

PalSack® Filling Station



Sack Filling Station

Rates: 50 - 100 sacks/hr.
Capacity: from 5 to 60 kg/sack
Objective: packaging of all sack types

CONTAINMENT, PRECISION, CLEANABILITY

Advantages

- . A double enveloped filling head and inflatable seal for dust containment
- . Load cells under structure for gain in weight performance
- . Screw feeder adapted to each application (accuracy, cleanability, rate, etc.)

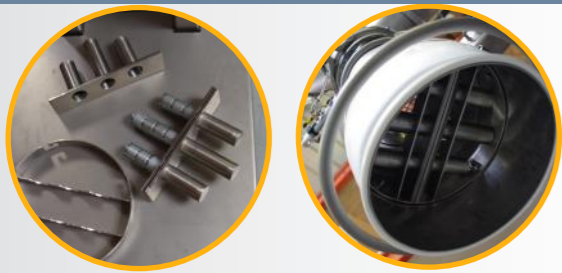
TECHNICAL SPECIFICATIONS

Rate: from 50 to 100 sacks/hr.
Manufacturing material: mild steel, stainless steel 304L, stainless steel 316L
Dosing accuracy: +/- 40 g.
Dust collection rate: 118 CFM
Inflatable seal: FDA

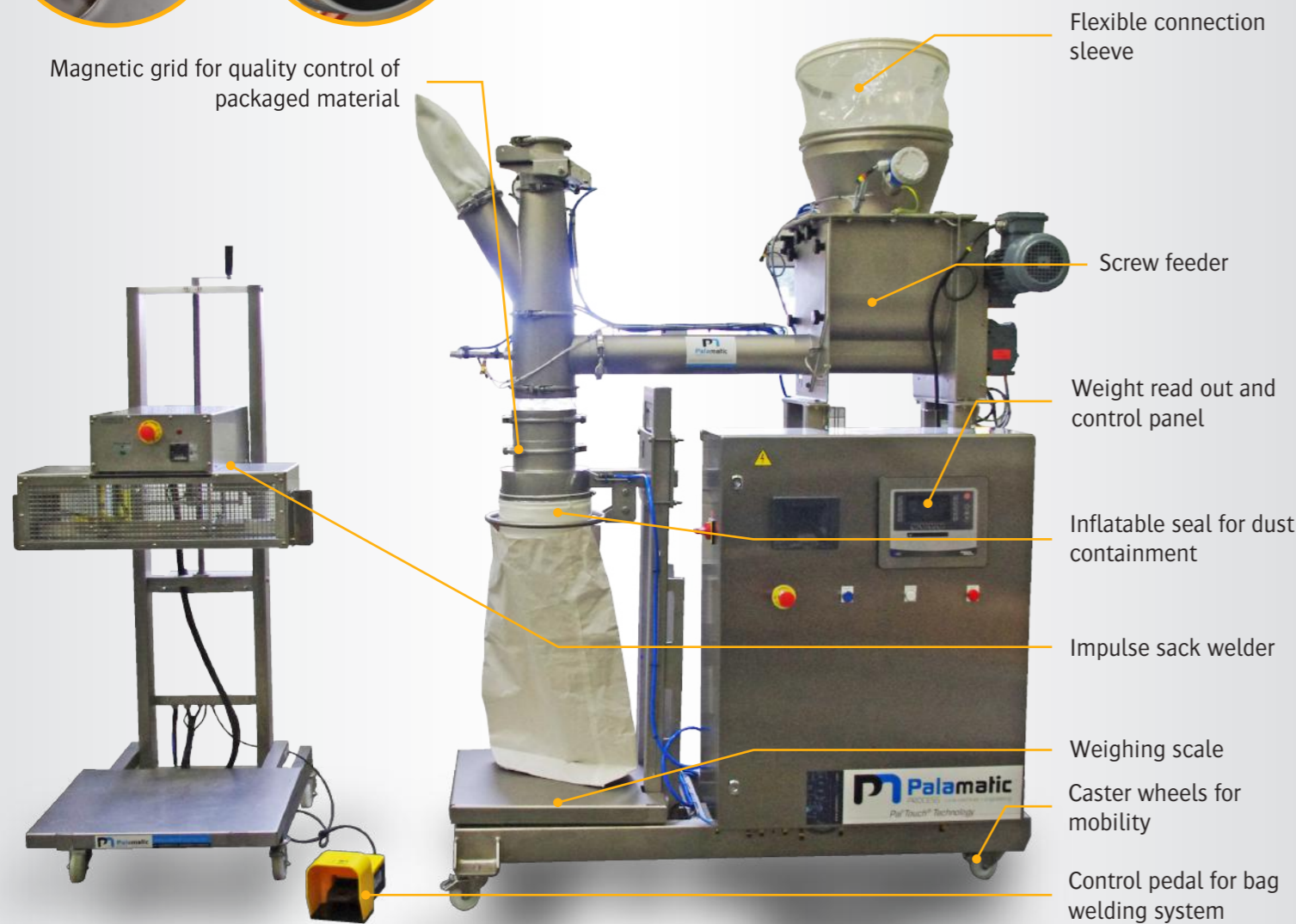
OPERATING SEQUENCE

AVERAGE TIME CYCLE COMPLETION IS 1 MINUTE.

1. Sack is positioned on the filling head
2. Seal inflates and holds bag in position
3. High-rate sack filling
4. Dosing management: low-rate material feeding to guarantee fill weight accuracy and monitoring of the material quantity.
5. The filling cycle stops, the seal deflates and the sack is removed for closure.



