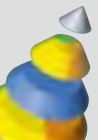


RÖSLER
finding a better way ...

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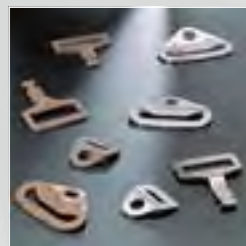
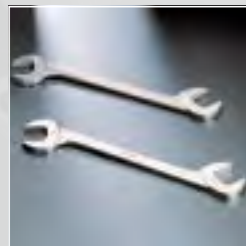
Rotary Vibrators



Rösler Rotary Vibrators set new standards

Successful mass finishing applications are usually the result of a combination of creative process technology and innovative equipment engineering. This approach is reflected in the varied line of Rösler rotary vibrators with their enhanced performance characteristics. They combine Rösler's high equipment quality and reliability standards with a functional design. In addition, they are easy to operate and provide a high degree of productivity.

A technology that saves cost!



Functional description

Vibratory surface finishing takes place in a work bowl placed on coil springs. The vibratory energy is induced by a special vibratory motor that is mounted in the center of the work bowl. The vibration creates the typical "relative" movement of media against parts. The continuous feeding of water and compound – also known as soap – supports the finishing process. Frequently, rotary vibrators are equipped with an integrated separation flap and screen. This allows separating the finished parts from the media in the machine: Via the separation screen the parts are transferred to the machine exit or to a post-treatment system, for example, a dryer, while the media remains in the machine. Of course, automatic solutions including different types of material handling systems, along with pre- and post-treatment units, are possible.



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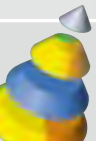
Media and Compound Production



When it comes to consumables, no one in the industry can match our product line, or our experience. The Rösler product range of media and compounds is by far the most comprehensive in the world due to our 60 years of constant product development and improvement. There are altogether over 8,000 different types of ceramic media, plastic media, and compounds available for use in both, grinding and polishing applications. We continually offer our customers worldwide innovative finishing solutions and possibilities for product improvements and cost reduction.

Applications

Rotary vibrators are extremely flexible and versatile mass finishing systems. Applications include: De-burring, grinding, radiusing, general parts cleaning, de-scaling, de-greasing and polishing of stampings, castings, formed, forged and saw-cut parts as well as machined components. Vibratory finishing can be used for all metals, many plastics, ceramics, rubber, wood, stone and glass and can help to achieve a wide range of objectives. Excellent results can be obtained for highly delicate and small components as well as for large and robust parts.



Technical details

Rotary vibrators made by Rösler ...

Our highly efficient and flexible machine systems offer virtually unlimited finishing solutions. And our engineers and process technology experts are continuously working on further technical improvements.

Convincing technology ...

1 Work bowl

All our process bowls undergo heat treatment after welding for stress relief.

- ▶ Process water supply connections
- ▶ Large access doors for easy adjustment of imbalance weights
- ▶ Many process bowl variations for easy customization of the equipment

2 Integrated separation unit

The machine types EC, Euro, Euro-HS, Euro-KP, Long Radius and Long Radius-KP are equipped with internal separation. The vibration causes the media and finished parts to move across the separation screen. The media falls through the screen openings back into the work bowl, while the finished parts are moved to the machine exit.

- ▶ Separation flap or hand insertable separation gate – for the Euro, EC and LR range
- ▶ The robust separation flap is activated by an external pneumatic cylinder (Euro range, optional for EC models)
- ▶ Vibration-resistant screen mounts (wedges)
- ▶ Spray rinse system over separation screen (optional)

2a Screening of undersized media

- ▶ Undersize screen segment: Optional in EC, Euro, Euro-HS and LR range

3 Wear resistant lining of work bowl

Rösler manufactures its own wear-resistant linings. Prior to lining the inside of the work bowl is shot blasted for better adherence of the wear linings. The following optional linings are available:

- ▶ Molded polyurethane
- ▶ Sprayed polyurethane
- ▶ Glued-in rubber or polyurethane sheets

4 Media unload plug

Double function: Media removal from the work bowl and main drain for the effluent from the work bowl. Can be cleaned from the outside

- ▶ Optional: Removal of undersize media

Longevity and high quality

Rösler rotary vibrators are setting high technological standards. Their functional design, the use of high-quality materials and excellent workmanship guarantee a long service life and low maintenance costs. High quality powder coatings and industrial grade paints guarantee a long-term attractive appearance as well as corrosion protection. Upon request special paints and colors are available.

8 Setting of the imbalance weights

The two basic upper and lower imbalance weights are securely fastened to the motor shaft. The offset angle can be easily set with the help of a shaft mounted disc indicating various angles.

Depending on the required vibratory performance, additional imbalance weight plates can be easily added.

9 Electrical control

Relay controls or a PLC (optional) allow the central control of all machine functions.

10 Process water supply

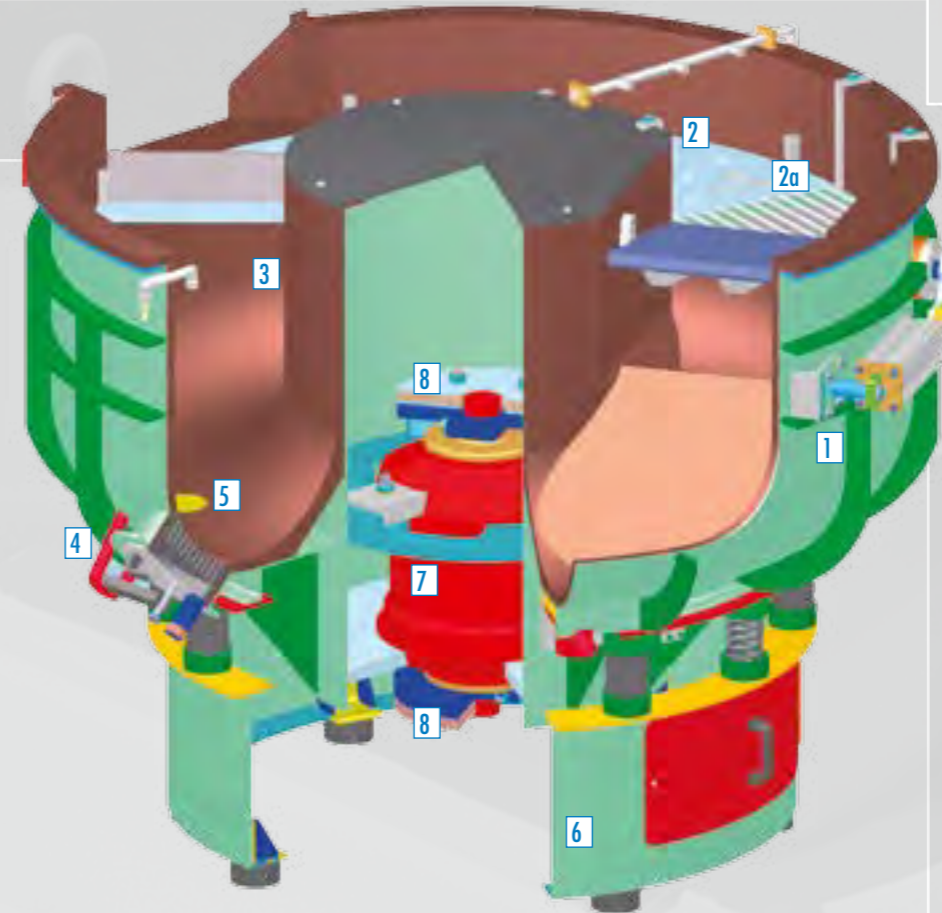
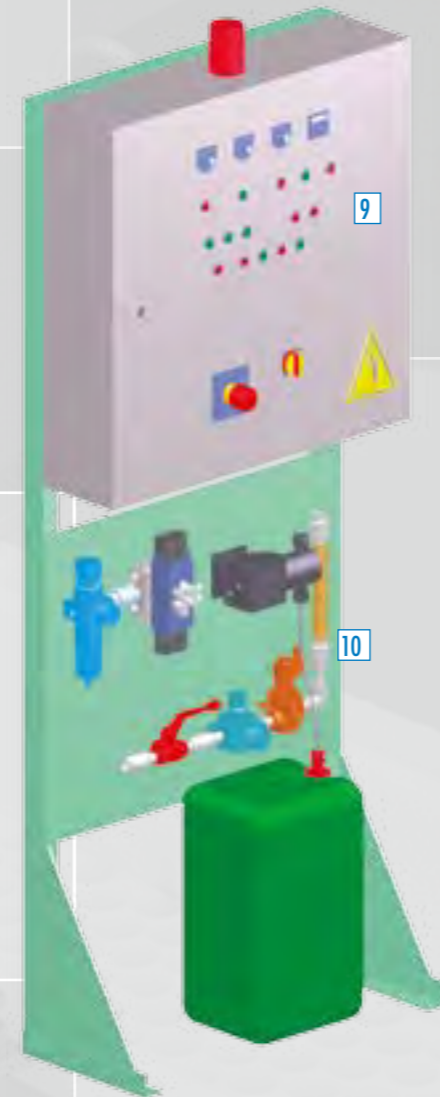
- ▶ Separate flow controls for fresh water and compound supply
- ▶ Process water recycling systems optional

Extras:

- ▶ Circular spray bar for even distribution of the process liquid in the work bowl
- ▶ Spray-rinse above the screening area
- ▶ Flow control for water and compound

High Speed systems

“High Speed” rotary vibrators produce an up to 50% higher grinding performance. Depending on the parts to be treated and the required grinding results they represent a real alternative to standard rotary vibrators. Available in the Euro-, A- and R-range as fully automatic double or triple batch systems.



