Hosokawa/Gericke

Nibbler

Delumper / Deagglomerator in a compact and robust design



- Suitable for disintegrating relatively soft lumps such as lumps hardened during storage in hoppers or silos agglomerates formed through drying or wet-filtering processes.
- Product size control can be available in range of around 30meshes to a few millimeters by change of screen.
- Easy and quick screen changes offers easy cleaning and servicing.
- By screen itself material is also being disintegrated.
- Rotor speed is extremely low so fine dust and noise generation kept minimum.

Construction

The Nibbler will shred and cut the feed material between the slowly moving rotor and screen. After disintegrated, materials passed through screen are discharged as products. On this rotor beaters as shown in Fig. 1 are fixed. Beaters are movable so the clearance between th4e screen can be adjusted. Screen itself has something like corrugated shape as shown in Fig. 2, enabling effective disintegration on its inner surface. Product control is made by change of opening size of screen.









Fig.1

Advantages

1. Minimum fine dust generation.

2. Easy adjustment of product size.

3. Easy Maintenance and cleaning inside.

4. Low energy consumption

The Nibbler has a low working speed in comparison with other size reducing machines. the resulting benefits are;

- Less tendency to produce undesirable fines.
- Low energy consumption
- Rotational speed of less than 1m/s makes the Nibbler applicable for use with explosion risk products.

Fig. 3



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Specifications

Model : NBS-300/450 Material : Carbon Steel or stainless steel 304 Required power : 3.7 kW geared motor Rotor speed 75 / 90 rpm (50/60Hz) Available screen size: 2,3,4,6,8,11mm Feed inlet size : 300 x 450mm Weight : 350kgs



Application

Nibbler is suitable for the use in preprocessing to pneumatic conveying, fine grinding, mixing, solving and packing Nibbler is v ery effective if used as pre-processing, to obtain optimum performance of those processes. Some installation examples are shown in Fig. 5 and table. 1





Application Examples

| Material Name | Motor Power | Capacity kg/hr | Feed Size | Product Size |
|----------------------------|-------------|----------------|----------------------------|--------------|
| Pharma intermediate | 3.7 | - 2,000 | max. 30x30x100mm | 0.5mm |
| Urea organic material | 3.7 | 1,500 | 50x30x20mm | 5-6mm |
| Microcrystalline Cellulose | 3.7 | 600 | 300x300x20mm | around 18mm |
| Chroline Agglomerates | 3.7 | 3,000 | powder contains some lumps | delumping |
| Aggrochemicals | 3.7 | 1,000 | 10-20cm | below 1mm |
| Detergent | 3.7 | 1,500 | agglomerates 10mm | 4-6mm |
| Phenolic Resin | 3.7 | 170 | Plate 50 x 200mm | D50 15x15mm |
| Activated Carbon | 3.7 | 2,500 | 50mm | below 2-3mm |
| Adipic Acid | 3.7 | 15,000 | max. 300mm | D50 10mm |

Table 1



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Hosokawa Micron Corporation is a member of the Hosokawa Micron Group, responding to global needs through emphasis on materials equipment and systems for powder processing, thermal processing, and plastics processing. The Group maintains facilities for research, engineering, manufacturing, and service in each of the world's industrial markets.

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