

# **Surf-Finisher**





# Rösler process solutions, working in perfect harmony



When it comes to surface finishing, Rösler is known to offer complete, well-engineered process solutions. Based on our comprehensive knowledge of mass finishing and shot blasting technologies, we can provide our customers with practically unlimited finishing solutions. In our state-of-the-art test lab, we conduct meaningful test trials to develop the optimum finishing processes for our customers because only complete solutions yield the best results. We are not simply offering specific surface finishing processes but we are also supply perfectly matched auxiliary equipment and consumables. This approach has proven to be highly successful and has established Rösler as the global technological and market leader, with groundbreaking innovations and extremely high quality standards.



In more than 60 countries we support our customers with a comprehensive network of Rösler sales branches and independent distributors.

Rösler is the only supplier in its field maintaining test labs all over the world, where we develop process solutions under actual operating conditions and select the most suitable equipment. This approach saves our customers not only long travel distances and high freight costs, but it also provides them with products and processes that have been extensively tested by our specialists under the most severe operating conditions.



## Global network of test labs

Test labs for mass finishing and shot blasting at the Rösler headquarters in Untermerzbach:

- More than 95 mass finishing and shot blast machines.
- About 2,700 m² (27,000 sqft) workspace

Our teams in USA, Great Britain, France, Netherlands, Belgium, Spain, Turkey, Romania, Italy, Austria, Switzerland, Russia, Brazil, Serbia and India provide similar test lab services.

## **Complete solutions**

Besides demanding high quality,

environmentally safe and efficient products,

our customers also prefer to purchase

all process components from one single

processing equipment but the complete package with perfectly matched consumables.

source. That is why we offer not merely the

This guarantees the best finishing results and

absolute process safety. Our global service

installation for you. Qualified engineers train

our customers right at their location. And, of course, our after-sales service members will answer all of your questions. Quick supply of all spare parts and professional consultation by our experienced process specialists ensure that your finishing processes are always running

teams take care of the delivery and the

Professional knowledge within a highly systematic framework

Rösler Academy

In hands-on and effective seminars our Rösler professional trainers, certified by TÜV Rheinland, provide you with theoretical and practical knowledge about mass finishing and shot blasting as well as Lean

You will find a complete list of our seminars under www.rosler-academy.com.



