

YUHUAN PRECISION CNC DOUBLE DISC SURFACE GRINDER



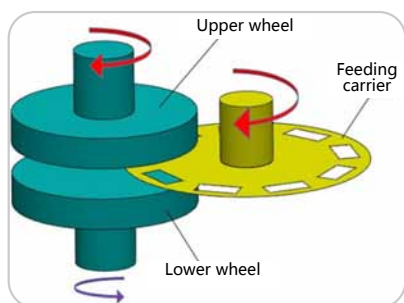
宇环数控机床股份有限公司
YUHUAN CNC MACHINE TOOL CO., LTD.

YUHUAN DOUBLE DISC SURFACE GRINDER is designed for high precision grinding of the two parallel surfaces of flat metallic parts such as bearing, valve plate, carbide chip, seal, oil pump vane, piston ring, etc. It can also grind the flat surfaces of non-metallic parts of hard & brittle materials like glass and ceramics. The uniquely sophisticated & compact design of the machine ensures high precision & efficiency, and Yuhuan Double Disc Grinding has been recognized by the market as one of the most practical grinding solution for mass production of flat parts.

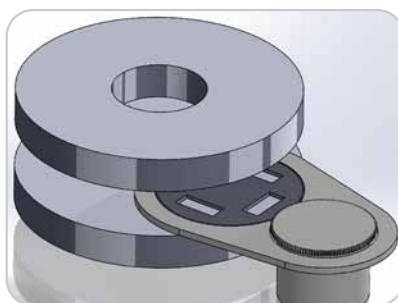
MODEL OVERVIEW

Model	Grinding method	Tool Φ	Workpiece Φ
YHDM580CNC/CBN	C type/Oscillation/Planetary	585 mm	120/280mm
YHDM580B	C type/Oscillation/Planetary	585 mm	120/280mm
YHDM750A	C type/Oscillation/Planetary	750 mm	180/320mm
YHMM7758	C type/Oscillation/Planetary	585 mm	120/280mm

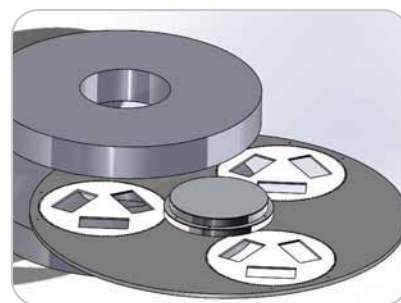
GRINDING METHOD



C type grinding



Oscillation grinding



Planetary grinding

TOOL SYSTEMS



CASE REFERENCES

High precision in seconds, widely applied in metal and ceramic parts for automotive, bearing, stamped applications, etc.



Model	YHDM 580B	YHDM 750A	YHMM 7758
Workpiece	Piston ring	Valve plate	Bearing outer ring
Material	Cast alloy iron	Cast alloy iron	High-carbon chromium bearing steel
Workpiece size(mm)	Φ50-60	Φ100-120	Φ60-70
Removal amount(mm)	0.1-0.15 (Rough ring grinding) ; 0.01-0.03(Fine grinding)	0.1-0.16 (Rough ring grinding) ; 0.01-0.02(Fine grinding)	0.1-0.15 (Rough ring grinding) ; 0.03-0.05(Fine grinding)
Cycle time (sec.)	1	1	3
No. of runs	1	1	1
Flatness & parallelism(mm)	0.003	0.005	0.003
Surface roughness(mm)	Ra0.32	Ra0.32	Ra0.32

LIST OF SPECIFICATIONS

Item/Model	Unit	YHDM580CNC	YHDM580B	YHDM750A	YHMM7758
Workpiece size	mm	Φ12-Φ120	Φ12-Φ120	Φ50-Φ180	Φ12-Φ120
Workpiece thickness	mm	0.8-40	0.8-40	1.2-60	0.8-50
Grinding wheel size	mm	Φ585×Φ50×70	Φ585×Φ195×75	Φ750×Φ195×75	Φ585×Φ195×75
Grinding motor power	kw	22 ×2	22 ×2	30 ×2	22 ×2
Grinding motor speed	rpm	150-950	150-950	150-890	150-950
Feeding carrier motor power	kw	1.5	1.5	2.2	0.75
Feeding carrier motor speed	rpm	1-10	1-10	1-10	1-10
Flatness & parallelism	mm	≤ 0.003	≤ 0.003	≤ 0.005	≤ 0.003
Surface roughness	μm	≤ Ra0.32	≤ Ra0.32	≤ Ra0.32	≤ Ra0.32
Weight	kg	10000	10000	12000	15000
Overall dimension (L×W×H)	mm	2700×2620×2650	2700×2620×2650	2840×3140×2880	3200×2600×3000

MACHINERY PRECISION & STABILITY

- 1 The machine adopts box structure with vertical spindle for upper & lower grinding heads, ensuring reliable rigidity and thermal stability.



- 2 The spindle structure is a combination of double cylindrical roller bearing and double direction angular contact thrust ball bearing, ensuring the stability & rigidity of the grinding heads.

- 3 The main motor transmits the torque to the spindle through triangular belt-wheel. And unloading structure is adopted between triangular belt-wheel and splines to avoid bending load on the spindle.



- 4 Grinding head feeding controlled by high-precision ball screw unit, with feeding precision up to 0.001mm, which secures the stability of grinding process.

INSTALLATION OF GRINDING WHEEL

Integrated crane is equipped for unloading/loading of the abrasive wheels. Unique swing-out structure for the feeding carrier provides outstanding space for tool changes. Portable wheel changing aid for rapid & easy transportation of the tools, reducing labor intensity and improving work efficiency.



TOOL DRESSING

We adopt oscillating dressing for the dressing unit. The swing arm is fixed by the revolving shaft with stepless speed regulating. The fixture for the sharpening unit can be dismantled easily, and upper & lower grinding wheels can be dressed at the same time. Hydraulic control circuit of the wheel dressing is controlled by hydraulic lock.



FEEDING CARRIER CHANGE

Customized carriers available for all types of workpieces, exchangeable in 2 min.



WORKPIECE LOADING



Manual



Robot arm

DEVELOPMENT HISTORY

“Provincial Engineering Research Center of High Efficient & Precision Equipment for Difficult-to-machine Materials” co-founded with Hunan University Workshops of Yuhuan Intelligence accomplished for operation

2018

Listed as public company, stock No.: 002903
China first digital workshop of CNC precision grinding machine established

2017

Subsidiary Yuhuan Intelligence certified as National High-tech Enterprise
YH2M8169 3D Magnetic Polishing Machine launched, reached international advanced level
YH2M8169 3D Magnetic Polishing Machine selected as 2016 Hunan Top 10 Innovative Manufacturing Achievements

2016

Academicians Workstation founded
China First Provincial CNC Precision Grinding Machine Engineering Research Center founded
YHM77110 launched into the market. The machine precision, high-pressure stability and polishing plate temp control reached the international advanced level.

2015

Awarded as China Top 10 Quality Machine Tool Company
Awarded as Hunan Top 10 Quality Machine Tool Company

2013

Completed shareholding reform
Awarded as “2012 China Top 10 Innovative Machine Tool Company”

2012

Undertake “Key Project of Sci-tech SME Innovation Fund” of Ministry of Technology
Awarded as China Excellent Mechanical & Industrial Enterprise
Listed as Hunan Top 100 enterprises of Strategic Emerging Industry

2010

2007

Awarded as Hunan High-tech Enterprise
Awarded as Provincial Enterprise Tech Center

2004

Company founded
Doctor student research base founded



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Website