

## YHJMKG 2880 HIGH PRECISION CNC VERTICAL UNIVERSAL GRINDING MACHINE



YUHAN CNC MACHINE TOOL CO., LTD.

# YHJMKG 2880 HIGH PRECISION CNC VERTICAL UNIVERSAL GRINDING MACHINE



It is suitable for processing parts with high precision and high surface quality requirements in equipment, military, energy, aerospace and other manufacturing industries. It aims to process the ID, OD, conical surface, end surface and special-shaped surface contour of disc, ring and sleeve parts.

The processing precision grade can reach IT3 ~ IT2, and the surface roughness  $\leq$  Ra 0.2.

## YHJMKG2880 TECHNICAL PARAMETERS

ITEMS	PARAMETER	ITEMS	PARAMETER
Worktable dimensions	$\phi 800$ mm	Worktable runout	Radial/ end face $\leq 0.001$ mm
Maximum grinding height	650 mm	B-axis rotation angle	0~285°
Maximum load of worktable	1500 Kg	X-axis movement speed (continuously variable speed)	0.010~10m/min
Worktable speed (stepless)	0.01-100 rpm	Z-axis movement speed (continuously variable speed)	0.010~8 m/min
Maximum speed of main spindle & Interface (internal and external grinding head)	8000rpm/HSK63-C	X and Z axis positioning accuracy & repeated positioning accuracy	$\pm 0.003$ mm/ $\pm 0.002$ mm
Maximum speed of main spindle & Interface (surface grinding head)	4500rpm/N56 ( 18000 rpm optional accessory)	Spindle runout	Radial/ end face $\leq 0.001$ mm

## TECHNICAL CHARACTERISTICS

### ► High-power & precision electric spindles



- High precision: grinding spindle runout  $\leq 1\ \mu\text{m}$ , spindle vibration  $\leq 0.15\text{mm/s}$ ;
- High configuration: synchronous direct-drive motor + online dynamic balance;
- High speed: high linear speed + high stiffness performance;
- High interchange ability: standard modular design of the spindle.

### ► High-precision exchange rotary station



- High positioning accuracy: direct-drive torque motor + high-precision grating;
- High bearing capacity: high torque gas brake system for auxiliary brake positioning;
- High applicability: grinding head automatic indexing, arbitrary angle positioning processing;
- Personalized customization: self-made high-precision exchange turntable to achieve more; composite processing functions

### ► Direct-drive high-precision static pressure rotary station



- High rotation accuracy: the roundness and flatness of the workpiece are better;
- High positioning accuracy: direct-drive torque motor + high-precision grating;
- Hydrostatic bearing patented technology: never wear, machine precision long-term maintenance.

### ► Hydrostatic guide rail



- Non-contact, non-abrasive, suitable for reciprocating motion, guideway Characteristics and accuracy, can be maintained for a long time;
- Excellent shock absorption characteristics, improve the quality of the processing surface;
- The patent technology of closed hydrostatic pressure ensures the high rigidity of the machine.

## HIGH PRECISION CNC VERTICAL UNIVERSAL GRINDING MACHINE SERIES

SR.	MODEL	WORKSTATION DIAMETER(mm)	MAX. ROTATION DIAMETER(mm)	MAX. WORKPIECE HEIGHT (mm)	MAX. WORKPIECE WEIGHT (kg)
1	YHJMKG2835	Φ350	Φ500	400	800
2	YHJMKG2860	Φ600	Φ750	500	1000
3	YHJMKG2880	Φ800	Φ1000	650	1500
4	YHJMKG28100	Φ1000	Φ1200	650	2000
5	YHJMKG28125	Φ1250	Φ1500	650	3000
6	YHJMKG28160	Φ1600	Φ1850	850	5000
7	YHJMKG28200	Φ2000	Φ2300	1050	5000

# VERTICAL UNIVERSAL GRINDING MACHINE

It is designed for precision grinding of precision disc, ring, sleeve, slewing bearing and other parts. The grinding of ID, OD, end face, step surface, conical surface, bearing raceway, non-circular surface and other elements of the workpiece can be realized by one-time clamping. The precise form dressing of the grinding wheel is controlled by CNC linkage system and the rich functions such as online dynamic balance, AE system and online measurement can be configured to improve the processing quality, efficiency and safety guarantee.

