Sacks & Drums

- Emptying
- Compacting
- Handling
- Discharging

SOLUTIONS

Powder Handling Solutions
CONTENT

- **RANGE OF MANUAL SACK OPENING SYSTEMS**
  - Sacktip®: STANDARD model
  - Sacktip® Enclosed: DUST CONTAINMENT model
  - Sacktip® Hygienic: with INTEGRATED SIEVE
  - CUSTOM MADE manual bag dump station

- **OPTIONS FOR MANUAL BAG DUMP STATIONS**
  - Sack compactor
  - Vacuum sack lifter
  - Suction booth
  - Pouyès ring

- **CONTAINMENT AND ERGONOMICS**
  - Ergotip®
  - SAS®
  - Minislit®
  - Rotasil®
  - Varislit®
  - Autotip

- **RANGE OF AUTOMATIC BAG DUMP STATIONS**
  - DrumFlow® 01: suction tube
  - DrumFlow® 02: discharge by extraction of the sack
  - DrumFlow® 03: tilting
  - DrumFlow® 04: tilting and caping

Means that the equipment is available for testing at PALAMATIC PROCESS

Means that the equipment can be installed in ATEX zone

Means that design and options can be customised

PALAMATIC PROCESS reserves the right to make changes in the design of the facilities listed in this commercial documentation.
### Basic configurations and applicable options

<table>
<thead>
<tr>
<th>Sacktip®</th>
<th>Sacktip® Enclosed</th>
<th>Sacktip® Hygienic</th>
<th>Custom made manual unit</th>
<th>Ergotip®</th>
<th>SAS®</th>
<th>Minislit®</th>
<th>Rotaslit®</th>
<th>Varislit®</th>
<th>Autotip®</th>
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<tbody>
<tr>
<td>Sack opening rate (the highest rate may vary according to the operator and the type of sack)</td>
<td>2 - 6 sacks/min.</td>
<td>2 sacks/min.</td>
<td>2 - 4 sacks/min.</td>
<td>2 - 6 sacks/min.</td>
<td>6 sacks/min.</td>
<td>2 - 4 sacks/min.</td>
<td>6 sacks/min.</td>
<td>6 - 12 sacks/min.</td>
<td>15 sacks/min.</td>
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<td>Foldaway tray</td>
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### Utilities

<table>
<thead>
<tr>
<th>Input TOR</th>
<th>Output TOR</th>
<th>Installed power (Kw)</th>
<th>Power supply (VTR)</th>
<th>Service pressure (bar)</th>
<th>Average power consumption (KWH)</th>
<th>Compressed air consumption (Nm³/h.)</th>
<th>Dust collecting rate (m³/h.)</th>
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</thead>
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<td>According to design</td>
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</tbody>
</table>

Download videos & layouts from our website: www.palamaticprocess.com/power-machine/sack-solutions
Sacktip®: Manual Bag Dump Station

**Manual and Ergonomical Unloading**

The PALAMATIC PROCESS dumping units are designed to reduce material waste and to ensure an effective dust collection during the manual process of opening and discharging of the bag. All sack stations are provided with dusting tappings or integrated filters and containment systems for empty packaging.

**Advantages**

- The gas cylinders allow the heavy-duty door to be lifted with ease and firmly maintained in an open position.
- Internal sieve to support the bags with sliding bars facilitates sack positioning and protects the process from foreign bodies with a mesh in the lower part of the unit.
- Ergonomic removable table to put down sacks: immediate rest area; stand back for feet clearance; limited space requirement; ergonomic height between heavy load; dust-proof closure of the door during the phases of unclogging or CIP.
- Product outlet chute adapted to each particular case: the slope of the hopper allows clearance for knees and feet.

**Standard Models**

<table>
<thead>
<tr>
<th>Models</th>
<th>Length of the sacks (mm)</th>
<th>Flow required for dedusting nozzle (m³/hr)</th>
<th>Volume of the hopper (litre)</th>
<th>Unloading diameter (DN)</th>
<th>Height from ground to drain flange (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S800</td>
<td>650</td>
<td>800</td>
<td>180</td>
<td>250</td>
<td>285</td>
</tr>
<tr>
<td>S1000</td>
<td>850</td>
<td>1,000</td>
<td>225</td>
<td>250</td>
<td>285</td>
</tr>
<tr>
<td>S1200</td>
<td>1,050</td>
<td>1,200</td>
<td>265</td>
<td>250</td>
<td>285</td>
</tr>
<tr>
<td>S1400</td>
<td>1,250</td>
<td>1,400</td>
<td>300</td>
<td>250</td>
<td>285</td>
</tr>
</tbody>
</table>

The volume of the hopper is defined according to the process requirements.

**Operating Sequence**

1. Open the door and set up the removable table
2. Position the bag on the shelf and on the sieve
3. Open the bag
4. Empty the bag
5. Disposal of empty sack into the discharge chute or bag compactor (containment of the waste in a polyethylene sheath).

**Options**

Vacuum sacks lifter
Nozzles/washing rotary heads (CIP)

See all our options on pages 18-19

**Download videos & layouts from our website**

www.palamaticprocess.com/powder-machines/sack-solutions
/manual-sack-opening-systems/standard
Sacktip®: Manual Bag Dump Station

4 Standard Models:
S 800 - S 1000 - S 1200 - S 1400

● MANUAL BAG DUMP STATION

<table>
<thead>
<tr>
<th>Model</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>S 800</td>
<td>800</td>
<td>905</td>
<td>710</td>
<td>58°</td>
</tr>
<tr>
<td>S 1000</td>
<td>1,000</td>
<td>1,105</td>
<td>910</td>
<td>51°</td>
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<tr>
<td>S 1200</td>
<td>1,200</td>
<td>1,305</td>
<td>1,110</td>
<td>45°</td>
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<tr>
<td>S 1400</td>
<td>1,400</td>
<td>1,505</td>
<td>1,310</td>
<td>41°</td>
</tr>
</tbody>
</table>

