

2022

design
technical
documentation
production



**PRODUCTION
THE MACHINE**
DPF / FAP FILTER
AND SCR CATALYST



**CNC CUTTING
LASER
WATER JET
PLASMA AND GAS
CNC CUTTING**



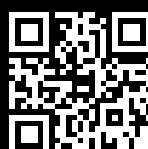
**CNC MACHINE
PROCESSING**
MANUFACTURE OF
PRECISION MACHINE PARTS
GEARED PARTS
GEARS



SINCE 1989
NS-STEEL
mašinska CNC obrada - proizvodnja mašina



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C A L L U S !
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OBROVACKA 7, VETERNIK
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SINCE 1989



TRADITIONALLY GOOD QUALITY

YEARS OF EXPERIENCE – QUALITY GUARANTEED

Machine center **NS-STEEL 1989** with decades of experience and tradition is engaged in providing services of CNC machining, production of gears - gears, CNC cutting of plate materials, production and service of machines.

The parts we produce are widely used in industrial plants and various production and service machines.

We offer our associates design service, preparation of technical documentation and production of necessary parts.

Services we offer in our machine center:

Work unit machining and production

- CNC machining, production of machine elements (parts)
- Reduction of gear motor
- Machine repair
- Design and reconstruction of industrial machines

Working unit for cutting plate materials

- Water jet CNC – water cutting
- CNC plasma & gas cutting

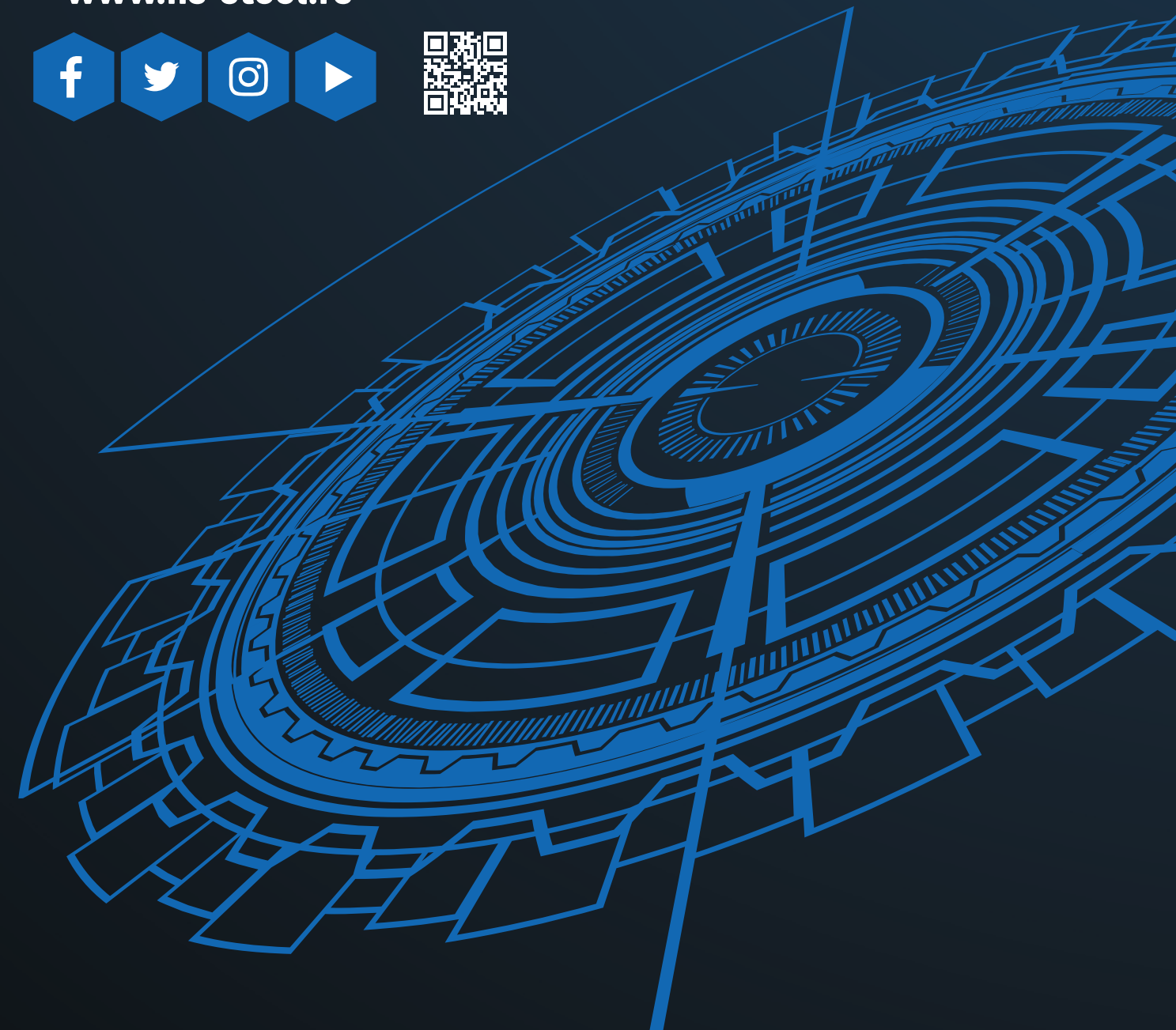
Working unit of machine production – special welding – locksmith works

