



High energy disk systems

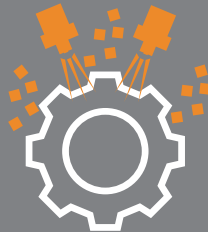


Mass Finishing



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Shot Blasting



Customer-oriented equipment technology and intelligent process solutions – long-lasting and energy-efficient

AM Solutions



Comprehensive solutions for additive manufacturing, especially 3D post processing equipment

› **80**

More than 80 years of **experience**



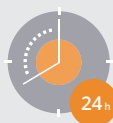
15 locations –
over **150** distributors –
over **1,500** employees **across the globe**



Worldwide **Customer Experience Center**



More than **15,000**
different types of media and compounds



Our technical service –
round-the-clock support



Transfer of professional knowledge
by certified trainers

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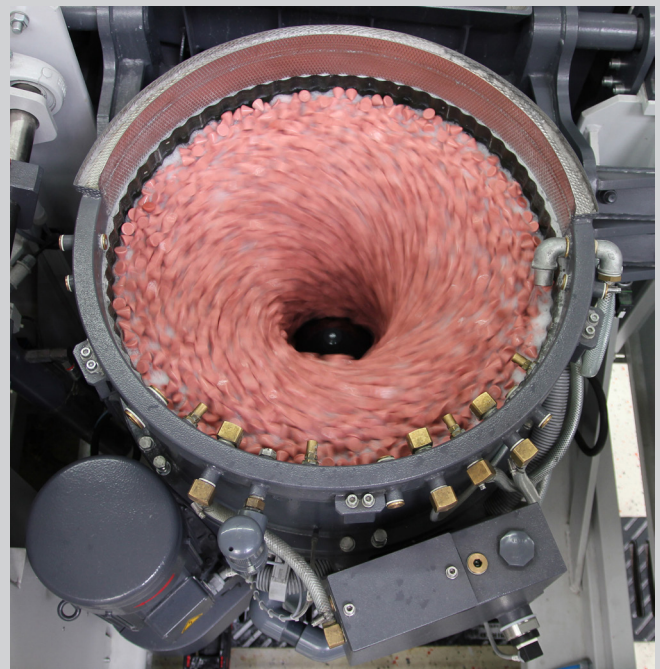
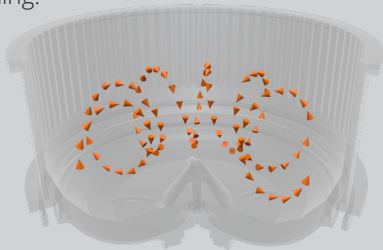
FUNCTIONAL CHARACTERISTICS OF HIGH ENERGY DISK SYSTEMS

Rösler high energy disk systems are **highly efficient, compact and easy-to-operate systems** for surface finishing of work pieces in a wide array of shapes, sizes and quantities. Compared to conventional vibratory systems the **high energy disk system technology** is **10 to 15 times more**

productive. Our broad equipment range allows you to perfectly match our technical solutions to your individual finishing needs. With numerous peripheral loading and post-treatment modules you can expand our high energy disk systems into a fully automatic processing line.

Functional principle

High energy disk systems consist of a round stationary processing bowl and a rotating spinner located in the bottom of the bowl. The centrifugal force created by the rotating spinner pushes the mix of media and work pieces up along the wall of the stationary processing bowl. Due to the decreasing acceleration and gravity the media / work piece mix slides back to the spinner, where it's again accelerated. The variable spinner RPM and the amount of process water in the processing bowl allow a practically unlimited spectrum of applications ranging from aggressive deburring and grinding to high gloss polishing.



Fields of application

High energy disk systems can handle any finishing task, be it deburring, edge radiusing, surface grinding or polishing of stampings, castings, forgings and machined work pieces. Our customers can always expect short cycle times and a high degree of automation. Even delicate work pieces with a thickness of < 0.1 mm or sturdy components with edge lengths of up to 150 mm can be perfectly processed in high energy disk systems.



COMPACT HIGH ENERGY DISK SYSTEMS – TECHNICAL DETAILS

The Rösler compact high energy disk systems offer numerous technical benefits. They are **extremely efficient, very durable, easy to operate** and can be used for a wide range of different

finishing applications. The availability of special technical equipment modules greatly facilitates automation.

Convincing engineering ...

1 Processing unit

- ▶ The application of fluid mechanics in the design of the processing bowl ensures a high material removal rate and gentle work piece handling
- ▶ A highly abrasion-resistant structured lining consisting of a special hot-poured HE special polyurethane provides an excellent protection against premature wear

2 Gap design

- ▶ Depending on the machine type, the gap between processing bowl and spinner is adjustable
- ▶ The different adjustment possibilities
 - Manual adjustment of the gap size with set screws
 - Central adjustment of the gap size by hand wheel
 - Automatic hydraulic adjustment of the gap size
- ▶ Gap design options for special applications:
 - Carbide steel
 - Steel re-enforced polyurethane
 - Micro-Gap®
- ▶ Temperature measurement in the gap area

3 Spinner drive

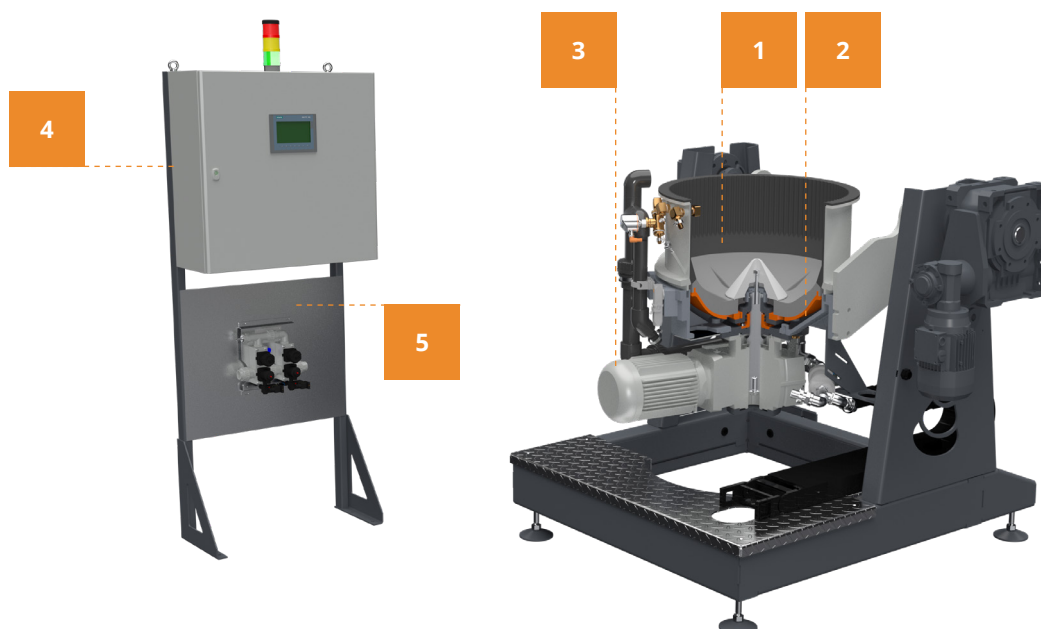
- ▶ Energy-efficient electrical drive, optional speed control with frequency inverter
- ▶ Long-lasting and extremely precise spinner bearing

4 Compact equipment controls

- ▶ All equipment functions controlled via PLC
- ▶ Intuitive operator panel designed in line with Rösler design standards

5 Process water supply

- ▶ Centrally controlled dosing system for fresh water handling or recycling mode
- ▶ Programmed water discharge from the processing bowl by manual or pinch valve
- ▶ Variable water level in the processing bowl, manual or automatic adjustment



HIGH ENERGY DISK SYSTEM, MODEL RANGE E

The basic machine – stand-alone system

The model range “E” is a **compact** equipment version that can be operated as an **autonomous stand-alone machine** or it can be **part of a modular finishing system**. It allows **part-on-part operation** without media or **single piece**

treatment with manual work piece removal from the processing bowl. The addition of a vibratory screening unit allows the handling of complex screening tasks for complete **work piece batches**.

