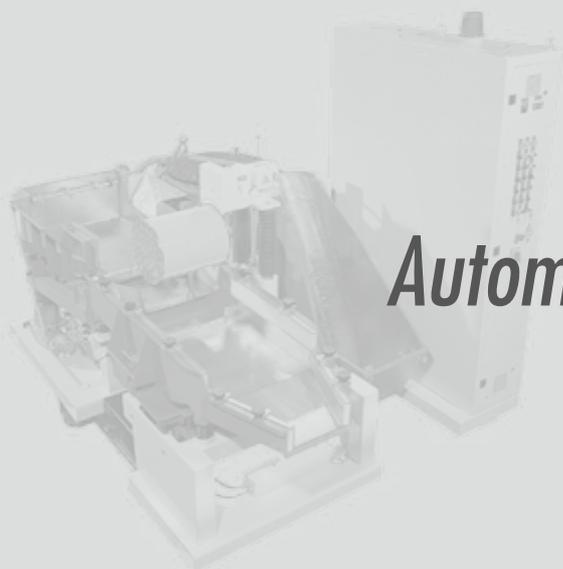
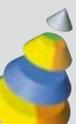


RÖSLERTM
finding a better way ...

www.rosler.com



*Automatic high energy centrifugal
disc finishing systems*



The "Profi-Line" centrifugal disc finishing systems – Your parts will be treated well

In recent years centrifugal disc finishing has been steadily gaining more importance in the field of surface finishing. Rösler's numerous technical innovations paired with decades of practical experience and extremely high quality standards have no doubt been key factors for this trend. The result – the best equipment technology on the market and by far the biggest market share in the field of high energy centrifugal disc finishing equipment. This means: With the **Profi-Line** from Rösler your parts will always be treated right!



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Production of media and compounds

The Rösler media and compound product range is by far the most comprehensive in the world. 60 years of continuous product development and improvement are the basis for over 8,000 types of different compounds as well as ceramic and plastic grinding & polishing media. This wealth of problem solving products is available to our customers all over the world.



Areas of application

High energy centrifugal disc finishing is ideal for deburring, surface grinding, edge breaking/radiusing and polishing of stampings, castings, forged or machined parts. Its major benefits are extremely short processing times and a high degree of automation. Its applications are practically unlimited ranging from, for example, very delicate, thin spacers with a thickness of 0.2 mm to heavy gear components with dimensions of over 150 mm.

That's how it works

The centrifugal force of the rotating spinner (60 – 250 RPM) accelerates the component/media mass, pushing it up the stationary wall of the work bowl, until it loses its kinetic energy and falls back onto the rotating spinner where the centrifugal force accelerates it again. The process intensity, determined by the rotational speed of the spinner and the water level in the work bowl, can vary between gentle surface smoothing/polishing and aggressive grinding. Compared to standard vibratory equipment the centrifugal disc finishing technology offers a 10 to 30 times higher grinding performance, i.e. metal removal rate.

Customer feedback - our major inspiration.

Our company's success is measured by the benefits we can provide to our customers! This philosophy has made the Rösler group the leading global supplier for mass finishing equipment and consumables. In our daily work we focus on helping our customers with their surface finishing problems and not on the rigid adherence to product philosophies from the past. Feedback from the market is our inspiration for developing technical solutions which we custom engineer to the specific finishing needs of our customers. Listening to the market is our strength. It allows us to remain a competent and reliable partner for our customers in the field of surface finishing.



State of the art centrifugal disc finishing technology

The **Profi-Line** centrifugal disc finishing systems are designed around the Rösler double-batch concept: While one batch of raw parts is processed in the work bowl, another batch of finished parts is separated from the media on the screening unit.