● OPTION: DUST COLLECTOR

<table>
<thead>
<tr>
<th>Model</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>S 800</td>
<td>800</td>
<td>1,110</td>
<td>710</td>
<td>58°</td>
</tr>
<tr>
<td>S 1000</td>
<td>1,000</td>
<td>1,510</td>
<td>910</td>
<td>51°</td>
</tr>
<tr>
<td>S 1200</td>
<td>1,200</td>
<td>1,710</td>
<td>1,110</td>
<td>45°</td>
</tr>
<tr>
<td>S 1400</td>
<td>1,400</td>
<td>1,910</td>
<td>1,310</td>
<td>41°</td>
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</tbody>
</table>

● OPTION: COMPACTOR

<table>
<thead>
<tr>
<th>Model</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>S 800</td>
<td>800</td>
<td>1,560</td>
<td>710</td>
<td>58°</td>
</tr>
<tr>
<td>S 1000</td>
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<td>1,760</td>
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</tr>
<tr>
<td>S 1200</td>
<td>1,200</td>
<td>1,960</td>
<td>1,110</td>
<td>45°</td>
</tr>
<tr>
<td>S 1400</td>
<td>1,400</td>
<td>2,160</td>
<td>1,310</td>
<td>41°</td>
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</table>

● OPTIONS: COMPACTOR AND DUST COLLECTOR

Download layouts from www.palamaticprocess.com

www.palamaticprocess.com/powder-machine/sack-solutions
/manual-sack-opening-systems/standard
Download videos & layouts from our website
Sacktip® Enclosed: Manual Bag Dump Station

4 Standard Models: SE 800 - SE 1000 - SE 1200 - SE 1400

Rate: 2 sacks/min.
Objectives: ergonomics and containment for toxic materials

**Advantages**

- **Glove box** for handling material in a closed and contained area: glass and gloves
- **Support** for secured opening tool with support cable
- **Mirror-polished finishes** to improve material flow and hygiene, particularly suitable for the pharmaceutical industry
- **Side discharge chute** for the bag to maintain a clean working area and to eject the "dirty" emptied sack in a contained area

**OBJECTIVES**

- Emptying of toxic or hazardous materials
- Perfect ergonomics
- Healthy work environment
- Advanced dust containment
- Operators protection from harmful dust

**MANUFACTURING**

- **Structure and parts in contact with the material**: mild steel, 304L stainless steel, 316L stainless steel
- **Access door**: plexiglass, antistatic lexan, tempered laminated glass
- **Sealing**: EPDM, NBR, natural rubber, silicone
- **Finishes**: customized RAL, peening, electropolishing

**STANDARD MODELS**

<table>
<thead>
<tr>
<th>Models</th>
<th>Length of the hopper (mm.)</th>
<th>Flow required for dedusting nozzle (m³/hr.)</th>
<th>Volume of the hopper (L) volume of water</th>
<th>Unloading diameter (DN)</th>
<th>Height from ground from drain flange (mm.)</th>
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</thead>
<tbody>
<tr>
<td>SE 800</td>
<td>650</td>
<td>400</td>
<td>180</td>
<td>250</td>
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<tr>
<td>SE 1000</td>
<td>850</td>
<td>500</td>
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<tr>
<td>SE 1200</td>
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<td>250</td>
<td>285</td>
</tr>
<tr>
<td>SE 1400</td>
<td>1,250</td>
<td>700</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

The volume of the hopper is defined according to the process requirements.

**ALTERNATIVES**

The introduction of sacks can be conducted by a system of sealed lock chamber (alternatives: belt conveyor, roller conveyor ...)

Visit our website for more information:


Download videos & layouts from our website.
Sacktip® Enclosed: Manual Bag Dump Station

Dust Containment

4 Standard Models:
SE 800 - SE 1000 - SE 1200 - SE 1400

● CONFINED MANUAL BAG DUMP STATION

<table>
<thead>
<tr>
<th>Models</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE 800</td>
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<td>850</td>
<td>2,060</td>
<td>58°</td>
</tr>
<tr>
<td>SE 1000</td>
<td>1.34</td>
<td>1,000</td>
<td>2,460</td>
<td>51°</td>
</tr>
<tr>
<td>SE 1200</td>
<td>1.54</td>
<td>1,250</td>
<td>2,860</td>
<td>45°</td>
</tr>
<tr>
<td>SE 1400</td>
<td>1.74</td>
<td>1,450</td>
<td>3,260</td>
<td>41°</td>
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</table>

● OPTION: DUST COLLECTOR

<table>
<thead>
<tr>
<th>Models</th>
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<th>B</th>
<th>C</th>
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</thead>
<tbody>
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<td>2,060</td>
<td>58°</td>
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<tr>
<td>SE I/1000</td>
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<td>1,050</td>
<td>2,460</td>
<td>51°</td>
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<tr>
<td>SE I/1200</td>
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<td>1,250</td>
<td>2,860</td>
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<tr>
<td>SE I/1400</td>
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<td>41°</td>
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● OPTION: COMPACTOR

<table>
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<tr>
<td>SE COMP 1400</td>
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<td>1,450</td>
<td>3,870</td>
<td>41°</td>
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● OPTIONS: COMPACTOR AND DUST COLLECTOR

<table>
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<tr>
<th>Models</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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<tbody>
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<td>2,670</td>
<td>58°</td>
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<tr>
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<td>3,070</td>
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<td>SE COMP/DF 1400</td>
<td>1.74</td>
<td>1,450</td>
<td>3,870</td>
<td>41°</td>
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</tbody>
</table>

Dust Containment

Sacktip® Enclosed: Manual Bag Dump Station

Download videos & layouts from our website
Sacktip® Hygienic : Manual Bag Dump Station

Standard Model SH 800
Possibility of customization

Rate: 2 to 4 sacks/min.
Objective: protection

OBJECTIVES
- Protection of your process
- Prevent contamination
- Quality of your production

Integrated Sieve

MANUFACTURING
Structure and parts in contact with the material: mild steel, 304L stainless steel, 316L stainless steel
Access door: plexiglass, antistatic lexan, tempered laminated glass
Sealing: EPDM, NBR, natural rubber
Finishes: customized RAL, peening, electropolishing

Advantages
- Customized and interchangeable screen mesh
- Gas cylinder to optimize the ergonomics and to support the door
- (1) Mirror polish finish - (2) Rounded corners
- Vibratory motor to improve the amplitude and intensity of the screen. These settings are adjustable depending on the flowability of the material and the mesh

OPERATION
Integrated sieve: protection against foreign bodies for a production without any impurities.

