



SOLUTIONS for Sack

- EMPTYING
- COMPACTING
- HANDLING
- FILLING



Powder Handling Solutions

CONTENT



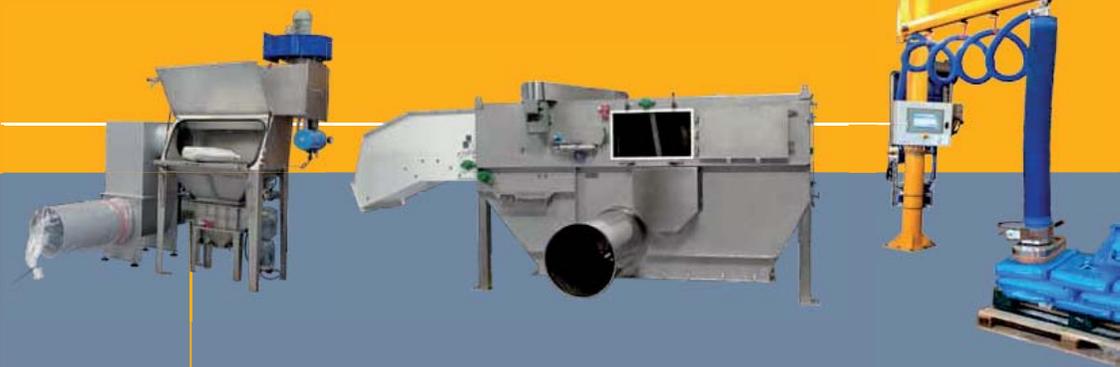
Means that the equipment is available for testing at PALAMATIC PROCESS



Means that the equipment can be installed in ATEX zone



Means that design and options can be customised



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Basic configurations and applicable options

CAPTION: X Included Options Not available

	Sacktip®	Sacktip® Enclosed	Sacktip® Hygienic	Custom made manual unit	Ergotip®	SAS®	Minislit®	Rotaslit®	Varislit®	Autotip®
Sack opening rate (the highest rate may vary according to the operator and the type of sack)	4 - 6 sacks/min.	2 sacks/min.	4 - 6 sacks/min.	2 - 6 sacks/min.	6 sacks/min.	3 - 6 sacks/min.	6 sacks/min.	6 sacks/min.	6 - 12 sacks/min.	15 sacks/min.
Mobile station on wheels										
Dust-proof door		X			X	X				
Security screen	X	X	X		X	X	X	X	X	X
Sliding bars		X			X	X				
Foldaway tray	X		X		X	X				
Gravity roller table		X					X	X	X	X
Motorized infeed belt conveyor							X	X	X	X
Integrated sack compactor						X	X	X	X	X
Integrated dust collector										
Integrated lump breaker										
Clean In Place (C.I.P.)										
Dosing and weighing										
Hygienic application			X							

Utilities

Input TOR	0	0	0	According to design	3	5	11	10	9	37
Output TOR	1	1	1	According to design	3	11	3	4	2	13
Installed power (KW)	0,1	0,1	0,6	According to design	0,1	2,5	4,4	5,2	4,5	19,7
Power supply voltage	230V./400V. TRI	230V./400V. TRI	230V./400V. TRI	230V./400V. TRI	230V./400V. TRI	230V./400V. TRI	230V./400V. TRI	230V./400V. TRI	230V./400V. TRI	230V./400V. TRI
Service pressure (bar)	6	6	6	6	6	6	6	6	-	-
Average power consumption (KWh)	0,1	0,1	0,3	According to design	0,1	1,0	4,0	3,5	3,2	9,9
Compressed air consumption (Nm³/h.)	4,3	4,3	-	According to design	5,0	6,3	2,0	2,0	-	-
Dust collecting rate (m³/h.)	-	Depending on the model chosen		According to design	-	-	800	800	1500	2000

Sacktip®: manual bag dump station Standard



4 standard models:
S 800 - S 1000 - S 1200 - S 1400

Rate: 4 - 6 sacks/min.
Objective: Ergonomics

MANUAL AND ERGONOMICAL UNLOADING

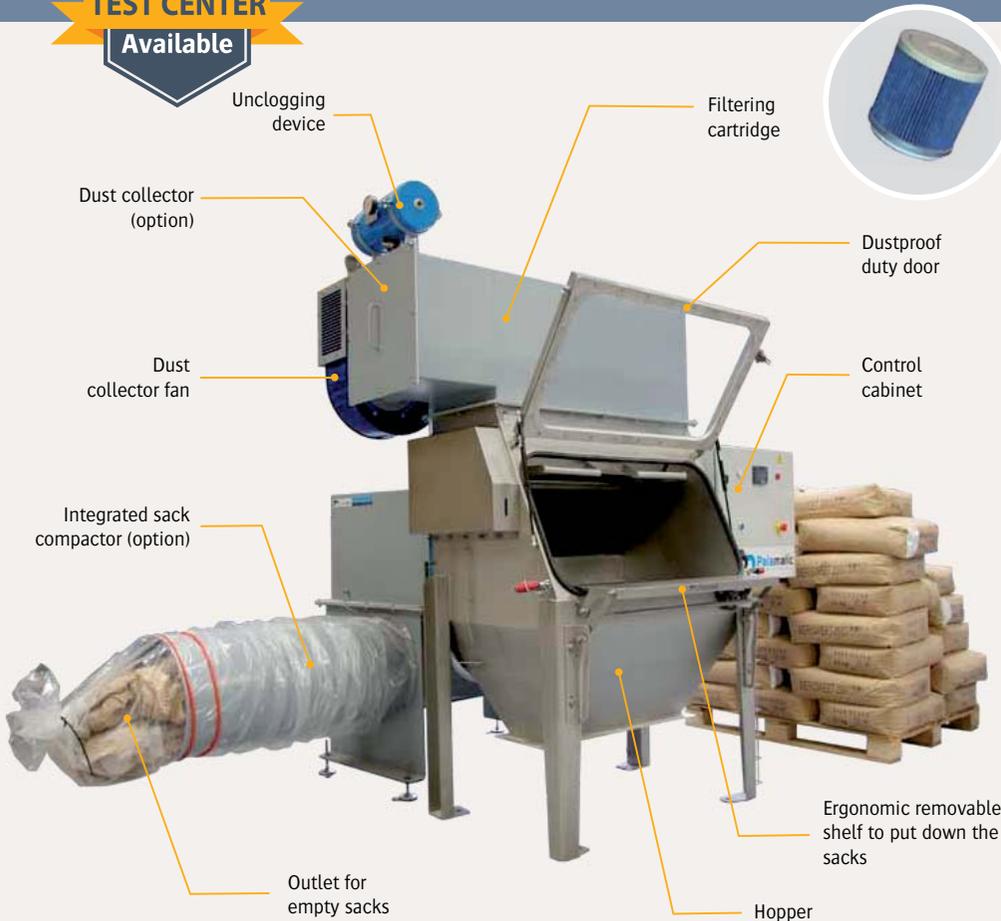
The PALAMATIC PROCESS dumping units are designed to reduce material waste and to ensure an effective dust collection during the manual process of opening and discharging of the bag. All sack stations are provided with dedusting tappings or integrated filters and containment systems for empty packaging.

MANUFACTURING

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

OPERATING SEQUENCE

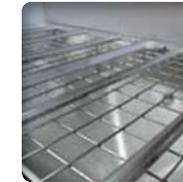
1. Open the door and set up of the removable table
2. Position the bag on the shelf and on the sieve
3. Open the bag
4. Empty the bag
5. Disposal of empty sack into the discharge chute or bag compactor (containment of the waste in a polyethylene sheath)



▶ **The gas cylinders** allow the heavy-duty door to be lifted with ease and firmly maintained in an open position



▶ **Ergonomic removable table to put down sacks:** immediate rest area; stand back for feet clearance; limited space requirement; ergonomic height between 810 mm and 1,075 mm for heavy load; dust-proof closure of the door during the phases of unclogging or CIP



▶ **Internal sieve to support the bags with sliding bars** helps positioning the sack and protects the process from foreign bodies with a mesh in the lower part of the unit



▶ **Product outlet chute adapted to each particular case:** the slope of the hopper allows clearance for knees and feet

Advantages



STANDARD MODELS

4 Models	Ref :	S800	S1000	S1200	S1400
Length of the sack (mm)		650	850	1050	1250
Flow required for dedusting nozzle (m³/hr.)		800	1000	1200	1400
Volume* of the hopper (L) <small>*volume of water</small>		180	225	265	300
Unloading diameter (DN)		250			
Height from ground from the drain flange (mm)		285			

* The volume of the hopper is defined according to the need of the process.

