

### Aleš Habe

Sales Manager of Eastern markets

### Company

We have more than **70 years of knowledge and experience**. Our beginnings date back to 1947, when production began in workshops in Nova Gorica.

**Robustness** was already a priority when we constructed the first machines; throughout the development, we are aware of its importance, so we maintain it also today.

When we embarked on an independent path, we focused the development of our machines on higher productivity, lower operating costs, lower maintenance costs, consequently lower energy consumption and process control.

We have included **Design Management** in our business process, which encourages our innovative thinking towards effective product and service design, improves the user experience, and ensures organizational efficiency.

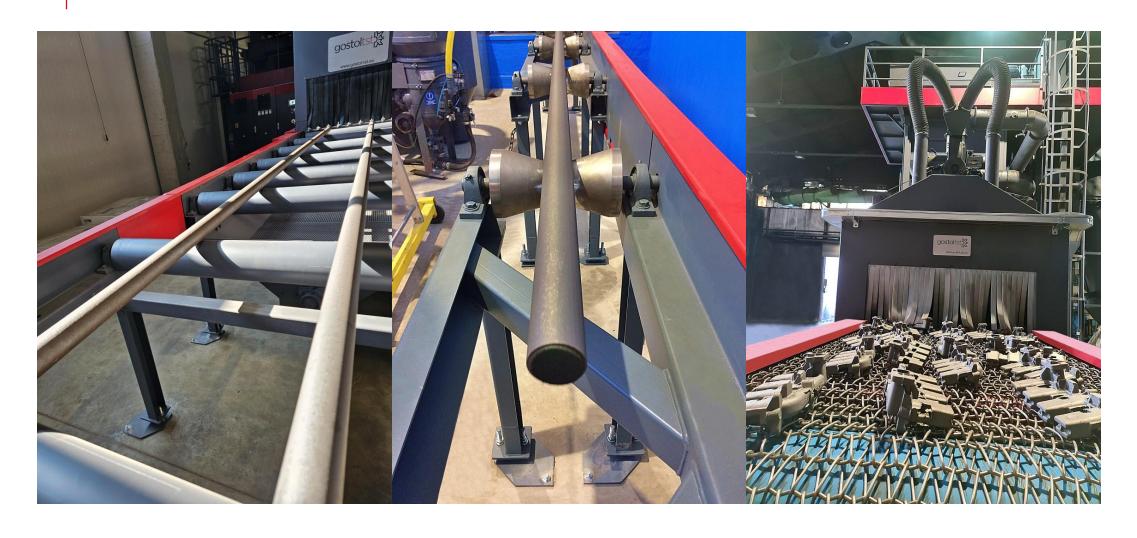
Within Design Management, we use the methods of **Design Thinking and Design Research**, with which we want to focus even more on the customer and get closer to him.

