



**OBSERVATOR**

precisiotechniek

**Machinelist**

## Lathe

<b>Traub Lathe</b>	TNL32 System TX 8i-P (7 axis)( With tooldrive) 27 tool holders  incl. Bar feeder FMB	max. diameter Slide travel X Slide travel Z C-axis Y-axis	ø32mm 140 mm 320 mm -20+40
<b>CNC Lathe</b>	MORI SL 154 Y CNC control Fanuc MAPPS (4 axis) (With tooldrive) 12 tool holders	max. diameter Slide travel X Slide travel Z C-axis Y-axis	300 mm 215 mm 490 mm 360° 60mm
<b>CNC Lathe</b>	MORI SL35 CNC control Fanuc (2 axis) 12 tool holders	max. diameter Slide travel X Slide travel Z Bore max. diameter Between the centers	300 mm 215 mm 490 mm 90mm ø 600 mm 750 mm
<b>CNC Lathe</b>	MORI SL25 CNC control Fanuc (2 axis) 12 tool holders  incl. Bar feeder	max. diameter Slide travel X Slide travel Z Bore max. diameter Between the centers	300 mm 215 mm 490 mm 70 mm ø 500 mm 550mm
<b>NC Lathe</b>	Kern DMT 282-Teach In With tooldrive Heidenhain 620 control	center height center distance max. diameter max. bore	140mm 500mm 280 mm ø 45 mm
<b>Lathe</b>	Weiler Ergodor B digital readout	center height center distance max. diameter max. bore	145 mm 470 mm 300 mm ø 35 mm
<b>Lathe</b>	A.I. (Hembrug) DR1-L digital readout	center height center distance max. diameter max. bore	133 mm 750 mm 270 mm ø35 mm
<b>Lathe</b>	Huvema digital readout	center height center distance max. diameter max. bore	160 mm 1000 mm 320 mm ø 38 mm

<b>Lathe</b>	TOS S32	center height	155 mm
		center distance	750 mm
		max. diameter	320 mm
		max. bore	ø 35 mm

<b>Lathe</b>	Boehringer DM640
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## Milling

<b>CNC Milling Millingcenter</b>	HERMLE C12-5 axis Simultaan Heidenhain TNC640 71 tool holders with MTS Erowa pallet system	slide travel	x-axis 350 mm
			y-axis 440 mm
			z-axis 330 mm

<b>CNC Milling Millingcenter</b>	HERMLE C20-5 axis Simultaan Heidenhain TNC530i 30 tool holders	slide travel	x-axis 600 mm
			y-axis 450 mm
			z-axis 450 mm

<b>CNC Milling Millingcenter</b>	DMU 60E Heidenhain 426 25 tool holders	slide travel	x-axis 600 mm
			y-axis 525 mm
			z-axis 500 mm

<b>CNC Milling Millingcenter</b>	MAHO 800P NC-control	slide travel	x-axis 700 mm
			y-axis 500 mm
			z-axis 450 mm

<b>CNC Milling machine</b>	Deckel FP3A CNC control Contour3	slide travel	x-axis 400 mm
			y-axis 400 mm
			z-axis 400 mm

<b>Milling machine</b>	FGV32	slide travel	x-axis 900 mm
			y-axis 300 mm
			z-axis 300 mm

<b>Milling machine</b>	Deckel FP1 digital readout	slide travel	x-axis 300 mm
			y-axis 150 mm
			z-axis 340 mm

<b>Milling machine Universal</b>	First LC-1 ½ VS digital readout	slide travel	x-axis 880 mm
			y-axis 265 mm
			z-axis 350 mm

<b>EDM Wire cutting</b>	Fanuc Robocut 1iD 5 axis control	slide travel	x-axis 600 mm
			y-axis 400 mm
			z-axis 410 mm

<b>EDM start hole cutting</b>	Matra BT2	slide travel	x-axis 250 mm y-axis 250 mm z-axis 330 mm w-axis 200 mm
<b>Drill small</b>	Flott TB6	workspace	170 x 170 mm
<b>Drill small</b>	Ixion BST 6	workspace	170 x 170 mm
<b>Drill</b>	Cincinnati Milacron PE26 MH	max. dia 360 mm workspace	430 x 427 mm

## Metal sheet

- Guillotine Shears Jorg 4002 breedte 1050 mm, voetbediend
- Folding machine

## Grinding and Polishing

<b>Grinding</b>	Jumag 400	400x160mm	
<b>Grinding</b>	Deckel (engraving)		
<b>Läpmachine</b>	Hubert DW481 (duplo)	Engis MM 980 Engis MM 992	24" dia 24" dia
<b>Blasting machine( glass)</b>	Sybrandy S61	Dimensions door 600 x 740 mm (bxh) Dimensions floor 750 x 980 mm	
<b>TIG Weldingmachine incl. manipulator</b>	Hoekloos TIG175G	5-200 Amp. (175 Amp. Bij 30%)	
<b>Brazing equipment</b>			
<b>Diamant sawing machine</b>	Heatway		
<b>Ultrasonic bath</b>	Branson 3200-E Sonicolor SC 100-22	290x150x150 mm 230x135x90 mm	
<b>Compressor (rotary screw)</b>	Compare L11RS	800 l/min.	
<b>Sawing machine</b>	BEWO	zaag diameter ø225 mm	
<b>Sawing machine</b>	Kasto	max. dia ø150 mm	
<b>Sawing machine</b>	Hegner MK4	blad 150 mm	
<b>Automatic sawing machine</b>			
<b>Drill</b>	Cincinnati Milacron PE26 MH	max. dia 360 mm workspace	430 x 427 mm

## Assembly room

### Measurement facilities

#### Climatized chamber

##### NKO calibrated, certified

- 3D Measuring machine Mitutoyo Crysta-Plus M545
- Height Gages Mahr, 1 D-2D, 3D
- Height Gages Tesa
- Measure pens  $\varnothing$  0,5 t/m  $\varnothing$ 4,0 (0,02 mm ascending)
- Micrometers inside
- Micrometers outside
- Depth gages (digital)
- Cone calibers (outside) EN-1281-1:1997
- Cone calibers (inside) EN-1281-1:1997
- Set screw gages M2-M10
- Threaded ring caliber M2-M10
- Gage blocks ceramic Class 0, 32 pieces
- Gage blocks Class 1, 103 pieces
- Black granite surfaceplate
- Surface test
- Hardeness Testing equipment
- Brook Massflow meters with several units for flow and pressure measurements

#### Software CAD and CAD/CAM:

- Solidedge, 3D IGES-STEP-Parasolid-DWG-DXF formaat
- Autocad Lt 2004, 2D, DWG en DXF formaat.
- Topsolid, CAM pakket, IGES-STEP-Parasolid-DWG-DXF formaat
- PC Fact Cut i for EDM

#### Certifications:

- NEN EN ISO 9001:2008 by SGS
- CE marking Medical Device (CE3703.01) by TNO
- ATEX marking by KEMA