

Rotor sieving mills for low-dust size reduction



RTS 160 x 90 Pharma

Rotor sieving mills type RTS



RTS 90 x 85
with bench top machine
stands and inlet hopper

Many machines can reduce particle size, but to the desired grain size? With little or no fines?

The Powtec- Rotor sieving mills reduce **soft to medium-hard solids** to particles within a **small grain spectrum**. The machines size rough blocks, prevent blocked piping, recycle and rework material. They granulate flakes from roller compactors, homogenise agglomerates from dryers and make agglutinated materials free flowing. In short: The possible fields of application of the rotor sieving mills are as many fold as your products. Whether a sieving mill for the laboratory or systems with throughputs of several tons per hour – we produce machines of a modular design. The screen mesh or perforated sieve determines the degree of size reduction and typically the machines are supplied with sieves ranging from 0,4 to 6 millimetres. However, further sizes are available. Our innovative approach to design and construction ensures that we can meet your needs, our machines have been proven many times.

Your advantages at a glance

- ➔ • **Effective:** High degree of efficiency in combination with very gentle and low-dust size reduction.
- **Economical:** Additional sieving of the processed material is unnecessary.
- **Easy to clean:** Only a few minutes are required to clean the machine or exchange the sieve. The machine remains in the process chain even during "in-line" applications.
- **Safe:** The rotor sieving mills correspond with the ATEX 100a guideline in explosion execution due to the rotor velocity below 1 m/s.
- **Flexible:** Other grain sizes can be simply produced via exchange of the sieve insert. And the low rotor speed also permits the processing of sensitive products.
- **Reliable:** The machines are suitable for continuous operation as well as for batch production.
- **Environmentally friendly:** The Rotor sieving mills work very quietly.
- **Space saving and high-quality:** All machines feature a compact design and are manufactured in stainless steel.
- **Cost-effective:** Modular design and comprehensive standard options ensure the widest possible application range.



RTS 400 x 400



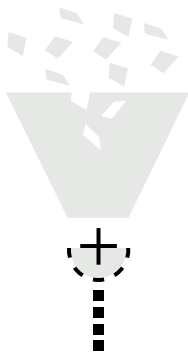
→ RTS 230 x 200
exchange of sieve

Operation

With the rotor sieving mill, a bar rotor presses the material through a sieve. Sieve diameters and rotor speed determine the throughput and size of the resulting material. A screen basket supports the selected sieve insert. No materials larger than the sieve openings pass the sieve. Contrary to the other size reduction methods, no additional sieving of oversized material is necessary with the rotor sieving mill by Powtec. The gap between screen basket and rotor is easily to adjusted and is reproducible in order to maximise the efficiency with different product types.

The cantilever-mounted rotor operates in a welded and dust-tight housing. The rotor and the screen basket are easily accessible for cleaning or exchanging of the sieve by opening the front panel. The machine is suitable for in-line installations and is also available with mobile and various inlet and outlet hoppers for manual feeding.

A control system, which permits an infinitely variable Rotor speed, is available on request.



