



# DTZ s.r.o.

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## MACHINERY EQUIPMENT AND ASSEMBLY AREAS



of the company

**DTZ s.r.o.**

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Insert 16614

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## Machinery Equipment of DTZ s.r.o. (Limited Liability Company)

### Welding and heat treatment

In the field of welding we have welding sources of brands Migatronik, ESAB, Kemppi, Lincoln Electric and MEZ Broumov. Further we have positioning, welding tools and tables.

#### a) Welding with Coated Electrode (111)

- Sources with maximum current value 150 – 400 A.

#### b) Welding in Protective Atmospheres MIG (131), MAG (135), TIG (141)

##### Welding in MIG, MAG (131, 135)

- Pulse sources 250 A – 500 A with water-cooled burners. Possibility of welding AL, Cu; programmes for root layer, thin sheets and a great root penetration.
- Welding semiautomatic device Migatronik/B08/Duo for long parallel welds of the length up to 5 m
- Welding trolley Miggytrac 1001

##### Welding in TIG (141)

- Sources with gas-cooled and water-cooled burners
- Current range 160 – 250 A
- AC/DC sources, possibility of welding Al
- For orbital welding we have 2 pcs of POLYSOUDE ORBITIG 250A device with the total scope of welded tubes with the diameter from 20 to 76 mm, quality classes 11, 12,15 and 17, their equivalents and their combinations

#### c) Heat Treatment

##### Gas Annealing Furnace with Temperature Record

- Maximum dimensions of annealed parts 2,400 x 400 x 600 mm, maximum 960 °C

##### Mobile Equipment for Heat Treatment HM 406 T Heatmaster

- Fully automatic six-channel unit for the heat treatment, pre-heating and annealing of metal objects
- It is possible to connect 12 heating elements, 1.0 – 3.45 kV/heating element, 4 elements/heating channel
- Temperature range 20 – 1,200 °C
- Maximum performance 40 kW

#### d) Welders

- Welders have the authorization/certification for the works on pressure systems and structures under the standards ČSN EN 287-1, ČSN EN 9606-1, PED 97/23 EC and AD2000MB, their tests cover welded materials in the quality classes 11,12,15, and 17

#### e) Welding Documentation

- Welding is based on WPS under the standards ČSN EN ISO 15607, 15609 and WPQR under the standard ČSN EN 15614

#### f) Welding Supervision

- The welding supervision is provided under the standards ČSN EN ISO 14731 and 3834-2



## CNC Machining

### a) Machining Centre

#### AXA VHC 3 – 5000 XTS50

- *Number of axes: 5*
- *Spindle travel x = 5,000 mm*
- *Spindle travel y = 1,000 mm*
- *Spindle travel z = 950 mm*
- *Rotary table AXA RAT 5S – 1000 – diameter 1000 mm*
- *Rotary table max load: 6,000 kg*
- *Maximum spindle revolutions: 9,000 r. p. m.*

#### KEKEISEN PBF 3 000/12

- *Spindle in axis z.*
- *Number of axes: 3*
- *Rotary head 90° in axis y.*
- *Spindle travel x = 5,800 mm*
- *Spindle travel y = 900 mm*
- *Spindle travel z = 1,100 mm*
- *Table 5,800 x 900 mm*
- *Maximum spindle revolution: 2,500 r. p. m.*
- *Maximum table load distributed: 5,000 kg*

#### AXA VSCI – 5 000 M

- *Spindle in axis z.*
- *Number of axes: 3 + 1*
- *Spindle travel x = 5,000 mm*
- *Spindle travel y = 500 mm*
- *Spindle travel z = 600 mm*
- *Fixed table 5,000 x 500 mm*
- *Rotating table diameter 300mm, 2 pcs, with vertical or horizontal fastening*
- *Maximum spindle revolutions: 5,000 r. p. m.*
- *Maximum table load distributed: 3,000 Kg*

### b) Lathes

#### SUI 50, SN 50 B

- *Circulating diameter above the bed 500 mm*
- *Distance between lathe tips 1,500, 2,000 mm*
- *Spindle boring dia. 54 mm*

#### M 63 B

- *Circulating diameter above the bed 630 mm*
- *Distance between lathe tips 2,800 mm*
- *Spindle boring dia. 70 mm*



## c) Milling Machines, Horizontal Boring Machines

### FGX 25/32

- *Table size 1,000 x 320 mm*

### FGS 32/40

- *Table size 1,400 x 400 mm*

### H 100 A – Horizontal Boring Machine

- *Spindle travel x = 1,250 mm*
- *Spindle travel y = 1,120 mm*
- *Spindle travel w + z = 900 mm*
- *Outer face turning up to diameter of 900 mm*
- *Inner face turning up to diameter of 560 mm*
- *Table 1,250 x 1,250 mm*

## Forming machines

### a) Hydraulic Presses CDM 80 – 4, LTR – TOR, HL 33, ORGREZ LRT

#### CDM 80 – 4

- *Maximum pressing force 80 t; adjustable table height 1,000 mm*

#### LTR – TOR

- *Straightening horizontal press; maximum pressing force 110 kN*
- *Belt steel 120/12 mm; rods up to 120/12; pipes/tubes up to diameter of 76/6.3 mm*