1 Processing Unit

- ▶ Water tight, pre-stressed precision spinner bearing. Manual or automatic height adjustment of the spinner
- ▶ Hot poured, highly wear resistant HE polyurethane lining of the spinner and work bowl
- ▶ Multifunctional stainless steel ring pipe on top of the work bowl for supply with process and rinse water
- ▶ High torque, low wear electrical drive with variable speed
- ▶ "Soft discharge" flap on the work bowl (optional)

2 Intermediate vibratory hopper

- ▶ PLC controlled hydraulic up and down tilting for easy unloading
- ▶ Electromagnetic vibratory drive for precise dosing of the part/media mass to the screening unit
- ▶ Anti adhesion lining to prevent thin, small parts from sticking to the surface (optional)

3 Vibratory screening machine with large screening area

- ▶ Vibratory drive with variable motor speed (optional)
- ▶ Multi level, easy to exchange screens (no tools required for a screen change)
- ▶ Integrated screen area extension
- ▶ Reverse screening (optional)
- ▶ Magnetic separation (optional)

4 Media return conveyor

- ▶ Powerful vibratory media return conveyor with pneumatic lateral movement
- ▶ Removal of undersize media and other particles (optional)

5 Undersize media classification

- ▶ Self-cleaning slide-in screen (no tools required for a screen change)
- ▶ Rinsing of parts with recycling water removes media residue

6 Energy saving hydraulic power pack

- ▶ One single hydraulic system for all movements of hydraulic loader, work bowl and intermediate hopper

7 Central lubrication

- ▶ Electronically controlled on-demand supply of lubricant

8 Ergonomic protective cabin

- ▶ Wing and/or sliding doors with windows allow easy and safe access to the equipment. Compact, noise suppressing design.

9 Pneumatic supply panel

- ▶ Contains all control components including
- ▶ Control valves

10 Process water distribution

- ▶ Central supply of water and compound to all users, either in recycling or flow-through mode
- ▶ Automatic control of the rinsing functions
- ▶ PLC controlled adjustment of the water level in the work bowl

11 Easy to operate electrical controls

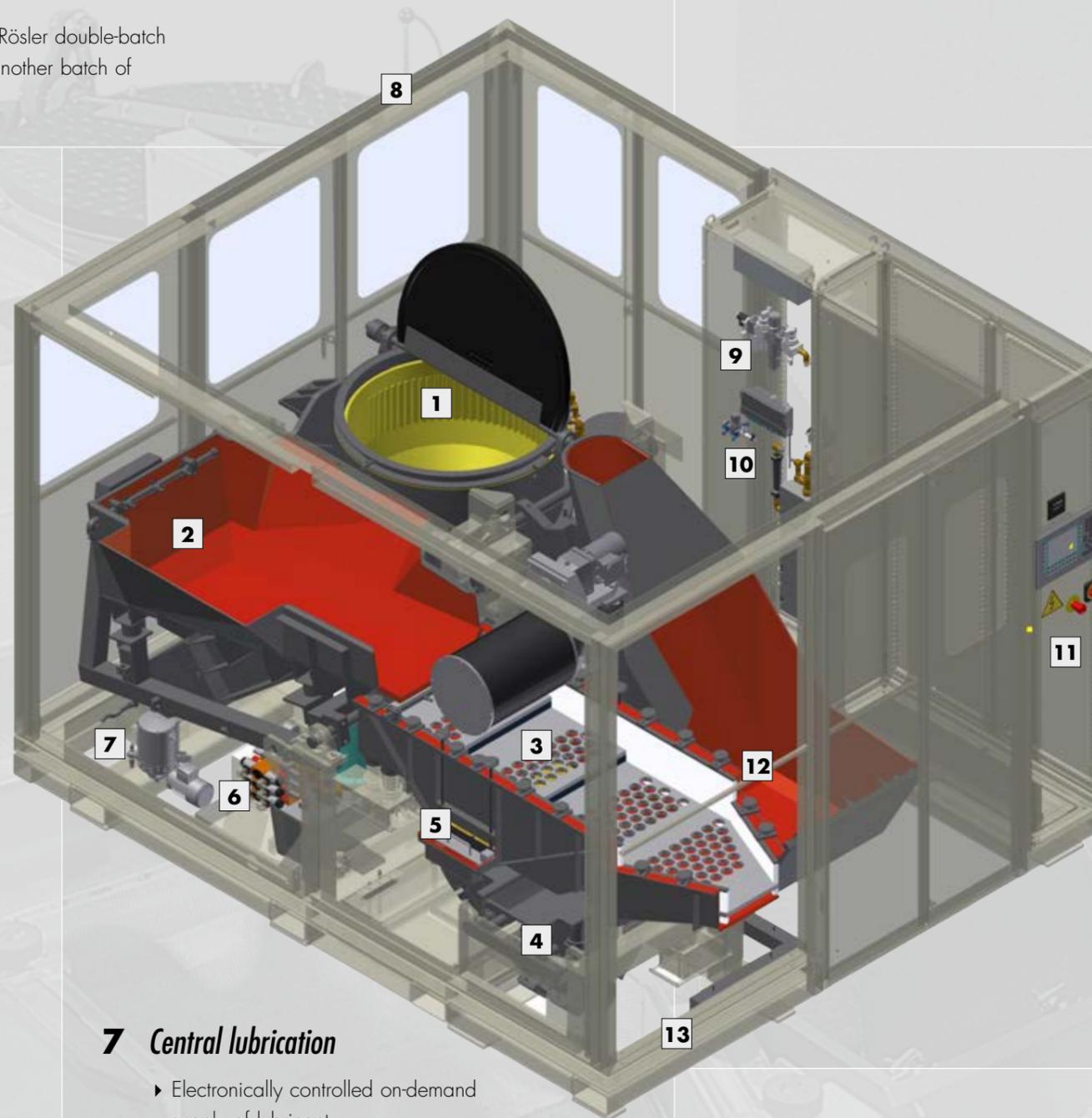
- ▶ Fully automatic system operation controlled by PLC with touch panel
- ▶ Multiple process programs
- ▶ Clear text display of error messages
- ▶ Variable speed controls with individual displays

