

TECHNICAL DATASHEET

CNC - HIGH PRECISION FLAT and PROFILE GRINDER

Manufacturer	ABA
Type	TM 30.15
Control	Siemens SINUMERK 840 D
Built	2006



Grinding area

Travel X-Axis	4.000 mm
Cross travel (Z-Axis)	1.700 mm
Distance table surface – grinding spindle center	1.050 mm Max.

Table

Electro Permanent magnetic clamping plate with air-blow drilling	3.000 x 1.500 mm
Pole pitch	27,5 mm
Clamping force control	8 steps
Max. workpiece weight	4,5 t

Table drive (X-Axis)

Table speed max.	38.000 mm/min
Hydraulic table drive	

Vertical feed (Y-Axis)

Smallest feed rate	0,001 mm
Measuring system	Glass scale
Electromechanical vertical movement by means of digital servo motor and ball screw	
Central grease lubrication	

Cross feed (Z-Axis)

Smallest feed rate	0,001 mm
Measuring system	Glass scale
Electromechanical vertical movement by means of digital servo motor and ball screw	
Central grease lubrication	

Grinding spindle

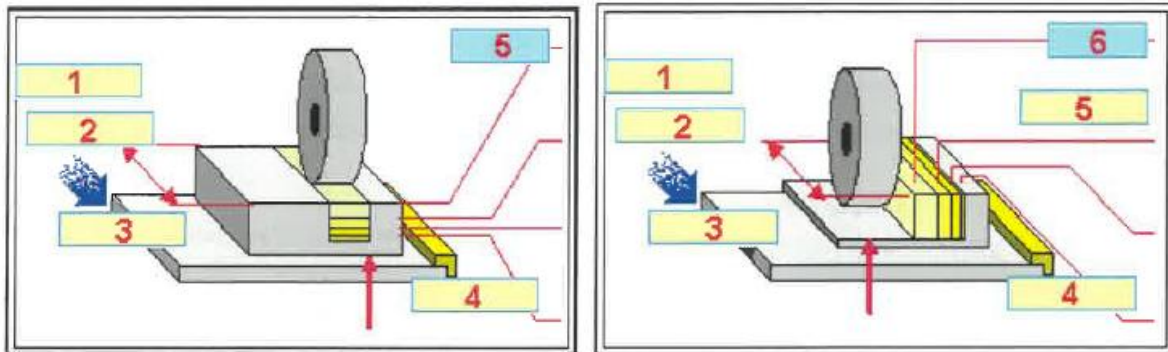
Motor - Version	AC - motor adjustable
Power	35 kW
Spindle bearings	Axial and radial backlash-free
Grinding wheel dimension max.	500 x 150 x 203,2 mm
Grinding spindle with anti-friction bearings in block design with preloaded high-precision spindle bearings and grease permanent lubrication, spindle preloaded axially and radially without backlash.	
Grinding wheel cutting speed max.	35 m/s
External balancing system MPM, Type BMT150M	

Steuerung

SIEMENS SINUMERIK 840 D
With TFT color monitor
Modular 32-bit microprocessor-based CNC path control with integrated, high-performance PC.
Operating system: Network-compatible Windows version
Manual input via keyboard or TEACH-IN
Pre-programmed aba z&b cycles for graphics-based user guidance and programming
Can be integrated with common handling and automation systems
Modular control system design
Axis drives using digital technology

Grinding technologies

- Flat grinding
- Manual grinding (manual surface, plunge and face grinding)
- Plunge grinding
- Groove and face grinding



- Flat profile dressing
- Standard profiles can be programmed directly at the control panel. The geometry of the standard profiles is stored in the tool memory.
- Job-Listing: Automatic program sequence with roughing, finishing, fine finishing, spark-out
- Tool management

Dressing technologies

Table dresser - straight - TAG:

Dresser for cylindrical dressing of grinding wheels

Table dresser TAW-R:

Dresser with driven diamond wheel

Table dresser with single diamond:

Slightly angled single-grain diamond for easy dressing of the grinding wheel

Connection data

Operating voltage	3x 400 V
Frequency	50 Hz
Nominal current ca.	75 A
Backup fuse ca.	125 A
Space requirement ca.	11.000 x 5.600 mm, Height 3.200 mm
Weight ca.	48.000 kg

Sonstige Ausstattung bzw. Zubehör

- Linear measuring systems on the Y and Z axes
- All linear axes equipped with digital servo motors and ball screws
- Belt filter system with paper belt filter, tank capacity approx. 1,000 L, and level monitoring
- Manual coolant nozzles
- Electric permanent magnet plate 3,000 x 1,500 mm, transverse pole pitch 18 mm, and air blow holes for easier removal of flat components
- MPM electric grinding wheel balancing unit (external)
- Fully enclosed work area with work area light, open at the top for crane loading
- Generously sized work area doors on both sides, safety interlock in automatic mode
- Portable electronic handwheel for automatic and manual operation of all axes
- 2-channel exhausting unit
- M5000 probe from Dittel with display for monitoring grinding processes via Acoustic Emission (AE). Detection of contact, wear, collisions, and grinding wheel breakage. For increased process reliability and workpiece quality.
- Electrical equipment 400V/50Hz
- Levelling elements
- Paint finish RAL 7035 (light gray), RAL 5010 (gentian blue)
- Flushing gun with hose and mount in the operating area
- Various grinding wheel flanges and wheels



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FLECKENSTEIN

Werkzeugmaschinen

Technisches Datenblatt

CNC–Profilschleifmaschine

ABA Powerline 1006