#### ORGREZ LRT

- *Straightening horizontal press; maximum pressing force 240 kN*
- *Pipes up to diameter of 108/10 mm*

### b) Tube Benders PERFEKT WE 60, 100

#### PERFEKT WE – 60

- *Tubes from dia. 18/3mm to dia. 57/6.3 mm*
- *Bending angle  $R_{min} = 5^\circ$ ;  $R_{max} = 195^\circ$*
- *Bending radius  $R_{min} = 38$  mm,  $R_{max} = 300$  mm*
- *Minimum distance between bends 100 mm*
- *Minimum length of clamping 100 mm*

#### PERFEKT WE – 100

- *Tubes from dia. 51/4 mm to dia. 108 x 6.3 mm*
- *Bending angle  $R_{min} = 5^\circ$ ;  $R_{max} = 180^\circ$*
- *Bending radius  $R_{min} = 100$  mm,  $R_{max} = 600$  mm*
- *Maximum bending module  $W = 59,3$  cm<sup>3</sup> in materials class 15*
- *Maximum bending module  $W = 70,4$  cm<sup>3</sup> in materials class 12*
- *Minimum distance between bends*
  - *Tubes up to dia. 60.3 – 100 mm*

- Tubes up to dia. 89 – 160 mm
- Tubes up to dia. 108 – 200 mm
- Minimum length of clamping 250 mm

Given data are valid for materials classes 12 and 15.

Lists of pulleys, bending radius and wall thickness will be specified upon request.

## Cutting and preparation of material

### a) Table Shears DNT 3 150/16

- Maximum cutting length 3,000 mm
- Material thickness up to 10 mm
- Material strength up to 450 MPa

### b) Band Saws EVERISING S 400 HA, CONDOR 360, FEMI ART 781

- Round iron up to 400 mm
- Possibility of cutting under the angle up to dia. 168 mm

### c) CNC Plasma and Flame Cutting VANAD – HYPER THERM 130

- Table working area 2,000 x 3,000 mm
- Maximum speed 15 m/min,
- Step size 0.15 mm,
- Diagonal accuracy  $\pm 0.5$  mm per 1 m,
- Control system Vanad B+R, software WrykRys
- Plasma cutting of sheet metal thickness 1.0 – 20 mm (steel, non-ferrous metals, stainless steels)
- Flame cutting of sheet metal thickness 10 – 300 mm (steel) – burning depth up to 90 mm
- Micro impact marking unit Vanad

### d) Blasting Equipment SCHLICK RB 2100. 04

- Blasting with steel abrasive
- Blasting of metallurgical material (metal sheets, profiles) and products (weldments) up to length of 10 m and dimensions of input hole width 2,000 mm and height 460 mm
- Material blasting from minimum thickness 3 mm
- Surface quality under ISO 8501 (Sa 2.5)

## Technical Inspection

### a) Measurement of Surface Roughness MARSURF PS1

- range 350  $\mu$ m, 150  $\mu$ m, 90  $\mu$ m

### b) Equipment for Pressure Tests and Leak Tests TZ 60

- Maximum testing pressure 60 MPa, testing substance is water with the ingredient of corrosion inhibitor, documenting of the process of pressing on the printed record

### c) Equipment for Determining Spectral Analysis of Material

- SPECTROTEST JrF

d) Equipment for Ultrasonic Hardness Test

- *KRAUTKRÄMER GmbH – USK 7*

e) Equipment for Inspection of Surface Defects by Capillary Method

f) Ultrasonic Thickness Gauge

- *DAKOTA ULTRA SONIC – TYPE MX – 2, range 0.63 ÷ 500 mm*

## Assembly Areas and Paint Shop

### 1. Production Hall H1

- *54 x 17.5 m, 945 m<sup>2</sup>*
- *Assembly area of approximately 400 m<sup>2</sup>*
- *Bridge crane with load capacity of 8 t*

### 2. Production Hall H2

- *100.5 x 18 m, 1,809 m<sup>2</sup>*
- *Assembly area of approximately 1,000 m<sup>2</sup>*
- *Two bridge cranes, each with load capacity of 8 t*

### 3. Production Hall H3

- *47.2 x 9.7 m, 458 m<sup>2</sup>*
- *Machining*
- *Two bridge cranes with load capacity of 3 t*

### 4. Production Hall H4

- *64.5 x 10.2 m, 658 m<sup>2</sup>*
- *Material cutting, warehouse*
- *Bridge crane with load capacity of 5 t*

### 5. Production Hall H5

- *43 x 33 m, 1,419 m<sup>2</sup>*
- *Assembly area of approximately 900 m<sup>2</sup>, warehouse*
- *Bridge crane with load capacity of 20 t, gantry crane with load capacity of 2 t*

### 6. Paint Shop

- *15.5 x 5.3 m, 82 m<sup>2</sup>*
- *Charging trolley 3 x 12 m*
- *Entrance gate height 2.5 m, width 5 m*

