Grinding
The ABMS type hammermill is the result of a long experience acquired by STOLZ company for the last few years with the concern to adapt to plants developments (production, maintenance, automation...).

Feeding the hammermill all over its length and adding cleaning functions to separate metal parts and stones have been the most important improvements.

The ABMS feeder is one block unit with a concern for aesthetic, cleanliness, automated separation of wastes, staff safety thanks to Stolz experience.
Hammermill feeder ABMS

Features

Placed at machine inlet, this machine has many advantages:

- Magnetic separator with pneumatic cylinder, automatically operated or remote controlled by an operator.
- Removal of heavy particles, especially stones and non-ferrous metals.
- Quality of hammermill feeding leading to the wear of screens and hammers to be the same all over the rotor length.
- Increase of screens and hammers lifetime thanks to a regular and homogeneous feeding.
- Assembly on the hammermill with silent-block.

<table>
<thead>
<tr>
<th>Type</th>
<th>Power</th>
<th>Mass</th>
<th>Dimensions (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(kW)</td>
<td>(kg)</td>
<td>A</td>
</tr>
<tr>
<td>ABMS 4</td>
<td>1,5</td>
<td>530</td>
<td>950</td>
</tr>
<tr>
<td>ABMS 8</td>
<td>1,5</td>
<td>650</td>
<td>934</td>
</tr>
<tr>
<td>ABMS 10</td>
<td>1,5</td>
<td>720</td>
<td>1114</td>
</tr>
<tr>
<td>ABMS 14</td>
<td>2,2</td>
<td>840</td>
<td>1484</td>
</tr>
<tr>
<td>ABMS 16</td>
<td>2,2</td>
<td>900</td>
<td>1629</td>
</tr>
</tbody>
</table>
Hammermills
RM & RMP

Features
- Two-way direction of rotation up to 3600 rpm
- Effective screening area from 0.45 to 2.20 m²
- Quick change of hammers by tilting
- Change of screens during operation
- Continuous control of bearings and grinding chamber temperatures
- Adjustable feeding flap
- Grinding chamber fitted with grooved armor plate and counter-hammers

Range
- RM type: Manual removal of screens
- RMP type: Manual removal of screens by means of pneumatic cylinders (French patent n°93-051-88)

The equipment is also available with a grinding chamber with reinforced seal for fine grinding process.
Hammermills RM & RMP
Options

**Fine grinding**

STOLZ has developed a new grinding / sieving concept in order to offer solutions for an even finer grinding dedicated to specific food formulas for extrusion meeting the users requirements.

Our sifters with two-way centrifugal rotation and automatic cleaning during operation are mounted at hammermills outlet with 400 to 1600 mm chamber width, and 37 to 355 kW.

Such concept, combined with the RM hammermill reputation and our high quality ABMS pneumatic feeder-metal remover-destoner appeal to several dozens of customers each year.

**Table:**

<table>
<thead>
<tr>
<th>Type</th>
<th>Power</th>
<th>Hammermill mass with motor and ABMS</th>
<th>Quantity of hammers</th>
<th>Effective screening area (m²)</th>
<th>Dimensions (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(kW)</td>
<td></td>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>RM 14</td>
<td>45/75</td>
<td>3200</td>
<td>52</td>
<td>0,70</td>
<td>2150</td>
</tr>
<tr>
<td>RMP 18</td>
<td>90/132</td>
<td>4150</td>
<td>92</td>
<td>1,25</td>
<td>2615</td>
</tr>
<tr>
<td>RMP 110</td>
<td>110/160</td>
<td>4550</td>
<td>112</td>
<td>1,50</td>
<td>2800</td>
</tr>
<tr>
<td>RMP 114</td>
<td>180/250</td>
<td>5800</td>
<td>152</td>
<td>2,00</td>
<td>3595</td>
</tr>
<tr>
<td>RMP 116</td>
<td>200/355</td>
<td>6900</td>
<td>168</td>
<td>2,20</td>
<td>3740</td>
</tr>
</tbody>
</table>

* 'A' dimension given for a standard motor.
The automatic SAGA screen selector is designed to insert one of the sets of screens in stand by through data exchange with the production automaton without any manual operation.

The automation at this step involves a huge reduction of production downtimes, improves the production flexibility and ensures a traceability of screens.
Working conditions are improved by the limited risks of accidents and noise exposure.
Self standing automatic screen selector SAGA

Features and options

Features

- Traceability of screens
- Limited downtimes
- 2 or 4 sets of available screens
- Improved working conditions

Options

- Electrical Box
- Set of safety signs boards
- Frames with locking flatbar cylinder
- Sets of screens

Assets

The SAGA may be adapted to STOLZ RMP type hammermills from 110 to 116 type. The use of SAGA involves a limited plant downtime.

