



# DEPU GROUP

Focus On High-end Machining Center, Excent Service For The Whole World Manufacturing

[www.depu-group.com](http://www.depu-group.com)  
[www.depu.com](http://www.depu.com)



## Corporate Culture

DEPU pursues a down-to-earth and hardworking engineer culture:

<b>DEPU's mission</b>	<b>"Connect The World With Intelligent Manufacturing"</b>
<b>DEPU's vision</b>	<b>"To Become The World's Leading Manufacturer Of CNC Machining Center"</b>
<b>DEPU's value</b>	<b>"Customer-centric, Striver-oriented, Long-term Hard Work"</b>

In the future, DEPU CNC will continue to polish the product system with the craftsmanship spirit.  
Provide global customers with high-quality advanced manufacturing solutions with the "customer-centric" service system.  
Strive to become the world's leading CNC machining center company and contribute wisdom and strength to the intelligentization of the global manufacturing industry.

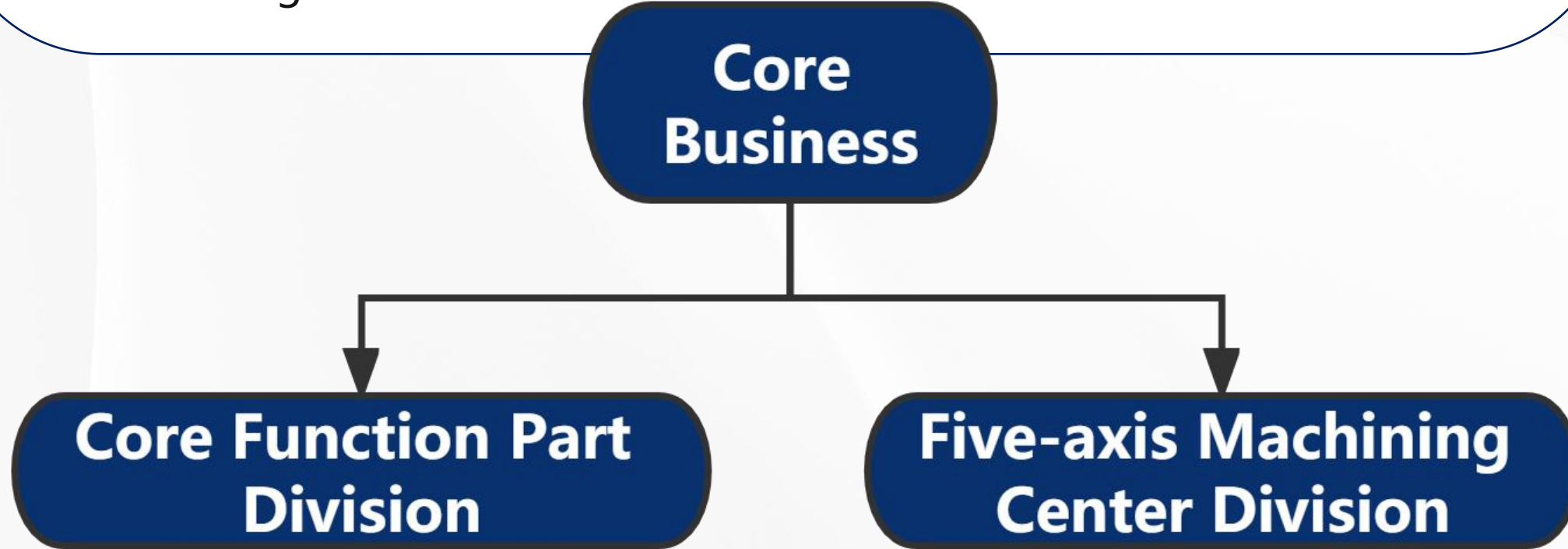
# Group Introduction



DEPU has strong research and development capability, the core team has been researching in the field of R&D and manufacturing of high-end machining center for many years, especially pays attention to the independent research and development of main components: Turntable, spindle head, position detection module, optical probe, etc. DEPU has always been focusing on the localization layout of these main components.

DEPU has a good reputation in the five-axis machining center and related core part industry, and has been highly recognized by many customers of the world's top 500 and listed companies at domestic and oversea markets.

Depp pays attention to industry-university-research cooperation, and has established joint laboratories and research centers with many companies, universities and research institutes at domestic and oversea areas to jointly research and develop higher technologies and practical applications of five-axis machining centers.



DEPU group has an international layout, headquarter in Shenzhen, branches in Suzhou, Nanjing and Hong Kong, the R&D and sales center in Germany

The group has two core business divisions, operating services from core function parts to complete machining center, covering multiple industries

# Group Introduction-Development History



2010

DEPU Group was established, mainly engaged in the production, R&D and sales of turntables



2011

Nanjing office was established to further develop the domestic market



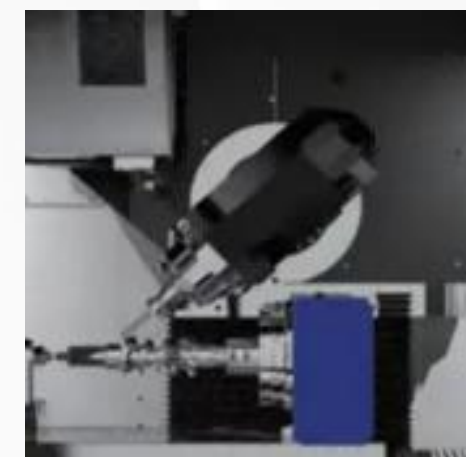
2014

Hong Kong company was established to enter the overseas market



2017

Focus on R&D, production and sales of core components: swing head, time-grating, probe, etc.



2019

Five-axis machining center had become a strategic goal, focusing on developing overseas markets



2021

The headquarter was officially established in Shenzhen; Suzhou office was established; Establish sales network in Pearl River Delta and Yangtze River Delta



2022

Exclusive strategic cooperation with Germany's MAIROTEC GmbH to dig deeper into the European market



**rexroth**  
A Bosch Company

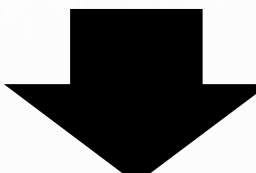
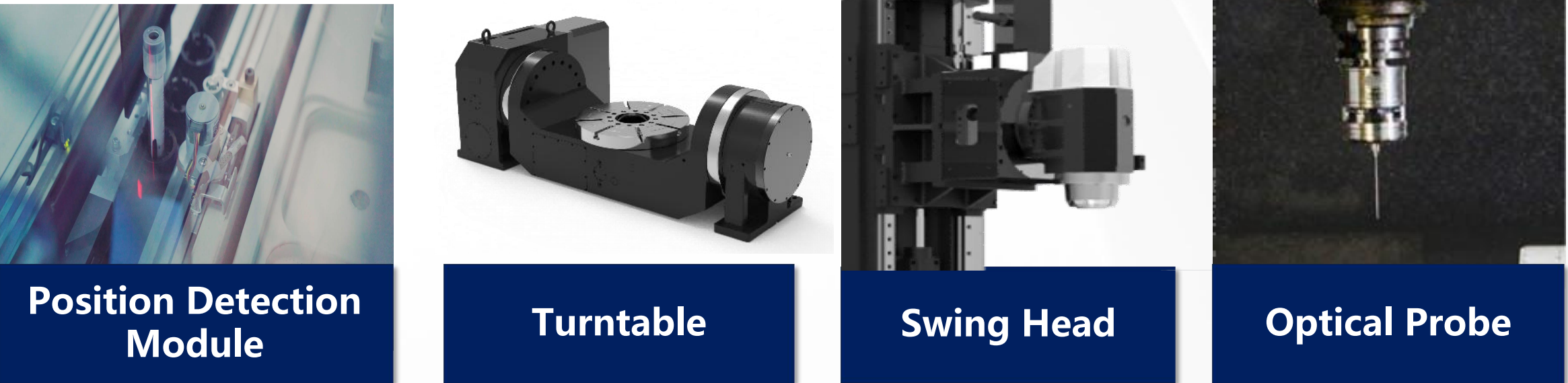
**KUKA**

**Big Event:** In 2021, DEPU Group's high-end five-axis CNC machining centers were mass-produced. DEPU obtained orders from high-quality customers such as Bosch Rexroth and KUKA

# R&D Capability-Overall Introduction

The company independently develops core components such as turntables, swing heads, position detection modules and optical probes, focusing on the localization of these core components. And according to the needs of downstream customers, we have designed and developed G series, V series and U series machining centers to meet their various needs. DEPU realizes the integration of the supply chain from parts to complete machines.

## Product Advantages



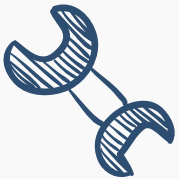
**Five-axis Machining Center**



High Stability



High Precision

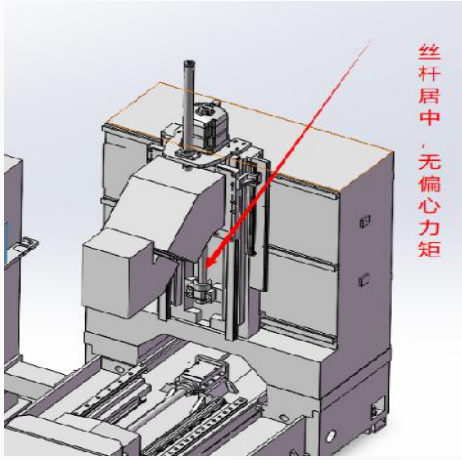


High Efficiency

G series positioning accuracy/repeat positioning accuracy data (ISO230-2) has reached the standard of international high-precision machining centers

V series is put into actual production at the customers' side, and the processing efficiency of shaft parts is better than international first-line brands.

