

- Production of plasma automatic machines
- Production of weld surfacing machines
- Production of welding machines
- Weld surfacing, PTA surfacing
- Sale of welding electrodes, wires, rods, powders
- Production of positioners
- Assembling robotics working places



## KSK s.r.o.

Was established in 1991 as a private Czech company specialised in custom-made construction and production of special and single-purpose machines and devices. Its aim is to meet the complete range of our customers' needs from the selection or development of suitable technology to the construction and production of a machine. Training of servicing staff, technical support and service throughout the machine life-time are a matter of course. KSK s.r.o. is also involved in other business activities, for instance the sale of auxiliary materials for welding, mechanical water filters, etc.

### Our activities

- construction and production of machines for welding and surfacing
- technical and consulting services for technological processes of welding and surfacing
- technical and consulting services of welding processes **zde menší písmo**
- sale of welding materials (voestalpine Böhler Welding, ALUNOX GmbH, ESAB, DEW)
- renovation of worn-out parts
- co-operation with welding and surfacing in our house
- construction and production of testing benches
- repair, overhaul and modernization of machines, including electrical, hydraulic and pneumatic ones
- production and sale of filters for mechanical impurities



Production of weld surfacing, welding and PTA automatic machines, sale of welding materials, robotic workplaces, supplier of overlays.

## Plasma weld surfacing machines

For weld surfacing mechanization of abrasive-resisting, anticorrosive, heat-resisting and other layers, we produce special automatic machines for weld surfacing under the fluxing agent, in protective gases and by plasma. We produce particular types of automatic machines on demand with regard to the type and size of the surfaced part and type of surfaced material. For weld surfacing, you can also use some of the welding automatic machines we produce. Apart from the construction and production of weld surfacing automatic machines, we also offer cladding on these machines.

### Examples of our production



Plasma weld surfacing automate **PPC 250 HG** serves for weld surfacing of rotary and non-rotary parts from face or onto the circuit (seats, wedges and cones of armatures, centring rings, bottoms and closing heads of glass moulds, etc.) by PTA ith powder.



Fully automated plasma welding machine surfacing of extruders using **PTA** (wolframkarbid, stellite and others powders).



Plasma weld surfacing automate **PPC 250 PTM** serves for weld surfacing of rotary parts from face or onto circuit (seats, wedges and cones of armatures, diffusers, snails, boards, etc.) by PTA method.



Plasma weld surfacing automate **PPC 250 R6** serves for weld surfacing of rotary parts from face or onto the circuit (seats, wedges and cones of armatures, centring rings, neck ring moulds, bottoms and closing heads of glass moulds, valves and seats of combustion engines etc.) by PTA method with powder.



Plasma weld surfacing automate **PPC 250 GMR** serves for weld surfacing of shaped parts (frontal, final and neck ring glass moulds, etc.), rotary parts from face or on the circuit (seats, wedges and cones of armatures, centring rings, bottom, etc.).



**PPC 250 NAO** is suitable for hardfacing of rotary and non-rotary parts, on circumference and on the face and it is also possible to hardface internal diameters from minimum inner diametr 50mm.

## Welding automatic machines

We produce several lines of automatic machines for mechanisation of welding. On all automatic machines the weld surfacing by methods of MIG/MAG, TIG, TIG with an additional welding wire, under the fluxing agent, plasma and micro-plasma etc., can be installed. Particular types of automatic machines are solved as unit built-in machines, so it is possible to adjust them for the required component and weld type, required range of minimum and maximum dimensions of a weldment, stage of automatization etc.

### Examples of our production



**Automate SA 201**

– The automatic machine serves for welding of seats into the bodies of armatures. Seats are usually inserted obliquely into the bodies. Welding head follows automatically welding joint by left-right traversing.



**SAP 1000**

The automatic machine serves for linear welding of tubes from curled sheet metal.



**SA 718** – The automatic machine serves for rotary welding of small pieces. The automate is equipped with rotary table. There are 2 jigs on the table. During the welding process, the parts are welded in the first jig and manually changed in the second jig at the same time.



The welding line **SL 800** serves for welding of large armatures parts by under the fluxing agent method or MIG/MAG method. Long parts are clamped in the positioner and the welding unit with a positioning system of the torch moves on rails alongside.



