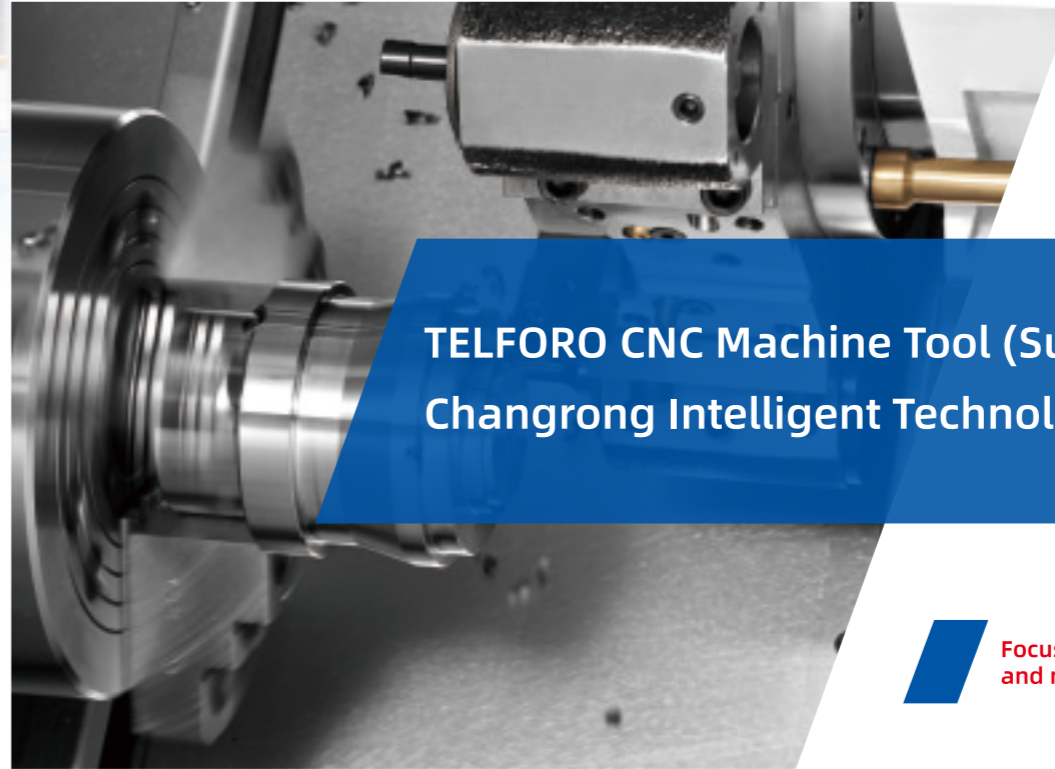


Globally trusted CNC machine tool manufacturer

Automotive industry Aviation parts Medical industry Machinery industry New energy industry



TELFORO CNC Machine Tool



TELFORO CNC Machine Tool (Suzhou) Co., Ltd
Changrong Intelligent Technology (Zhenjiang) Co., Ltd

Focus on the research and development and manufacturing of high-end machining centers

Marketing headquarters: Nanjing Hatai Machinery Co., Ltd

- Office Address: Room 1302, Building 3, Yuhua Living Room, No. 109, Software Avenue, Yuhuatai District, Nanjing, Jiangsu Province
- Telephone: 025-52382806 13386033758
- FAX: 025-52382601
- URL: www.njhightech.com
- Email: hightech_vmc@126.com

Taicang Plant: TELFORO CNC Machine Tool (Suzhou) Co., Ltd

- Address: Yinxi Technological Innovation Industrial Park, No. 518 Damuqiao Road, Shaxi Town, Taicang City, Jiangsu Province
- Telephone: 0512-53308151 13386033758
- Telephone: 13916699016
- URL: www.telford-sz.com
- Email: hightech_vmc@126.com

Zhenjiang Plant: Changrong Intelligent Technology (Zhenjiang) Co., Ltd

- Address: Building 5, Zhongnan Gaoke-Jurong Jinqi Science and Technology Innovation Park, No. 100, Fudi West Road, Economic Development Zone, Jurong City, Jiangsu Province
- Telephone: 17715229738 13386033758
- URL: www.telford-sz.com
- Email: hightech_vmc@126.com



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**CNC
PRECISION
LATHE**



COMPANY PROFILE

TELFORD brand inherits the rich experience and design philosophy accumulated by Taiwan's Delfu CNC machine tool for decades, and aims to further expand its marketing market in mainland China. Some mass-produced models are assembled and debugged by Taiwanese technical directors, and the assembly process is closely monitored and tested to ensure the reliability and stability of the machine tool in customer use. The Taiwan headquarters will focus on the research and development of new products and the trial production of new products, and pursue a leading role in the market. In the research and development process, it will constantly draw on the essence and inspiration of internationally renowned machine tool brands such as Japan.

The company's products have been introduced with advanced design concepts and manufacturing technologies from Europe, America, Japan, and other regions, combined with professional talents in their fields, to launch a full range of machining centers, high-speed drilling and tapping machines, gantry-type high-speed machining centers, and high-performance profile machining centers. The company's product customers have covered high-end industries such as automobile manufacturing, electronic communication industry, precision mold manufacturing, high-speed railway accessories, aerospace industry, etc.

With the increasing recognition of customers, we are driven to continuously develop new products that are more advanced and better meet customer needs; create greater value for customers, enhance their product competitiveness, and achieve win-win cooperation.