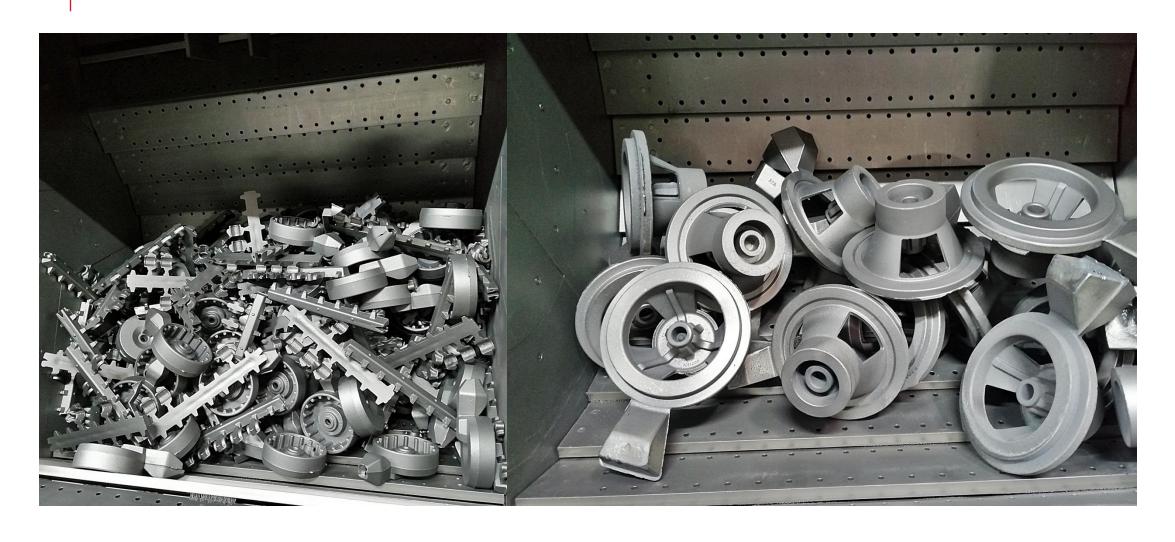


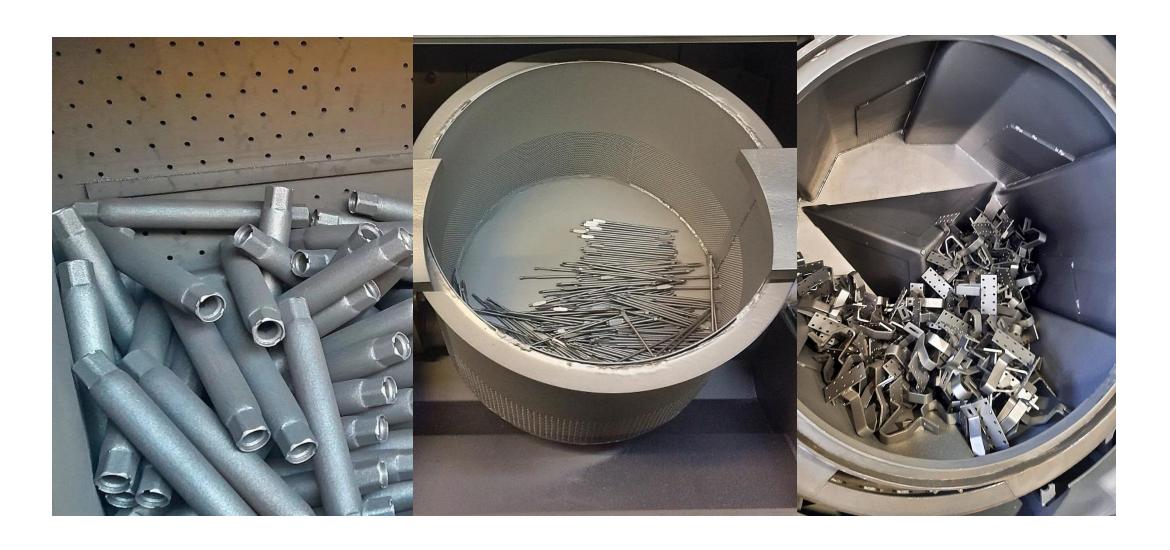
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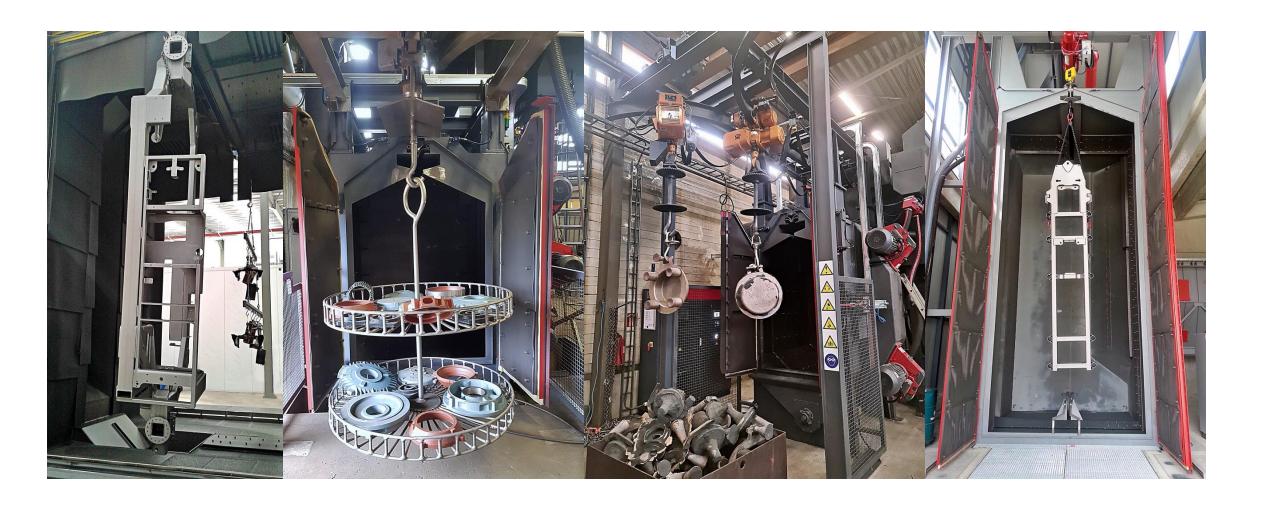