Technical details

- ▶ Variable equipment design: Operation as completely autonomous machine or as part of a modular system
- ▶ Easy expansion into a system with multiple processing units
- ▶ Processing bowl can be tilted, either manually or mechanically with an electric drive

External vibratory screening unit

The basic processing unit can be augmented by various separation solutions. Available options:

- ▶ Drive with adjustable vibratory motors optional RPM adjustment
- ▶ No tools required for exchange of separation screens
- ▶ Screens with tumbling steps, required for cup-shaped work
- ▶ Optional spraying system over separation screen
- ▶ Undersize media discharge
- ▶ Media collection bin

Extras

- ▶ Variable adjustment of the water level in the processing bowl
- ▶ Lid for processing bowl
- ▶ Central adjustment of the gap size
- ▶ Temperature sensor in the gap area



Rösler high energy disk system
FKS 04.1 E

Process sequence

1. Processing

Optimal media / work piece flow ensures quick and efficient processing



High energy disk system in processing position

2. Separation

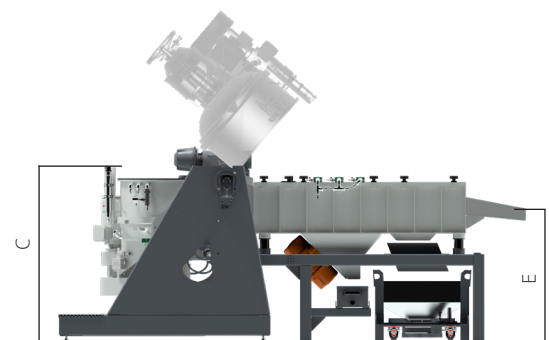
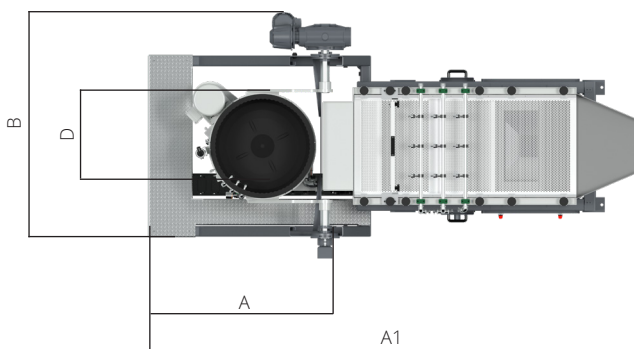
After the processing bowl has been manually or mechanically tilted, the media / work piece mix flows onto the external vibratory screening unit, where the finished work pieces are safely separated from the media.



High energy disk system in separation position

3. Ready for the next work piece batch

After completion of the separation stage the operator returns the media into the processing bowl.



Technical data

| Model range: | FKS 02.1 E | FKS 04.1 E | FKS 04.1 E/M* | FKS 06.1 E | FKS 15.1 E | FKS 35.1 E |
|--|------------|------------|---------------|------------|-------------|-------------|
| Gross operating volume (l) | 14 | 40 | 40 | 60 | 120 | 260 |
| A – Length (mm) | 962 | 1,129 | 1,126 | 1,399 | 1,600 | 2,225 |
| A1 – Length with screening unit (mm) | 1,274 | 2,254 | 2,254 | 2,214 | 2,450 | - |
| B – Width (mm) | 551 | 723 | 815 | 1,395 | 1,568 | 1,549 |
| C – Height (mm) | 940 | 950 | 1,060 | 1,210 | 1,142 | 1,294 |
| D – Diameter processing bowl (mm) | 288 | 428 | 428 | 496 | 630 | 800 |
| E – Discharge height screening unit (mm) | 505 | 266 | 365 | 1,146 | 1,188 | 1,236 |
| Drive power rotary spinner (kW) | 0.75 | 2.2 | 2.2 | 2.2 | 4.0 | 11.0 |
| Vibratory screening units | - | R 40 SM | R 40 SM | R 9/6 SM-E | R 12/7 SM-E | R 18/7 SM-E |
| Screening area L x W (mm) | - | 995 x 540 | 955 x 540 | 955 x 540 | 1,205 x 674 | 1,785 x 685 |

* With electric tilting motor, not shown in the drawing | Please contact us for additional technical data and specifications

HIGH ENERGY DISK SYSTEM, MODEL RANGE E/SM AND E/SA

Semi-automatic systems with integrated separation unit

In the model range "E/SM" and "E/SA" the **processing bowl is directly connected to the work piece separation system.** After completion of the finishing process the processing bowl tilts forward over a vibratory screening unit. This ensures the safe separation of the finished work pieces from the media.

By tilting the unit back into the processing position the media is automatically returned into the processing bowl, ready for the next finishing cycle. This design feature makes the machines **particularly efficient** and **easy to operate.**

Technical details

Model range **E/SM** with **manual separation screen**
Model range **E/SA** with **vibratory screening unit**

- ▶ Compact equipment design
- ▶ No tools required for exchange of separation screens
- ▶ Precisely adjustable vibratory motors, RPM adjustment optional
- ▶ Media collection bin below the separation screen with opening for easy media change
- ▶ Manual separation gate between processing bowl and screening unit
- ▶ Return of the media into the processing bowl
- ▶ Temperature sensor in the gap area

Extras

- ▶ Inverse separation
- ▶ Pneumatically activated separation gate
- ▶ Work piece rinsing station
- ▶ Automatic control of the water level in the processing bowl
- ▶ Central adjustment of the gap size



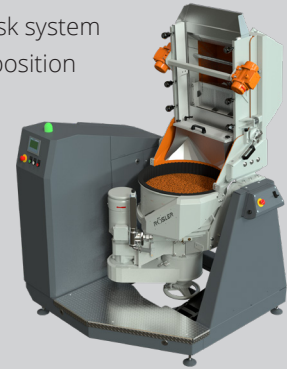
Rösler high energy disk system
FKS 15.1 E/SA

Process sequence

1. Processing

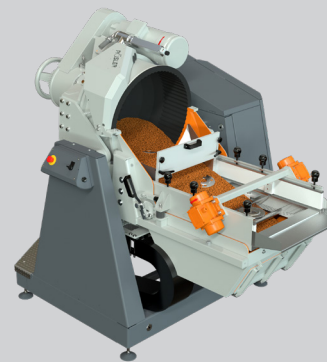
Optimal media / work piece flow ensures quick and efficient processing.

High energy disk system
in processing position



2. Separation

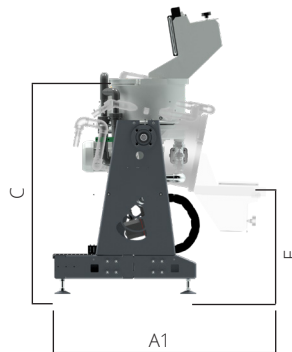
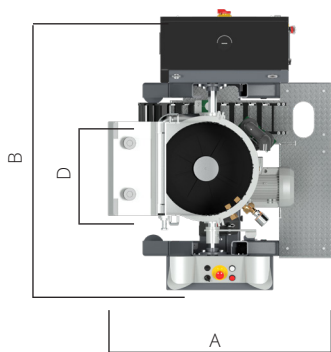
After lifting the separation gate and tilting of the processing bowl into the separation position the media / work piece mix flows gently onto the screening unit, where the finished work pieces are safely separated from the media.



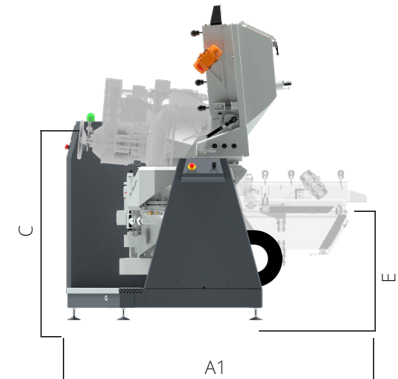
High energy disk system
in separation position

3. Ready for the next work piece batch

By tilting the unit back into the processing position the media is automatically returned into the processing bowl, ready for the next finishing cycle.