Magnetic grid for quality control of packaged material



Minimized product retention

Compact design and cleanability of the system

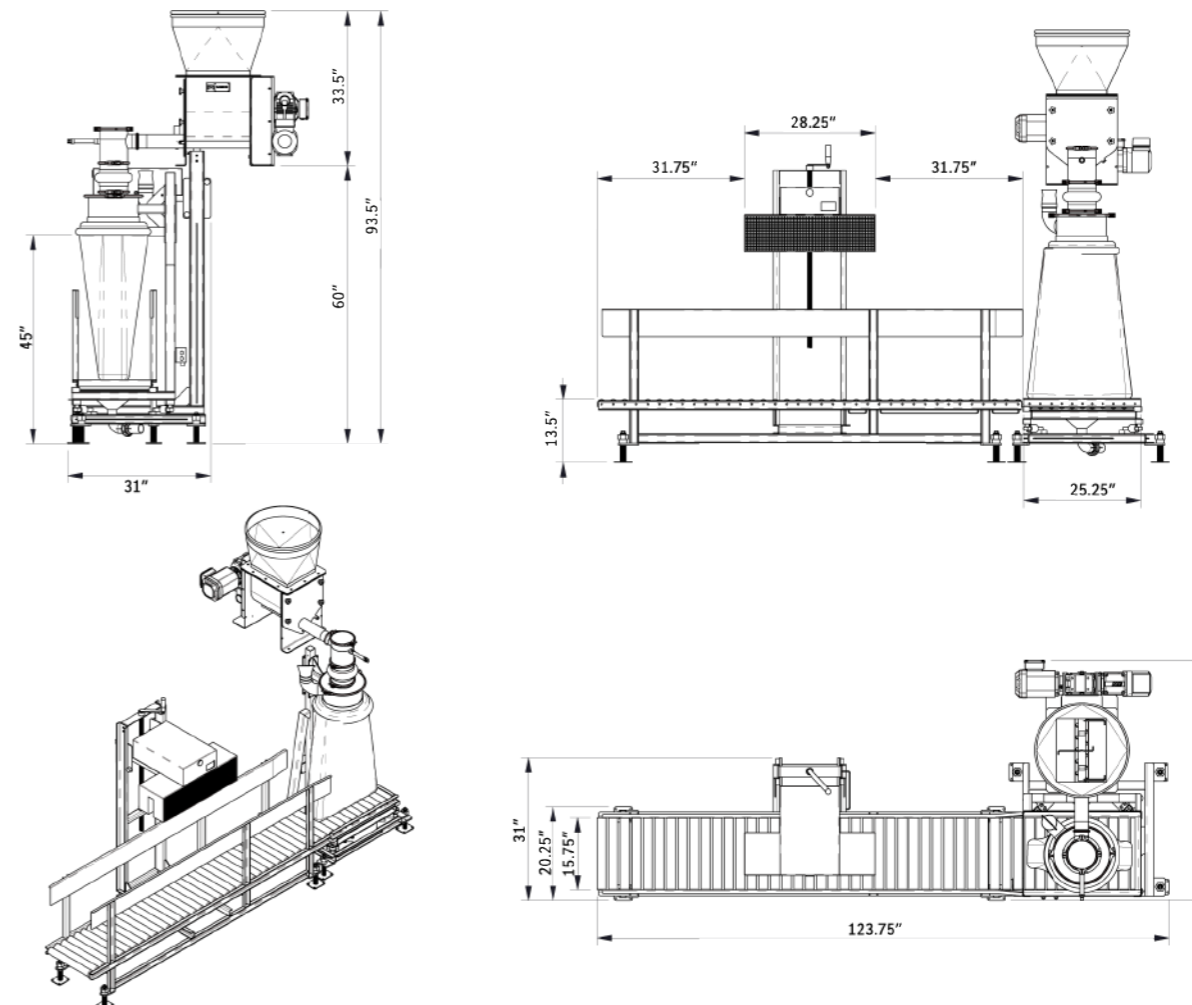
Rotary valve for product dosing

Clamping ring for flexibility to work with different types of sacks

Advantages



GENERAL PLAN

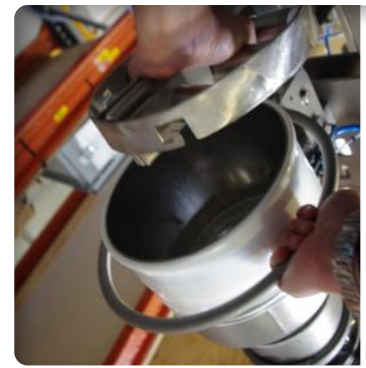


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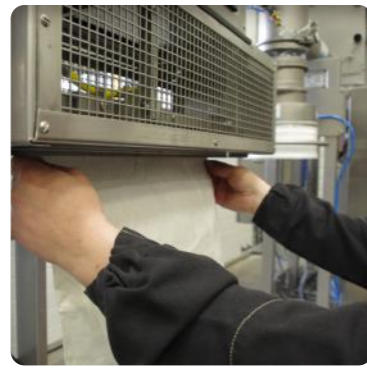


▶ TYPES OF BAGS

Our bag filling systems are suitable for all types of materials: burlap, paper, plastic, open mouth, inner liners, single layer, double layer, microperforated, etc.



▶ Integrated magnetic bars for ferrous particles capturing



▶ Sack welder for a complete containment



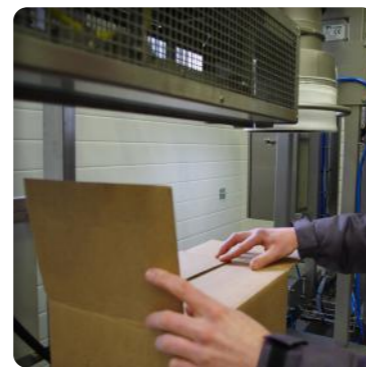
▶ Screw feeder for a high-accuracy dosing



▶ Manual and automatic sampler for a product quality control



▶ Weighing table with a possibility of commercial weighing



▶ Manual or automatic cardboard closing by an operator

▶ EXAMPLES OF INSTALLATIONS



Filling bags inside cardboard boxes



Packaging of the flavoring agent



Packaging at the sieve output



Icing sugar line and double packaging



Sack filling for further conditioning to cardboards

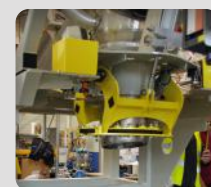


Filling boxes with internal bag liners

Options - Different sack connections



Inflatable seal: It provides a completely sealed connection. A double envelope conception assures the balance between pressure and degassing. There is a possibility of pharmaceutical design for an easy disassembly of all parts.