5 Bottom drains in the work bowl

For special mass finishing processes like Keramo-Finish®, Isotropic Superfinish (ISF/REM® process), ball burnishing and pickling, we recommend the use of extra bottom drains in addition to the main drain (media unload plug).

6 Stable bowl suspension

- ▶ Machine base and the special coil springs arrangement ensure a high degree of stability without limiting the vibratory movement
- ▶ Easy access to the lower imbalance weights

7 Special vibratory drive system



The Direct Drive vibratory motor has been specifically developed for the Roesler rotary vibrators. This powerful and robust drive system provides ample capacity for the transfer of the vibratory energy to the work bowl. The proven double-flange motor fixturing system guarantees a vibration resistant mounting of the vibratory motor onto the inner dome of the work bowl. The motor bearings can be lubricated with an automatic lubrication system. This guarantees a high bearing life.

- ▶ 2 standard motor speeds: 1500 and 1000 rpm at 50 Hz (1800 and 1200 rpm at 60 Hz)

Option:

- ▶ Variable speed control by frequency inverter: Provides more flexibility in all processing and separation stages



Qualified company,
ISO 9001: 2008

"EC" ... Rotary Vibrators

Due to their specially designed process channel, rotary vibrators, type EC, are truly general purpose machines: The relatively shallow incline of the process channel in the EC machines allows the processing and separation of small as well as large parts. EC machines are also ideally suited for finishing of delicate parts.



Technical details:

Operator-assisted separation of media from parts:

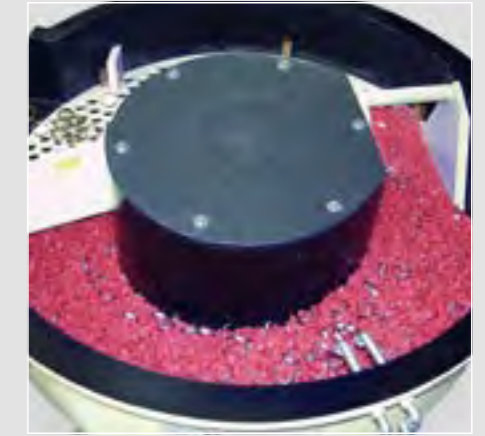
Due to their shape, size or fragility, certain parts cannot be automatically separated from the media. The manually inserted and easy to handle separation gate allows such gentle separation. Of course, pneumatically activated separation flaps are also available (R 320 EC and bigger).



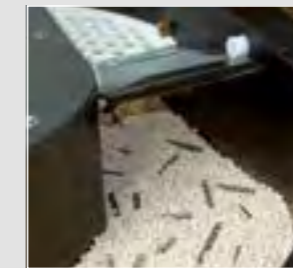
"Shallow" incline of the process channel



Manually inserted separation gate



Separation of media and parts



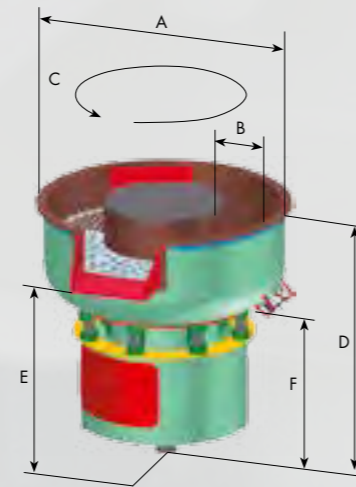
Pneumatically activated separation flap

Features:

- ▶ Shallow incline of the processing channel
- ▶ Manually insertable separation gate or pneumatically activated separation flap (option)
- ▶ Large-surface and easy to change separation screens (screen change does not require any tools)
- ▶ Rösler double-flange vibratory motor with 2 speeds (1500 and 1000 rpm at 50 Hz); easy and safe lubrication of the bearings
- ▶ Adjustable imbalance weights allow different grinding intensities
- ▶ Wear resistant lining made from hot poured polyurethane
- ▶ Media unload plug with integrated effluent drain
- ▶ Flexible design of control panels and compound dosing systems

Extras:

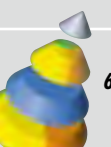
- ▶ Variable speed of vibratory motor
- ▶ Extra bottom drains
- ▶ Undersize media classification: Integrated into media unload plug or separate segment on separation screen
- ▶ Noise protection equipment



Type:

		R 125 EC	R 220 EC	R 320 EC	R 420 EC	R 620 EC	R 780 EC
Process bowl							
Total volume	l	125	220	320	420	620	780
External diameter max.	mm	A	1200	1280	1520	1695	1805
Process bowl width	mm	B	260	290	355	430	430
Overall length of processing channel	mm	C	1970	2630	2780	3300	3820
Machine height	mm	D	1105	1115	1210	1240	1235
Unload height	mm	E	890	890	990	1010	985
Height media unload plug	mm	F	660	640	650	675	600
Separation							
Length x width	mm	710 x 210	980 x 260	1025 x 300	1260 x 360	1315 x 430	1430 x 430
Area	cm ²	1600	2600	3500	4600	5800	6400
Type		Slide-in-gate	Slide-in-gate	Slide-in-gate, optional: pneumatically activated separation flap	Slide-in-gate, optional: pneumatically activated separation flap	Slide-in-gate, optional: pneumatically activated separation flap	Slide-in-gate, optional: pneumatically activated separation flap
Drive power							
Speed (at 50 Hz)*	RPM	1500	1500	1500	1500	1500	1500
Connected load	kW	0,75	3	3	3	7,5	7,5
Media unload plug	Ø mm	105	105	105	180	180	180

* Standard speed 1500 and 1000 RPM
Variable speed with frequency inverter



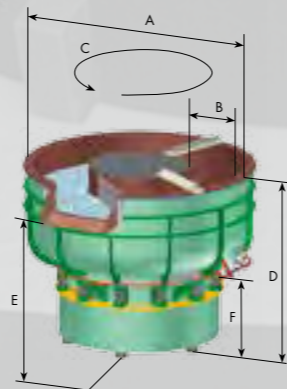
"Euro"... Rotary Vibrators

Euro rotary vibrators are ideal for interlinked, automatic surface finishing processes. They are characterized by a process channel with spiral bottom incline and pneumatically activated separation flap. A special "gate clearing" feature developed by Rösler allows fully automatic processing and separation.



Features:

- ▶ Spiral bottom process channel for easy separation
- ▶ Pneumatically activated separation flap
- ▶ Large-surface and easy to change separation screens (screen change does not require any tools)
- ▶ Rösler double-flange vibratory motor with 2 speeds (1500 and 1000 rpm at 50 Hz); easy and safe lubrication of the bearings
- ▶ Adjustable imbalance weights allow different grinding intensities
- ▶ Wear resistant lining made from hot poured polyurethane
- ▶ Media unload plug with intergrated effluent drain
- ▶ Flexible design of control panels and compound dosing systems
- Extras:**
 - ▶ Variable speed of vibratory motor
 - ▶ Extra bottom drains
 - ▶ Undersize media classification: Integrated into media unload plug or separate segment on separation screen
 - ▶ Noise protection equipment
 - ▶ "Gate clearing" with sliding imbalance weights and automatic reversal of the vibratory



Technical details:

Automatic separation:

The spiral bottom process channel and the pneumatically activated separation flap facilitate automatic separation of media and parts.

Option:

- ▶ Rinsing of the separation flap

Gate clearing

By reversing the rotational direction of the vibratory motor and subsequent sliding of the imbalance weights by around 190 degrees, the parts/media mass is moving backwards and clears the ramp area of media and parts. This allows the separation flap to move into position without "catching" any media or parts.



