

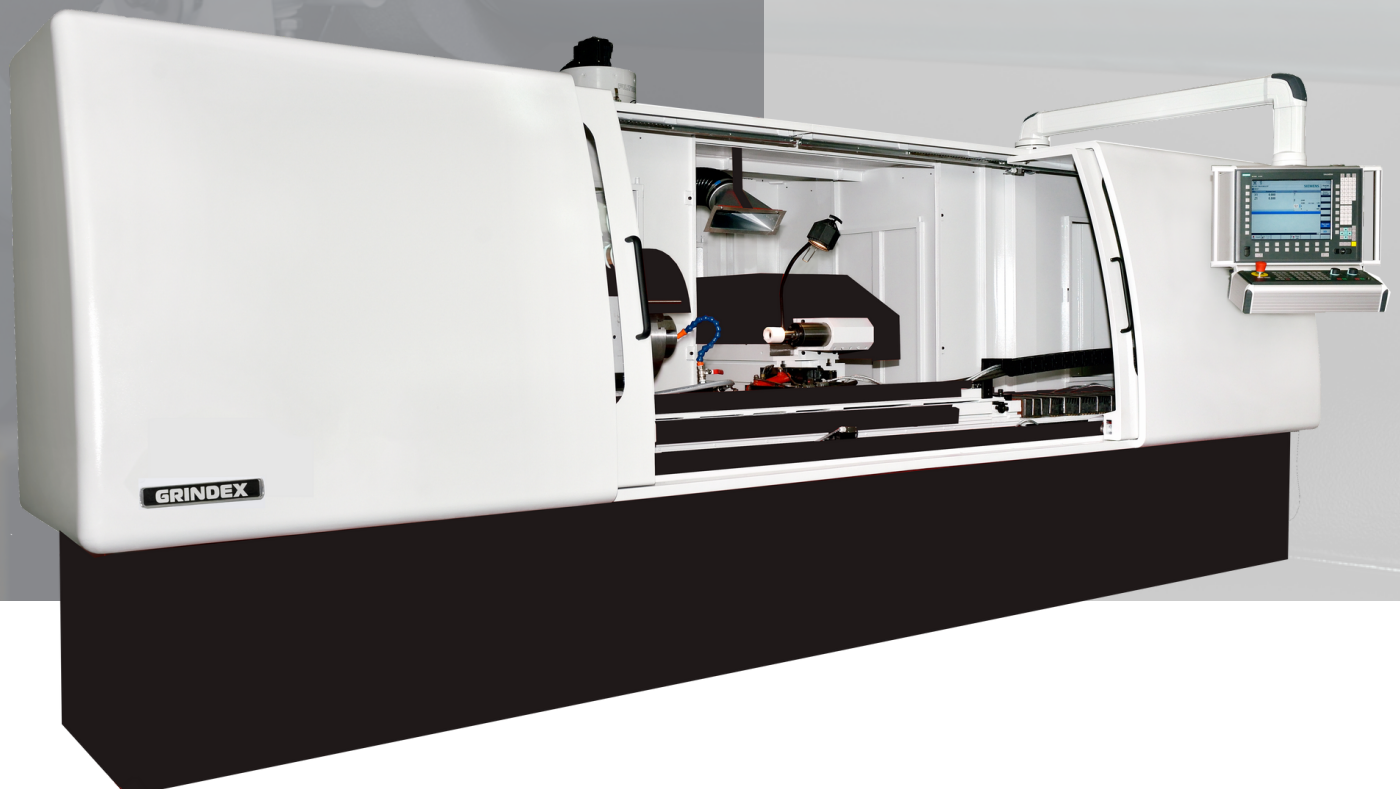
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INTERNAL CYLINDRICAL GRINDING MACHINE

UBC 700, 1000, 1500, 2000

UBD 700, 1000, 1600, 2500, 3000

UBE 1500, 3000, 4000





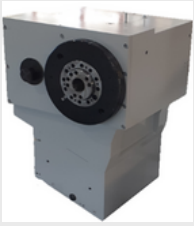


**INTERNAL GRINDING MACHINES
MODELS UBC, UBD and UBE**

**Internal grinding machines for grinding
internal diameter and taper, internal
and external face. Especially applicable
for long holes grinding.
Internal diameter range $\varnothing 10$ - $\varnothing 600$ mm.
Hole length up to 1200 mm.**