The SAGA may be integrated in the limited space of an existing grinding unit with manual screen exchange.

The totally electrical driven movements ensure smooth movements, increased safety and power saving.

<table>
<thead>
<tr>
<th>For hammermill type</th>
<th>Screens sets</th>
<th>Dimensions (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Width</td>
</tr>
<tr>
<td>RMP 110</td>
<td>2 / 4</td>
<td>3180 / 4240</td>
</tr>
<tr>
<td>RMP 114</td>
<td>2 / 4</td>
<td>3180 / 4240</td>
</tr>
<tr>
<td>RMP 116</td>
<td>2 / 4</td>
<td>3180 / 4240</td>
</tr>
</tbody>
</table>
Hammermills

RMA

Features

• Two-way direction of rotation up to 3600 rpm
• Effective screening area from 0.45 to 2.20 m²
• Quick change of hammers by tilting
• Automatic exchange of screens during operation
• Continuous control of bearings and grinding chamber temperatures
• Adjustable feeding flap
• Grinding chamber fitted with grooved armor plate and counter-hammers

Such equipment is also available with a grinding chamber with reinforced seals for fine grinding process.
Hammermills RMA

Automatic exchange of screens

In the RMA configuration, the automatic exchange of screens is automatic and achieved during operation.

The screens are fitted into 2 rigid half frames sliding inside the grinding chamber guided by cylindrical rods on interdependent ball sockets of the chamber and supports with bearings.

The change is performed by 2 pneumatic cylinders. When passing through the crushing chamber, the sealing is carried out by special brushes that can be easily dismantled.

<table>
<thead>
<tr>
<th>Type</th>
<th>Power (kW)</th>
<th>Hammermill mass with motor and ABMS (m²)</th>
<th>Quantity of hammers</th>
<th>Effective screening area (m²)</th>
<th>Dimensions (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A*</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>RMA 18</td>
<td>90/132</td>
<td>4350</td>
<td>92</td>
<td>1,10</td>
<td>4410</td>
</tr>
<tr>
<td>RMA 110</td>
<td>110/160</td>
<td>5000</td>
<td>112</td>
<td>1,35</td>
<td>4795</td>
</tr>
<tr>
<td>RMA 114</td>
<td>180/200</td>
<td>8050</td>
<td>152</td>
<td>1,95</td>
<td>6270</td>
</tr>
</tbody>
</table>

* ‘A’ dimension given for a standard motor
The RME hammermill is derived from the RM range. It is adapted to meet reliability criteria required by industries requiring a very high mechanical and wearing strength to face high impact loads (knackery, paper blocks, cakes, cassava roots, etc...)

The hammermill is usually fed by a belt conveyor with adjustable speed. The powder is conveyed by a hopper and a screw conveyor.

**Features**

- Two-way rotation
- Screen exchange when machine is at a standstill
- Speed 3000 rpm
- Grinding chamber equipped with grooved armor plates
- Very thick hammers
Hammermills RME

Rotor

It consists of a hard steel shaft provided with braced discs supporting hammers machined in a special alloy and treated steel. These hammers are bored with two holes to work on the 4 angles, and oscillating on supporting axis made of treated hard steel.

The rotor turns on a plummer block housing roller bearings fitted outside the chamber.

Their lubrication is ensured by automatic autonomous greasing devices.

The drive is ensured by a semi-flexible coupling sleeve.

<table>
<thead>
<tr>
<th>Type</th>
<th>Power (kW)</th>
<th>Hammermill mass without motor (kg)</th>
<th>Quantity of hammers</th>
<th>Effective screening area (m²)</th>
<th>Dimensions (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RME 14</td>
<td>55</td>
<td>3050</td>
<td>40</td>
<td>0,7</td>
<td>2370 1610 1345</td>
</tr>
<tr>
<td>RME 17</td>
<td>110</td>
<td>3650</td>
<td>56</td>
<td>1,1</td>
<td>2600 1610 1345</td>
</tr>
</tbody>
</table>

* ‘A’ dimension given for a standard motor
The Lump breaker can be installed at all product inlets (in bulk or in bags) when the particle size of a product required to be powered.
The crusher can be assembled in a circuit under a discharging hopper or a bag unloader but it is not designed to turn a non friable raw material into powder.
Lump breaker
Features and options

Features
The lump breaker includes one or two rotors depending on the required capacity. It has two versions, coarse or fine, according to the required particle size.

Options
- Rotation sensor
- Temperature probes on bearings

The rotor
It consists of a steel shaft fitted with cross braced disks supporting special steel disks. These offset disks have teeth with inclined geometry forcing the product flow between each interval.

The disks are separated from one another by guides assembled on shaft.