Motor with reversible weights



Spiral bottom process channel



Drop behind separation flap: Prevents flat parts from sticking to each other



Gentle "cascade" drop behind separation flap: Prevents damage of delicate parts



Separation flap, closed



Manual separation flap with hand lever (R 125 Euro)

"Euro"... HS high speed vibrators

Work bowl:

- ▶ Made with specially treated steel
- ▶ Special gusseting



for extra strength

- ▶ Segmented separation screen
- ▶ Wear resistant, double-thick lining made from hot poured polyurethane

Machine base:

- ▶ Re-enforced welding fabrication

Drive system:

- ▶ Special high performance Rösler vibratory motor Power+
- ▶ Amplitude up to app. 10 mm
- ▶ Variable motor speed*
- ▶ Central lubrication

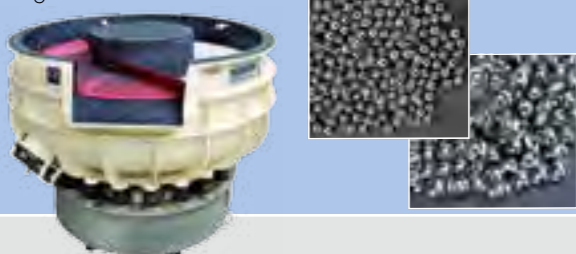
* especially useful during the separation process

Type:

	R 125 Euro		R 220 Euro		R 320 Euro			R 420 Euro	R 620 Euro			R 780 Euro		R 1050 Euro	R 1500 Euro	
	Euro	Euro-KP	Euro	Euro-KP	Euro	Euro-KP	Euro-HS	Euro	Euro	Euro-KP	Euro-HS	Euro	Euro-HS	Euro	Euro	
Process bowl																
Total volume	l	125	125	220	220	320	320	320	420	620	620	620	780	780	1050	1500
External diameter max.	mm	A	910	910	1190	1190	1350	1350	1350	1520	1695	1695	1715	1805	1800	2130
Process bowl width	mm	B	215	215	260	260	325	330	305	350	430	435	430	440	440	525
Overall length of processing channel	mm	C	2050	1890	2725	2725	3050	3050	2820	3500	3800	3800	3800	4100	4100	4800
Machine Height	mm	D	1110	1105	1180	1180	1210	1250	1320	1355	1225	1225	1320	1375	1375	1530
Unload height	mm	E	890	890	965	960	990	1030	1030	1150	985	985	1055	1125	1125	1160
Height media unload plug	mm	F	650	625	640	640	615	635	580	705	500	500	580	600	600	580
Separation																
Length x width	mm	710 x 215	710 x 215	980 x 260	980 x 260	1265 x 335	1265 x 335	1265 x 335	1260 x 360	1315 x 430	1315 x 430	1315 x 430	1430 x 435	1430 x 435	1395 x 465	1700 x 600
Area	cm ²	1600	1600	2600	2600	3500	3500	3500	4600	5800	5800	5800	6200	6200	6500	10200
Type		Manually activated separation flap	Pneumatically activated separation flap	Pneumatically activated separation flap	Pneumatically activated separation flap	Pneumatically activated separation flap	Pneumatically activated separation flap	Pneumatically activated separation flap	Pneumatically activated separation flap	Pneumatically activated separation flap	Pneumatically activated separation flap	Pneumatically activated separation flap	Pneumatically activated separation flap	Pneumatically activated separation flap	Pneumatically activated separation flap	Pneumatically activated separation flap
Drive power																
Speed (at 50 Hz)*	RPM	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Connected load	kW	0,75	0,75	3	3	3	7,5	7,5	7,5	7,5	7,5	7,5	Power* 12,5	7,5	Power* 12,5	7,5
Media unload plug	Ømm	105	105	190	190	190	190	190	190	190	190	190	190	190	190	190

"Euro"... KP ball burnishing systems

- For extra heavy loads:**
Specially designed for ball burnishing or high-pressure deburring with steel / stainless steel media:
- ▶ High power vibratory drive system
 - ▶ Re-enforced coil springs
 - ▶ Work bowl re-enforced with extra gussets; 270 degrees spiral bottom incline of process channel
 - ▶ Rubber lining of work bowl
 - ▶ Recommended accessories: Suction pump and splash guard



*Standard speed 1500 and 1000 RPM
Variable speed with frequency inverter

"A"... Rotary Vibrators

The A – range of rotary vibrators with their powerful MS/E-V magnetic separators is in a class of its own. This machine type was specially designed for processing of parts that can be separated magnetically. The electrical controls are designed to allow the finishing process to run fully automatic.

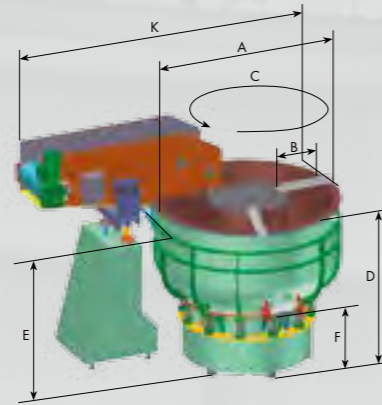


Features:

- ▶ Work bowl re-enforced with extra gussets and equipped with special ramp in the process channel for easy magnetic separation. High performance magnetic separator, type MS/E-V.
- ▶ Rösler double-flange vibratory motor with 2 speeds (1500 and 1000 rpm at 50 Hz); easy and safe lubrication of the bearings
- ▶ Adjustable imbalance weights allow different grinding intensities
- ▶ Wear resistant lining made from hot poured polyurethane
- ▶ Media unload plug with integrated effluent drain
- ▶ Flexible design of control panels and compound dosing systems

Extras:

- ▶ Variable speed of vibratory motor
- ▶ Extra bottom drains
- ▶ Undersize media classification: Integrated into media unload plug
- ▶ Noise protection equipment



IMPORTANT when utilizing magnetic separation: Almost all finished steel parts require de-magnetization prior to further treatment. We offer the following options:

- ▶ Plate de-magnetization: Installed in the magnetic belt separators of the types MS/E-V and MS/E
- ▶ Drum magnet separators: Optionally equipped with basic de-magnetization unit
- ▶ Special solutions: De-magnetization tunnels and conveyor belts with single or double de-magnetizing plates

Type:		R 780 A	R 1050 A	R 1050 A-HS
Process bowl				
Total volume	l	780	1050	1050
External diameter max.	mm	A	1805	1805
Process bowl width	mm	B	435	465
Overall length of processing channel	mm	C	4100	4100
Machine Height	mm	D	1275	1375
Unload height	mm	E	1045	1105
Height media unload plug	mm	F	600	550
Total length incl. magnetic separator	mm	K	3000	3000

Separation		Magnetic separat.	Magnetic separat.	Magnetic separat.
Drive power				
Speed (at 50 Hz)*	RPM	1500	1500	1500
Connected load *	kW	7,5	7,5	Power* 12,5
Media unload plug	Ømm	190	190	190

* Standard speed 1500 and 1000 RPM · Variable speed with frequency inverter

"A"... HS high speed vibrators

process bowl:

- ▶ Made with specially treated steel
- ▶ Special gusseting for extra strength
- ▶ Wear resistant, double-thick lining made from hot poured polyurethane

Machine base

- ▶ Re-enforced welding fabrication

Drive system:

- ▶ Special high performance Rösler vibratory motor Power*
- ▶ Amplitude up to app. 10 mm
- ▶ Variable motor speed*
- ▶ Central lubrication

*especially useful during the separation process

Magnetic separation of finished parts

Magnetic separation of finished ferritic parts offers advantages with regard to efficiency, productivity and ease of operation.

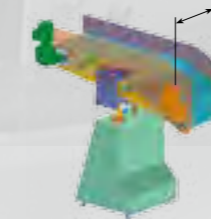
MS/E-V high performance magnetic separators for the "A"... range of rotary vibrators

Fully automatic removal of parts with height adjustment and adjustment of the magnetic field

Technical details:

- The angled magnetic head and the permanent magnetic field with pulsating poles (anti-poles) facilitates the release of trapped media in the pickup area.
- ▶ Discharge width equals the full width of the process channel
- ▶ Special cams prevent parts from getting caught on the left- and righthand side of the belt
- ▶ Side plates of the magne-

- tic head are made from stainless steel
- ▶ Magnetic adjustment in the parts pickup area
- ▶ Pneumatic height adjustment
- ▶ Different belt designs available



- ▶ Plate de-magnetization zone
- Extras:**
- ▶ Variable conveyor speeds
 - ▶ Customized de-magnetization solutions
 - ▶ Automatic parts unload program with height adjustment and adjustment of the intensity of the magnetic field

Recommended: Speed control for the rotary vibrator



Type:	Conveyor width mm	Scale: 04/09
R 780 MS/EV	480	
R 1050 MS/EV	480	

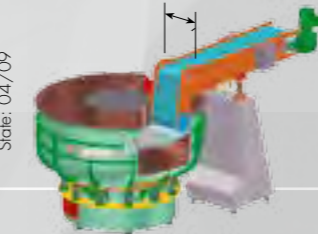
MS/E magnetic separators for the EC and Euro range

The angled magnetic head and the permanent magnetic field with pulsating poles (anti-poles) facilitates the release of trapped media in the pickup area.

