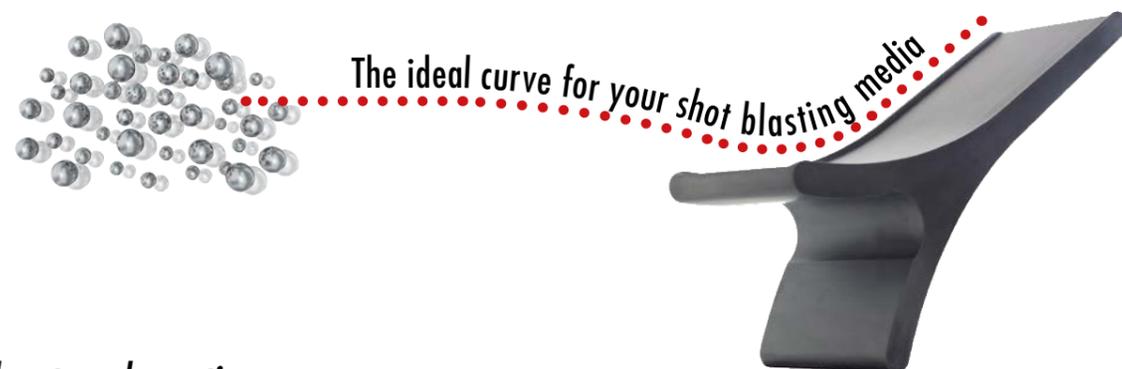




Service Shot Blasting Equipment Modernization



TuneUp - Launch into higher blasting efficiency



The eternal question

How can you achieve the highest efficiency and the best quality at the lowest costs?

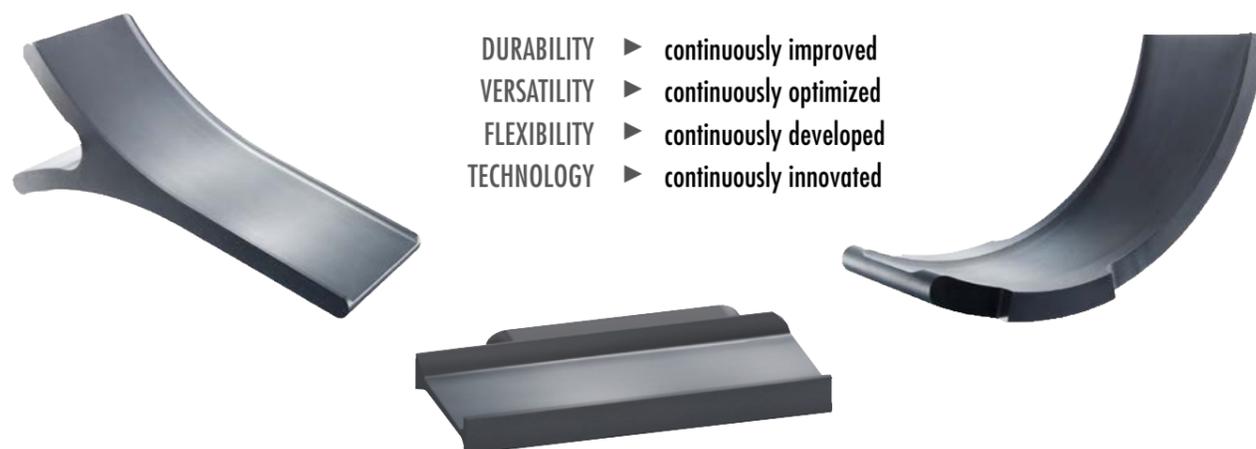
Rösler's clear answer

RÖSLER TuneUp - THE ideal option for shot blast equipment upgrades!

Rösler TuneUp is the cost effective option for modernizing your existing shot blast equipment. We are absolutely certain that we can optimize your shot blast equipment. For this reason, we guarantee technical and economic success – if after the retrofit you are not totally satisfied with the results, we reinstall your old turbines - free of charge.

Simple explanation

The patented unique design of the throwing blades; easily adaptable for your individual applications. (DE/4409690)



DURABILITY ▶ continuously improved
VERSATILITY ▶ continuously optimized
FLEXIBILITY ▶ continuously developed
TECHNOLOGY ▶ continuously innovated

Technical possibilities

With our experience and knowhow we can offer many solutions, for example, with our revolutionary high performance RUTTEN (DM/052835) and "Gamma® G" turbines!