EASY HANDLING
Easy access to the sifter including the screen mesh. Its design allows operators to clean and replace the screen mesh in seconds.

See all our options on pages 18-19

Download videos & layouts from our website
Sacktip® Hygienic: Manual Bag Dump Station

Standard Model: SH 800

- MANUAL BAG DUMP STATION - SH 800
- OPTION: DUST COLLECTOR - SHDEP 800
- OPTION: COMPACTOR - SHCOMP 800
- OPTIONS: COMPACTOR AND DUST COLLECTOR - SHCOMPDEP 800

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/manual-sack-opening-systems
Manual Bag Dump Station

Painted steel, 304L stainless steel, 316L stainless steel manufacturing

The PALAMATIC PROCESS engineering office offers customized solutions for your sack opening process according to your layout and flow constraints. We define together the adequate solution after visiting your site and following your needs and technical conditions.

POSSIBLE FEATURES

- Specific and reduced dimensions
- Applications for toxic materials
- Nuclear industry
- Advanced containment
- Manufacturing specific to the bulk material and work environment: steel, stainless steel, Hastelloy, Uranus B6, Viton, Perbunan, Nitrile...
- Surface treatment adapted to your powders: electropolishing, mirror polished, vulcanization, teflon
- Process features integration: dosing, screening, milling, granulation, anti-bridging device, mechanical conveying
- Ideal design for all types of bags
- ATEX...

Custom Made

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Manual sack opening systems customization
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**Options**

**Manual Bag Dump Station**

**Vacuum Sack Lifter**

*Easy lifting and handling of the bag.*

The manipulator provides the operator with maximal working ergonomics. The problem of load handling is fully resolved with the introduction of this equipment. The manipulator is suitable for all types of bags (materials and weight).

**Glove Box**

*It optimizes containment and enables the handling of toxic materials.*

The gloves are set on the door and mounted on PVC glove ports. Spring clips provide containment and closing. A neon facilitates opening operations through the plexiglass. The glove box is designed to allow opening and dumping of the bag and sack contents in a confined environment. The operator is protected from any contact with potential hazardous bulk materials. Also, it prevents the bulk material from contamination or interaction with the outside environment.

**Magnetic Bars**

*It guarantees the hygienic process by eliminating foreign substances.*

The strong magnetic power capacity (13,000 Gauss) can capture the sub-millimeter particles.

**Belt Conveyor**

*To provide buffer storage upstream of the unloading system.*

The conveyor belt allows operator to make a buffer storage of sacks to optimize the discharge cadences. The layout length and configuration are custom-manufactured to suit your needs and your constraints on site.

**Weighing - Dosing**

*To monitor the quantity of the loaded powder, the unloading hopper can be mounted on load cells.*

- Number of cells: 4
- Weighing accuracy: ±1kg
- Implementation: shock absorber + anti-fallover device
- Input signal: A 4-20 mV
- Possible protocols: communication + RS 232 + Ethernet

**CIP**

*Rotative cleaning nozzles/heads - Clean In Place (CIP).*

To ensure the material change without cross-contamination, the washing nozzles are located inside the unloading unit.

- Pressure of washing nozzle: 3 bars
- Technology: fixed or rotating 360°
- Centralized wirings and connection to the network with a clamp system.

**Vibrators / Vibrating Bin Aerators**

*They facilitate the flow and discharge of stored materials.*

These vibrators transmit multi-directional vibrations to the walls, while the vibrating bin aerators combine a fluidization effect against the inner walls of the hopper. These devices allow proper flowing of your bulk materials. They help break vaults or chimneys and greatly reduce retention.

**Automatic Cutting System for Sacks**

*This system ensures maximum ergonomics and safety by preventing the operator from cutting and turning the bag.*

A blade actuated by a pneumatic cylinders penetrates the bag through the grid. The operation is secured with a safety switch fitted on the door or with hand control.

**Lump Breaker**

*Our lump breakers are the ideal solution to crush materials that tend to form lumps.*

Your materials stored in bags may tend to make lumps during storage. It is then sometimes imperative to standardize the powder particle size in order to allow its use in the downstream process, such as pneumatic conveying or introduction into a reactor or a mixer.

**Sack Compactor**

*Protect the operator against potential exposure to dust during unloading.*

The PALAMATIC PROCESS sack compactor enables reducing of the waste volume and maintains healthy, dust-free environment. It can be mounted on one of the hopper sides. The compacted sacks are contained within a polyethylene sheath (up to 60 sacks/tn - depending on the size and type of sacks). It may be positioned on the left, on the right or at rear of the unloading unit, with three possible positions for each of these orientations.

---

Our engineering office is listening to you for any specific options.

www.palamaticprocess.com/powder-machines/sack-solutions
/manual-sack-opening-systems
Download videos & layouts from our website
**Objective**

- Contain dust and minimize dust volume.

**Sack Compactor**

**All Types of Sacks**

Compression ratio: 60 sacks/min.