12 High capacity hydraulic loader

- ▶ Gentle transfer of parts and media into the work bowl
- ▶ Anti adhesion feature with special lining and spray nozzles (optional)

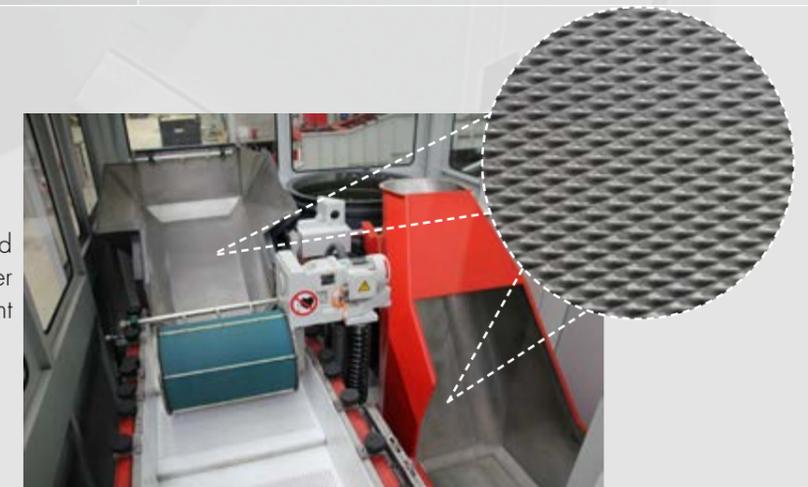
13 Sturdy machine frame

- ▶ Torsion resistant construction with special anti corrosion powder coating
- ▶ Can be split into different sections for easier transportation



Special: Anti adhesion feature

Chequer plate or special ribbed PU lining in intermediate hopper and hydraulic loader to prevent adhesion of parts and media.



