

**PROTECHNIKA** **COM**

Waste Management & Recycling Equipment Manufacturing



# Services Catalog 2020

LASER · PLASMA · CNC MACHINING · GRINDING · METAL BENDING · HEAT TREATMENT



## About us

---

Protechnika is a manufacturing company specializing in metalworking, in particular the production of spare parts and specialized machines, as well as small and medium-sized steel structures. We manufacture machines and parts used in municipal and industrial waste management, recycling, as well as the food and construction industries.

In our technologically advanced production plant, we provide services in the field of high-performance CNC machining, such as laser and plasma cutting, milling, turning, surface grinding, drilling, and hydraulic bending. We specialize in the serial production of a wide range of metal details that are elements of machinery and equipment (shafts, screens, dies, rings, bodies,

industrial knives, screws, etc.). We also provide tool regeneration services.

We have qualified and experienced staff as well as a universal, modern machine park. Thanks to these factors, we can meet the various requirements of our customers. By providing a high level of process automation, we perform high-performance machining. We are focused on medium and high volume orders, in some cases also individual orders

## We offer

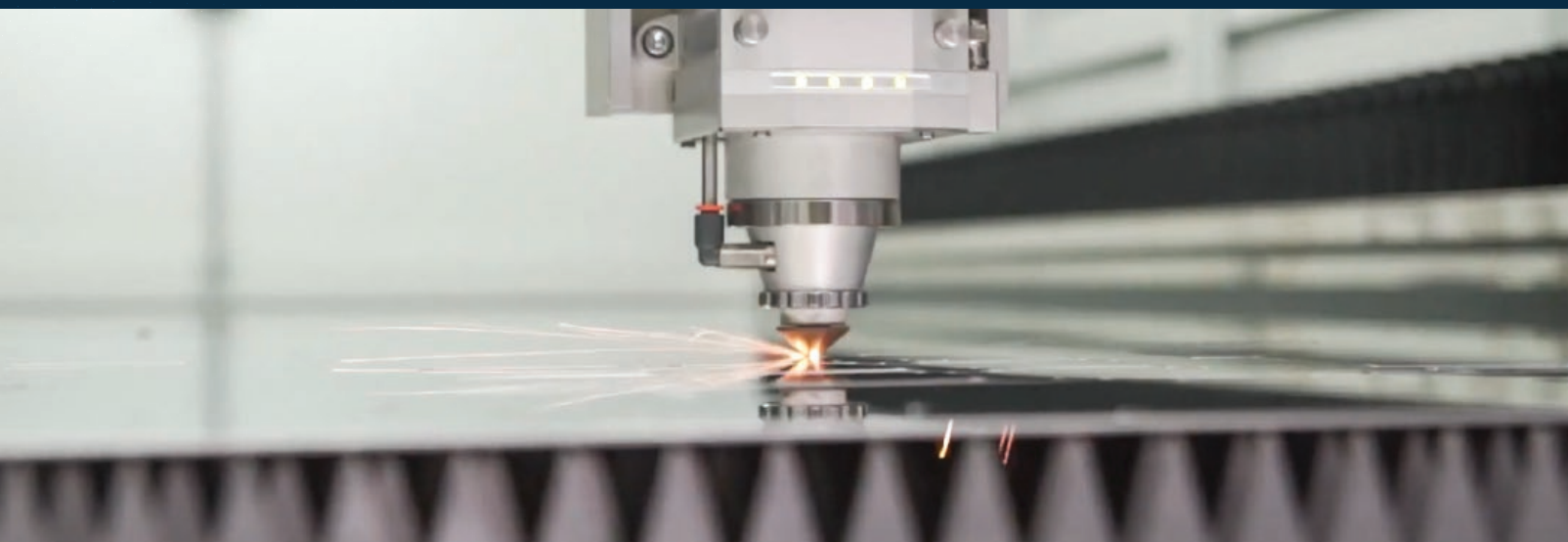
- Laser cutting
- Plasma and Oxygen cutting
- CNC Turning
- CNC Milling
- Surface Grinding
- Metal Sheet Bending
- Heat Treatment



# Metal Sheet Laser Cutting

---

The Kimla Powercut Linear 2040 fiber laser is the absolute latest technology for efficiently cutting any shape from sheet metal. It provides cutting precision and speed without further finishing allowing high repeatability with contactless cutting and ensuring that elements are cut without damaging the surface of the sheet. We ensure maximum use of material thanks to professional technological software.



