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MACHINE PROCESSING

PART MANUFACTURING

GEAR PRODUCING

GEARS - SHAFTS

WATER JET CUTTING

PLASMA AND GAS CUTTING

DPF MACHINES PRODUCTION

DPF - TURBO SERVICING

DPF / FAP FILTER CLEANING

TURBO COMPRESSOR OVERHAUL





**O BROVACKA 7, VETERNIK
NOVI SAD, SERBIA**

Machine Centre **NS-STEEL 1989** with long lasting tradition and experience provides services of machining, production of serrated parts – gears and CNC cutting, as well as production and service of machines.

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

To our associates we offer design services, technical documentation preparation, as well as production of necessary parts.

In our machine center, we offer the following services:

Plate Material Cutting Department

- Water Jet CNC - Water Cutting
- Flat Material and Tube Fiber Laser CNC Cutting
- CNC Plasma & Gas Cutting

Machine Processing and Production Department

- Complete Machining, Production of Machine Elements (Parts)
- Gear Reducer Overhaul
- Machine Overhaul
- Industrial Machinery Design and Reconstruction

Machine Production Department

- Production of DPF / FAP Filters Cleaning Machines and SCR Catalysts

Turbine and DPF Filter Servicing Department

- Turbo Compressor Overhaul For Passenger, Cargo and Heavy-Duty Machines
- DPF Filters Machine Cleaning / Washing for Passenger, Cargo and Heavy-Duty Machines.

www.ns-steel.rs



**SINCE
1989**

**TRADITION AND
HIGH QUALITY
ASSURANCE**

**YEARS OF
EXPERIENCE
QUALITY
GUARANTEED**

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.



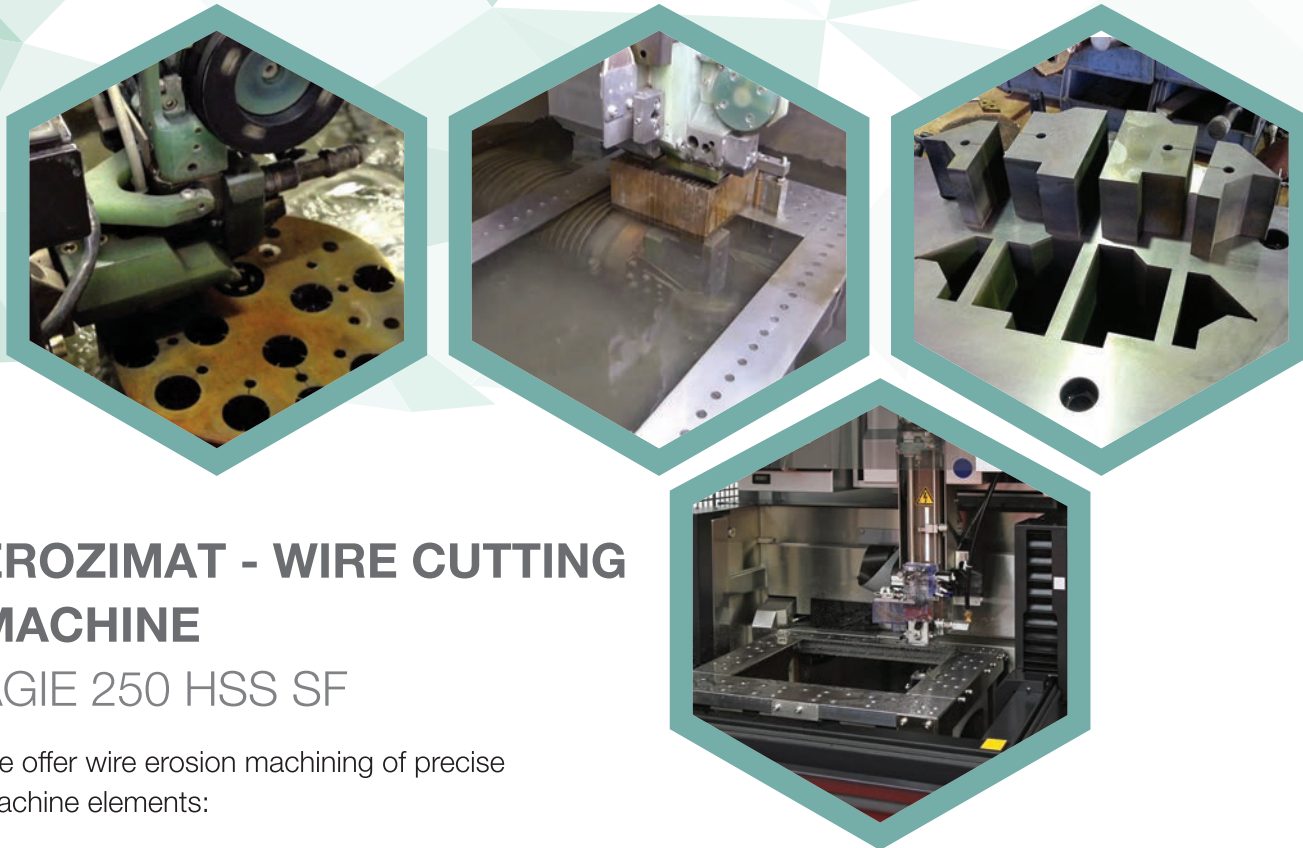
MACHINING SERVICES:

- ⚙ 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



EROZIMAT - WIRE CUTTING MACHINE

AGIE 250 HSS SF

We offer wire erosion machining of precise machine elements:

- XYZ stroke: 400 x 250 x 251 mm
- Operating angle of the I / O machine: 0 ° - 30 ° C
- Maximum work piece size: 860 x 530 x 250 mm
- Work piece weight up to 400 kg
- Wire diameter: 0.1 - 0.3 mm



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

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 temperature 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 | |

CLEANING MACHINES

DPF/FAP/SCR FILTERS AND CATALYSTS

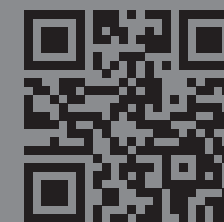


DPF LINE NS - 019 L / TECHNICAL FEATURES

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	1400 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.

OUR MACHINES HAVE THE FOLLOWING QUALITIES:

- ✧ THE MACHINES ARE MADE ENTIRELY OF STAINLESS STEEL
- ✧ CONTROL UNIT, MODERN SOFTWARE
- ✧ POWER CONSUMPTION INDICATOR BY PHASES
- ✧ AUTOMATIC CONTROL - FILTER WASH
- ✧ FILTER DRYER BLOCKS - OUTSIDE AND INSIDE
- ✧ AUTOMATIC WATER FILLING WITH NIVOSTAT
- ✧ PERMANENT STAINLESS STEEL FILTERS
- ✧ ADEQUATE MACHINE INSTRUCTION MANUAL
- ✧ TECHNICAL SUPPORT 24/7
- ✧ 2 YEAR WARRANTY



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[DPF-MASINE-SRBIJA](#)

MACHINE 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



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 bar
Aspiration	1400 m ³
Total consumption / work consumption	10,2 kWh / 8 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 DPF FILTERS AND CATALYSTS

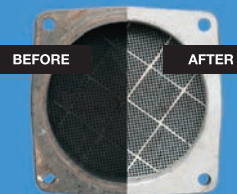


Machine filter cleaning is a process in which the efficiency of the DPF / FAP filter and SCR catalytic converter for all passenger, bus, cargo and work vehicle vehicles is restored to 95% of the new one. The entire cleaning process is performed on one machine and takes 90 minutes for passenger vehicles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



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%



DPF SERVICE DECARBONISATION:

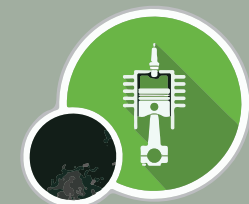
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NEW SERVICE OF ENGINE CLEANING DECARBONIZATION



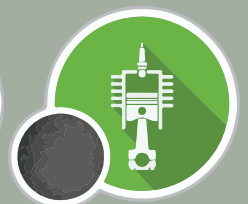
CLEANING RESULT

BEFORE

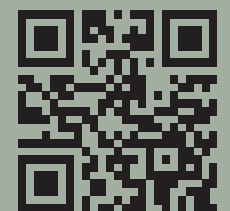


• BLACK CARBON
DEPOSITS

AFTER



• THE ENGINE
IS CLEAN





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