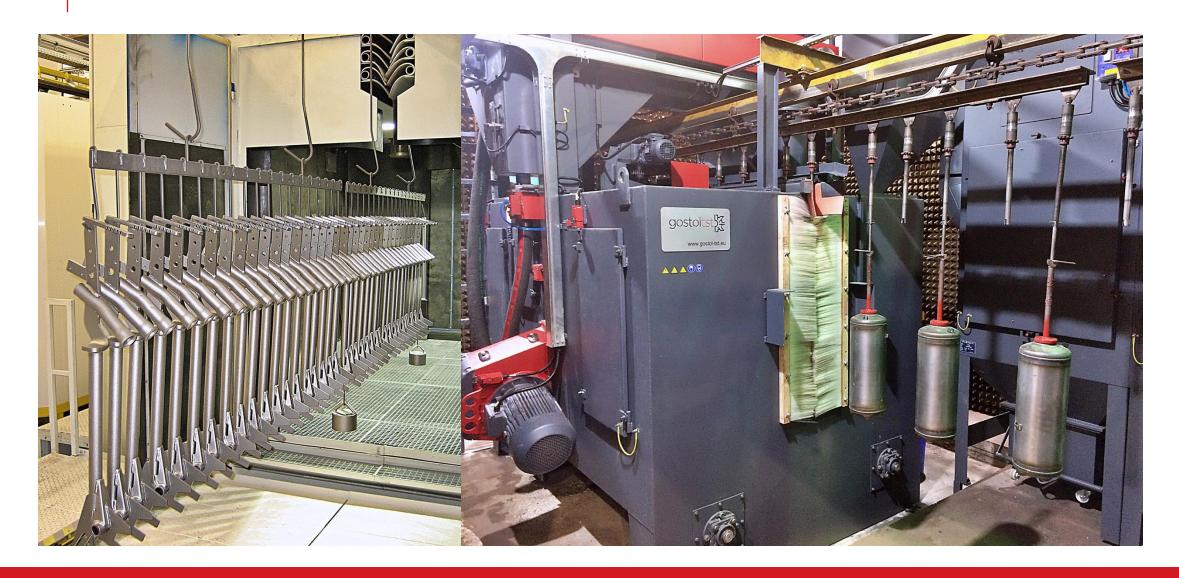




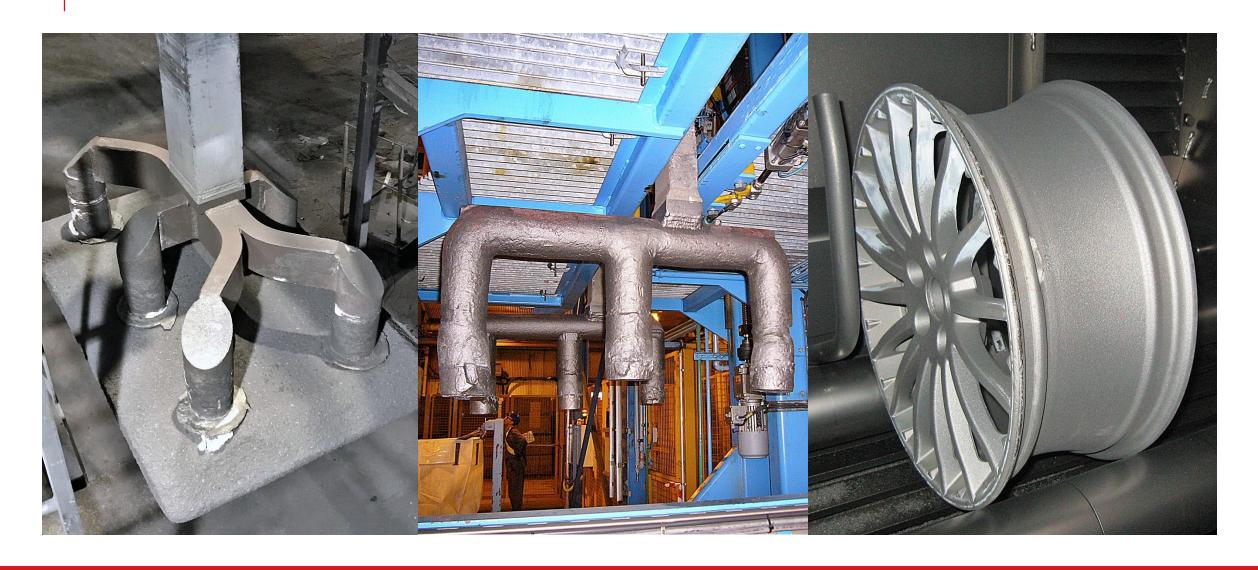












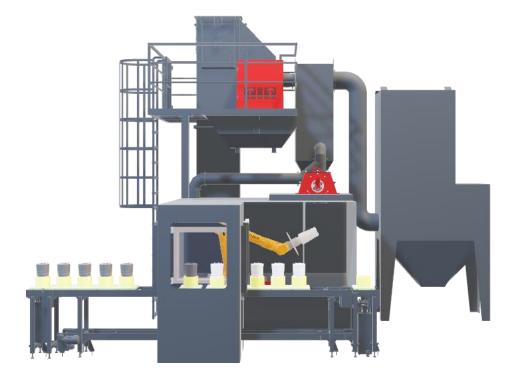


# Universal robotic shot blasting machine

#### Universal robotic shot blasting machine

The robot directly carries the workpiece from the transition chamber to the shot blasting chamber, where it is exposed to the shot blasting jet.

After the operation, the robot places the workpiece again in the transition chamber.



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### Application

Industries suitable for the universal robotic shot blasting machine:

- Automotive industry
- Foundries
- Forges
- Railway industry
- Construction and agricultural machinery
- Tool industry
- Military industry
- Energy sector
- Aluminium industry



### The solution for the most demanding workpieces

#### **Process automation**

The robotic shot blasting machine enables automation, greater repeatability and better control over the process.

#### **Specific processing of various surfaces**

The robot with advanced kinematics enables precise adjustment of the shotblasting intensity and the optimal processing angle, which ensures exceptional results even with complex shapes.

#### Workpieces that represent excessive physical effort for the worker

(e.g. a heat exchanger weighing 12 kg)

#### Workpieces where damage is unacceptable

For sensitive pieces such as sealing surfaces on aluminium housings, the robot ensures precise processing without damage.