U series is operated by the German R&D team, developed/tested/produced by DEPU. U series adopts an optimized mechanical structure design with the Z-axis screw centered to avoid the generation of eccentric torque and enhance the overall rigidity and stability



All DEPU products (except the U series, not mass-produced) have passed the European CE certification standard and have been sold in the European market



# R&D Capability-Southern Institute of Industrial Technology



- ✓ Established a high-end CNC machining center technology joint laboratory with the SIIT to optimize the mathematical algorithm of the time grid encoder and specialize in high-precision position detection
- ✓ Carry out joint research on "Industrial Manufacturing Equipment Sensor and Data Analysis Technology", "High-precision Displacement and Positioning Technology and Data Analysis" with Southern University of Science and Technology



\*SIIT is a research institution jointly established by Shenzhen Government and Southern University of Science and Technology



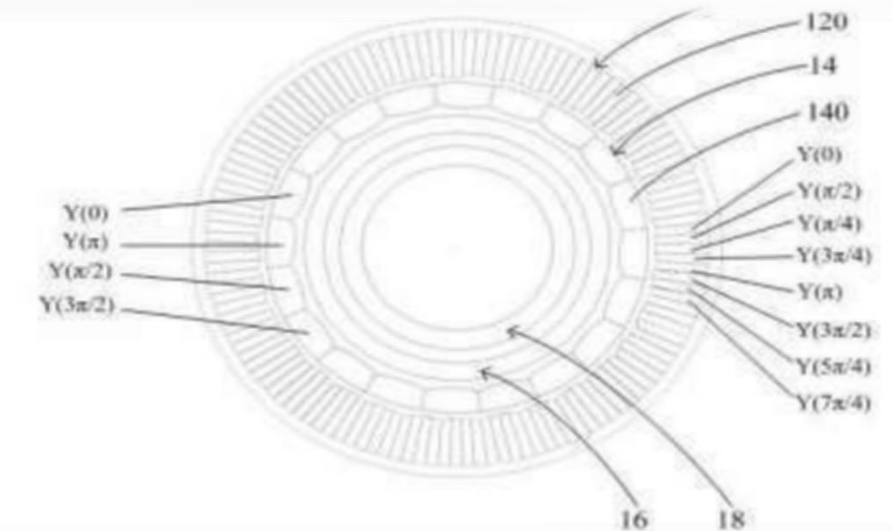
## Zhaohua Xu Project Leader

- ✓ Was engineer at FOXCONN, EMBEST, Tiansheng.
- ✓ 12 years +FPGA development experience, dedicated to the development and application of software and hardware for the control system of machining centers



## Huaiyu Ye Project Leader

- ✓ Associate Professor at SUST
- ✓ Served as a reviewer for more than 20 famous journals including IEEE EDL,IEEE TED,Nanoscale, IJH&MT, and Chinese Academy of Engineering Engineering



# R&D Capability-Collage of Mechanical Engineering, ChongQing University

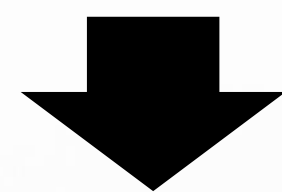


- ✓ Established a joint research center with the **CMECU** to carry out in-depth research in the fields of core transmission device and machine tool manufacturing
- ✓ The gear transmission, the swing head and the turntable, are fully independently designed and developed . From theoretical design to manufacturing technology, Depp has mastered all core technologies



**Yonghong Chen Leader**

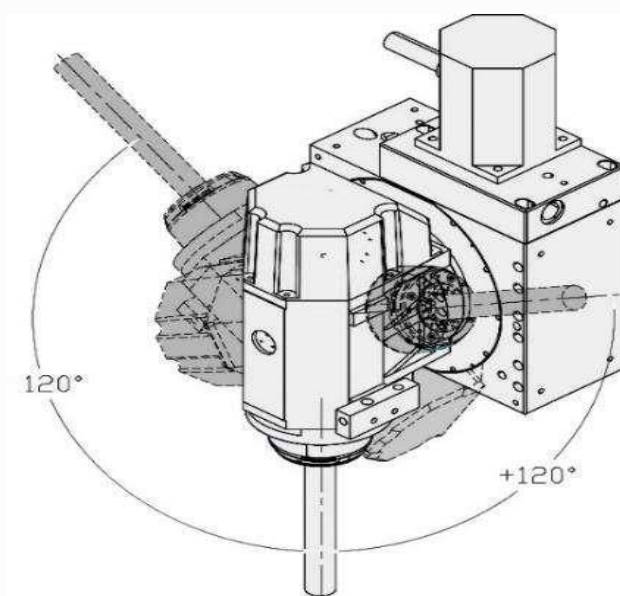
- ✓ Associate Professor/Doctoral Supervisor, Chongqing University
- ✓ Research Leader of National Precision Transmission Laboratory
- ✓ Has rich experience in gear drive and related transmission fields, presided over more than 20 various scientific research projects



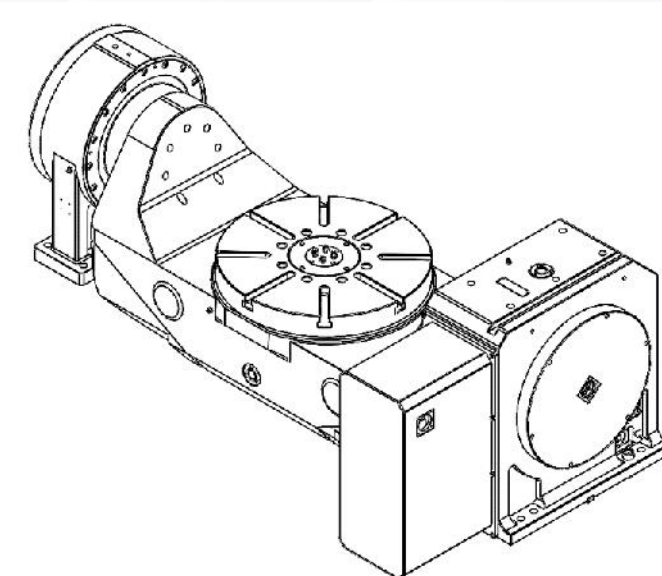
Joint and independent research with DEPU



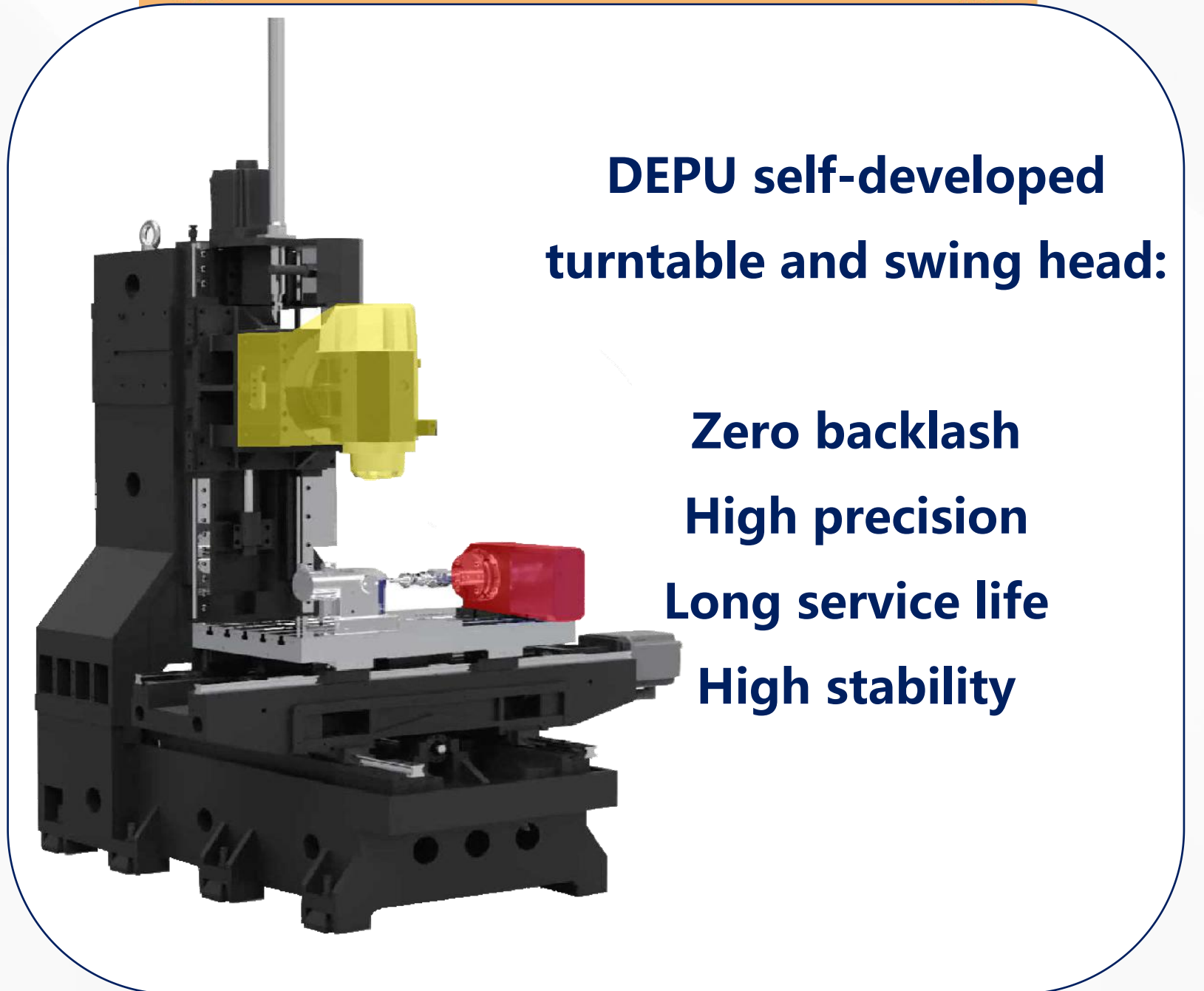
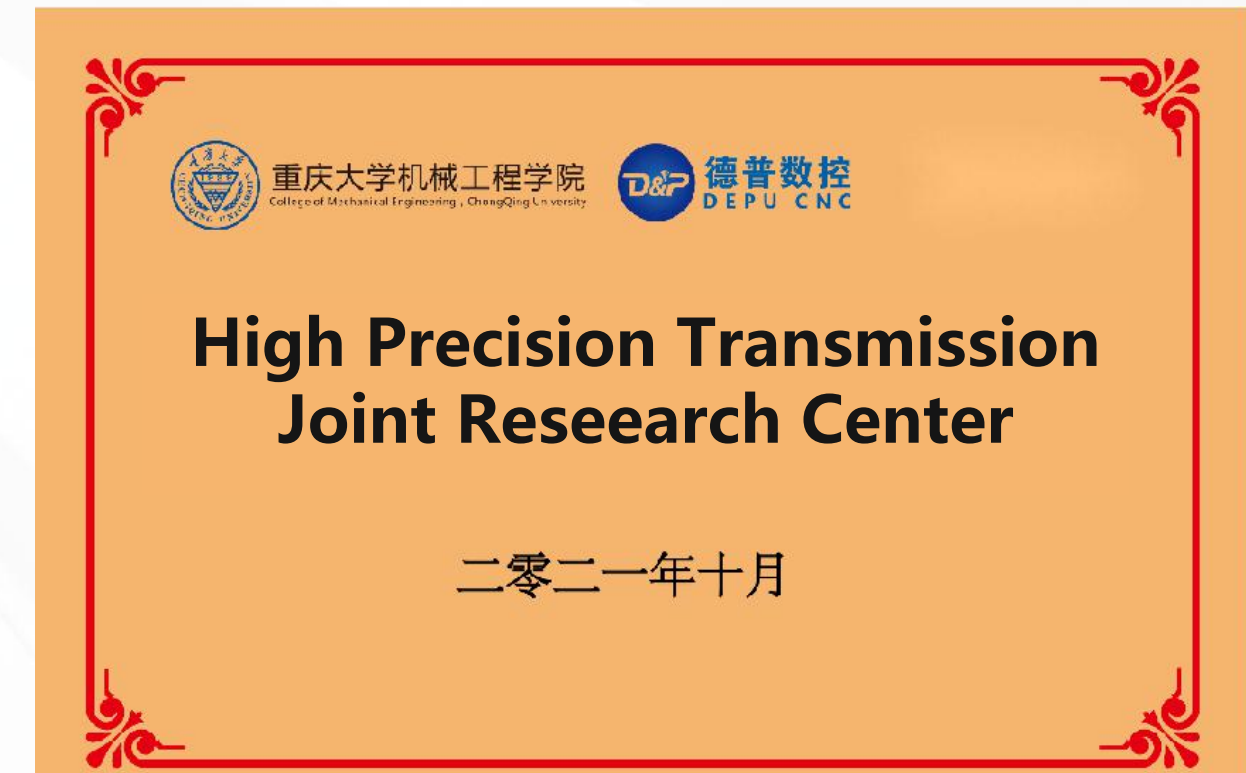
**Roller Cam Gear**