Up to 16 times higher wear resistance

Helps to drastically reduce costly maintenance and downtime with an expected service life of up to 40,000 operating hours!*

Lower energy consumption

Improved cost efficiency of the Ruten turbines provides a savings of at least 10% and up to 25% on energy costs!*

Reduction of processing time

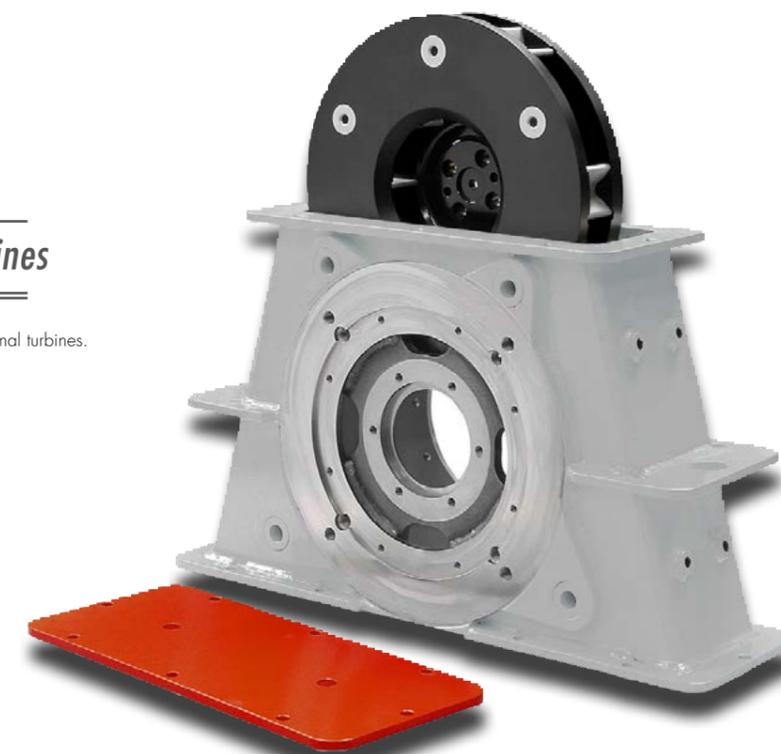
Up to 77% higher media impact energy results in a significant productivity increase!*

Reduction of the blast media consumption

This creates a cost savings of up to 30% on your media costs!*

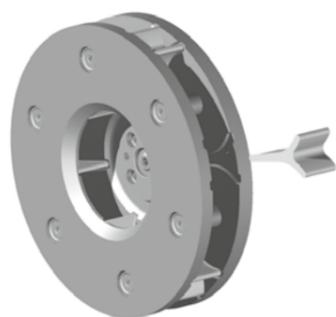
- + Efficiency
 - + Quality
 - + Cost Savings
-
- = **Rösler - high performance turbines**

* Depending on the blast application; in comparison to conventional turbines.



Blast turbines

The blast turbines are at the center of every shot blast machine. They determine the blast results, are normally the biggest users of consumables, like wear parts, and require intensive maintenance. With our broad turbine portfolio we can offer the optimum solution for practically any shot blast application.



RUTTEN turbines – for a longer life

- ▶ Specially designed curved throwing blades offer very high media throwing speeds, precise blast patterns and an extremely high efficiency
- ▶ Compared to conventional turbines up to 25% higher energy efficiency
- ▶ Throwing blades made from highly wear resistant alloys offer an exceptionally long blade life
- ▶ Both sides of the throwing blades can be utilized
- ▶ Simple change of the rotational direction of the turbine
- ▶ Depending on the used blast media, up to 10-16 times higher overall turbine life



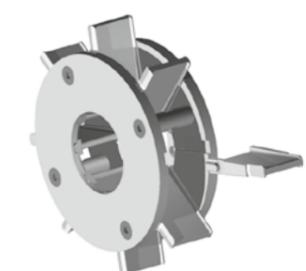
Gamma® G turbines – designed for easy maintenance

- ▶ Specially designed curved blades offer very high media throwing speeds, precise blast patterns and an extremely high efficiency
- ▶ Compared to conventional turbines up to 15% higher energy efficiency
- ▶ Throwing blades made from forged tool steel offer a very high wear resistance
- ▶ Simple change of the rotational direction of the turbine
- ▶ Both sides of the throwing blades can be utilized
- ▶ Depending on the used blast media, up to 3 times higher overall blade life
- ▶ Easy replacement of the throwing blades by simple removal of the side turbine lid



