

BBN

EXTERNAL THREAD GRINDING MACHINE

BBN 500

BBN 700

BBN 1000

BBN 1600



GRINDEX



The background of the entire page is a grayscale photograph of a large industrial machine, specifically a CNC external thread grinding machine. The machine is complex, with various metal components, a grinding wheel, and a workpiece being processed. The text is overlaid on this image in a semi-transparent white box.

EXTERNAL THREAD GRINDING MACHINES MODELS BBN 500, 700, 1000, 1600

Ideal for grinding from solid and external thread grinding - all types of external threads, screw surfaces, slots.

Thread diameter range $\varnothing 1$ - $\varnothing 300$ mm, length up to 1200 mm.

CNC machine with standard workhead C-axis and wheelhead A-axis.

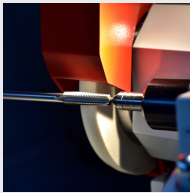
CNC Siemens Sinumerik One control with Grindex software which enables easy set up with user friendly interface for workpiece programming through graphics and screens.

Tailored to the specific needs of every customer.

Complete machining with integrated B-axis which swivels automatically and enables use up to four grinding wheels.

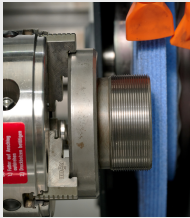
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IDEAL FOR SINGLE AND SMALL-BATCH PRODUCTION



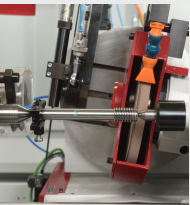
DISTANCE BETWEEN CENTERS

- from 500 to 1600 mm



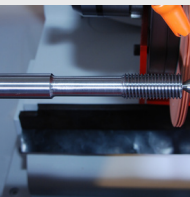
LOAD

- between centers up to 500 kg
- chucked up to 150 kg



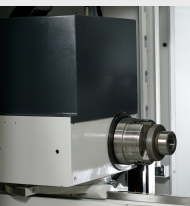
THREAD DIMENSIONS

- length up to 1200 mm
- diameter range $\varnothing 1 - \varnothing 300$ mm



PITCH RANGE

- 0,2-150 mm



HIGH-PRECISION WORKHEAD C-AXIS

- Live and dead center base
- C-axis
- Workpiece rotation control with high-precision encoder
- Encoder resolution 0,001°
- Spindle speed is infinitely adjustable



BASE

Machine base 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.

The option of X-axis travel driven by linear motor. Less wear and minimal maintenance. Extremely high accuracy, positioning and repeatability.

BBN

FOR GRINDING FROM SOLID AND EXTERNAL THREAD GRINDING -
ALL TYPES OF EXTERNAL THREADS, SCREW SURFACES, SLOTS

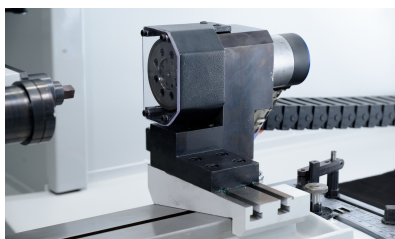


B-AXIS

Turret wheelhead with continuous indexing function and with up to four grinding spindles enables external and internal thread, OD, ID, complex profile grinding to be performed in single clamping.

WHEEL DRESSING

- Single point diamond
- Diamond roll/disc
- CNC wheel dresser
- Single or multi rib dressing

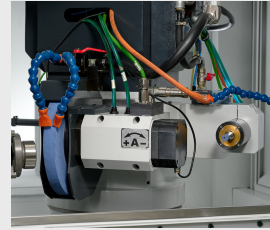


A-AXIS

- Automatically swiveling A-axis for efficient thread grinding
- Swivel angle is ± 40 deg
- Max. two A-axes

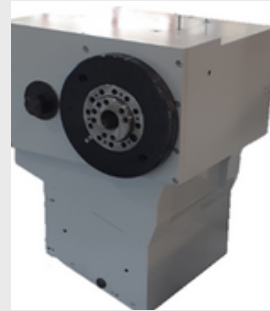
AUTOMATIC WORKPIECE LOADING SYSTEM

Requirements of completely automated manufacturing processes are fulfilled with the incorporation of customised Grindex automatic loading systems e.g. integrated gantry or robot solutions or custom tailored systems. Grindex offers both internal and external loading systems.



