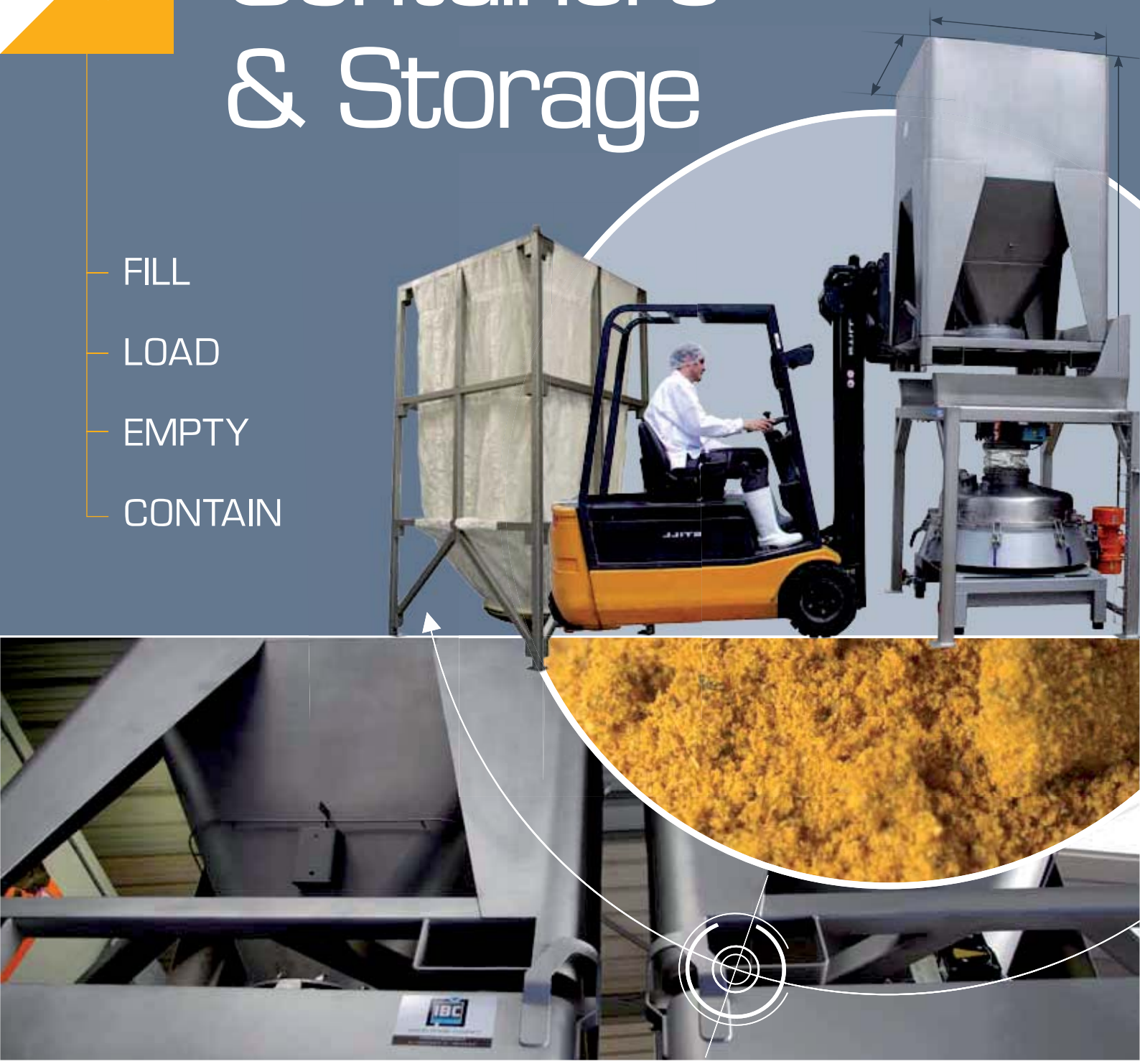
SOLUTIONS for

Containers & Storage

- FILL
- LOAD
- EMPTY
- CONTAIN



Palamatic PROCESS >>> machines • engineering

Powder Handling Solutions

CONTENT

Equipment TEST CENTER Available — Means that the equipment is available for testing at PALAMATIC PROCESS