► Internal bore grinding



► End face grinding



► Special-shaped surface grinding



► Taper grinding



► Automatic dressing



► Online measurement



## TYPICAL WORKPIECE



Wind power gear



Turbine disk



Bearing seat



Triangular rotor



Aviation bearing



Shell-type

# COMPANY INTRODUCTION

YUHUAN CNC Machine Tool Co. Ltd., a National Key Equipment Manufacturing Enterprise, and state certified Specialized Innovative“ Little Giant” Enterprise, is specialized in the research and development, production, sales and services of CNC grinding machine, lapping and polishing machine and intelligent equipments, providing comprehensive solutions of precision grinding, polishing and intelligent manufacturing technology for the customers.

YUHUAN’s technical team has dedicated in precision grinding and polishing for nearly 30 years. Through continuous independent innovation and technology accumulation, the company now has the industry leading independent R & D capabilities and core technology advantages. The products are exported to more than 10 countries, including Korea, Japan, Russia, Thailand, Vietnam, India, winning the market’s recognition and preference over international rivals . The company has constituted 3 scientific research and innovation platforms, i.e., Hunan CNC Precision Grinder Engineering Research Center, Hunan Enterprise Technology Center, high-efficiency precision machining equipment for difficult-to-process materials and Hunan Engineering Research Center, and has won multiple national awards, including the CCMT“ Chun Yan Award”, and China Machinery Industry Science and Technology Award.

YUHUAN CNC will always adhere to its enterprise spirit of“ Responsibility first, innovation for the future, everlasting pursue for development, and take pride in dedication”, and set our goal and mission to become cutting edge manufacturer, and revitalize national industry, always be aggressively innovative and forging ahead, to build the company’s foremost reputation as an professional provider of precision grinding and intelligent manufacturing technology solutions, committing to become the pioneer of the industry.



# COMPANY HISTORY

The overall technology level of the YHJMKG2880 high-precision CNC vertical grinding center independently developed by the company is internationally advanced, among which the plane throttling adaptive technology used in hydrostatic pressure is internationally leading.

YHMM300 high precision CNC vertical double side grinding machine, along with other 10 new products passed the appraisal and acceptance successfully, with overall technology level reaching domestic leading and internationally advanced.

Hunan Yuhuan Precision Manufacturing Co., Ltd., a holding subsidiary, was established.

The company's four major Management systems of quality, environment, occupational safety and health and energy management have passed third party certification, The company was granted the Hunan Province Enterprise Management Modern innovation Achievement Award; The company set up India office, accelerating its overseas development.

The Hunan Engineering Research Center of High-efficiency and Precision Machining Equipment for Difficult-to-Machine Materials jointly established by the company and Hunan University was approved by the Hunan Development and Reform Commission; The new plant for Yuhuan Intelligent Equipment was completed and put into use.

The company was officially listed on the small and medium sized board of the Shenzhen Stock Exchange, stock abbreviation: Yuhuan Shukong, stock code: 002903; The company built the first digital workshop assembly line of CNC precision grinding machine in China.

Its subsidiary Yuhuan Intelligent Equipment Co., Ltd passed the national high-tech enterprise certification; YH2M81693D magnetic flow polishing machine was launched in the market, with its technologies appraised internationally advanced; YH2M81693D magnetic flow polishing machine was enlisted the 10 landmark achievements of manufacturing technology innovations of Hunan.

The academician expert workstation was officially awarded and established; The first provincial engineering technology research center for CNC precision grinding machines in China was established in the company; YHM77110 was launched in the market, with its grinding and polishing precision at nanometer level, and the technologies of high pressure stable loading, and polishing disc temperature control internationally advanced.

Awarded China Top 10 Best Quality Enterprises of Machine Tool Industry; Being rated as Hunan Top 10 Best Quality and Efficiency Enterprises in Machinery and Equipment Industry.

The company completed its share holding reform, changing its name into Yuhuan CNC Machine Tool Co., Ltd, and was enlisted as key enterprise to be listed in Hunan and Changsha; Awarded the 2012 China Top 10 Cutting-Edge Enterprises in Machine Tool Industry.

Undertaking Key Project of Science and Technology SME Innovation Fund; Awarded the 2010 Excellent Enterprise of China Machinery Industry; Elected Hunan Top 100 Strategic Emerging Industry Enterprises.

Awarded Hunan High-Tech Enterprise, Provincial Enterprise Technology Center.licensing.

The company was relocated to the capital of Hunan Province, Changsha; Hunan Yuhuan Technology Machinery Co., Ltd. was formally established in Liuyang Manufacturing Industrial Base; The scientific research base for PhD students was established..

Founder of the company, Mr.XuShixiong founded Yuanjiang Electric Machinery Co.,Ltd, symbolizing the prelude of the great cause of Yuhuan.