▲ TELFORD Changrong Factory

▶ TELFORD Suzhou Factory



Customer on-site selection

600+

20+

50+

60+

Years of Manufacturing Experience Exporting country Honor Witness



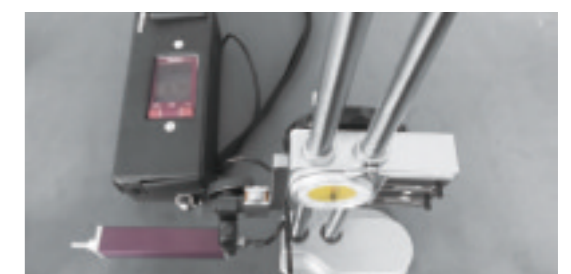
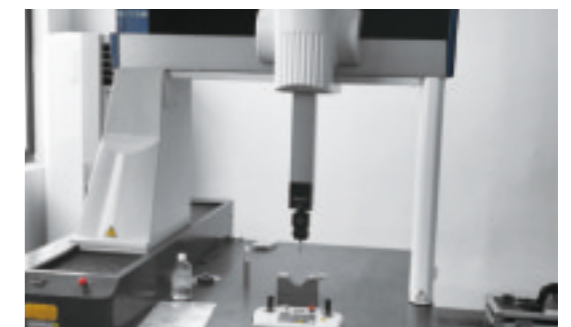
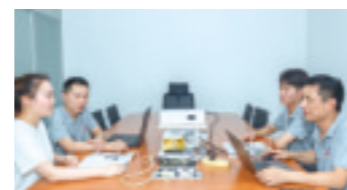
Precision Manufacturing Drives the Future

The company adheres to the business philosophy of "people-oriented, excellence, customer first". All products are dedicated with utmost sincerity. Technology is not a matter of concern, but rather a means to create infinite possibilities. Pursuing clarity, Tiefu will provide customers with quality products and services with extraordinary capabilities. We will work together with customers to contribute to the development of Chinese manufacturing.



Hardcore strength · Comprehensive guarantee

- Process certification:
ISO9001/AS9100 aviation quality system certification
- Detection system:
three-coordinate measuring instrument
+ laser scanner dual quality inspection barrier



Honor witness, quality inheritance

We have received positive recognition from all sectors of society. It is quality, details, seriousness, and persistence that make the brand more dynamic. Standards, responsibility, honor, and mission spur us to carry the past and create the future. One solid footprint after another inspires us. It is not only the faith we adhere to and the pursuit of our life, but also the bound to reach!

8 invention patents

6 national institutions have been awarded certificates

48 authorized patents and software copyrights



FORGE AHEAD AND THE ROAD OF GROWTH



High processing efficiency 20 years of industry experience Strong stability





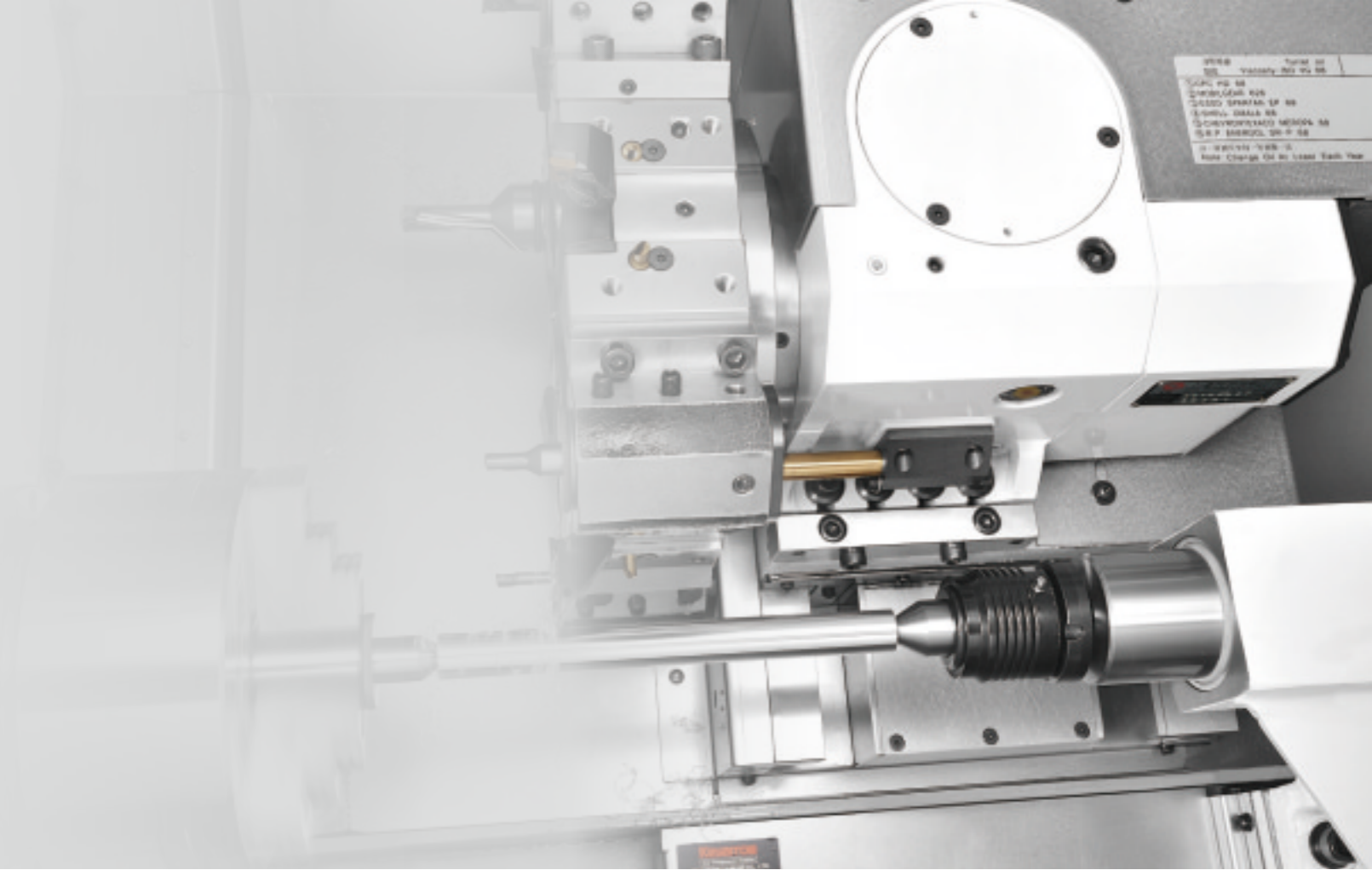
Continuous Innovation: New Products & New Technologies

Provide Customers with Ultimate Solutions

We constantly pursue the perfect unity of product quality.

