



Custom manufacturing

Cooperation potential

STEEL CONSTRUCTIONS

MACHINING

STEEL PROCESSING

CUSTOM MANUFACTURING

Our company offers a complex technological unit suitable for the production of machine's components and parts reaching weights up to 20 tons on a built up production area approx. 16 000 m².

Steel processing	Machining	Steel constructions
<ul style="list-style-type: none">• laser cutting• plasma cutting• oxygen cutting• hydraulic press cutting• bending• rounding• planing	<ul style="list-style-type: none">• milling• turning• grinding• slotting• bohring	<ul style="list-style-type: none">• steel profile cutting• welding• cold working• annealing• blasting• painting

STEEL CONSTRUCTIONS

KLIMA, a.s. also produces various types of welded steel structure products i.e. (liquid Storage tanks, multipurpose containers, frames, machine base-frames, platforms, stairs, railing etc.) according to customer's documentation and technical requirements. The steel construction fabrication and assembly of parts of maximum weight up to 20 tons.

STEEL PROFILE CUTTING

- Disk saw machine TRENNJAEGER LTS 400
- CNC band saw with linear guide MEBAeco 510 DGA-2300
- Automatic disk saw TOS PKA13
- Profile cutting press LEXN 100



Parameters:

Round steel	Ø 510 – 270 mm
Other profiles (h x w)	700 x 500 mm
Bevel cutting	30° – 50° (set individually)

WELDING

Welding of steel structures and e.

- **Arc welding with consumable wire electrode in inert / active gas (MIG/MAG method 131, 135, 136):** Manual semi-automatic welding with solid or tube wire electrode – GMAW, FCAW
 - **Manual metal-arc welding with coated electrode – MMA, SMAW (method 111)**
 - **TIG welding (method 141)**
 - **Testing of weld joints**
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COLD WORKING

Section roll bending

- Implementation of the desired weld deposits with high hardness and wear resistance, repair of casting
 - XZP 50/7
 - XZP 100/12
 - XZP 125/15

Profile bending roll PULLMAX 223

Parameters:

- PLO 20 x 3 up to 120 x 15 mm at Ø 300 up to 6 000 mm
 - Profile T, L 20 x 3 up to 125 x 125x14 at Ø 300 up 6 000 mm
 - 4 HR up 70 x 70 mm at Ø 1 250 up to 6 000 mm (divided)
 - U, I 50 up to 220 mm at Ø 1 400 up to 6 000 mm (divided)
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ANNEALING

HEAT TREATMENT

HM406T

Description:

HM406T is fully automated, six-channel unit for heat treatment, preheating and annealing of metallic parts. Thyristor controlled output power enables using various sizes of heating elements. Setting, control, monitoring and documentation of heat treatment parameters is carried out by Heatmasters Control System.



Parameters:

Temperature range	20 ÷ 1200 °C
Heating output	40,0 kW, ED 100%
Number of heating channels	6 á 100 A
dimensions (w x l x h)	600 x 1020 x 600 mm 1200 x 5500 x 600 mm 1900 x 2300 x 1700 mm



BLASTING

Blaster RS-R 2050/VSD

Description:

This is a continuous shot-blast machine with roller track, control of force and flow direction of abrasive (steel shots or steel wire blasting medium), for removal of rust and scale from metallurgical semiproducts, weldments or machine parts and for preparation of substrates before application of paints and related products. Sa 2.5 surface quality.

Parameters:

Dimensions of metallurgical semi-products:

Maximum length	12 000mm
Maximum width	2000mm
Height	500mm



PAINTING

SURFACE TREATMENT OF PRODUCTS BY APPLICATION OF PAINTS

Paint systems and surface preparation according to technical standard ČSN EN ISO 12944.