WHEELHEAD

- Max. wheel diameter $\phi 400 \times 40 \times \phi 127$ mm
- Dynamic wheel balancing system



OPTIONS:

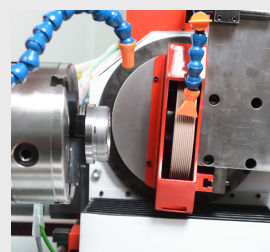
WORKHEAD

- with hydrodynamic or hydrostatic bearings
- Pneumatic or hydraulic clamping
- Custom tooling for clamping



WHEELHEAD

- Hydrodynamic, hydrostatic, hybrid ceramic bearing
- Ceramic, CBN, Diamond grinding wheel



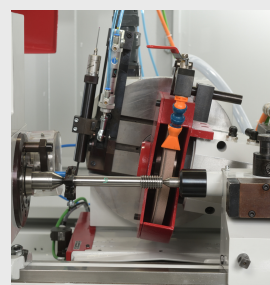
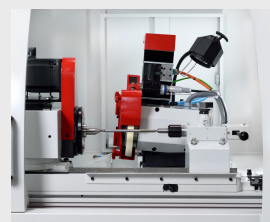
STEADY REST

- Fine adjustment steady rest ideal for follow down grinding
- Self-centering steady rest
- Commercial and Grindex steady rest



CLAMPING SYSTEM

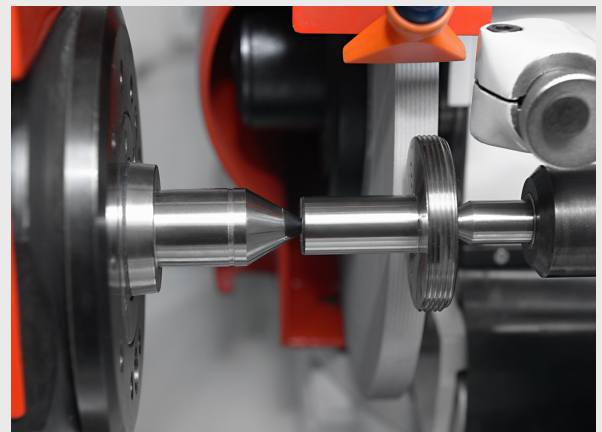
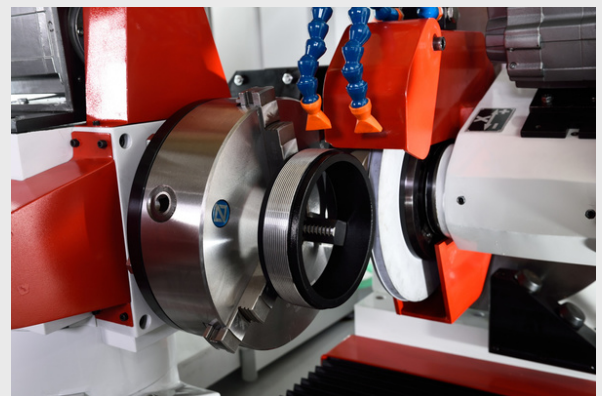
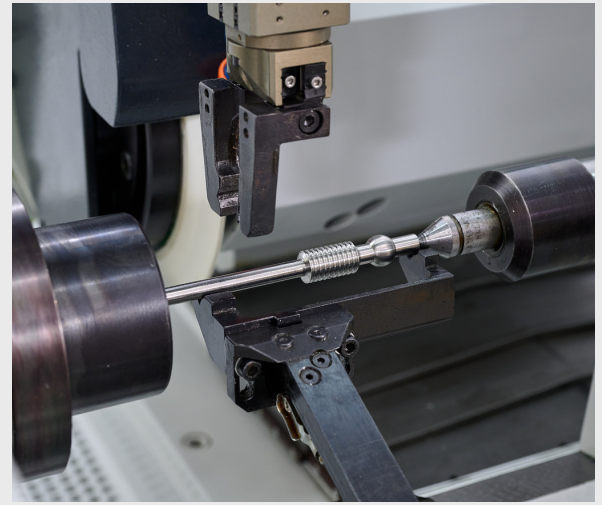
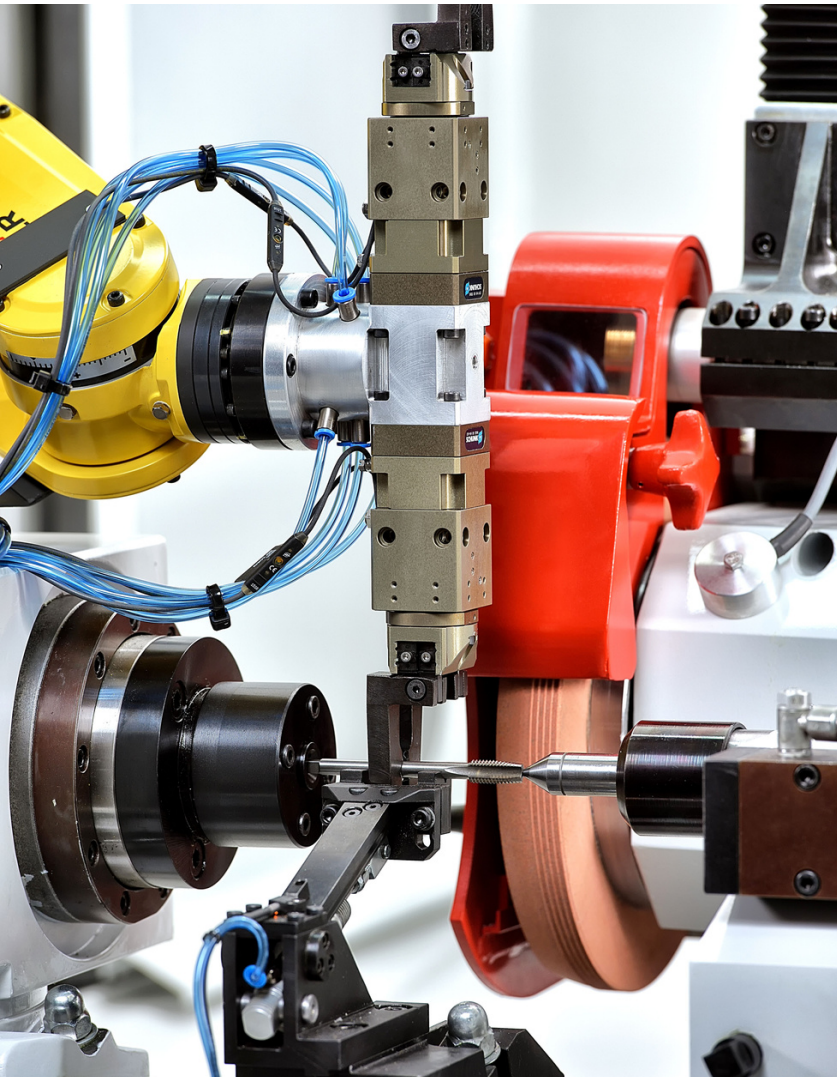
- Between centers, chuck, face driver, power actuated clamping system, collet chuck, custom tooling