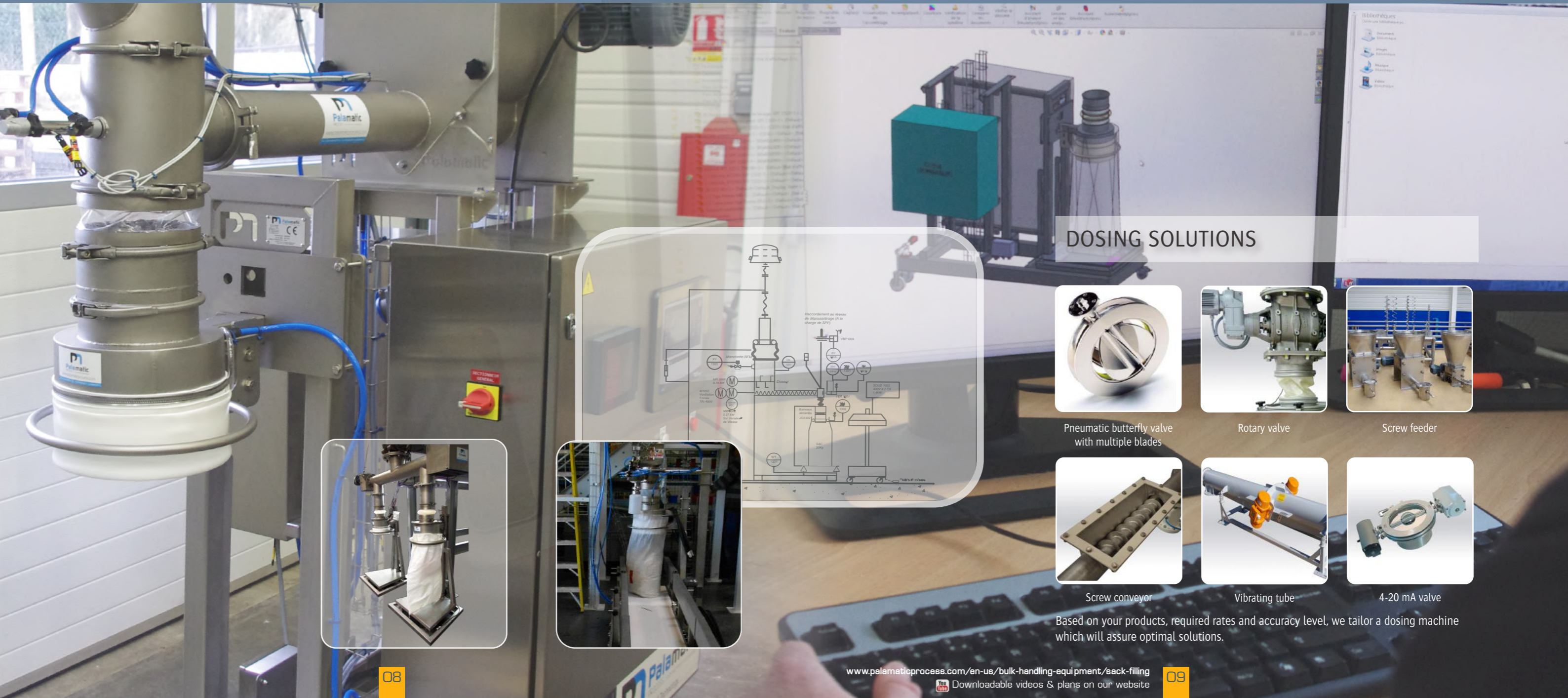
Half-shells: a sack fixation is ensured by means of half-shells with an oval mouth design equipped with two jaws activated by pneumatic cylinder. This connection type is recommended when the sack is suspended while filling.

See all our options on pages 14-17

The PALAMATIC PROCESS engineering office offers custom-made solutions for your sack filling installations based on your rates and implantation constraints. We determine together an appropriate tailored solution after visiting your site and taking into consideration your requirements and technical specifications.

POSSIBLE FUNCTIONALITIES

- Manual and automatic system
- Bar magnets
- Demountable system
- Mobile set on wheels
- Adjustable height of sack welding and sewing
- Sieving before dosing
- Adjustable rates
- Several filling heads are available depending on the packaging conditions
- Manufacturing: steel, stainless steel 304 L and stainless steel 316 L
- Motorized or gravity sack conveyor with final weight checking
- Weighing scale at the filling station assures the exact product dosing = dosing control and weight checking
- Legal metrology for traceability and direct sales with embedded printer
- Sampling...