We always adhere to design and apply new technologies and new processes.

We keep innovating to provide customers with the best and highly effective overall solutions for high-efficiency precision machining.



CNC lathe

FCL-280/280HT

Maximum swing over bed(mm)	500/550
Maximum machining length(mm)	460/520
Maximum machining diameter(mm)	280/350



CNC lathe

FCL-280S/280M

Maximum swing over bed(mm)	550/500
Maximum machining length(mm)	550/420
Maximum machining diameter(mm)	390/260



CNC lathe

FCL-310/3100/3150

Maximum swing over bed(mm)	650/680/680
Maximum machining length(mm)	630/1100/1500
Maximum machining diameter(mm)	480/500/500



CNC lathe

FBL-500/630/800

Maximum swing over bed(mm)	580/630/800
Maximum machining length(mm)	520/750/1500
Maximum machining diameter(mm)	520/600/600

Excellent cutting performance

+ **The powerful headstock is an integrally cast component**

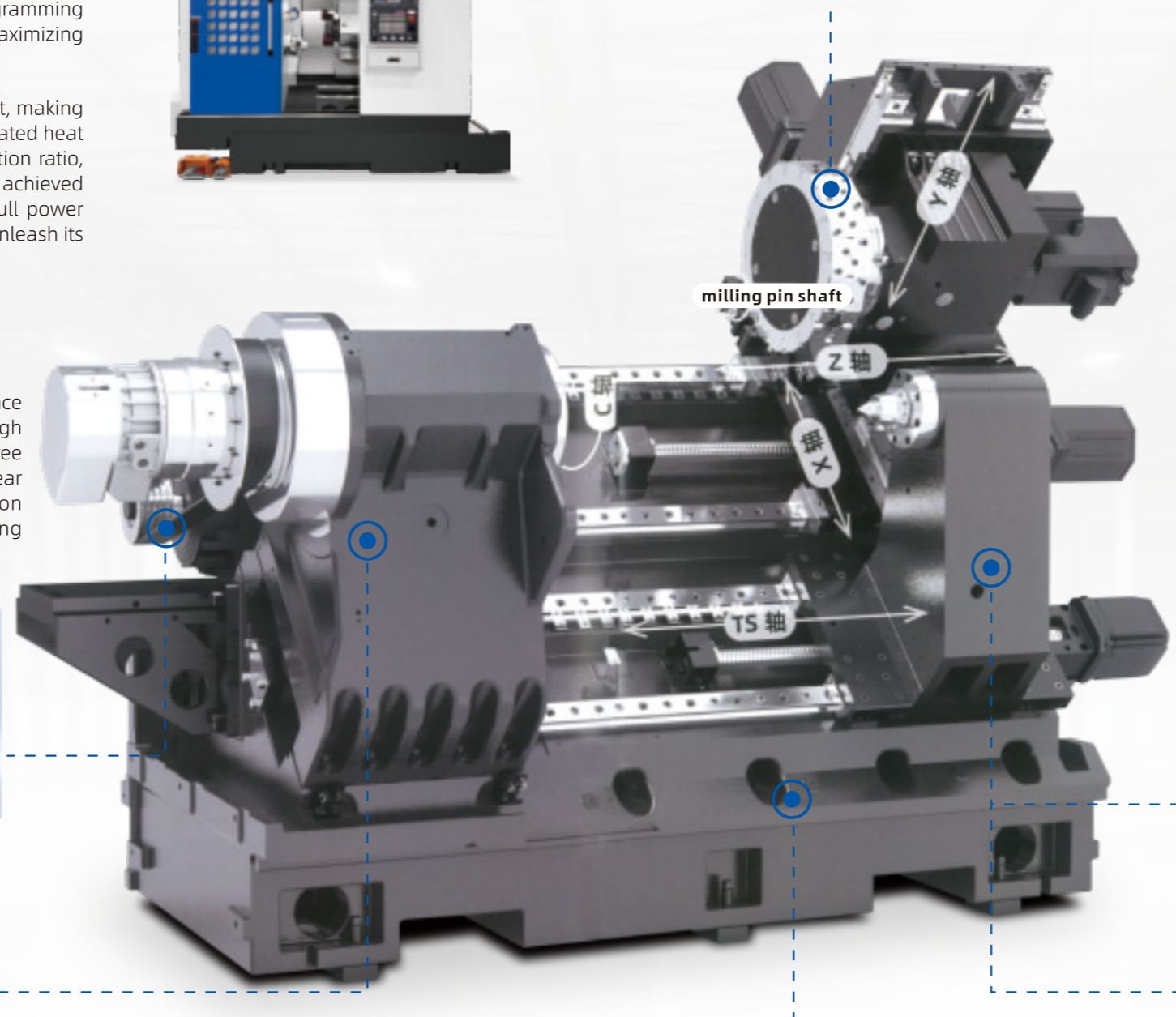
+ Standard rigid tapping function enables high-speed and precise tapping without the need for a floating tap holder. The programming setup is simple and the tapping depth is more accurate, maximizing productivity in tapping operations.

+ The spindle is driven by a dedicated high-performance V-belt, making maintenance easier and reducing the impact of motor-generated heat on spindle accuracy. By precisely adjusting the pulley reduction ratio, the maximum motor speed and maximum spindle speed are achieved simultaneously, thereby lowering the minimum speed for full power output and increasing torque. This allows the motor to fully unleash its potential and achieve maximum cutting capability.



> **Spindle motor**

The main drive system is powered by a high-performance FANUC/Siemens servo motor, which drives the spindle through a pair of gears. The front spindle support uses a set of three high-precision angular contact ball bearings, while the rear support employs a set of two large-bore high-precision angular contact ball bearings, meeting the load-bearing requirements for axial and radial cutting forces.



> **High precision**

Features such as larger spindle bearing inner diameters for its class and appropriately wide spacing between the lead screws and guide rails ensure the high precision and rigidity characteristics of this series of machine tools.

> **Integral Cast Iron Machine Bed**

The robust gray cast iron machine bed, made of HT300 material and formed in one-piece casting, achieves maximum stability and optimal machining results.