OPERATING SEQUENCE



Options



Vacuum sacks lifter



Nozzles/washing rotary heads (CIP)

See all our options on pages 18-19

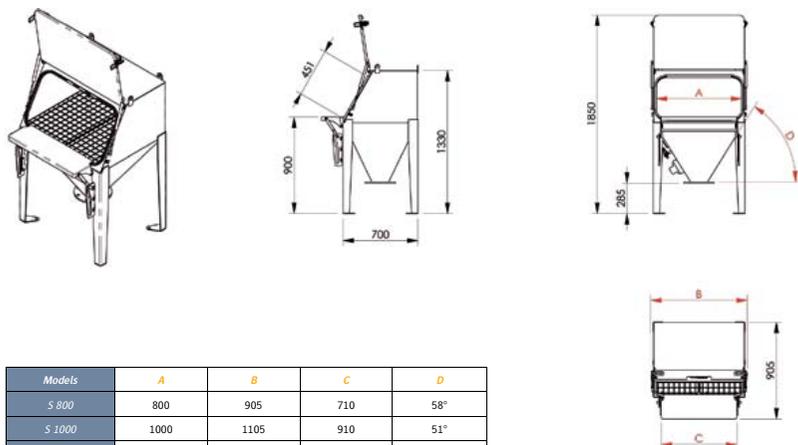
Sacktip®: manual bag dump station Standard



4 standard models:
S 800 - S 1000 - S 1200 - S 1400

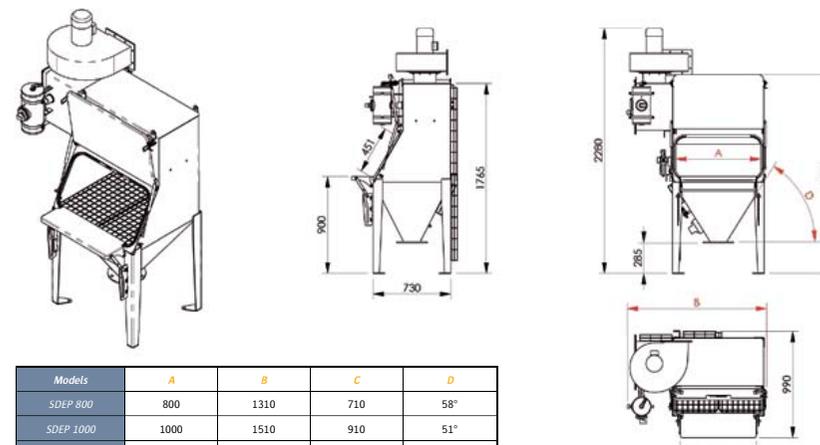
Sacktip®

MANUAL BAG DUMP STATION



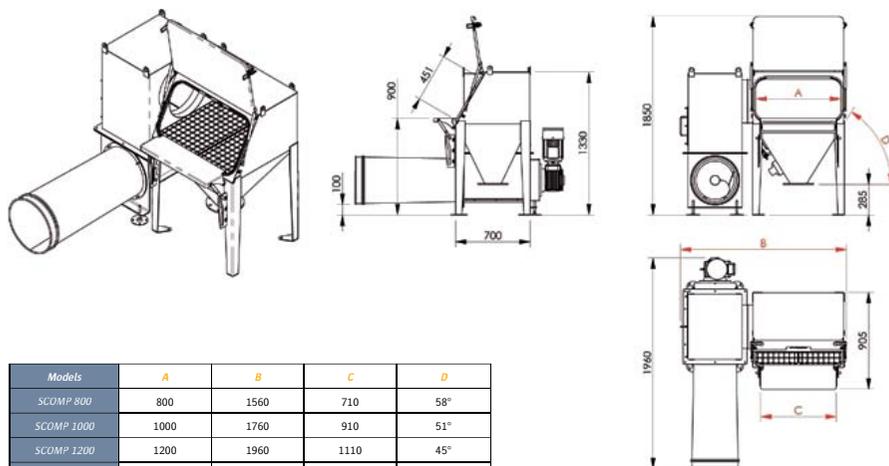
Models	A	B	C	D
S 800	800	905	710	58°
S 1000	1000	1105	910	51°
S 1200	1200	1305	1110	45°
S 1400	1400	1505	1310	41°

OPTION: DUST COLLECTOR



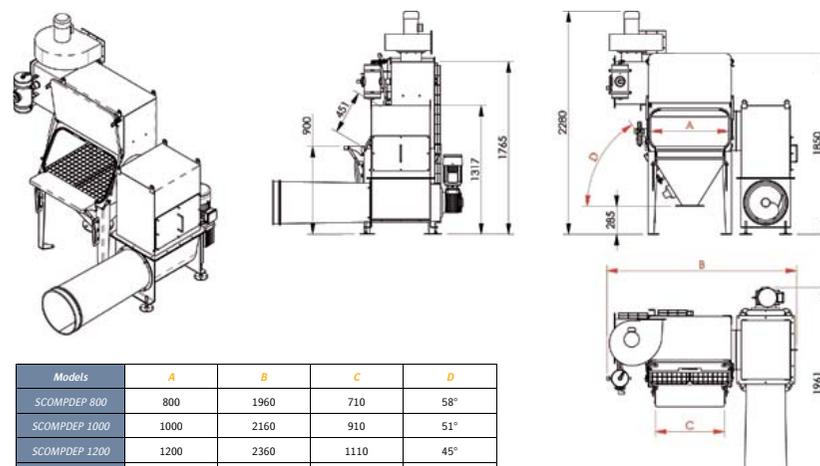
Models	A	B	C	D
SDEP 800	800	1310	710	58°
SDEP 1000	1000	1510	910	51°
SDEP 1200	1200	1710	1110	45°
SDEP 1400	1400	1910	1310	41°

OPTION: COMPACTOR



Models	A	B	C	D
SCOMP 800	800	1560	710	58°
SCOMP 1000	1000	1760	910	51°
SCOMP 1200	1200	1960	1110	45°
SCOMP 1400	1400	2160	1310	41°

OPTIONS: COMPACTOR AND DUST COLLECTOR



Models	A	B	C	D
SCOMPDEP 800	800	1960	710	58°
SCOMPDEP 1000	1000	2160	910	51°
SCOMPDEP 1200	1200	2360	1110	45°
SCOMPDEP 1400	1400	2560	1310	41°

Sacktip® Enclosed: manual bag dump station



Sacktip® Enclosed

4 standard models:
SE 800 - SE 1000 - SE 1200 - SE 1400

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

OBJECTIVES

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

Dust containment

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



▶ **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 to 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

Advantages



STANDARD MODELS

4 Models	Ref :	SE 800	SE 1000	SE 1200	SE 1400
Length of the sack (mm)		650	850	1050	1250
Flow required for dedusting nozzle (m ³ /hr.)		400	500	600	700
Volume* of the hopper (L) <small>*volume of water</small>		180	225	265	300
Unloading diameter (DN)		250			
Height from ground from the drain flange (mm)		285			

* The volume of the hopper is defined according to the need of the process.

ALTERNATIVES

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



Lump breaker



Drum unloading

See all our options on pages 18-19

Sacktip® Hygienic : manual bag dump station

Integrated sieve

AVAILABLE
CUSTOM
MADE

Standard model SH 800
Possibility of customization

Rate: 4 to 6 sacks/min.
Objective: protection

OBJECTIVES

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



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



Solution for hygienical process

Sacktip® Hygienic

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.

Options



Gloves

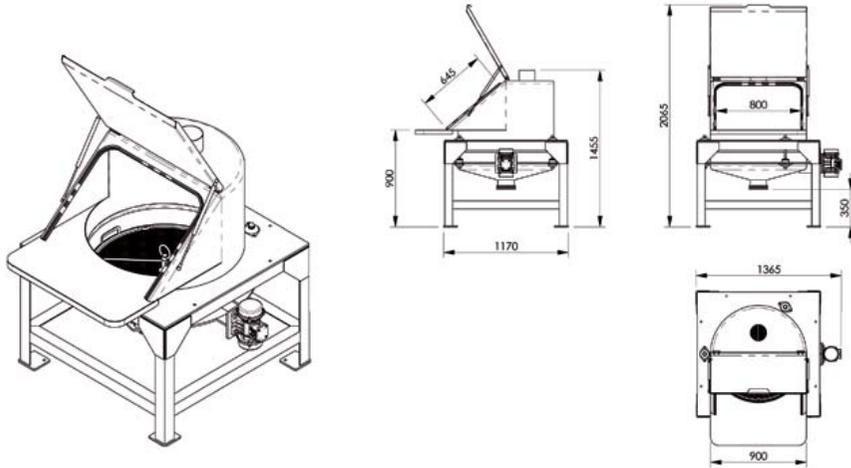


Vacuum sacks lifter

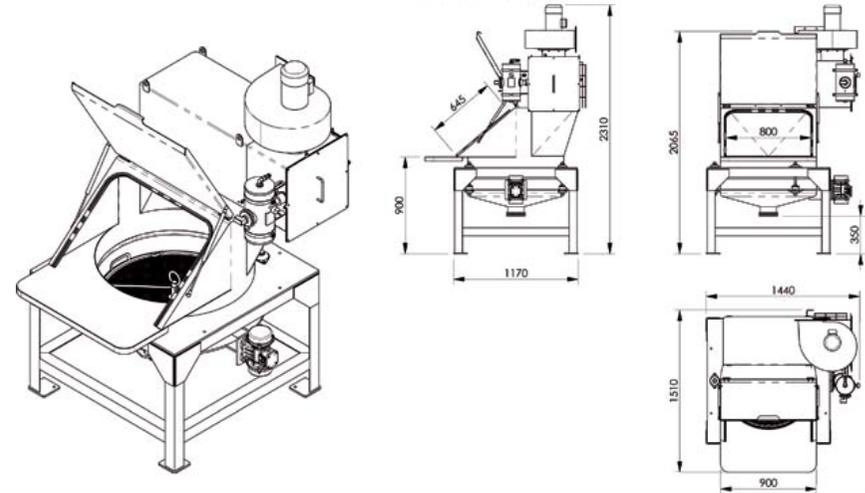
Sacktip® Hygienic: manual bag dump station _____ Integrated sieve