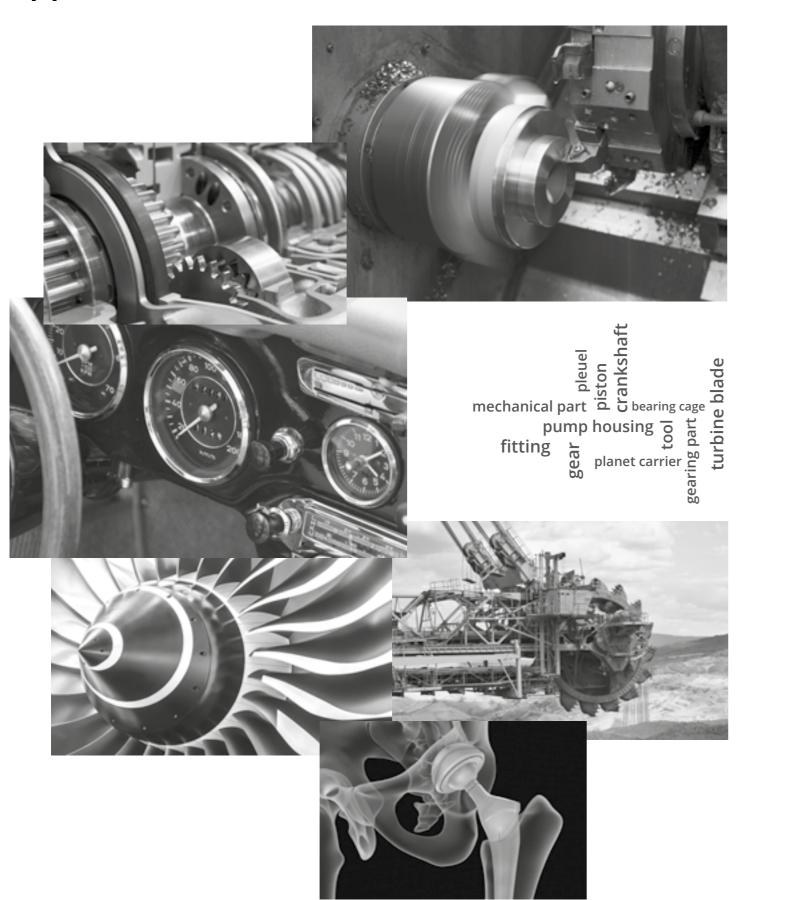


Test lab mass finishing

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# Fields of application / Examples of applications



## Overview



Precise surface finishes and high productivity with the Rösler Surf-Finisher



Surf-Finishing work centers allow fully automatic processing



Equipment details

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# Precise surface finishes and high productivity with the Rösler Surf-Finisher

The innovative Surf-Finishing technology from Rösler opens the door to a wide range of new mass finishing applications. It combines fully automatic work piece handling with the precise finishing of partial or complete surface areas. Surf-Finishing is the ideal treatment method for high value work pieces with complex shapes.



## Fields of application

Surf-Finishing is equally suitable for deburring, edge breaking/radiusing, surface grinding and smoothing and even high gloss polishing. Depending on the application, the finishing process may be dry or wet. The computer controlled robotic movement of the work pieces allows the precise finishing of partial or complete surface areas. Of course, the robotic movement can be adjusted to each individual work piece type. The high pressure generated between work pieces and medium produces a very intensive finishing process resulting in short cycle times. Surf-Finishing is ideal for treating high value precision components, which require single piece processing. Of course, the work pieces must be suitable for clamping. If no direct clamping is possible, specially designed clamping adapters must be utilized.

## Working principle

Surf-Finishers consist of single or multiple 6-axis robots and a rotating work bowl filled with specially selected grinding or polishing media. One or several work pieces are mounted to each robot, which guides them through the processing medium with pre-programmed, specific movements. The medium in the rotating work bowl flows around the work pieces creating a "surfing" effect with very high pressures between medium and work pieces. The robot technology fulfills a dual task, namely the process related movement through the medium as well as comprehensive material handling. For example, raw parts are picked up from a transport unit, finished, rinsed and returned to the transport unit without any operator intervention.

## Mass finishing consumables



Rösler offers by far the most comprehensive portfolio of mass finishing consumables in the world. 60 years of experience in mass finishing are the basis for more than 15,000 types of ceramic and plastic grinding & polishing media as well as compounds. This wealth of experience and products allows us to offer our customers solutions for new finishing applications, improvement of their existing finishing processes and comprehensive cost savings.

