E/SM



E/SA

Technical Data

| Model range: | FKS 02.1 E/SM | FKS 04.1 E/SM | FKS 04.1 E/SA | FKS 06.1 E/SA | FKS 15.1 E/SA | FKS 35.1 E/SA | FKS 65.1 E/SA |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Gross operating volume (l) | 14 | 40 | 40 | 60 | 120 | 260 | 550 |
| A – Length (mm) | 1.095 | 1.265 | 1.023 | 1.295 | 1.527 | 2.413 | 2.765 |
| A1 – Length with screening unit (mm) | 1.305 | 1.476 | 1.519 | 1.797 | 2.155 | 3.160 | 3.360 |
| B – Width (mm) | 551 | 815 | 1.037 | 1.259 | 1.529 | 1.502 | 2.012 |
| C – Height (mm) | 945 | 1.065 | 1.004 | 1.064 | 1.175 | 1.105 | 1.359 |
| D – Diameter processing bowl (mm) | 288 | 429 | 420 | 496 | 630 | 798 | 1.037 |
| E – Discharge height screening unit (mm) | 538 | 300 | 769 | 807 | 876 | 1.035 | 1.359 |
| Drive power rotary spinner (kW) | 0,75 | 2,2 | 2,2 | 2,2 | 4 | 11 | 15 |
| Screening area L x B (mm) | 365 x 254 | 400 x 435 | 630 x 414 | 680 x 530 | 850 x 630 | 1.051,5 x 840 | 1.253 x 1.070 |

HIGH ENERGY DISK SYSTEM, MODEL RANGE E-A

Automatic system with integrated separation unit

The model range "E-A" combines all features of the previously described machine types with the possibility of an **automated process** and a **compact equipment design**. The E-A machines

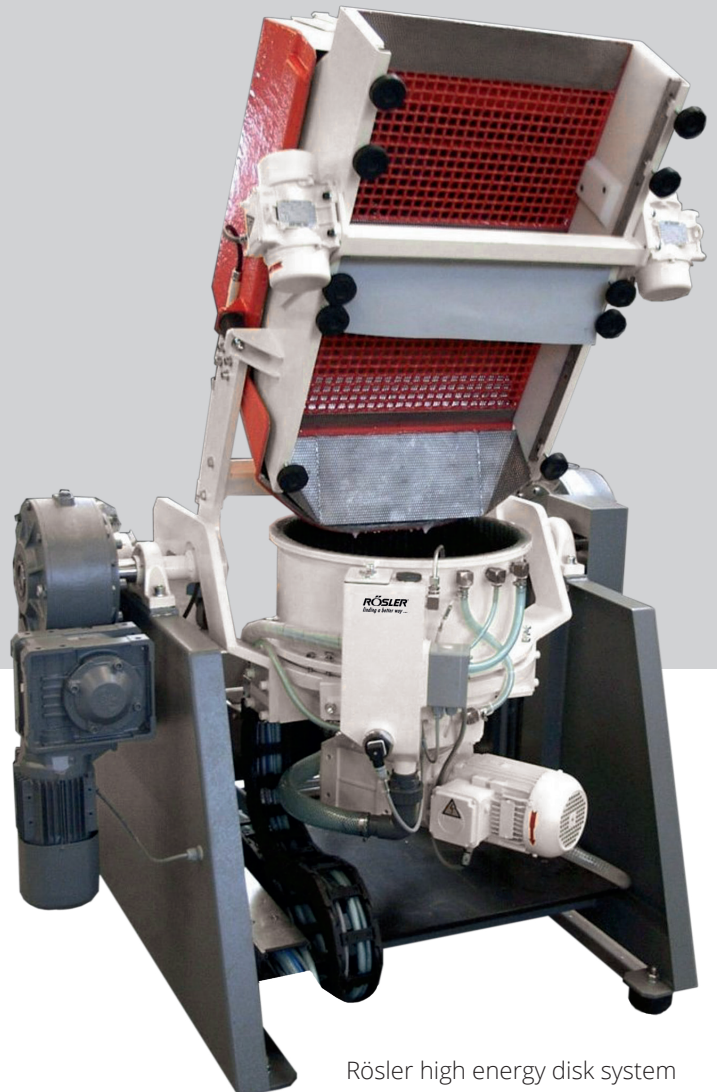
require **very little space** and can be linked with a multitude of Rösler peripheral equipment.

Technical details

- ▶ The 140° tilting angle of the processing bowl guarantees the safe and complete discharge of the media / work piece mix onto the screening
- ▶ Supply ring at the processing bowl entry for process water supply and rinsing of the media / work piece mix
- ▶ Adjustment of the gap size: Manually around the bowl circumference or by axial precision adjustment with hand wheel
- ▶ Vibratory screening unit with large screen area and multi-level screens
- ▶ Undersize media screen integrated into the second screen level
- ▶ No tools required for exchange of separation screens
- ▶ Temperature sensor in the gap area

Extras

- ▶ Magnetic work piece separation
- ▶ Central adjustment of the gap size
- ▶ Variable water level in the processing bowl
- ▶ Overflow sensor



Rösler high energy disk system
FKS 06.1 E-A

Automatic process sequence

1. Processing

Optimal media / work piece flow ensures quick and efficient processing.

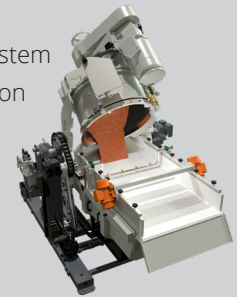


High energy disk system
in processing position

2. Separation

Precisely controlled tilting of the processing bowl ensures complete transfer of the media / work piece mix onto the screening unit, where the finished work pieces are safely separated from the media.

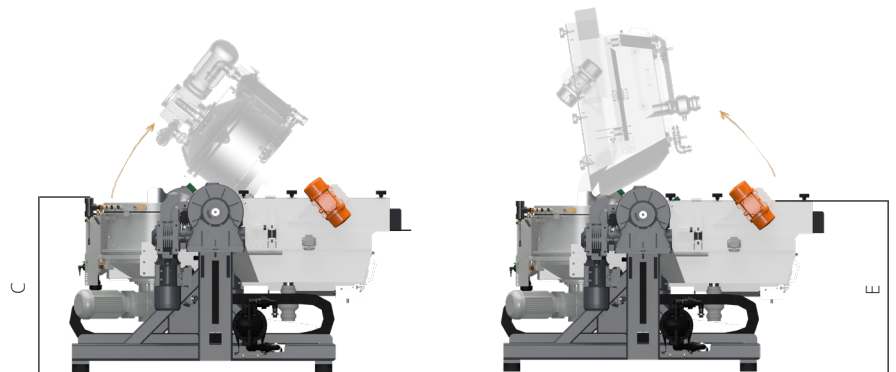
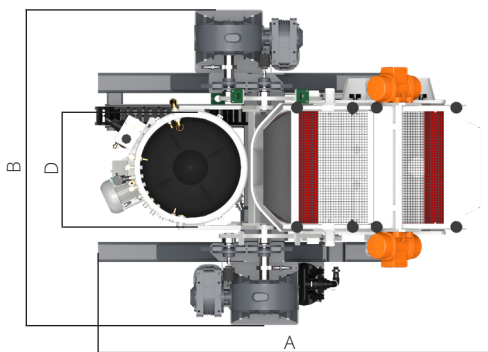
High energy disk system
in separation position



3. Ready for the next work piece batch

By tilting the unit back into the processing position the media are automatically returned into the processing bowl, ready for the next finishing cycle.

Tilting position of the high energy
disk system for media return into
the processing bowl



Technical data

| Model range: | FKS 06.1 E-A | FKS 15.1 E-A | FKS 35.1 E-A |
|--|--------------|--------------|--------------|
| Gross operating volume (l) | 60 | 120 | 260 |
| A – Length (mm) | 2,007 | 2,342 | 3,213 |
| B – Width (mm) | 1,601 | 1,864 | 1,770 |
| C – Height (mm) | 981 | 1,186 | 1,390 |
| D – Diameter processing bowl (mm) | 495 | 630 | 800 |
| E – Discharge height screening unit (mm) | 821 | 937 | 1,091 |
| Drive power rotary spinner (kW) | 2.2 | 4.0 | 11.0 |
| Screening area L x W (mm) | 945 x 566 | 1,158 x 730 | 1,540 x 935 |

FULLY AUTOMATIC HIGH ENERGY DISK SYSTEMS – TECHNICAL DETAILS

The efficient processing of large work piece volumes requires particularly intelligent equipment designs. For this purpose, we have developed **fully automatic high energy disk systems** as **2- or 3-batch systems**. To minimize machine idle times, these

systems allow the **simultaneous processing and separation of multiple work piece batches**. Depending on the finishing requirements the customers can choose from a range of different machine sizes.

Convincing engineering ...