**Swing Head**



**Turntable**



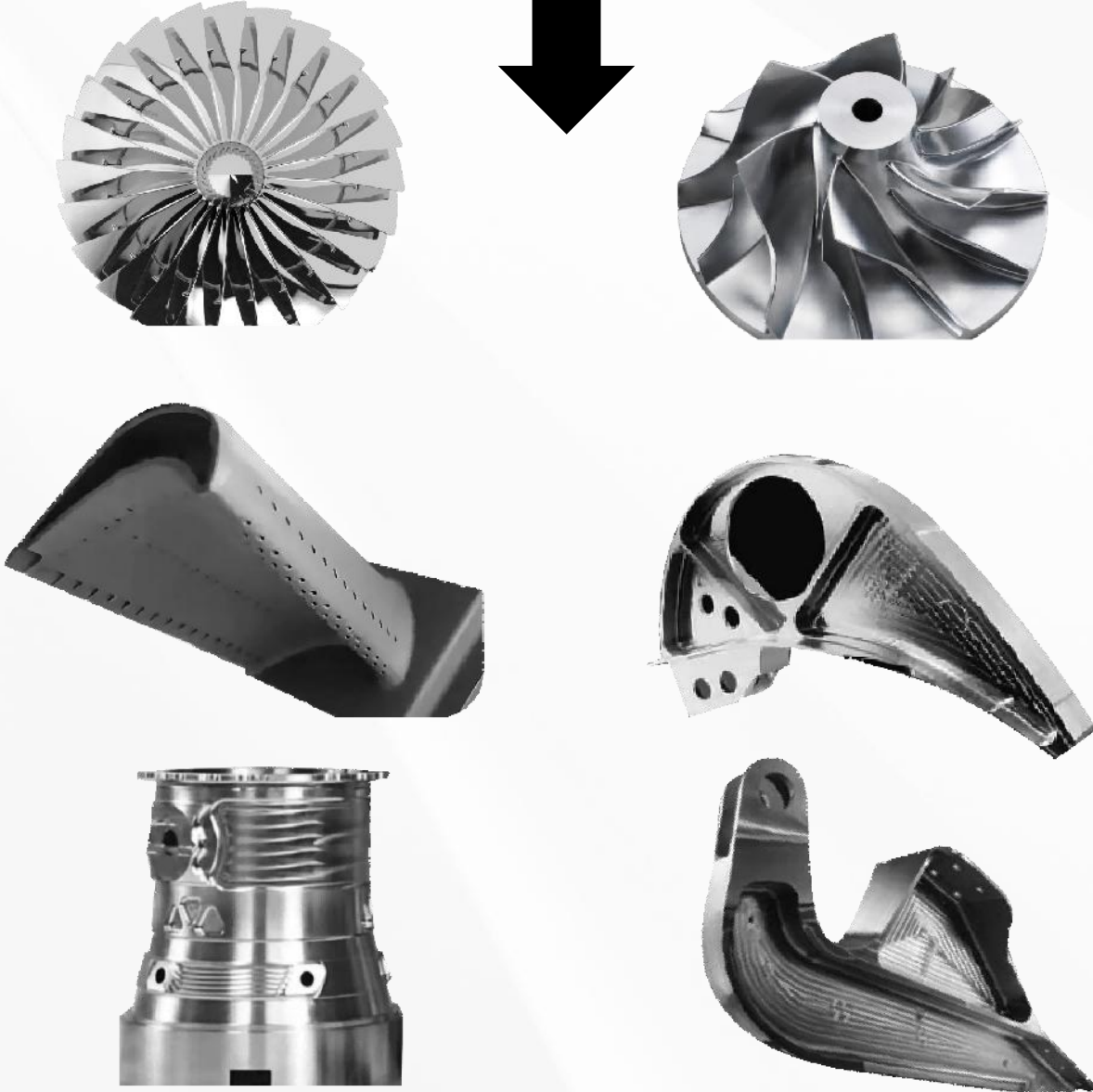
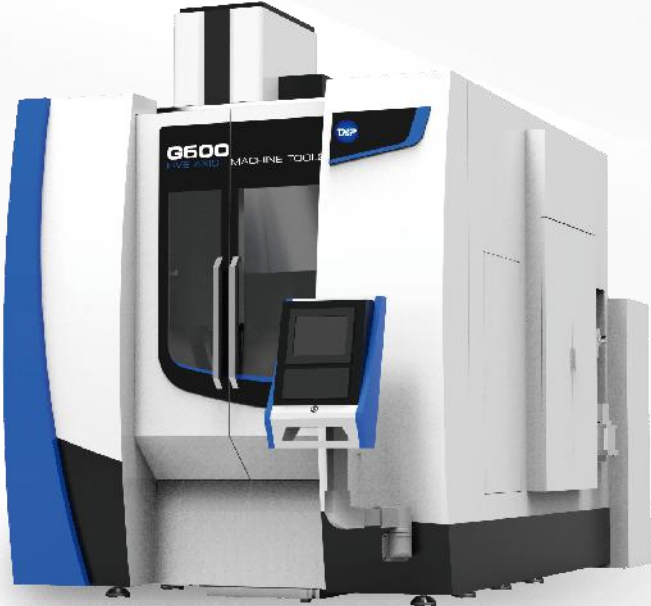
**DEPU self-developed turntable and swing head:**

- Zero backlash**
- High precision**
- Long service life**
- High stability**

# R&D Capability-Space Institute of Southern China



- ✓ Became a research and development strategic partner with the **SISC**, and jointly develop more advanced processing technologies and solutions for aerospace equipment by five-axis machining centers



\*Use DEPU five-axis machining center to process difficult-to-machine and non-standard parts in the aerospace manufacturing industry; and jointly explore more advanced processing solutions



# R&D Capability-German Partner Introduction



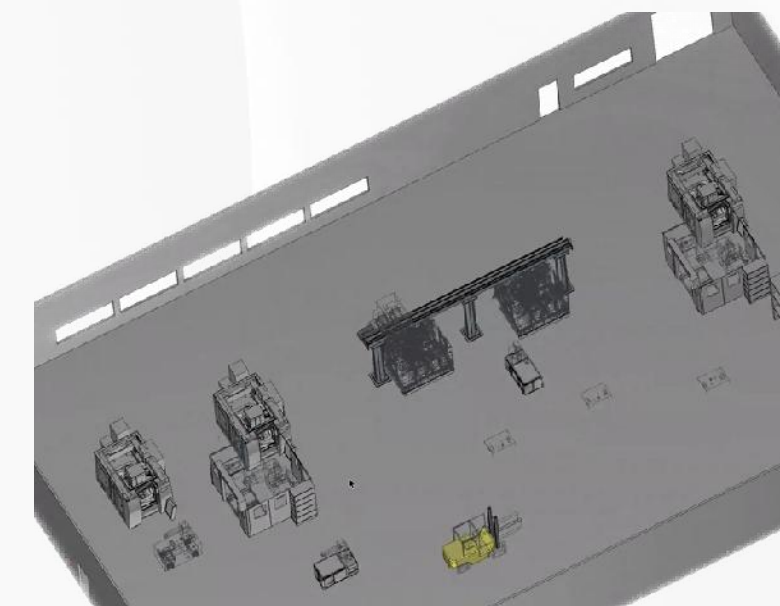
## China-Germany cooperation, enter the global market



**MAIROTEC-DEPU'** s Europe exclusive strategic partner: With strong technical strength and German tradition, its core R&D team comes from DMG, with more than 50 engineers and experts. Its R&D employees have an average of 30 years of industry experience. MAIROTEC provides development and engineering services to customers, and has been committed to industrial automation and robotics, machine center modification and maintenance, electromechanical engineering services, etc. for many years. The design of DEPU U series is jointly developed by the two parties.



1. Provide service for DMG Mori.
2. Have been long-term contracted partners with BOSCH and Siemens for many years.
3. Has a corporate database of 15000 machining center industry customers in Europe, and 3800 active customers.
4. Has sales and service points in more than 26 countries.