Standard model: SH 800

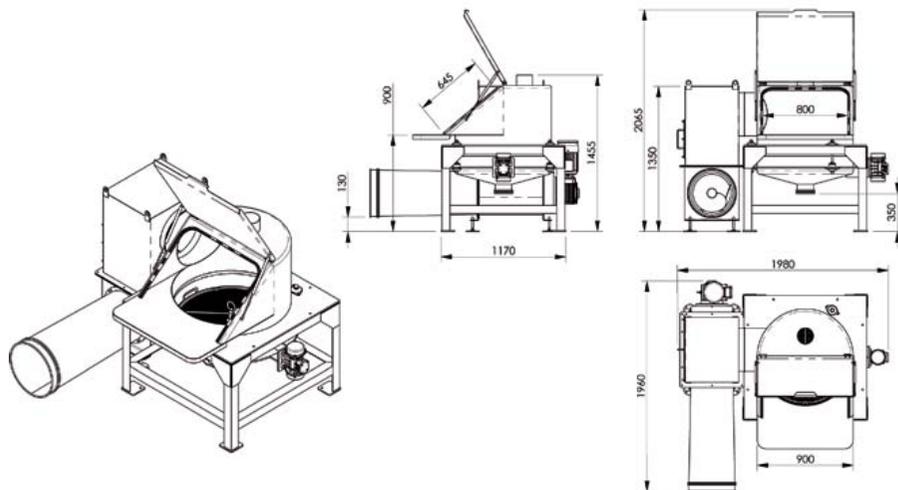
MANUAL BAG DUMP STATION - SH 800



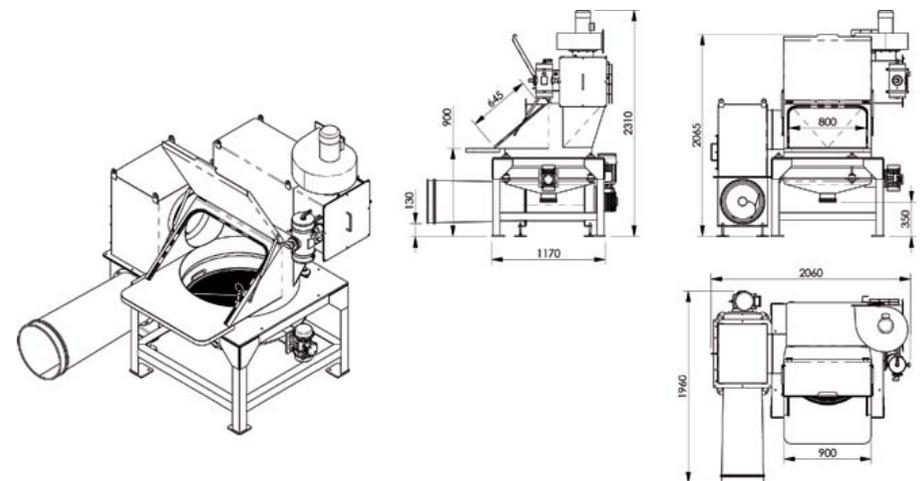
OPTION: DUST COLLECTOR - SHDEP 800



OPTION: COMPACTOR - SHCOMP 800



OPTIONS: COMPACTOR AND DUST COLLECTOR - SHCOMPDEP 800



Manual bag dump station Custom Made



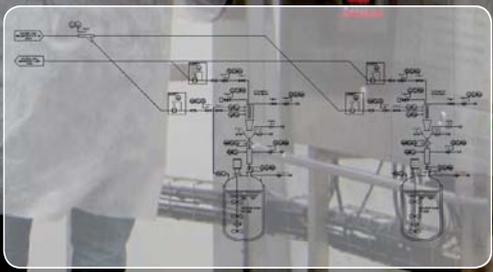
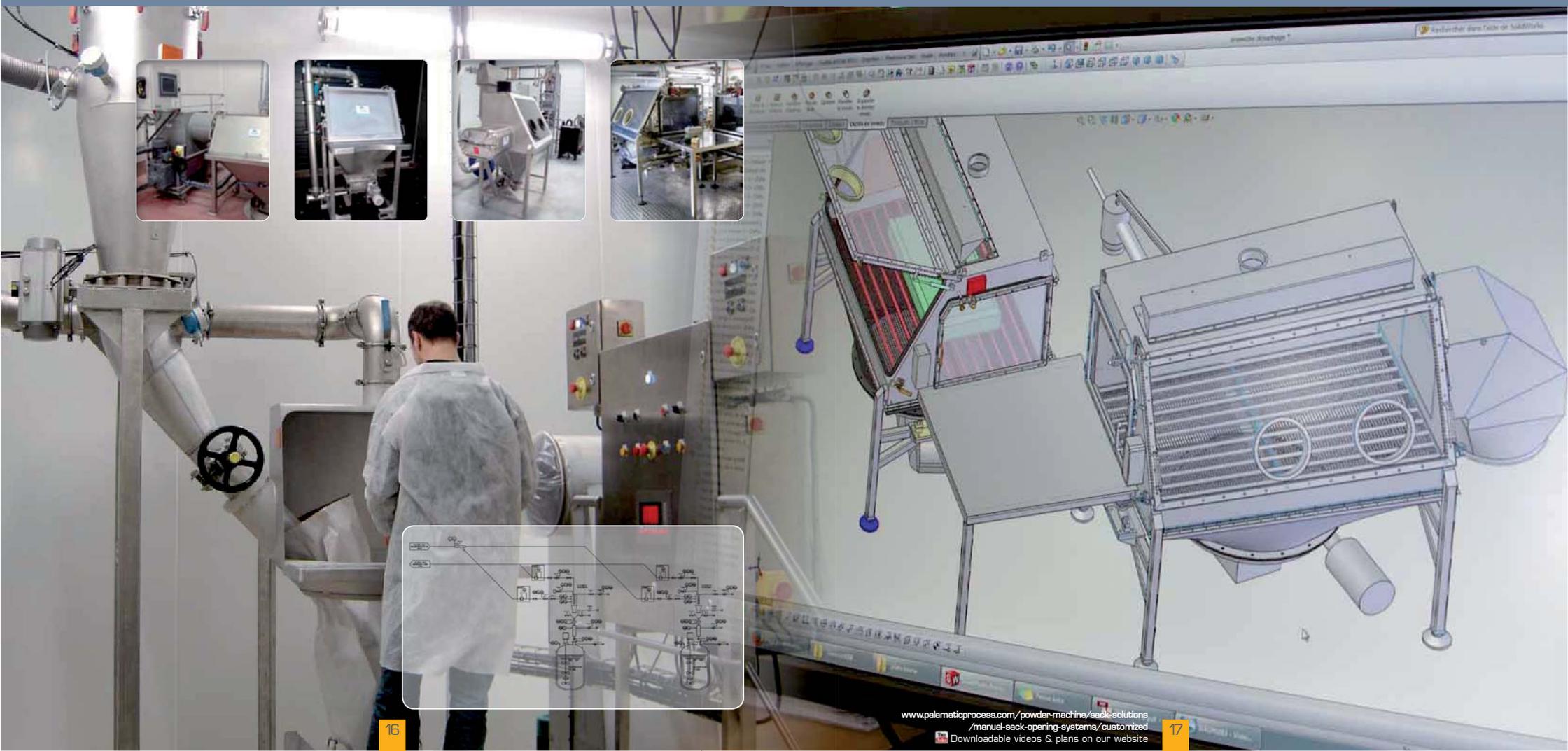
Custom Made

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...





▶ 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 bags or small sacks to be opened and dumped into a process in a close 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 hygiene process by eliminating foreign substances.

The magnetic bars, implanted on the dumping system offer protection on the quality of materials brought into your process. 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 the 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 inform the process of the quantity of powder introduced, the unloading hopper can be mounted on load cells.

Number of cells: 4
 Weighing accuracy: < 1kg
 Implementation: shock absorber + anti-failover device
 Input signal 4-20 mA
 Possible profibus 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 nozzles: 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 your hopper wall.

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 particle size of a powder 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 to reduce waste and maintains a healthy, dust-free environment. It can be mounted on one side or the other of the hopper. The compacted sacks are contained within a polyethylene sheath (up to 60 sacks/m. - 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.

Sack Compactor



All types of sacks

Compression ratio: 60 sacks/min.*
*Depending on the type of bag

OBJECTIVES

Contain dust and minimize dust volume.