Special Features

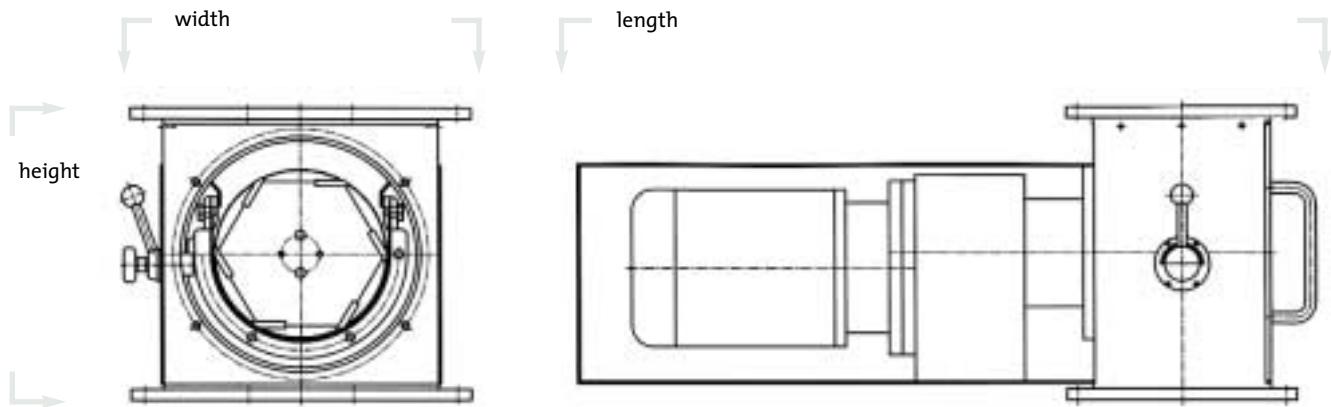
- • Innovative design and construction guarantees **maximum throughput**, process stability, reproducibility and product quality.
- Easy and quick cleaning of the screen and rotor thanks to the **cantilever-mounted rotor**.
- The **rotor velocity below 1 m/s** preserves fine particle structures.
- The **adjustable rotor gap** can be consistently **reproduced**.
- The machines are **dust-tight** and on request **gas-tight** available.
- A **wide variety of rotor shapes and screens** ensures maximum throughput in every application.
- The **process components** are enclosed and **separated** from the drive unit.
- The process results can be scaled up and down due to the **modular design**.



RTS 90 x 85 Pharma
on mobile unit

Standard Options

- • Chemical, Food or Pharmaceutical design (in cGMP- standard)
- IQ/OQ qualification inclusive of FAT and SAT
- Large selection of various screen inserts such as mesh screens, grater sieves, conidur screens as well as perforated sieves according to request
- Large selection of inlet and outlet hoppers
- Specially designed mobile units
- Apparatus for dust-free filling, on request with CIP-cleaning
- De-dusting connections
- Drives with adjustable rotor speed, also Ex rated drives for operation in hazardous or explosive areas
- Oscillating operating mode
- Special designs for abrasive products
- Special designs for operation in deep-freeze atmosphere (- 50 °C)
- Complete turnkey size reduction systems



Rotor sieving mills type RTS

Specifications

Machine ¹	typical Throughput ²	Sieve surface	Motor power ³	Weight ³	Dimensions L x W x H (mm) ³
RTS 90 x 85	20 - 120 kg/h	120 cm ²	0,25 kW	25 kg	480 x 230 x 175
RTS 160 x 90	40 - 240 kg/h	226 cm ²	0,75 kW	55 kg	635 x 320 x 270
RTS 160 x 130	60 - 350 kg/h	326 cm ²	0,75 kW	60 kg	680 x 320 x 270
RTS 250 x 120	80 - 450 kg/h	471 cm ²	1,5 kW	100 kg	690 x 430 x 380
RTS 230 x 200	120 - 700 kg/h	722 cm ²	1,5 kW	120 kg	790 x 395 x 340
RTS 300 x 250	200 - 1200 kg/h	1178 cm ²	2,2 kW	200 kg	940 x 535 x 450
RTS 350 x 300	280 - 1700 kg/h	1649 cm ²	3,0 kW	300 kg	1020 x 605 x 520
RTS 400 x 400	420 - 2500 kg/h	2513 cm ²	4,0 kW	400 kg	1145 x 800 x 630
RTS 400 x 800	840 - 5000 kg/h	5026 cm ²	7,5 kW	750 kg	1720 x 800 x 630

Note: specifications are subject to change

¹ **Machine:** Cipher = rotor diameter x rotor length in mm

² **Throughput:** Dependent of the grinding material and grinding degree

³ **Motor power, weight, dimensions:** Specifications vary depending on the design

powtec

Maschinen und Engineering GmbH

Berghauser Strasse 62

D - 42859 Remscheid

Telefon + 49 (0) 21 91. 38 91 94

Telefax + 49 (0) 21 91. 38 91 96

e-mail info@powtec.de

www.powtec.de

We are happy to carry out trials with your materials in our laboratory or for longer periods of evaluation rental machines are available for on-site trials.

Our promise: To meet our customers high demands on quality, economic efficiency, production safety and environmental protection.