Ex — Means that the equipment can be installed in ATEX zone

AVAILABLE CUSTOM MADE — 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

Range of Solutions For Containers

Ex AVAILABLE CUSTOM MADE

Steel Stainless steel	Polyethylene	Fill	Discharge	Blend	Wash
					
500 to 2.500 l. Storage and transport without deterioration or contamination	1.000 to 1.800 l. Storage and transport of corrosive or food grade materials	+/- 1% Accurate dosing and absolute hygiene	2 tons No product loss and increased productivity	4 to 10 rev./min. Homogeneous blend without product loss	15 min. cycle Internal and external complete cleaning and time saving
Page 04	Page 10	Page 12	Page 18	Page 22	Page 24

www.ibc-powder-container.com

IBC CONTAINERS

CONTAINER SOLUTIONS REFERENCE WEBSITE

Thanks to its experience in powder handling and storage containers, PALAMATIC PROCESS focuses its expertise in the trademark «IBC Containers.»

Industries

CAPTION: X Recommended | According to application | Not applicable

	Steel IBC	Stainless Steel IBC	PEHD IBC
. Food		X	X
. Chemicals	X	X	
. Fine chemicals		X	X
. Pharmaceuticals		X	

Volumes and capacities

CAPTION: X Standard design | Not applicable

	Steel IBC	Stainless Steel IBC	PEHD IBC
. 500 litres	X	X	
. 800 litres	X	X	
. 1,000 litres	X	X	1,100
. 1,200 litres	X	X	
. 1,500 litres	X	X	
. 2,000 litres	X	X	1,800
. Custom made	X	X	

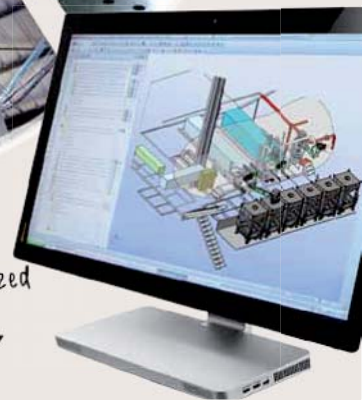
Utilities

	Filling station	Discharging station	Blending station	Washing station
Input TOR	1	0	6	14
Output TOR	1	2	6	13
Weight cells	Option	Option	-	-
Installed power (kW)	0,2	0,2	1,7	8,7
Power supply	230V./400V. TRI	230V./400V. TRI	230V./400V. TRI	230V./400V. TRI
Service pressure (bar)	6	6	6	6
Compressed air consumption (Nm^3/hr)	0,1	0,9	0,9	6,8

- Filling
- Discharging
- Blending
- Washing
- Complete solutions
- Test plant

www.ibc-powder-container.com

Design office
Standard and customized design



Containers

Technical Characteristics

Capacity: 500 - 2,000 liters
Objectives: conditioning and conveying bulk materials without damage or contamination

STORAGE AND CONDITIONING SOLUTIONS FOR MATERIALS WITH HIGH HYGIENIC CONSTRAINT

IBC Containers® stainless steel containers are metallic conditioning solutions for the transportation, storage and dosage of your powdered and granular products. Our containers are designed to meet performance, ergonomics and design requirements.

Steel - Stainless steel

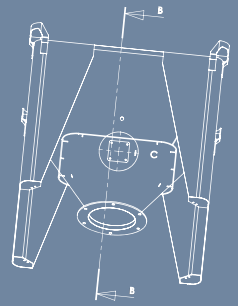
AVAILABLE CUSTOM MADE

TECHNICAL SPECIFICATIONS

REUSABLE CONTAINER FOR UNLOADING OR DOSING OF POWDERY MATERIALS
Manufacturing: steel, 304L stainless steel, 316L stainless steel
Finishings: RAL 9006, blasting, electro polishing, mirror polished, teflon coating
Maximun sizes of containers
Length x Width x Height: 1.204 x 1.204 x 2.417 mm.

