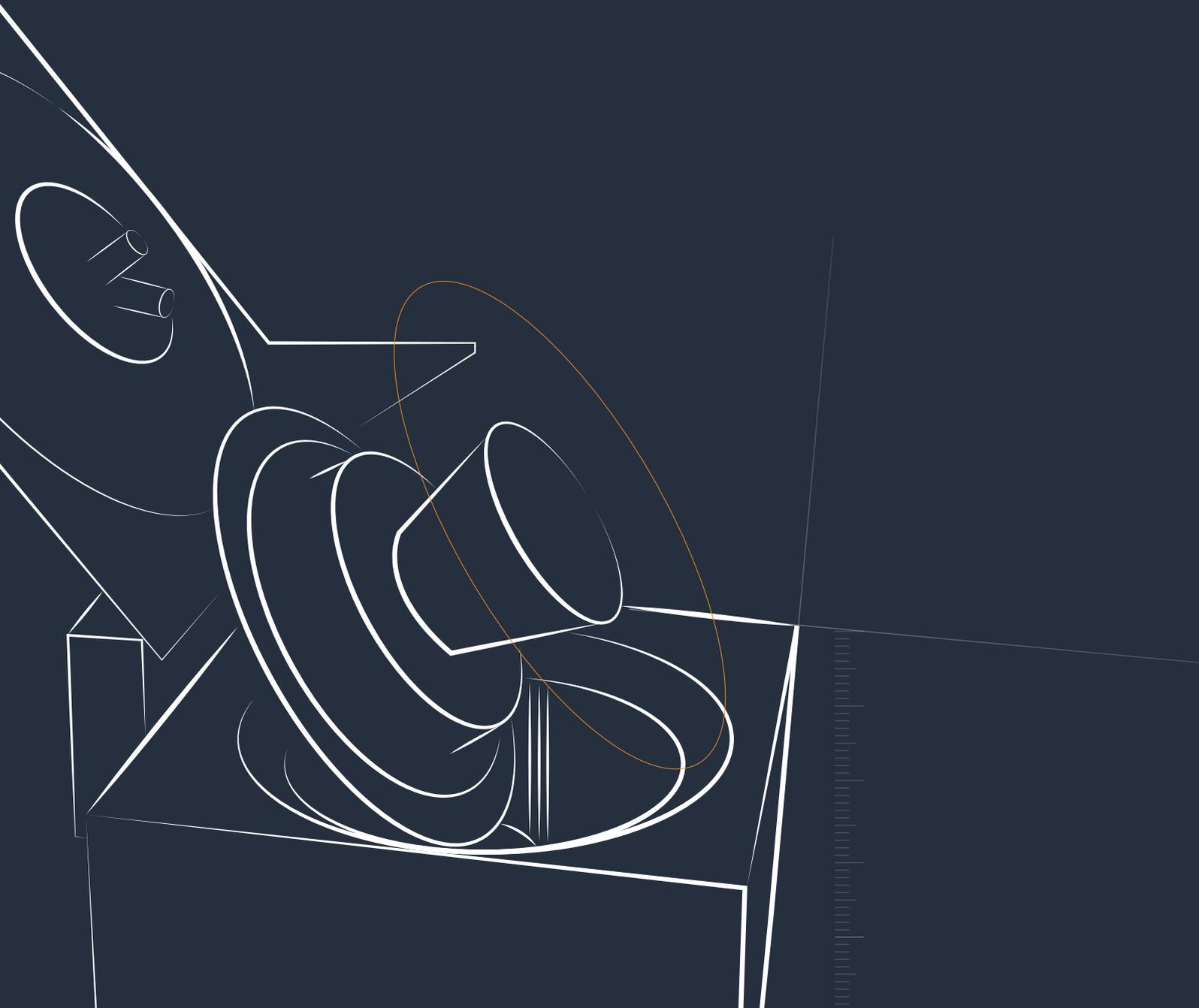


# Cleaning centrifuges

for industrial liquids



## Mass Finishing



High-performance equipment and innovative technologies – productive and cost-effective

## Shot Blasting



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

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

› **80**

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Our technical service –  
**round-the-clock support**



**Transfer of professional knowledge**  
by certified trainers

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## FOR THE SAKE OF THE ENVIRONMENT

As a family-owned company we bear a particular responsibility for future generations. Therefore, sustainable environmental protection is a central element of our corporate culture. With our Rösler cleaning centrifuges all kinds of industrial liquids can be effectively and efficiently cleaned and recycled! This allows

you to make a substantial contribution towards environmental protection and helps you to save money at the same time: The centrifugal filtering technology can reduce your water consumption by up to 90 %!