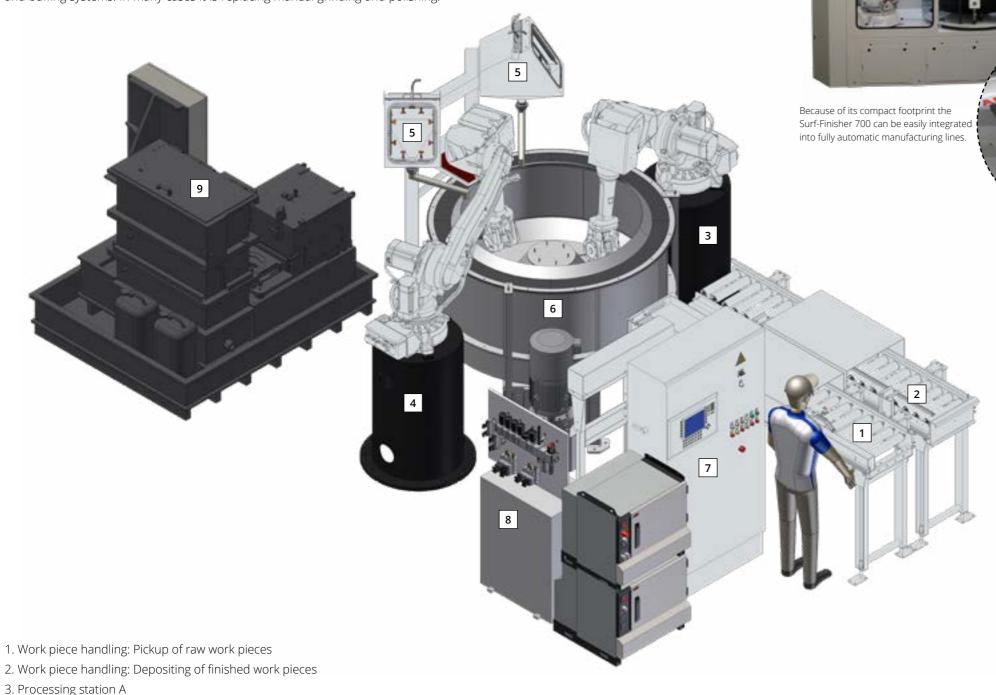






## Surf-Finishing work centers allow fully automatic processing

The Surf-Finishing technology, combined with the high process flexibility of mass finishing, allows the treatment of complex shaped, high value components that allow clamping. Surf-Finishing is a cost effective alternative to brush deburring, belt grinding and buffing systems. In many cases it is replacing manual grinding and polishing.





Complete system enclosures ensure compliance with safety and noise regulations.



allows for the full utilization of its automated, robotic handling capabilities, resulting in flexible positioning and finishing of the

8. Dosing and control of the process water

9. Semi automatic process water recycling system

5. Two (2) work piece cleaning stations

4. Processing station B

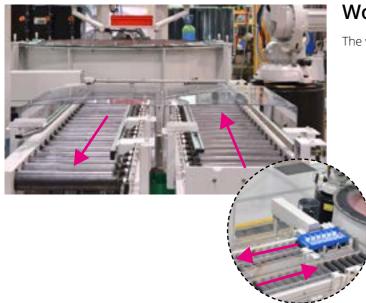
6. Work bowl

7. System controls



## **Equipment details**

Surf-Finishing works best in a fully automatic process environment. Rösler offers numerous solutions for automatic processing.



## Work piece handling

The work piece handling is adapted to individual finishing processes.



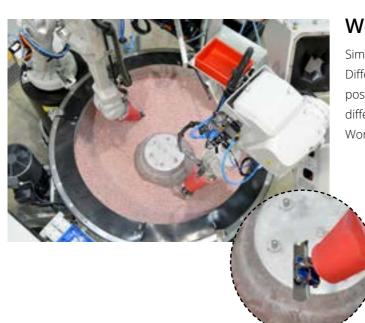
## Work piece fixtures

The work pieces are individually clamped to the robotic workstations. Clamping options: Work piece with internal drilled holes, direct clamping or prior mounting of the work piece to a clamping adapter.



## **Eco-friendly Surf-Finish processing**

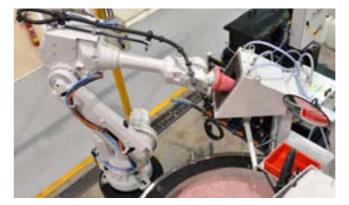
Wet processing methods guarantee clean work pieces and consistent processing results. The use of process water recycling systems saves natural resources and lowers the operating costs.



## Workstations

Simultaneous surface finishing with two robotic workstations. Different work piece processing options: Work pieces in stationary position, rotational movement, processing at different angles and different depths.

Work bowl: Variable RPM, adjustment of the process water level



## Cleaning of the finished work pieces

After wet, as well as dry Surf-Finishing processes the work piece surface can be contaminated with media and metal fines. The robotic handling systemsmove the finished work pieces to an integrated cleaning station, where they are cleaned by compressed air or process water.

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