

TECHNICAL DATA  
CNC-Profile Grinding Machine

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manufacturer	<b>GLEASON PFAUTER</b>
type	<b>P 2800/3200 G</b>
control	<b>SINUMERIK 840 C</b>
built	<b>2002</b>

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### Working area

Nominal workpiece diameter for external grinding head	3.000 mm
Max. Radial travel (X axis)	1.620 mm
Max. Tangential travel (Y axis)	300 mm
Max. Axial travel (Z axis)	1.600 mm
Max. Profile depth	80 mm
Grinding spindle swivel angle (A-axis)	+/- 45 degrees
Max. modul	32 mm

## workpiece table

Outside diameter	2.500	mm
Bore diameter x depth	Ø 800 x 900	mm
Max. permissible load	30.000	kg
Max. Table speed	2	1/min
Hydrostatic radial bearings		
Axial plain bearing		
Automatic hydraulic table relief		

## Grinding Spindle

Drive power	24	kW	medium-frequency three-phase motor, liquid-cooled
Max. modul	32	mm	
Speed range	1.200 – 8.000	1/min	
Grinding mandrel -Ø	80	mm	
Grinding wheel max. dimension	400x80x127	mm	
Integrated automatic balancing device			

## Feeds and rapid traverses

Axis X	3	m/min
Axis Y	5	m/min
Axis Z	6	m/min

## Dimension, weight

Space requirement approx	100	m <sup>2</sup>
Machine weight approx.	55.000	kg

## Electrical connection values

total connected load	80	kVA
operating voltage	400	V
operating frequency	50	Hz
control voltage	24	V DC

### CNC - Control SINUMERIK 840 C

- Modular design in 1-channel configuration
- 5 axes + 1 spindle and gear interpolation
- 19" flat control panel with 10" TFT display
- 40 Mbyte hard disk capacity
- Electric override with emergency strategy
- Incremental measuring systems
- Digital drive technology
- operating handset

### Gearing software

- warm-up program
- Extended software for fault diagnosis
- Phone Diagnostic System
- temperature recorder
- Non-entanglement grinding
- Grinding of double helical gears
- Dialog programming for the automatic generation of part programs for profile
- Grinding of external or internal gears.
- Automatic cutting division
- centering device
- Grinding of external and internal gears
- Gear measurements for involute external or internal gear workpieces  
The following measurements can be performed: Profile measurement, flank line measurement, pitch and concentricity testing, tooth width measurement

### Internal grinding head with grinding arm - I2

Max. Swing diameter	3.700	mm	
Max. Inner diameter with/without measurement	1.100	mm	
Max. Ring thickness	300	mm	
Max. Grinding width with straight toothing	550	mm	
Max. Profile depth	55	mm	
Max. Grinding head - swivel angle	+/- 45	Grad	
Grinding spindle speed	1.000–4.500	min-1	27 kW

### Machine description and equipment

- Basic machine P 2800/3200 G
- NC dressing device with two dressing spindles and additional feed axis
- Power dressing
- Software for fault diagnosis
- Super special accuracy
- Phone Diagnostic System
- Centre device with touch probe
- Dust exhausting
- Temperature recorder
- Automatic cutting division
- Non-entanglement grinding
- Grinding of asymmetric flank line modifications
- Special software for double helical gears
- Gear measurement according to DIN 3961 or AGMA 2000-A88 (external and internal gearing)
- Main column raised (vertical travel 1,600 mm)
- Single centre device with touch probe for external and internal gearing
- Gear measurement of external and internal gears
- Measurement of head and root diameter of external and internal gears
- Colour printer for input data and measurement evaluations
- Internal grinding head I2
- NC dressing device for internal grinding head
- Changing device for external and internal grinding head
- Workpiece table with separate servo drive and 1-speed double worm gear unit
- Hardened and ground ball screws with preloaded nuts
- Full coverage of the working area
- Hoffmann coolant system, tank capacity 3,000 litres, 2 x 200 l/min pump capacity, coolant cleaning with fine filter (without using filter consumables)
- Oil recooling system with cooling circuits for the lubricating and cooling lubricant system as well as for the grinding spindle drive
- Machine without steady rest