- **Surface treatment before application of paints:**
 - 50 % of used metallurgical semi products are shot-blasted before cutting or after welding according to standards ČSN EN ISO 8501.
 - Before finishing the products are degreased with the use of aqueous solution of a cleaning agent or organic degreasing agent by hand washing or spraying.
 - The workplace is formed by a closed degreasing and drying box 4.8 x 6 x 5 m with a crane of lifting capacity of 1 t.
- **Application of paints:**
 - Solvent-borne synthetic, polyurethane and epoxy two-component paints are used.
 - The paints are applied by manual high-pressure spraying.
 - The workplace is formed by a closed spray and drying box 4.5 x 15 x 5 m, with a crane of lifting capacity of 1 t. The working area is completed by an auxiliary area of 390 m² with a crane of lifting capacity of 12 t and a fork-lift truck.

MACHINING

MILLING

MILLING MACHINES

- F 1250
- FA 5 AU universal knee-and-column milling machine
- FB 40 V vertical milling machine

Parameters:

Table dimension (w x l x h)	440 x 1 400 x 500 mm
Work piece weight	1 200 kg

- FCQV 63 NC
- FSSQ 50 NC

Parameters:

Table dimensions (š x d)	630 x 2 200 mm
Work piece weight	2 000 kg
Work piece dimensions	630 x 1 500 x 500 mm



HORIZONTAL BORING MACHINES

- AFD 100
- WH 80
- WHN 9B NC

Parameters:

Table dimension (w x l x h)	1 000 x 1 200 x 900 mm
work piece weight	3 000 kg

- WHN 13 CNC

Parameters:

Travel in axis X	3 500 mm
Travel in axis Y	2 500 mm
Travel in axis Z	1 250 mm
Travel in axis W	800 mm
Table dimension	1 800 x 2 200 mm
work piece weight	12t



MILLING AND DRILLING CENTER

- Doosan MYNX 7500

Parameters:

Spindle taper	ISO 50
Spindle speed	6 000 ot./min.
Spindle motor output	18,5 kW
Travel in axis X	1 525 mm
Travel in axis Y	760 mm
Travel in axis Z	625 mm
Table dimension	1 600 x 750 mm
Number of tools	10



TURNING

HORIZONTAL SINGLE TURRET LATHES/TURNING CENTRES

- Doosan PUMA 400LB

Parameters:

Number of controlled axes	2
Max swing	770 mm
Max turn dia	570 mm
Max. turn length	2 093 mm
Bar dia	116,5 mm
Spindle rpm	2 000
Motor output	37
Number of tools	10



CENTRE LATHES

- SV 18 RA
- SUI 50 A
- SU 63 A/3500
- SUS 63/3500
- SU 100/5000

Parameters:

swing diameter	Up to 1 000 mm
centre-to-centre distance	Up to 5 000 mm
work piece weight	Up to 6 000 kg



SEMI-AUTOMATIC LATHES

- SPT 32 NC
- SPR 63 NC

Parameters:

flanges	Up to Ø 320 x 250 mm
Shafts	Ø 10 up to 170 x 1 500 mm
Rods	Ø 25 up to 63 mm
Work piece weight	Up to 3 000 kg

VERTICAL LATHES

- SK 12
- SK 25 B
- SKQ 12 NC

Parameters:

work piece diameter	from 155 till 2 800 mm
max. work piece height	max. 1 600 mm
weight	up to 15 000 kg
auxiliary grinding device	Ø 200 mm



GRINDING

CENTRE GRINDERS

UNIVERSAL CENTRE GRINDERS

- BUT 63/4000
- BU 40/1500

Parameters:

clearance Ø	630 mm
centre-to-centre distance	4 000 mm
chuck diameter	315 mm
work piece weight	2 500 kg



SURFACE GRINDERS

- BPH 20 NA

Parameters:

table working surface	200 x 630 mm
workpiece weight	180 ÷ 280 kg
grinding spindle vertical travel	360 ÷ 420 mm

