

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 system s 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 AchievementAward; The companyset 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-techent prise certification; YH2M81693D magnetic flow polishing machine was launched in the market, with its technologies appraised internationally advanced; YH2M81693D magnetic flow polishingmachine was enlisted the 10 landmark achievements of manufacturing technology innovations of Hunan.

The academician expert workstation wasofficially 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.

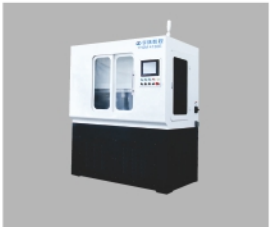
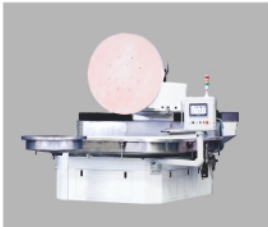
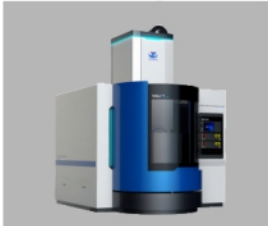
Awarded Hunan High-Tech Enterprise, Provincial Enterprise Technology Center.licensing.

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.



GATHERING OF TALENTS IN THE VAST UNIVERSE



YUHUAN CNC MACHINE TOOL CO., LTD

Precision Grinding and Intelligent Manufacturing Technical Solution Professional Provider



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.



13B-9L/8432C/8432E/ 8436B/18B/22B

High Precision Vertical Double Surface Lapping (Polishing) Machine series

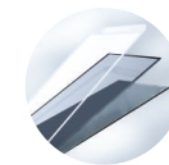
Applied in the parallel surface of lapping and polishing of metallic and non-metallic brittle hard thin materials in silicon wafer, sapphire crystal, ceramic wafer, optical glass, quartz crystal, cellphone glass, semiconductor.



Classical Processing Parts



Cemented Carbide



Glass



Ceramic



Sapphire



Bearing



Cemented Carbide

Features

- 1.4 planetary annual polishing movements;
2. Adopting lifting method of inner gear cam mechanism and equipping safety self-lock cylinder device.
3. Sun wheel, upper disc, lower disc, ring gear are driven by gear pair + reducer transmission, variable frequency speed regulation.
4. Loading pressure is controlled by cylinder + electrical proportion valve, adopted touch screen + PLC HMI.

Technical Parameters

LTEMS	Units	YH2M13B-9L	YH2M8432C	YH2M8432E	YH2M8436B	YH2M18B	YH2M22B
Lapping disc size (Outer Diameter x inner Diameter x Thickness)	mm	φ978x φ558x45	φ1070x φ495x45	φ1070x φ495x45	φ1140x φ375x45	φ1280x φ449x50	φ1462x φ494x50
Planetary wheel specification		DP=12 Z=108	P=15.875 Z=64	P=16.842 Z=60	P=15.875 Z=84	P=21.053 Z=71	M=3 Z=184
Planetary wheel amounts	n	3≤n≤9	3≤n≤7	3≤n≤7	3≤n≤5	3≤n≤5	3≤n≤5
Workpiece Maximum Size	mm	φ180 (Diagonal)	φ280 (Diagonal)	φ280 (Diagonal)	φ360 (Diagonal)	φ440 (Diagonal)	φ480 (Diagonal)
Workpiece minimum thickness	mm	0.4			0.5	0.6	0.3
Lapping Flatness	mm	0.006(φ100)					
Polishing Flatness	mm	0.008(φ100)					
Lapping Roughness	μm	Ra0.15					
Polishing Roughness	μm	Ra0.05					0.04
Size (Aproximately:LxWxH)	mm	1650x1300 x2650	1750x1450 x2700	1750x1400 x2700	1800x1450 x2650	2250x1750 x2700	3800x3300 x3600
Weight (Aproximately)	kg	2600	3500	3200	3200	5000	11000



YH2M8192/8192 II / 8195/8164

Single surface Lapping (Polishing)Machine

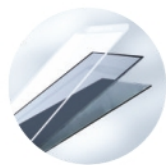
Used for single-side Lapping and Polishing thinning parts of metallic parts of valve plate and non-metallic materials of glasses, ceramics, sapphire etc.



Classical Processing Parts



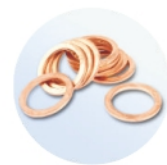
Gasket



Glass



Metal Logo



Copper

Features

1. 3 / 4 station eccentrical Planetary single surface Lapping machine.
2. Precisely adding pressure by air cylinder + electrical proportion valve, HMI.
3. Polishing wheel driven directly by frequency speed regulation reducer, working ring driven by rolling
4. wheel + speed regulation motor.