Type	Drum width mm	Scale: 04/09
R 220 MS/E	185	
R 320 MS/E	245	
R 420 MS/E	245	
R 620 MS/E	350	
R 780 MS/E	350	
R 1050 MS/E	350	

Technical details:

- ▶ Electro magnetic drum permits variation of the magnetic force
- ▶ Different belt designs available
- ▶ Special cams prevent parts from getting caught



- on the left- and righthand side of the belt
- ▶ Side plates of the magnetic head are made from stainless steel
- ▶ Plate de-magnetization zone
- ▶ Pneumatic height adjustment

- Extras:**
- ▶ Variable conveyor speeds
 - ▶ Drum with permanent magnet
 - ▶ Customized de-magnetization

Recommended: Speed control for the rotary vibrator



TRM drum magnetic separators for EC, Euro and Long Radius rotary vibrators

Drum magnetic separators can easily be integrated into rotary vibrators equipped with separation screens. A key feature of magnetic drum separators is their compact, space saving design.

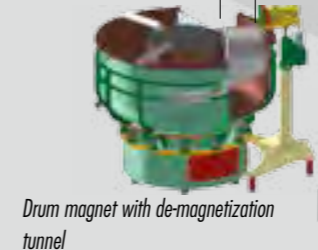
Technical details:

- ▶ Height adjustment by electric motor
- ▶ Variable drum speed
- ▶ Drum design: Stainless steel with a polyurethane anti-adhesion coating

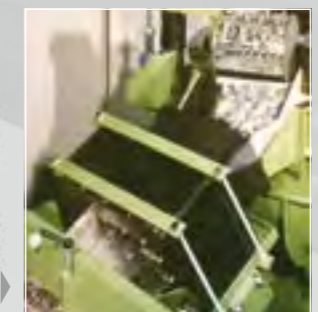
Extras:

- ▶ Integrated demagnetization unit
- ▶ Mounted on a movable frame for easy handling
- ▶ Magnetic drum can be tilted/bar

Recommended: Speed control for the rotary vibrator



Type:	Drum width mm	Scale: 04/09
R 125 TRM	125	
R 220 TRM, R 320 TRM	180	
R 420 TRM	255	
R 620 TRM, R 780 TRM, R 1050 TRM	355	
R 1500 TRM	425	



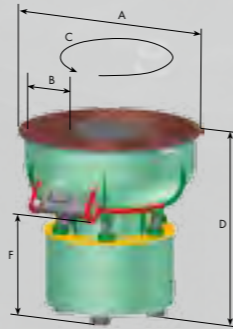
Double drum magnetic separation system for difficult to separate parts

"R"... Rotary Vibrators

Flat bottom rotary vibrators are perfect for treating large and bulky as well as delicate parts. The flat bottom ensures a perfect immersion of the parts into the media mass. For parts that need to be processed individually without touching each other, so-called "paddle wheels" with dividers are available which create separate processing chambers in the work bowl. Finished parts are usually taken out manually. Bottom unload gates allow complete evacuation of the work bowl and external separation of media from parts (option).



Multi-Power package:
Two levels of vibratory intensity (amplitude) can be automatically selected for aggressive de-burring followed by gentle smoothing.



Technical details:

- ▶ Flat bottom processing channel
- ▶ Reversing of rotational direction of vibratory motor moves the parts to the top of the media mass for easy manual removal
- ▶ Rösler double-flange vibratory motor with 2 speeds (1500 and 1000 rpm at 50 Hz); easy and safe lubrication of the bearings
- ▶ Adjustable imbalance weights allow different grinding intensities
- ▶ Wear resistant lining made from hot poured polyurethane
- ▶ Media unload plug with integrated effluent drain
- ▶ Flexible design of control panels and compound dosing systems

Extras:

- ▶ Variable speed of vibratory motor
- ▶ Extra bottom drains
- ▶ Undersize media classification: Integrated into media unload plug
- ▶ Noise protection equipment
- ▶ Bottom unload gate for complete unload of the work bowl
- ▶ Reversing imbalance weights

"R"...HS high speed vibrators

Process bowl:

- ▶ Made with specially treated steel
- ▶ Special gusseting for extra strength
- ▶ Wear resistant, double-thick lining made from hot poured polyurethane

Machine base

- ▶ Re-enforced welding fabrication

Drive system:

- ▶ Special high performance Rösler vibratory motor Power+
- ▶ Amplitude up to app. 10 mm
- ▶ Variable motor speed*
- ▶ Central lubrication

* especially useful during the separation process

"R"...KP special ball burnishing systems

For extra heavy loads:

- ▶ Specially designed for ball burnishing or high-pressure de-burring with steel/stainless steel media.
- ▶ High power vibratory drive system
- ▶ Re-enforced coil springs
- ▶ Work bowl re-enforced with extra gussets
- ▶ Rubber lining of work bowl

Recommended accessories:

- ▶ Suction pump and splash guard



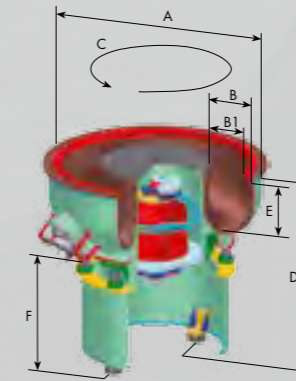
Special work bowl versions R range ...

"R"... rotary vibrators in E-PUR version

Outer wall of process channel equipped with triangular wedge made from polyurethane.

Benefits:

The wedge profile in the outer wall of the process channel speeds up and optimizes the processing of small, delicate parts by preventing them from sticking to the channel wall. The wedge is also very useful for part-on-part processing without media.



Type:

		R 220 E-PUR	R 320 E-PUR	R 620 E-PUR
Process bowl				
Total volume	l	220	320	620
External diameter max.	mm	A	1190	1350
Process bowl width	mm	B	260	330
Max. parts width	mm	B'	185	240
Overall length of processing channel	mm	C	2600	2840
Machine Height	mm	D	1070	1200
Process bowl useable depth	mm	E	250	280
Height media unload plug	mm	F	645	595
Drive power				
Speed (at 50 Hz)*	RPM	1500	1500	1500
Connected load	kW	3	3	7,5
Media unload plug				
	Ømm	190	190	190

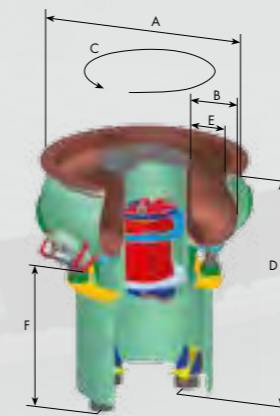
* Standard speed 1500 and 1000 RPM - Variable speed with frequency inverter

"R"... rotary vibrators in E-M version

The outer wall of the process channel has a curved profile.

Benefits:

The curved exterior wall of the process channel optimizes the rotational movement of the parts/media mass. Especially beneficial for processing of light-weight parts which do not easily immerse into the media but tend to float on the top.



Type:

		R 125 E-M	R 220 E-M	R 320 E-M	R 420 E-M	R 620 E-M
Process bowl						
Total volume	l	125	220	320	420	620
External diameter max.	mm	A	850	1130	1280	1440
Process bowl width	mm	B	215	260	335	350
Overall length of processing channel	mm	C	1950	2600	2840	3250
Machine Height	mm	D	1010	1030	1100	1165
Max. parts width	mm	E	160	200	240	260
Height media unload plug	mm	F	640	570	580	620
Drive power						
Speed (at 50 Hz)*	RPM	1500	1500	1500	1500	1500
Connected load	kW	0,75	3	3	7,5	7,5
Media unload plug						
	Ømm	105	190	190	190	190

* Standard speed 1500 and 1000 RPM - Variable speed with frequency inverter

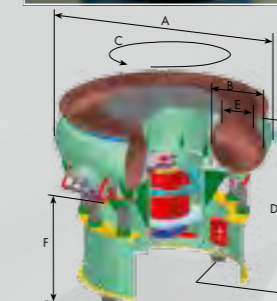
"R"... rotary vibrators in 2-E version

Work bowl with double curved wall processing channel.

