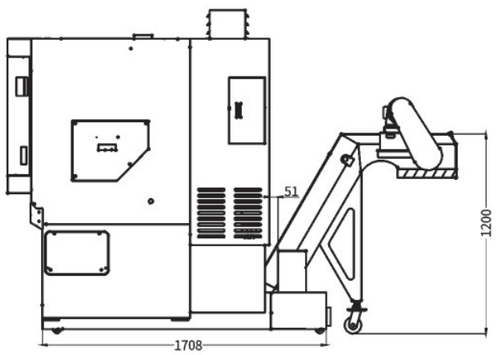


TS–200M、TS–200外观尺寸图

单位：mm

Appearance dimension diagram of TS–200M and TS–200





TS–250LM、TS–250L外观尺寸图

单位：mm

Appearance dimension diagram of TS–250LM and TS–250L