



2022

design
technical
documentation
production



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



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



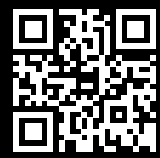
**PRODUCTION
THE MACHINE**
DPF / FAP FILTER
AND SCR CATALYST



SINCE 1989
NS-STEEL
mašinska CNC obrada - proizvodnja mašina



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C A L L U S !
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NOVI SAD, SERBIA

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

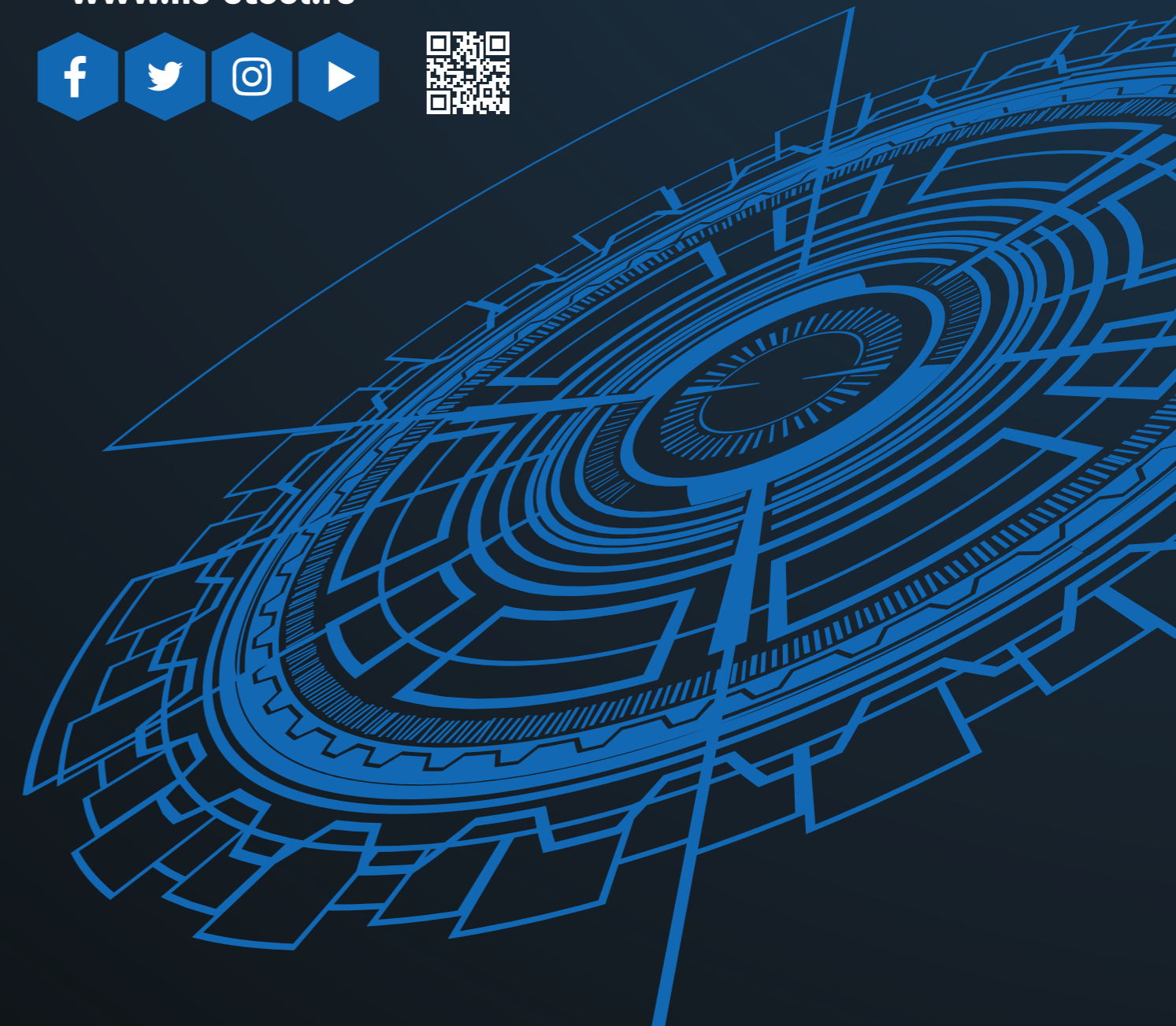
Working unit of machine production – special welding – locksmith works

- 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 | 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.

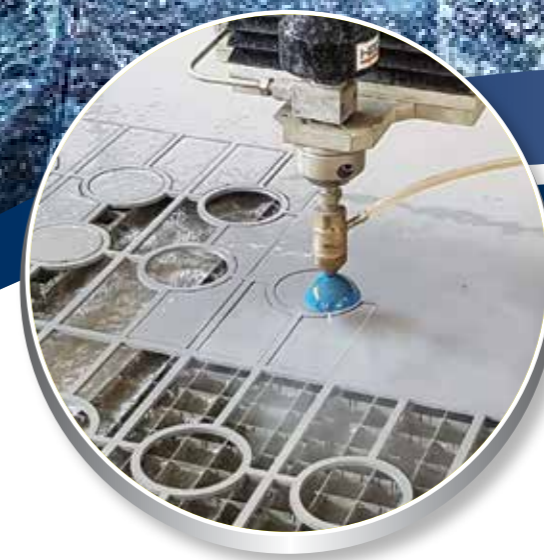
PLASMA CUTTING is a process used to cut steel and other metals using a plasma cutting blowpipe. Inert gas (sometimes compressed air) is thrust at high speed through a nozzle, while at the same time the electric arc is established through the gas to the metal piece, thus turning one part of the gas into 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
- Tool steel
- Manganese steel
- Spring steel
- Hardox
- Stainless steel
- Aluminum
- Copper
- Titanium
- Plastics
- Glass
- Ceramics
- Granite
- Marble
- Stone
- Wood
- Rubber

