# **Dowtec** Maschinen und Engineering GmbH

### Grater and Sieving Mill RSM

The powtec Grater and Sieving Mill RSM is a size reduction machine which can treat dry, wet, brittle and elastic material. Various designs are the solution to nearly all size reduction problems with soft and medium hard materials. Appropriate choice of working cylinder allows the processed material to be either crushed or cut. The unique horizontal design allows easy access for inspection or cleaning of in-line installations, by simply removing the front cover without the need to disconnect the unit from the process.

Machine designs and finishes are tailored especially to applications within the pharmaceutical, chemical, cosmetic, food and beverage, personal care and process industries. Examples of typical applications are crushing of agglomerates from dryers or centrifuges, improving flowability, optimizing granule size or tablet reclaim.

#### **Benefits:**

Improves the product and process characteristics of processed materials to prevent problems feed, dosage or packaging.

**Size reduction**, deagglomeration, sieving, milling, grinding, grating, granulation. Suitable for **in-line** use.

**Easy and fast exchange** of rotor and working cylinder, even with in-line applications. **Low velocity** for critical materials.

**High throughput** with a high yield of desired particle size and low dust and low percentage of fines.

Meets **cGMP** standard, absolutely **minimized dead space** in the working chamber. **Dust-tight** and on request also gas-tight and **CIP – execution** available.





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### **Process description**

The material to be processed falls directly into the working chamber of this high performance machine. A rotor cuts the material through a horizontally arranged, perforated screen surface cylinder and reduces it to the determined size. The working cylinder with perforated round holes, grater holes or square holes in different dimensions as well as different rotators ensure that this machine will solve a wide variety of size reduction and screening tasks. The cantilever mounted rotor and the working cylinder are easily accessible just by removing the front cover for cleaning and change over without removing any in- or outlet flange connections. In contrast to conical sieving mills, vertical grater and shredding machines this machine has the advantage that no material will build up inside the working cylinder during processing. The relatively low rotor velocity allows the processing even of critical materials and provides low dust and fines with a high yield of the required particle size.

All parts in contact with the material to be processed as well as machine housing and frame are manufactured out of stainless steel. The Grater and Sieving Mill RSM can be delivered in different dimensions. On request are available models with mobile, custom built in– and outlet hoppers, adjustable rotor speed, explosion – protection, special voltages, various surface finishes, etc.

### Technical Data

| Machine       | Typical Capacity | Cylinder<br>perforation <sup>2</sup> | Approximate<br>Weight <sup>3</sup> | Motor power | <b>Dimensions</b> ⁴<br>L x B x H (in mm) |
|---------------|------------------|--------------------------------------|------------------------------------|-------------|--|
| RSM 200 x 130 | 20 – 600 kg/h    | 1 – 10 mm                            | 90 kg                              | 2,2 kW      | 770 x 360 x 415                          |
| RSM 300 x 170 | 300 – 1200 kg/h  |                                      | 170 kg                             | 5,5 kW      | 950 x 480 x 525                          |
| RSM 400 x 250 | 600 – 2400 kg/h  |                                      | 320 kg                             | 11,0 kW     | 1190 x 600 x 645                         |

' Typical Capacity: product and screen dependent

<sup>2</sup> Cylinder perforation: typical

<sup>3</sup> Approximate weight: in-line unit

<sup>4</sup> Dimensions: in-line unit





We reserve the right for technical changes

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