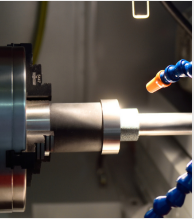
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IDEAL FOR LONG HOLE AND LONG PARTS GRINDING



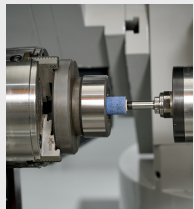
UNIVERSAL WORKHEAD

- Swivel range 0 - 90°
- Speed range 0,1-250 RPM
- Roundness accuracy 0,0005 mm



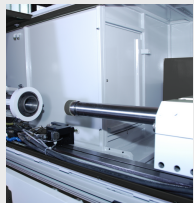
LOAD CHUCKED WORKPIECE

- up to 150 kg
- with steady rest up to 500 kg



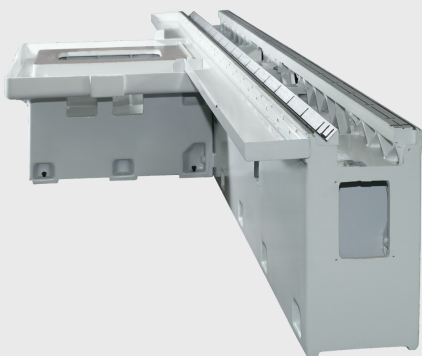
SWING DIAMETER

- 350-800 mm



WORKPIECE RANGE

- hole length up to 1200 mm
- ID range $\varnothing 10$ - $\varnothing 600$ mm



MACHINE BED

Machine bed made of grey cast iron. Very massive, solid, specially ribbed, naturally aged ensures thermal stability for a long life and complete stability of the process.

Flat and "V" guideways hand scraped and coated with antifriction material to ensure continuous movement, high accuracy, positioning and repeatability.

TABLE/SLIDE

X- and Z- slides driven by ball screw spindles and AC servo motors. High resolution linear scales to control the position of X- and Z- axes.

Swiveling possibility with the workhead, upper table and wheel slide.



WHEELHEAD

- Combination of grinding spindles for internal cylindrical, taper, face, complex profile grinding. Up to four grinding wheels.
- HF or belt driven internal grinding spindle
- Ceramic, CBN or diamond grinding wheel

B-AXIS

Turret wheelhead with continuous indexing function. With B-axis, up to four grinding spindles can be swiveled to the grinding position. That enables complete grinding to be performed in single clamping. Additionally, touch probe can be mounted for measurement tasks (diameters, face position/distance).

CNC OR NC CONTROLLER

User friendly, with flexible programming options and graphical interface. Availability of input data for analysis and process improvement. Ergonomic control panel, with touch screen, standard keyboard, USB ports. System set-up through Dialogs and Menu, NC programming not required.

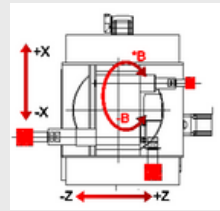
OPTIONS

WORKHEAD

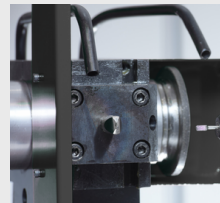


- C-axis rotation control
- Hydrodynamic bearing
- Hydrostatic bearings
- Pneumatic or hydraulic clamping

WHEELHEAD



- Hydrodynamic, hydrostatic, hybrid ceramic bearing
- Turret wheel head (B-axis)



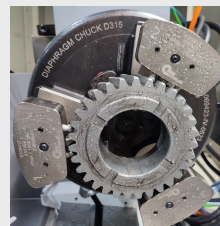
WHEEL DRESSING

- Single point diamond
- Diamond roll/disc
- CNC wheel dresser



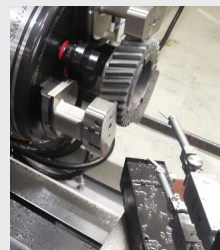
INTERNAL GRINDING SPINDLE

- Commercial and Grindex (belt driven) spindles



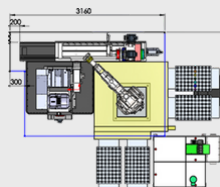
CLAMPING SYSTEM

- 3 or 4 jaws chuck
- Magnetic chuck
- Power actuated clamping system
- Custom tooling