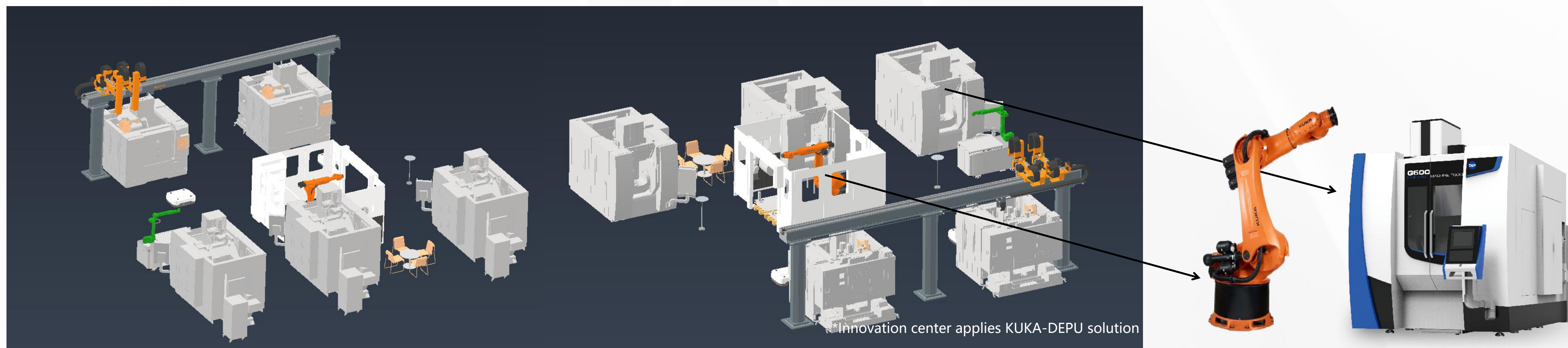
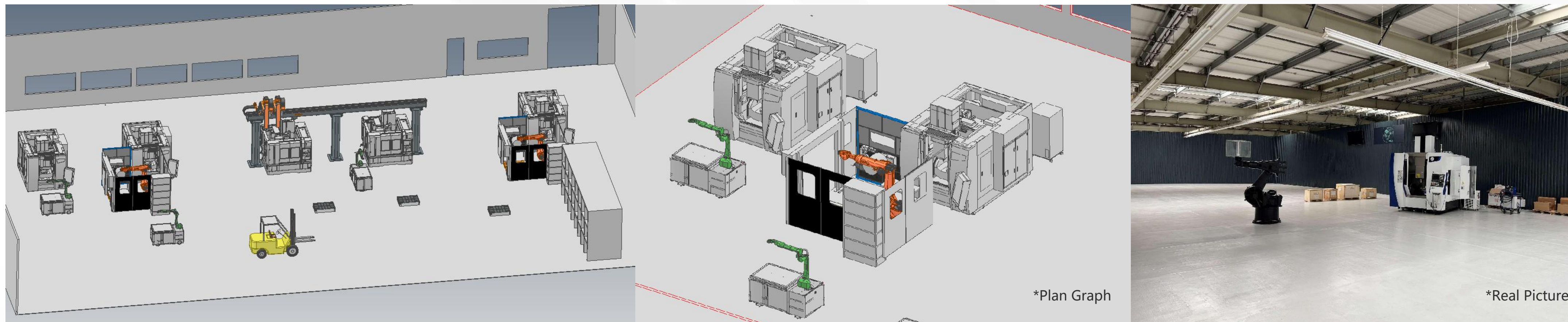
Jointly established talent training and R & D center, European offline equipment sales display center (Innovation Center); MAIROTEC operates the DEPU' s online sales platform [www.depu-group.com](http://www.depu-group.com)



MAIROTEC introduced 20 European sales partners for DEPU, Covering 26 European countries and 30,000 corporate customers

# R&D Capability-German Partner Introduction-Innovation Center

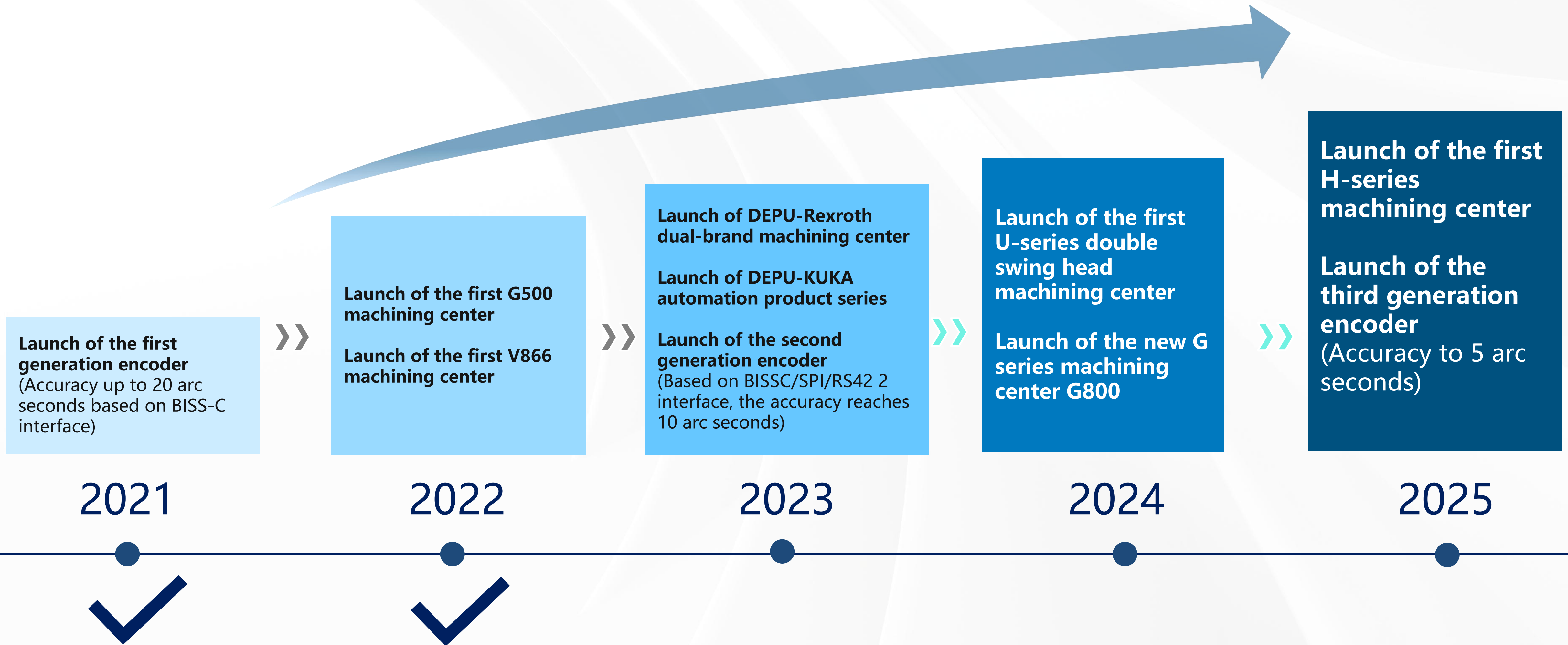
- ✓ The German Innovation Center has been completed, located in Thuringia, Germany, with an area of 1,000 square meters, with DEPU' s machining center as the core product, and a complete set of automation solutions
- ✓ As a joint research and development application center, talent training center and European offline sales display center, jointly develop and sell high-end products that meet European standards
- ✓ Famous companies such as BMW, Bosch, KUKA have come to the site for exchanges and visits



# Product Plan



✓ DEPU has the new product research plan every year, and currently all new products are steadily advancing by the plan

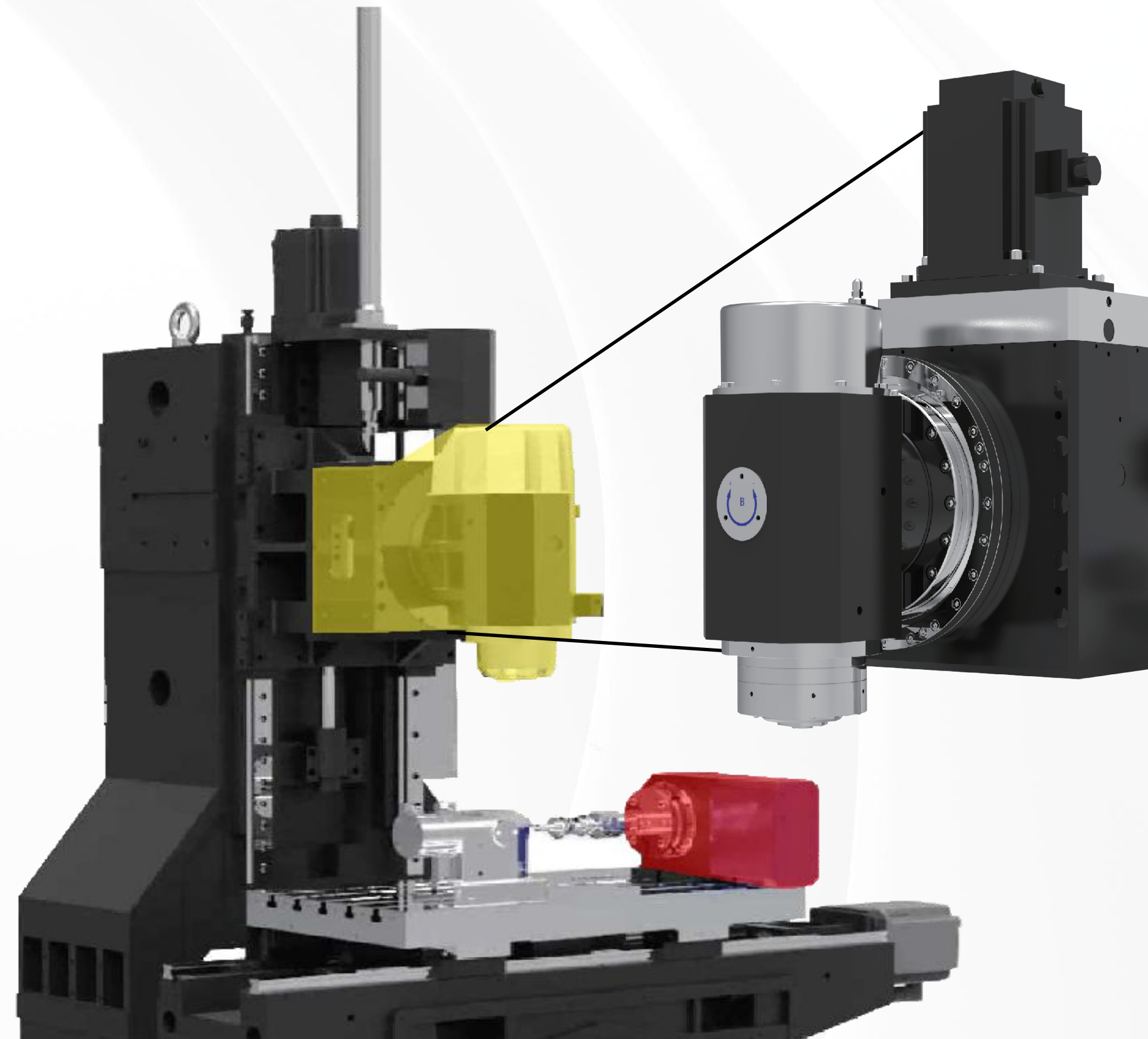


# Product Introduction-Turntable, Swing Head, Probe

- ✓ The company independently develops core parts such as turntables, swing heads, position detection modules, and optical probes, focusing on the localization of parts.
- ✓ Turntable, swing head, position detection module, and optical probe are the core parts that determine the precision of the five-axis machining center. DEPU realizes the supply chain integration from parts to complete machines



\*DEPU Turntable at Macow Expo



DEPU self-developed swing head, the repeat accuracy reaches  $\pm 10$  arc seconds, and the positioning accuracy  $\pm 7$  arc seconds



\*DEPU probe

# Product Introduction-Turntable series

- ✓ Depp provides a variety of turntable matching solutions
- ✓ Applicable to application scenarios such as four-axis/ five-axis machining center, and four-axis machine upgraded to five-axis machine



DEPU provides various types of turntables to meet the needs from different customers. Currently has TC series, TH series, TD series, RH series, HC series, A series, CTR series, etc.