TECHNICAL SPECIFICATIONS

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...)

Manufacturing:

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

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.



TYPE OF SACKS	SIZE OF SACKS in mm	NUMBER OF LAYERS	COMPACTING RATE
Paper	780 x 450 x 150	4	40-50 sacks/m. of sheath
Paper with liner	950 x 520 x 225	2	40 sacks/m. of sheath
Paper with aluminium liner	950 x 520 x 225	2	40 sacks/m. of sheath
Plastic	650 x 420 x 100	1	60-65 sacks/m. of sheath
Synthetic	850 x 480 x 90	1	55-60 sacks/m. of sheath
Synthetic with liner	850 x 480 x 90	2	50-55 sacks/m. of sheath
Hessian	950 x 510 x 170	1	30-35 sacks/m. of sheath
Double hessian	950 x 510 x 170	2	20-25 sacks/m. of sheath



▶ **Compacting screw**



▶ **Handling wheels** for mobility of the equipment (optional)



▶ **Ergonomic access for the operator:** the height is appropriate and it is possible to integrate a platform

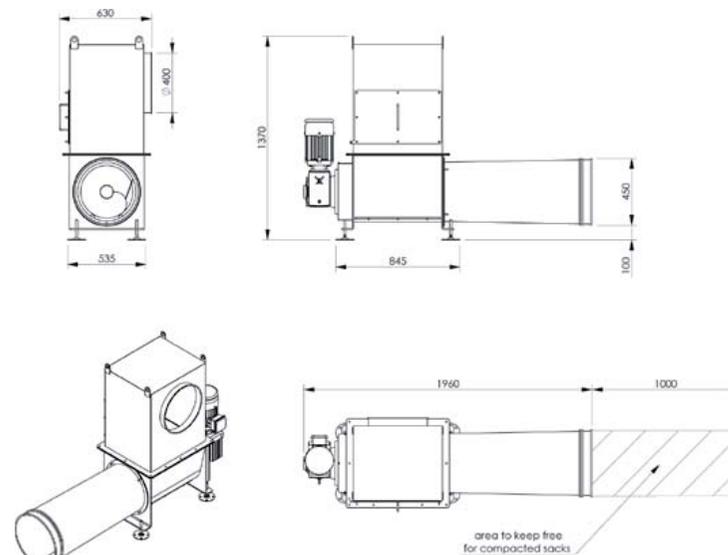


▶ **100 % hermetic containment sheath,** clean working environment and possibility to recover residual fines by specific tray

Advantages



CBU Model (Compactor Bag Unit)



Positionings

Examples of possible positionings



Vacuum sack lifter

Ex AVAILABLE CUSTOM MADE

Vacuum Sack Lifter

All types of sacks

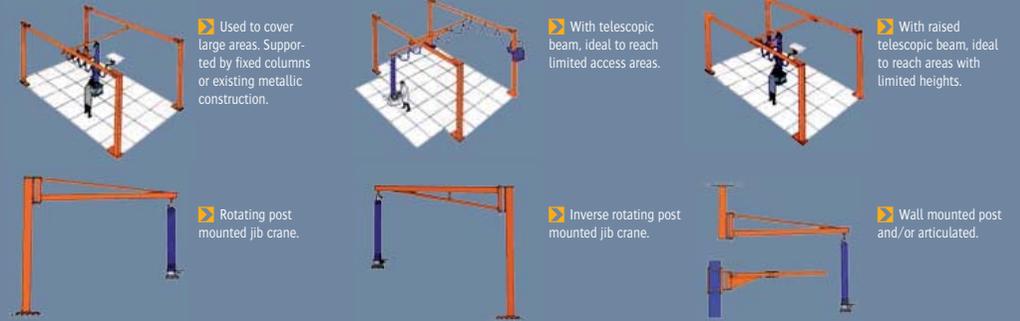
OBJECTIVES

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

Advantages :

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

EXAMPLES OF INSTALLATIONS



Triangular post mounted jib crane to provide a lifting stroke of 1,700 mm (overhead room 3m.)

Suction tube

Direct transmission vacuum pump which significantly reduces maintenance and noise (75 dB)

360° rotation lifting tube

Lifting head

Large suction foot

Sack dumping unit

Air filter for handling dusty bags



▶ **Roller conveyor:** possibility to install the manipulator near the roller conveyor to improve the ergonomics of the work station



▶ **Vacuum sack lifter:** fitted with a control handle equipped with a stay-put Lever valve allowing a self-stabilization of the load at any height, without any adjustment. Ergonomic handle design, preventing wrist elongation

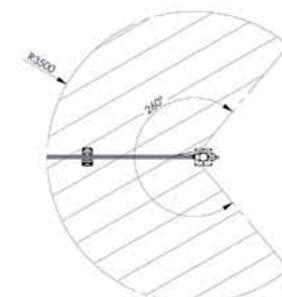
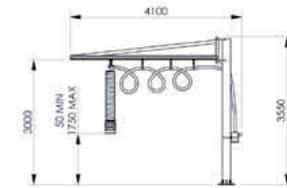
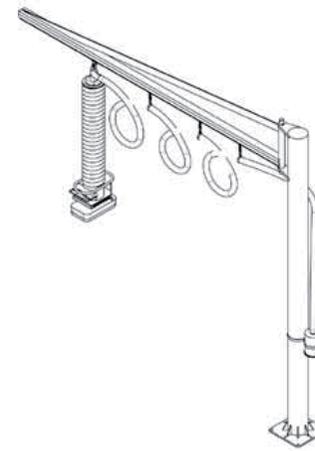


▶ **Rubber bale**



▶ **Hessian bags:** vacuum spike gripper to lift sacks of grains

Advantages



Options



Protection cover



Oversized filter for dusty bags

See all our options on pages 18-19

Suction booth



Rate: 200 to 2,000 m³/hr.
Installation: ground, table, wall
Objective: to ensure good distribution of the suction flow around the workplace

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: 9006 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



▶ Suction booth on table



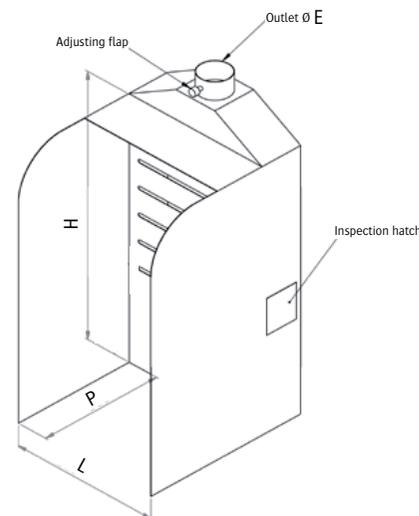
▶ Suction booth with integrated scale



▶ Suction booth for racking



▶ Room for pre-weighing



ANDEP	Dimensions	Ø E
800	L 800 x P 800 x H 1 350	Ø 200
	L 800 x P 1 000 x H 1 600	
1 000	L 1 000 x P 800 x H 1 350	Ø 250
	L 1 000 x P 1 050 x H 1 650	
	L 1 200 x P 800 x H 1 350	
1 200	L 1 200 x P 1 100 x H 1 650	Ø 300
	L 1 500 x P 1 100 x H 1 700	
1 500	L 1 500 x P 800 x H 1 350	Ø 300
	L 1 500 x P 1 100 x H 1 700	
2 000	L 2 000 x P 800 x H 1 350	Ø 300
	L 2 000 x P 1 100 x H 1 700	

Slot for distribution of the aspiration

Protection of the working area

Options



Sack unloading unit with dedusting panels



Small packagings skid set up

See all our options on pages 18-19

Pouyès ring



Rate: 150 to 400 m³/hr.
Installation: reactor, tank, drum..
Objectives: easy unloading of small conditionings, 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 equipments, 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: 0.6 to 1 m./s.
Air velocity reached in dedusting piping: 25 m./s.
ATEX grounding clamp
Weight: 10 to 50 kg



➤ **Simplified ring** for suction on the periphery of a vertical mixer vertical



➤ **Clamping ring** for drum filling



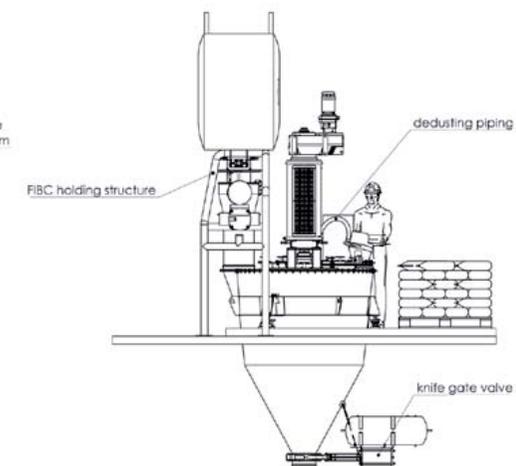
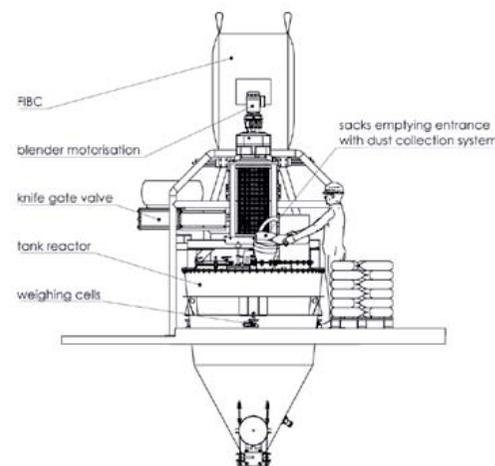
➤ **System connected directly to the reactor** for introducing the raw material. The system is removable for pressurization of the reactor



➤ **Dedusting of the working area**

Advantages

EXAMPLES OF INSTALLATIONS



Automatic bag dump station



Ergotip®

Ergotip®
Patented system

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

TECHNICAL SPECIFICATIONS

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

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.