#### Workpieces with high aesthetic requirements

The robot allows for arbitrary kinematics, ensuring a perfect visual appearance – ideal for products where aesthetics are of key importance.

## Why choose a universal robotic shot blasting machine?

#### **Adaptability for different workpieces**

The machine is designed for a wide range of applications. The gripper easily adapts to different shapes, sizes and types of workpieces, allowing it to be used in many industries.

#### **Exceptional accuracy and repeatability**

The robot can be programmed to precisely follow preset movements. This ensures a consistent shot blasting process, reduces human error and increases the quality of finished products.

#### **Faster blasting cyle**

The advanced design of the machine, which includes a transition and blasting chamber, reduces the time for handling workpieces. This speeds up the entire process and optimizes productivity.



## Why choose a universal robotic shot blasting machine?

#### **Less noise and greater safety**

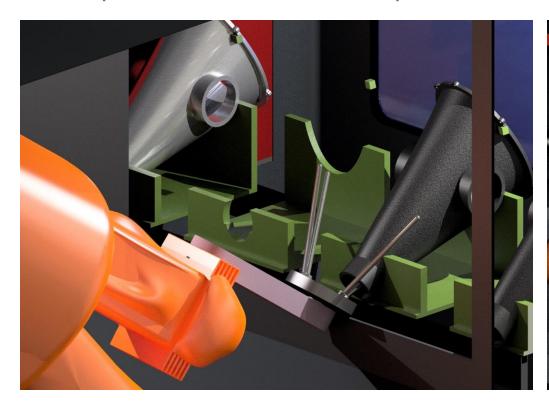
During the blasting process, collision of workpieces is avoided, reducing noise and protecting sensitive materials for damage.

#### **Higher productivity and lower labour costs**

Automation enables continuous operation, increasing the speed and efficiency of the process and reducing the need for human intervention, thus lowering labour costs.