The processing unit - perfect engineering, down to the last detail

The **Profi-Line** from Rösler makes high energy centrifugal disc finishing easier to operate and more productive. At the center of every **Profi-Line** machine is the processing unit consisting of work bowl and rotary spinner. It offers numerous technical features like the special design of work bowl and spinner generating optimum flow conditions and minimizing the wear rate. The result: Low cost and high quality finishing results!



Technical features

- ▶ Highly wear-resistant HE polyurethane lining guarantees a long life of the spinner and work bowl, even under the most aggressive operating conditions.
- ▶ Years of research went into development of the special geometry of the rotating spinner and stationary work bowl. It not only produces an unobstructed, fluid movement of media and parts but also increases the intensity of the process and prevents parts from floating on top of the media or sticking to the work bowl wall which could lead to inconsistent finishing results.
- ▶ The multifunctional stainless steel ring pipe allows rinsing of the work bowl and especially, the gap area. It also incorporates a water overflow sensor.
- ▶ This ensures that no water or compound supply lines must be disconnected, when the work bowl is replaced.

Electronic monitoring of machine functions and the gap prevents costly system crashes!

- ▶ Monitoring of the gap size
- ▶ Monitoring of the temperature in the gap area
- ▶ Overflow protection for the process liquid in the work bowl
- ▶ Monitoring of the water and compound flow
- ▶ Variable spinner speed (RPM) - the speed can be adjusted to specific processing tasks

All safety devices are coupled with an automatic stop function. This prevents damage to the system or the work pieces in case of an equipment failure.

Gentle unloading of the finished parts

The finished parts are gently transferred from the work bowl to the intermediate hopper without nicking of the parts. Embedded into the media mass, the parts gently slide into the hopper.



"Soft discharge" flap for very delicate parts



Discharge without large drop heights

A wide variety of processing possibilities

The PLC controlled adjustment of the process water level allows processing possibilities ranging from very gentle smoothing and polishing to aggressive grinding.



Process water level control and monitoring of the temperature in the gap



Precise setting of the gap size

Proven a hundred times - the easy manual axial spinner height adjustment with hand wheel.

Patent pending - fully automatic gap setting

Very thin, small work pieces and complex finishing processes require a reliable automatic gap adjustment. The system continuously monitors the gap size and, as needed, automatically adjusts the gap during the entire finishing process.



Manual gap adjustment with hand wheel



Patent pending



Fully automatic gap adjustment

Gentle and safe separation of high-value parts from the finishing media

The optimum separation of parts and media is a significant factor for system performance and parts quality. That is why the **Profi-Line** is equipped with a specially engineered high capacity separation system with large-area screens. This ensures perfect separation of delicate parts with complex geometries.

Precise, flexible and fast

The **Rösler double batch system**® with a separation unit that consists of an intermediate hopper and a vibratory screening machine allows the simultaneous processing/finishing and separation of two batches of media and parts.

- ▶ Programmable screening process for large-area screen deck.
- ▶ Tumbling steps for total removal of media from cup-shaped parts.
- ▶ Screen changes are quick and require no tools. This allows fast and easy adaptation to any screening task.
- ▶ The delicacy of the parts determines the separation speed which is infinitely adjustable.
- ▶ Built-in rinsing device for rinse cleaning of the finished parts.



Clean parts, a precondition for good quality

- ▶ Rinse cleaning of media and finished parts during the screening process.



Magnetic separation of media and parts

Ferrous parts, especially those with sizes equal to or smaller than the media, can be separated magnetically.

Single unit magnetic separation:

High performance magnetic drum with height adjustment and variable rotary speed minimizes media carry-out.

Double unit magnetic separation:

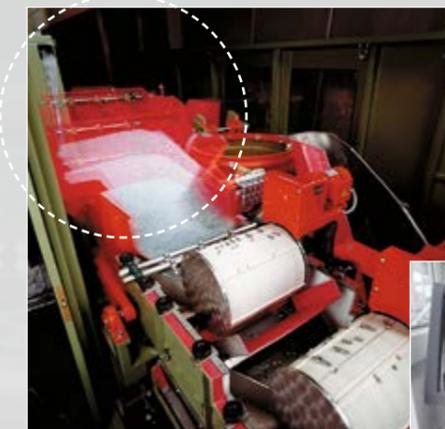
Dual drum system offers double operational safety. The optional, patented built-in demagnetizing device facilitates the work piece transfer and, at same time, demagnetizes the parts.