> **Tool Drive**

Standard rigid tapping function enables high-speed and precise tapping without the need for a floating tap holder. The programming setup is simple and the tapping depth is more accurate, maximizing productivity in tapping operations.

12-station BMT45 power turret

12-station BMT55/VDI40 power turret

All 12 stations can be equipped with power tool holders, and the maximum speed of the power tools can reach 3000/4000 rpm.



> **Y-Axis Configuration**

12-station BMT45 power turret, Y-axis stroke +35

12-station BMT45 power turret, Y-axis stroke +50

16-station BMT45 power turret, Y-axis stroke +45



> **CNC Tailstock**

The high-rigidity CNC tailstock driven by a servo motor significantly reduces non-machining time.

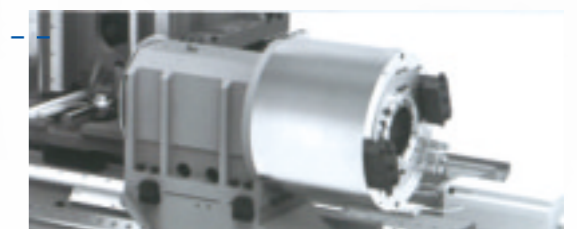
Fewer steps required to operate the tailstock
Setup time: reduced by 50%

Tailstock spindle operation time: reduced by 20%

Different thrust forces can be controlled using program commands



> **Counter Spindle**



PRECISION

Precise and Efficient, Intelligent Manufacturing for the Future

A New Generation of Best - Selling High - Productivity CNC Lathes Worldwide

Suitable for processing various metal materials, it is widely used in various industrial fields due to its characteristics of high efficiency and high precision.



FCL-310

Turret drive type	Hydraulic tool turret
Maximum Swing Over Bed (mm)	650
Maximum Machining Length (mm)	630
Maximum Machining Diameter (mm)	480

FCL-310MY C-axis support: M turning and milling

Turret drive type	power turret
Maximum Swing Over Bed (mm)	650
Maximum Machining Length (mm)	630
Maximum Machining Diameter (mm)	480

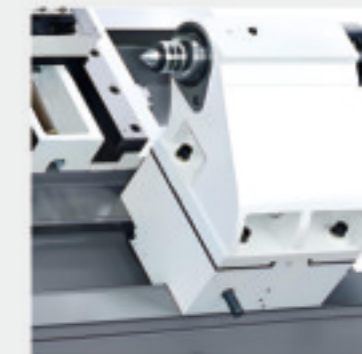
➤ Rigid Machine Body

- + The machine bed, headstock, saddle, slide, motor base, and bearing block of this machine are all cast from HT300. All castings undergo heat preservation for more than 26 hours followed by tempering and aging treatment, which helps eliminate internal stress and ensures the stability of the machine tool.
- + The integral bed structure provides excellent anti-vibration performance. During the machining process, it can significantly reduce vibration and natural frequency, improving the stability of machining accuracy and surface quality.
- + The X/Z axes adopt linear guideways, featuring high rigidity, low noise, and low friction. They enable rapid displacement and achieve optimal circular interpolation accuracy.



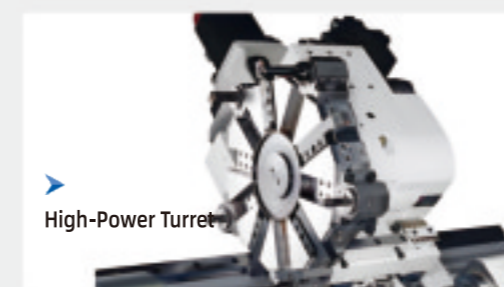
▲ High-Rigidity Spindle System

- + The spindle adopts a modular design, and the supporting bearings use a sleeve type, with both precision and service life superior to the general box-type method



◀ Tailstock System

- + The tailstock body has high rigidity and suppresses vibration.
- + It utilizes the programmable movement of the Z-axis clearance, and the tailstock displacement is automatically controlled by the program (optional for FBL-300).
- + A rotary mandrel can be optionally equipped to increase the load capacity.



➤ High-Power Turret

- + Equipped with a high-power hydraulic turret, it provides high-strength cutting load capacity. The internal components are robust and fully meet the stringent requirements for high performance.
- + A 12-station turret is available as an option.



◀ High-Torque Spindle Drive System

- + The spindle power is shifted through a two-stage gearbox, enabling high torque output even at a low speed of 250 RPM. It fully demonstrates high-torque cutting characteristics during heavy cutting operations.

- + Imported high-strength toothed belts are used for transmission, ensuring reliable torque transmission without slipping. The externally pushed transmission mechanism features low noise, minimal heat transfer, excellent heat dissipation, and easy maintenance and adjustment.

PRECISION

Precision Cutting, Intelligent Excellence

A New Generation of High-Precision Turning Centers

The integrally cast machine bed ensures high precision and long-term stability of the machine tool. It can automatically turn various rotating surfaces such as cylindrical surfaces, conical surfaces, and special-shaped surfaces. It is also capable of performing grooving, milling, reaming, and drilling operations, featuring high efficiency and strong applicability.