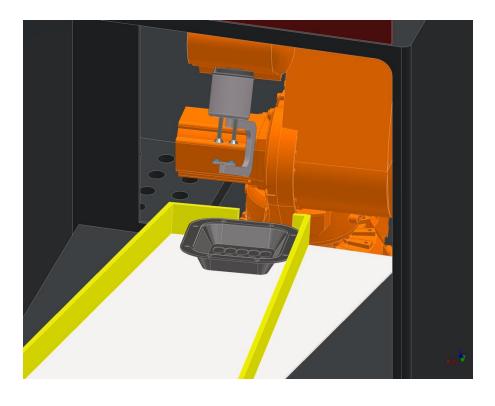
Example of automated workpiece loading on a hook

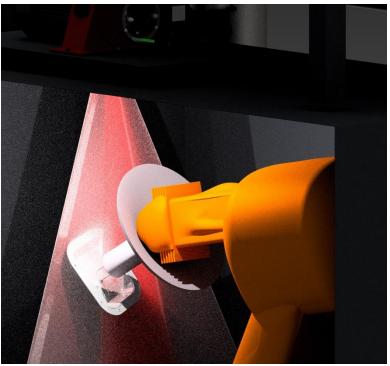




<sup>\*</sup> The image is intended to present an idea and does not represent a detailed solution.

Unit with axle grip





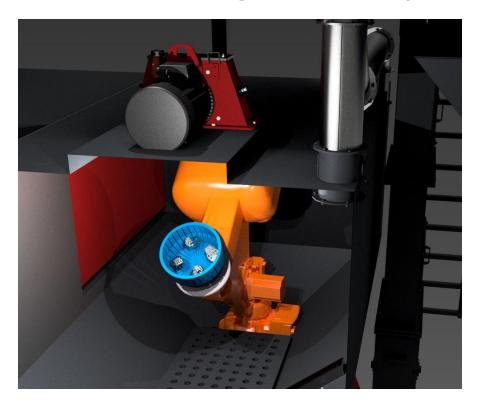
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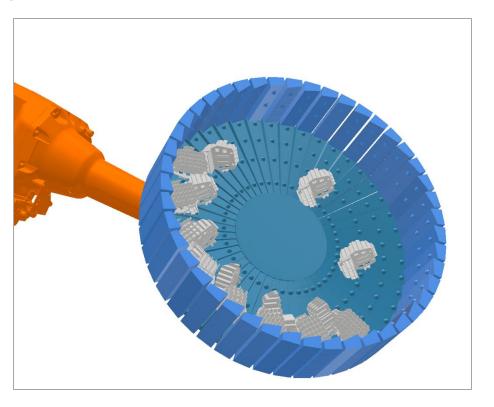
Unit with fork for clamping individual workpieces



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A branched hanger with many workpieces





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### Universal robotic shot blasting machine



#### Results of testing

#### **Heat exchanger**

Weight & dimensions: 8 kg, Ø 200 x 320 mm

**Production capacity:** 300,000 pieces annually

Current process: Blasted on a VK machine (labour

intensive loading & unloading)

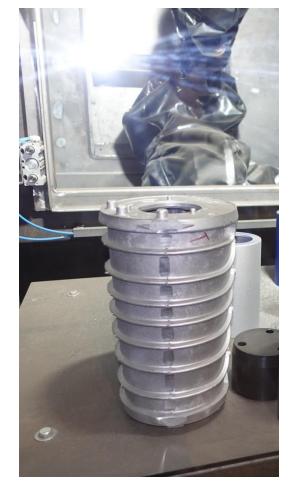
Additional operations: Internal blasting &

blowing

**Proposed solution:** Universal robotic shot blasting machine capable of completing all steps within a 60-second cycle.

**Decision:** Project not pursued due to a reduction in orders.





#### Results of testing

#### **Exhaust muffler**

**Project:** URPS offered for shotblasting stainless steel exhaust mufflers

**Key requirements:** Surface roughness, reflection, uniform shine

#### **Solution:**

- Robotic shot blasting ensures a consistent blasting angle across all surfaces
- Two stage blasting:
  - Close-range blasting for initial surface treatment
  - Distant blasting for achieving uniform roughness

#### **Key advantages:**

- Flexibility of robotic shotblasting
- Automation for improved efficiency and consistency