- ▶ Integrated sack compactor
- ▶ Integrated dust collector
- ▶ Pneumatic cutting cylinder with accumulator for more efficiency cutting
- ▶ Holding bar and cutting blade

Advantages



OPERATING SEQUENCE

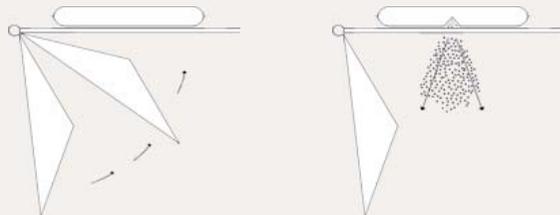


- ▶ The operator puts down the sack on the grate and closes the duty door.
- ▶ The blade performs a cut on the bottom of the bag.
- ▶ Shaking of the sack without effort and without heavy lifting of the sack. The operator does not have to return the bag.
- ▶ Flowing of the material into the hopper.

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.

Automatic bag dump station



SAS®

SAS®

Patented system

Rate: 3 to 6 sacks/min.
Capacity: 15 to 50 kg/sack
Manufacturing: mild steel, 304L stainless steel, 316L stainless steel

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 door closed, 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 sack manually. The machine is supplied with a complete control cabinet to ensure the rate you require.

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 comes 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



➤ **Internal mobile parts** of the machine ensuring the shaking and the ejection of the sacks



➤ **External gearing**



➤ **Screw compactor** for the evacuation of the emptied sacks and the reduction of dust emissions

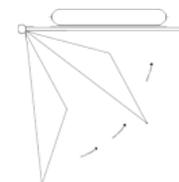


➤ **Ejection** of empty bags into the compactor

Advantages



OPERATING PRINCIPLE



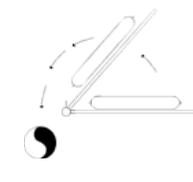
1. Articulated cutting blade



2. Programmable cutting cycle



3. Shaking of the sack with articulated plates



4. Ejection of the emptied sack to the compactor

Options



Sack lifter



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

See all our options on pages 18-19

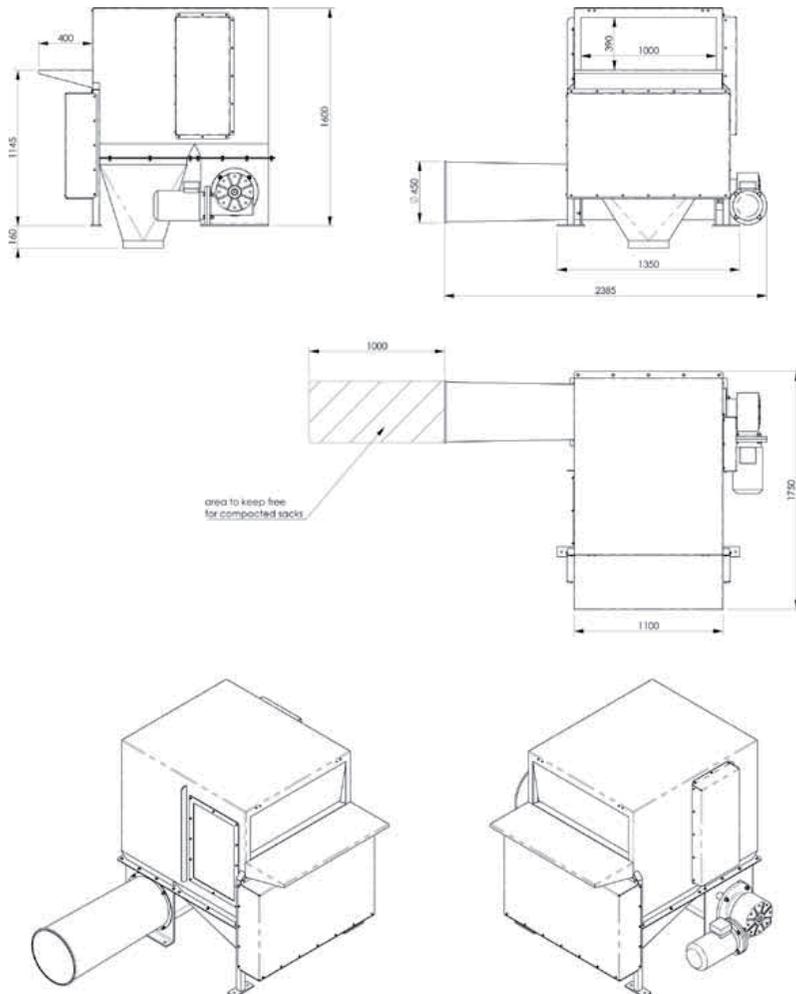
Automatic bag dump station

SAS®

Patented system

SAS®

► GENERAL LAYOUT



The SAS® bag dump system allows, due to its mode of operation, the deconditioning of explosives 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 bags opening is made with closed door: no external ATEX risk.



Automatic bag dump station



Minislit®

Minislit®

Patented system

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

AUTOMATIC OPENING WITHOUT ANY ADJUSTMENT

Designed to open bulk sacks of pulverulent, the automatic dump bag station MINISLIT® is available with a band 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 processes 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 the handling by the operator
- Increased productivity
- Reduced dust contamination
- Integrated dust collecting device (option) and sack compactor
- The band-saw cutting system is available with various options: carbon steel (high speed), stainless steel or diamond coated for applications with abrasive materials.



➤ The belt conveyor transports the bag directly to the band-saw cutting system



➤ Vacuum sack lifter and belt conveyor



➤ Screw compactor for evacuation of empty bags into a plastic sheath and reduction of dust emissions

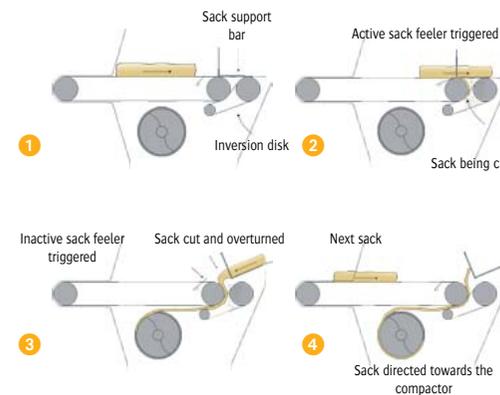


➤ External gearing

Advantages



OPERATING PRINCIPLE



MINISLIT® THROUGHPUT CAPACITIES

PRODUCTS	Sacks per minute
Peanuts	8
Coffee beans	6
PE / LDPE granules	8
Lentils	6-8
Animal feed pellets	5
Dicalite	6-8
Sugar	4-6
Tea	5
PVC powder	4-5
Carbon black	4-6
Soya flour	4-5
Cement	5-6
Starch	4
TiO2	4-5
Aluminium oxide	3-4
Caustic flake	3-4
Ammonium sulphate	3-4
Milk powder	5-6
Filter aid	4-5