HURRICANE turbines – for many applications

- ▶ Available as cast, tool steel and hard metal version
- ▶ Trouble free conversion from one material version to another, thus easy adaptation to changes of the shot blast process
- ▶ Modern single disc turbine requires fewer parts and is easy to maintain
- ▶ "Smart" design without any internal screws



EVOLUTION turbines – for very high media quantities

- ▶ The special design of the turbine body allows a maximum of media throughput
- ▶ Twin disc turbine guarantees a precise "hot spot" for a more efficient shot blast process
- ▶ "Smart" design without any internal screws
- ▶ Turbine can run clockwise and counter clockwise

Maintaining a stable shot blast process

In order to meet the high quality standards of the market it is possible to produce 100% constant, repeatable shot blast results. We offer numerous supporting systems that ensure absolute process stability.



Patent 2533942

MAX-IMP – Automatic control of the blast pattern

A sensor located near the "hot spot" measures the blast pattern while the shot blast machine is running. After only 3-5 seconds the result is displayed on the control panel screen. This offers the following benefits:

- ▶ Since the time consuming manual control of the blast pattern with a sheet metal plate is no longer necessary, the time requirements for maintenance are drastically reduced.
- ▶ The desired shot blast results can be achieved in shorter cycle times
- ▶ Lower blast media consumption
- ▶ Reduced requirements for spare and wear parts
- ▶ Continuous quality control by automatic monitoring of the shot blast process



MagnaValves – Blast media dosing with the combination of rare earth permanent magnets and an electro magnet

MagnaValves guarantee a maximum in process stability and precision for the precise dosing of blast media to the turbines as well as the media replenishment. These systems consist of rare earth permanent magnets for normally closed operation and an electromagnet for controlling media flow rates. With power applied, the magnetic field is neutralized and media is allowed to flow through the valve. When no power is applied to the MagnaValve, the permanent magnets stop the flow. Since the system has no moving parts, it does not wear and requires practically no maintenance. Models with sensor coil allow the exact measurement of the media flow.



Shell valves – Control of the media flow with pneumatically activated dosing valves

The shell valves represent a proven and cost effective system for dosing blast media to the turbines at a constant flow rate. Shell valves are activated pneumatically and can be individually controlled (opened or closed). With the use of a linear motor the media flow rate can be further refined.

Special system components

By utilizing special system components from our product range you can quickly optimize your overall shot blast process, reduce your costs and increase the productivity of your shot blast equipment.



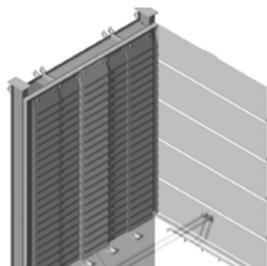
Magnetic separators

Magnetic separators are used to remove non-magnetic particles, e.g. sand, from steel blast media to reduce turbine wear. With Rösler magnetic separators the amount of sand in the blast media can be reduced to 0.1%.



Media replenishment

Media level sensors in the media hopper activate a pneumatic valve to replenish the media hopper with fresh blast media from a special storage hopper. The replenishment of lost blast media guarantees a constant media operating mix.



Wear linings

Our special, patented wear liners for the blast chamber offer another opportunity to reduce your operating costs. They can be easily installed and replaced and offer an exceptionally long uptime. This helps prevent expensive refurbishment work on your blast chamber. By simply rotating the wear plates, their overall uptime can be practically doubled.



Automatic adjustment of the blast pattern

When different work pieces must be shot blasted with different blast programs, the adjustment of the blast pattern can yield a significant process improvement. The blast pattern adjustment is activated through the PLC program and will result in an increased productivity.



Screen decks

Large particles in the blast media like screws or other metal parts can seriously damage or even destroy a turbine. The screen deck is installed in front of the inlet spout of the turbine. It catches any larger particles, before the media flows to the turbine. These particles can be discharged by simply removing a plate in front of the screen deck.

CHECKLIST TuneUp - Upgrade with new turbines

We will gladly assist you in determining the cost savings potential you can achieve with a modernization of your shot blast equipment. All you have to do is **complete** the following questionnaire and send it to the E-mail address or the fax number listed on the reverse side of this sheet.