1 Compact machine enclosure

- ▶ Hinged or sliding doors with panoramic windows for a better view and noise reduction
- ▶ Sturdy machine frame protected with a special powder coating

2 Loading unit

- ▶ Gentle transfer of media and work pieces into the processing bowl
- ▶ Special equipment: Anti-adhesion lining with spray nozzles

3 Processing unit

- ▶ Pre-stressed precision spinner bearing with manual or automatic axial height adjustment of the rotating spinner
- ▶ Rotary spinner and processing bowl lined with hot-poured, highly wear-resistant special polyurethane
- ▶ Supply ring at the processing bowl entry for process water supply and rinsing of the media / work piece mix
- ▶ Powerful and low-wearing electrical drive, variable RPM by frequency inverter
- ▶ Lid for the processing bowl, optional

4 Central control panel

Equipment controls

- ▶ Fully automatic operation
- ▶ PLC controls with easy to operate touch panel
- ▶ Allows operation with up to 100 different processing programs
- ▶ Clear text display for error messages
- ▶ RPM controls equipped with displays

Pneumatic and process water controls

- ▶ Monitoring and adjustment devices
- ▶ Control valves
- ▶ Central supply of water and compound to all users, flow-through or recycling mode possible
- ▶ Electronic process water supply to all rinse stations
- ▶ Electronically controlled water level in the processing bowl

5 Intermediate hopper

- ▶ Electro-hydraulic up and down tilting for easy unloading, controlled by PLC program
- ▶ Precisely adjustable electromagnetic vibratory drive
- ▶ Optional anti-adhesion lining for handling thin work pieces that tend to stick to the hopper surface

6 Vibratory screening unit with large screening area

- ▶ Vibratory drive, variable motor speed optional
- ▶ Multi-level screens, no tools required for exchange of separation screens
- ▶ Integrated extension of the screening area
- ▶ Inverse separation, optional
- ▶ Magnetic separation, optional

7 Media return conveyor

- ▶ Powerful vibratory conveyor for return of the media into the loading unit
- ▶ Discharge of undersize media and other debris, optional

8 Undersize media screening and discharge

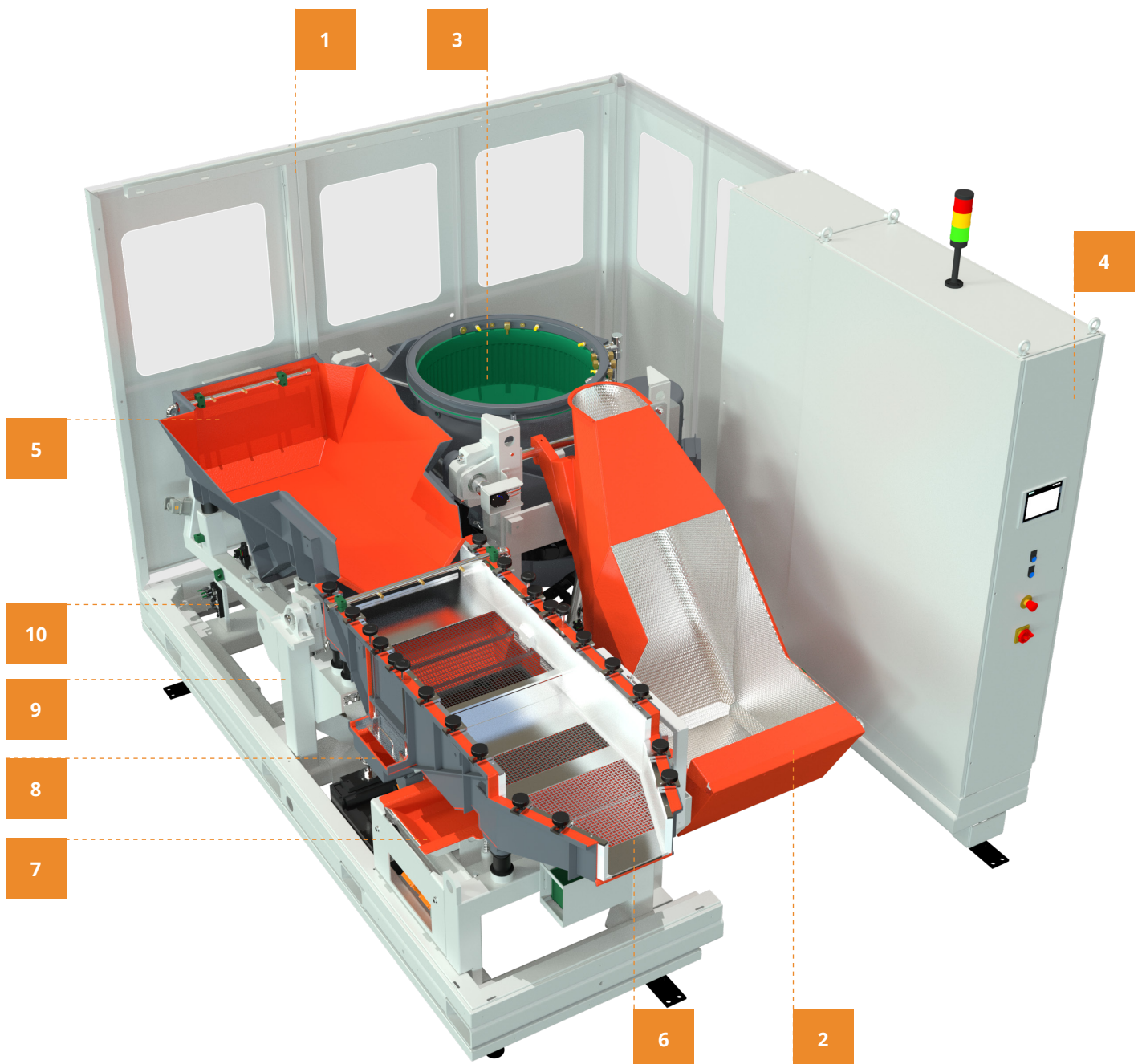
- ▶ Slide-in screen, no tools required for a screen change
- ▶ Recycling of the spray water

9 Hydraulic system

- ▶ Controls all tilting movements of the loading unit, processing bowl and intermediate hopper

10 Central lubrication

- ▶ Electronically controlled on-demand supply of lubricant



HIGH ENERGY DISK SYSTEM, MODEL RANGE A2 2-BATCH SYSTEM

Because the finishing and separation operation take place simultaneously, the Rösler 2-batch systems are ideal **for the cost-efficient processing of large work piece volumes**: While a first work piece batch is separated, a second batch is treated

in the processing bowl. This minimizes idle equipment times and increases productivity. The A2 machine range is designed for fully automatic operation and can be easily linked with other peripheral equipment.

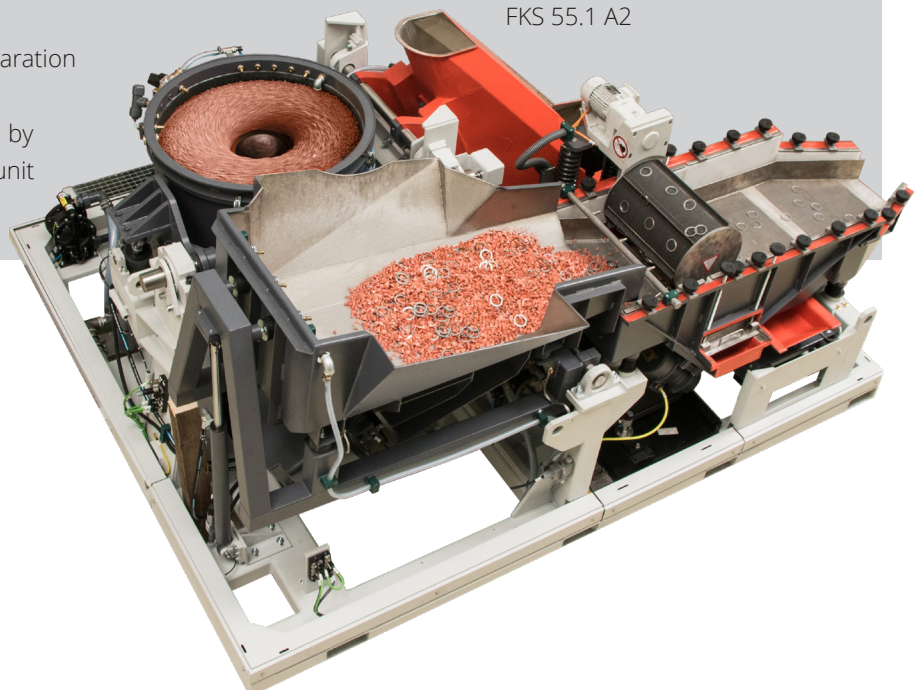
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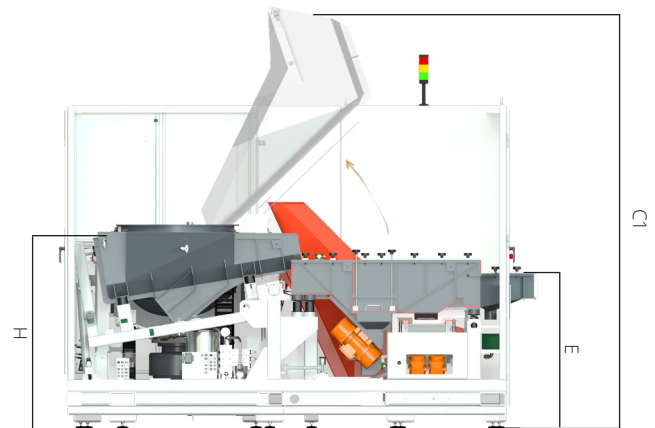
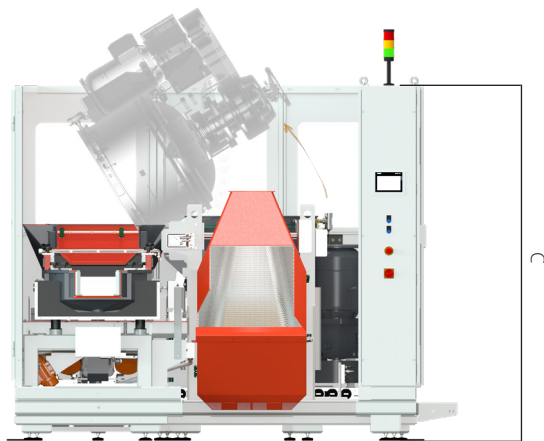
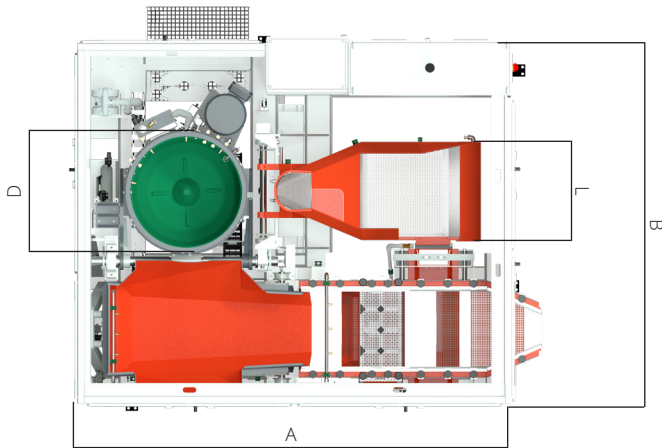
- ▶ Protective cabin, hinged or sliding doors allow optimal accessibility to all machine components
- ▶ Processing bowl lined with special highly wear-resistant HE polyurethane, hydraulic tilting movement
- ▶ The application of fluid mechanics ensures an optimum shape of rotary spinner and processing bowl
- ▶ Adjustment of the gap size: Manually around the bowl circumference or by axial precision adjustment with hand wheel
- ▶ Supply ring at the processing bowl entry for process water supply and rinsing of the media / work piece mix
- ▶ Intermediate hopper with variable tilting angle and magnetic vibratory drive for precise dosing of the media / work piece mix onto the screening unit
- ▶ Vibratory screening unit with large screening area and multi-level screens
- ▶ Undersize media screen integrated into the screening unit
- ▶ No tools required for exchange of separation screens
- ▶ Media return into the processing bowl by vibratory cross conveyor and loading unit