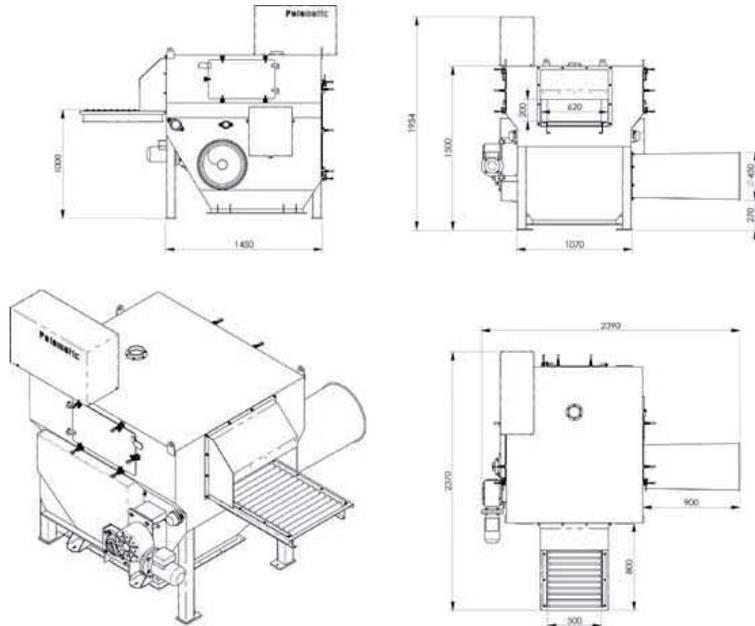
Automatic bag dump station

Minislit®

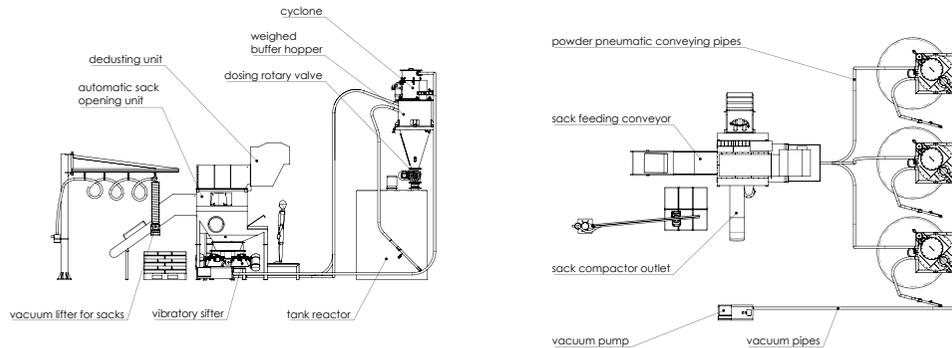
Patented system

Minislit®

▶ GENERAL LAYOUT



▶ EXAMPLE OF IMPLEMENTATION



▶ 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 production



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 part of our test center for easy testing of any type of bags.

These industrial-scale tests are a guarantee of results and success of your project.



▶ EXAMPLES OF INSTALLATIONS



▶ Application in the paint industry



▶ Application in the food industry



▶ Facility for seeds

Automatic bag dump station



Rotaslit®

Rotaslit®

Patented system

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

DECONDITIONING OF MATERIALS WITHOUT ANY ADJUSTMENT

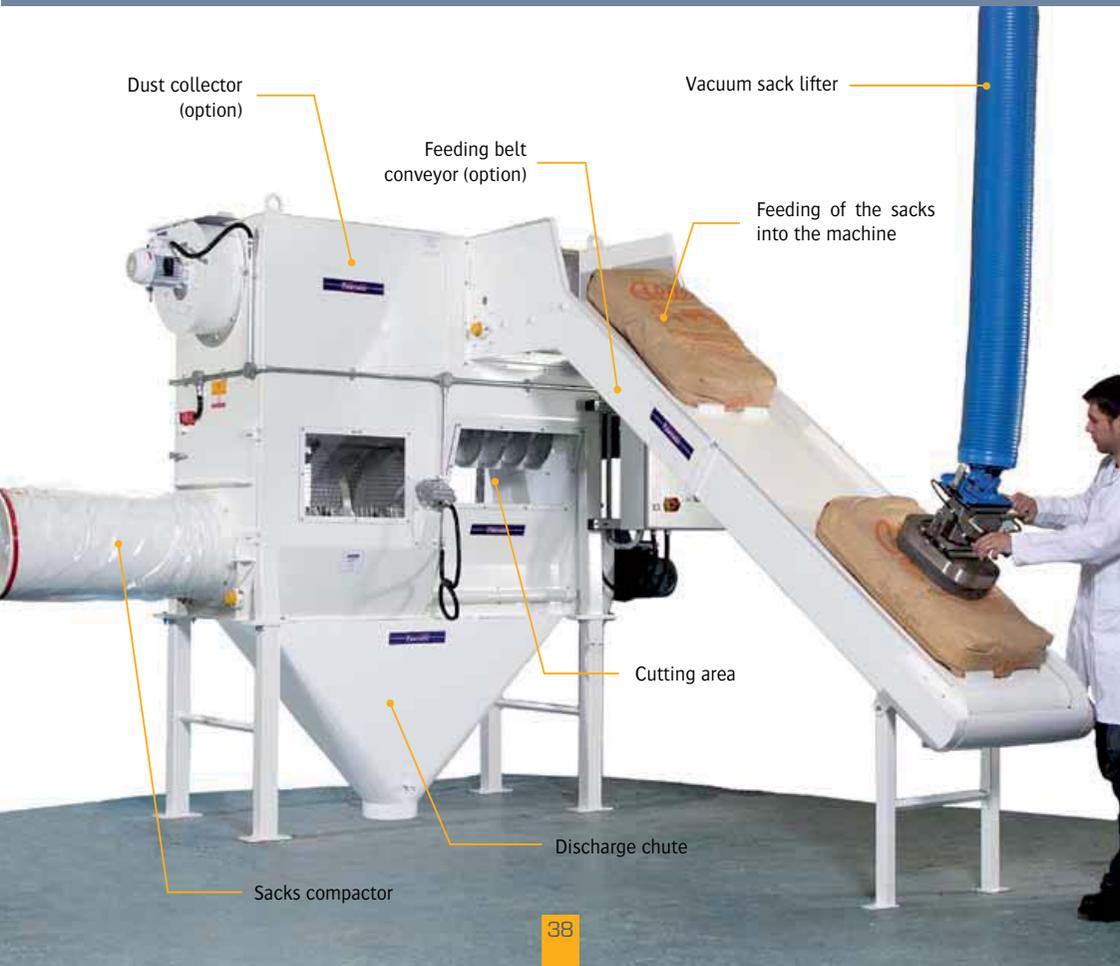
The ROTASLIT® opening unit is widely used in food, pharmaceutical, chemical and agrochemical industries. The bags are cut by a multi-blade shaft and transferred by the compacting screw compactor into the drum. The dust extraction option offers the best solution for rapid automatic opening of sacks with no dust. It was developed into operation on platforms to facilitate the incorporation of raw materials in the process. This automatic machine uses only one 3 kW motor.

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 to accept bags oriented in the length or width and the ability to process large varieties of packagings such as boxes or sacks covered with paper or plastic and plastic or paper bags. Like all the other PALAMATIC PROCESS automatic bag dump stations, its conception facilitates cleaning and maintenance with minimal retention points, flanges and gaskets. This sack opening unit can process 10 tons of material per hour (depending on the fluidity of the bulk material) and is available in steel or stainless steel.

ADVANTAGES

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



✂ Cutting system with rotating drum



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



✂ Opening over the compacting screw



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

Advantages



Inner turbine system

ROTASLIT® THROUGHPUT CAPACITIES

PRODUCTS	Sacks per minute
Peanuts	6
Coffee beans	6
PE / LDPE granules	6
Lentils	6
Animal feed pellets	4
Dicalite	6
Sugar	4
Tea	6
PVC powder	3-4
Carbon black	4
Soya flour	6
Cement	4-6
Starch	3
TiO2	3-4
Aluminium oxide	4-6
Caustic flake	4-6
Ammonium sulphate	5
Milk powder	4
Filter aid	6

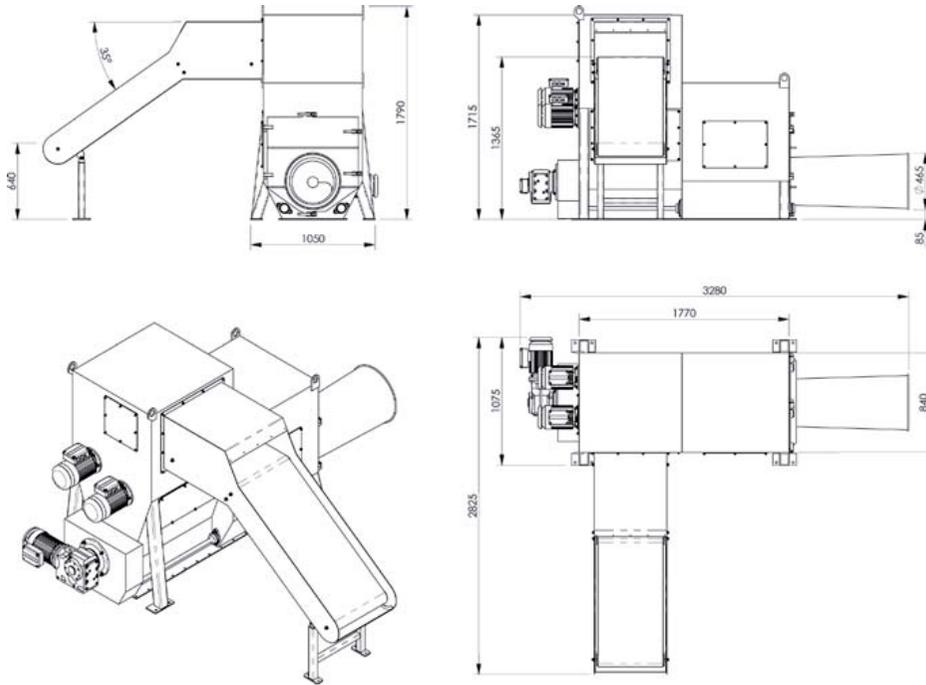
Automatic bag dump station



Rotaslit®

Patented system

▶ GENERAL LAYOUT



▶ EXAMPLES OF IMPLEMENTATION



▶ ATEX version



▶ Feeding of the machine with a vacuum sack lifter



▶ Rotating blades

▶ 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.