Technical Parameters

LTEMS	Units	YH2M8192	YH2M8192 II	YH2M8195	YH2M8164	YH2M8164B (With dressing mechanism)
Lapping disc size (Outer Diameter x inner Diameter x Thickness)	mm	φ914×35	φ914×35	φ952×35	φ640×30	φ640×30
Work ring size(Outer Diameter x inner Diameter x Height)	mm	φ410×φ368×60(3piece)	φ410×φ368×60(3piece)	φ400×φ375×60(3piece)	φ268×φ238×50(3piece)	φ268×φ238×50(3piece)
Planetary wheel amounts	mm	3≤n≤9	3≤n≤7	3≤n≤7	3≤n≤5	3≤n≤5
Workpiece Maximum Size	mm	φ300	φ300	φ320	φ220	φ220(Diagonal)
Workpiece maximum flatness accuracy	μm			0.005 (φ80) /0.008(φ80)	0.003 (φ80) /0.005(φ80)	
Workpiece roughnes	μm			Ra0.15/Ra0.05	Ra0.15 /Ra0.125	
Rotation speed	rpm	5~90(Infinitely variable speed)	5~90(Infinitely variable speed)	5~90(Infinitely variable speed)	5~90(Infinitely variable speed)	5~90(Infinitely variable speed)
Motor	kW/ rpm	Power:7.5 Rated Speed:1450	Power:7.5 Rated Speed:1450	Power:11 Rated Speed:1450	Power:7.5 Rated Speed:1440	Power:5.5 Rated Speed:1400
Cylinder(diameter X Stroke)	No.	φ100×400(3 pieces, weights pressurized)	φ100×400(3 pieces, weights pressurized)	φ100×400(4 pieces, weights pressurized)	φ100×400(3 pieces, weights pressurized)	φ100×400(3 pieces, weights pressurized)
Stations	No.	3	3	4	3	3
Size	mm	1570×1725×2250	1600×1625×2150	1500×2200×2250	1225×1900×2350	1550×1700×2250
Weight (Aproximately)	kg	2000	2500	2800	2100	1900

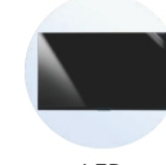
YH2M81190

High Precision Single Surface Polishing Machine

Mainly used for fine grinding and polishing of large-size plane in the optical, electronics, mechanism, such as rubber plate prisms, optical flat crystal, liquid crystal display sheet, IC shading film, crystal, filter glass, sapphire glass, quartz crystal, silicon wafer, ceramics and other components, as well as STNLCD,CSTN-LCD, sheet glass substrate and other hard and brittle materials of high precision, high efficiency single-sided polishing.



Classical Processing Parts



LED



Large size glass

Features

- 1.Upper disc diameter:1300mm,Lower disc diameter:1900mm,the upper disc could flip 90°, Lower discprovides power by variable frequency motor to drive the reducer, the upper disc is driven by the lowerdisc to rotate, both of upper and lower disc can be used as mounting workpieces or as polishing discs,and the workpiece size can be processed ≤1850.
- 2.The upper disc can be traversed horizontally to form a reciprocating motion to ensure the flatness andsmoothness of workpiece processing, and upper disc moving stroke is 1100mm.
3. The process parameters can be preset by using PLC and touch screen, the lower disc motor is driven byvariable frequency motor to realize stepless frequency conversion speed regulation.

Technical Parameters

LTEMS	Units	PARAMETERS
Lower disc (customize)	mm	φ1900, flatness tolerance±0.01
Lower disc rotation speed	rpm	0~50
Upper disc size(customize)	mm	φ1300, flatness tolerance±0.01
Upper disc swing amplitude	mm	≤700
Upper disc workpiece maximum size	mm	①Round(square diagonal)workpiece ≤1850(adsorbed to lower disc); ②Round(square diagonal)workpiece 1345×1345(adsorbed to upper disc);
Polishing fluid tank volume (customize)	L	40
Mixing motor	W	400
Polishing fluid pump	W	375W
Lower disc motor	/	22kW 1450rpm 3相380V
Upper disc motor	/	2.2kW 1450rpm 2相220V
Swing servo motor	/	3.0kW 2000rpm 3相380V
Installed capacity	KVA	Approximately 25
Size(L×W×H)	mm	Approximately4000×3000×2400
Weight	kg	Approximately10,000



YH2M8690

Single surface Lapping (Polishing)Machine

Suitable for polishing 2.5D,3D glasses, zirconia, metal and non-metal special-shaped arc surfaces.