**SAO 320** – The automatic machine serves for welding of rotary parts.



**SAP 400** – The automatic machine serves for welding of corners from curled sheet metal.



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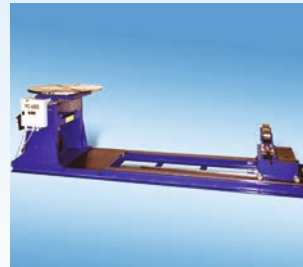
## Positioners

We produce several rotary positioners with the carrying capacity from 50 kg, with a continuous regulation of rotations (controlled by the frequency changers), or without regulation, with manual tilting or tilting by motor, with foot or manual control. The positioners are constructed as robust and do not require any special maintenance during their operation.

### Examples of our production



Positioner **PO 300 D** for welding of smaller parts with through hole with diameter 55mm.



Positioner **PO 4000 S** for welding of parts with capacity load 4000kg max.



Positioner **PO 1000 S** for welding of parts with capacity load 1000kg max.



**Pulley positioner** with frame, moveable pulleys and moveable parts. Driven is one pulley with brake.



Positioner **PO 2500 SH** for welding of parts with load capacity up to 2500kg.



**Separate supporting pulleys** are offered with brake and with engine. Width and diameter of pulleys according requirement.

## Special machines

We manufacture special machines according to customer requirements and machines for the pressure tests of industrial armatures, containers, exchangers, radiators, plumbing parts, castings, etc.

### Examples of our production



Straightening machine **RS 400** serves for the automatic straightening of the weldments of truss structures, which are twisted after the welding.



Testing bench **ZS 300** is combined for testing the armatures of DN65-300 and small flange armatures of DN 10-65.



The machine **MO 65-50** serves for the safe input of the parts into the inductor and it enables the inductor to move with the parts, thus to heat them on a required temperature.



**VZ 40T**  
The testing bench serves for pre-testing of weldments on the air-tightness. Tested weldment is filled by pressured air and by means of motorically driven platform is immersed into a tank with water.



Soldering automatic machine **PA 3** serves for soldering of lids and tubes in a protective atmosphere when using the induction heating.

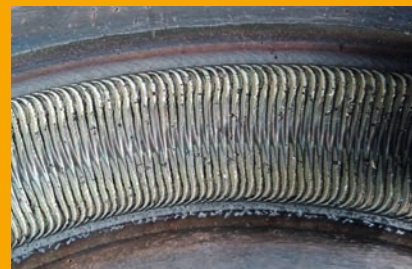


Testing bench **ZS 240** serves for pressure tests of body strength and tightness of the armatures closing with welded-on endings.

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## For customers who require specialized overlays.

The method is based in highly concentrated electric arc for melting of additional material during simultaneous minimum melting of basic material. Into stream of plasma is continually supplied additional material which is well proportionally surfaced / overlaid onto a part. **Plasma surfacing enables extensively and independently control welding current and quantity of additional material.** In this way it is possible to achieve optimal thermal regime with minimum depth of mixing and achieve overlay in high quality already in one layer of 1 mm height.



- Lower consumption of energy in comparison with classical methods
- Minimum appearance of defects (pores, cracks, inclusions) in overlay
- Stability and repeatability of technological process including possibility of parameters monitoring
- Achieving of high quality overlay already in first layer
- Introduction and keeping of high quality overlay and work production
- Setting of progressive technique (CNC machines etc.) to connected operations during machining
- Higher stage of mechanisation both in piece and in series production
- Possibility of surfacing the additional materials in different forms (powder, tube, wire, stick)
- Metallurgical type of connection with minimum mixing until 0,5 mm from boundary surface overlay / basic material (e.g. during MIG, UP methods there is mixing 2–7 mm)
- Minimum melting loss of alloying addition Cr, Mo, Mn, Si etc.
- Structural uniformity and high internal quality of overlay
- Minimum thermal influence of basic material
- Minimum of harmful substances, emissions and noisiness during welding (accordingly to DIN standards deeply under permitted limit)
- Minimum unevenness of surface by defined height of overlay 0,5 mm in one layer (relation with productivity during machining)

