

TECHNICAL DATA  
CNC-Precision Surface and Profile Grinding Machine

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manufacturer	<b>ABA</b>
type	<b>ECOLINE 1005</b>
control	<b>SINUMERK 840 D</b>
built	<b>2006</b>

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#### Grinding range

Grinding length	1.000	mm
Grinding width	600	mm
Distance table surface – grinding spindle centre	700	mm
Travel vertical	530	mm

#### Work piece table

Electro permanent magnetic plate	1.000 x 500	mm
Pole pitch	18	mm
Clamping force	8 levels	

#### Table drive

Linear drive with absolute linear measurement, cooling system for X-axis		
Table speed	10-60	m/min
Pre-tensioned linear guidance		

### Automatic vertical feed

resolution	0,001	mm
Min. feed size	0,001	mm
Measuring system	Linear scale	
Ball screw with AC-servo-motor, pre-tensioned linear guidance		

### Cross feed

resolution	0,001	mm
Min. feed size	0,001	mm
Measuring system	Linear scale	
Ball screw with AC-servo-motor, pre-tensioned linear guidance		

### Grinding spindle head

Motor - execution	AC- servo motor, air cooled	
power	18	kW
Grinding spindle speed variable	1.000 – 2.600	Min-1
Spindle bearing	Axial and radial at zero backlash	
Grinding wheel size	400 x 60 x 127	mm
Grinding spindle mounted on axial and radial pre-tensioned, high-precision spindle		
Bearing with grease lubrication, zero backlash.		
Max. circumferential speed of grinding wheel	35	m/s
Balancing unit MPM		

### control

NC-Superplus D (SINUMERIK 840 D)  
With operator panel OP 10  
With digital drives and integrated adaption control

This menu is simple and structured with logical dialog programming, By standard functions and Easy comprehensible macros, different programs can be activated, so that the operation can also be executed fast and secure by less trained users.

Features:

- Digital position indicator with big colored display
- Graphic-supported input of workpiece data
- Manual positioning during automatic mode possible
- Positioning one or both-sided
- Control for constant cutting speed, alarms and errors in clear text
- Remote diagnostics

### Technology grinding

- manual grinding
- Surface grinding
- Plunge grinding
- Plunge grinding chain size
- Front grinding
- multiple-plunge grinding
- grinding wheel management (optional no. of grinding wheels)
- night operation
- JOB-Listing
- Operating hours counter (spindle ON)
- Manual overlapping Z-axis surface grinding
- Take-over CAD- profil data
- Guideway grinding X-/Y-axis
- Safety Integrated

### Technology dressing

- Straight dressing TAG
- calibration (TAW, TAW-R)
- Face dressing (TAW, TAW-R)
- Angle dressing (TAW, TAW-R) (profil software)
- Radii dressing (TAW-R)
- Straight dressing (TAW, TAW-R)
- V-profil dressing(TAW, TAW-R)

### Accessories dressing

Table dresser straight TAG:

Dressing device mounted on machine table, roughing and finishing diamonds are arranged in Line, cylindrical dressing of grinding wheels for surface and plunge grinding, suitable for corundum and SiC-wheels

Table dresser –angle wheel- TAW-R:

Suitable for diamond wheel PKD, D = 130, R 0 0 ,15 mm

#### accessories

- Linear measuring system in all axis
- Linear drive table
- Temperature control of linear drive for X-axis (table)
- Coolant unit with band filter, capacity 360 l, coolant pump 60 l/min circulation 90 l/min
- Coolant recooling
- Coolant gun
- Manual adjustment of coolant nozzle holder
- Emulsion-mist collector, load max. 1.600 m<sup>3</sup>/h
- Sealing air for measuring system and grinding spindle
- Electro-permanent-magnetic plate 1.000 x 500 mm, pole pitch 18 mm
- Grinding wheel balancing system MPM
- Part housing of working area with manual doors, safety swith automatical
- Portable electronical hand wheel with automatic operation and manual mode for all axis
- Machine light
- Electrical equipment 400V/50Hz
- Coolant unit with temperature display
- painting RAL 7035 (light grey), doors RAL 5015 (sky blue)