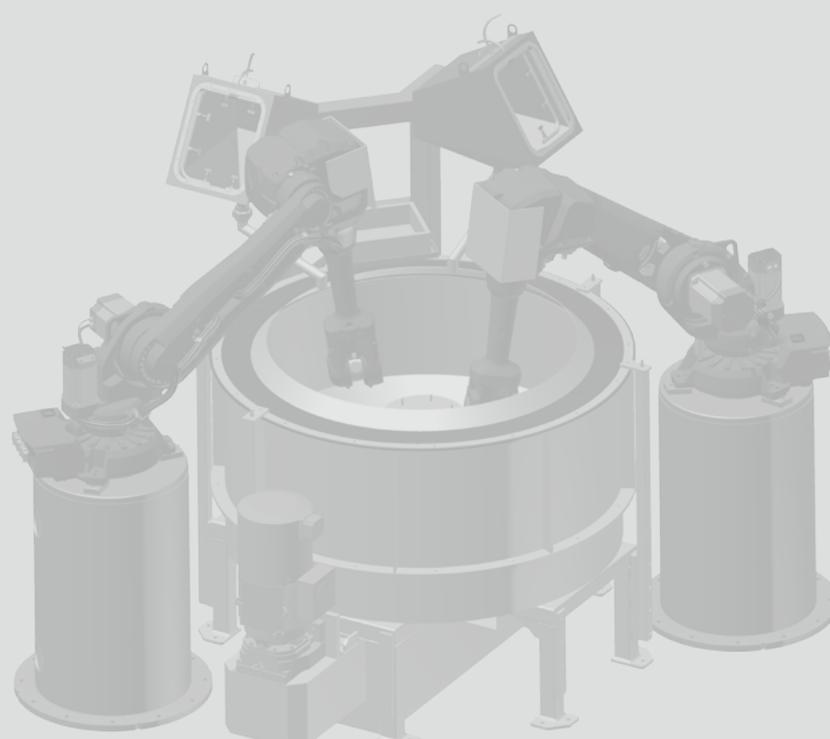


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Surf-Finisher

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.



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.



Contents

Page 2 – 3	Precise surface finishes and high productivity with the Rösler Surf-Finisher
Page 4 – 5	Surf-Finishing work centers allow fully automatic processing
Page 6–7	Equipment details

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 8,000 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.

Fields of application

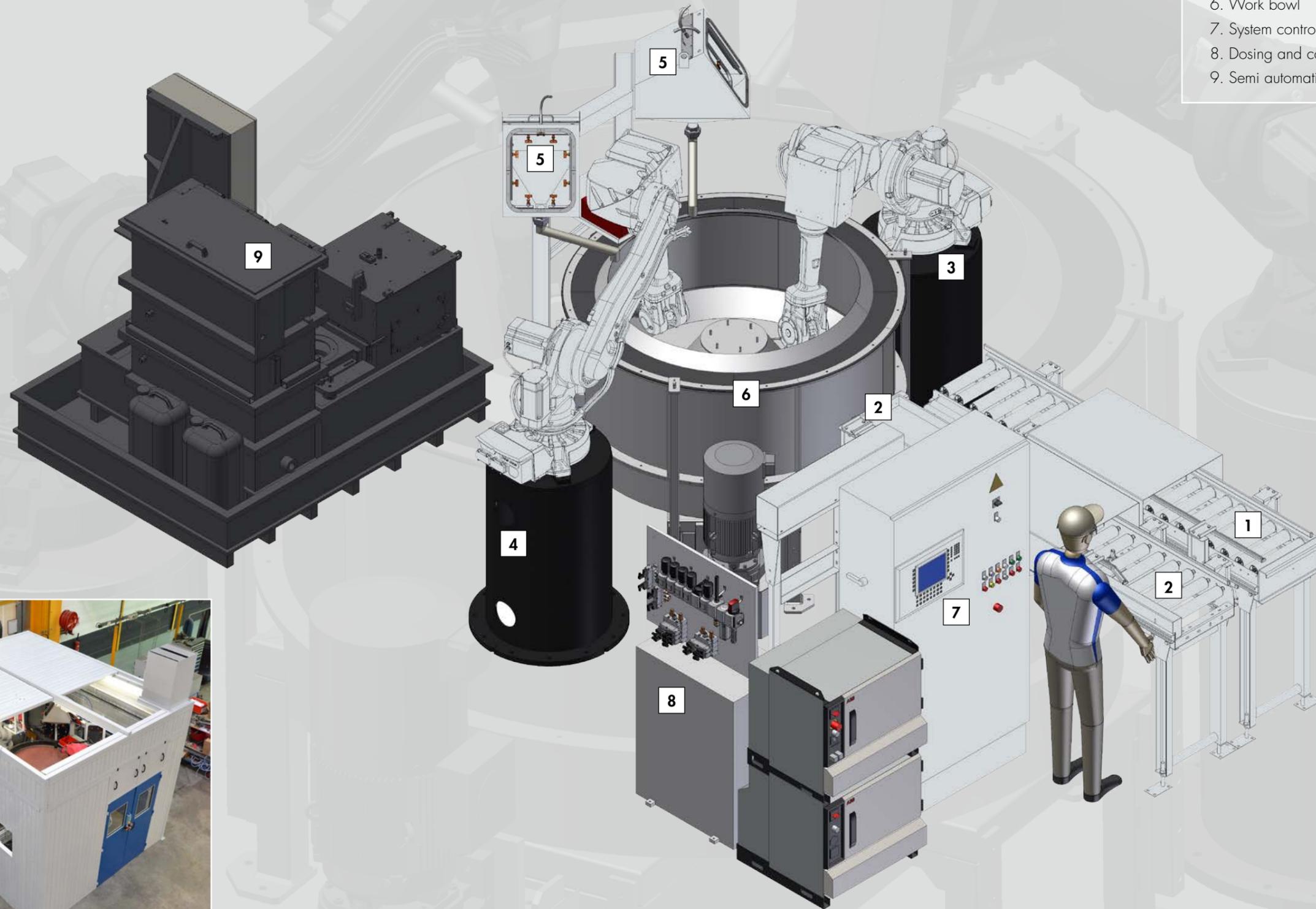
Surf-Finishing is equally suitable for deburring, edge breaking/radiusing, surface grinding and smoothing and even high gloss polishing. Depending on the application, the finishing process may be dry or wet. The computer controlled robotic movement of the work pieces allows the precise finishing of partial 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.