*Depending on the type of bag*

**Equipment**

- Overhead access for the operator: the height is appropriate and it is possible to integrate a platform

**Ergonomic access**

- Mild steel, 304L stainless steel, 316L stainless steel
- Motor 2.2 kW (direct coupling)
- Applied bearing

**Examples of possible positionings**

**Available**

- The compacting screw “pushes” the empty bags inside the dust-proof sheath. With an efficient and compact design, the compactor is suitable for all types of bags (paper, polyethylene, plastic, woven plastic, hessian bags...)

**Characteristics**

- A polyethylene sheath positioned at the end of the compacting tube allows to collect the empty bags at the output of the compactor. The tensioning ring of the sheath permits a completely dust-proof compression of the bag fragments. A dedusting nozzle optimizes the cleanliness of the work station. The compaction takes place in a completely confined area.

**Advantages**

- Space and dust safety: 100% hermetic containment sheath, clean working environment and possibility to recover residual fines by specific tray

**Compression tube**

- Adjustable tensioning ring
- Compacted empty bags

**2 Versions**

- **INDEPENDANT COMPACTOR**
- **INTEGRATED COMPACTOR**

**Option**

- 150 meters compacting sheath (up to 500 meters on request)

**Specifications**

<table>
<thead>
<tr>
<th>Sack type</th>
<th>Size of sacks in mm.</th>
<th>Compression ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper</td>
<td>798 x 696 x 696</td>
<td>60 sacks/hr. of sheath</td>
</tr>
<tr>
<td>Paper with aluminum liner</td>
<td>880 x 696 x 696</td>
<td>40 sacks/hr. of sheath</td>
</tr>
<tr>
<td>Plastic</td>
<td>958 x 728 x 600</td>
<td>48 sacks/hr. of sheath</td>
</tr>
<tr>
<td>Liner</td>
<td>958 x 728 x 600</td>
<td>48 sacks/hr. of sheath</td>
</tr>
<tr>
<td>Synthetic</td>
<td>958 x 728 x 600</td>
<td>60-65 sacks/hr. of sheath</td>
</tr>
<tr>
<td>Synthetic with liner</td>
<td>958 x 728 x 600</td>
<td>60-65 sacks/hr. of sheath</td>
</tr>
<tr>
<td>Double layer hessian</td>
<td>958 x 728 x 600</td>
<td>26-35 sacks/hr. of sheath</td>
</tr>
<tr>
<td>Double layer hessian</td>
<td>958 x 728 x 600</td>
<td>26-35 sacks/hr. of sheath</td>
</tr>
</tbody>
</table>

**Download videos & layouts from our website**

**www.palamaticprocess.com/powder-machines/sack-solutions/sack-compactor**
Advantages

Vacuum Sack Lifter

All Types of Sacks

OBJECTIVES

Effortless vacuum lifting of all types of sacks from 10 to 80 kg and increased productivity. It is a simple and reliable means for one operator to handle sacks from 10 to 80 kg.

Advantages:
- Effortless lifting
- Maximum performance and productivity
- Optimal working conditions
- Improvement in ergonomics
- Increased operator safety
- Very little maintenance required

EXAMPLES OF INSTALLATIONS

1. Used to cover large areas. Supported by fixed columns or existing metallic construction.
2. With telescopic boom: ideal to reach limited access areas.
3. With raised telescopic boom: ideal to reach areas with limited heights.

Options

See all our options on pages 18-19

Vacuum Sack Lifter

AVAILABLE CUSTOM MADE

www.palamaticprocess.com/powder-machinewarehouse-solutions/bag-manipulator

Download videos & layouts from our website
The operators working directly with powders, especially during packaging or unloading phases, have to work in a dusty environment. The suction booth is used to create a vacuum flow in the working area. The side screens enable to close the working area and to minimize the draughts effect. Our standard range of suction booths can be customized to meet your requirements.

**ERGONOMICS AND SAFETY OF THE WORKSTATION**

The operators working directly with powders, especially during packaging or unloading phases, have to work in a dusty environment. The suction booth is used to create a vacuum flow in the working area. The side screens enable to close the working area and to minimize the draughts effect. Our standard range of suction booths can be customized to meet your requirements.

**TECHNICAL SPECIFICATIONS**

- **Working width**: 800 to 2,000 mm
- **Manufacturing**: mild steel, 304L stainless steel, 316L stainless steel
- **Finishes**: RAL, bead blasted, electropolished
- **Frontal panels**: 1, 2 or 3 panels
- **Air rate reached in open areas**: 0.6 to 1 m/s
- **Air rate reached in dedusting piping**: 25 m/s
- **ATEX grounding clamp**
- **Weight**: 10 to 50 kg
**Pouyès Ring**

**Rate:** 150 to 400 m³/hr.

**Installation:** Reactor, tank, drum.

**Objectives:** Facilitate unloading of small packings without any dust emission

**ADVANTAGES**
- No obstruction of the working area, direct access for loading
- Protection against dust emission
- Rapid connection to all types of equipment, removable and cleanable system

**TECHNICAL SPECIFICATIONS**
- **Dropping area for the bag:** 200 to 400 mm depth, 400 to 600 mm width
- **Manufacturing:** Painted / galvanized steel, 304L stainless steel, 316L stainless steel
- **Finishes:** 9006 RAL, bead blasted, electropolished
- **Coverage of the vacuum area:** 270° to 180°
- **Inclination of the ring:** 0° to 20°
- **Connection to suction device:** DN50 to DN80
- **Connection to equipment:** PN 10 flange, clamp
- **Air rate reached in open areas:** 0.5 to 1 m³/s.
- **Air velocity reached in dedusting piping:** 25 m³/s.
- **ATEX grounding clamp**
- **Weight:** 10 to 50 kg

**EXAMPLES OF INSTALLATIONS**

- **Simplified ring** for suction on the periphery of a vertical mixer, vertical
- **Clamping ring** for drum filling
- **System connected directly to the reactor** for introducing raw material, the system is removable for pressurization of the reactor
- **Dedusting of the working area**


Download videos & layouts from our website
The entire mechanism is positioned outside to avoid contact with the product (bulk powders, powders...).