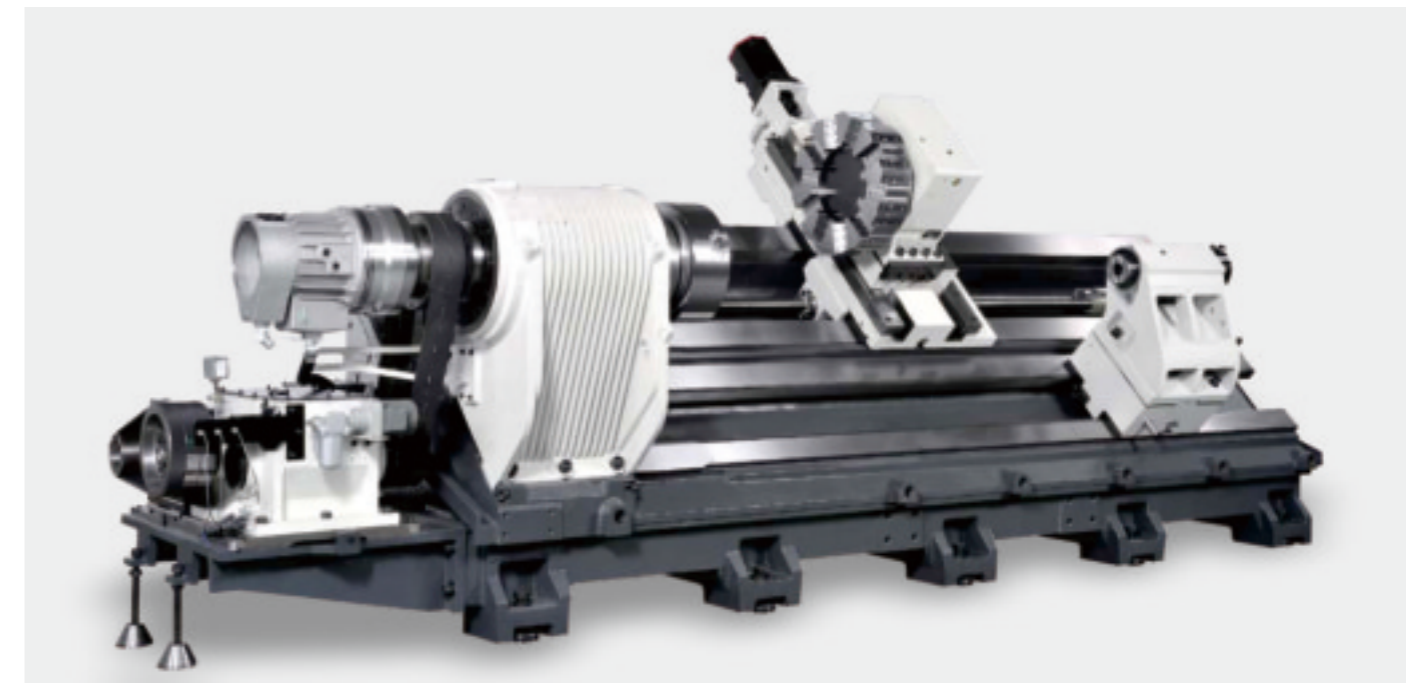


FBL-500

Chuck Size	10 inches
Maximum Swing Over Bed (mm)	580
Maximum Machining Length (mm)	520
Maximum Machining Diameter (mm)	Disc type 520/shaft type 380

FBL-630

Chuck Size	12 inches
Maximum Swing Over Bed (mm)	630
Maximum Machining Length (mm)	750
Maximum Machining Diameter (mm)	Disc type 600

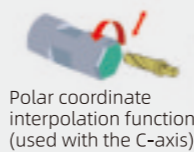


FANUC

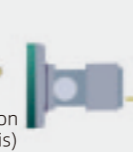


Cylindrical interpolation function

SIEMENS



Polar coordinate interpolation function (used with the C-axis)



Manual Guidei (optional) can provide conversational editing functions and perform 3D machining simulation.

Controller Configuration

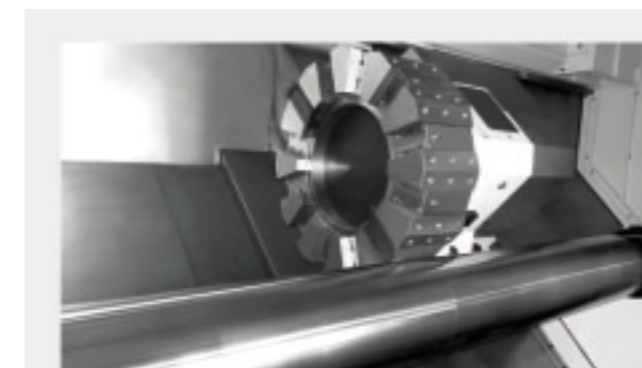
The controller is equipped with a 10.4" large screen, making operation more convenient. It can also be optionally configured with the SHOP TURN function, providing a fully graphical operating environment. Operators can complete machining programs without using G-codes at all.



Dual-graphic dynamic simulation

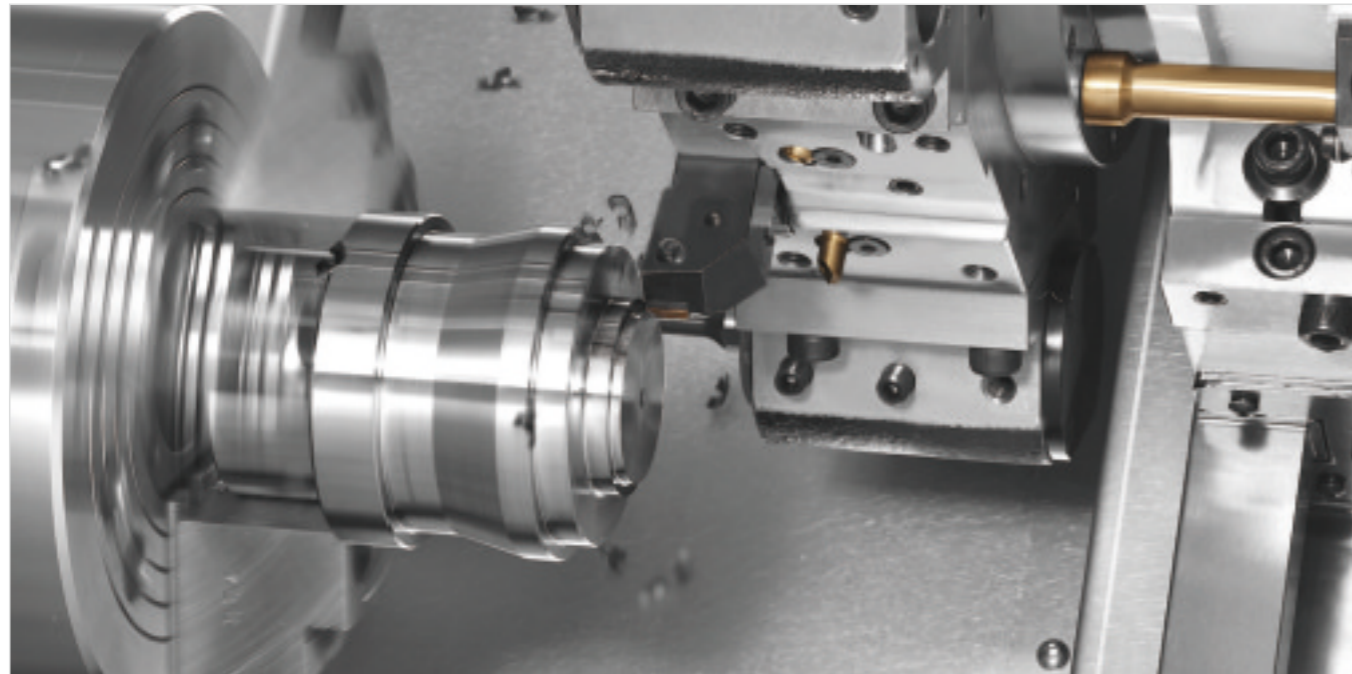
3D finished product simulation (optional)