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.

1. Work piece handling: Pickup of raw work pieces
2. Work piece handling: Depositing of finished work pieces
3. Processing station A
4. Processing station B
5. Two (2) work piece cleaning stations
6. Work bowl
7. System controls
8. Dosing and control of the process water
9. Semi automatic process water recycling system

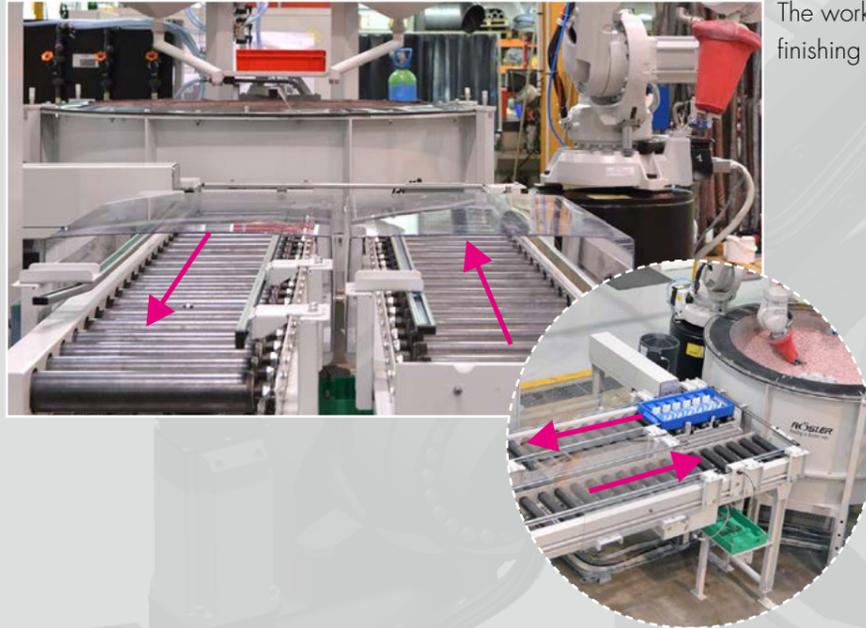


Complete system enclosures ensure compliance with safety and noise regulations.

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 systems move the finished work pieces to an integrated cleaning station, where they are cleaned by compressed air or process water.