Classical Processing Parts



Cell phone cover



2.5D mobile phone glass



3D mobile phone glass

Features

- 1.Continuous polishing, loading/unloading when 3 workstations on processing, 1 workstationloading/unloading.
- 2.3sets of independent servo lifting processing workstation system to control upper disc loadingposition by motor current feedback.
- 3.Lower workstation rotation adopting variable frequency motor + worm gear reducer driving andcolumn pin positioning.
4. Machine equipped vacuum gas-liquid separation device to monitor negative press with touch screenand PLC control .

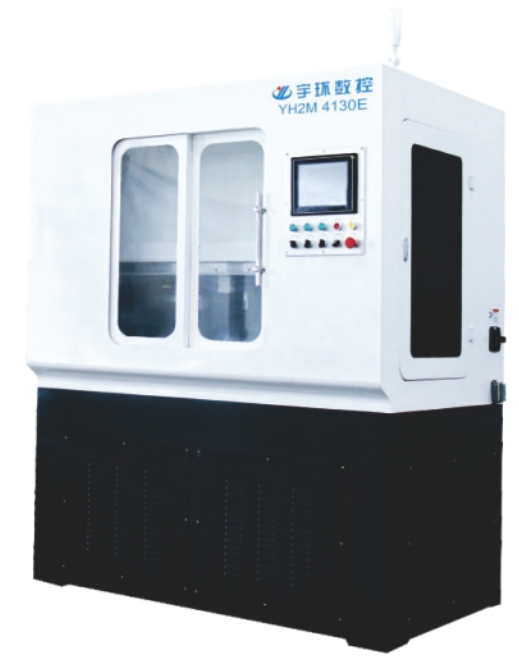
Technical Parameters

LTEMS	Units	PARAMETERS
Workplace plate	mm	12×φ420
Polishing disc	mm	3×φ920
Upper disc lifting motor	kW	3×2.3
Lower disc rotation motor (VFD)	kW	4×2.2
Lower workpiece changeover motor (VFD)	kW	4.0
Polishing disc motor(VFD)	kW	3×5.5
Upper disc stroke	mm	200
Lower workstation rotation speed	rpm	0-10
Lower disc rotation speed	rpm	0-40
Polishing disc rotation speed	rpm	0-280
Air pressure	Mpa	0.6
Vacuum pressure	Kpa	-75
Voltage	V	3 phases 5 lines AC380V
Power	kW	36
Weight	kg	4900
Size	mm	2540×2540×2600

YH2M4130E

Edge Polishing Machine

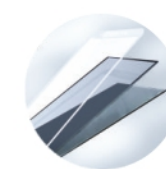
Suitable for thin sheet par ts multi sides polishing and molding of non-metal brittle hard materials such as glasses, sapphire etc.



Classical Processing Parts



Ceramic cover plate for mobile phone



Glass



Sapphire

Features

- 1.Side polishing machine SPM adopted stacking installation pressed by cylinder.
- 2.Left and right polishing head simultaneously CNC profile polishing workpiece, lifting movementsmakes the workpiece evenly.
- 3.Servo control driven, using touch screen and PLC to control.

Technical Parameters

LTEMS	Units	PARAMETERS
Polishing head size (OD×H)	mm	φ290*235
Workpiece maximum size	mm	300(Diagonal, and side length≥60)
Maximum thickness of workpiece	mm	180
Polishing head rotation speed	rpm	50-1500
Workpiece rotation speed	rpm	0.5-3
Polishing head lifting speed	mm/min	5-350
Polishing head Power	kW	3
Polishing head rotation motor power	kW	1.5
Polishing head lifting motor power	kW	0.4
Polishing head moving motor power	kW	0.4
Polishing head amounts	No.	2
Weight	kg	2500
Size (L× W×H)	mm	1800×1250×2150



YH2M8169

3DMagnetic Polishing Machine

Mainly used for 3D precision polishing of non-magnetic materials like aluminum alloy, glasses, sapphire, stainless steel etc.



Classical Processing Parts



Cell phone cover



2.5D mobile phone glass



3D mobile phone glass

Features

- 1.The magnetic flow polishing machine uses electromagnetic field magnetization to polish the workpiece with magnetorheological fluids.
- 2.Workpiece is clamped on 6 Dual freedom manipulator on orbit rotation disc.
- 3.Adopts low-voltage magnetic field, which has high safety and the magnetic induction can be programmed.
- 4.Magnetic field and polishing fluid temperature can be controlled by special cooling system.
- 5.PLC+ touch screen interface.