DOSING SOLUTIONS



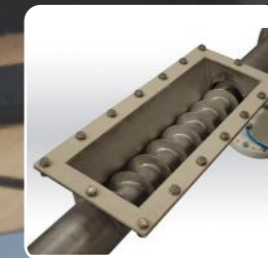
Pneumatic butterfly valve with multiple blades



Rotary valve



Screw feeder



Screw conveyor

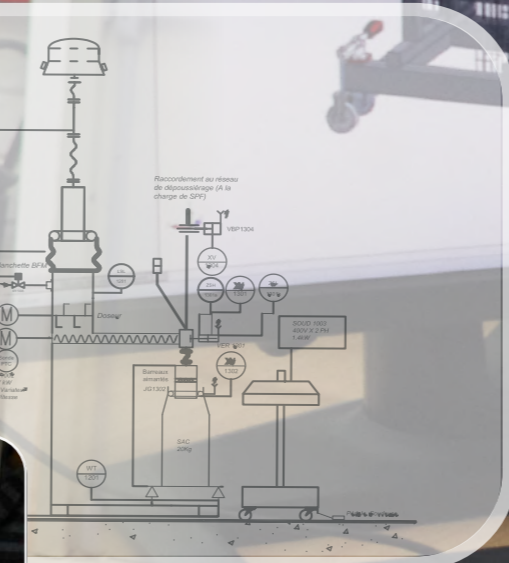


Vibrating tube



4-20 mA valve

Based on your products, required rates and accuracy level, we tailor a dosing machine which will assure optimal solutions.



Examples of Installations

▶ MILLING AND PACKING INSTALLATION IN HAZARDOUS AREA

Client: International group specializing in biscuits, chocolate and cocoa products.

Product: Icing sugar

Characteristics: The objective of this installation is to grind granulated sugar into icing sugar for better efficiency in the creation of chocolate dough.

The goal of this installation is to avoid lumps forming without the need to use additives.

PALAMATIC PROCESS equipment: bag dump station with integrated hygienic Sacktip® screener, screw conveyor, pin mill with rates of 1.5 t/hr., storage tank with agitator and discharge screw, dust collection filter, rotary valve, bag filling station with weighing table and PLC controls. All contact surfaces are manufactured in stainless steel.



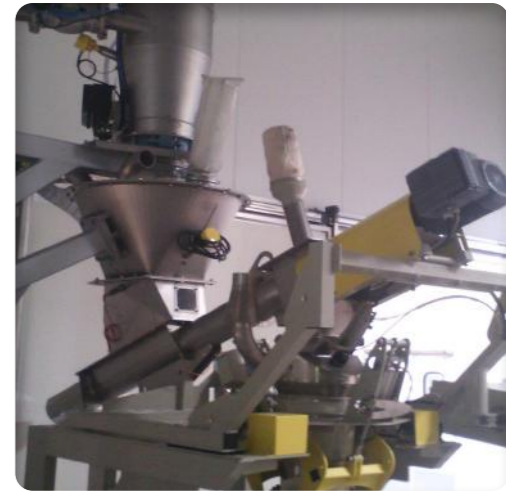
▶ CONDITIONING AT AUTOMISATION TOWER OUTPUT

Client: Food processing plant

Product: Fish flour

Characteristics: After coming out of the automizing tower, the fish flour is dried and sieved before being packed to the sacks. Magnetic separation ensures the purity of raw material.

PALAMATIC PROCESS equipment: sieve, VFlow® pneumatic conveyor, conditioning station



▶ MOBILE BIG BAG AND SACK PACKAGING STATION

Client: Taste enhancer

Product: Flavor taste enhancer

Characteristics: Located directly under the mixer, a mobile sack packing station allows conditioning of sacks from 25 to 50 kg, depending on the client's request. The sack conditioning system can be installed within less than 5 minutes directly on a big bag packaging station.

PALAMATIC PROCESS equipment: Mixing and conditioning line



▶ HYGIENIC CONDITIONING

Client: Industrial chemistry

Product: Magnesium citrate

Characteristics: Product reconditioning from big bags to sacks or drums with internal sack layer.

The production line ensures hygienic conditions of the process by means of: sieve, magnets, sampling. The line is completely sealed.