# Product Introduction-Machining Center Series



## G series



## V series



## U series



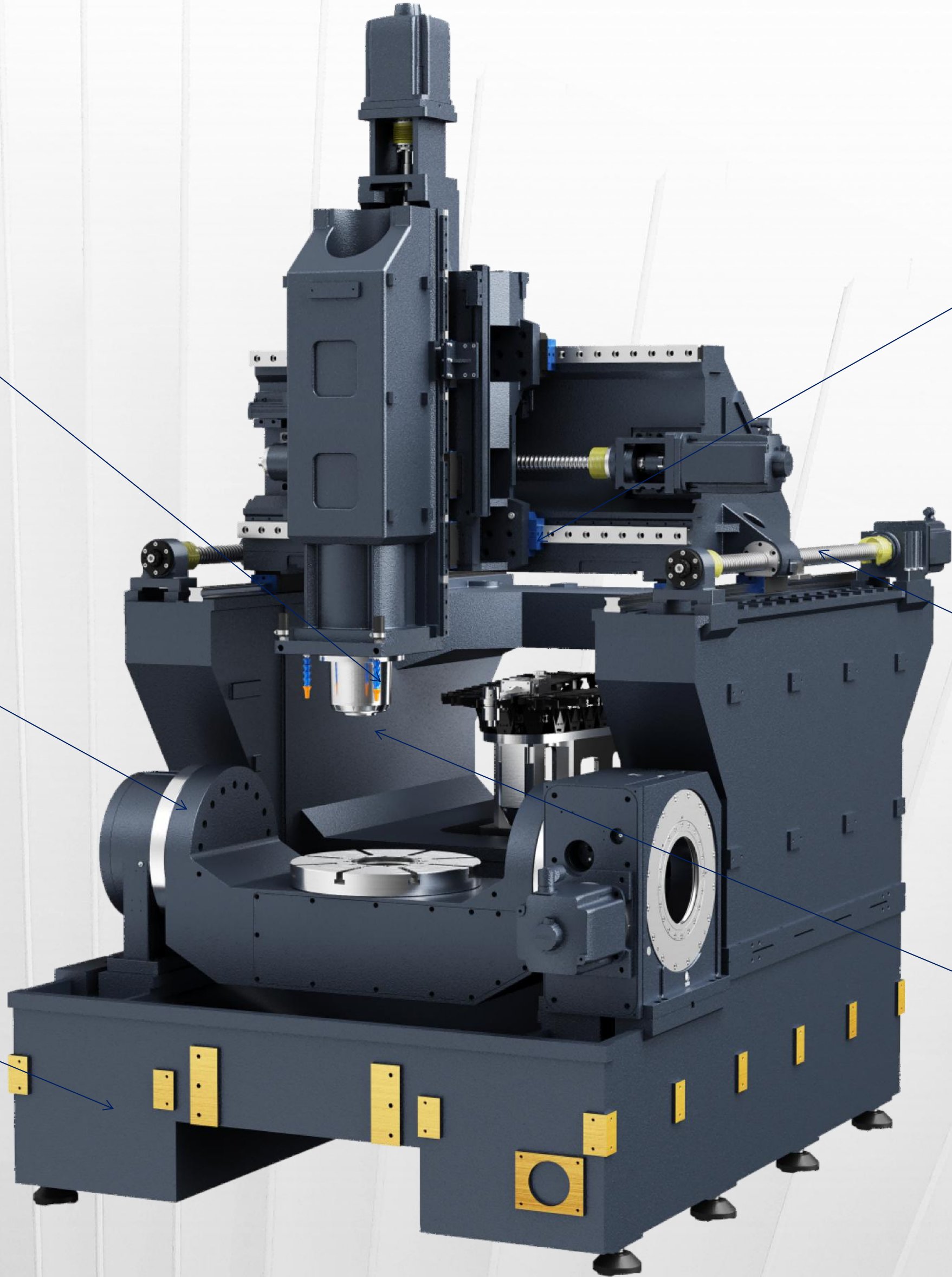
# Product Introduction-Machining Center Series-G Series



High rigidity, high precision electric spindle configuration, the spindle power can reach 40KW, the maximum speed is 24000rpm

The turntable is driven by cam rollers, completely independently designed and manufactured, with zero backlash and long service life. Double-end support rotary table, strong bearing capacity

The gantry structure, integral column, and large cross-section beams make the body extremely rigid.

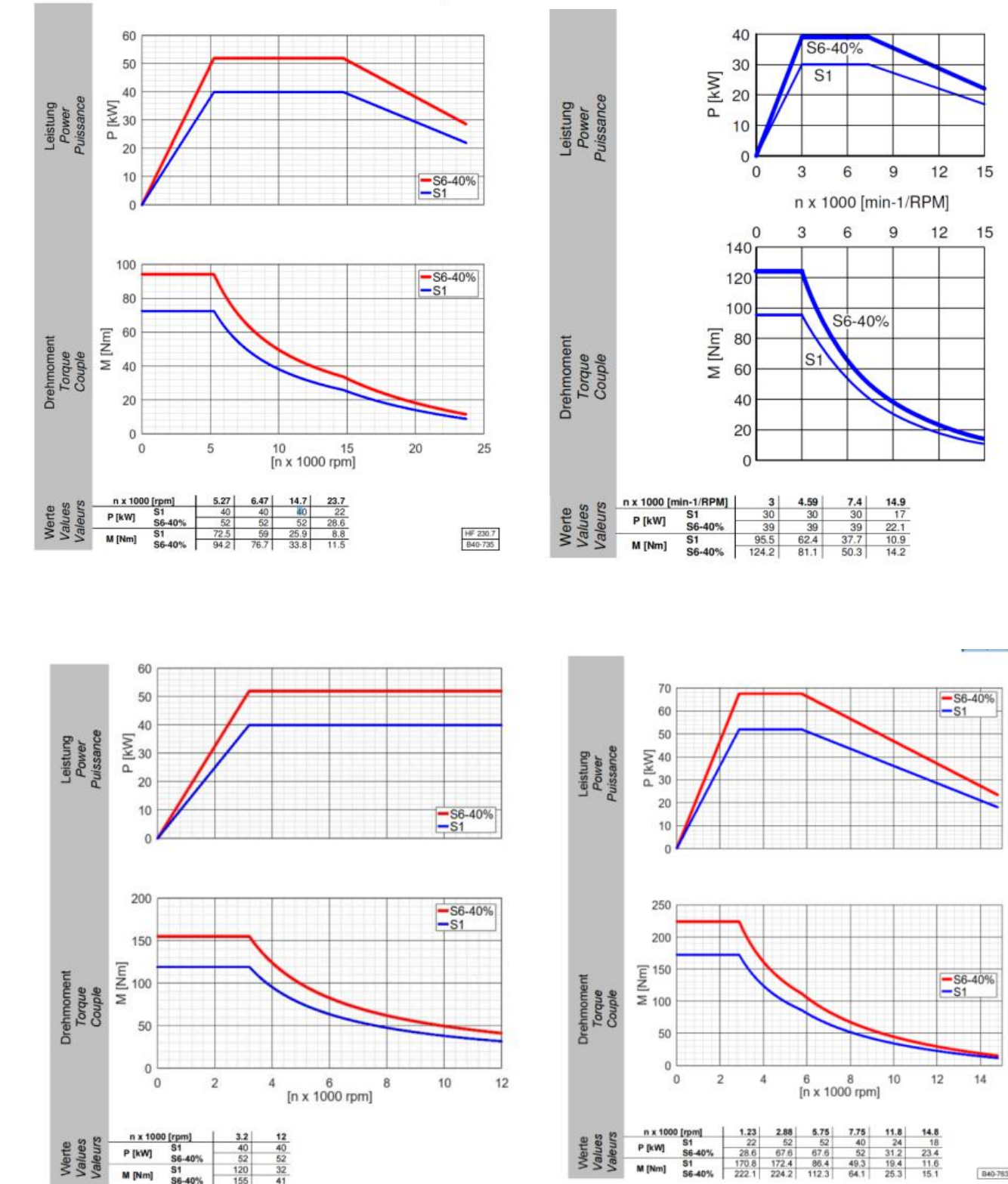
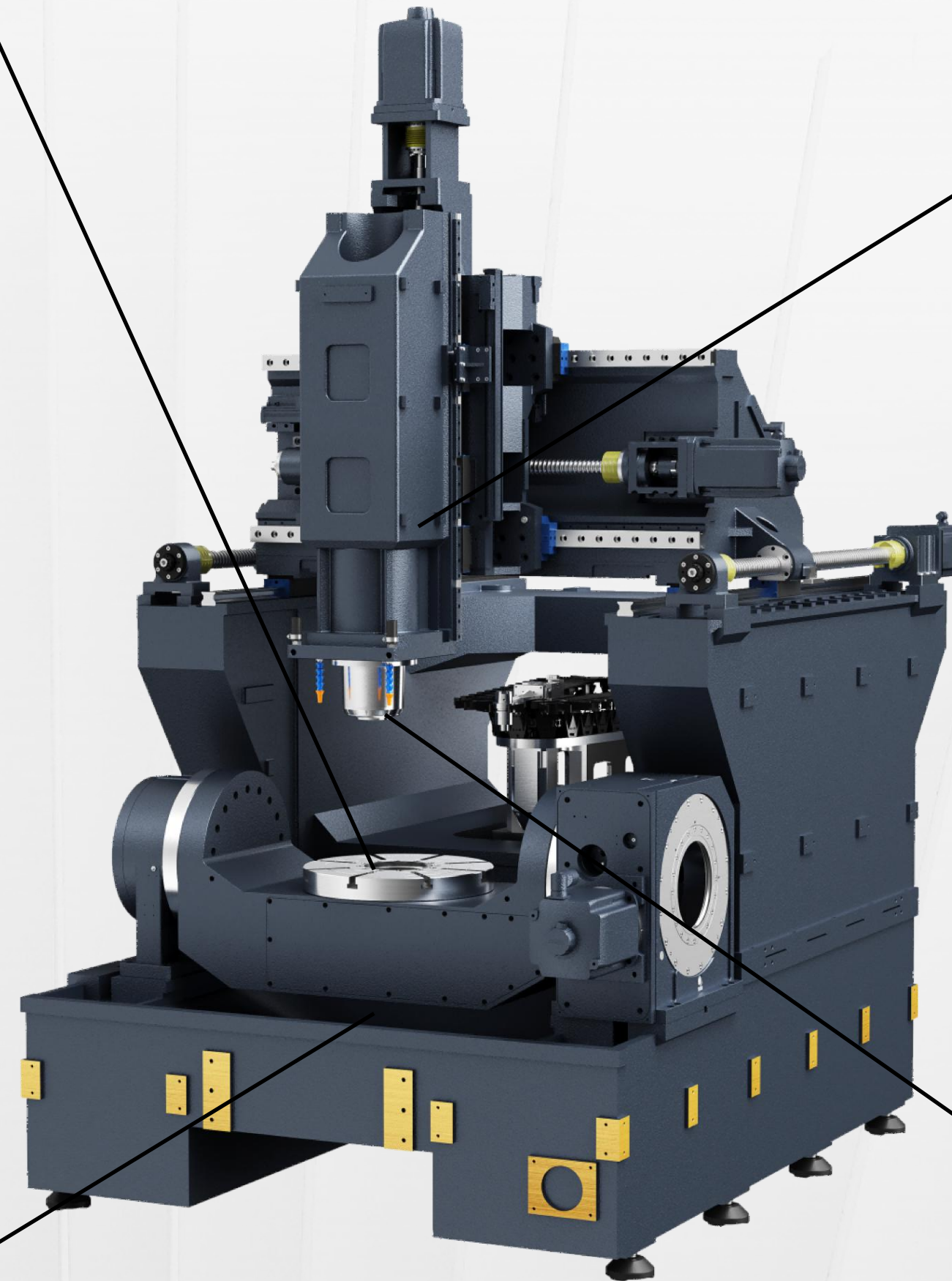
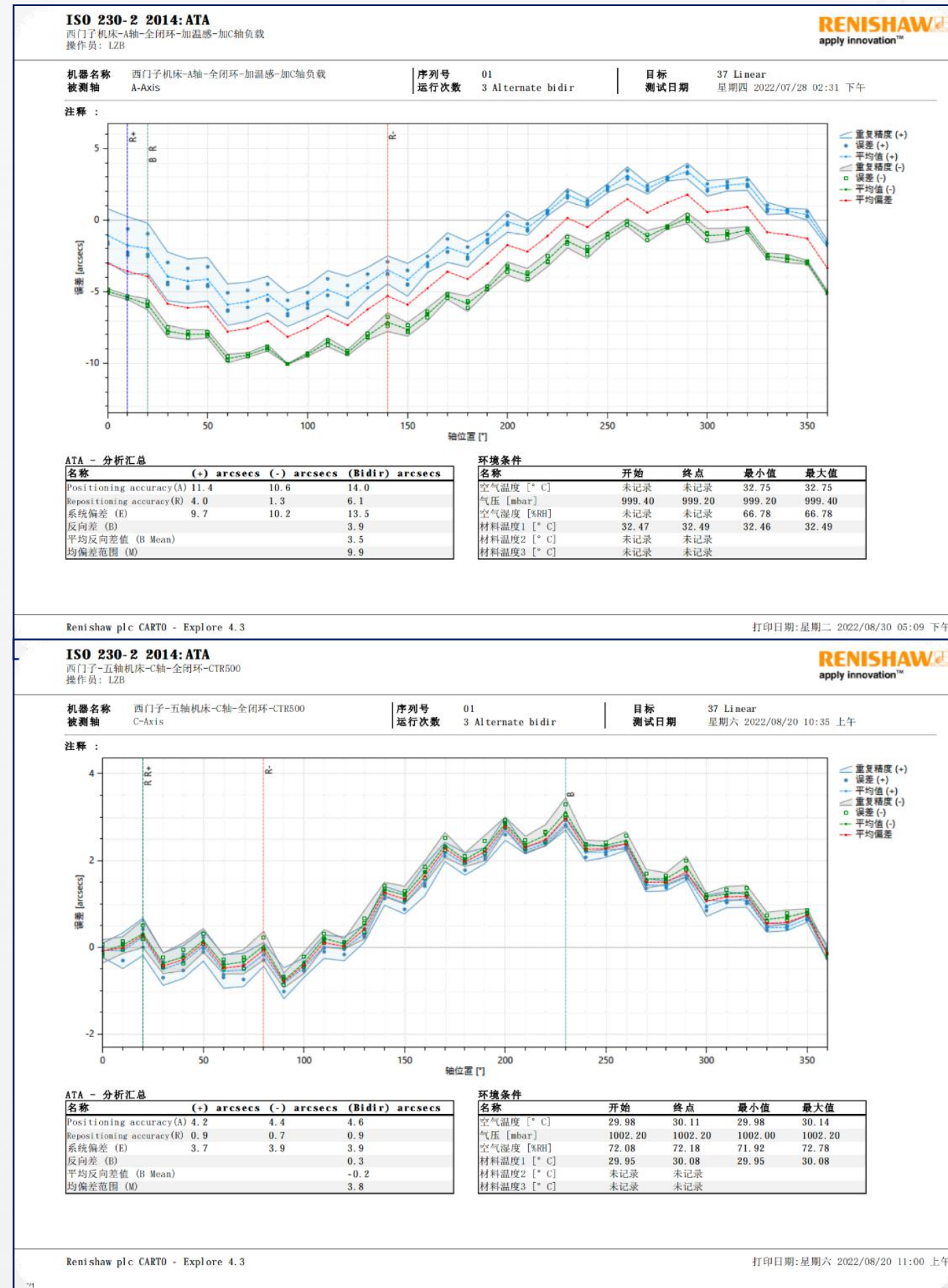