- Suitable for many types of bags: paper, polywoven, lined...
- Minimize the handling by the operator
- Increased productivity
- Airborne dust is drawn into the dust collector, preventing plant contamination
- Integrated sack compactor
- Easy to clean

**OPERATING SEQUENCE**

1. The operator puts the sack down on the grate and actuates the control of cutting.
2. The blade performs a cut on the bottom of the bag.
3. Shaking of the sack without effort and without heavy lifting of the sack. The operator does not have to return the bag.
4. Flowing of the material into the hopper.

**OPERATING PRINCIPLE**

- The working position of the operator is effective and safe. The bags are no longer handled multiple times and the operator will no longer return the bags.
- The cutting from the bottom of the bag prevents the operator from turning the bag. In addition to better ergonomics, the discharge rate is improved.

**MULTI-SACKS DECONDITIONING**

The sack opening system ERGOTIP® is used in all industrial sectors. The cutting system with an articulated blade provides a clear cutting of all types of sacks. The bi-manual control system ensures safety and efficiency as well as the rate of opening.

**TECHNICAL SPECIFICATIONS**

- **Rate:** 6 sacks/min.
- **Capacity:** 15 to 50 kg/sack
- **Manufacturing:** mild steel, 304L stainless steel, 316L stainless steel

**Advantages**

- The entire mechanism is positioned outside to avoid contact with the product (bulk powders, powders...).
- Suitable for many types of bags: paper, polywoven, lined...
- Minimize the handling by the operator
- Increased productivity
- Airborne dust is drawn into the dust collector, preventing plant contamination
- Integrated sack compactor
- Easy to clean

**Rate:** 6 sacks/min.

**Capacity:** 15 to 50 kg/sack

**Manufacturing:** mild steel, 304L stainless steel, 316L stainless steel
Automatic Bag Dump Station

SEMI-AUTOMATIC SYSTEM, OVERALL DIMENSIONS REDUCED

To establish a connection between manual and automatic bag dump stations, PALAMATIC PROCESS offers a semi-automatic machine. This equipment is ideal for food, pharmaceutical and chemical applications. This machine is intended for semi-automatic opening of any type of sack (except aerosils) limiting the operator’s movement to set up the bag. The degree of dust containment of the machine that operates with the closed door, the installation of a sack compactor and the connection to the dedusting piping minimize fine particles emission in the atmosphere. A dust collector can be proposed as an option. It guarantees operation in a dust-free environment, without the need of cutting the sack manually.

The machine is supplied with a complete control cabinet to ensure the rate you require.

Rate: 2 to 4 sacks/min.
Capacity: 15 to 50 kg/sack
Manufacturing: mild steel, 304L stainless steel, 116L stainless steel

OPERATING PRINCIPLE

1. Articulated cutting blade
2. Program mobile cutting cycle
3. Shaking of the sack with articulated plates
4. Ejection of the emptied sack to the compactor

TECHNICAL SPECIFICATIONS

1. The blade pivots from the back to the groove provided in the screen and cuts the bottom of the sack
2. The blade retracts and the material flows into the hopper
3. The bars do the shaking to make the material come out of the bag
4. The bag ejector bar sends the empty sack into the compactor

ADVANTAGES

- Pneumatically controlled cutting system that leaves hands free
- Ideal solution for hazardous areas

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AVAILABLE
CUSTOM
MADE

Automatic Bag Dump Station

Patented system

Control box

Dust-proof opening

Retractable shelf to put down the sacks

Internal mobile parts of the machine ensuring the shaking and the ejection of the sacks
External actuator
Screw compactor for the evacuation of the emptied sacks and the reduction of dust emissions
Ejection of empty bags into the compactor

Options

Sack lifter

Rotative cleaning nozzles/heads - Clean In Place (CIP)

See all our options on pages 16-19
The SAS® bag dump system allows, due to its mode of operation, deconditioning of explosive material with a very low or low EMI. The moving parts included in the SAS provide slow speeds, thus avoiding the risks of sparks caused by impacts.

Electrical continuity of all the parts ensure safe operation. The dust collector offers maximum dust containment in an ATEX zone. Also, the bag opening is carried out when the door is closed: no external ATEX risk.
Automatic Bag Dump Station

Minislit®
Patented system

Rate: 6 sacks/min.
Capacity: 15 to 50 kg/sacks
Manufacturing: mild steel, 304L stainless steel, 316L stainless steel

AUTOMATIC OPENING AND ELIMINATION OF EMPTY SACKS

Designed to open bulk sacks with pulverulent products, the automatic dump bag station MINISLIT® is available with a ribbon cutting system. Adapted to multiple applications, from aggregates to pharmaceutical products, the parts of the automatic sack opening system MINISLIT® can be cleaned manually or mechanically with the option “Cleaning In Place” providing a complete washing and drying system (30 minutes cycle with washing and drying).

TECHNICAL SPECIFICATIONS

The cutting system produces a three sided cut on the sacks without tearing the material. The patented disc inversion system ensures a full discharge of the material. It is particularly suitable for food, chemical and paint industry. Like all other PALAMATIC PROCESS automatic bag dump systems, its design facilitates cleaning and maintenance with minimal retention areas. The mechanical driving and guiding parts are external which greatly limits the wear and offers the possibility to discharge materials having a high degree of abrasion.

ADVANTAGES

- Suitable for many types of bags: paper, polywoven, lined...
- Minimize operator’s handling
- Maximum productivity
- Reduced dust contamination
- Integrated dust collecting device (option) and sack compactor
- The ribbon-saw cutting system is available with various options: carbon steel (high speed), stainless steel or diamond coated for applications with abrasive materials.