GAUGING AND CONTROL

- In-process and post-process gauging system
- Touch probe
- Gap-crash



AUTOMATION

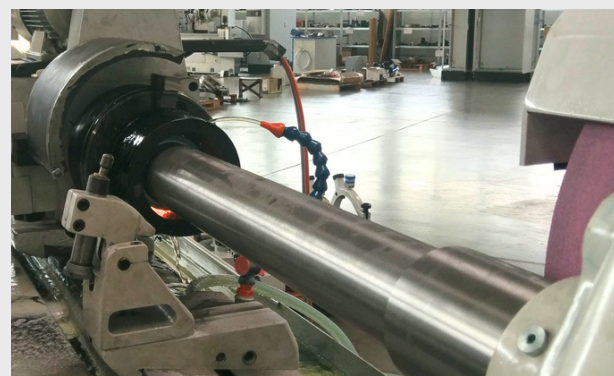
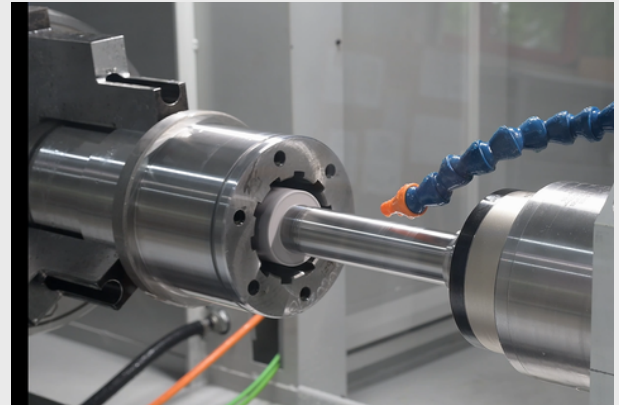
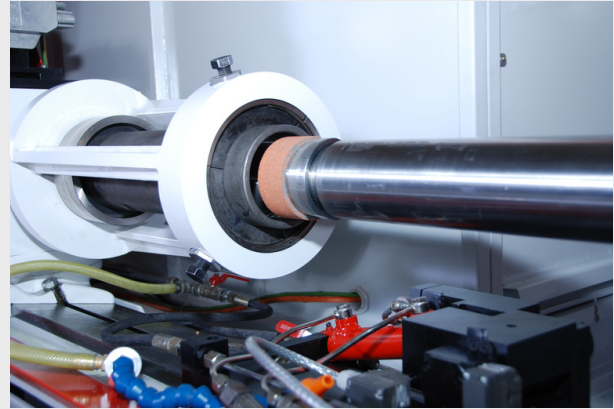
- Robot
- Gantry loader



TECHNOLOGICAL EXPERTISE

We strive to talk to the customer. Our engineers and technicians cooperate with customer in order to supply perfect machine. Grindex provides technological expertise with flow of operations, grinding and dressing method, chuck system proposal, control/gauging system proposal, automation system proposal etc. with priority to reduce cycle time and achieve the best possible workpiece quality.

MACHINING EXAMPLES



TECHNICAL DATA

Main data	UBC UBD UBE
· Internal diameter range	ø10 - ø600 mm
· Swing diameter	350-800 mm
· Max. workpiece dimensions	ø600x1000 mm / ø800x1500 mm
· Max. internal grinding length	1200 mm
· Max. workpiece weight	150/500 kg*
Wheelslide X-axis	
· Travel	200-600 mm
· Max. speed	up to 3000 mm/min
· Resolution	0,0001 mm
Work table Z-axis	
· Travel	750-4150 mm
· Max. speed	up to 5000 mm/min
· Resolution	0,0001 mm
· Swivel angle	up to 9° / 2,5°
Wheelhead	
· Max. internal grinding spindle speed	45000 rpm
B-axis	
· Swivel range	-30° / +210°
· Resolution	1"
· Max. speed	3 600 °/min
Workhead	
· Rotation speed	up to 500 / 200 rpm
· Motor power	1,5-4 kW
· Interface	A6 DIN 55026/MT5 / A11 DIN 55026/MT6
· Swivel angle	0 - 90°
Controller	Siemens Sinumerik One, Siemens Simatic, NUM

*with steady rest

GRINDEX



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