PALAMATIC PROCESS equipment: big bag emptying station, rotary valves, sieve, sack weighing station, big bag discharging, rotary valves, sieve, sack filling weighing station, packed sack conveyor, access platform, control cabinet



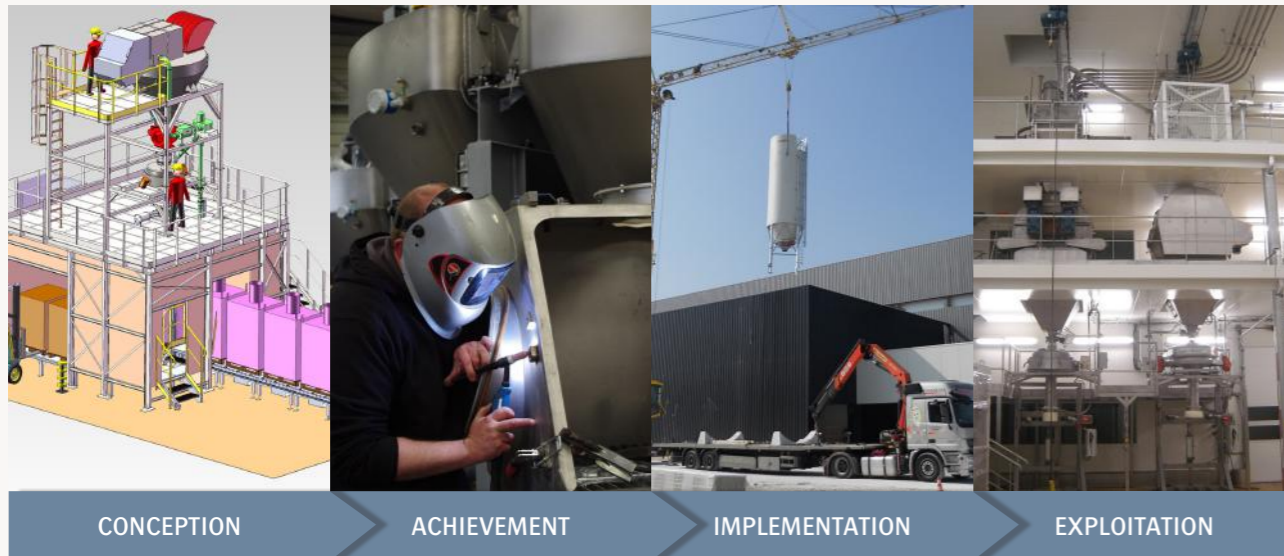
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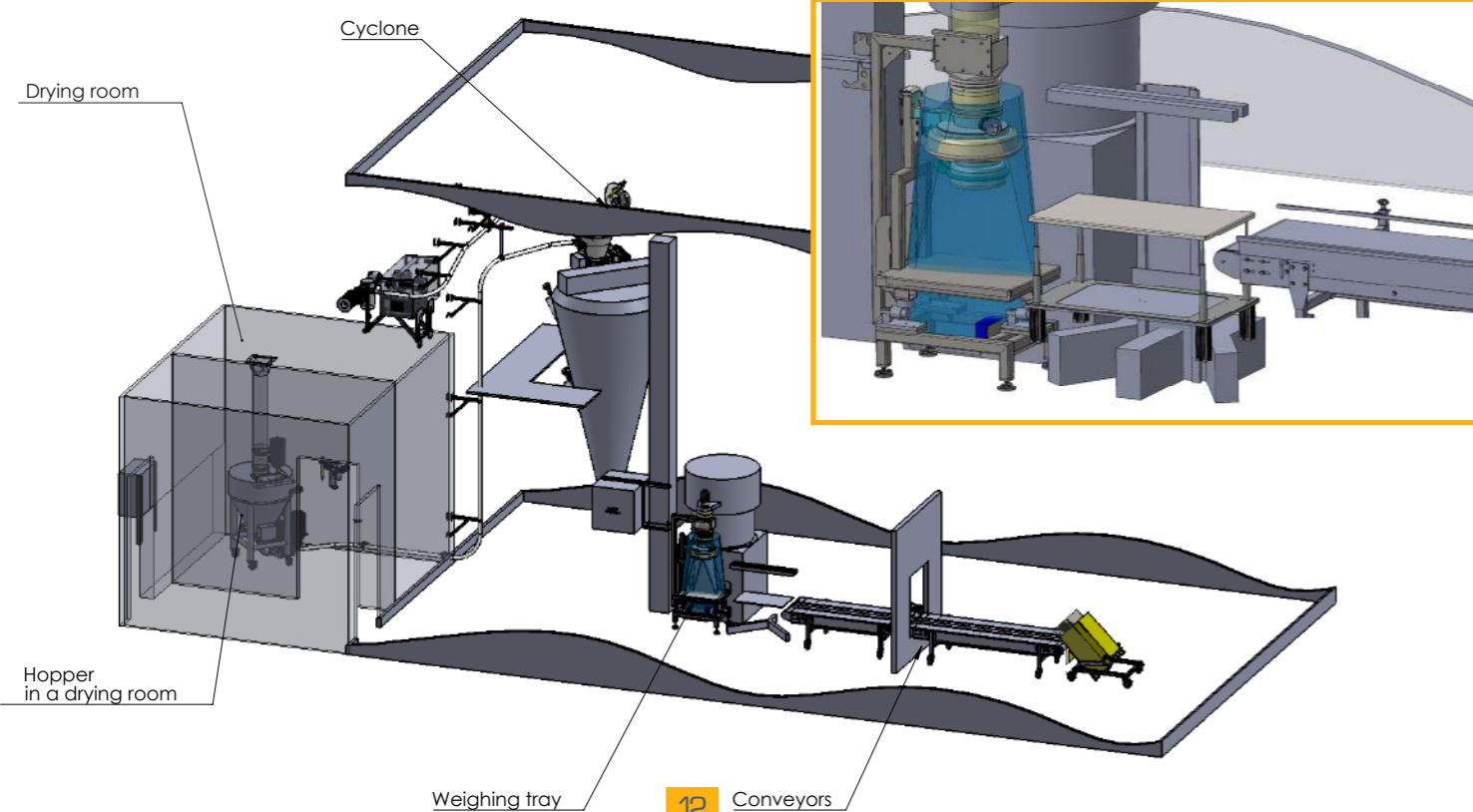
Complete Lines