HANDLING

. Forklift truck, stacker and pallet truck
. Can be handled with a hoist
. Stackable
. Discharge and filling with appropriate facility



Three level stacking (depending on container dimensions)

62° slope hopper to increase product flow

Secured butterfly or slide gate valve

Welded lifting eye for overhead handling

Fluidization: vibrator to facilitate the material flow (optional)

Container base
Handling by forklift, stacker and pallet truck

Handling by 4 sides

Advantages

Corrosion resistance to harsh environment (chemicals, textiles, petroleum...)

Positioning brackets for stacking the containers

Sealing: no dust emanation thanks to tight connections

62° slopes to ensure the flowing of the materials when discharging

STANDARD MODELS OF THE RANGE

Models (butterfly or knife gate valve)	*IBC 500*	*IBC 800*	*IBC 1000*	*IBC 1200*	*IBC 1500*	*IBC 1800*	*IBC 2000*
Water volume in liters	500	800	1,000	1,200	1,500	1,800	2,000
Base dimensions in mm.	1,204 x 1,204	1,204 x 1,204	1,204 x 1,204	1,204 x 1,204	1,204 x 1,204	1,204 x 1,204	1,204 x 1,204
Overall height in mm.	1,374	1,567	1,717	1,867	2,067	2,314	2,417
Outlet Ø in mm.	250	250	250	250	300	300	300

Interior mirror polished finishing as an option

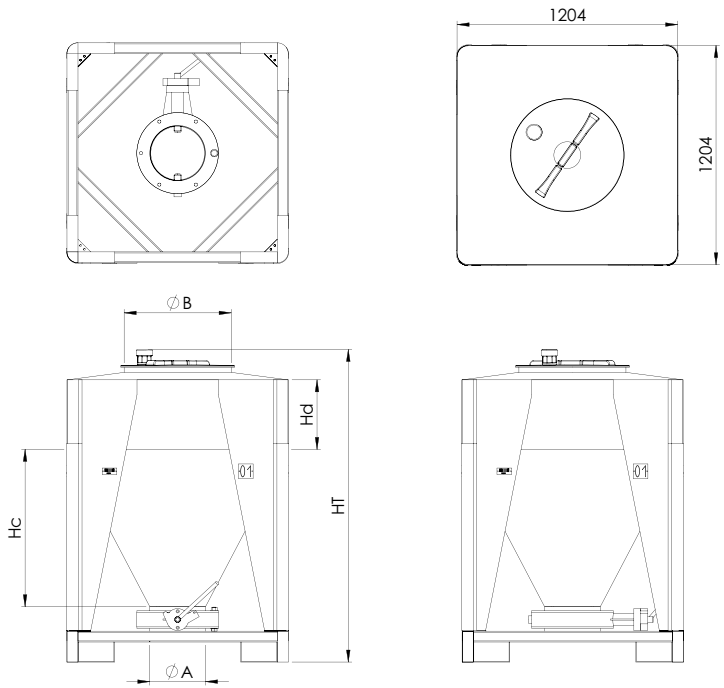
USES

Agrochemicals · Agrifood · Chemicals · Petrochemicals · Paints and dyes · Pharmaceuticals and cosmetics · Fragrances and flavorings · Nuclear

Containers

7 Standard Models

INTERMEDIATE BULK CONTAINER DIMENSIONS



Models	Water volume (in litres)	Working volume* (in litres)	Empty weight (kg)	Ø A	Ø B	Hd	HT	Hc	Slope
IBC 500	573	474	215.5	300	575	0	1,374	864	62°
IBC 800	908	778	238	300	575	232	1,567	864	
IBC 1000	981	850	250	300	575	382	1,717	864	
IBC 1200	1,343	1,211.5	264	300	575	532	1,867	864	
IBC 1500	1,632	1,501	283	300	575	732	2,067	864	
IBC 1800	1,909	1,803	306.5	300	575	980	2,314	864	
IBC 2000	2,138	2,007	316.5	300	575	1,082	2,417	864	

*The working volume is provided for information purposes depending on the product material angle of repose

Steel - Stainless Steel

AVAILABLE CUSTOM MADE

Custom Made

Faced with various industrial constraints, the PALAMATIC PROCESS engineering office offers customized container solutions to meet the needs of its customers. Their design can be simple or sophisticated depending on the nature of the powders to handle.
IBC containers are at the center of PALAMATIC PROCESS powder handling system. Designed for rapid operations of filling and discharging with cleaning systems, containers are used to simultaneously implement manufacturing process for optimum production.

