

TECHNICAL DATA
CNC-Gear Shaping Machine

manufacturer	GLEASON PFAUTER
type	GP 200 ES
control	SIEMENS 840 D
built	2002



CNC gear shaping machine for shaping internal and external spur and helical gears. Due to the electronic helical guidance also very well suitable for small lot sizes and prototypes.

Technical Data – external toothing

Nominal module	6 mm	in steel with tensile strength approx.
Max. Tooth width	100 mm	
Max. Nominal diameter	200 mm	
Max. Angle of helix (with use of slotted cutting wheels with Ø 125mm)	+/- 45 °	

Technical Data – internal gearing

nominal module	6 mm	In steel with tensile strength approx. 600N/mm ² .
Max. Tooth width	100 mm	
Max. Swing diameter	350 mm	
Largest inside diameter	200 mm	

Machine + Tool

Max. Tool diameter	Ø 125 mm
Max. Slide travel radial (X-axis)	230 mm
Manual transverse movement of the column (Y-axis)	+/- 25 mm
Adjustment travel of the axial slide (Z axis)	250 mm
Max. Stroke length (Z2 axis)	110 mm
column inclination range (B-axis)	0-12 °
Shaping spindle - Ø	95 mm
Adjustment range of spindle nose	+/- 25 °
<u>Cutting wheel pick-up:</u>	
Diameter	1 ¾
Taper in the HSK-B80 push-rod spindle	HSK-B80
Outside diameter of the workpiece table	168,14 mm
Bore of the workpiece table	65,519 mm

Electronic helical guide

- The additional rotation required for helical gears in the CNC control can be superimposed on the pure shaper spindle movement by means of coordinated application software.
- All gear, tool and technology data (including the helix angle to be machined) are entered without mechanical intervention only via the dialog program. The control then calculates all the necessary machine parameters.
- Elimination of the time-consuming and sometimes complex replacement of the mechanical inclined guides
- Problem-free correction of flank line angle corrections from one part to the next
- Helix angles greater than 45° and extremely small pitches for external and internal gears can also be produced.

Feed, Speed

Feed rate X-Axis	1 bis 6.000	mm/min	
rapid traverse X-axis	6.000	mm/min	
rapid traverse X-axis	2.000	mm/min	
Workpiece table speed (C axis)	0 bis 1.000	min-1	
Cutting wheel speed (C2 axis)	0 bis 200	min-1	
ram stroke number	80 bis 800	DS/min	Double Stroke/minute

Electrical connection values

Electrical connection values	48	kVA
total connected load	3x400	V
operating frequency	50	Hz
control voltage	24	V DC
cable cross-section	35	mm ²
protection	70	A

Dimension, weight

Space requirement approx.	4,5 x 4,1 x 3,3	m
Machine weight approx.	10.000	kg

Equipment

- Swivelling control panel
- Switch cabinet with cooling unit
- Full coverage of the working area
- counterholder
- Shaping spindle and lifting of the shaping head hydrostatically mounted
- Lubrication and hydraulic unit
- Electronic inclination adjustment
- Magnetic belt conveyor make NSM
- Vibration isolating machine installation using damping shoes (included in scope of delivery)
- Oil cooler make BKW
- Oil mist extraction make IFS