### Results of testing

#### **Military industry**

**Dimensions:** Ø 200 mm, length 450 – 950 mm

Weight: Up to 90 kg

#### **Challenges:**

- Variability in workpiece size and weight
- Need for internal blasting with nozzle

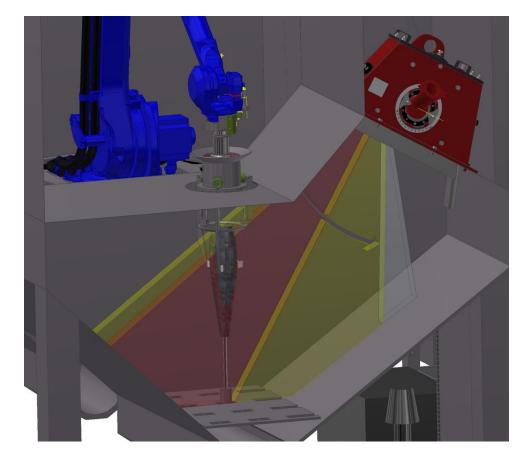
#### **Solution:**

- URPS offers a fully automated process
- Ensures efficiency, consistency, and precision

#### **Key advantages:**

 URPS is the optimal solution for complex and heavy workpieces





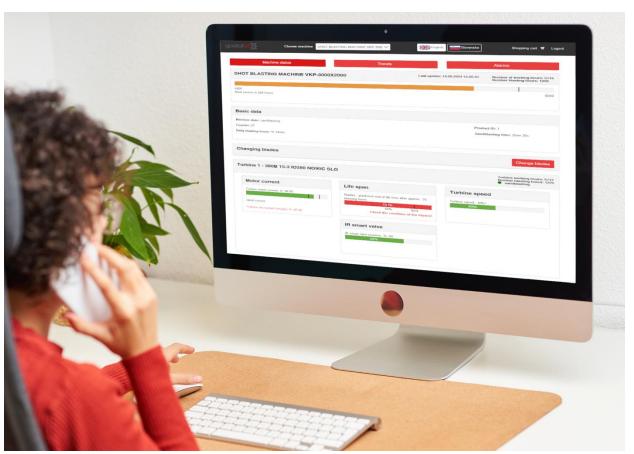
### Universal robotic shot blasting machine

Customizable Excellence: Universal robotic shot blasting machine – Your gateway to tailored surface finishing!



### Sm@rt cloud platform





How to improve machine performance?

Easy access to the cloud via mobile phone or computer.

You need the following to access the app

- internet connection
- username and password

https://smartcloud.gostol-tst.eu

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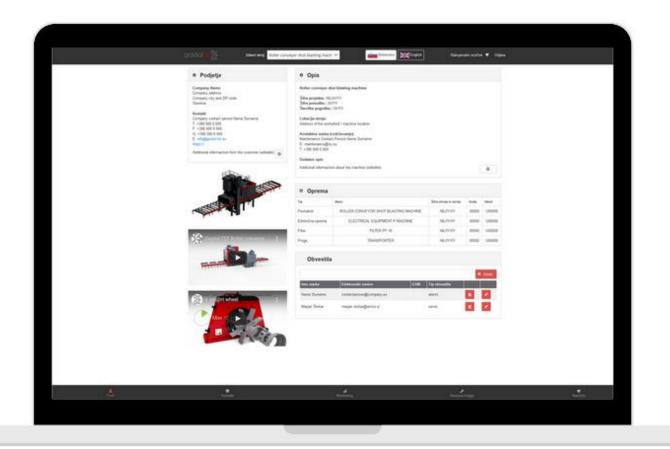
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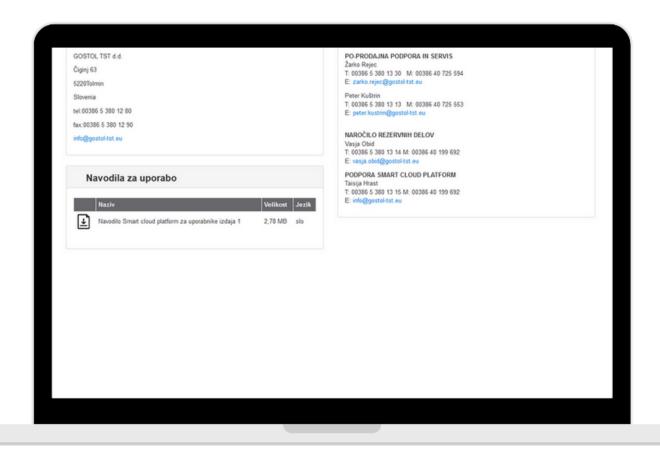
#### Profile