PALAMATIC PROCESS containers are adequate solutions for:
- Transport safety of materials in complete between every stage of production process, without any risk of cross contamination
- The transfer of material from the container to the downstream process equipment without dust emanation
- Easy handling of containers that can be moved by forklifts or hoists

Example of «custom made » container with introduction hatch

www.ibc-powder-container.com/equipments/steel-stainless-steel-containers
Download videos & layouts from our website

BUTTERFLY VALVE

The butterfly valve allows the regulation of the material flow.
The actuation of the butterfly valve is carried out manually, with a lever or a steering wheel depending on the diameter of the valve.

KNIFE GATE VALVE

The knife gate valve is a closing and isolating valve resistant to dust and granules.
The diameter of our knife gate valves can be adapted to any type of container.

AUTOMATIC DISCHARGE VALVE

For efficient discharge of your industrial container.
Containers associated with automatic discharge stations and fitted with knife gate valves can be remotely opened thanks to pneumatic actuators. A vibrating structure can be added to ensure the end of the discharge and optimize the descent of the powders.

CUSTOM MADE

Dimensions and manufacturing materials on request.
For complete customization of your equipment according to your environment, and treated powders. PALAMATIC PROCESS offers you the opportunity to design your equipment and your complete custom made process line in partnership with our engineering department.

MIRROR POLISHED OR TEFLON INTERIOR COATING

For optimum flow of your materials without adherence to the walls.
Interior Teflon coating or polished mirror finishes of the containers are options that prevent the adhesion of your materials to the walls during the discharging operation.

CONTAINER IDENTIFICATION PLATE / RFID CHIP

Enables simple and efficient identification of your containers.
This tracking system allows, in real time, to trace the containers and all the ingredients throughout the production process. It helps to reduce the risk of human error and offers the security of a quality manufacturing process.

STAINLESS STEEL FINISHES

Depending on products to be treated and environments, we offer steel, 304L and 316L stainless steel manufacturing.

MULTIPURPOSE HANDLING BASE

To facilitate the handling of containers.
Containers are handled via a pallet truck, a stacker, a forklift truck or a hoist.

VIBRATOR / VIBRATING BIN AERATOR

They facilitate the flow and the discharging of stored products.
These vibrators allow the introduction of nitrogen or air to ease the flow of the material by fluidizing it.

BALANCING VALVE

Valve for evacuation and introduction of air according to the use of the container.
The valve balances the pressure for the filling and discharging phases of the container.

Containers

Polyethylene

AVAILABLE CUSTOM MADE

Technical Characteristics

Capacity: 1,000 and 1,800 liters
Objectives: packaging and transport of corrosive or food grade materials

FOR THE PACKAGING AND TRANSPORT OF FOOD-GRADE MATERIALS

IBC Containers® has developed a range of containers made of plastic material for the transport, conditioning and dosing of a large variety of powders. The advantage of polyethylene containers is that they are durable through years and reduce handling costs. Thanks to their plastic manufacturing, these IBCs are ideal for food applications. The polyethylene container is also an interesting solution for wet products due to its resistance to mold and sea salt exposition.