STEEL PROCESSING

LASER CUTTING

Laser cutting machine TRUMATIC L3003

Parameters:

table dimensions	1500 x 3000 mm
	thickness
steel sheets and plates	1 ÷ 10 mm
sheets of Al and Al alloys	1 ÷ 3 mm
stainless sheets	1 ÷ 6 mm



Laser cutting machine TrueLaser 3040 / L32

Resonator TruFlow 4000W

Table dimensions	4000 x 2000mm
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Parameters:

	thickness
Construction steel	20mm
Corrosion-resistant austenitic steel	15mm
Alluminium alloys	10mm



PLASMA CUTTING

Plasma cutting machine OMNIBIT 3600 AKU

Description:

Cutting machine of robust portal design with excellent static and dynamic characteristics. The machine has a precise linear guidance system with ground steel rods and ground rack bars which do not need lubrication. The portal travels along robust and precise path, and is driven by powerful servo drives on both sides of the portal.



Parameters:

table size	2 500 x 12 000 mm
	thickness
steel sheets and plates	5 ÷ 30 mm
Al and Al alloy sheets and plates	4 ÷ 15 mm
stainless sheets and plates	4 ÷ 15 mm

OXYGEN CUTTING

Portal cutting machine Cortina for cutting structural steel up to thickness 170 mm

Table size: 2 x 6m

SHEETMETAL CUTTING

Table shears PULLMAX GSA-430

Parameters:

sheet width	3 000 mm
sheet thickness	1 ÷ 10 mm
max. strength	450 MPa



SHEET FOLDING

Edge bending machine with NC device TRUMABEND 200.3.F

- forming force 200 t
- bending length 3 000 mm without possibility of elimination of limit deviations and quality of metal sheet, worn bending tools and equipment
- thickness 6 mm



Edge bending machine LO 315t

- forming force 315 t
- bend length up to 3 000 mm with possibility of elimination of limit deviations and quality of metal sheet
- thickness 15 mm by length

Edge bending machine TruBend 5320

- press force 3200 kN
- bending length 4420 mm



FORMING

FORMING BY ECCENTRIC PRESSES

Eccentric press

- LENP 63A
- PEE 160
- PEE 250/400

Punching, cutting, shallow drawing, levelling, cold bending in a forming tool with forming force 63 to 250 t without mechanization for mass production

FORMING AND LEVELLING BY HYDRAULIC PRESSES

Hydraulic press

- PYE 160
- PYE 250
- CLT 400

Hydraulic press for pressing of shaped parts of fans in fixtures and tools and for mechanical levelling of big parts.

Parameters:

max. forming force	160 a 250 t
max. forming force without a holder	400 t
ram size	500 x 500 mm
table size	1 250 x 1 250 mm



FORMING OF LAMELLA OR SOCKET FLANGES

Flanging machine HÄUSER BSM 6

cold forming to max. thickness	P 6 a Rm - 400 MPa
range Ø	Ø 445 ÷ 1 000 mm
length	350 ÷ 800 mm
maximum flange height	64 mm
flare curve radius R	R156 a 196 mm
common flange hole dimensions	Ø 11,5 - 12 - 15 a 19 mm

SHEET ROUNDING

Sheet rounding machines

- XZM 2000/12
- HÄUSLER VRME 1500/6
- ROUND0 PS310

Parameters:

- Sheet from 10mm up to width 3m
 - Sheet from 16mm up to width 3m, $\varnothing < 900\text{mm}$
 - Sheet 18mm up to width 3m, $\varnothing < 1500\text{mm}$
 - Sheet 19mm up to width 3m, $\varnothing < 2500\text{mm}$
 - Maximum \varnothing is 6000mm.
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PLANING

PLANING OF PLATE EDGES

Plate-edge planing machine HHP-6

It is used for planing of plate edges to remove the heat affected area after thermal cutting and for preparation of welded surfaces for manufacture of boilers, vessels and air handling equipment.

Parameters:

planing length	6 m
plate thickness	80 mm
planing tool angle	$0^\circ \div 35^\circ$