OPERATING PRINCIPLE

1. Sack support bar
2. Inversion disk
3. Active sack feeler triggered
4. Sack directed towards the compactor

Sacks directed towards the compactor

Sack cut and overturned

MINISLIT® THROUGHPUT CAPACITIES

<table>
<thead>
<tr>
<th>PRODUCTS</th>
<th>Sacks per hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dicalite</td>
<td>6-8</td>
</tr>
<tr>
<td>Coffee beans</td>
<td>6</td>
</tr>
<tr>
<td>Lentils</td>
<td>6-8</td>
</tr>
<tr>
<td>Animal feed pellets</td>
<td>6-8</td>
</tr>
<tr>
<td>Sugar</td>
<td>6-8</td>
</tr>
<tr>
<td>Tea</td>
<td>6-8</td>
</tr>
<tr>
<td>Carbon black</td>
<td>6-8</td>
</tr>
<tr>
<td>Soya flour</td>
<td>6-8</td>
</tr>
<tr>
<td>Sugar</td>
<td>6-8</td>
</tr>
<tr>
<td>Caustic flake</td>
<td>6-8</td>
</tr>
<tr>
<td>Ammonium sulphate</td>
<td>6-8</td>
</tr>
<tr>
<td>TiO2</td>
<td>6-8</td>
</tr>
<tr>
<td>Aluminium oxide</td>
<td>6-8</td>
</tr>
<tr>
<td>Starch</td>
<td>6-8</td>
</tr>
<tr>
<td>Cement</td>
<td>6-8</td>
</tr>
<tr>
<td>Sand</td>
<td>6-8</td>
</tr>
<tr>
<td>Fly</td>
<td>6-8</td>
</tr>
<tr>
<td>PVA powder</td>
<td>6-8</td>
</tr>
<tr>
<td>Paper pulp</td>
<td>6-8</td>
</tr>
<tr>
<td>Glass fibre</td>
<td>6-8</td>
</tr>
<tr>
<td>Cotton</td>
<td>6-8</td>
</tr>
<tr>
<td>Wool</td>
<td>6-8</td>
</tr>
<tr>
<td>HDPE</td>
<td>6-8</td>
</tr>
<tr>
<td>Milk powder</td>
<td>6-8</td>
</tr>
<tr>
<td>Opaque</td>
<td>6-8</td>
</tr>
</tbody>
</table>

Download videos & layouts from our website
Automatic Bag Dump Station

Minislit®

Patented system

1. GENERAL LAYOUT

2. OPTIONS

- Vibrating spout for dosing and homogeneous separation of your bulk materials.
- Dust collector system to vacuum fine particles.
- Inclined conveyor to feed the unloading station.
- Vacuum lifter for sacks for effortless handling and improvement of the productivity.
- Integrated lump breaker enables the machine to handle powders with lumps. The blades ensure the passage of the lumps through a calibrated screen.

The MINISLIT® automatic bag dump system is a part of our test center for easy testing of any type of bags. These industrial-scale tests are a guarantee of result and success of your project.

3. EXAMPLES OF IMPLEMENTATION

4. EXAMPLES OF INSTALLATIONS

- Application in paint industry
- Application in food industry
- Facility for seeds
- Application in petrochemical industry

www.palamaticprocess.com/powder-machine/sack-solutions
Automatic-sack-opening-systems/minislit
Download layouts from www.palamaticprocess.com
Download videos & layouts from our website
**Automatic Bag Dump Station**

**Rotaslit®**

Patented system

**TECHNICAL SPECIFICATIONS**

The sack is conveyed by a screw to the compactor and at the same time stirred in a rotating drum. This configuration allows an optimal discharge of the bag. The greatest strength of this machine is its ability to process a wide variety of packaging such as boxes or sacks covered with paper or plastic and plastic or paper bags. It is suitable for bags of various shapes and sizes, including those with a large variety of packaging materials. This automatic machine uses only one 3 kW motor.

**ADVANTAGES**

- Suitable for many types of bags: paper, polywoven, laminated...
- Minimize the handling by the operator
- Robustness, reliability and productivity
- Can be used in areas with restricted head room
- Integrated sack compactor
- Better productivity
- Reduced dust contamination
- Easy to clean

**AVAILABLE / CUSTOM / MADE**

**FEATURES**

- Discharge chute
- Cutting area
- Dust collector (option)
- Vacuum sack lifter
- Supply of sacks to the machine
- Feeding belt conveyor (option)

**PRODUCTS**

<table>
<thead>
<tr>
<th>Products</th>
<th>Sacks per minute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium carbonate</td>
<td>6</td>
</tr>
<tr>
<td>Alumina</td>
<td>6</td>
</tr>
<tr>
<td>Caustic soda</td>
<td>6</td>
</tr>
<tr>
<td>Fumed silica</td>
<td>4</td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>4</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>3</td>
</tr>
<tr>
<td>Diatomaceous earth</td>
<td>2</td>
</tr>
<tr>
<td>Rice flour</td>
<td>6</td>
</tr>
<tr>
<td>Animal feed pellets</td>
<td>6</td>
</tr>
</tbody>
</table>

**ROTA SLIT® THROUGHPUT CAPACITIES**

**Rate:** 6 sacks/min.
**Capacity:** 15 to 50 kg/sack
**Manufacturing:** mild steel, 304L stainless steel, 316L stainless steel

**SUPPLY OF SACKS TO THE MACHINE**

- Vacuum lifter to handle effortlessly sacks for an ergonomic working station (option)

**Cutting system with rotating drum**

**Screw compactor to discharge the empty bags and to reduce dust emission**

**Opening over the compaction screw**

**Vacuum lifter to handle effortlessly sacks for an ergonomic working station (option)**

**Download videos & layouts from our website**

### Automation

The automation is an integral part of the expertise of PALAMATIC PROCESS. The ROTASLIT® machine is fully driven by our automaton so the success of the raw-material loading is guaranteed.