3D cross-sectional viewing function (optional)



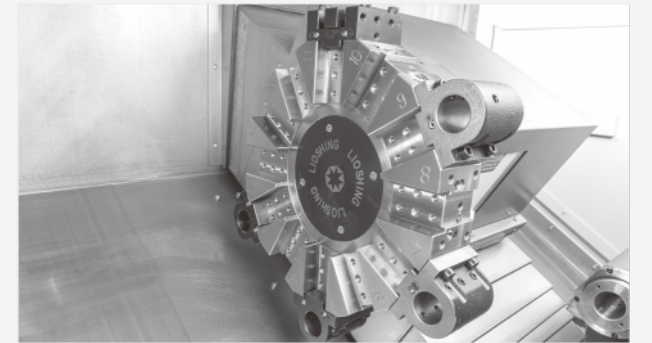
Machine Tool Characteristics

- + It is a large-scale heavy-duty machine tool with hard rails, capable of low-speed and heavy cutting for large-diameter workpieces.
- + Equipped with the latest FANUC Oi control system, it comes with a color LCD screen as standard, featuring high-speed analysis capability and excellent operation functions, presenting a perfect new realm of machining.
- + High-rigidity square rails, with sliding surfaces processed through professional scraping procedures and precise oil guide groove design, achieving excellent transmission efficiency.
- + The machine body adopts a 45° inclined-back integrated box structure, with a low center of gravity and stable precision.

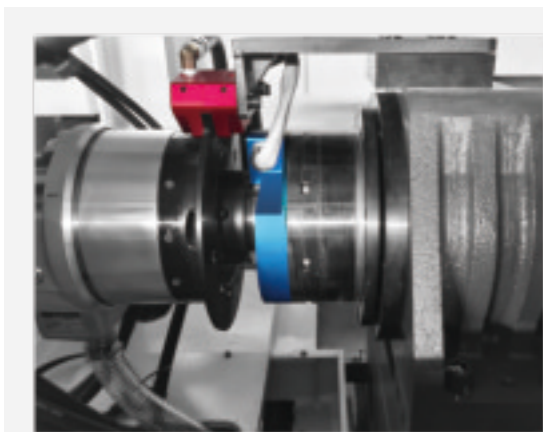


► High-Speed Servo Turret

- + The turret is equipped with a 12-station BMT-type power turret, and each tool position can be installed with a power tool.
- + The rotation of the turret is driven by a servo motor, with hydraulic locking, and tool changing adopts a non-lifting structure.
- + The maximum milling speed can reach 4000 rpm.
- + The power rotating shaft is driven by a servo spindle motor.



» Structural Features



◀ High - Rigidity Precision Motorized Spindle

- + Adopt internationally renowned brand spindle bearings to make the spindle have unparalleled rotational accuracy, providing guarantee for high - precision machining.
- + Adopt large - bearing - diameter ball roller bearings. The bearing arrangement and preload are optimized to ensure the best spindle rigidity.
- + Built - in permanent magnet synchronous motor, which is particularly outstanding in low - speed and high - torque, high - speed and high - precision, fast start - stop, precise control, and ultra - low vibration.
- + Air curtain sealing. Different front box structures are designed to apply different driving forms to meet different needs.
- + The spindle adopts a maintenance - free grease lubrication structure, with low operating temperature rise and maintenance - free operation throughout its service life.

◀ High - Precision Ball Screw / Linear Guide Rail

- + Adopt high - quality heavy - duty extended slider ball guides from Japan's THK, with high rigidity and low installation design, providing optimized anti - disturbance performance and rigidity, meeting heavy - load cutting capacity and achieving longer machine service life.
- + Strict assembly requirements: The installation reference surface of the slider guide rail is straight, and the parallelism is $\leq 3\mu$. The guide rail installation requirement is within 5μ , which can achieve better part machining accuracy.



► Can be equipped with an enhanced tailstock

The tailstock body adopts a heavy-duty linear guide dust-proof structure and can be optionally controlled by servo programming, achieving a perfect combination of high rigidity and flexibility.



► Precision Lead Screw

Adopts Japanese THK C3-class precision double-nut ball screw with pre-stretching treatment, ensuring higher transmission accuracy and precision stability of the machine tool.



◀ Oil Cooler

- + For better thermal stability control to address the dimensional instability caused by heat sources during machine tool processing, the machine tool is equipped with a spindle cooling device.
- + The oil cooler can timely cool the heat generated by the spindle during rotation through the spindle cooling device, effectively controlling temperature rise, suppressing thermal deformation of the spindle box, and achieving better machining stability.



► Machining stability.

- + It uses a silent working motor with precision accessories.
- + The oil temperature in the hydraulic tank can be effectively controlled to achieve better machining stability.



◀ Water Tank Chip Conveyor

- + A universal water tank chip conveyor is provided as standard. Rear-side discharge can be achieved without adding any accessories, making site layout more convenient.
- + This feature is particularly prominent in production line layouts or when the site space is limited.