- Machines for cleaning DPF / FAP filters and SCR catalysts
- Design – construction
- Welding services by various processes

Working unit mechanical filter cleaning

- Machine cleaning / washing of DPF filters and catalysts for passenger, cargo program and working machines.

www.ns-steel.rs

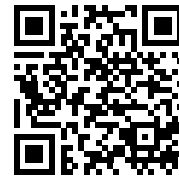


MACHINING – PART PRODUCTION

MACHINE AND GEARBOX OVERHAUL

With decades of experience and tradition, we provide machining services, produce machine parts according to sketch, technical documentation or sample.

- ⚙ We provide design and technical documentation services.
- ⚙ We repair machines and gear-motors as well as produce their spare parts.



SERRATED PARTS

GEARS

Besides classic machining, we also produce the following serrated parts:

- ⚙ Gears, sprockets, parts with internal gearing, snails and snail carts, geared shafts, gear couplings and laths.



MACHINING SERVICES:

- ⚙ Scraping
- ⚙ Milling
- ⚙ Grinding
- ⚙ Drilling
- ⚙ Internal gearing
- ⚙ Outer gearing

GEARS

IN PRODUCTION PROGRAM

- ⚙ Spur Gear
- ⚙ Helical Gear
- ⚙ Herringbone Gear
- ⚙ Bevel Gear
- ⚙ Worm Gear
- ⚙ Rack and Pinion
- ⚙ Internal and External Gear
- ⚙ Face Gear
- ⚙ Sprockets

CNC MACHINING

UNIVERSAL HORIZONTAL 2-AXIS LATHE WITH
DRIVEN TOOLS I C AXIS
DMG MORI CLX450

TECHNICAL FEATURES		CLX 450
Horizontal lathe with driven tools and C axis		
Max. work piece dimensions – ø	mm	400 x 830
Main spindle power	kW	25,5
Maximum spindle speed	o/min	4.000
Through spindle capacity – ø	mm	80
Chuck – ø	mm	315



Chain Wheel Balancing flange adapter V-Pulley Chuck adapter Nozzle Connector

VERTICAL MACHINING CENTER

CMX 800V

We offer machine elements processing on vertical machining centers DMG MORI CMX 800V and CINCINNATI SABER 750:

- XYZ stroke: 800 x 560 x 510 mm
- Working area: 1,100 x 560 mm
- Maximum work piece mass up to 800 kg
- Spindle speed: 20 - 12.0000 rpm
- Cooling through the spindle



Scroll Pump Body Pump Body Coupling Plate Adapter Plate



WELDING

MANUFACTURE OF ASSEMBLIES AND DIFFERENT TYPES
OF METAL STRUCTURES

We provide the following services to our customers:

- Design and construction – preparation of documentation
- Production of assemblies and structures based on a sample or documentation
- CNC cutting of plate materials
- Welding services - locksmith works

We perform special welding services with the following procedures for different types of materials:

Material	Thickness (mm)	Welding technique
Stainless steel	0.5 - 50	TIG
Steel	1 - 100	MIG/MAG, electric arc (SMAW)
Cast iron	1 - 20	electric arc (SMAW)
Aluminum	1 - 12	TIG
Steel	1 - 100	MIG/MAG, electric arc (SMAW)
Aluminum	1 - 50	MIG
Copper	1 - 15	TIG, oxy acetylene
Brass	1 - 15	TIG, oxy acetylene
Bronze	1 - 15	TIG, oxy acetylene



CNC CUTTING

PLASMA & GAS CUTTING SERVICE

We offer plasma and gas cutting services to our customers. Using CNC machines technologically creates the most economical process of cutting metals, flat materials and tin sheets. With this technology, we get high-performance and high-quality cutting. The cutting process is completely automatically managed by the management software.

PLASMA CUTTING is a process used to cut steel and other metals using a plasma cutting blowpipe. Inert gas (sometimes compressed air) is thrust at high speed through a nozzle, while at the same time the electric arc is established through the gas to the metal piece, thus turning one part of the gas into plasma. Plasma temperature is high enough to cut the metal.

GAS CUTTING is the process of separating metals by combustion in an oxygen stream, while simultaneously blowing off the products of combustion.

Gas cutting is a thermal process in which the operating tempera-

ture is achieved by combustion of acetylene gas. Combustion of this gas produces a fraction of the heat that maintains the operating temperature, and a significant portion of the heat is obtained by combustion of the metal which is being cut, making this an important advantage of this process.

CNC PLASMA CUTTING is one of the most commonly applied cutting techniques because of its effectiveness and simplicity, always resulting in high quality cut.



WATER JET CUTTING

WATER JET CUTTING SERVICE



To our customers we offer water jet cutting of different materials with **WATER JET TECHNOLOGY**.

We base our offers on technical documentation, technical drawing, projects in dxf or dwg formats, as well as on the sample you bring to us (in that case we prepare technical documentation).

Depending on our customer's needs, we can offer our materials with competitive pricing policy.

We offer you cutting in five different levels of final processing quality. We meet the diverse needs of our clients, from the production of individual parts, prototypes, to the serial production of the necessary elements. Engineers are at your service for finding a solution to every problem, providing you with instructions and giving you advice to help you find the best possible solution. We also offer complete project documentation, which, in addition to cutting, includes all other necessary works.



Cutting on the Water Jet guarantees high precision and quality with $\pm 0.1\text{mm}$ cutting accuracy, the work table dimensions are 4000 x 2000 mm, sheet thickness is up to 210 mm and we can work on different materials such as:

- | | |
|-------------------|------------|
| • Steel | • Plastics |
| • Tool steel | • Glass |
| • Manganese steel | • Ceramics |
| • Spring steel | • Granite |
| • Hardox | • Marble |
| • Stainless steel | • Stone |
| • Aluminum | • Wood |
| • Copper | • Rubber |
| • Titanium | |

**PROFESSIONAL DPF CLEANING MACHINE
FOR FILTERS AND CATALYSTS
DPF LINE NS - 022 L**



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e-mail: sale@dpf-machine.com
www.dpf-machine.com



- The machines are completely made of stainless steel
- The filter is permanent
- Automatic water level regulation
- Indicators of the presence of phases
- Economical consumption of electricity
- Frequency regulator - for safe washing of DPF and catalyst
- Control unit with automatic and manual control
- Touch screen
- Memory of up to 5 filters for faster and easier work on the machine
- Pre-drying and dual drying of filters
- Productivity up to 10 filters in 8 hours
- Database - up to 100,000 users
- Printing results before and after washing
- Daily, weekly, monthly reports of the number of washed filters
- A record of how many hours the main pump worked
- A record of how many hours the machine worked
- Control of the number of washed filters
- Instructions for working on the machine
- Technical support 24/7
- Warranty up to 2 years

**NEW IMPROVED
FORMULA!**

CLEANER
for DPF filters and catalytic.

Try it and see for yourself!
NEW DPF CLEANER!