Single unit operation



Tandem operation



Intermediate hopper



The intermediate hopper – a technical master piece

The unique combination of hydraulic tilting and electromagnetic vibratory drive allows precise dosing of a constant, pre-programmed media/part quantity to the subsequent vibratory or magnetic separation system. This prevents overloading the separation unit and post treatment systems (e.g. driers).

Large size media – small size parts

Non-ferrous parts which require a finishing process that uses larger media can be separated with a reverse screening unit. This ensures quick and total separation of media from parts.



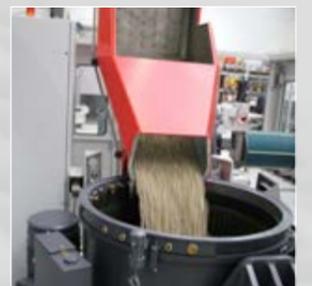
Reverse screening

Ready for the next batch!

The hydraulically activated loader offers enough capacity to transfer a complete batch of media and parts into the work bowl, either separately or together.



Hydraulic loader with media return conveyor



Hydraulic loader in unload position

Technical details that count

Permanent magnets or automatic magnetic belt separators prevent ferrous particles like stamping chads from contaminating the next media batch.



Magnetic removal of ferrous contaminants

High uptime and easy maintenance

The fully automatic centrifugal disc finishing machines with the **Rösler double batch system**[®] are known for their reliability! They offer high performance and uptimes combined with minimum wear and low maintenance costs. For any maintenance or repair work our mobile service team is available 24/7.

A safe working environment

The **Profi-Line** systems are delivered with an all-around protective cabin that protects the operator from any moving components and reduces the noise level. Windows in each access door allow a complete view of the system.



Minimizing setup times - media change

For the quick exchange of media batches the media return conveyor transfers the media into a bin placed inside the protective cabin. Alternatively, this can also take place outside of the cabin by using a 2-directional return conveyor.



Media bin outside of the cabin



Media bin inside the cabin

Optimum use of the space

Wing doors or sliding doors (optional) offer easy access for cleaning and maintenance work on the equipment.

Effective undersize media classification

Worn media which might start lodging in the work pieces is safely discharged with a slide-in undersize screen at the end of the separation unit. Easy access and the self-cleaning characteristics eliminate long cleaning times.



Undersize media classification with flexible, self cleaning "flapper" screen.

Perfect process management with sophisticated controls

The PLC system manages the complete system. Operating data, functions and processing times can be easily entered and displayed on the digital touch operator panel.



A control panel that meets all requirements



Easy integration of multiple functions

Auxiliary functions like part loading and post-finishing treatment are easily managed by the central PLC. Multiple process programs make it possible to adapt the processing parameters to specific process requirements. This applies to spinner RPM, the water level in the work bowl, finishing and screening times, etc. All essential safety features are continuously monitored. For example:

- ▶ Temperature in the gap area
- ▶ Overflow protection
- ▶ Process water and compound supply
- ▶ Machine running dry
- ▶ Process gap sizes
- ▶ Compressed air supply
- ▶ Batch quantity
- ▶ Service schedule
- ▶ Water level

Easy operation

The control valves for process water distribution, rinse and spray stations, all hydraulic functions and central lubrication are logically placed for easy operation and accessibility.