Support
"from **CONCEPTION** to **EXPLOITATION**"
for complete processes



FOOD POWDER CONDITIONING TO SACKS



SEMI-AUTOMATIC SACK CONDITIONING LINE

Company: Food Industry

Final product: Fruit and vegetable powder

Operating sequence: This packaging line is semi-automatic starting from the delivery of the product by means of pneumatic screw till its conditioning to sacks. Sack positioning, cardboard packing, palletizing and labeling are carried out by an operator.

Installation details: Food company wishes to perform packing of fruit and vegetable powder into PE sacks of 5, 10, 20 or 25 kg. The aim of the installation is to ergonomically redesign packaging station in order to maximally reduce operator's charging port and eventually increase the line productivity.

After being packed at the output of the discharging tower into plastic sacks of 25 kg, the product is stored and loaded into a one-tonne conical mixer. After the homogenization, the powder is sieved in order to remove all foreign bodies and to get a pure final product. The packaging station is composed of the vibrating sieve, the magnetic bar system (to remove all ferrous particles), the weighing scale (to control the dosing accuracy) and of the welder (for a sealed sack closing).

The operator puts a sack between the inflatable seal and the clamping ring. Via a pneumatic control, the operator autorises the inflation of the seal which blocks the sack against the clamping ring. The dosing device allows balancing the volumes via a double envelope filling tube.

PALAMATIC PROCESS industrial equipment: Pneumatic conveyor, conical mixer, transfer screw, vibrating sieve, sack filling station, belt conveyor, dosing table.





➤ SAMPLING

Volumetric test of the product flow in order to ensure a representative sampling

The sampler is positioned at the sack packaging station. It ensures an automatic sampling during each packing. Thus the traceability is guaranteed.



➤ DOSING

Screw feeder, belt or vibrating conveyor

Product weight managing is based on the product type, desired dosing accuracy level in order to get the required quantity of the product.



➤ MAGNETIC SENSOR

It allows to remove ferrous particles from the product in product freefall applications

The magnetic sensor is a metal detection system adapted to gravity applications. The device can be equipped with an automatic valve ejection system.



➤ SIEVING

To ensure the hygiene and security of the process

The vibrating sieve ensures the control and protection of your production line. It guarantees the absence of foreign bodies in the packaged products.



➤ CONDITIONING HEAD

It consists of a filling tube with double envelope, of an inflatable seal and a clamping ring.