TECHNICAL SPECIFICATIONS

Manufacturing: polyethylene
Very high density with a high thickness to resist shock
Optional **anti-static HDPE**
Maximun sizes of containers
Length x Width x Height: 1,204 x 1,204 x 2,417 mm

Applications
FDA Certification

Agrochemicals | Agrifood | Chemicals

Possibility to customize the material outlet valve


Valve for liquid


Aluminum valve


Slide gate valve


Stainless steel valve

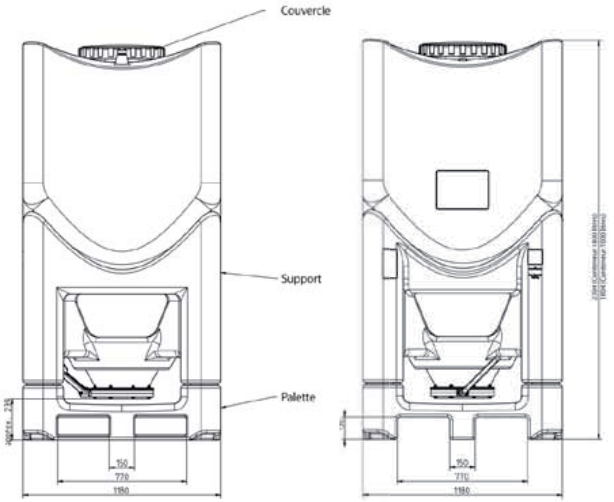
Advantages

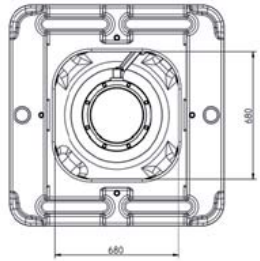

Stackable containers to optimize space


Hygienic: easy maintenance and cleaning


Ease of handling by forklift or pallet truck


Resistance to corrosion





Models (butterfly or slide gate valve)	*IBC POLY 1.000*	*IBC POLY 1.800*
Water volume in litres	1,100	1,800
Base dimensions in mm.	1.180 x 1.180	1.180 x 1.180
Overall height in mm.	1.780	2.280
Outlet diameter in mm.	300	300
Empty weight (kg)	165	190

Container Filling Station

Manual Version

Objectives: manual and completely tight connection

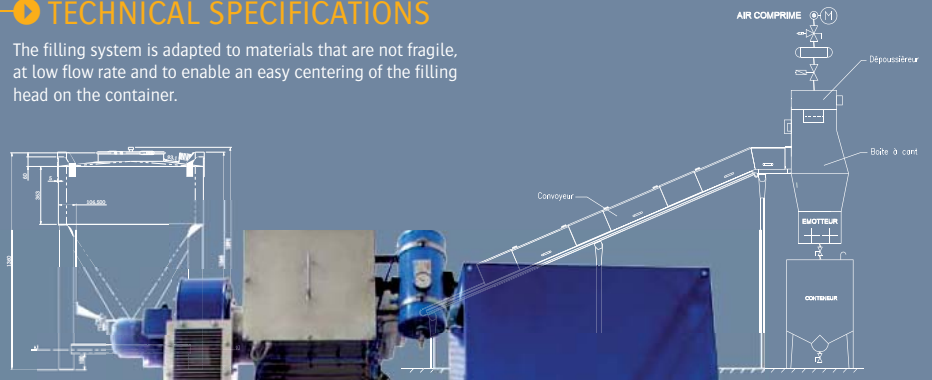
EASY CONDITIONING OF BULK AND POWDERED MATERIALS

The IBC Containers® filling station offers the main expected functions regarding the transfer by gravity of your materials. This station has been designed to meet the "connection and filling" demand. It was designed to ensure a completely tight filling of Intermediate Bulk Containers. The system provides a fully contained transfer of your material in the container to avoid any loss of product.

AVAILABLE CUSTOM MADE

TECHNICAL SPECIFICATIONS

The filling system is adapted to materials that are not fragile, at low flow rate and to enable an easy centering of the filling head on the container.



Manual sack dump system

Filling head manually operated

Flexible fitting adapted to weighing procedure

Weight control scale

Sack dump system dedicated to an accurate filling of containers

This container filling station is specially designed to perform the conditioning of premix. The ergonomic sack dump system ensures a tight connection without interference by the container weighing. The container is placed on a scale in order to ensure control of the introduced weight. The pre-weighed materials are mixed then.