Benefits:

Both, inner and outer wall of the processing channel are curved. This creates an ideal rotational movement of the parts/media mass: Specifically recommended for:

- ▶ ISF/REM® Superfinishing applications
- ▶ Light-weight parts
- ▶ Delicate parts



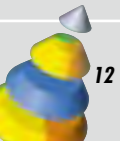
Type:

		R 420 2-E	R 620 2-E
Process bowl			
Total volume	l	330	530
External diameter max.	mm	A	1440
Process bowl width	mm	B	365
Overall length of processing channel	mm	C	3250
Machine Height	mm	D	1010
Max. parts width	mm	E	220
Height media unload plug	mm	F	530
Drive power			
Speed (at 50 Hz)*	RPM	1500	1500
Connected load	kW	7,5	7,5
Media unload plug			
	Ømm	190	190

* Standard speed 1500 and 1000 RPM - Variable speed with frequency inverter

Type:	R 125		R 220	R 320			R 420	R 620			R 780		R 1050	R 1400	R 2600	R 3500
	R 125	R 125 KP		R 320	R 320 KP	R 320 HS		R 620	R 620 KP	R 620 HS	R 780	R 780 HS				
Total volume	l	125	125	220	320	320	420	620	620	620	780	780	1050	1400	2600	3500
External diameter max.	mm	A	910	1190	1350	1350	1520	1695	1695	1695	1805	1810	1805	2210	2520	2905
Process bowl width	mm	B	210	250	330	335	360	430	430	430	435	435	455	650	765	890
Overall length of processing channel	mm	C	1950	2600	2840	2840	3250	3510	3510	3510	3815	3815	3750	4400	4900	5660
Machine Height	mm	D	1010	1070	1070	1110	1235	1200	1200	1280	1225	1225	1225	1385	1780	1765
Height media unload plug	mm	F	630	645	595	630	705	625	625	705	600	600	550	675	840	815
Drive power																
Speed (at 50 Hz)*	RPM	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Connected load	kW	0,75	0,75	3	3	7,5	7,5	7,5	7,5	7,5	Power* 12,5	7,5	Power* 12,5	7,5	12,5	22
Media unload plug																
	Ømm	105	105	190	190	190	190	190	190	190	190	190	190	320x220	490x320	350x250

* Standard speed 1500 and 1000 RPM - Variable speed with frequency inverter



Double batch and triple batch systems – Fully automatic rotary vibrators

The finishing process and parts separation take place simultaneously

The surface finishing of mass-produced parts poses special engineering challenges. For example where no mixing of batches of different parts ("batch integrity"), carryout of media, or media lodging in the parts is allowed. Among other things this requires a reliable and effective undersize media classification system.

Benefits of multi batch systems:

Double and triple batch systems offer maximum use of available processing capacity by simultaneous surface finishing and separation:

- ▶ Fully automatic separation process
- ▶ No mixing of parts from different batches.
- ▶ Precise and controlled parts transfer to the separation unit ensures effective screening. This is a prerequisite for post treatment steps like parts washing and drying
- ▶ Can be easily adapted to the most difficult separation tasks
- ▶ Excellent separation performance
- ▶ Built-in media undersize classification
- ▶ Parts can be spray-washed during separation

1 Rotary vibrator:

- ▶ Work bowl geometry based on "R" range with special gusseting for extra strength, flat bottom process channel and designed for complete unload.
- ▶ Media/parts unload gate, either pneumatically or hydraulically activated
- ▶ Rinse station to flush out residual media and parts from the work bowl
- ▶ Variable speed for the vibratory motor
- ▶ Operator platform

Extras:

- ▶ "R" ... rotary vibrator E-PUR version – Triangular wedge on outside wall of processing channel

Automatic separation technology:

2 Intermediate hopper (holds one complete batch of finished parts and media):

- ▶ Variable speed of the vibratory system and variable inclination levels allow exact dosing of parts and media to the separation unit for optimum separation.

Extras:

Anti-adhesion package: Prevents finished parts from sticking to the walls of the intermediate hopper

3 Vibratory separation unit with large screen area:

- ▶ Three screen decks with tumbling steps; screens can be easily replaced without requiring any tools
- ▶ Many screen designs available
- ▶ Rinse station over screen decks for cleaning of the finished parts
- ▶ Adjustable vibration intensity, optionally with speed control

Extras:

Magnetic separation; either rotary drum magnet or belt magnetic separator with de-magnetizing system

4 Undersize media classification:

- ▶ Special screen deck with slide-in undersize media collecting tray

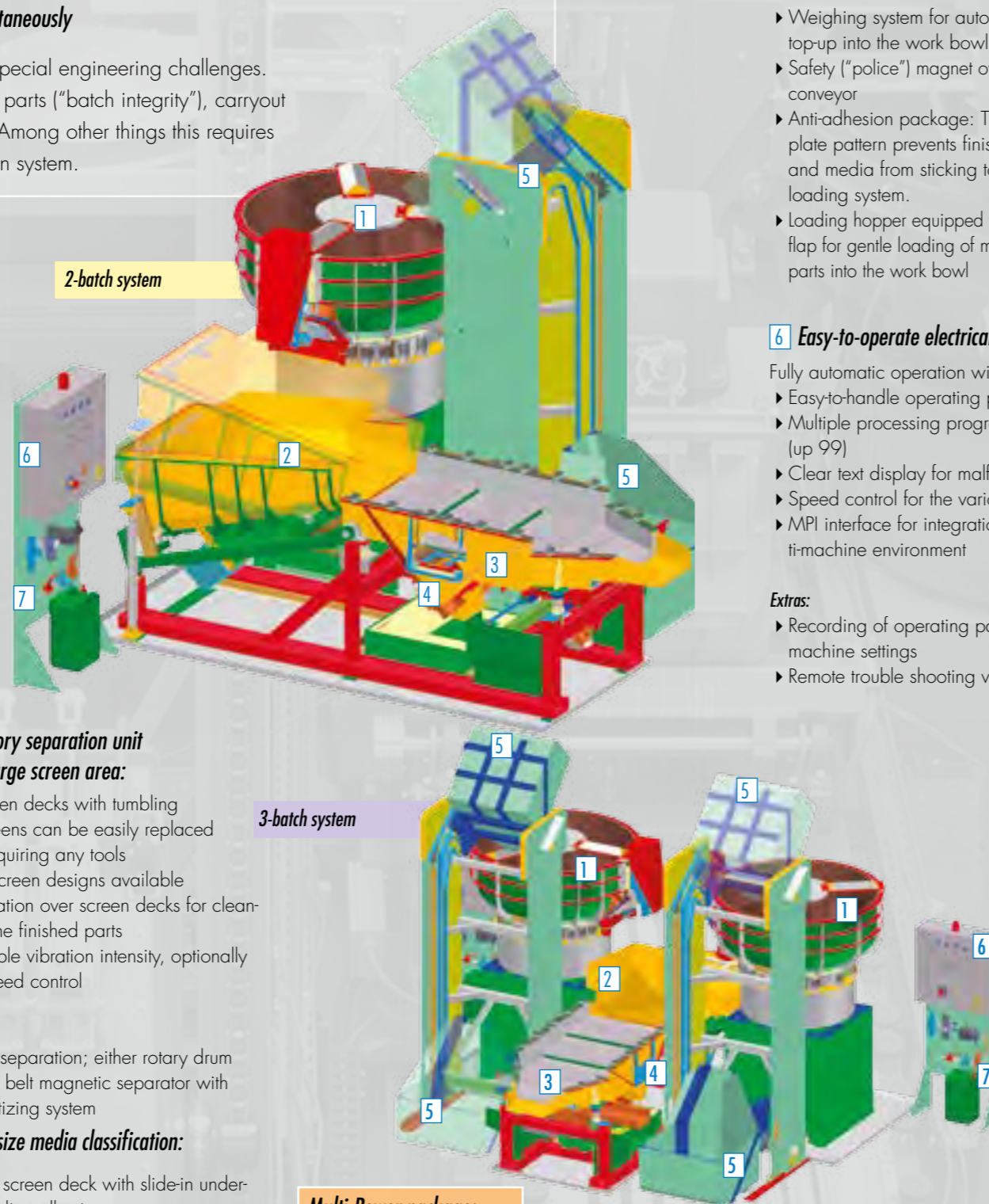
5 Media return into the work bowl:

- ▶ Special loading system for returning media to the work bowl; can also be used for loading raw parts into the work bowl
- ▶ Rinse station in loading unit for flushing out media and/or parts from the walls
- ▶ Vibratory cross conveyor for transferring the media from the separation to the loading unit

Multi-Power package:

Two levels of vibratory intensity (amplitude) can be automatically selected for aggressive de-burring followed by gentle smoothing.

