

TECHNICAL DATA
CNC – Precision Surface and Profile Grinding Machine

manufacturer	BLOHM
type	PLANOMAT HP 412 CNC
control	SINUMERK 840 D
built	2008



Grinding range

Grinding area	1.200x400	mm
Travel cross (Z-axis)	360	mm
distance table surface - grinding spindle center	700	mm max.
Travel vertical (Y-axis)	550	mm

Workpiece table

Electro permanent magnetic clamping plate	1.200 x 400	mm
Swing-pole pitch	18	mm
Clamping force control	8	steps

Table drive (X-axis)

Digital servo motor with ball screw drive and angle encoder in the longitudinal axis (X-axis)		
Table speed	30-40.000	mm/min
Pretensioned precision rolling guide		

Automatic vertical feed (Y-axis)

Resolution	0,001 mm
Smallest feed size	0,001 mm
Measuring system	linear scale
Distance spindle centre - table	150 - 700 mm
Grinding head vertical	550 mm
Ball screw drive with servo motor and planetary gearbox, pretensioned precision rolling guide	

Cross feed (Z-axis)

Resolution	0,001 mm
Smallest feed size	0,001 mm
Measuring system	linear scale
column cross max.	360 mm
Ball screw drive with servo motor, preloaded precision rolling guide	

Grinding spindle head

Motor - version	Three-phase motor adjustable
power	15 kW ab 1.000 min-1
Grinding spindle speed adjustable	45 – 6.000 min-1
Spindle bearing	axial and radial back-lash free
Schleifscheibenabmessung max.	400 x 80 x 127 mm
Rolling bearing mounted grinding spindle in block design with pretensioned high precision spindle bearings and permanent grease lubrication, spindle axially and radially pretensioned backlash-free.	
peripheral grinding wheel speed	35 m/s
Automatic grinding wheel balancing system make DITTEL, type SIE: Automatic balancing of the grinding wheel on the grinding spindle without stopping the spindle drive.	

control

SINUMERIK 840 D

- With 10.4" TFT colour monitor
- Ms-Windows user interface module PCU 50 with graphical user interface
- With digital drives and integrated matching controls
- CNC user memory 1.5 Mbyte for programs and data
- Main memory 256 Mbyte SDRAM
- Hard disk 40 GByte, of which 3 Gbyte freely available for user programs
- MPI interface, USB V 1.1 (1 x external, 1 x internal), Ethernet 10/100 Mbps
- Floppy disk drive interface
- User-friendly manual grinding and automatic grinding sequences
- Graphic-supported input of workpiece data
- Infeed in automatic mode can be selected on one or both sides
- Constant cutting speed control, error messages in plain text

Technology grinding

- L 929 Preparation for path grinding
- L 930 Deep grinding
- L 933 Plunge grinding intermittent
- L 934 Flat grinding intermittent
- L 935 Surface grinding manual
- L 936 Plunge grinding with manual infeed
- L 937 Surface hand intermittent
- L 938 Surface continuous

Technology dressing

- L 941 Circumferential dressing from table

auxiliary cycles

- L 993 Approach safety height
- L 994 Move to loading position

Other equipment and accessories

- Linear measuring systems in all three axes
- All linear axes with digital servo motors and ball screw drive
- Coolant system with paper band filter, tank capacity 1,200 l, coolant pump 200 l/min/4 bar
- Automatic coolant nozzles - tracking
- Automatic work area door pneumatically controlled
- Electro-permanent magnet plate 1.200 x 400 mm, pendulum pole pitch 18 mm
- Automatic grinding wheel balancing device DITTEL
- Complete enclosure of the work area with automatically operated door, safety guard locking in automatic mode
- Portable electronic handwheel in automatic and manual mode for all axes
- Machine lamp in the working area
- Three-colour signal lamp
- Electrical equipment 400V/50Hz
- Coolant device for electrical cabin
- Painting RAL 9002 (grey white), RAL 5010 (gentian blue)