- Control cabinet
- Sack dump system with glove box
- Belt conveyor (Sacks feeding)
- Filling head
- Sack compactor
- Access platform
- Container
- Slide gate valve

Container Filling Station

Automatic Version

AVAILABLE CUSTOM MADE

TO GUARANTEE A SECURED AND HYGIENIC FILLING OPERATION

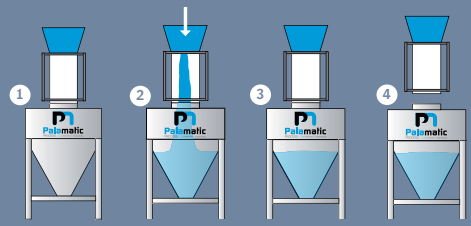
This container filling equipment allows automatic and contained transfer of bulk materials without systematic intervention of an operator to remove or set up the docking tray.
The automatic filling of PALAMATIC PROCESS containers significantly reduces the operator's level of exposure to potentially dangerous materials. This automated system was designed to provide a high standard of hygiene, safety, ease of cleaning and maintenance.

SPECIFICATIONS

The container filling system is positioned under your hopper. It consists of a telescopic tube and a docking tray.
The docking of the tray is provided by two pneumatic cylinders that ensure a tight connection. The control of the connection system is carried out by the operator. Depending on the treated material, the filling head can be fitted with an inflatable seal which closes the top lid to avoid any dust emanation during the filling process.
Degassing is ensured by the double casing tube.

OPERATING MODE

1. The filling head is ready to cover the container
2. The filling station is connected with the container by means of telescopic connecting sleeve (food grade manufacturing)
The transfer of the material into the container is carried out by gravity
3. The transfer is stopped from the control cabinet
4. The filling head comes off the container



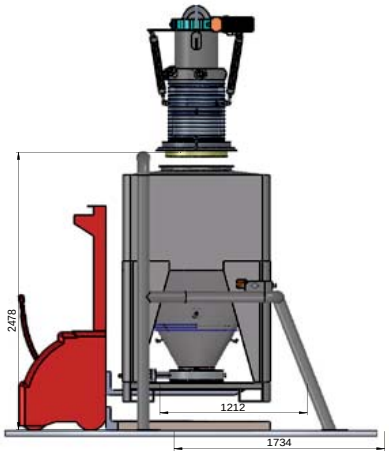
Advantages

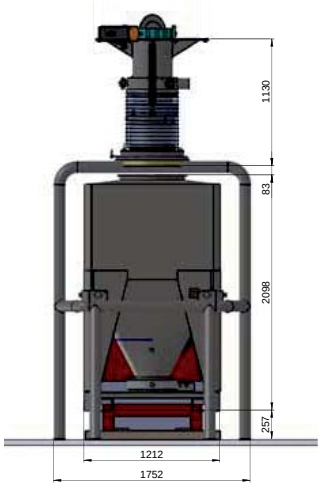
Sealing with inflatable seal to avoid any dust emanation and product loss

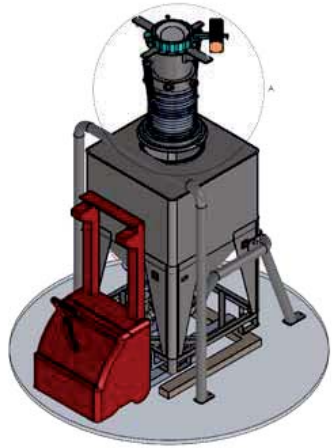
Dust cap seal to ensure containment and to allow high flow rates

Double casing

Fake lid with inflatable seal for total containment







Container Filling Station

Ex AVAILABLE CUSTOM MADE

Case Studies

AUTOMATIC DOSING AND FILLING

Customer: Manufacturer of facade coating
Materials: Pigments
Installation details:
The container, set on a motorized track, is positioned under the different dosing devices according to the batch recipe. The containment is performed by a dedusting ring also avoiding weighing interference.