Special HS high speed version available in model size R 620



Extras:

- ▶ Weighing system for automatic media top-up into the work bowl
- ▶ Safety ("police") magnet over media cross conveyor
- ▶ Anti-adhesion package: The checker plate pattern prevents finished parts and media from sticking to the walls of loading system.
- ▶ Loading hopper equipped with pneumatic flap for gentle loading of media and raw parts into the work bowl

6 Easy-to-operate electrical controls:

- ▶ Fully automatic operation with PLC
- ▶ Easy-to-handle operating panel
- ▶ Multiple processing programs possible (up 99)
- ▶ Clear text display for malfunctions
- ▶ Speed control for the various drive units
- ▶ MPI interface for integration into a multi-machine environment

Extras:

- ▶ Recording of operating parameters and machine settings
- ▶ Remote trouble shooting via modem

7 Compound dosing:

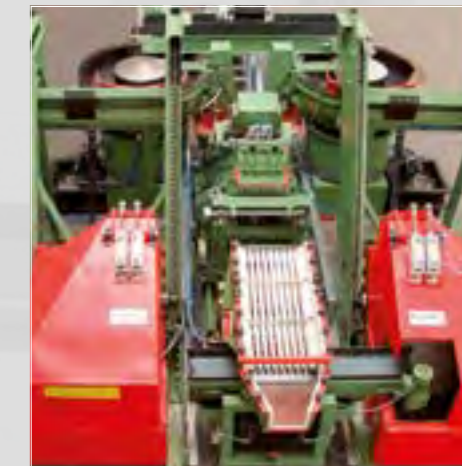
- ▶ PLC controlled process water supply system with flow regulator, optionally for fresh water or recycling operation
- ▶ Independent control of individual rinse stations
- ▶ Dosing pump for precise dosing of compound

2-batch or 3-batch system



The 2-batch system:

- ▶ There are two batches of parts and media in the system: While one batch of parts is processed, a second batch is being separated. This minimizes nonproductive, idle equipment time.
- ▶ The 2-batch system features a processing unit and a stand-alone separation station.



The 3-batch system:

- ▶ There are three batches of parts and media in the system: While two batches of parts are processed, a third batch is being separated.
- ▶ The 3-batch system features a tandem installation (2 processing units) and one stand-alone separation station. This separation station is used by both processing units for separation of finished parts from media. Non-productive, idle equipment time is minimized.

Equipment safety/noise protection

- ▶ Safety fence
- ▶ Sliding doors minimize the required floor space

Extras:

- ▶ Combined safety/noise protection cabin reduces the noise level to <80 dB(A)

Type:

		R 420 2 CH	R 620 2 CH	R 420 3 CH	R 620 3 CH
<i>Dimensions¹</i>					
Length	mm	5300	4400	5300	5400
Width	mm	3900	4000	4900	5000
<i>Single processing bowl</i>					
Total volume	l	420	620	420	620
External diameter max.	mm	1520	1700	1520	1700
Process bowl width	mm	350	430	350	430
Overall length of processing channel	mm	3250	3510	3250	3510
<i>Drive power</i>					
Speed (at 50 Hz)*	RPM	1500	1500	1500	1500
Connected load	kW	7,5	7,5	7,5	7,5

¹ More types available on request

* Standard speed 1500 and 1000 RPM
Variable speed with frequency inverter

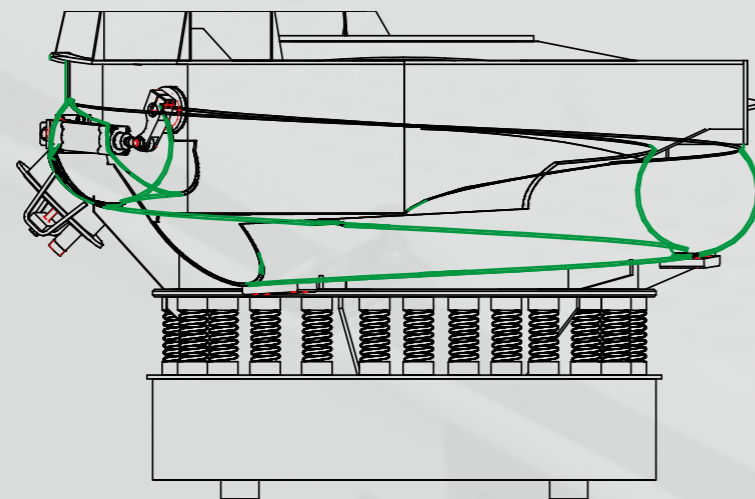
State: 12/12

Special Long Radius vibrators type R.../2E-LR

With their extra long processing channel Long Radius vibratory systems can be used for batch as well as continuous feed surface finishing. The work bowl has a double curved wall processing channel with equal channel width and depth. This guarantees excellent rotary movement and immersion of the parts into the media mass.



Optimum immersion of parts into media mass; protection against parts nicking each other on the channel incline



Technical details:

- ▶ Spiral bottom process channel with continuous incline for easy separation
- ▶ Double curved walls of processing channel
- ▶ Gentle, adjustable "cascade" drop behind separation ramp
- ▶ Manually insertable separation gate or pneumatically activated separation flap
- ▶ Linear screen area with easy to change separation screen
- ▶ Adjustable imbalance weights allow different grinding intensities
- ▶ Wear resistant lining made from HD 90 polyurethane
- ▶ Media unload plug with integrated effluent drain
- ▶ Flexible design of electrical controls and compound dosing systems
- ▶ Extra bottom drains

Extras:

- ▶ Undersize media classification segment integrated into separation screen
- ▶ Special separation unit with independent vibratory drive
- ▶ Parts load chute
- ▶ Variable speed of vibratory motor

Applications:

Continuous feed mode:

- ▶ Gentle de-burring and radiusing of delicate parts
- ▶ Cleaning

Chargenbetrieb:

- ▶ Intensive grinding/de-burring/radiusing
- ▶ RÖSLER Keramo-Finish® / REM Isotropic Superfinish ISF®
- ▶ Polishing/smoothing
- ▶ Ball burnishing



Technical details:

Parts loading:

Load chute for feeding parts in continuous feed operation



Continuous or batch operation:

Separation package with automatic control of separation flap

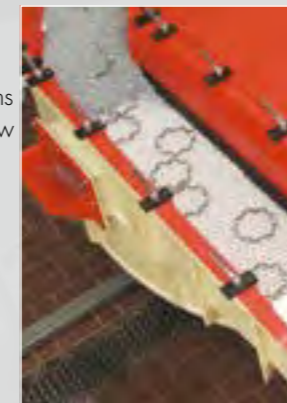


Pneumatically activated separation flap



Manually insertable separation gate

Separation of media from finished parts: Easy to change screens requiring no tools allow quick exchange of separation screens.



Option: Integrated rinse station over screening area for spray rinsing of the finished parts

▶ Available upon request: Special linear separation unit with independent vibratory drive; can be linked to a rotary storage table



Long Radius- KP ball burnishing systems

For extra heavy loads:

Specially designed for ball burnishing or highpressure deburring with steel/stainless steel media:

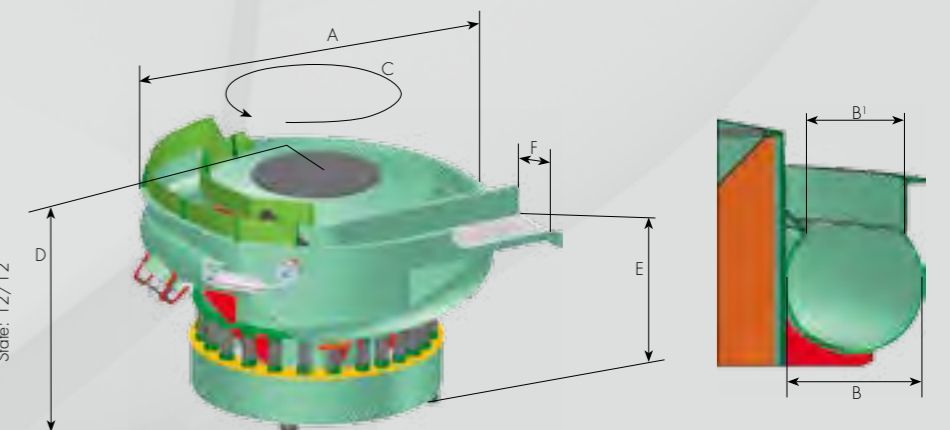
- ▶ Re-enforced coil springs
- ▶ Lining of work bowl: sprayed polyurethane
- ▶ Recommended accessories: Suction pump and splash guard



Type:

		R 480/2E-LR	R 780/2E-LR
Process bowl			
Total volume	l	350	680
External diameter max.	mm	A	2345
Process bowl width	mm	B	380
Workpiece loading width	mm	B ¹	250
Overall length of processing channel	mm	C	5350
Machine height	mm	D	1460
Unload height	mm	E	1060
Screen width	mm	F	405
Drive Power			
Speed (at 50 Hz)*	RPM	1500	1500
Connected load	kW	7,5	7,5
Media unload plug			
	Ømm	200	200

* Standard speed 1500 and 1000 RPM
Variable speed with frequency inverter



Scale: 12/12

Separation technology

To be truly successful, vibratory finishing applications require sophisticated separation technologies. After the finishing process the parts must be completely separated from the media. Screen separation is the most commonly used separation technology. Pre-condition: Optimum difference in media and parts size. Small to mid-size ferritic parts can be separated with magnetic separators.

Screen fastening wedges



Polyurethane wedges allow quick screen fastening and ex-change of screens.