## Parameters

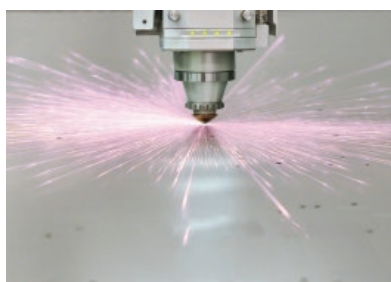
---

- Laser beam power 8 kW
- Working dimensions 2100 x 4100 x 120
- Sheet Maximum dimensions 2050 x 4050
- Sheet Maximum weight 1200kg
- Cutting accuracy 0.05 mm/m
- Maximum speed 5 m/s

## Materials

---

- Carbon Steel up to 25mm
- Stainless steel up to 20 mm
- Aluminium
- Copper
- Brass



# CNC plasma and gas cutting

At Protechnika plasma and gas cutting is carried out by Stigal Pro Master 3d, the fastest and largest CNC plasma and oxygen cutter. Equipped with a 3D head, it allows cutting pipes and sheets with a maximum thickness of 70 mm with a plasma torch and up to 300 mm when machining with an oxygen torch. Qualified staff and professional software allow us to use the cut material efficiently and to complete orders quickly, while maintaining the highest quality standards.



## Spektrum of cutting possibilities

- Oxygen cut. Cutting range 20 - 300 mm
- Plasma cut (with puncture). Cutting range 1 - 70 mm
- Precise plasma scoring and routing
- Bevelling of plates 0 - 45°

## Parameters

Working Width	2000 mm
Working Length	6000 mm
Travelling Speed	45 m/min
Dock.Positioning	+/- 0,05 mm
Max. sheet thickness /cutting	300 mm

## Materials

- Carbon Steel
- Stainless Steel
- Aluminium
- Copper
- Brass



# CNC Machining (Milling, Turning)

---

Our services include CNC milling (including 5-axis milling), CNC turning (including turning with milling). We offer efficient and precise CNC machining of black, high grade and stainless steel - we process material in accordance with the documentation provided by the client, and each order is carried out fully individually, meeting customer expectations.



## Possibilities Parameters

---

### TURNING

- turning range from 10 mm to 1600 mm  
length up to 5200 mm

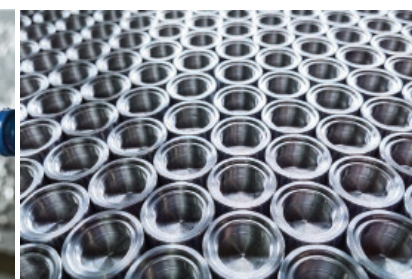
### MILLING

- milling using 3, 4 or 5 axes
- max. working area 1500 x 3000 mm
- double rotary tables for increased performance

## Machine Park

---

- 5-axis milling center
- Numerical lathe with C and Y axes
- Horizontal milling center
- Vertical lathes
- Multi-spindles drilling machines
- Robotic turning centers



# Surface Grinding - Deburring

Often, after cutting with a laser, plasma, extruder or guillotine, a sharp edge remains on the cut surfaces of the elements which require further treatment.

To meet the quality requirements of our customers, we offer deburring, grinding and rounding of both external and internal edges for elements made of steel, stainless steel and aluminium. For this purpose, we use specialized machines from leading manufacturers.



Workpiece processing is entirely adapted to the needs of the customer, machines have the ability to work from above, below or from above and below in one pass.

## Technological Possibilities

- Blunting the edge of the detail,
- Rounding the edges of the detail ,
- Deburring,
- Giving directional grinding,
- Removing oxides from the side of the detail,
- Material preparation,
- Removing scale.

## Parameters

Working Width	600 mm
Workpiece thickness from	0.5 do 160 mm
Accuracy	0.1 mm



# Metal Sheet Bending

We perform sheet metal bending using press brakes with very high accuracy. Bending on CNC machines guarantees the expected level of repeatability of bent elements, while enabling bending of complicated shapes. Two presses allow us to bend thin and thick high strength sheets (Hardox, Strenx, Docol).



## Parameters

Hydraulic Pressure	250 ton	630 ton
Working Length	to 3100 mm	to 4100 mm

## Technological Possibilities

- Bending components with complex shapes
- Full repeatability of dimensions and bending angles
- Large resource of tools

# Heat Treatment

As part of the heat treatment services we offer: Vacuum heat treatment, Induction hardening and Conventional hardening in oil.



## Parameters

### *Vacuum Heat Treatment*

- Working dimensions D1200 x H1200mm
- Working Temperature 1280°C
- Charge Weight : 2000kg brutto
- Vacuum Carburizing - liquid carburizing agent

### *Induction Hardening*

- Power 50 - 250 kW
- Diameters of hardened rollers 30 – 500 mm
- Height of hardened elements 20 – 1000 mm
- Diameter of hardened wheels by envelope method 50 – 500 mm
- Diameter of wheel hardening by 'tooth-to-tooth' do 900 mm