- D** RÖSLER Oberflächentechnik GmbH · Werk Memmelsdorf
Vorstadt 1 · D-96190 Untermerzbach
Tel.: +49/9533/924-0 · Fax: +49/9533/924-300 · info@rosler.com
- RÖSLER Oberflächentechnik GmbH · Werk Hausen
Hausen 1 · D-96231 Bad Staffelstein
Tel.: +49/9533/924-0 · Fax: +49/9533/924-300 · info@rosler.com
- USA** RÖSLER Metal Finishing USA, L.L.C.
1551 Denso Road · USA-Battle Creek · MI 49037
Tel.: +1/269/4413000 · Fax: +1/269/4413001 · rosler-us@rosler.com
- F** RÖSLER France
Z.I. de la Fontaine d'Azon · CS 50513 – St. Clément · F-89105 Sens Cedex
Tel.: +33/3/86647979 · Fax: +33/3/86655194 · rosler-fr@rosler.com
- I** RÖSLER Italiana S.r.l.
Via Elio Vittorini 10/12 · I-20863 Concorezzo (MB)
Tel.: +39/039/611521 · Fax: +39/039/6115232 · rosler-it@rosler.com
- CH** RÖSLER Schweiz AG
Staffelbachstraße 189 · Postfach 81 · CH-5054 Kirchleerau
Tel.: +41/62/7385500 · Fax: +41/62/7385580 · rosler-ch@rosler.com
- GB** RÖSLER UK
Unity Grove, School Lane · Knowsley Business Park · GB-Prescot, Merseyside L34 9GT
Tel.: +44/151/4820444 · Fax: +44/151/4824400 · rosler-uk@rosler.com
- E** RÖSLER International GmbH & Co. KG
Sucursal en España · Polg. Ind. Cova Solera C/Roma, 7 · E-08191 Rubí (Barcelona)
Tel.: +34/93/5885585 · Fax: +34/93/5883209 · rosler-es@rosler.com
- NL** RÖSLER Benelux B.V.
Reggestraat 18 · NL-5347 JG Oss · Postbus 829 · NL-5340 AV Oss
Tel.: +31/412/646600 · Fax: +31/412/646046 · rosler-nl@rosler.com
- B** RÖSLER Benelux B.V.
Avenue de Ramelot 6 · Zoning Industriel · B-1480 Tubize (Saintes)
Tel.: +32/2/3610200 · Fax: +32/2/3612831 · rosler-be@rosler.com
- A** RÖSLER Oberflächentechnik GmbH
Hetmanekgasse 15 · A-1230 Wien
Tel.: +43/1/6985180-0 · Fax: +43/1/6985182 · rosler-at@rosler.com
- RO** RÖSLER Romania SRL
Str. Avram Iancu 39-43 · RO -075100 Otopeni/ILFOV
Tel.: +40/213/524416 · Fax: +40/213/524935 · rosler-ro@rosler.com
- RUS** RÖSLER Russland
Borovaya Str. 7, bldg. 4, office 107 · 111020 Moscow
Tel. / Fax: +7 / 495 / 247 55 80 · +7 / 495 / 505 23 15 · rosler-ru@rosler.com
- BR** RÖSLER do Brasil LTDA
Estrada dos Galdinos 35 · Jd. Barbacena · 06700-000 · Cotia · São Paulo - Brasil
Tel.: +55/11/46123844 · Fax: +55/11/46123845 · rosler-br@rosler.com
- ZA** RÖSLER S.A. Surface Technologies
P.O. Box 7949 · 66 Regency Drive · Route 21 Corporate Park · Irene Ext. 31 · ZA-0046 Centurion
Tel.: +27/12/345 2215 · Fax: +27/12/345 3731 · rosler-za@rosler.com
- CN** RÖSLER – BEIJING
Office 11N, Tower A, Beijing Fu Hua Mansion · No. 8, Chaoyangmen North Avenue
Dong Cheng District · Beijing 100027 P.R. China
Tel.: +86/10/6554 73 86 · +86/10/6554 73 89 · Fax: +86/10/6554 73 87 · rosler-cn@rosler.com
- IND** RÖSLER SurfaceTech Pvt. Ltd.
Pune Factory No: A-29, Chakan MIDC-Phase-2 · Pune-410501 · Tel: +91/2135/690202
Bangalore Office No: 9, 1, Main Road, RT Nagar, Bangalore-560032 · Tel: +91/80/23534445 · info@rosler.net.in
- SRB** RÖSLER D.o.o
Dr Ivana Ribara 32 · 11070 Novi Beograd
Tel: + 381/11/3184407 · rosler-rs@rosler.com

- and more than 156 representations worldwide

