

TECHNICAL DATASHEET

CNC – Gear Hobbing Machine

Manufacturer	LIEBHERR
Type	LC502
Control	SIEMENS Sinumerik 840D sl
Built	2013



Working Area

Max. gear diameter	Ø 500	mm
Max. Toothing width (axial travel)	400	mm
Max. module	10	mm
Max. Distance from table to counterholder	1.120	mm
Max. Distance from table to center of milling spindle	585	mm
Min./max. center distance between milling spindle and table center	50 / 475	mm

Working table

Table diameter	Ø 420	mm	
Table bore	Ø 150	mm	H7
Table equipped with hydraulic clamping device			

Milling spindle

Speed range	48 - 480	1/min	Stepless
Swivel range	+/- 50	°	A-Axis
Cutter holder	SK40		
Tangential path of the milling carriage	200	mm	
Max. Cutter diameter	Ø170	mm	
Max. milling cutter width	250	mm	

Electronical Gearbox

The control system contains an electronic gearbox that enables synchronized movement between the cutter drive, the feed axes Y and Z and the table drive without having to rely on mechanical transmission elements.

Two types of gearbox are available to the user:

- Single-part gearbox for generating spur gears and other profiles in the **single-indexing method**
- Generating gearbox for generating spur and worm gears using **the axial or tangential method** with the option of radial plunging. The gearbox also allows synchronous shifting

Application interface with technology masks

In addition to the manual operation of the machine axes via the machine control panel, all machine-specific special functions can be executed using special keys.

The machine can also be operated directly in the working area using a handheld control device with a handwheel. The workpiece parameters are entered via the control's LCD display.

Workpiece and tool masks

- Input mask for workpiece and tool data and for gear activation
- Correction mask for entering the program start point and for correcting the tooth width
- Memory mask for archiving workpiece and tool data

Technology screens

- Simple axial milling
- Two-cut axial L program
- Two-cut axial R program
- Program for spherical milling
- Program for conical milling
- Single-part program with the option of segment milling
- Trough milling

Connection Data

Operating Voltage	400 V
Operating Frequency	50 Hz
Total Power Connection	55 kVA

Machine Dimensions

Space requirements approx.	6.2 x 4.2 x 3.3 m	Machine only
Weight approx.	10,500 kg	

Equipment and Accessories

- High-performance CNC gear hobbing machine LIEBHERR LC502, particularly suitable for spur and helical gears as well as worm gears
- Very well-equipped gear hobbing machine with SINUMERIK 840D solution line CNC control and SINAMICS digital drive technology incl. motors
- Counter holder with tailstock, hydraulically movable
- Handheld control unit
- Electronic gearbox for all gear and single part processes
- Air-conditioned control cabinet with front-mounted machine control panel
- Hydraulic and cutting oil unit, approx. 160 l/min
- Chip conveyor
- Oil mist extraction system
- Hydraulic clamping device in the table
- Documentation



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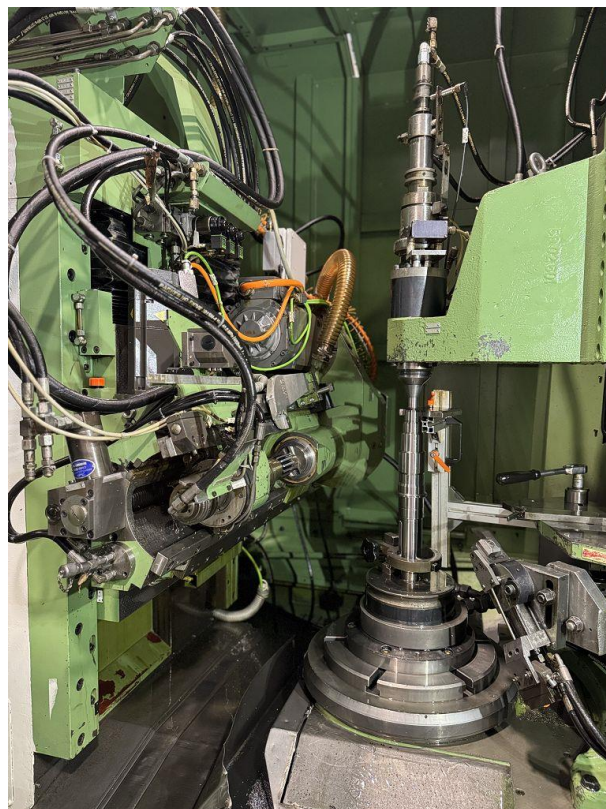
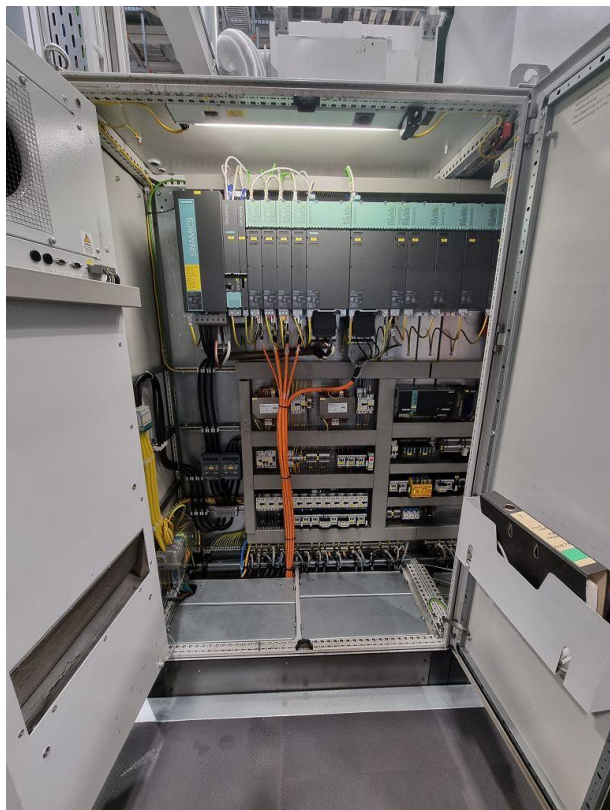
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