► Automatic Centralized Lubrication

- + The lubrication of the machine tool's lead screws and guide rails is completed by an automatic centralized lubrication device.
- + It can automatically complete oil injection to lubrication points regularly and quantitatively.



Main Technical Parameters Table of CNC Lathe

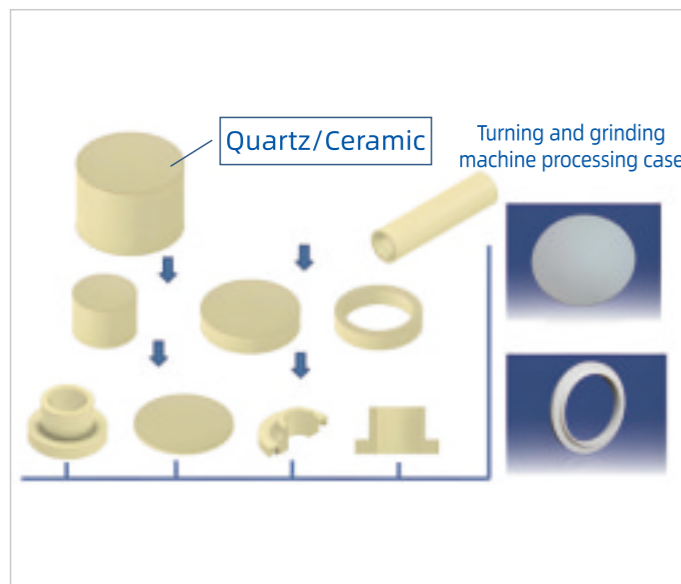
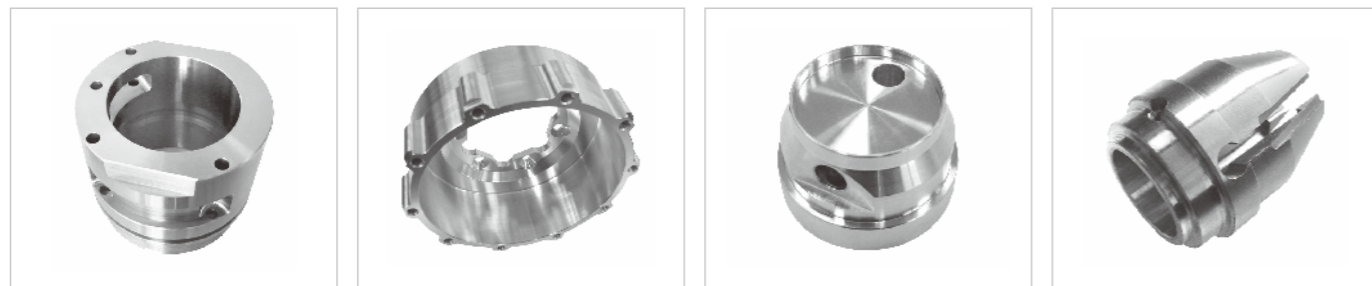
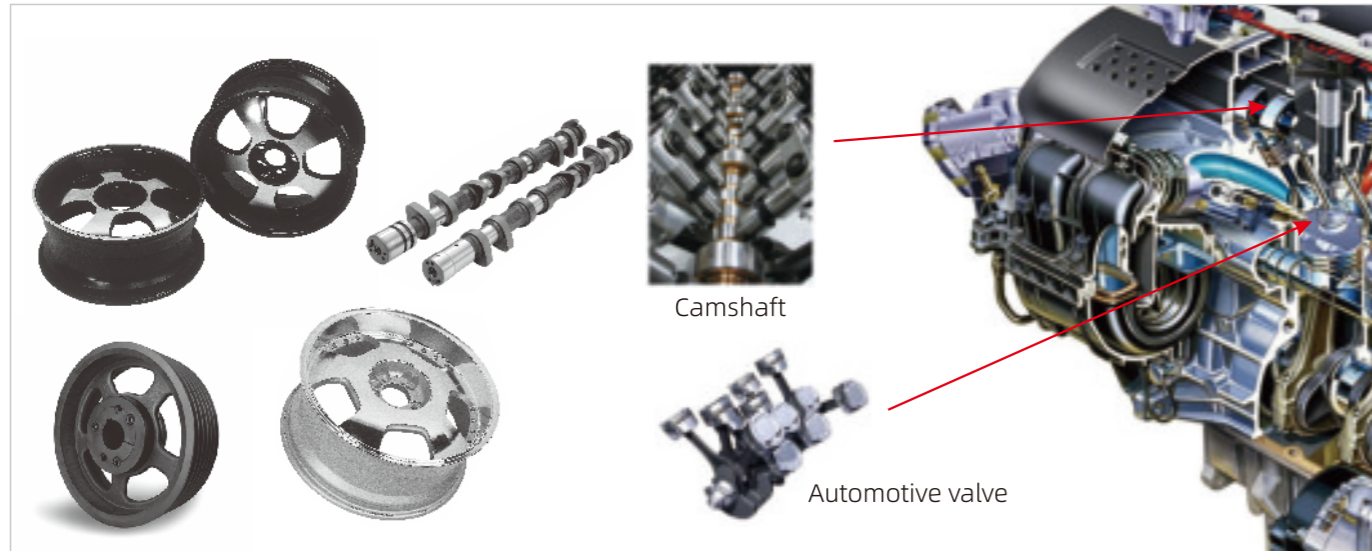
Model	Unit	FCL-160A/160	FCL-280S	FCL-280	FCL-280HT	FCL-280M FCL-280MY Vertical type	FCL-280MY Interpolation type	FCL-310 FCL-3100 FCL-3150	FCL-310MY FCL-3100MY FCL-3150MY	FBL-500	FBL-630 FBL-630L	FBL-800 FBL-800L1000 FBL-800L1500 FBL-800L2000	FBL-1000/1M FBL-1000/2M FBL-1000/3M FBL-1000/4M
Machining range													
Maximum swing over bed	mm	420	550	500	550	500	550	650/680/680	650/680/680	580	630	800	1200
Maximum machining length	mm	350	550	460	520	420	540	630/1100/1500	630/1100/1500	520	750/1000	600/1000/1500/2000	1000/2000/3000/4000
Maximum machining diameter	mm	155/200	390	280	350	260	310	480/500/500	480/500/500	Plate category520/Shaft parts380	Plate category600	Plate category600/Shaft parts500	Plate category1100/Shaft parts1000
Spindle													
Spindle nose type	-	A2-5	A2-6	A2-6	A2-6	A2-6	A2-6	A2-8	A2-8	A2-8	A2-8	A2-8/A2-8/A2-11/A2-15	A2-15 (OptionalA2-20)
Spindle bore diameter	mm	Φ56	Φ65	Φ61	Φ62	Φ61	Φ65	Φ87	Φ87	Φ87	Φ93	Φ91/105/105/134	Φ134/Φ134/Φ134/Φ181
3-jaw clamping capacity	-	6"	8"	8"	8"	8"	8"	10"	10"	10"	12"	12"/12"/15"/15"	18" hydraulic / 24" hydraulic / 32" manual / 40" manual
Spindle motor power	kw	5.5/7.5	7.5/11	7.5/11	11/15	11/15	11/15	15/18.5	15/18.5	15/18.5	15/18.5	15/18.5 15./18.5 18.5/22 22/26	30/37 37/45
Maximum spindle speed	rpm	5000	4500	4500	4500	4500	4500	3500	3500	2500	2500	2500/2500/1500/1400	1000/500
X/Y/Z Axis													
X-axis stroke	mm	460/190	230	200	190	200	230	280	280	300	320	330/350/350/350	580
Z-axis stroke	mm	400/380	630	480	580	450/400	630	650/1120/1600	650/1120/1600	530	850/1080	850/1120/1600/2100	1080/2100/3200/4200
X/Z-axis rapid traverse	m/min	30	30	30	30	30	30	X18/Z24	X18/Z24	X12/Z16	X12/Z16	X12/Z16	X10/Z12
Y-Axis	-	/	/	/	/	-/+50	±70	/	±50	/	/	/	/
Turret													
Turret drive type	-	Comb-type Turret / Turret	Hydraulic Turret	Hydraulic Turret	Servo Turret	Power Turret	Power Turret	Hydraulic Turret	Power Turret	Hydraulic Turret	Hydraulic Turret	Hydraulic Turret	Hydraulic Turret
Tool station count	unit	5/12	12	8/12	8/12	12	12	12	12	12	12	12	12
Square tool post specification	mm	20	25	25/20	25/20	25	25	25	25	25	25	32	32
Boring tool holder specification	mm	20	32	40/32	40/32	32	40	32/40	32/40	40	40	50	60
Tailstock													
Core specification	-	-/MT4	MT4	MT4	MT4	MT4	MT4	MT5	MT5	MT5	MT6	MT6	MT6
Top center diameter	mm	-/70	70	70	70	70	70	80	80	90	110	170	170
Tailstock travel	mm	-/260	500	380	440	350/300	500	650/1020/1500	550/1020/1500	400	600/800	650/920/1400/1900	900/1900/2900/3900
Tank													
Cutting water tank capacity	L	80	150	150	150	150	150	200/250/300	200/250/300	240	240	240	300
Cutting water pressure	kg	0.8	2.3	2.3	2.3	2.3	2.3	3/2.3/2.3	3/2.3/2.3	2.3	2.3	2.3	3
Power requirement													
Voltage	V	380±10%	380±10%	380±10%	380±10%	380±10%	380±10%	380±10%	380±10%	380±10%	380±10%	380±10%	380±10%
Power	kw	15	22	22	22	22	22	25/35/35	25/35/35	35	35	35	35
Frequency	HZ	50/60	50/60	50/60	50/60	50/60	50/60	50	50	50	50	50	50
Machine dimensions													
Length x Width x Height	mm	2210x1550x1700	2610x1775x1750	2070x1580x1750	2318x1585x1770	2070x1580x1750	3250x2050x2250	2800 × 1800 × 1960 3360 × 1830 × 1960 3860 × 1830 × 1960	2800 × 1800 × 2100 3360 × 1830 × 2100 3860 × 1830 × 2100	2590x1508x1800	3460 × 2020 × 2040 3760 × 2020 × 2040	3250 × 2050 × 2250 3380 × 2050 × 2250 3550 × 2050 × 2250 3850 × 2050 × 2250	5450 × 2310 × 2450 5580 × 2310 × 2450 5850 × 2310 × 2450 6250 × 2310 × 2450
Weight	kg	2500	3100	3100	4000	3100	4500	4800/6500/7500	5000/6500/7500	5800	7500/9000	8000/8800/9600/10500	13000/17000/21000/25000