The rotor turns on flanged bearings with self-aligning roller bearing mounted outside on supporting frame and are separated from the machine sides.

Their lubrication is ensured by manual greasing devices, and direct drive by hollow shaft gear motor.

<table>
<thead>
<tr>
<th>Type</th>
<th>Quantity of rotors</th>
<th>Power (kW)</th>
<th>Mass (kg)</th>
<th>Dimensions (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMG1</td>
<td>1</td>
<td>1x2,2</td>
<td>230</td>
<td>A 1120</td>
</tr>
<tr>
<td>BMF1</td>
<td>1</td>
<td>1x2,2</td>
<td>240</td>
<td>A 1120</td>
</tr>
<tr>
<td>BMG2</td>
<td>2</td>
<td>2x5,5</td>
<td>920</td>
<td>A 2150</td>
</tr>
<tr>
<td>BMF2</td>
<td>2</td>
<td>2x5,5</td>
<td>1035</td>
<td>A 2150</td>
</tr>
</tbody>
</table>

Drawing: lump breaker with double row of toothed discs
Our range of crumblers is designed to make crumbs from 0.2 to 4 mm with granulated product passing between 2 rollers.

The main feature of STOLZ PEDT crumbler is the possible use of the distributor permanently in order to regulate the pellet flow before sifting.

**Features:**
- Ø250 mm rollers
- Space adjustment between cylinders with remote control
- Integrated system for product sampling
- Automatic spacing of cylinders when foreign bodies crossing
- Total spacing of rollers to provide a free passage of pellets
The purpose of Stolz crumbler:

To crush pellets (usually a 4 mm diameter is easier to pellet than a 2.5 mm diameter) for poultry, game, fish, and piglets thus improving ingestion by small animals and digestion.

Our PEDT crumbler is also used to reduce the grain size of various dry products use in food or chemical industries.

Cylinder surface area geometry is adjusted to the products to be treated according to their nature and original size.

---

<table>
<thead>
<tr>
<th>Type</th>
<th>Capacity</th>
<th>Power</th>
<th>Mass</th>
<th>Dimensions (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEDT 600</td>
<td>4 à 6</td>
<td>7,5</td>
<td>1100</td>
<td>1950 1460 1010</td>
</tr>
<tr>
<td>PEDT 1000</td>
<td>8 à 12</td>
<td>11</td>
<td>1400</td>
<td>1990 1460 1010</td>
</tr>
<tr>
<td>PEDT 1500</td>
<td>12 à 18</td>
<td>15</td>
<td>1850</td>
<td>2490 1460 1010</td>
</tr>
<tr>
<td>PEDT 1800</td>
<td>15 à 25</td>
<td>18,5</td>
<td>2200</td>
<td>2790 1460 1010</td>
</tr>
</tbody>
</table>
The RMP or RMA type hammermills are generally installed on a concrete or metal floor and fixed with anti-vibrating mountings.

The air enters the ABMS feeder and crosses the screens and then the automatic cleaning filter.

The air is forced out after passing through a muffler.

The motorized flap controls the air flow-rate at the centrifugal fan inlet.

The ground product is discharged by the screw conveyor equipped with a sealing flap or even a rotatary valve.
Grinding line with hopper and screw discharge

- Hopper
- Helmet gate
- ABMS feeder (destoner, ferrous cleaner)
- Air intake (Atex option)
- Hammermill
- Filter
- Motorized flap
- Centrifugal fan
- Silencer (option)
- Hopper under hammermill
- Explosion vent and air outlet duct (Atex option)
- Screw conveyor
- Sealing valve
- Rotary valve

Hopper beneath hammermill

Explosion vent and outlet duct
The air gets in through the ABMS feeder and an additional air inlet. It passes through the screens of the hammermill. The ground product is conveyed by vacuum thanks to the fan. An automatic cleaning filter separates the product from the air. The air flap adjusts the air flow rate at the fan inlet. The air is forced out after going through a muffler. Considering the fineness of the product, the cyclo-filter is flat-bottomed, equipped with a motorized cleaning arm and a sealing valve. A turbo sifter is designed to separate the products. The particles not meeting the required size are handled back towards the mill. In ATEX area, an explosion vent and an air outlet duct provide a safe of the installation.
Grinding line with pneumatic conveying

Key

1. Hopper
2. Helmet gate
3. ABMS feeder (destoner, ferrous cleaner)
4. Air intake (Atex option)
5. Hammermill
6. Pneumatic transfer
7. Filter with cleaning arm
8. Motorized air flap
9. Centrifugal fan
10. Nuffler (option)
11. Explosion vent and air outlet duct (Atex option)
12. Sealing valve
13. Turbosifter

Cyclo-filter and fan
Filter with cleaning arm
Pneumatic conveying