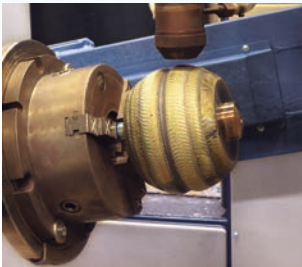


## Our services — overlays PTA, MIG-MAG, TIG

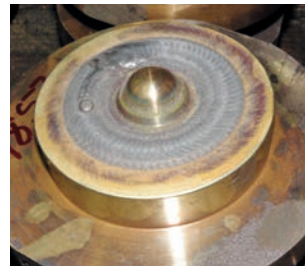
We weld PTA overlays on the machines from our production.



Welding PTA overlays of valve parts with cobalt welds (body, seats, wedges, balls, pins)



PTA overlays of moulds and parts for the glass industry.



Other overlays: extruders, grinding wheels and hammers, pulleys...





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## Welding consumables

KSK s.r.o. offers a wide range of products for welding and surfacing. We work closely with manufacturers renowned, not only in deliveries but also in development and testing of new materials and applications, for example with voestalpine Böhler Welding, ALUNOX Schweißtechnik GmbH, Deutsche Edelstahl Werke and others.



### **Böhler Welding**

Offers a complete and unique solution in the world and a product portfolio of welding materials.



### **UTP Maintenance**

High quality welding materials for maintenance applications industrial, repairs and surfacing.

**soudokay**

### **SOUDOKAY**

High quality welding tubular materials for industrial applications for maintenance, repairs and surfacing.



### **ALUNOX Schweißtechnik GmbH**

German supplier of quality welding consumables offering a very wide product line.



### **DEW**

German manufacturer and supplier of high quality welding consumables offering a very wide range, especially for the PTA method.



### **ESAB**

Global manufacturer of welding consumables.

## Robotics

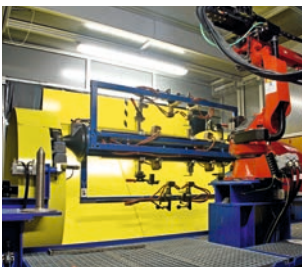
In the field of robotics, the company KSK s.r.o. presents itself as the supplier of fully robotic workstations. Deliveries are made even with positioning devices manufactured directly in our company, with preparations and complete safety equipment. We cooperate with renowned suppliers ABB, Comau, Doosan.



New robotic workstation ready to install and following the commissioning.



Robotic workstation, equipped with a manipulation robot.



Workplace robotic with designed positiner, built and do at KSK s.r.o.



Collaborative robots DOOSAN.



Robotic workplace equipped with robots for handling metal parts at high temperatures.



Positioners for robotic stations.

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## Machining

CNC lathe FTC 640 (max diameter 640 mm, max length 1900 mm)  
CNC lathe UT 200L (max. diameter 350 mm, max. length 1000 mm)  
MASTURN 70 CNC lathe (max. diameter 650 mm, max. length 1300 mm)  
**NAKAMURA-TOME WT-100 CNC lathe (machining center, through hole diameter 42 mm, max. diameter 503 mm, max. rod length 1500 mm)**



## Milling

3-axis milling centers VMC-50 Strojtos (dimensions max. 900 x 500 x 500 mm)  
CNC COMBI U7 milling machine (strokes 1600; 750; 900 mm, work table 1800 x 700 mm)



## Ovens – Heat treatment

Heat treatment resistance furnace with graphic recording during thermal processing.  
Dimension of parts up to 1500x1400x1250mm.





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**Construction and production of PTA machines for surfacing in energy and glass industry.**

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**Production of automatic welding machines, single-purpose welding machines – design, construction, production, service..**

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**Production of welding, tilting, pulley and rotating positioners – design, construction, production, service.**

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**Sale of welding consumables – electrodes, wires, rods, powders for PTA welding etc.**

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**Supplier of PTA overlays – in the energy sector, glass and processing industry etc.**

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**Assembling of robotic stations in cooperation with suppliers ABB, Comau, Doosan.**

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**Cintropur filters for capturing mechanical impurities in liquids and gas.**

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