



# equipment mechatronics

**250 m<sup>2</sup> clean room class 1000**

**200 m<sup>2</sup> ESD-protected working area**

## **Laboratory benches, Hera**

Including the following built in:

- Regulating transformer 0-400V/10A
- 3-phase regulating transformer
- Power displays (analog)
- Voltage display (analog)
- Safety-type laboratory power sockets, CEE power sockets, earthed power sockets with variable and fixed voltage
- Power sockets with isolating transformer 230V/3A connected in series for ungrounded connection
- Digital 3x DC power supplies (2 x 0-30V/5A, 1 x 5V/0-3a)

## **Oscilloscope Tektronix TDS 360**

- 2-channel storage oscilloscope 200 MHz
- Sampling rate: 10 samples up to 1 Gs/sec
- 3.5" diskette drive for playback / storage of the settings of individual measuring operations
- Settings for voltages: 2 mV/DIV – 10V/DIV
- Settings for timebase: 2,5 ns/DIV – 10µs/DIV

## **Oscilloscope Hameg HM 404-2**

- 2-channel oscilloscope 40 MHz
- Settings for voltages: 1 mV/DIV – 50V/DIV
- Settings for timebase: 10 ns/DIV – 50 ms/DIV



**Secutest 0701/0702 Gossen Metrawatt**

Tester for repair / continuous testing as per DIN VDE 0701 and DIN VDE 0702

**Multitester multimeter Tektronix TX1**

Digital true effective value multimeter

**Multitester multimeter Chauvin Arnoux C.A 5011**

Analog/digital true effective value multimeter

**Video camera with magnification optics and image transfer to PC (electronic magnifying glass)**

- To check soldered points (especially SMD), strip conductors
  - Improved reading of data and links
- The image resolution matches the optimal monitor display

**L'ABTOOL – 48**

Universal E-PROM and flash programmer for software backup

**Digital pressure tester COMARK C9557**

Measuring ranges: pressure / vacuum 0 – 100 PSI

**Ultrasound cleaner Transsonic 1040/TH**

- ELMA
- Bath internal dimensions: 500 x 300 x 300 mm

**3D CNC-controlled measuring machine WENZEL LH65**

- System LH, MB 650 x 750 x 500
- CNC control in all axes
- Measuring uncertainty  $U1 = 2.5 + (L/300)$
- Temperature compensation



### **Surface roughness tester SJ 301**

Surface parameters:  
Ra – arithmetic median value  
Rz – determined roughness  
Rmax – maximum roughness

### **Measuring projector PJ 300**

Screen diameter 306 mm  
Measuring table area 166x166 mm  
Adjustment 50 x 50 mm  
Magnification: 10x

### **Height measuring and scribing units**

Measuring range 600 mm  
Scale divisions 0.01 mm  
Error limits 0.05 mm

### **tool presetting equipment ZOLLER smile 400**

Tool holding fixture SK 50  
z 400 mm, x 160 mm  
Ø 320 mm  
graphical user interface

### **CNC lathes GILDEMEISTER CTX 420linear with opposed spindle**

Spindle clearance Ø 65 mm  
Max. turning Ø 565 mm  
Turning length max. 620 mm  
Driven tools  
C- and Y-axis path-controlled

### **CNC lathes EMCO Maxxturn 65SM with opposed spindle**

Spindle clearance Ø 65 mm  
Max. turning Ø 500 mm  
Turning length max. 610 mm  
Driven tools  
C-axis path-controlled



**CNC lathes EMCO Maxxturn 65 SMY  
with opposed spindle**

Spindle clearance  $\varnothing$  65 mm  
Max. turning  $\varnothing$  500 mm  
Turning length max. 610 mm  
Driven tools  
C- and Y-axis path-controlled

**WEILER lathes E 80  
cycle-controlled**

Spindle clearance  $\varnothing$  100 mm  
Max. turning  $\varnothing$  800 mm  
Turning length 1000 mm

**WEILER lathes E 50  
cycle-controlled**

Spindle clearance  $\varnothing$  83 mm  
Max. turning  $\varnothing$  500 mm  
Turning length 1000 mm

**GILDEMEISTER NEF 520  
cycle-controlled**

Spindle clearance  $\varnothing$  70 mm  
Max. turning  $\varnothing$  500 mm  
Turning length 1000 mm

**VOEST lathes**

Spindle clearance to  $\varnothing$  70 mm  
Max. turning  $\varnothing$  600 mm  
Peak width max. 2000 mm

**CNC universal milling machines  
DECKEL-MAHO DMU 50 eVolution  
5 axes path-controlled**

Machining size  
500 x 420 x 380 mm

**CNC universal milling machines  
DECKEL MAHO DMU 70 eVolution  
5 axes path-controlled**

Machining size  
750 x 600 x 520 mm

**CNC universal milling machines  
DECKEL MAHO DMC 70 eVolution  
5 axes path-controlled**

Machining size  
750 x 600 x 520 mm

**CNC universal milling machines  
HERMLE U630T  
3 axes path-controlled  
with horizontal and vertical spindles**

Machining size  
875 x 500 x 500



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**CNC milling machines MAHO MH 500 W3**  
**3 axes path-controlled**

Machining size  
500 x 300 x 400 mm

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**Contract manufacture for  
special mechanical engineering**