The whole series is equipped with high-precision ball screws and roller rails as standard, which enables the machine to achieve excellent rigidity and stability under high dynamic conditions.

The Y-axis adopts a double-screw center-of-gravity drive structure, which can make the linear motion of the axis have a high response speed and better vibration suppression ability.

Excellent access to the machining area with good visibility, quick and easy to setup the workpieces or tools. Convenient operation for customers.

# Product Introduction-Machining Center Series-G Series



**High rigidity cradle table:**  
Positioning accuracy/ Repositioning accuracy:  
A axis 14.1/6.1 arc seconds  
C-axis 4.6/0.9 arc seconds

Provide multiple spindle options and customized spindle solutions for customers



# Product Introduction-Machining Center Series-G Series



Name		Unit	G500	G600	G800
X/Y/Z Travel		mm	550/550/450	650/650/500	900/900/600
A/C Travel		°	+30 ~ -120/360°	+30 ~ -120/360°	+30 ~ -120/360°
Distance from spindle nose to work table		mm	80-530	125-625	125-725
Max workpiece size		mm	Φ600*400	Φ700*400	Φ900*500
Work table size		mm	Φ500	Φ600	Φ800
Max load bearing (Uniform load)		kg	400	500	600
Rapid traverse speed	X/Y/Z	m/min	45	45	36
	A/C	rpm/min	33	33	33
Cutting speed	X/Y/Z	m/min	0-12	0-12	0-12
	A/C	rpm/min	12/15	12/15	12/15
Tool model		-	HSK-A63	HSK-A63	HSK-A63
Max rotational speed		rpm	24000	24000	24000
Rated power		kw	25	25	40
Torque (S1/S6)		N.m	68/89.5	68/89.5	72.5/94.2
Tool magazine size		T	40T	40T	40T
Tool diameter		mm	Φ75/Φ120	Φ75/Φ120	Φ75/Φ120
Max tool length		mm	300	300	300
Max tool weight		Kg	8	8	8
Machine center weight		Kg	11000	12000	15000
Machine center height		mm	3200	3210	3450
Coverage area (Width X Length)		mm	2580×4050	2580×4050	2890×4450

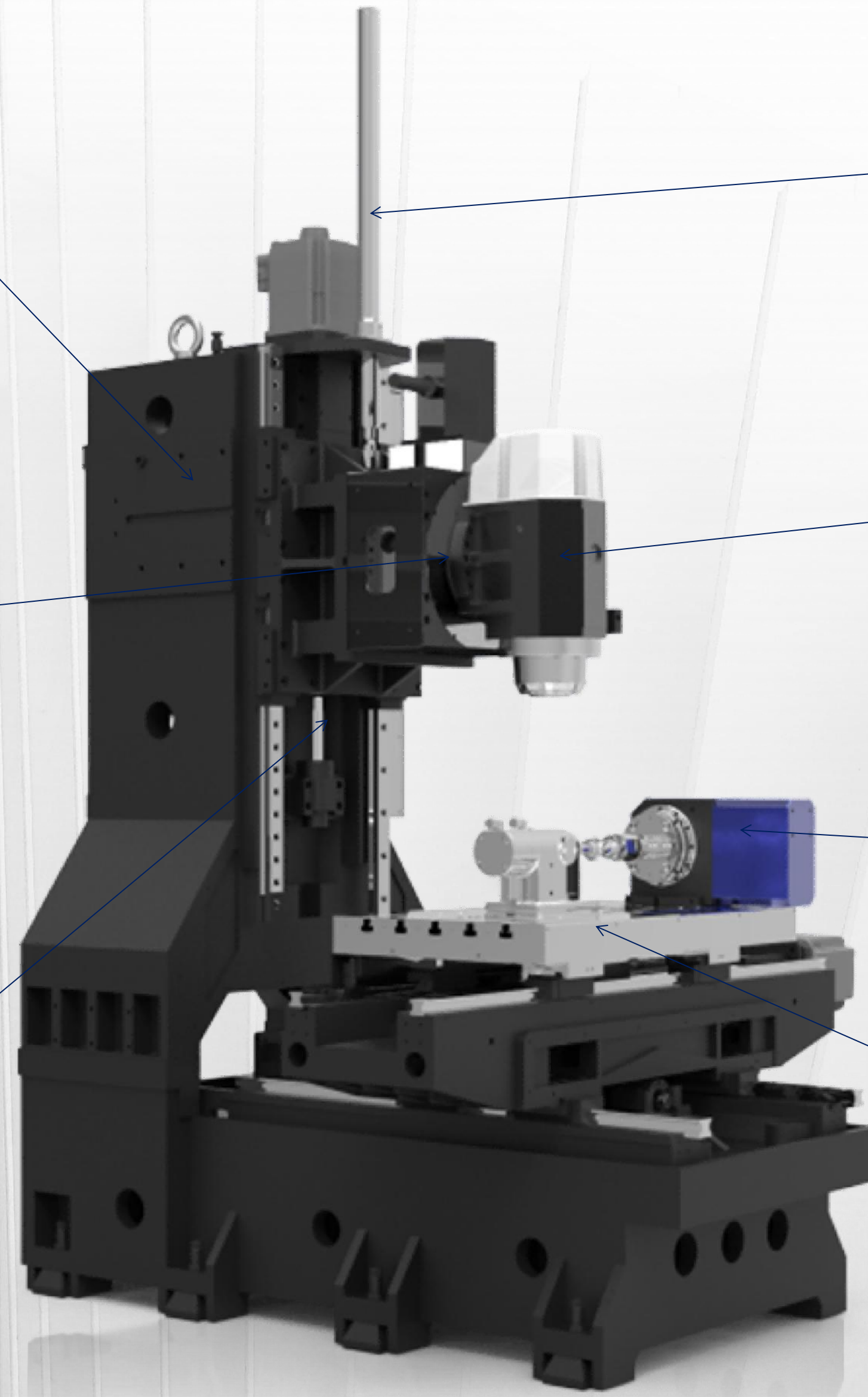
# Product Introduction-Machining Center Series-V Series



The whole machine adopts a cross slide structure; the body adopts a super large and stable base, and a high-rigidity large-span herringbone column can effectively ensure the cutting rigidity of the machine.