Cleaning procedure:

1. Visual inspection of the condition of the filter
2. Video examination - endoscope with camera
3. Software reading of soiling
4. Printed test - results
5. Cleaning the filter with an adequate CLEANER
6. Filter pre-drying + efficient drying (30 min.)
7. Final control of reading the results
8. Packaging and delivery

Mechanical filter cleaning is a **proven method that restores the efficiency** of DPF/FAP filters and SCR catalysts to 95% of factory, compared to other methods. The entire cleaning process takes up to 90 minutes on one machine for passenger vehicles, and up to 150 minutes for trucks and work machines (including drying).

The machine cleans DPF filters and catalysts for passenger cars, vans, light commercial vehicles, trucks, buses and work machines.

DPF LINE NS - 022 L / TECHNICAL DATA	
External dimensions (length x width x height)	2515 x 1230 x 2250 mm
Internal dimensions (length x width x height)	1900 x 935 x 915 mm
Machine weight	850 kg
Material	Inox - Stainless Steel
Tank volume	230 l
The volume of the operational water purifier	35 l
Total volume	265 l
Power supply	380 V 3 phases
Connection to the air network	8 bar
Aspiration	330 m³/h
Total consumption / working consumption	17,3 kWh / 14 kWh
Equipment	Aspirator, water filtration system, pressure gauges on the filter, water heaters, air heaters, Lowara Italian stainless steel pumps, electromagnetic check valves - Burkert, printer, filter connectors.

**PROFESSIONAL DPF CLEANING MACHINE
FOR FILTERS AND CATALYSTS
DPF LINE NS - 022 M**



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www.dpf-machine.com



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DPF LINE NS - 022 M / TECHNICAL DATA	
External dimensions (length x width x height)	1650 x 1100 x 2200 mm
Internal dimensions (length x width x height)	1090 x 950 x 1200 mm
Machine weight	450 kg
Material	Inox - Stainless Steel
Tank volume	130 l
The volume of the operational water purifier	35 l
Total volume	165 l
Power supply	380 V 3 phases
Connection to the air network	8 bar
Aspiration	330 m³/h
Total consumption / working consumption	16 kWh / 13 kWh
Equipment	Aspirator, water filtration system, pressure gauges on the filter, water heaters, air heaters, Lowara Italian stainless steel pumps, electromagnetic check valves - Burkert, printer, filter connectors.

PROFESSIONAL MACHINE CLEANING DPF/FAP FILTERS AND SCR CATALYST



DPF/FAP/SCR CLEANING

We offer you an efficient and proven method!
Mechanical cleaning of the DPF/FAP filter and catalysis for:

- passenger vehicles
- vans
- semi-trucks
- cargo vehicles
- working machines

In our DPF SERVICE we cleaned over 4,500 DP filters and SCR catalyst in 4 years.
We use that experience to solve the problem of a clogged filter.

THE MACHINES HAVE ALL THE NECESSARY FUNCTIONS TO CLEAN THE FILTERS WITHOUT DAMAGE
AND TO

IT DRIES EFFICIENTLY, IT IS ONE OF THE MOST IMPORTANT FUNCTIONS!

WE OFFER COMPLETE TRAINING TO WORK ON DPF/FAP/SCR CLEANING MACHINE

ENGINE DECARBONIZATION

Preventive cleaning of carbon deposits in the vehicle engine will restore engine parts instead of their own for me.

It will save them, that is, extend their working life.

Advantages of ENGINE DECARBONIZATION:

- Reduces fuel consumption - engine operation, power and fuel consumption return to normal;
- Removes carbon deposits on all types of internal combustion engines;
- Stops clogging, extends the life of expensive engine parts: EGR valve, DPF and catalyst, spark plug, diesel, turbocharger...
- Reduces intermittent engine operation and noise;
- Reduces the emission of exhaust gases;
- Accelerates, enables the vehicle to pass the ECO TEST at the TECHNICAL INSPECTION.
- The working life of the engine is extended.

A CLEAN ENGINE IS A HEALTHY ENGINE!

NEW IMPROVED FORMULA!

MACHINE CLEANING AGENT DPF AND CATALYST

Tested on over 2000 different washed filters soiling content, from passenger to cargo programs, from diesel to gasoline engines.

The improved agent has better soot dissolution and degreasing, the most important thing, besides EFFICIENCY-TI cleaning, the agent does not DAMAGE the inside of the filter, ceramics and precious metals.

Try it and see for yourself!

**NEW
DPF CLEANER!**





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