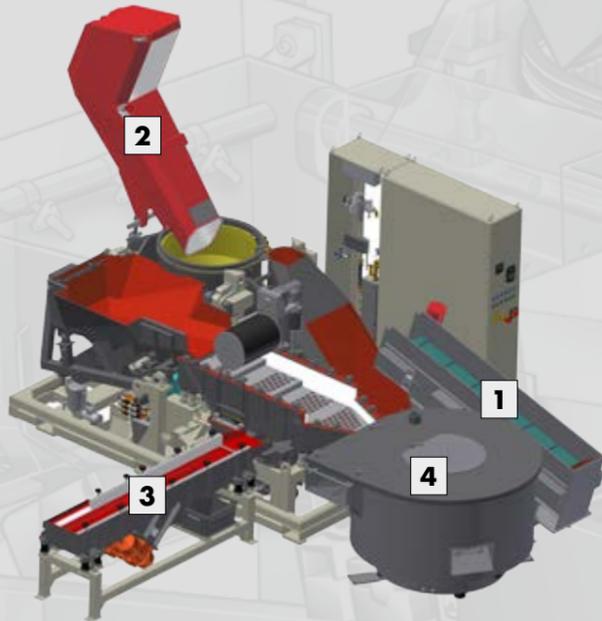


The modular equipment design helps solving any finishing task

Whether integrated into a production line or as stand-alone system, the full potential of the **Profi-Line** can only be exploited, if work piece loading and unloading is directly linked with the basic disc finishing unit. The combination of four powerful automation tools offers a wide range of automated finishing solutions.

Systems for feeding of raw parts into double batch systems

Conveyor belts, **1** lift and tip loaders **2** and vibratory feed hoppers **3** offer numerous possibilities for feeding of raw parts. Weighing cells can be easily integrated.

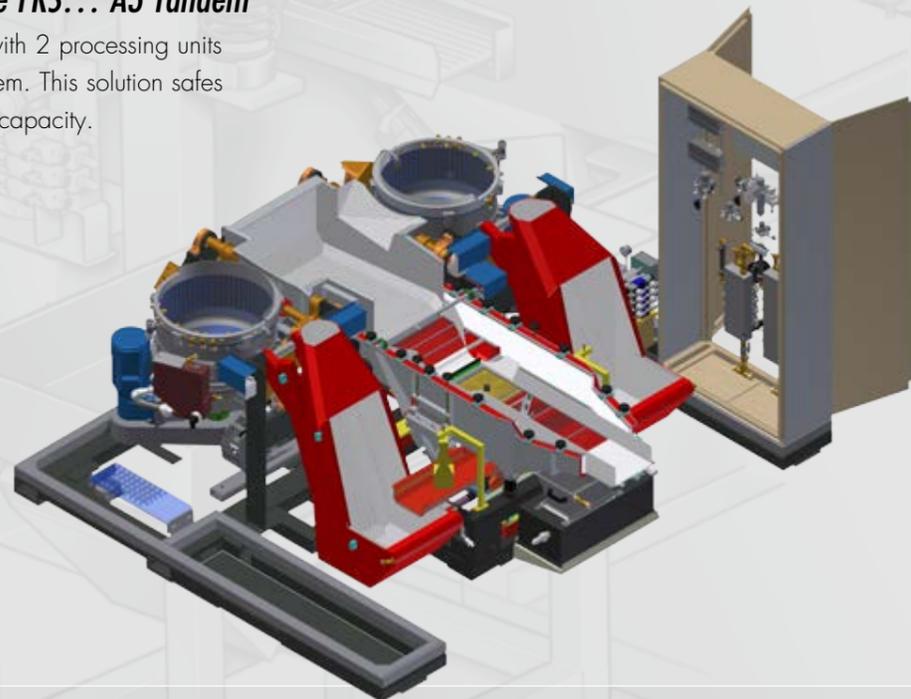


Post treatment

Variant **4** is exclusively utilized for post treatment. Linking with various dryer types, washing machines and passivation stations can be easily implemented. Part transport systems for transferring the finished parts into waiting part bins complement the automation possibilities.