Self-made high-precision, high-rigidity, zero-backlash roller cam single-arm 5-axis swing head, continuous cutting torque up to 1560N.m.

The whole series is equipped with high-precision ball screws and roller rails as standard, which enables the machine to achieve excellent rigidity and stability under high dynamic conditions.



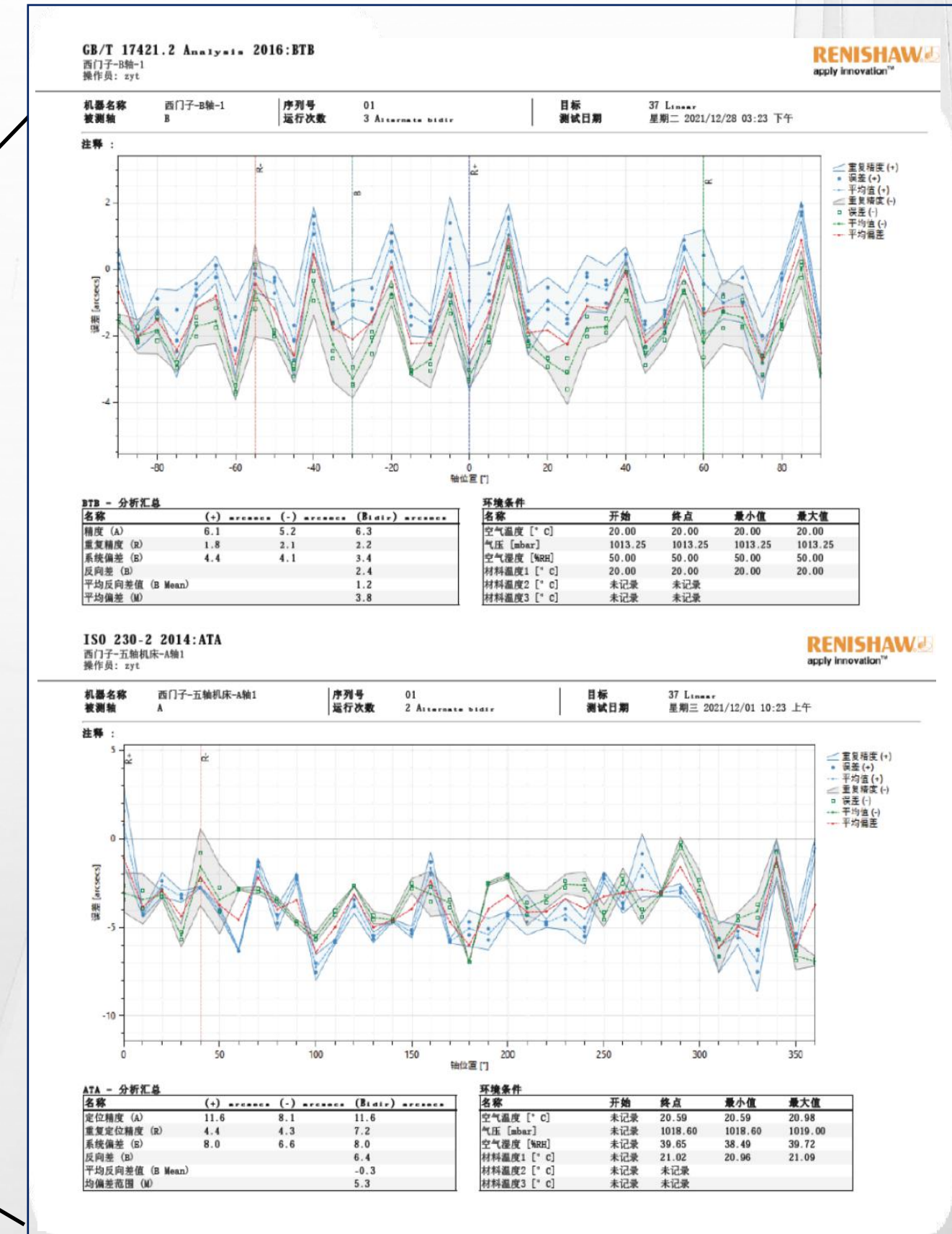
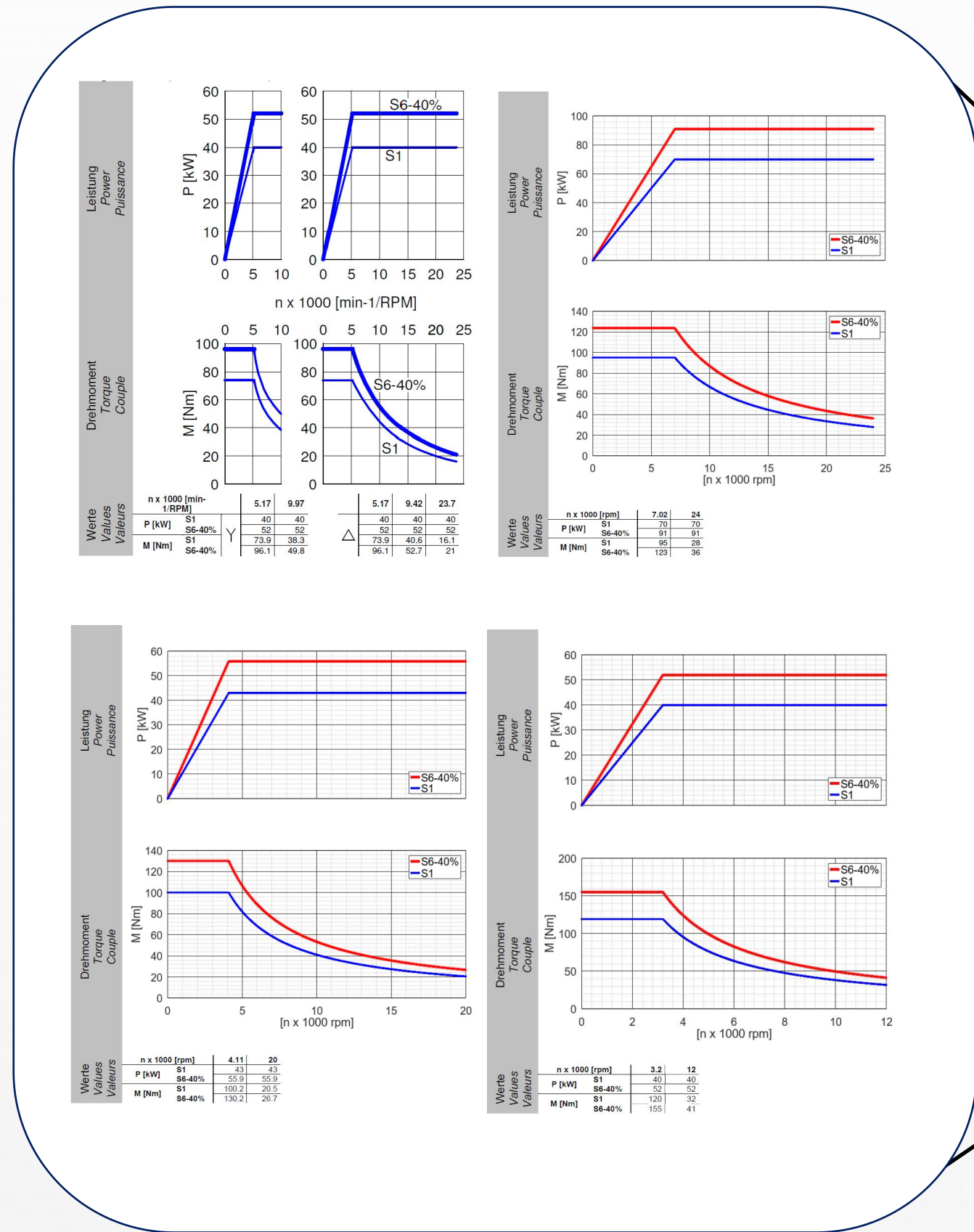
The whole system is equipped with a nitrogen gas counterweight device as standard, which can effectively absorb the vibration generated during the processing and provide a stable response for high-precision and high-efficiency processing.

The key cutting moving parts are made of ductile iron QT550, which greatly improves the shock resistance of the machine tool and the stability of dynamic precision. Meet the processing requirements of high strength and high precision.

The A-axis turntable adopts the cam roller structure, which is completely independently designed and manufactured, with zero backlash and long service life.

A-axis or C-axis turntable can be selected to form a five-axis linkage machining center to meet the processing requirements of different types of parts.

# Product Introduction-Machining Center Series-V Series



Provide multiple spindle options and customized spindle solutions for customers

High rigidity B-axis swing head, A-axis turntable  
positioning accuracy/repeat positioning accuracy:  
B axis 6.3/2.2 arc seconds  
A axis 11.6/7.2 arc seconds

# Product Introduction-Machining Center Series-V Series



名称 Name		单位 Unit	V640U	V866U	V1160U	V1580U
X/Y/Z Travel		mm	600/400/480	820/600/600	1100/600/600	1500/800/700
A/B Travel		°	360° /±110°	360° /±110°	360° /±110°	360° /±110°
Distance from spindle nose to work table		mm	140-620	160-760	140-790	185-885
Max workpiece size		mm	600*400	800*600	1100*600	1500*800
Work table size		mm	700*400	1000*550	1300*600	1600*800
Max load bearing (Uniform load)		kg	300	500	800	1500
Rapid traverse speed	X/Y/Z	m/min	52/52/52	48/48/30	30/30/30	22/22/18
	A/B	rpm/min	100/30	100/30	50/30	50/30
Cutting speed	X/Y/Z	m/min	0-12	0-12	0-12	0-12
	A/B	rpm/min	12/12	12/12	12/12	12/12
Tool model		-	HSK-A50	HSK-A63	HSK-A63	HSK-A63
Max rotational speed		rpm	42000	12000/18000/ 24000	12000/18000/ 24000	12000/18000/ 24000
Rated power		kw	11	30	30	30
Torque (S1/S6)		N.m	5/8.5(最大15)	72/85 (120/155)	72/85 (120/155)	72/85 (120/155)
Tool magazine size		T	16T/20T	24T/32T/40T/60T	24T/32T/40T/60T	24T/32T/40T/60T
Tool diameter		mm	Φ50/Φ80	Φ75/Φ120	Φ75/Φ120	Φ75/Φ120
Max tool length		mm	200	300	300	300
Max tool weight		Kg	3	8	8	8
Machine center weight		Kg	4500	6000	7100	12500
Machine center height		mm	2750	3050	3150	3450
Coverage area (Width X Length)		mm	2350X2600	2600X2850	2800X3300	4070X3600

# Product Introduction-Machining Center Series-CNC System and Tool Magazine



## High-end CNC system for safe and high-precision machining

V series equipped Siemens high-end five-axis linkage CNC system as standard, which improves the numerical performance of the machine center. In addition, optional configurations such as HeidenhainTNC640 / Huazhong NHNC are provided as diversified choices for customers to choose.