Extras

- ▶ Control unit to monitor the gap between rotary spinner and processing bowl
- ▶ Automatic, hydraulic adjustment of the gap size
- ▶ Variable setting of the water level in the processing bowl
- ▶ Central lubrication
- ▶ Magnetic separation of the finished work pieces from the media

Rösler high energy disk system
FKS 55.1 A2





Technical data

| Model range: | FKS 06.1 A2 | FKS 15.1 A2 | FKS 35.1 A2 | FKS 55.1 A2 | FKS 65.1 A2 |
|---|-------------|-------------|-------------|-------------|-------------|
| Gross operating volume (l) | 60 | 120 | 260 | 350 | 550 |
| A – Length (mm) | 2,230 | 2,620 | 3,250 | 4,000 | 4,085 |
| B – Breite (mm) | 2,020 | 2,260 | 2,710 | 3,115 | 3,015 |
| C – Width (mm) | 2,350 | 2,320 | 2,360 | 2,330 | 2,500 |
| C1 – Maximum height of loading unit in tilt position (mm) | 2,290 | 2,560 | 3,110 | 3,530 | 3,740 |
| D – Diameter processing bowl (mm) | 500 | 640 | 800 | 920 | 1,000 |
| E – Discharge height screening unit (mm) | 900 | 880 | 980 | 1,070 | 1,035 |
| Total installed power (kW) | 8.0 | 11.0 | 22.0 | 32.0 | 32.0 |
| Drive power rotary spinner (kW) | 2.2 | 4.0 (5.5) | 11.0 (15.0) | 18.5 | 15.0 (18.5) |

Please contact us for additional technical data and specifications

TANDEM HIGH ENERGY DISK SYSTEM, MODEL RANGE A3 3-BATCH SYSTEM

In so-called “**tandem high energy disk systems**” up to **three work piece batches can be handled simultaneously**. Triple batch systems consist of two processing bowls and one intermediate hopper / vibratory screening station, which is alternately used by the two processing bowls. This makes

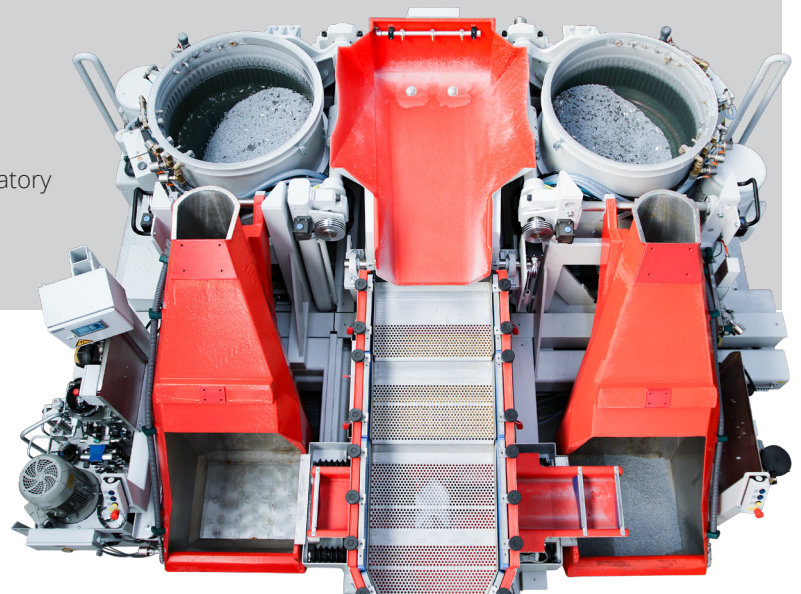
the finishing of large work piece volumes very economical. 3-batch systems **save** not only **time and money** but have also a **very small footprint**. A3-systems are also designed for **fully automatic operation** and can be easily linked with other peripheral equipment.

Technical details

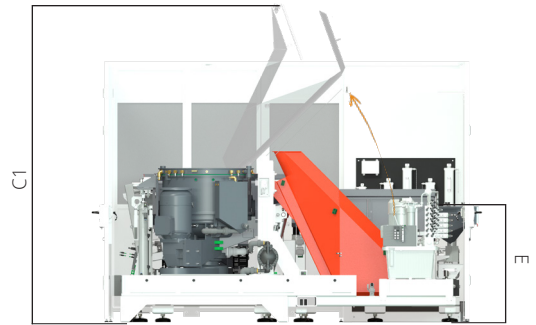
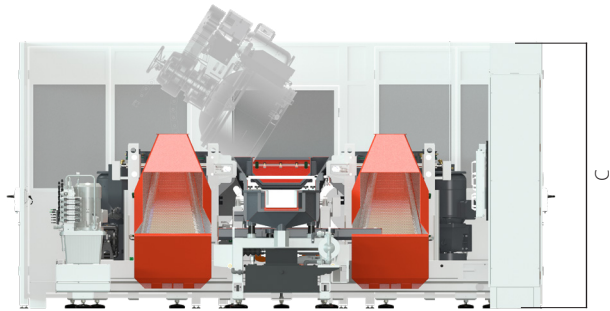
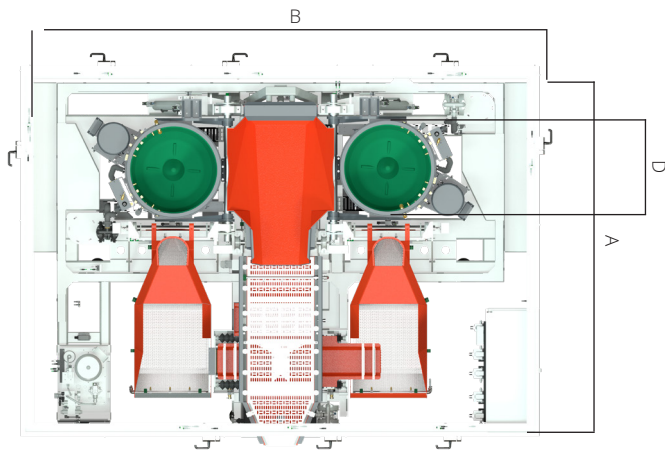
- ▶ Protective cabin, hinged or sliding doors allow optimal accessibility to all machine components
- ▶ Processing bowl lined with special highly wear-resistant HE polyurethane, hydraulic tilting movement
- ▶ The application of fluid mechanics ensures an optimum shape of rotary spinner and processing bowl
- ▶ Adjustment of the gap size: Manually around the bowl circumference or by axial precision adjustment with hand wheel
- ▶ Supply ring at the processing bowl entry for process water supply and rinsing of the media / work piece mix
- ▶ Intermediate hopper with variable tilting angle and magnetic vibratory drive for precise dosing of the media / work piece mix onto the screening unit
- ▶ Vibratory screening unit with large screening area and multi-level screens
- ▶ Undersize media screen integrated into the screening unit
- ▶ No tools required for exchange of separation screens
- ▶ Media return into the processing bowl by vibratory cross conveyor and loading unit