Tandem units - model range FKS... A3 Tandem

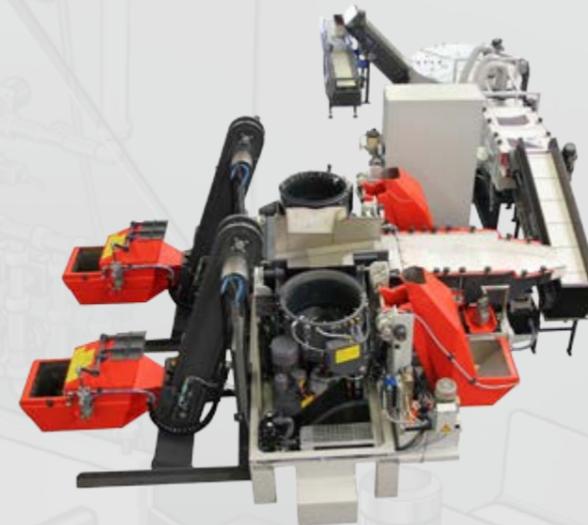
Tandem systems are equipped with 2 processing units using a common separation system. This solution saves space and increases the overall capacity.



Standard double batch system with rotary drier and conveyor belt



Stand alone system equipped with anti adhesion linings



Triple batch system with automated part loading and post treatment



Fully automatic coin blank finishing system MPA 37.1 A2



Linked system (4 tandem units) with special 6 track work piece channeling device for transport to the subsequent washing machine



Linked system:
Part loading, processing, double magnetic drum separation and drier with complete media/work piece discharge.

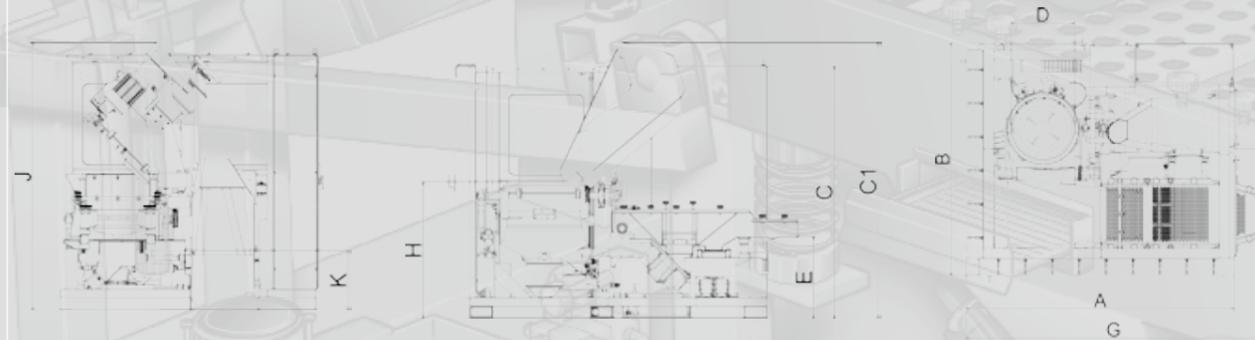
High productivity with low space requirements

Rösler offers automatic centrifugal disc finishing equipment as double or triple batch systems in six different sizes.

Technical data - automatic centrifugal disc finishing machines, model range FKS... A2

Technical Data	FKS 06.1 A2	FKS 15.1 A2	FKS 35.1 A2	FKS 55.1 A2	FKS 65.1 A2
A (mm)	2.230	2.620	3.250	3.985	4.085
B (mm)	1.945	2.250	2.710	3.115	3.015
C (mm)	2.180	2.180	2.200	2.200	2.200
C1 (mm)	2.105	2.500	2.950	3.450	3.585
D (mm)	500	640	800	920	1.000
E (mm)	660	690	720	850	840
G (mm)	2.410	2.860	3.435	4.175	4.275
H (mm)	1.090	1.150	1.340	1.480	1.430
J (mm)	1.850	2.290	2.735	3.100	3.200
K (mm)	370	500	520	610	550
L (mm)	560	560	1.070	1.360	1.360
Total installed power (kW)	8,0	11,0	22,0	32,0	34,0
Power rotary spinner (kW)	2,2	4,0 (5,5)	11,0 (15,0)	18,5	15,0 (18,5)