**Saving water = protecting the environment + higher profitability!**



## APPLICATIONS

Efficient cleaning of all kinds of industrial liquids

Whether you have to deal with process water, coolants, sludge from paint booths or other contaminated industrial liquids – the effectiveness and cost-efficiency of the cleaning process depends entirely on the employed technology. On the basis of its robust and proven centrifugal filtering technology, Rösler offers solutions that are characterized by significant technical and economic advantages. Under ecological and economic aspects the cleaning and recycling

of industrial liquids poses a substantial technical challenge. Rösler is meeting this challenge with the highly productive and powerful cleaning centrifuges utilizing centrifugal force for 2-phase or 3-phase separation of different materials. With a broad range of applications they are in a class of their own. If needed, they can be adapted to individual technical customer requirements.

- ▶ Glass industry
- ▶ Ceramics industry
- ▶ Painting operations
- ▶ Coolants
- ▶ Industrial washing operations
- ▶ Operations dealing with oil
- ▶ Plating industry

# THE CENTRIFUGE TECHNOLOGY IN DETAIL

## Functional principle

1

The contaminated liquid that must be cleaned, arrives directly from the processing equipment or is transferred to the centrifuge by a pumping unit (lifting station).

2

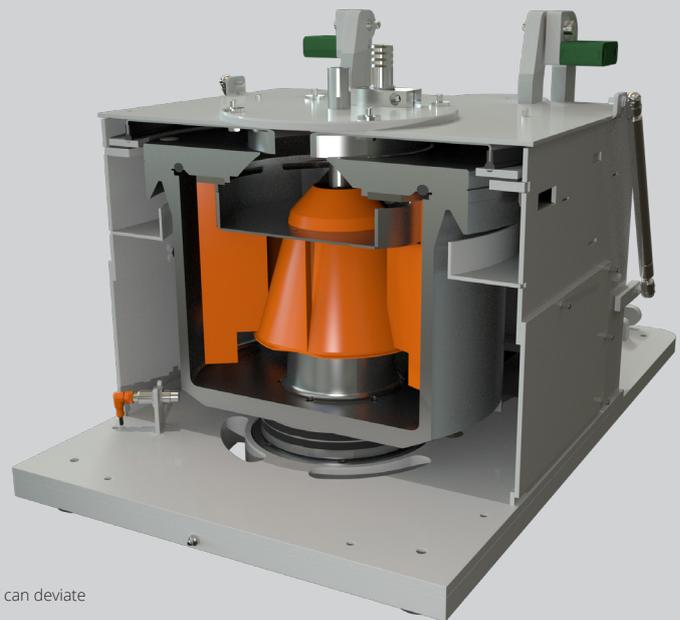
The feed pump transfers the process liquid - contaminated with solids or oil - continuously into the rotating drum of the centrifuge.

3

A rotational speed of up to 3,000 RPM guarantees that the generated high "centrifugal force" also catches very small and lightweight particles and ensures that these are deposited on the drum wall as dense sludge. Other materials (consumables) supporting the cleaning process for contaminated industrial liquids are not needed.

4

The dense sludge has a residual water content of about 20 %.\* In semi-automatic centrifuges it can be easily removed with a basket insert placed into the rotary drum. In fully automatic centrifugal systems the sludge is automatically peeled out of the drum. Depending on the equipment type, several industrial processing units can be handled by one cleaning centrifuge.



\*The achievable residual water content depends on the respective industrial process and can deviate from the value listed above.

## Your benefits

- ▶ Eco-friendly and resource-saving process
- ▶ Savings in consumption of fresh water and operating supplies
- ▶ Compliance with environmental protection rules and regulations
- ▶ Cost reduction
- ▶ Longer equipment uptimes
- ▶ No filter aids needed

## SEMI-AUTOMATIC CENTRIFUGES

### Manual sludge removal

The range of semi-automatic basket centrifuges is characterized by an **excellent separation performance** and a **space-saving design** that allows placing them next to the industrial processing units. In semi-automatic centrifuges the **sludge is manually removed** from the rotary drum by removing the sludge basket insert.

The centrifuge, the electrical controls and buffer tanks are supplied as a fully functional unit. At the center of centrifugal cleaning systems is the sturdy centrifuge designed by Rösler.

A collecting nozzle in the rotary drum is picking up the cleaned liquid and transfers it either to an industrial processing unit located nearby or to an intermediate buffer tank.