▶ AUTOMATION

The automation is an integral part of the expertise of PALAMATIC PROCESS. The ROTASLIT® machine is fully driven by our automaton so that the process of loading raw materials is successful.

Automatons: Siemens, Télémécanique, Allen Bradley, Rockwell

▶ OPTIONS



Dust collector ensuring healthy work environment



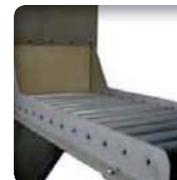
Vacuum sack lifter for an effortless loading of the machine. The rate is guaranteed with maximum ergonomics



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 cells 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 materials handled



Automatic bag dump station



Varislit®

Patented system

Rate: 6 to 12 sacks/min.
Capacity: 15 to 50 kg/sack
Manufacturing: mild steel, 304L stainless steel, 316L stainless steel

HIGH RATE DECONDITIONING, MULTI SACKS

The VARISLIT® automatic bag dump station is widely used in the 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.

TECHNICAL SPECIFICATIONS

The rotating double blade system, which is standard 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...
- Minimize the handling by the operator
- Increased productivity
- Reduced dust contamination
- Integrated sack compactor
- Easy to clean

Varislit®



➤ **Automatic cutting of the sacks** for a rapid opening and increased productivity

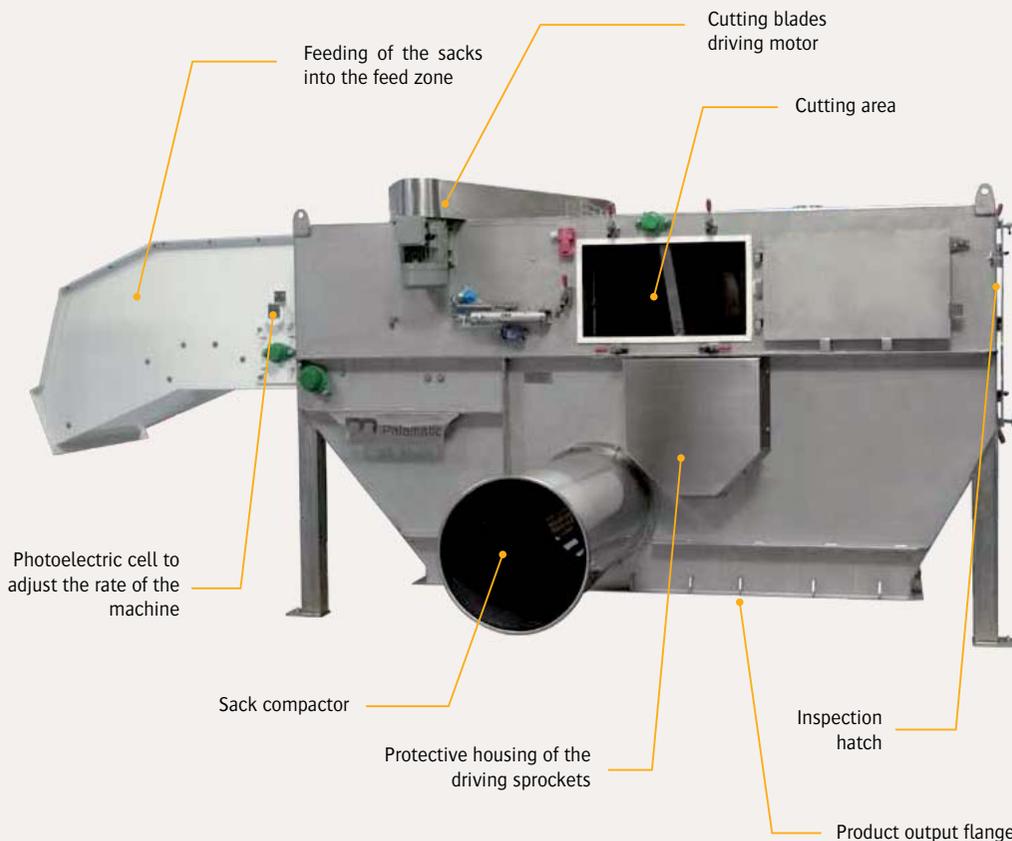


➤ **External gearing**



➤ **Screw compactor** to compact and discharge bags into a plastic sheath to secure the outlet of the compactor

Advantages



➤ **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



➤ **Handling is made easier** for the operator and allows him to follow the speed of the machine



➤ **Monitoring touch screen PalTouch® technology**

VARISLIT® 6000 THROUGHPUT CAPACITIES

PRODUCTS	Sacks per minute
Peanuts	8-10
Coffee beans	6-8
PE / LDPE granules	10-12
Animal feed pellets	6-8
Dicalite	8-10
Sugar	6-8
Tea	8
PVC powder	5-7
Carbon black	6-8
Soya flour	6-8
Cement	8
Starch	6
Aluminium oxide	6-7
Caustic flake	6-8
Ammonium sulphate	6-7
Milk powder	6-8
Filter aid	6-7

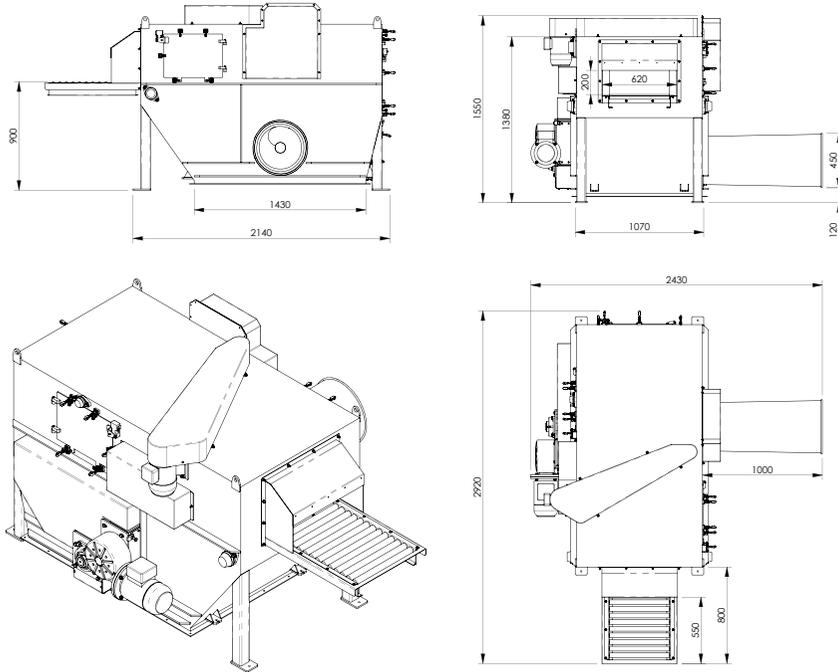
Automatic bag dump station

Varislit®

Patented system

Varislit®

▶ GENERAL LAYOUT



▶ OPTIONS



Hopper to add additives: pre-weighed and half sacks



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



Extended body allows to process sacks with a maximum length of 1 200 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

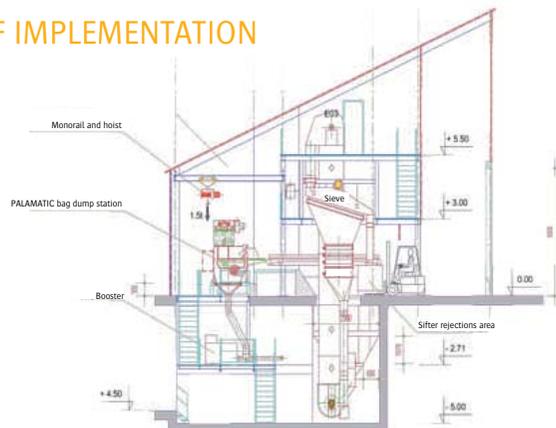


Holding roller to handle sacks whose weight is lower than 15 kg



Steel - Stainless steel manufacturing for all parts in direct contact with the materials handled

▶ EXAMPLE OF IMPLEMENTATION



▶ PRIOR INSTALLATIONS



▶ Milk powder process



▶ ATEX zone 21 implementation



▶ Reactor feeding through a sifter



▶ Deconditioning of cement with pneumatic conveying

Automatic bag dump station



Autotip®

Autotip®

Patented system

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

SACK CRACKING AT VERY HIGH SPEED

The automatic bag dump station AUTOTIP® 1200 can open paper, polyethylene, synthetic and hessian sacks containing materials such as plastic granules, coffee beans, tea and rice.