**We will treat your information as absolutely confidential and will use it only for internal purposes. Your information will NOT be passed on to third parties.*

1. Customer information

Name:
 Address (street):
 Postal code (Zip or PC):
 Address (Town):
 Value added tax ID (only when applicable):
 Industry:

Technical contact (name):
 Technical contact (phone):
 Technical contact (E-Mail):
 Commercial contact (name):
 Commercial contact (phone):
 Commercial contact (E-Mail):

2. Information on your shot blast equipment

Manufacturer:
 Model name:
 Machine type (roller conveyor, spinner hanger, etc.):
 Shot blast process / work pieces:
 Year of manufacture:
 Operating hours: (h)
 Blast hours: (h)
 Run time per day: (h)

3. Objectives of the modernization

Capacity increase: Yes No
 Improved blast results: Yes No
 Energy savings: Yes No
 Other points / remarks:

4. Blast media

Media name (per manufacturer):
 Manufacturer:
 Media type (grit/shot/etc.):



CHECKLIST TuneUp - Upgrade with new turbines

5. Current usable life

Impeller: (h)

Control cage: (h)

Wheel disk: (h)

Wear liners: (h)

Throwing blades: (h)

Material of the wear parts:

6. Information to the turbine(s)

Manufacturer:

Model name:

Drive power: (kW)

Quantity of throwing blades/turbine: (pieces)

Ø wheel disk: (mm)

Turbine quantity (rotation: CW/clockwise) (pieces)

Turbine quantity (rotation: CCW/counter-clockwise) (pieces)

Drive system (direct/indirect)

Ø motor drive disk (**): (mm)

Ø turbine drive disk (**): (mm)

Motor speed (*): (rpm)

Turbine speed (**): (rpm)

Max. throwing speed (*): (m/s)

Max. media throughput (*): (kg/min.)

Max. amperage draw: (A)

Frequency inverter for the turbines: (Type/kW)

* If available!

** Only in case of indirect drive!

7. Information regarding possible subsidies and return on investment (ROI) calculation

Annual sales volume customer:

Number of employees at customer:

Hourly machine costs:

Hourly personnel costs:

8. Remarks regarding the collection of information

For sizing of the new turbines the actual operating parameters of the shot blast machine(s) in question are required. These parameters can be obtained from the serial number plates, the various displays at the control panel and actual measurements of the turbine components. Operating manuals are also a good source of technical information.

9. Further remarks

For information about the actual equipment site photos of the shot blast machine(s) are very helpful. This includes photos of the complete machine(s) as well as detail photos showing the turbine arrangement and the wear liners in the blast chamber.

10. Questions to the checklist

For any questions you may have, please contact our TuneUp team per phone at +49 (0) 9533 924-888, per Fax at +49 (0) 9533 924-601 or per E-Mail at the address serviceDE05@rosler.com! Of course, one of our service engineers can also assist you in filling out the checklist.

Our after sales service team delivers the total solution



Overall service throughout the entire operational life of your equipment!

Whenever you are looking for professional answers to questions regarding surface finishing and surface preparation, you will be in good hands with our service team.



- ▶ BUS measurements
- ▶ Process and operational expertise
- ▶ Global network of test centers
- ▶ Blast media analysis
- ▶ 24-hour hotline for round-the-clock blasting customer support
- ▶ Spare parts and wear parts for any make and model of blast machine
- ▶ Customer-specific maintenance plans
- ▶ Operation and maintenance training
- ▶ Machine overhauls
- ▶ Safety and environmental support
- ▶ Control and calibration of filter systems
- ▶ Conductor checks (in compliance with EN 60204-1)
- ▶ Machine checks (in compliance with European safety requirements 2009/104/EG)





Maintenance and repair service

Our qualified service team is ready to assist you at any time, no matter the type of service work required. We handle emergencies, repairs or scheduled maintenance work.

Short response times and well-equipped service vehicles enable us to quickly and expertly repair and service your equipment.



Spare parts and wear parts - also for other manufacturer's equipment

All shot blast machines are subject to wear and tear.

Rösler maintains a large stock of parts. This guarantees a high parts availability and quick or overnight delivery.

Analysis
 Turbines
 Training
 Return on investment
 TuneUp
 Modernization
 Test centers
 After sales service



Do you still have questions

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Anticipating tomorrow's challenges today



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finding a better way ...

Surface Finishing · Shot Blasting · Engineering · Environmental Technologies