GAUGING AND CONTROL

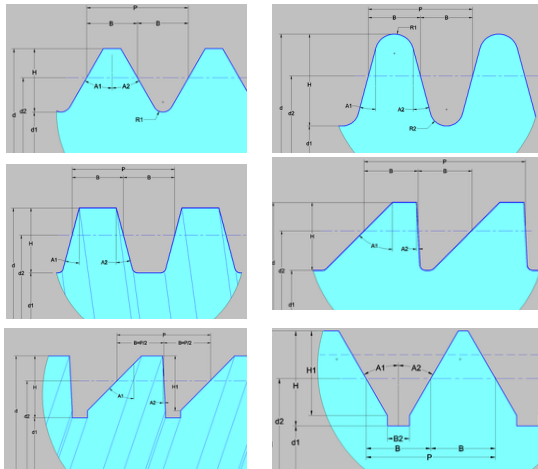
- Touch probe
- Gap-crash - gap, crash, dressing and position control for grinding wheel

MACHINING EXAMPLES



THREAD TYPES

- Metric
- Withwort
- Trapezoidal
- Saw-tooth
- Round
- Screw
- Special



GRINDING POSSIBILITIES

- constant and variable pitch grinding
- grinding of single and multi turn threads
- grinding of left and right threads
- thread pitch correction (by software)
- grinding of cylindrical and taper threads



TECHNICAL DATA

Main data	BBN 500	BBN 700	BBN 1000	BBN 1600
• Distance between centers	500mm	700 mm	1000 mm	1600 mm
• Center height	135 mm	225 mm		
• Thread diameter range	Ø1 - Ø200 mm	Ø15 - Ø300 mm		
• Max. thread length	280 mm	500 mm	700 mm	1200 mm
• Max. workpiece weight (between centers/chuck)	25/10 kg	500/125 kg		
• Pitch range	0,2 - 150 mm			
Wheelslide X-axis				
• Travel	300 mm	400 mm		
• Max. speed	up to 10000 mm/min			
• Resolution	0,0001 mm			
Work table Z-axis				
• Travel	550 mm	780 mm	1150 mm	1750 mm
• Max. speed	up to 10000 mm/min			
• Resolution	0,0001 mm			
Wheelhead				
• A-axis swiveling range	±40°			
• A-axis resolution	20"			
• Motor power	7,4-11 kW			
• Peripheral speed	50 m/s			
• Max. grinding wheel dimensions	ø350 x 32 x ø127	ø400 x 40 x ø127 mm		
B-axis				
• Swivel range	-30° /+210 °			
• Resolution	1"			
Internal grinding attachment				
• Speed range	45000-120000 rpm			
Workhead C-axis				
• Rotation speed	0,1-800 rpm	0,1-400 rpm		
• Motor power	15 Nm	28 Nm		
• Interface	A3 DIN 55026/MT4	A6 DIN 55026/MT5		
• C-axis resolution	20"			
Tailstock				
• Fitting taper	MT2	MT5		
• Controller	Siemens Sinumerik One			

GRINDEX



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