

Lathes

- 1 "MAZAK Quick Turn 20" CNC Lathe
Max. turned diameter 250 mm, max. distance between centres 1000 mm, drive output 18.5 kW
Controller: Mazatrol T2
- 1 "Weipert SS", SC and Bar Lathe
Centre height 280 mm, max. distance between centres 2000 mm, digital display, rapid traverse, upper carriage feed
- 1 "Gema SS", SC and Bar Lathe
Centre height 160 mm, max. distance between centres 1000 mm

Milling and Boring Machines

- 1 "SHW - UFZ 6 L" Travelling Column Machining Centre
X-axis = 16000 mm, Y-axis = 2600 mm, Z-axis = 1600 mm
with tool changer for 90 tools, automatic probe, spindle drive output 37 KW, the universal drilling head turn in two directions and allows to program and work on surfaces of 61200 different angles.
Controller: Heidenhain TNC 430M crane capacity: 50 t
- 1 "Danobat Soramill FS 16000" CNC Travelling Column Machining Centre
X-axis = 16000 mm, Y-axis = 3300 mm, Z-axis = 1500 mm
with tool changer for 60 tools, automatic probe, spindle drive output 25 KW, reversible clamp with tailstock 1250 x 1250, 4-axis machining, CNC controlled turning table for horizontal and vertical use, also for milling of spirals
Controller: Heidenhain 430 PA crane capacity: 50 t
- 1 "Heckert FBU 1250" CNC Travelling Column Machining Centre
with tool changer for 60 tools, automatic probe, spindle drive output 30 kW, X-axis travel 5500 mm, Y-axis travel 1250 mm, Z-axis travel 1000 mm; with reduced milling capacity, the Y-axis travel can be increased to 2400 mm by turning the universal milling head. The CNC universal milling head allows four-sided machining in one position as well as inclined surfaces in 4 planes. Drilling work can be performed in inclined planes.
A-axis rotation range 180 x 1 degree
B-axis rotation range 360 x 1 degree
Controller: Heidenhain TNC 415 A crane capacity: 10 t
- 1 "MAZAK V15N" CNC Vertical Machining Centre
with tool changer for 40 tools, double pallet changer and automatic probe; spindle drive output 15 kW
X-axis = 1500 mm, Y-axis = 635 mm, Z-axis = 550 mm (+ 200)
Controller: Mazatrol M 2
- 1 "MAZAK V550" CNC Vertical Machining Centre
with tool changer for 60 tools, automatic probe, spindle drive output 26 kW
X-axis = 1550 mm, Y-axis = 560 mm, Z-axis = 550 mm (+ 200)
Controller: Mazatrol M 32

- 1 "Cincinnati Milacron Arrow 1000" CNC Vertical Machining Centre
X-axis = 1020 mm, Y-axis = 510 mm, Z-axis = 560 mm
with automatic tool changer for 21 tools and automatic probe, vertical round table as a fourth axis, spindle rotation speed up to 8000 rpm, spindle drive output 11 KW
Controller: Heidenhain TNC 426
- 2 "Auerbach FBE 1200" CNC Plano Milling Machines
with hydromechanical tool clamping, manually adjustable universal milling head for horizontal and vertical machining
1 with spindle drive output of 18 kW and
1 with higher spindle drive output of 22 kW
X-axis = 1200 mm, Y-axis = 600 mm, Z-axis = 600 mm
Controller: Heidenhain TNC 360
- 1 "SHW - UF 15" Universal Tool Milling Machine
with double spindle inclined turret head with programmed movement for horizontal and vertical machining, extending quill for vertical spindle, spindle travel 115 mm, spindle drive output 10 kW, speed range 36 - 6000 rpm, hydromechanical tool clamping, CNC rotary table with hydraulic tilt facility in three planes +/- 30 degrees
X-axis = 800 mm, Y-axis = 650 mm, Z-axis = 550 mm
Heidenhain TNC 415 controller and TS 120 probe
- 1 "MAHO 600 P" Universal Tool Milling and Boring Machine
with TNC 135 screen, positioning and path controller, travel 500 mm longitudinal, 400 mm transverse and 400 mm vertical
- 1 "MAHO 800" Universal Tool Milling Machine
travel 700 mm longitudinal, 450 mm transverse and 450 mm vertical, table work-holding area 800 mm x 500 mm; digital display for all three axes, resolution 0.005 mm, universal work-holding table with 30 degree tilt facility in 4 planes and rotatable through 360 degrees and swivelling vertical milling head with boring quill and 120 mm travel
- 1 "Hurth" Slot Milling Machine
for feather key slots up to 25 mm x 400 mm
- 1 "Fehlmann Picomax 51 DC" Precision Co-ordinate Boring and Milling Machine
with NC cross table
X-axis = 450 mm, Y-axis = 260 mm, Z-axis = 120 mm (+ 450)
Controller: Visulesta 4

Grinding Machines

- 1 "WMW" Internal Circular Grinder
with automatic face grinding facility, min. ground diameter 10 mm, max. ground diameter 160 mm, max. ground depth 200 mm and max workpiece length 400 mm
- 1 "WMW Type SA5" External Circular Grinder
Centre height 135 mm, max. distance between centres 1000 mm, max. workpiece weight 125 kg
- 1 "ELB" Flat Grinder
Max. ground length 2000 mm, max. ground width 600 mm, max. ground height 600 mm, max. table load 1000 kg, automatic dressing compensation; various magnetic plates, sine table and precision clamping vices

Further Options

- 1 "Rausch" Broaching Machine
with 6, 8, 10, 12, 16, 20, 25 and 32 mm square broaches and for feather key slots
from 3 mm to 18 mm
- 1 "SUNNEN" Horizontal Honing Machine
for honing parts up to 500 mm in length and 10 to 80 mm in diameter
- 1 "WMW" Radial Boring Machine
56 mm drilling capacity, 1600 mm working radius
- 4 Boring Machines of various makes
up to 30 mm drilling capacity with automatic thread cutting facility
- 1 "Mössner" Band Saw
up to 250 mm diameter with automatic feed
- 1 "Trennjaeger VC 360" Circular Cold Saw
up to 110 mm square and up to 120 mm diameter with swivelling saw blade for
mitring up to 45 degrees
- 1 "Mössner" Vertical Band Saw and Filing Machine
- 1 "Schlotz" Cross Table
with pneumatic central clamping, travel 200 x 300 mm; for boring series production
parts according to template, the table has a digital display for boring one-off parts;
resolution 0.01 mm

Machine Accessories

Rotary tables, parting-off attachments, facing and boring heads, hydraulic vices, magnetic work-holding plates, hydraulic clamping attachments, centring probes, precision clamping vices, hydraulically and pneumatically operated power chucks, pneumatic collet chucks, chucking attachments, self centring pneumatic steadies.

Probing and Gauging

- 1 "Zeiss Eclipse 700 CNC" measuring machine
X = 700 mm, Y = 1000 mm, Z = 580 mm

On request we generate probing reports on the products so that an external QA testing is not needed.

Limit probes, pincer limit probes, thread gauging probes, thread gauging rings, taper measuring probes, taper reference gauges, granite verification base, three-point internal feature probes, pneumatic drill probe, height probe, height micrometer; internal, external and depth micrometer, groove micrometer, slot gauges, parallel stop measures, hardness testers, microprocessor-controlled vertical height probe with 0.001 mm resolution, tool pre-setting unit

AlphaCAM from Messrs. Licom System APS external programming station software