CLEANING MACHINES

DPF/FAP/SCR FILTERS AND CATALYSTS

OUR MACHINES HAVE THE FOLLOWING QUALITIES:

Machines made entirely of stainless steel, coarse and fine filters are permanent, automatic water level control, phase consumption indicator, economical power consumption, frequency regulator - for safe washing of DPF and catalysts, control unit with automatic and manual control, touch screen, memory up to 5 filters for faster and easier machine operation, pre-drying and dual drying 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 on the number of washed filters, records on how many hours the main pump worked, records on how many hours the machine worked, control of the number of washed filters, instructions for work on the machine, technical support 24/7, warranty up to 2 years.



DPF LINE NS - 022 L

DPF LINE NS - 019 L / TECHNICAL FEATURES

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	265 l
Operating Water Purifier Volume	70 l
Total volume	335 l
Power supply	380 V 3 phase
Connection to the air network	8 bar
Aspiration	1500 m ³
Total consumption / work consumption	17,3 kWh / 14 kWh
Equipment	Aspirator, water filtration system, system for receiving and fixing filters, pressure gauges in filters, water heaters, touch screen, printer, automatic water addition, dual drying inside and outside the machine, connectors.

PROFESSIONAL MACHINE CLEANING OF DPF FILTERS AND CATALYSTS

Machine filter cleaning is a proven method by which the efficiency of DPF / FAP filters and SCR catalysts is restored to 95% of the factory, compared to other methods. The whole cleaning process is performed on one machine for passenger vehicles and lasts up to 90 minutes, and for trucks and work machines up to 150 minutes (together with drying). The machine cleans DP filters and catalysts for passenger cars, vans, light commercial vehicles, trucks, buses and work machines.

DPF LINE NS - 019 M / TECHNICAL FEATURES

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
Operating Water Purifier Volume	70 l
Total volume	200 l
Power supply	380 V 3 phase
Connection to the air network	8 bara
Aspiration	1500 m ³
Total consumption / work consumption	16 kWh / 13 kWh
Equipment	Aspirator, water filtration system, system for receiving and fixing filters, pressure gauges in filters, water heaters, touch screen, printer, automatic water addition, dual drying inside and outside the machine, connectors.



DPF LINE NS - 022 M



- Visual inspection of filter condition
- Video Review – Camera Endoscope
- Software contamination reading
- Printed test – results
- Cleaning the filter with an adequate agent
- Filter pre-drying + effective drying (30 min.)
- Final control of results reading
- Packing and shipping

PROFESSIONAL MACHINE CLEANING DPF / FAP FILTER AND CATALYST

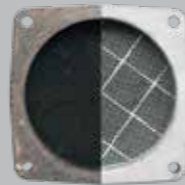


Machine filter cleaning is a process in which the efficiency of the DPF / FAP filter and SCR catalytic converter for all passenger, bus, cargo and work vehicle vehicles is restored to 95% of the new one. The entire cleaning process is performed on one machine and takes 90 minutes for passenger vehicles and up to 150 minutes for trucks and work machines (together with drying).

This method ensures the efficiency of DPF filters and catalysts, in comparison to other methods gives far better results.

CLEANING PROCEDURE:

- ✦ Visual inspection of filter condition
- ✦ Video Review - Camera Endoscope
- ✦ Software contamination reading
- ✦ Printed test - results
- ✦ Cleaning the filter with an adequate agent
- ✦ Filter pre-drying + effective drying (30 min.)
- ✦ Final control of results reading
- ✦ Packing and shipping



BEFORE

AFTER

DPF LINE NS -
019 L

NONCARBON

The innovative **NonCarbon** method for cleaning carbon deposits is the most efficient, non-invasive, environmentally friendly, easy, fast and convenient way to remove carbon deposits.

The **NonCarbon** system uses only water and electricity, without the use of chemicals, so there are no harmful by-products, traces or impurities, making it a unique system on the market. Just connect the **Carbon Cleaning** device to the car and, after 40 minutes, the engine has been cleaned of carbon deposits, so passing the eco-test is no problem.

Carbon deposits that build up on internal combustion engine parts are present in every vehicle on the road. Oil, an over-enriched fuel mix or worse quality, the city's 'start-stop' driving mode, all cause carbon to accumulate faster. A thin layer of carbon should not present major problems, but its build-up can cause them.

Carbon deposits can significantly affect vehicle performance such as reduced power and torque, engine jitter, frequent cold weather pauses, increased concentrations of harmful gases, and fuel consumption.



SAVING ON
UP TO 10% FUEL



EXTENDS
SERVICE LIFE
ENGINE



ENHANCES
STRENGTH AND CRAFT
ENGINE TORQUE



DECREASES
EMISSION OF HARMFUL
GASES BY 50%



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SERVICE OF ENGINE CLEANING DECARBONIZATION



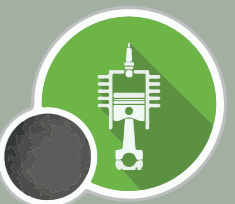
CLEANING RESULT

BEFORE



BLACK CARBON
DEPOSITS

AFTER



THE ENGINE
IS CLEAN





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