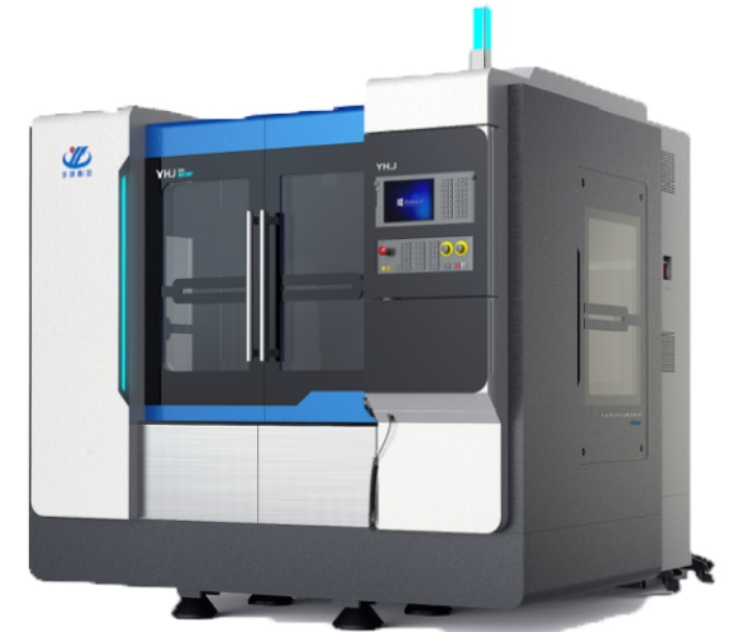
Technical Parameters

LTEMS	Units	PARAMETERS
workstation	No.	6
Maximum workpiece size	mm	165 (Diagonal) × 40 (H)
Polishing disc size	mm	φ630
Upper disc rotation speed	rpm	3-85
Workpiece rotation speed	rpm	3-62
Robots swing angle	°	-5°-12°
Upper disc motor power	kW	3
Robots swing motor power	kW	0.4
Manipulator rotation motor power	kW	0.1
Size (L×W×H)	mm	1800×2800×2600
Weight	kg	2800

YH2M8519B/3/4/5

5-Axis CNC Multi-Station Polishing Machine

Mainly used for polishing complex surface such as arc surface and side edge, such as 3D surface of glass, ceramics, sapphire, metal, plastic, carbon fiber board and other materials.



Classical Processing Parts



Mobile Phone



watch



laptop cover



e-cigarette case



VR glasses



Car rearview mirror

3C products exterior structural parts such as mobile phones, watches, laptops, tablet computers, electronic cigarettes, smart wearables, etc.; Exterior structural parts such as car door handles, cab interior trims, signs, keys, etc.; Exterior structural parts like Bluetooth speakers, high-grade thermos cups and other household products.

Features

1. 5-axis linkage, processing multiple workpieces one time, fixed by vacuum fixture, precisely positioning, reliable, efficiency.
2. Polishing head is driven by servo motor, precisely control rotation speed, and constant torque output.
3. Realize rough polishing, lapping, brushing, fine polishing forms in one-time, high yield and good consistency.

Technical Parameters

LTEMS	Units	YH2M8519B/3	YH2M8519B/4	YH2M8519B/5
Voltage	V	AC 380V,50/60Hz	AC 380V,50/60Hz	AC 380V,50/60Hz
Pressure	Mpa	0.5~0.7	0.5~0.7	0.5~0.7
X axis stroke	mm	500	500	500
Y axis stroke	mm	600	600	600
Z axis stroke	mm	530	530	530
A axis stroke	°	-30° ~ +360°	-30° ~ +360°	-30° ~ +360°
Power	kW	15	15	15
Size (L× W× H)	mm	2400×2580×2200	2400×2580×2200	2400×2250×2200
Weight	kg	3200	3200	3100
Workpiece speed	r/min	1-50	1-50	1-50
Servo linkage amount	/	5	5	5
Polishing head rotation speed	r/min	0-5000	0-5000	0-5000
Polishing head group	group	group×3	group×4	group×5
Workpiece center distance	mm	500	500	250
Workpiece processing Range	mm	Diagonal length ≤ 498	Diagonal length ≤ 498	5 stations : Diagonal length ≤ 248 3 stations: Diagonal length ≤ 495