Extras

- ▶ Control unit to monitor the gap between rotary spinner and processing bowl
- ▶ Automatic, hydraulic adjustment of the gap size
- ▶ Variable setting of the water level in the processing bowl
- ▶ Central lubrication
- ▶ Magnetic separation of the finished work pieces from the media



Rösler high energy disk system FKS 15.2 A3 Tandem



Technical data

| Model range: | FKS 06.2 A3-Tandem | FKS 15.2 A3-Tandem | FKS 35.2 A3-Tandem | FKS 55.2 A3-Tandem |
|---|--------------------|--------------------|--------------------|--------------------|
| Gross operating volume (l) | 2 x 60 | 2 x 120 | 2 x 260 | 2 x 350 |
| A – Length (mm) | 2,230 | 2,920 | 3,290 | 4,030 |
| B – Width (mm) | 3,110 | 3,560 | 4,270 | 5,030 |
| C – Height (mm) | 2,390 | 2,390 | 2,500 | 2,480 |
| C1 – Maximum height of loading unit in tilt position (mm) | 2,330 | 2,600 | 3,140 | 3,550 |
| D – Diameter processing bowl (mm) | 500 | 640 | 800 | 920 |
| E – Discharge height screening unit (mm) | 900 | 900 | 950 | 1,060 |
| Total installed power (kW) | 10.5 | 15.8 (18.5) | 33.0 (40) | 51 |
| Drive power rotary spinner (kW) | 2.2 | 4.0 (5.5) | 11.0 (15.0) | 18.5 |

Please contact us for additional technical data and specifications

SEPARATION SYSTEMS

Most mass finishing processes can only be successful with a **suitable separation technology**. That is why our high energy disk systems, be it model range E/SA, E/A or our 2- and 3-batch systems, are equipped with **sophisticated separation units**.

They guarantee a precise and efficient separation, even in case of extremely complex and delicate work pieces.

Screen versions

All screens are available in different sizes and versions:

- ▶ Polyurethane hole screens
- ▶ Stainless steel wire mesh screens
- ▶ Bar screens made from stainless steel or plastic

Magnetic separation

Ferro-magnetic work pieces can be separated from the media with magnetic separators. This is particularly advantageous for work pieces with a size that is equal to or smaller than the media size:

- ▶ Powerful magnetic drum separator with a high attractive force and height and RPM adjustment
- ▶ De-magnetizing plates in the drum housing ensure precise work piece discharge and de-magnetization

In addition, permanent magnets or automatic magnetic separators can be utilized to prevent ferro-magnetic small parts and debris from contaminating subsequent work piece batches.

Inverse separation

- ▶ Used for the separation of work pieces that are smaller than the media and not ferro-magnetic

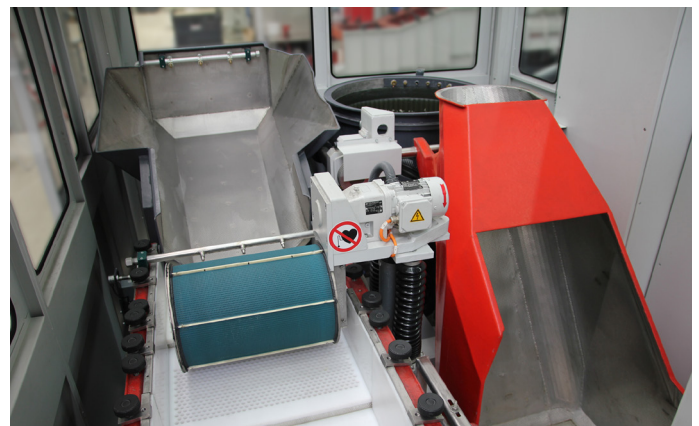
Undersize media discharge

- ▶ Easily accessible slide-in screen, also available in self-cleaning version

Separation station for A2 and A3 systems

The separation station, consisting of an intermediate vibratory hopper and screening unit, allows the simultaneous work piece processing and separation:

- ▶ Programmable separation sequence for the entire station, large screens facilitate the separation function
- ▶ Multiple screen levels ensure the safe removal of media from cup-shaped work pieces
- ▶ Quick-mount separation screens, screen changes require no tools
- ▶ Variable adjustment of the separation speed
- ▶ Built-in rinsing device for cleaning the finished work pieces



ELECTRICAL CONTROLS AND DOSING TECHNOLOGY

An Intelligent design of the system controls allows the **central management of all equipment functions** and ensures that the mass finishing operations are running smoothly. The operating parameters, functions and times can be displayed on the digital touch panel in real-time and can be corrected as needed.

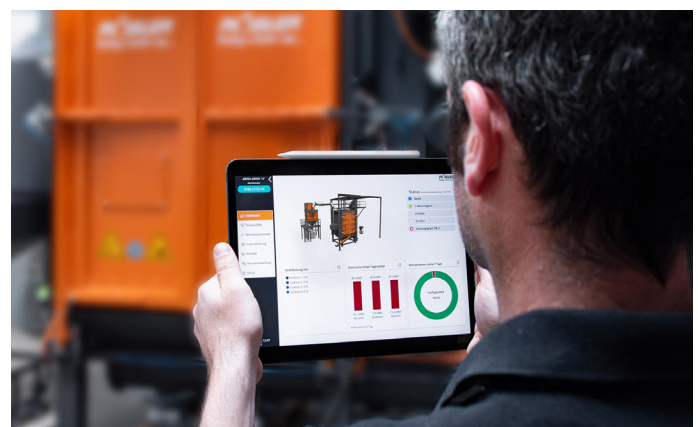
The central control system guarantees more transparency and flexibility

All linked equipment modules, including loading and post-treatment systems, can be easily monitored and controlled from the central control panel. Numerous programming options allow the adjustment of functions like RPM's, water level in the processing bowl, processing and separation times, etc., to the actual customer requirements. Available protective and control functions:

- ▶ Temperature in the gap area
- ▶ Overflow protection
- ▶ Process water supply (water / compound)
- ▶ System running dry
- ▶ Gap size
- ▶ Compressed air supply
- ▶ Number of work piece batches
- ▶ Maintenance data
- ▶ Water level in the processing bowl

Industry 4.0

- ▶ Connection to and communication with customer computer systems
- ▶ Possibility to conduct maintenance and troubleshooting via remote access
- ▶ Possibility to link the Rösler finishing systems with customer-supplied peripheral equipment and automate all functions
- ▶ Efficient and reliable work piece program selection via barcode scanners
- ▶ Rösler Smart Solutions: Digital process water management. Please find more information about this subject on page 24.



EXTRAS

The full potential of the Rösler high energy disk systems comes to fruition, when the basic finishing system is linked with work piece loading and post-processing equipment modules. We

offer **numerous linking solutions** to make your mass finishing operations particularly efficient.