*Automatons: Siemens, Télémécanique, Allen Bradley, Rockwell*

### Options

- **Dust collector** ensuring healthy work environment
- **Vacuum sack lifter** for an effortless loading of the machine. The rate is guaranteed with maximum ergonomics
- **Support raiser** for the machine to enable the operator to have access to the various doors of the machine
- **Vibrating chute** allows to channel the material flow for introduction into the process downstream

- **Roller conveyor** to feed the machine
- **Belt conveyor**, horizontal or inclined. It integrates detection coils to adjust the flow rate of the machine
- **Pre-crushing of the bags** when passing bags with lumps. The passage of the bag in front of the detect sensor starts the crushing action
- **Steel - Stainless steel manufacturing** for all parts in direct contact with the handled materials

### Examples of Implementation

- **ATEX version**
- **Feeding of the machine with a vacuum sack lifter**
- **Rotating blades**

---

**Automatic Bag Dump Station**

Rotaslit®
Patented system

---

**ATEX AND EXPLOSIVE ATMOSPHERE**

Due to its design, the ROTASLIT® is particularly suitable for ATEX applications. ATEX configuration includes additional security organs such as temperature sensors, engine torque calculation, rotation controller. Our R&D department defines with you the system requirements depending on the products that you deal with.
**Automatic Bag Dump Station**

Varislit®

**Patented system**

**HIGH RATE DECONDITIONING, MULTI SACKS**

The VARISLIT® automatic bag dump station is widely used in food, pharmaceutical, chemical and agro-chemical industries. Its patented inversion system ensures a full discharge of the material and the feeding of the emptied sacks into the waste sack compactor. The optional dust extraction system provides the best solution for an efficient opening without dust contamination.

**FEATURES**

- Automatic cutting of the sacks for a rapid opening and increased productivity
- Screw compactor to compact and discharge bags into a plastic sheath to secure the outlet of the compactor
- Inside view of the VARISLIT® with the cutting system and the compacting screw
- Sacks are cut on 3 sides for a total opening and an integral emptying
- Cutting blades driving motor
- Feeding of the sacks into the feed zone
- Cutting area
- Photoelectric cell to adjust the rate of the machine
- Sack compactor
- Protective housing of the driving sprockets
- Inspection hatch
- Product output flange
- Automatic sack opening system

**TECHNICAL SPECIFICATIONS**

The rotating double blade system, which is in standard version on this machine, and its elongated shape can process large bags with an extremely high rate of discharge. The entire mechanics is positioned outside to avoid any contact with the material (bulk, powders ...).

**ADVANTAGES**

- Suitable for many types of bags - paper, polywoven, lined...
- Minimized operator’s handling
- Increased productivity
- Reduced dust contamination
- Integrated sack compactor
- Easy to clean

**VARISLIT® 6000 THROUGHPUT CAPACITIES**

**PRODUCTS**

- Coffee beans: 6-8
- PVC powders: 10-12
- Animal feed pellets: 8-10
- Sugar: 8-10
- Tea: 8-10
- Carbon black: 6-8
- Soya flour: 6-8
- Cement: 8
- Starch: 6
- Aluminium oxide: 6-8
- Caustic soda: 6-8
- Ammonium sulphate: 6-7
- Water: 6-8

**Available custom made**

**Download videos & layouts from our website**
Automatic Bag Dump Station

Varislit®
Patented system

General Layout

Options

- Hopper to add additives: pre-weighed and half sacks
- Pre-crushing of the bags during bags with lumps passage. The passage of the bag in front of the detect sensor starts the crushing action
- Extended body allows to process sacks with a maximum length up to 2 200 mm
- Vibrating chute allows to channel the material flow for introduction into the process upstream

- Stainless steel static chute for the transfer of the powders into the process
- Sack infeed conveyor allows the conveying of the sacks towards the drive belts
- Holding roller to handle sacks of less than 35 kg
- Steel - Stainless steel manufacturing for all parts in direct contact with the handled materials

Example of Implementation

Prior Installations

- Milk powder process
- ATEX zone 21 implementation
- Reactor feeding through a sifter
- Deconditioning of cement with pneumatic conveying

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Download videos & layouts from our website
**Operating Method**

The bags are opened automatically using a pair of cutting blades. The material then passes through a sifter located directly below the cutting section. This system ensures that each bag is cut at least once. The material and the open bags are then transported by gravity in a rotary drum using the screw. The rotary drum ensures that the material is effectively separated from its packaging. This drum will convey empty packaging throughout its length and then supply a full-screw compactor for collection of empty sacks in a polyethylene sheath. The material then flows through the screen situated directly under the rotating drum in a discharge chute (this action is carried out by gravity). To complete the operation, the operator simply presses on a stop button on the control panel.

**Advantages**

- Suitable for many types of bags: paper, polywoven, lined...
- Can be used in areas with restricted room
- Integrated sack compactor
- Increased productivity
- Reduced dust emissions
- Easy to clean

---

**Cutting Machine with Rotary Drum and Cutting Blade**

The Autotip 1200 can open paper, polyethylene, synthetic and hessian sacks containing materials such as plastic granules, coffee beans, tea and rice.

This machine, the biggest of the range, is designed to open bags at the rate of 15 to 20 bags per minute (up to 60 tons per hour).

---

**Automatic Bag Dump Station**

- **Rate:** 15 sacks/min.
- **Capacity:** 15 to 50 kg/sack
- **Manufacturing:** mild steel. 304L stainless steel. 316L stainless steel

---

**Falling conveyor for pallets of sacks**

**Empty pallet stacker**

**Pallet tipper and infeed conveyor for sacks**

**Rotative drum separation of powders and sacks**

**Types of handled sacks: paper and polyethylene**

**Cutting system with rotative drum**

**Vibrating chute allows to channel the material flow for introduction into the process upstream**

---

**Feeding Process**

1. Infeed conveyor
2. Supply of full pallets
3. Tilting of the full pallet directly into the machine
4. Pre-cutting of the sacks

---

Download videos & layouts from our website: www.palamaticprocess.com/powder-machine/sack-solutions/Autotip
General Layout

Example of implementation

Strengths

- Sacks conveyor for the transport of pallets to the cutting system
- Empty sack compactor for a clean working area
- Automatic unstacker for a loading of the pallet without operator’s intervention
- Vibrating chute to ease and control the flow of the material

Medias

- Discover our machines on our YouTube channel

Prior Installations

- Sack opening line at a polyethylene manufacturer
- Plastic injection plant
- Feeding of the plant by extrusion

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Drum Dump Station

Our handling tools allow easy handling, lifting, turning and emptying of drums and barrels. Thanks to our many options available, the operator can completely or partially empty the contents of drums, into hoppers, reactors, or mixers manholes. PALAMATIC PROCESS design office offers multiple solutions to manually or automatically empty drums (tipping or turning system) according to your site constraints...