Special separation methods:



Separation screens with built-in tumbling steps
Removes media from cup shaped parts

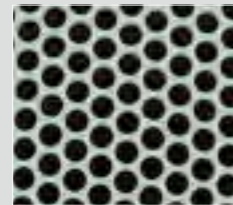
Special separation flap inserted from the top



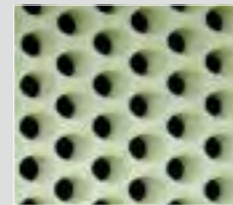
Screen types:



Perforated screens



Perforated plastic board*



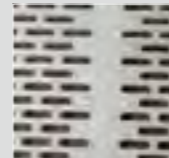
Plastic screen with holes at a 45 degree angle*



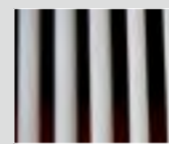
Bar screens and slotted screens



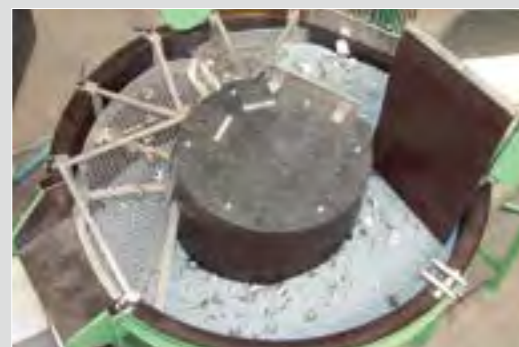
Bar screen, (stainless steel)*



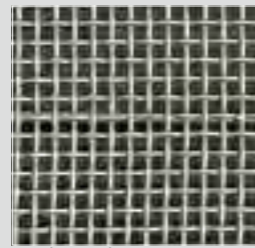
Slotted plastic screen*



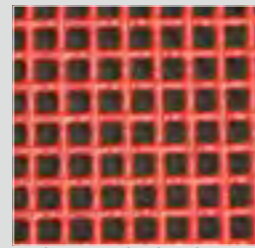
Milled plastic bar screen*



Mesh screens



Stainless steel*



Mesh screen with polyurethane coating*

Reverse separation screens:

For some finishing applications the media may be bigger than the parts. This requires reverse separation screens for separation of finished parts and media



Special separation task: Linear separation unit with independent vibratory drive

Delicate parts can be separated from the media by using external screening units with independent vibratory drive.

Technical details:

- ▶ Drive system either by vibratory motor or magnetic oscillator; both with variable speed
- ▶ Special separation screens to ensure optimum discharge of the finished parts



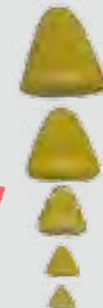
Linear separation unit with vibratory motors



Linear separation unit with magnetic oscillator

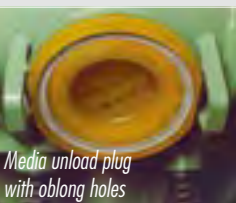
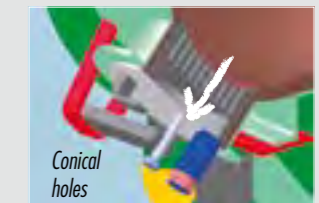
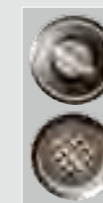
Undersize media classification:

The media changes its shape and size during the finishing process. Depending on the parts shape this can cause lodging of undersize media in bore holes, blind holes, undercuts, etc. To prevent such lodging, undersize media must be removed from the finishing system.



Permanent undersize media classification:

The classification and discharge of undersize media is performed continuously while the vibratory finishing system is running (processing and separation stage).



Periodic undersize media classification:

The undersize media is only removed during the actual separation step; usually by a screen segment built into the separation screen.

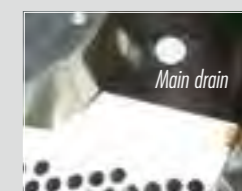


Effluent drain:

Effective removal of effluent from the work bowl is a pre-requisite for a stable finishing process.



Combined media unload plug with effluent drain (main drain)



Bottom drains ((optional) are recommended for complete removal of the effluent with special finishing applications (Keramo-Finish®, ball burnishing, REM/ISF®)

* Available in a wide range of sizes

Electrical controls and compound dosing

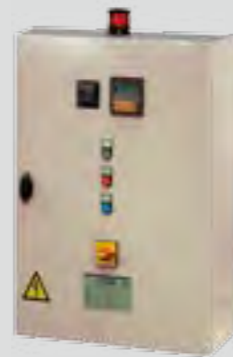
Electrical controls

Rotary vibrators can be used as manual stand-alone or fully automatic, linked systems. The electrical controls must reflect the complexity of the different finishing systems. For simple systems Rösler is using the well proven relay panels, while for more complex systems PLC controls are a must. These panels control all system functions including the compound and water dosing.



Control panel E1:

- ▶ Practical, easy-to-understand relay panel for stand-alone rotary vibrators
- ▶ Timer for the finishing process
- ▶ Can be expanded to include compound dosing and process water recycling



Control panel E3:

- ▶ For Keramo-Finish® Process
- ▶ Variable speed of vibratory motor
- ▶ Expansion modules available for additional system functions

Control panel E2:

- ▶ Basic relay control panel for stand-alone rotary vibrators
- ▶ Buttons and signal lamps
- ▶ Timer for auto-start and processing time
- ▶ Can be expanded to include compound dosing and process water recycling



Control panel E9:

- ▶ Automatic process control with PLC S7 200 (OP TD 200)
- ▶ Variable speed of vibratory motor
- ▶ Can be expanded to include compound dosing and process water recycling



Extras:

- ▶ Variable speed of vibratory motor

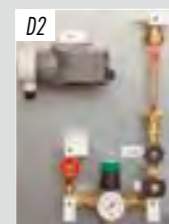
Compound dosing

A steady process water supply is a pre-condition for high quality finishing results. Since process water recycling systems offer ecological and economical advantages, they are preferred over fresh water supply systems.

Compound dosing for fresh water operation:



D1 Direct installation at the control panel E1 for stand-alone machines



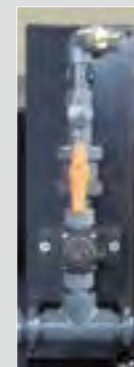
D2 General purpose dosing unit



D3 Keramo-Finish® dosing system

Dosing unit for recycling operation:

Dosing unit for recycling liquids containing solid fines.



D1K without flow meter



D2K with flow meter

Parts cleaning: Spraying and rinsing units

Spraying and rinsing units clean the parts during and after the vibratory finishing process. Special controls and dosing units permit the activation of the spray/rinse units for each individual process step.



Rinse station — above separation area



Circular rinse station in the work bowl

Noise protection equipment

Noise abatement helps create an environmentally friendly working environment. In vibratory finishing, the size and operating intensity of the machine as well as the type and size of media and parts determine the noise level of the finishing process. Without any protective measures, the noise level can vary between 75 and 140 dB(A), mostly between 80 and 95 dB(A).

Noise enclosing lid:

The noise generated by the finishing process can be reduced by a tilting sound enclosing lid.

Type:

			SDD 125 G	SDD 220 G	SDD 260 G	SDD 320 G	SDD 420 G
External diameter max.	mm	A	1130	1410	1500	1570	1740
Max. height *, open	mm	B	2600	3000	3100	3100	3500
Max. width	mm	C	1520	1760	1810	1840	2100
Height lid	mm	E	250	280	280	280	300

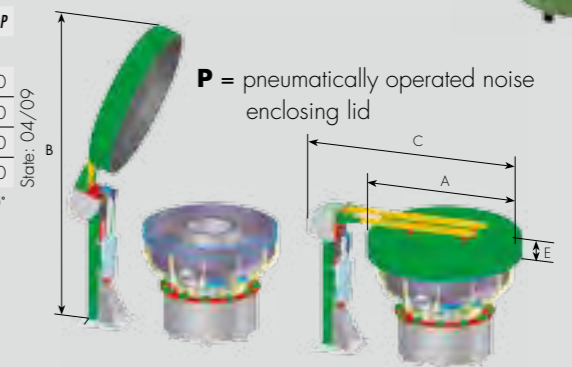
* Height of max. opening angle = 70°



Type:

			SDD 320 P	SDD 420 P	SDD 620 P	SDD 780 P	SDD 1050 P	SDD 1500 P
External diameter max.	mm	A	1570	1740	1940	2050	2050	2400
Max. height *, open	mm	B	3100	3550	3600	3750	3750	4250
Max. width	mm	C	2200	2400	2610	2660	2660	3000
Height lid	mm	E	280	300	300	300	300	300

* Height of max. opening angle = 70°



Splash guard package:

Recommended for ball burnishing applications: The splash guard cover, combined with suction pump and speed control, prevents the uncontrolled splashing of processing liquid when foam is produced as part of the finishing process.

The total noise protection package:

Noise protection cover and noise protection apron provide the perfect noise protection, especially in cramped conditions. Noise emissions of fully encapsulated machines – depending on operating conditions – can be reduced to < 80 dB(A).