Feeding of raw work pieces into automated systems

Work piece loading possibilities prior to the mass finishing process:

- ▶ Conveyor belts
- ▶ Lift & tip loaders
- ▶ Vibratory conveyors
- ▶ Option: Use of weighing cells for the automatic creation of work piece batches

Electronic monitoring of machine and gap area for fail safe operation

- ▶ Monitoring and control of gap size
- ▶ Measurement of the temperature in the gap area
- ▶ Overflow protection for the process water
- ▶ Control of the process water and compound flow
- ▶ Adaptation of the spinner RPM to the respective finishing task

Post treatment

Linking possibilities after the mass finishing process:

- ▶ Work piece drying systems
- ▶ Washing and corrosion protection systems
- ▶ Systems for the automatic backfilling of the finished work piece into waiting bins

Precise setting of the gap size

- ▶ Axial spinner height adjustment by hand wheel, requires no tools

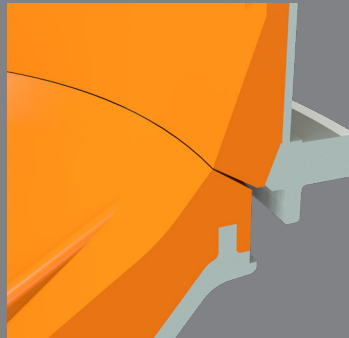
Fully automatic adjustment of the gap size

- ▶ Continuous monitoring of the gap size, for critical finishing processes and small work pieces that might get stuck in the gap
- ▶ Fully automatic monitoring of the gap size and gap adjustment as needed, takes place during the finishing process

Innovative Rösler designs for the gap between spinner and processing bowl

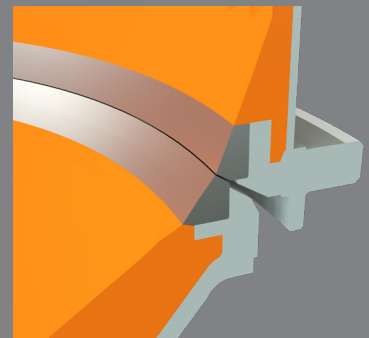
PU / PU (standard version)

- ▶ Processing bowl and spinner made from polyurethane
- ▶ Central adjustment of the gap size by hand wheel, optional



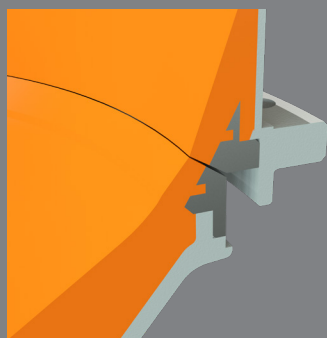
Stainless steel / carbide steel gap

- ▶ Processing bowl made from polyurethane
- ▶ PU spinner containing a stainless steel or carbide steel ring
- ▶ Very precise setting of the gap size with pre-stressed tapered roller bearing



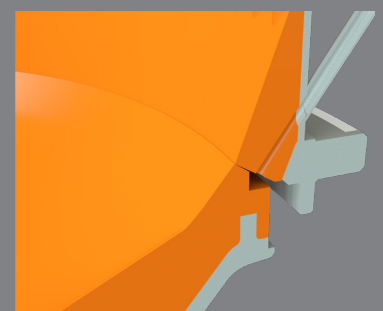
Stainless steel ring lined with polyurethane

- ▶ Processing bowl made from polyurethane
- ▶ PU spinner containing a stainless steel ring lined with polyurethane
- ▶ Very precise setting of the gap size with prestressed tapered roller bearing, optional
- ▶ Central adjustment of the gap size by hand wheel, optional



Micro-Gap®

- ▶ Special gap system with very precise setting of the gap size; gap size 0,03 mm
- ▶ Ideal for small and particularly thin work pieces
- ▶ Work piece thickness < 0,1 mm
- ▶ Permanent cooling of the Micro-Gap® with process water



AUTOMATED FINISHING SOLUTIONS / INTERLINKED SYSTEMS

Rösler provides you with highly flexible solutions for your finishing requirements: By simply adding suitable peripheral equipment for work piece loading and post treatment, the Rösler high energy disk systems can be easily expanded

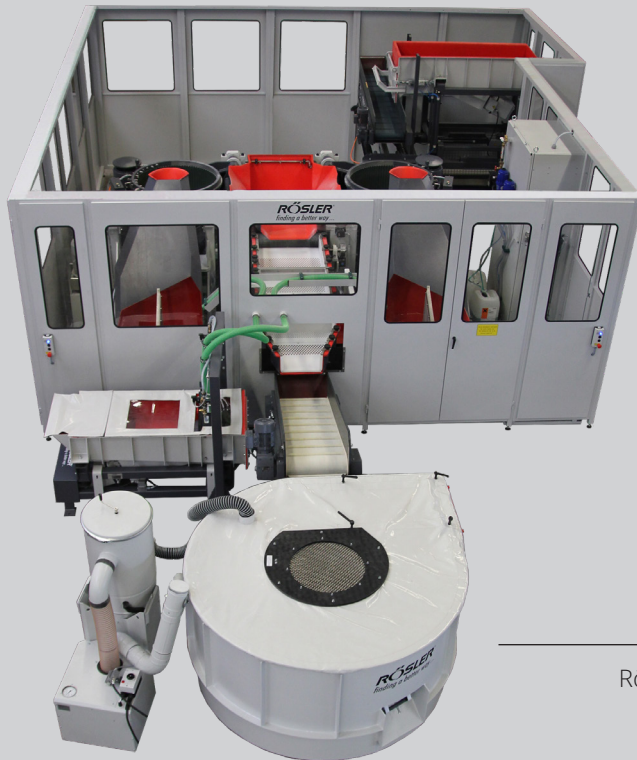
into **fully automatic processing lines**. These peripheral equipment modules, all made in-house, allows the implementation of practically all your automation requirements.



Rösler FKS 06.1 A2 double-batch system with magnetic belt separator for ferro-magnetic work pieces

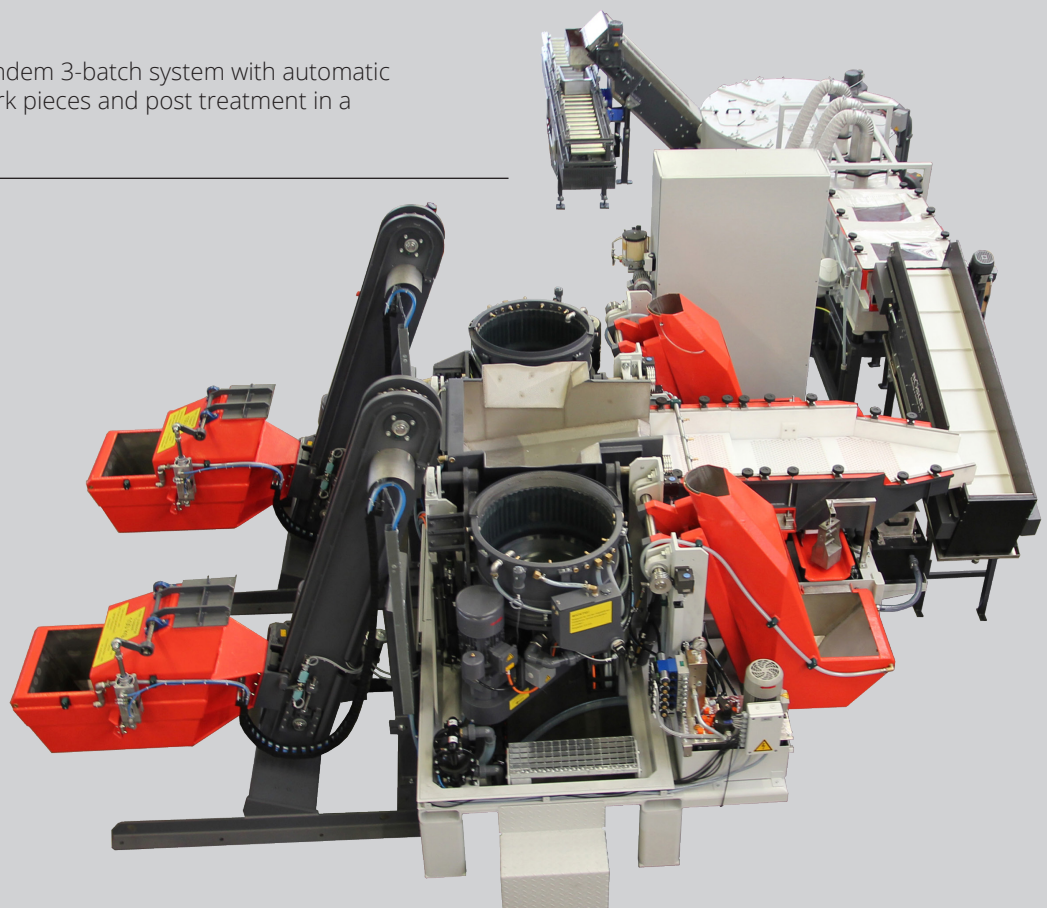
Rösler interlinked system: High energy disk system FKS 55.1 A2 with work piece loading, magnetic separation and drying of the finished work pieces in a rotary dryer with complete unload feature





Rösler FKS 55.2 A3 tandem 3-batch system with automatic generation of work piece batches, automatic media replenishment and subsequent drying operation

Rösler FKS 15.2 A3 tandem 3-batch system with automatic loading of the raw work pieces and post treatment in a rotary vibratory dryer