DrumFlow® 01
Suction pipe

- Emptying directly on the pallet, without drum manipulation
- Suction by VFlow® pneumatic conveying range

[+] Advantages
- No drum manipulation
- All sizes
- Ease of use

DrumFlow® 02
Discharge by sack extraction

- Confined dump station
- Drum connection on dump enclosure
- Removal of the inner sack layer for emptying

[+] Advantages
- Confinement
- Possibility to empty sacks
- Raw material dosing

DrumFlow® 03
Tilting

- Emptying by tilting directly on a collecting hopper
- Options: suction booth, handling conveyor, facilitated product flowing

[+] Advantages
- All sizes
- No drum manipulation
- Completely confined emptying by means of containment and sealed connection

DrumFlow® 04
Tilting and containment

- Completely confined emptying by means of containment and sealed connection

[+] Advantages
- Total containment
- No manipulations
- CMR toxic products applications

Discharge of end products stored in drums to feed a packing system

Drum discharging for mixer feeding

± Advantage

The DrumFlow® 01 solution prevents the operator from handling the drums that can be left on the pallet

Drum discharging for mixer feeding

± Advantage

Integration of a weighing device, weight gain or loss-in-weight

Drum discharging for mixer feeding

± Advantage

Discharge of end products stored in drums to feed a packing system

Drum discharging for mixer feeding

± Advantage

Our engineering office offers you turnkey customized solutions according to your product constraints, applications and drum dimensions.
Barrel Dump Station

DrumFlow®

Advantages

- Compatible with drums fitted with internal sack
- Tonic products applications
- Adjustable to all drum-types
- Maximal containment enclosure for a healthy workplace

1. Protective screen
   - It is positioned near the tilting engine and guarantees the operator's security
2. Lock system
   - The cycle start is forbidden when the door is open
3. Security area
   - Between the conveyor and the tipping device, it avoids all risks of collision and ensures the installation reliability

OPERATING MODE

-operative time of a complete cycle: 2 min.

1. The drum positioning on the inlet conveyor.
2. The drums are led by gravity to the emptying area.
3. The first drum is put at the positioning stop; rubber pads ensure drum accommodation without any impact.
4. When the drum is positioned, the operator can start the tipping cycle. The control of the cycle is conducted by means of two push buttons for lifting and two buttons for descending of the drum. The tipping is ensured by a gearmotor. The moving assembly arrives to abutment against the rubber pads.
5. When emptied, drums return to their initial position under the operator's control.
6. The operator can then manually move the drums to the soiled drums station.

TECHNICAL SPECIFICATIONS

- Rate: 1 barrel/2 min.
- Manufacturing: framework in painted steel/stainless steel
- Loading capacity: 250 kg
- Angle: up to 180°
- Drum tipping: electrical engine of 5.5 kW
- Drum containment: pneumatic cylinder with sealing control by overpressure

OPERATING MODE

1. Drum placing on the inlet conveyor and on tipping cradle
2. Drum confinement is assured by cradle lifting on the containment cone. The internal cone forks prevent the reversal of the internal sack
3. Drum tilting
4. Connection to the hopper by means of inflatable seal and dump valves opening

TECHNICAL SPECIFICATIONS

- Rate: 1 drum/4-5 min.
- Manufacturing: framework in painted steel/stainless steel
- Loading capacity: 250 kg
- Angle: up to 180°
- Drum tipping: electrical engine of 7.5 kW
- Drum containment: pneumatic cylinder with sealing control by overpressure

OPERATING MODE

- Connection: by low-pressure inflatable seal
- Draining butterfly valve: DN150
- Product flow assistance: fluidiser on the discharge cone, vibrator on the cone or drum bottom
Our expertise:

- **FILLING SOLUTIONS FOR BIG BAG AND OCTABIN**
  To fill

- **EMPTYING SOLUTIONS FOR BIG BAG AND OCTABIN**
  To empty, compact and massage

- **SACK, DRUM AND CARDBOARD FILLING SOLUTIONS**
  To fill, package, handle

- **SACK AND DRUM EMPTYING SOLUTIONS**
  To empty, compact, handle, discharge

- **SOLUTIONS FOR PNEUMATIC CONVEYING**
  Vacuum, pressure

- **SOLUTIONS FOR MECHANICAL CONVEYING**
  To transfer with screw, belt conveyor, bucket elevator, aeromechanical or vibratory conveyor, truck loading spout

- **CRUMBLING AND GRINDING EQUIPMENT**
  To granulate, crumble, grind, pound, micronise, disagglomerate

- **SIFTING EQUIPMENT**
  To sift, segregate, sieve, protect

- **CONTAINERS AND STORAGE SOLUTIONS**
  To fill, charge, empty, contain

- **DOsing equipment**
  To control, regulate, empty, extract

- **MIXING EQUIPMENT**
  To homogenise, incorporate, fluidify, stir, mix

- **FLOW AND CONNECTION**
  To vibrate, fluidise, unclog, drain, facilitate extraction, control the descent, prevent stacks and vaults, connect

- **INDUSTRIAL DUST COLLECTING EQUIPMENT**
  To filter, clean, confine, secure

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The know-how of our teams • the energy of a group