- Company details
- Basic information about the machine
- Equipment description
- Contact person for notifications
- Graphic and video materials



#### Contact

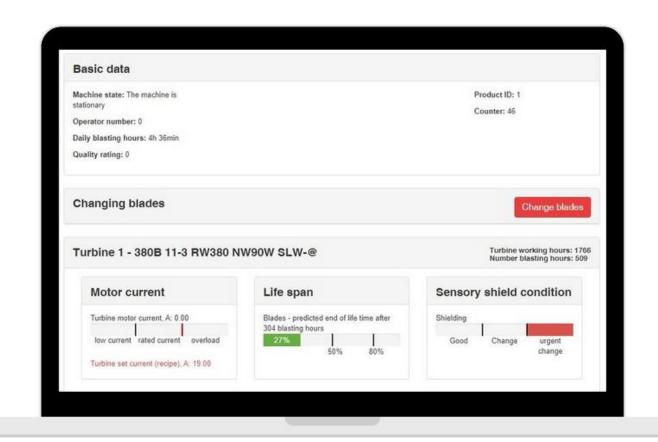
- Gostol TST contact
- User manual



#### Monitoring

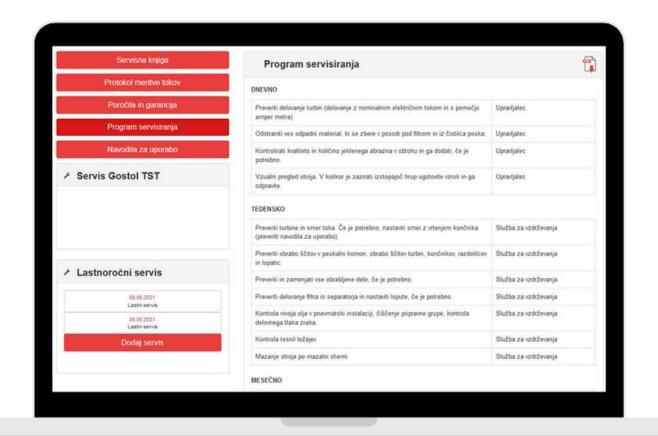
- Machine status
- Trends
- Alarms
- Webcam

The monitoring tab is only available to the customers who have the sm@rt cloud platform option enabled. The function works if the machine is connected to the internet.



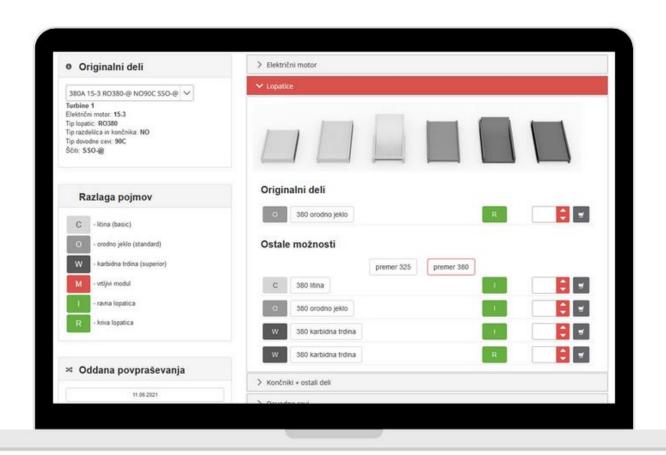
#### Service book

- Service book
- Protocol measurement current
- Reports and warranty
- Servicing program
- User manual



#### Spare parts order

- Spare parts order
- Submitted inquiries



## What does the Sm@rt cloud platform enables you to do?

Monitoring of individual parameters depends on the selected options.

1

Monitoring of current operating parameters of the machine, dust collector and blasting wheels.

2

Monitoring of machine counters, current alarms and history.

3

Data analytics

4

Access to service book, user manual and video instructions.

5

Easy order of spare parts.

What are the benefits of using Sm@rt cloud platform?

1 Energy savings

2 Lower abrasive consumption

3 Less maintenance and production interruptions

### Thank you for your attention!



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