DOSING BELOW TWO BIG BAG UNLOADING SYSTEMS

Customer: Alloy manufacturer
Products: Metallic powder
Installation details:
The 1.200-litres IBCs, manufactured from 304L stainless steel, are fitted with a butterfly valve. Two FIBC unloading systems are equipped with a lump breaker and a dosing screw to guarantee the filling of the IBC. The weighed roller conveyor ensures the handling and the dosing accuracy.

EASY DOSING AND CLEANING

Customer: Food spices packing
Materials: Spices, curry, paprika
Installation details:
This process enables the collection of spices mixings and their sieving before the conditioning phase. All the materials are processed by a rapid change of the screen.

PREMIX PREPARATION

Customer: Induction on canvas
Material: Premix
Installation details:
The VARISLIT® automatic sack discharging system, that is a part of the PALAMATIC PROCESS range, ensures the discharging of the premix. The container is automatically positioned by a motorized conveyor under the discharging system. The deconditioned powder falls by gravity into the container. A dedusting unit ensures a healthy working environment.

Container Discharging Station

AVAILABLE CUSTOM MADE

Technical Characteristics

Capacity: 2 tons
Objectives: Containment and optimization of the flow when emptying containers

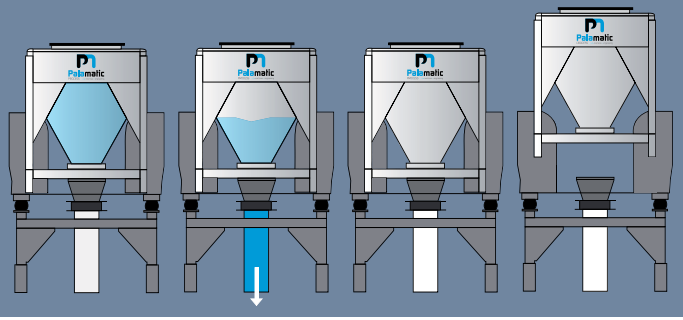
Equipment TEST CENTER Available

CONTROLLED DISCHARGE OF YOUR POWDERY MATERIALS

The emptying system for IBCs is designed to convey your powdery materials to your production line in an efficient and hygienic way.
From manual to fully automatic discharge of containers, the results achieved by our customers are numerous: increase in flow rate and productivity, improvement of integration controls, reduced operating costs in terms of manpower and product loss or complete unloading of containers without contamination of your materials.

TECHNICAL SPECIFICATIONS

Manufacturing: steel, 304L and 316L stainless steel
Containment: dust cap seal or inflatable seal



TIGHT CONNECTION

With dust cap seal

With inflating seal

With pressing plate

- Metallic container
- Knife gate valve / butterfly valve
- Base with centerers
- Pneumatically operated locking clamps
- Vibrating motor
- Silent block to absorb vibration
- Polyurethane flexible fitting

Alternative

The opening of the valve can be performed automatically

Vibration: electric vibrator and springs

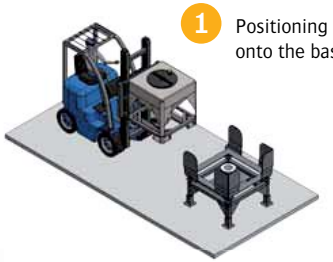
Pneumatic clamping system

Weight cells to control the dosing

Dust cap seal to ensure the tightness of the connexion

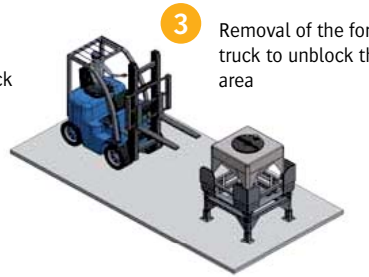
Advantages

OPERATING MODE

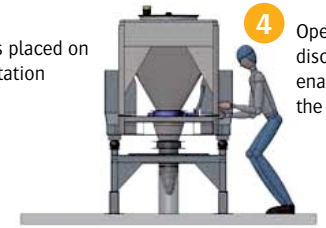


1 Positioning of the container onto the base by forklift truck

2 The container is placed on the discharge station



3 Removal of the forklift truck to unblock the area



4 Opening of the discharge valve to enable the flow of the material

Options

Vibrating table

Flanging clamp

Container Discharging

Examples of Installations

AVAILABLE CUSTOM MADE

WATER PROCESSING STATION

Client: Sewage treatment plant
Material: Aluminum sulphate
Installation details:
Aluminum sulphate is packaged in containers to facilitate handling and provide maximum containment.
The skid includes a 1,000-litres container, an automatic dump station with the integration of a dosing screw.

