

WK1420x500 Universal Cylindrical Grinding Machine

Model WK1420x500 | Cylindrical Grinder | WUK Machinery, Shenzhen China



Overview

The WK1420x500 grinds cylindrical and conical workpieces up to 200 mm outside diameter and 500 mm in length, with an internal spindle covering 30 to 100 mm bores. Workhead, outside wheel, internal wheel, oil pump and coolant pump are each driven by their own motor. The machine is rated at 1.5 micron roundness on outside diameters and 2.5 micron on bores, and is also available in a CNC configuration.

Who It Is For

Hydraulic and pneumatic component makers, fuel system and valve manufacturers, bearing and bush producers, and tool rooms grinding punch pins and small precision shafts.

Key Benefits

- **1.5 Micron Roundness on Outside Diameters** – Rated roundness of 1.5 micron OD and 2.5 micron ID, with longitudinal uniformity of 5 micron OD and 8 micron ID over the full 500 mm.
- **Ra 0.25 Micron Surface Roughness** – Rated Ra 0.25 micron on outside diameters and Ra 0.63 micron on bores, fine enough for running and sealing surfaces.
- **Bore and Outside in One Clamping** – A 14000 rpm internal spindle alongside the OD wheel head means concentricity between bore and outside is set by the machine, not by two setups.
- **Table Swivel Minus 5 to Plus 9 Degrees** – Shallow tapers, morse fits and conical seats are ground on the machine rather than requiring a dedicated taper attachment.

Technical Features

- Independent motor drive for workhead, OD wheel, ID wheel, oil pump and coolant pump
- 400 x 50 x 203 mm external grinding wheel at 35 m per second wheel line speed
- Internal spindle running to 14000 rpm
- 650 mm maximum worktable travel with 0.1 to 4 m per minute table speed
- Number 4 morse tailstock taper at 135 mm centre height
- CNC configuration available on request

WK1420x500 Specifications

Figures are taken from the machine data sheet. Items not documented are marked TBC rather than estimated.

Max grinding diameter OD / ID	200 mm / 30 to 100 mm
Max grinding length OD / ID	500 mm
Centre height	135 mm
Max workpiece weight	50 kg
Workbench speed	0.1 to 4 m/min
Grinding wheel line speed	35 m/s
Max travel of workbench	650 mm
Workbench rotation range	-5 to +9 degrees
External grinding wheel size	400 x 50 x 203 mm
Inner spindle speed	14000 rpm
Tailstock taper	Morse No. 4
Roundness OD / ID	1.5 / 2.5 micron
Uniformity of diameter in longitudinal section OD / ID	5 / 8 micron
Surface roughness OD / ID	Ra 0.25 / Ra 0.63 micron
Motor total power	5.625 kW
Machine overall dimensions (L x W x H)	2000 x 1400 x 1600 mm
Machine weight	2400 kg

Applications

- Grinding small shafts and spindles after hardening
- Finishing round sets and bushes on bore and outside diameter
- Needle valve and valve seat grinding for hydraulic assemblies
- Plunger and pump element grinding to a sealing fit
- Punch pin and form tool grinding in press tool rooms

Materials and Construction

Cast iron bed and table on hardened ground ways, with independently driven workhead and wheel spindles. Wheels, dressers and steadies specified for the workpiece.

Quality Control Before Shipping

- Spindle run out measured on workhead and wheel head
- Table travel and swivel accuracy verified
- Roundness measured on ground test pieces
- Surface roughness checked against the rated figures
- Electrical and safety inspection before crating

Customisation Options



- CNC configuration with FANUC, SIEMENS, SYNTEC or GSK control
- Wheel balancing stand
- Centre rest for slender workpieces
- Closed type radius dresser
- Wheel specification matched to your material and finish target

Certification

Certification is quoted and confirmed in writing on request. Documented certification status for this model is TBC.

Commercial Terms

- Minimum order: 1 set
- Delivery: 15 to 45 working days after deposit
- Trade terms: EXW, FOB, CFR and CIF
- Packing: plywood cases lined with plastic film
- Warranty: 12 months on the machine
- CNC control options where applicable: FANUC, SIEMENS, SYNTEC and GSK

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