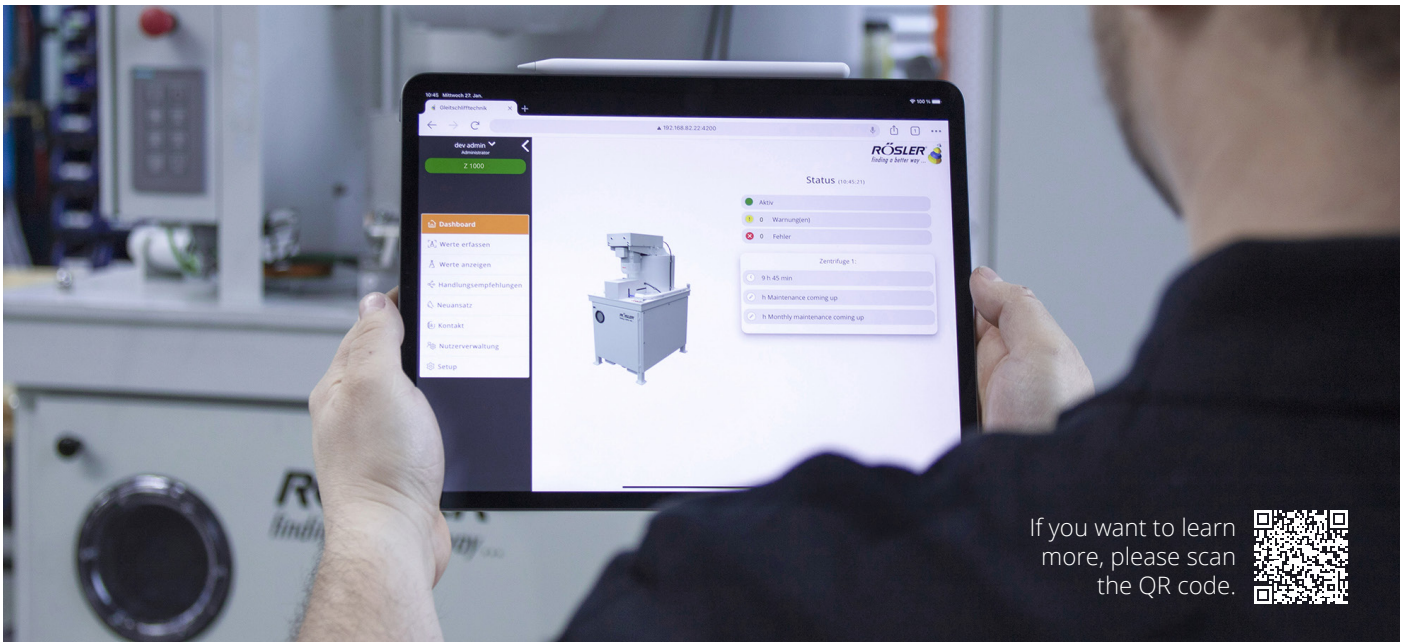


RÖSLER SMART SOLUTIONS

A digital added value to meet your challenges

Now is the time to promote the **digital transformation** and develop innovative digitization solutions. Under our new brand **Rösler Smart Solutions** we have developed a comprehensive digitization product that will allow you to **make processes**

and their parameters more transparent and to define the potential for substantial cost savings. Our package creates the **potential for optimization significant reduction of the operating costs.**



If you want to learn more, please scan the QR code.



Transparency of processes and costs



Process monitoring and recording of data



Quick correction of deviations and faults



Intelligent operation with uptime projections



Optimized utilization of resources and cost reduction

MEDIA AND COMPOUNDS

In addition to our machine program, we also offer the most comprehensive range of media and compounds in the world. All our consumable products have been developed and produced in-house with „Made in Germany“ quality. With over 80 years of

experience in the field of surface finishing we can provide our customers with tailormade processes for new applications and solutions for product improvement and cost reductions.

Stable and repeatable finishing processes are our specialty.



The world's largest range of media and compounds

With around 15,000 products our portfolio of consumables is the largest in the world. It includes ceramic and plastic grinding and polishing media, compounds and process water cleaners. All our consumables can be individually adapted to the needs and requests of our customers.



Our ceramic media production

Quality

Our production complies with the most stringent environmental standards and is subject to strict quality controls per DIN EN ISO 9001 and 50001.

Excellent product availability

Our central warehouse in Germany stocks more than 8,000 tons of media and compounds. In addition, our global network of branches and many of our channel partners maintain warehouses with consumables close to our customers.

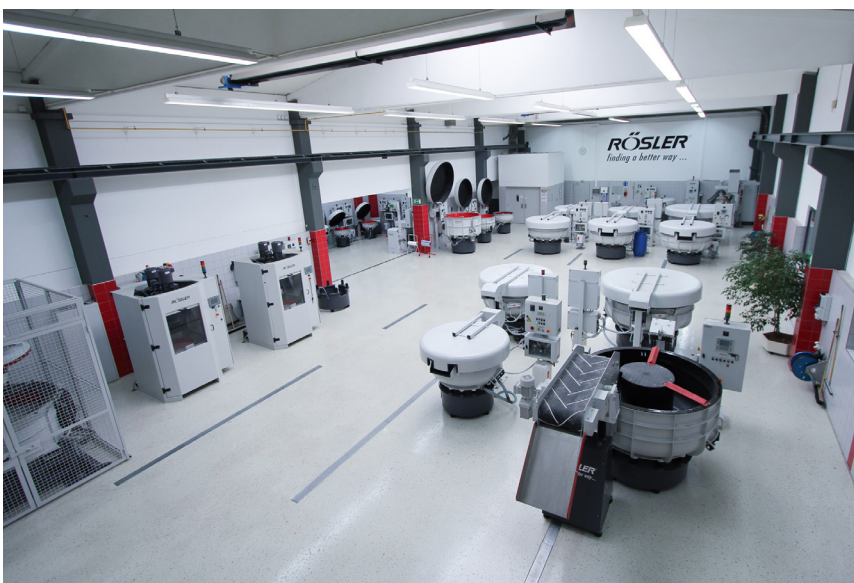
CUSTOMER EXPERIENCE CENTER

MASS FINISHING

A major strength of the Rösler business approach is that **we look at all aspects of a finishing task**. The equipment and the processes are individually tailored to the respective finishing requirements, but also to their optimal integration into the customer's manufacturing operation. Most of the Rösler sales

branches have their own **Customer Experience Centers (CEC)**, equipped with the latest finishing equipment.

To investigate the various finishing possibilities, in our CEC we are conducting **processing trials** with the work pieces of our respective customers.



Process development and process optimization

Our all-around approach guarantees perfect finishing solutions. This includes processing trials, process development, selection of the right machinery and a professional after sales service.

In our CEC, equipped with ultra-modern equipment, we can run practically any mass finishing process.

State-of-the-art **physical and chemical measuring** equipment represents a vital tool for process development and optimization.

The entire focus of our specialists in the engineering and R & D departments is on developing **tailormade finishing solutions**.

Product development and optimization

The enormous depth of the Rösler product range, **CEC around the world** and our well-equipped laboratory at the Untermerzbach location in Germany are an excellent basis for the development of innovative and cost-efficient products in the field of mass finishing.

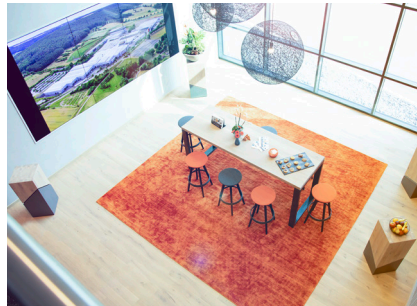
All our products, be it consumables, finishing equipment,

vibratory motors, process water cleaning centrifuges, as well as work piece handling systems and post processing equipment like dryers, are **developed and manufactured** in-house. Such a high manufacturing depth is unparalleled in our industry.

LEARNING FROM THE GLOBAL LEADER

Our comprehensive mass finishing know-how is founded on over 80 years of experience. As the global technology and market leader in the field of surface treatment we can offer proven

solutions ranging from a broad equipment and consumables portfolio to round-the-clock after-sales service. In our training seminars we are passing our extensive knowledge on to you.



Rösler Academy

The central training center of the Rösler Oberflächentechnik GmbH

- ▶ An area of more than 1,350 m² for learning and working
- ▶ Equipped with the latest digital media and communication technologies
- ▶ Certified professional trainers
- ▶ Specialized fields: Mass finishing, shot blasting, lean management
- ▶ More than 10 different training seminars
- ▶ Focus on hands-on learning
- ▶ Training seminars in German and English
- ▶ Customized training seminars at customer locations upon request

Our professional trainers


All our trainers are certified and are among the best in their respective fields. In our training seminars you will benefit from the extensive experience of our trainers, who will provide you with first-hand practical knowledge.

Ø Participants per year




Over 1,000

Ø Rating



9.6 out of 10 possible points¹

Ø Recommendation rate



99 %¹

¹ Source: Evaluation questionnaires filled out by participants, Status 31/12/2022

You can find more information about our seminars, dates and registration procedures under www.rosler-academy.com or scan the QR-Code.



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