Status per May 14



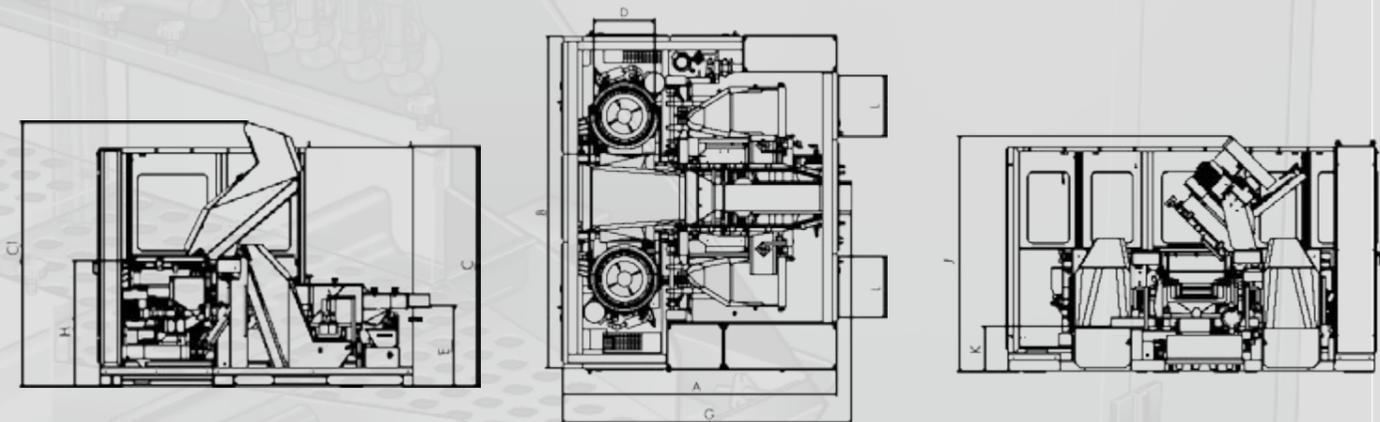
Quality – Made in Germany

For Rösler the word quality means more than just trouble-free operation, reliability and long equipment life. Quality is an essential part of our work ethic and is expressed in the daily sense of personal duty and reliability found in our employees. Various awards and our quality management certification to DIN EN ISO 9001 are proof of our commitment.

Technical data - automatic centrifugal disc finishing machines, model range FKS... A3

Technical Data	FKS 06.2 A3-Tandem	FKS 15.2 A3-Tandem	FKS 35.2 A3-Tandem	FKS 55.2 A3-Tandem
A (mm)	2.185	2.912	3.045	4.022
B (mm)	2.670	3.554	4.220	4.785
C (mm)	2.180	2.180	2.122	2.500
C1 (mm)	2.200	2.400	3.050	3.450
D (mm)	500	640	800	920
E (mm)	660	735	917	927
G (mm)	2.510	3.065	3.410	4.220
H (mm)	1.090	1.140	1.440	1.480
J (mm)	1.884	2.280	2.835	3.025
K (mm)	480	450	645	630
L (mm)	560	612,5	1.070	1.440
Total installed power (kW)	10,2	15,0	33,0	50,5
Power rotary spinner (kW)	2,2	4,0 (5,5)	11,0 (15,0)	18,5

Status per May 14



Our commitment – a clean environment

Striving for a clean environment is an essential part of our company philosophy. In our production we use as much as possible recycled and natural raw materials. Long maintenance intervals, the ease of maintenance and repair of our equipment, concentrated compounds, and wear-resistant media, save valuable natural resources and contribute to a clean environment. The prevention of hazardous waste and the recycling of packing materials are an integral part of our production and sales policies.



DIN EN ISO 9001



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