Optionally all Rösler centrifuges are available in stainless steel AISI 304/316. For use at multiple locations the centrifuges can also be equipped with a movable base. This allows the cleaning of liquids from multiple machines by easily moving the centrifuge to different locations.

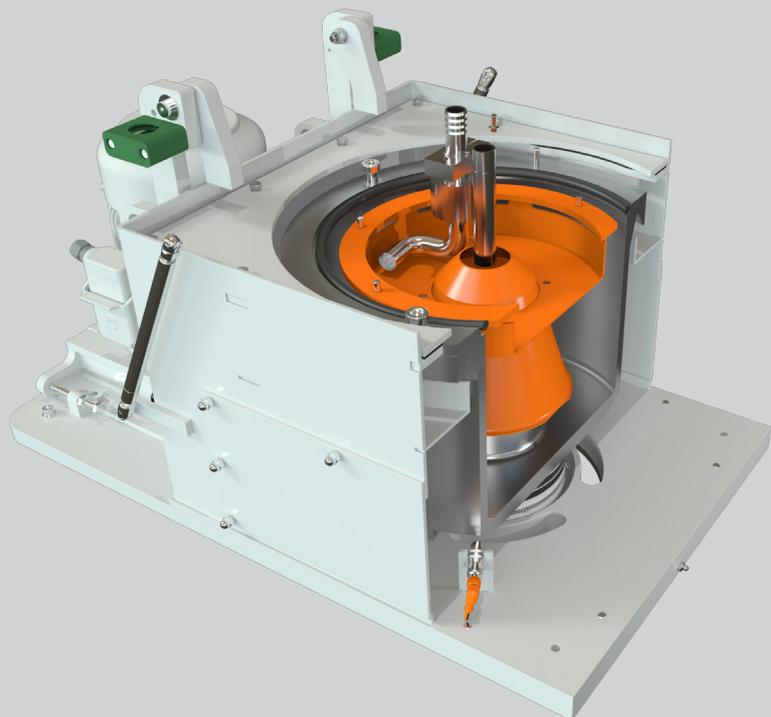
To view the movie clip, please scan the QR code



The cleaning effect of the high-performance cleaning centrifuges is achieved by centrifugal force. They are available as **2- or 3-phase systems**.

2-phase separation: Liquid / solid

3-phase separation: Liquid / liquid / solid



## 2-phase cleaning centrifuges

### RZ 60 M

The high-performance RZ 60 M is our smallest centrifuge and is ideal for cleaning tasks with relatively low volumes of liquids. Because of its **compact design** it has a very small footprint so that it can be placed in tight spaces on the shop floor. The 2-phase principle allows the efficient separation of

solid particles from all kinds of liquids. This semi-automatic cleaning centrifuge, characterized by minimal noise emissions and **an excellent separation** performance, can handle **liquid volumes of up to 60 liters/minute**.



Technical data	RZ 60 M
Max. throughput (l/min)	max. 60
Capacity sludge basket (dm <sup>3</sup> )	1.8
Temperature resistance (° C)	50
Centrifugal force (g)	1,800
Motor power (kW)	1.5
Speed (RPM)	4,100

### Equipment examples



RZ 60 M-V-So  
with movable base



RZ 60 M-V-KB  
with movable base and combi tank

## Cleaning centrifuges for industrial liquids

### RZ 120 M

The RZ 120 M is the most productive model within our range of semi-automatic cleaning centrifuges. Besides offering a **high throughput of 120 liters/minute**, this machine can also be

supplied with a movable base. This ensures a **high flexibility** for its use in an industrial environment.

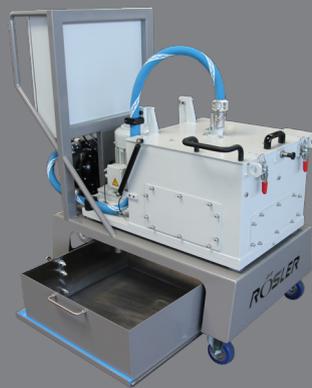


Technical data	RZ 120 M
Maximum throughput (l/min)	max. 120
Capacity sludge basket (dm <sup>3</sup> )	7.5 - 10.0
Temperature resistance (° C)	50
Centrifugal force (g)	1,750
Motor power (kW)	5.0
Speed (RPM)	2,930