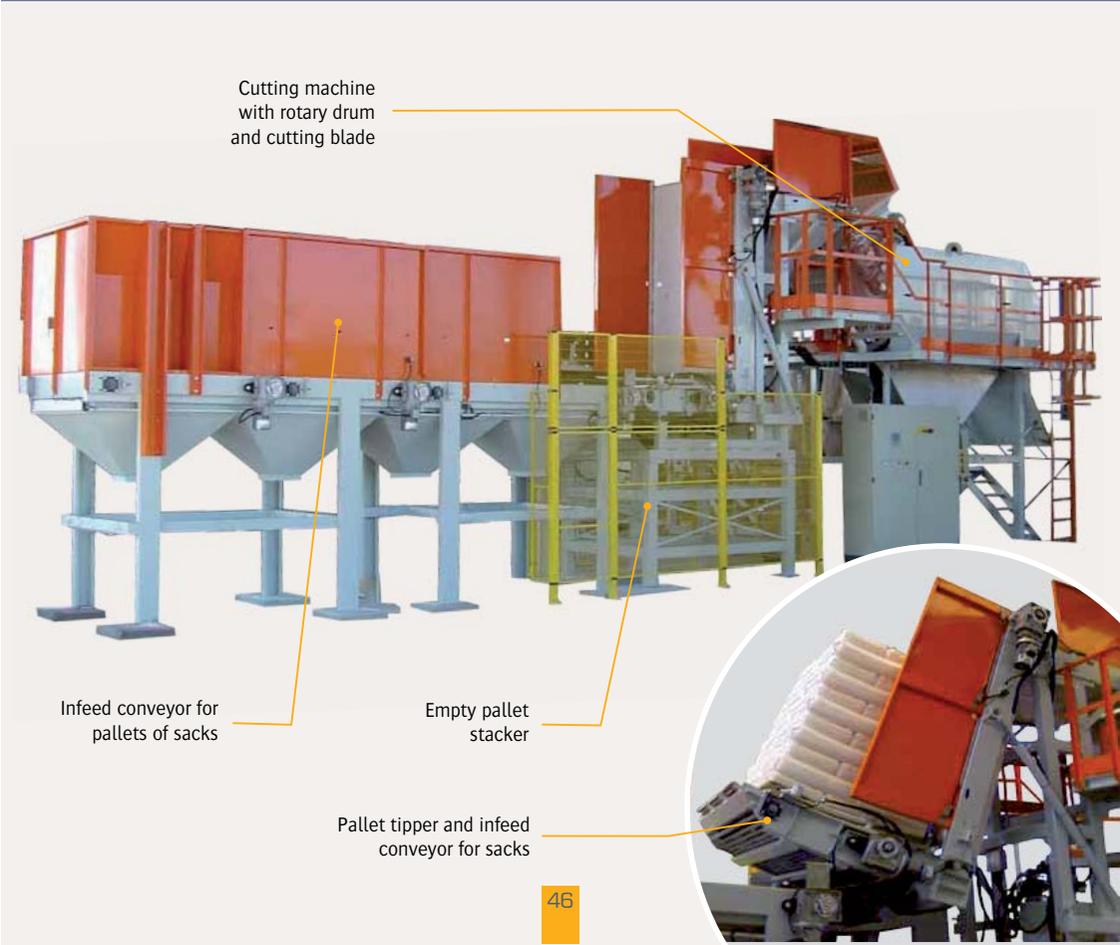
This machine, the biggest of the range, is designed to open bags at the rate of 15 to 20 bags per minute (up to 60 tons per hour).

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 performed 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, polywo-ven, lined...
- Can be used in areas with restricted head room
- Integrated sack compactor
- Increased productivity
- Reduced emissions of dust
- Easy to clean



▶ **Rotative drum:** separation of powders and sacks



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



▶ **Cutting system** with rotative drum

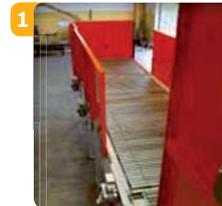


▶ **Vibrating chute** allows to channel the material flow for introduction into the process upstream

Advantages



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

Bagging machine



Rate: 50 to 100 sacks/hr.
Capacity: 1 to 60 kg/sack
Objective: filling of all types of bags

CONTAINMENT, PRECISION, CLEANABILITY

Advantages

- . Double jacket filling head and inflatable seal
- . Weighing of the entire structure to avoid interference weighing (tension of the bags)
- . Dosing system for every issue (accuracy, cleanability, flow...)

TECHNICAL SPECIFICATIONS

Rate: 50 to 100 sacks/hr.
Manufacturing: mild steel, 304L stainless steel, 316L stainless steel
Weighing accuracy: +/- 60 g.
Dedusting rate: 200 m³/h.
Inflating seal: PU

OPERATING SEQUENCE

AVERAGE TIME FOR A COMPLETE CYCLE: 1 MIN.

1. Positioning of the bag
2. Connection of the filling mouth (inflating seal)
3. High speed filling of the bag
4. Weighing management: moving to low speed for dosage control
5. Stop of the filling process, deflation of the seal



Retention minimized



Compactness and cleanliness of the system



Flexibility of the type of sack



The clamping ring allows the user to deal with bags with apertures of different sizes

Advantages



DOSING SOLUTIONS

Depending on your materials, flow rates and technical requirements, we can adapt the dosing system for an optimal solution.



Pneumatic butterfly valve with multiple blades



Rotative valve



Screw feeder



Screw conveyor



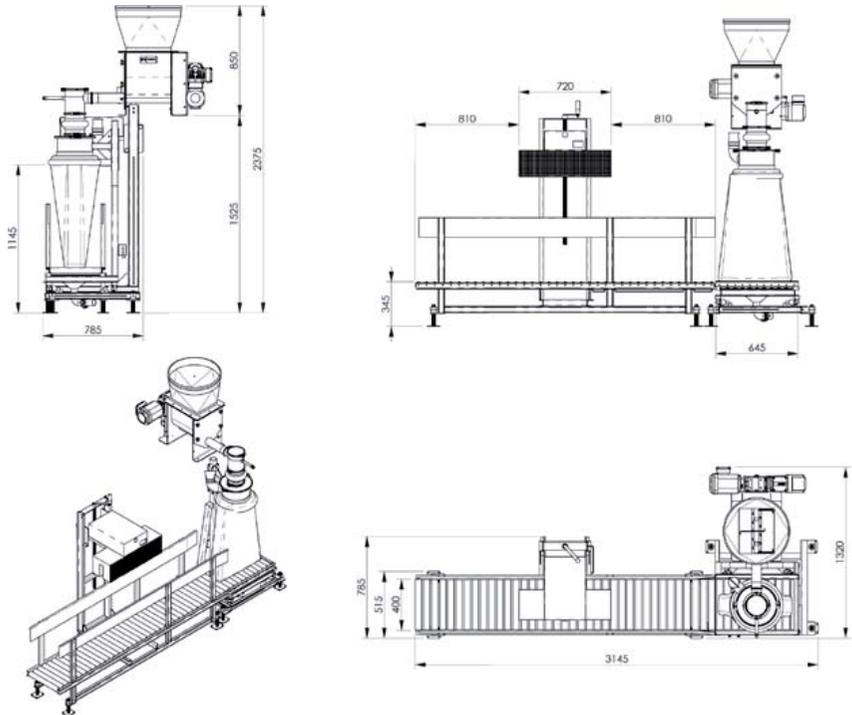
Vibrating tube



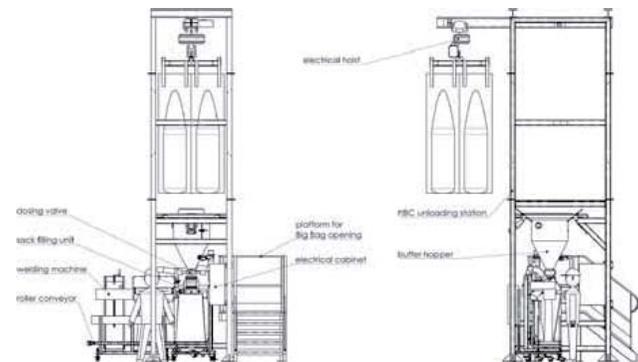
4-20 mA valve

Bagging machine

▶ GENERAL LAYOUT



▶ EXAMPLE OF IMPLEMENTATION



▶ OPTIONS



Custom made conveyor for bags evacuation



Weighing tray



Automatic or manual sack sewer



Sack welder to improve the containment of the installation

PALAMATIC PROCESS designs semi-automatic packaging lines. These installations offer a high accuracy in dosing of contents, ergonomics, high throughput and total containment. Depending on the options chosen by our customers, our engineering office conceives solutions with hygienic design: from the dismantling of all constituent parts to the integration of CIP nozzle.

▶ PRIOR INSTALLATION



Milk powder hygienic conditioning



Agent flavors conditioning



Conditioning on sifter output



Icing sugar line with double conditioning



Conditioning unit at the output of a though screw conveyor

Our expertise:

FILLING SOLUTIONS FOR BIG BAG AND OCTABIN

To fill

EMPTYING SOLUTIONS FOR BIG BAG AND OCTABIN

To empty, compact and massage

SACK SOLUTIONS

To empty, compact, handle, fill

CARDBOARD AND DRUM SOLUTIONS

To fill, condition, empty

PNEUMATIC TRANSFER EQUIPMENT

Vacuum, pressure

MECHANICAL TRANSFER EQUIPMENT

To transfer with screw, belt conveyor, bucket elevator, aeromecanic or vibratory conveyor

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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