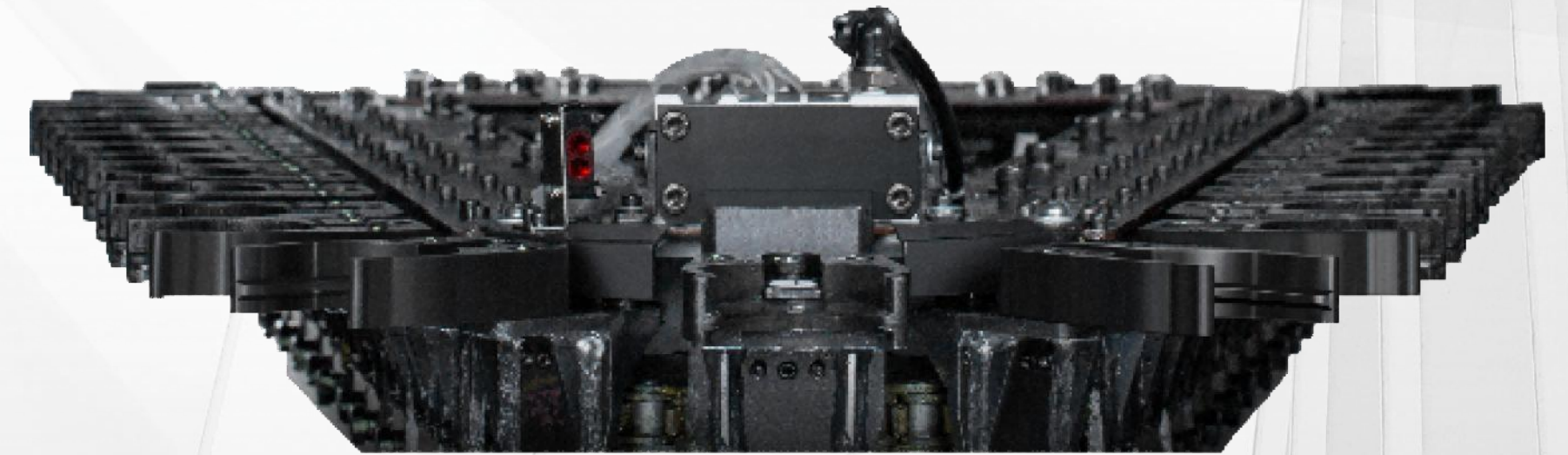
**SIEMENS**



**HEIDENHAIN**

海 德 汉

G series option: 40T, 60T, 80T. The tool magazine chain is driven by a servo motor, the tool can be transferred quickly and smoothly to the exchange position, which reduces the negative impact of the vibration during the processing



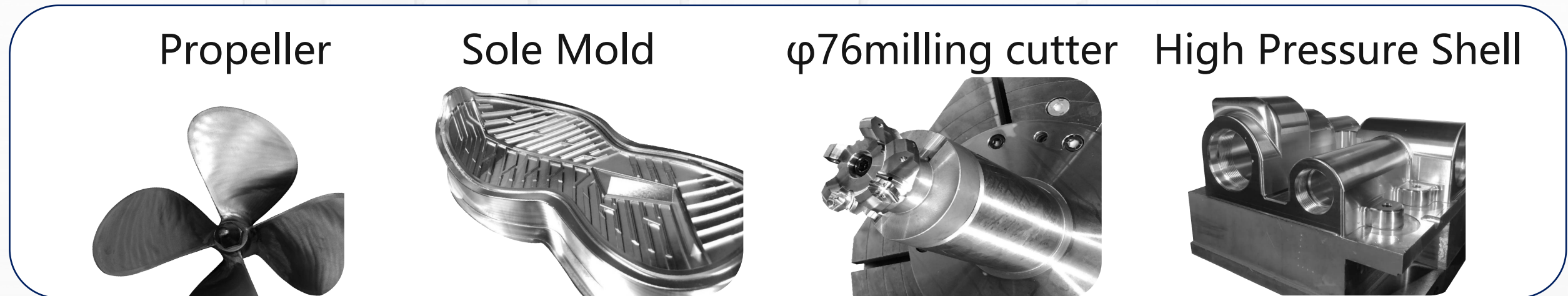
V series option: 32T, 40T, 60T. Turntable style tool magazine, the tool can be exchanged quickly and smoothly



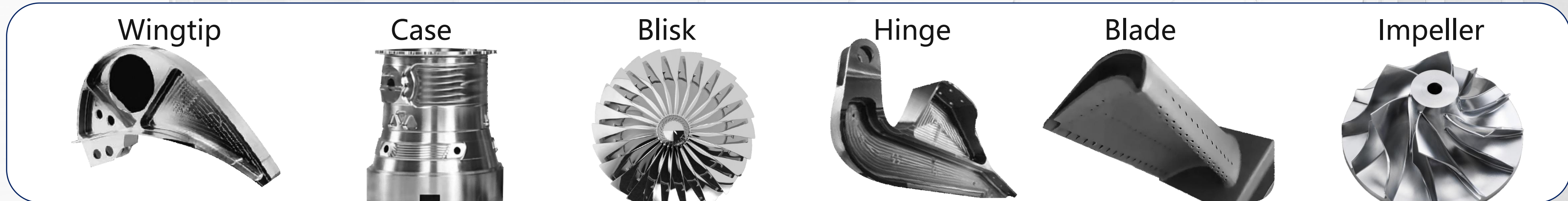
# Applicaton Field

- ✓ DEPU machining center can process high-precision, complex and unusual special spare parts. DEPU could also provide technical support for program processing.
- ✓ DEPU products are widely used in shipbuilding, aviation, automotive, and medical equipment industries, which have strong needs for precision spare parts

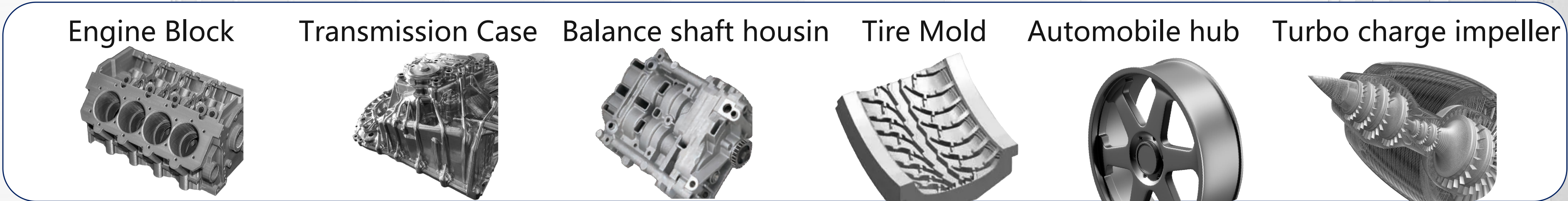
## Special spare parts



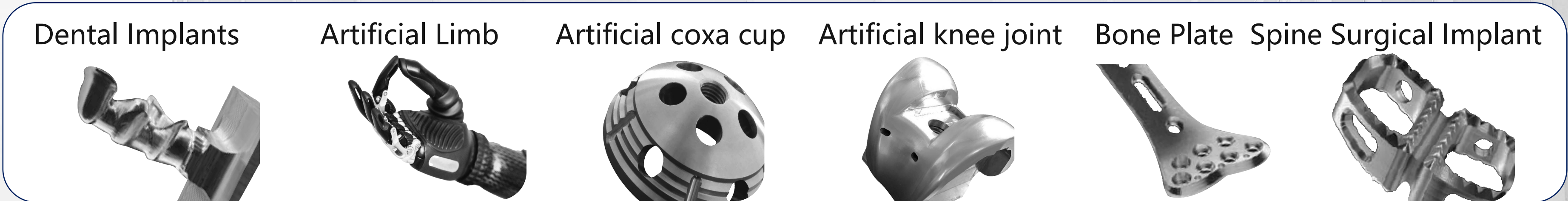
## Aviation Industry



## Auto Industry



## Medical Industry

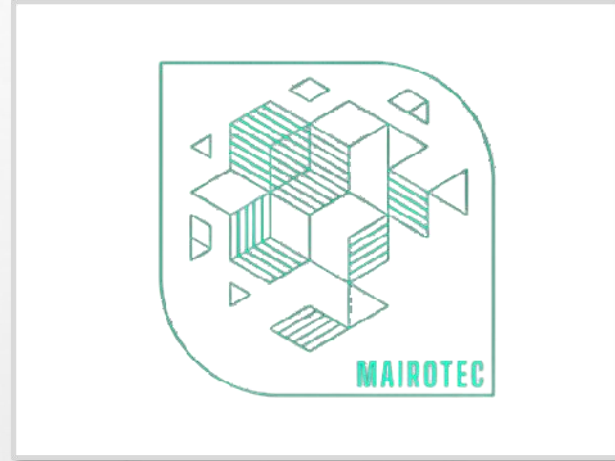
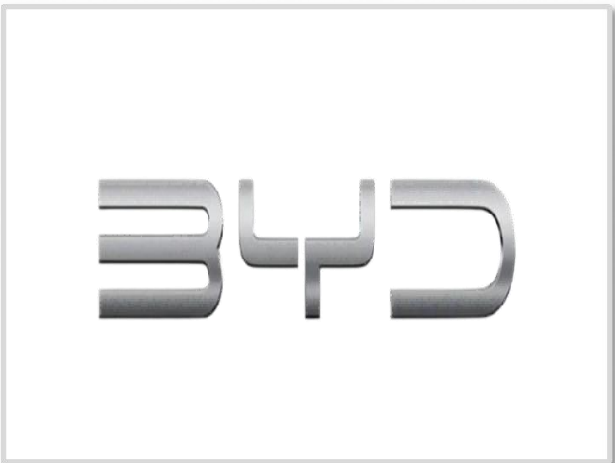


## The Belt and Road Initiative to expand new global markets



DEPU has expanded 16 channels; Nearly 100 million orders have reached cooperation intentions

## Model Customers



### Model Case

**KUKA**

✓ Reached cooperation with KUKA to launch the "D&P Powered by KUKA" automation series products

**rexroth**  
A Bosch Company

- ✓ Rexroth has added DEPU to its ecosystem to jointly develop the "D&P Powered by Rexroth" series
- ✓ DEPU is responsible for mechanical design and assembly, Rexroth is responsible for operating system and electrical components
- ✓ Added DEPU machining center into Bosch supply chain first, serving Bosch factories around the world





**THANKS**