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PRECISION

Technology Empowers, Examples Demonstrate

Batch processing of precision shafts and flanges, with 0.01mm precision easily controlled! With 20 years of technical accumulation, we provide you with efficient and stable horizontal lathe solutions. Customers in the aerospace/automotive industries achieve efficiency improvement and renewal – Witness our ingenuity in the details!



AUTOMATION

Automation cases/Machine tool networking/Data collection



PARTNERS

Cooperative Customers

Domestic Trade Cooperative Customers



Commissioning and Handover Case



Foreign Business Cooperation Inspection and Talks



CRAFTSMANSHIP SERVICE

Craftsmanship Service: Helping Enterprises Soar

With "Customer Worry-Free" as the core, we have built a full-life-cycle service system covering pre-sales consultation, in-sales support, and after-sales guarantee. The professional team provides 24-hour rapid response and escorts you with over 20 years of industry experience. Choosing us is not only choosing products, but also choosing a commitment of lifelong companionship!

We adhere to the service principle of "Making Customers Worry-Free" to enable customers to enjoy professional and high-quality services at all times.

24_H Timely Response

30_{MIN} Provide Solutions Within

24_H On-site Service

INTEGRITY

QUALITY · SERVICE · CREATION

Efficient · High-Quality · Service · Dedicated



Business Team

Technical Team

Foreign Trade Operation Area

Foreign Trade Operation Area