Noise protection cabin:

This is the perfect solution for interlinked vibratory finishing systems with integrated parts loading and post-treatment units. The walk-in noise protection cabins provide easy access for cleaning, maintenance and inspection. Thickness of the cabin modules: 40 mm or 60 mm. Reduction of the noise level down to < 75 dB(A)



Special Vibratory Systems

RVH rotary vibrators for wood processing

The RVH range of vibratory vibrators has been specifically designed for surface finishing of wooden components.

Applications:

- ▶ De-burring, radiusing
- ▶ Etching, bleaching, application of paint or wax

Features and accessories:

- ▶ Channel screen in work bowl
- ▶ Special drive with speed control
- ▶ Paint package with heating fan
- ▶ Multiple, easy to change work bowl inserts

- ▶ Dust extraction
- ▶ PUR triangular wedge profile
- ▶ Bottom unload or screen separation

Available sizes in the R ..., EC and Euro range:

- ▶ RVH 320
- ▶ RVH 420



Vibratory finishing without part-on-part contact – Rotary vibrators without inner dome in the work bowl:

The components are either routed to the work bowl or are "free floating" in the media mass:

- ▶ Large components: Single piece processing
- ▶ Small components: In groups, attached to special part fixtures

Technical details:

- ▶ Work bowl without inner dome; with integrated parts clamping device
- ▶ Re-enforced vibratory drive
- ▶ Bottom drains
- ▶ Rinse bar

Extras:

- ▶ Reversing imbalance weights
- ▶ Variable speed of vibratory motor

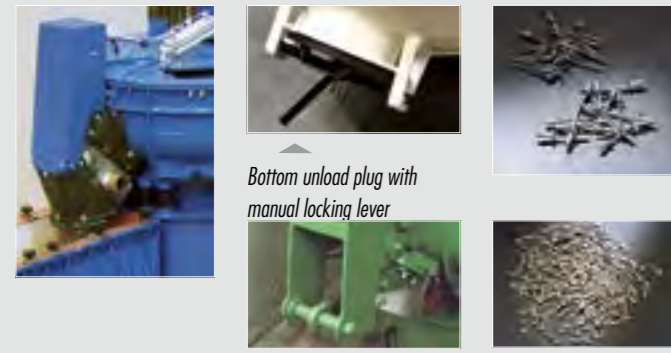
Available sizes:

- ▶ R 220 DL
- ▶ R 260 DL
- ▶ R 320 DL
- ▶ R 420 DL
- ▶ FBA 24 (for finishing of Al wheels)



Rotary vibrators with bottom unload plug

Total discharge after "part-on-part" processing or for external separation.



Bottom unload plug with pneumatically or hydraulically activated locking lever

Rotary vibrators with special work bowl lining

Process bowl with profiled structure: Prevents flat parts from sticking to the wall of the processing channel



Continuous feed rotary vibrators – with parts in-feed chute

Parts are continuously fed into the work bowl through a special in-feed chute. This allows the use of the entire length of the process channel with cycle times of 3 – 7 minutes.

Applications:

- ▶ Light de-burring and parts cleaning
- ▶ Interlinking with stamping presses, surface grinders or machining centers
- ▶ Use as vibratory finishing cells

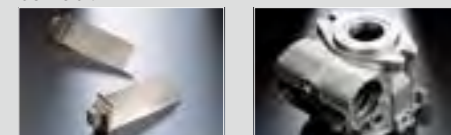
Available sizes:

- ▶ R 620 Euro
- ▶ R 780 Euro
- ▶ R 1050 Euro
- ▶ R 1500 Euro



Vibratory finishing without part-on-part contact – Rotary vibrators with dividers ("paddle wheel" system)

The "paddle wheel" divides the work bowl into individual segments or chambers. Each chamber can contain one part. This prevents damage due to part-on-part contact.



Fully automatic vibratory finishing

The efficiency of any vibratory finishing operation can be significantly increased by automating its material handling aspect – including parts-loading, -unloading and post-treatment. Roesler offers a complete range of material handling modules which can be configured into fully automatic surface finishing systems.

Examples of automated vibratory finishing systems ...

Linear vibratory screen separation combined with rinse station, vibratory dryer and rotary storage table for finished parts



Loading unit with vibratory feed hopper, magnetic belt separator and hot air belt dryer

Loading of raw parts with conveyor belt system; a second system of conveyor belts transports the finished parts to a vibratory dryer

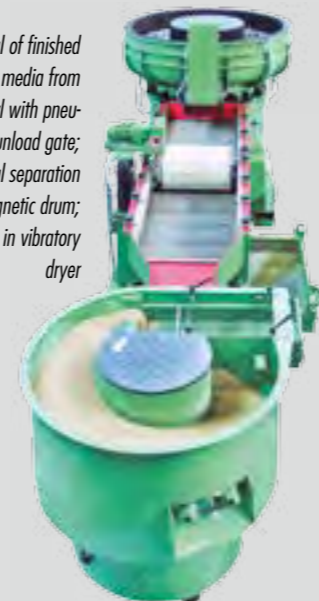


Parts loading: Load system movable on rails with integrated vibratory feed hopper
Conveyor belt for collecting finished parts and transferring them to a vibratory dryer

Automatic polishing system consisting of multiple vibrators, conveyor belt and vibratory dryer



Removal of finished parts and media from work bowl with pneumatic unload gate; external separation with magnetic drum; drying in vibratory dryer



Parts loading: Vibratory feed hopper. Vibratory washer for finished parts; drying with vibratory dryer linked with special vibratory screening unit to remove residual drying media from the finished parts



System for dual stage vibratory finishing: Parts are transferred from vibrator 1 to vibrator 2; drying with two vibratory dryers

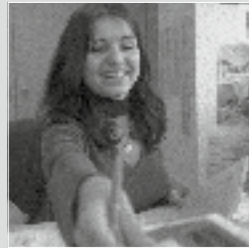


finding a better way ...

When it comes to dealing with surface finishing and surface preparation problems, Rösler offers **the total process solution!** Our customers can choose between two processing technologies, **Vibratory finishing or Shot blasting**, which offer virtually unlimited possibilities. Through extensive processing trials, we always find the right finishing solution for our customer's needs. This includes not only the development of a specific finishing process, but also the selection of the right equipment and consumables. We deliver the total solution to satisfy your surface finishing requirements. Our success in the market proves that we are right. It is not by chance that our innovative developments and our high quality standards have established Rösler as the world technology and market leader in vibratory finishing and shot blasting.

In more than 60 countries we support our customers with a closely-knit network of Rösler subsidiaries and sales representatives.

We are the only company in our field operating **test and demonstration centres** throughout the world. This allows us to run test trials under real production conditions close to our customers. This offers several advantages: Our customers save time and money, and at the same time – through our professional processing trials and advice – they are assured of receiving the best process solutions and products available on the market!



Worldwide Demonstration and Test Centres

Vibratory finishing and shot blasting test centre located at the Rösler headquarters in Untermerzbach:

- more than 95 vibratory finishing and shotblasting systems
- working space: approx. 2.700 square meters

Similar test centres are located in the United States, Great Britain, France, the Netherlands, Belgium, Switzerland, Russia, Spain, Italy, Austria, South Africa and Brazil.

The Total Process Solution

Consumables, machines and process safety in perfect combination:

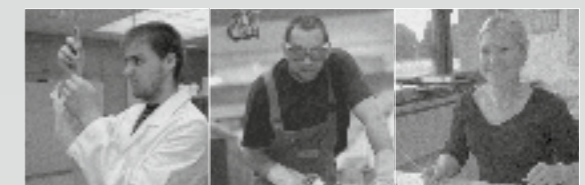
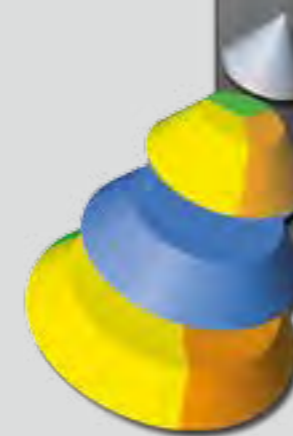
- A perfect interaction between consumables, equipment, process and safety
- Cost-saving automation linking multiple process steps
- Qualified field service teams guarantee smooth installation and commissioning of your equipment
- Comprehensive training of your operators and maintenance staff
- After-sales service guarantees high uptimes for your equipment

Environmental - Quality

The consideration of environmental issues guarantees a high level of product quality and environmental protection. For example, recycling the process water is a key feature of our mass finishing technology. In this case, the positive effect on the environment is reflected in savings of compound and water of up to 95%. At the same time, a high level of process reproducibility and finishing quality is guaranteed.

Team Spirit

Rösler is a dynamic organization where the initiative and commitment of each employee plays a key role. Systematic training and a cooperative management with lean structures are essential elements of our corporate philosophy. This allows us to create a workplace environment which attracts talented young people.





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- and more than 60 representations worldwide