### Equipment examples



RZ 120 M-K  
with cooling unit



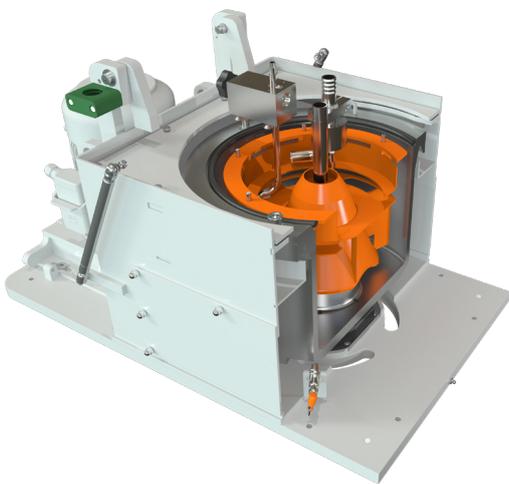
RZ 120 M-V  
with movable base

## 3-phase cleaning centrifuges

### RZ 120 M-3PH

Besides the separation of solids, 3-phase centrifuges allow also the **separation of two liquids** (for example, water and oil). This is achieved with a **second collection tube** in the rotary drum. Due to the different densities of the three phases (solids, water and oil) they are separated in the rotating drum through the centrifugal force. While the solid particles are deposited on the wall of the insertable sludge basket, water and oil are removed

by two separate collection tubes. The cleaned water can be re-used, while the separated oil is deposited in a collecting tank for disposal. The sludge is accumulating in the sludge basket in the centrifuge drum. Depending on the amount of generated sludge, the basket must be manually emptied within certain time intervals.



Technische Daten	RZ 120 M-3PH
Maximum throughput (l/min)	max. 20
Capacity sludge basket (dm <sup>3</sup> )	7.5 - 10.0
Temperature resistance (° C)	50
Centrifugal force (g)	1,750
Motor power (kW)	5.0
Speed (RPM)	2,930

### Equipment examples



RZ 120 M-V-3PH  
with movable base



RZ 120 M-3PH-KB  
with combi tank

# FULLY AUTOMATIC CENTRIFUGES

## Automatic sludge removal

Automatic centrifuges offer an **excellent separation performance** combined with a **high reliability** and **equipment uptime**. This was achieved by designing the base units and the components such as motor, pumps, valves, rotary drum

and peeling knife, etc., with a focus on **longevity and functionality**. These systems are also characterized by **easy and quick maintenance**.

### RZ 150 A

In most centrifugal systems available in the market the peeling knife, powered by a gear motor, is continuously rotating in the rotary drum. In the RZ 150 A the **peeling knife is stationary**. During the peeling cycle a linear drive is moving the knife towards the drum wall, causing the sludge to be peeled out without any load whatsoever on the drum bearings. After

completing the peeling operation, the drum is automatically rinsed to remove any sludge residues, which could cause an imbalance and premature wear of the bearings during subsequent cleaning cycles. All centrifuges are equipped with imbalance sensors. This protects them against any damage caused by a potential imbalance in the rotating drum.



To view the movie clip, please scan the QR code



Technical data	RZ 150 A
Maximum throughput (l/min)	max. 150
Maximum sludge load (kg)	55
Temperature resistance (° C)	50
Centrifugal force (g)	approx. 1,800
Motor power (kW)	11/15
Speed (RPM)	max. 2,650

### Equipment examples



RZ 150 A  
with two process water tanks



2 x RZ 150 A  
on a movable base;  
sludge deposited in a container

## OPTIONAL PERIPHERAL EQUIPMENT

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To optimally fulfill the respective cleaning tasks, different industrial liquids may require certain technical equipment adaptations. For this reason, we offer a selection of optional

peripheral equipment. This allows us to fully meet your requirements and guarantees a high cost efficiency of your centrifugal system.

### **Tanks**

Our tanks are supplied in different materials and sizes. They can also be custom-engineered for specific customer requirements:

- ▶ Tank materials: Steel / stainless steel / polypropylene / polyethylene
- ▶ Tank sizes: From 500 l up to 8,000 l
- ▶ Special customer applications: Resistant against aggressive chemicals, temperature-resistant

### **Discharge of coarse particles**

Coarse particles may sometimes have to be discharged before or after the centrifugal cleaning operation. Discharge of coarse particles by

- ▶ Pre-cleaner: Magnetic separator or scraper

### **Subsequent fine filtration**

- ▶ Post cleaning: Filtration by belt, drum or membrane filter

### **Cooling of the liquids**

Precisely sized cooling units guarantee a high process stability

Mass Finishing  
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