Different sizes can be used depending on the type of the conditioning.



➤ VIBRATING TRAY FOR A PRODUCT COMPACTION

Vibrating motor

The vibration of the sack at the end of conditioning process ensures the optimization of the sack volume. Another alternative: compression by air or mechanical pression.



➤ BALANCING

Double envelope filling head with filter sleeve or dust collector for the connection to your dust collection network.

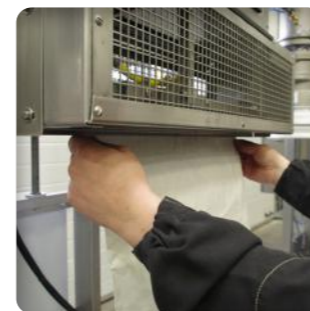
The balancing ensures healthy environment without dust.



➤ DUST COLLECTION SYSTEM

Dust collection of the filling head

At the moment of the sack removal, the suction booth installed around the filling head ensures the aspiration of any possible product traces near the sack opening. The dust-collection system is connected to the double envelope system.



➤ WELDER

Sack welder - from 4 to 20 sacks/min.

If the welder is manual there is a possibility to install a load balancer. It is particularly suitable for plastic sacks with the weld length (width) going from 650 to 1 000 mm. There is a large variety of possible weldings depending on the chosen welding technology: double pulse welding, thermal welding, hot air welding etc.



➤ SEWER

Automatic or manual sack sewer.

It is mainly used for paper sack closing.



▶ CLIPPING MACHINE

Internal bag closing

Manual or automatic clip (staple) closing system.
Compatible with food industry applications.



▶ DRUM STRAPPING MACHINE AND COVER POSITIONING

Sealed closing of the drum manually

The cover positioning can be performed automatically.



▶ CONVEYOR

Gravity and motorized feed and/or evacuation conveyor

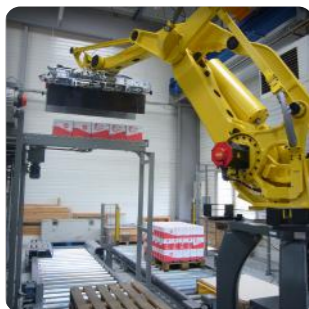
It can be installed on load cells.
The conveyor can be equipped with a raised frame in order to ensure maintenance of sacks, drums, buckets and cardboards.



▶ SACK MANIPULATOR

Effortless sack lifting and handling

The manipulator offers a maximum workplace ergonomics. The charging ports problem is completely solved by means of this equipment. The manipulator is suitable for all types of sacks (different materials and weight).



▶ AUTOMATON

It ensures sack palletizing at the end of the packaging line. During the stacking process, it is possible to overlap sacks in order to stabilize the pallet.



▶ COMMERCIAL WEIGHING

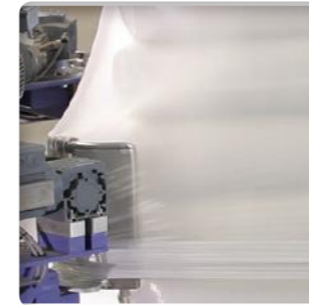
Net and gross weighing

Commercial weighing
NAWI (Non-automatic weighing instruments) device is a weighing system requiring operator's intervention during the weighing process.



▶ ETIQUETTE PRINTER

Printing of the etiquettes, labels, stickers, tags, inkjet printing directly on sack, containing the information regarding product weight, basic data, operator's number etc.



▶ STRETCH HOOD PALLET WRAPPING MACHINE

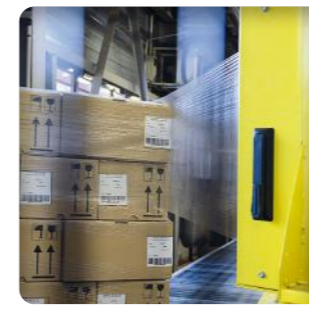
Installation of the hood wrapping machine at the end of the production line offers an optimal containment of the full pallet (4 or 5 sides)



▶ BAR MAGNETS

Ferrous particles captation before product conditioning in order to ensure a high quality of final product

The bars are set in the middle of product flow in order to remove ferrous particles.



▶ PALLET SRETCH WRAPPING MACHINE

Stretch wrapping machine with the film.