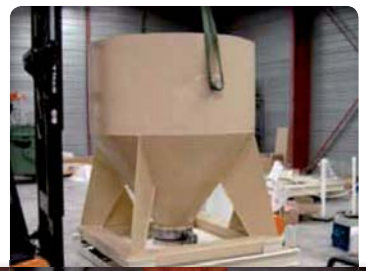
Location of the water treatment plant

PREPARATION OF BORIC ACID

Client: Nuclear plant
Material: Boric acid
Installation details:
The whole installation is composed of two complete and autonomous skids.
The first skid incorporates a sack deconditioning system for filling containers.
The second skid ensures the emptying of containers in a confined manner and enables the dosing of boric acid in the dilution reactor.

FEEDING OF THE MIXER

Client: Welding material
Material: Metal premix for welding
Installation details:
The high capacity containers are automatically filled below the dosing devices of raw materials.
After the packaging operation, the containers are automatically emptied above the powder mixer.



FOOD MIXTURE

Client: Food factory
Materials: Flour, chocolate, sugar,...
Installation details:
Containers of raw materials are placed above the mixer to ensure automatic dosing with no operator's intervention. According to the materials, the discharging systems are fitted with vibrators and pneumatic hammers. Load cells built in the dump station ensure the compliance with the recipe.

Container Blender

Technical Characteristics

Rate: 4 to 10 revolutions/min.
Capacity: 200 to 1,500 liters
Objectives: homogeneous mixture without material loss

HOMOGENEOUS, FAST AND EASY MIXING OF YOUR POWDERS

Our container blending systems are specially designed for pharmaceutical and food industries where the requirements of cleanliness and hygiene are high. Our equipment offers a high mixing performance for a wide variety of powders, while maintaining the quality of your materials and avoiding the mechanical action of the standard mixers.

TECHNICAL SPECIFICATIONS

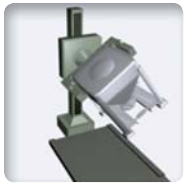
Manufacturing: steel, 304L and 316L stainless steel.
All parts in contact with the material are polished.
Control: fully automated system with touchscreen. Automatic acceleration at start and deceleration at shutdown thanks to the frequency variator and the dynamic braking module. Control elements include «rpm» indication, emergency stop button, the cycle time, start, pause, lock/unlock. The mixing program can be selected from pre-programmed cycles.
Engine: variable frequency with adjustable rotations from 4 to 10 revolutions per minute
Security: an immaterial barrier can be provided to ensure the safety of the operator by prohibiting the access to the system.

Ex AVAILABLE CUSTOM MADE

Positioning on the structure

Rotation of the container

Advantages



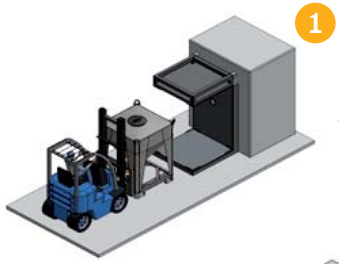
Variable mixing speeds depending on the products to be mixed

Control panel: ergonomic and easy to use

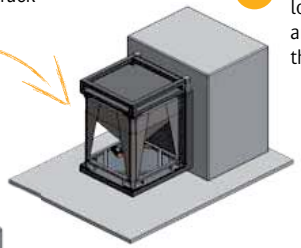
Secure lock of the container for a mixture without risk for operators

Uniform mixture of your liquids and powdered materials

OPERATING MODE



1 Positioning of the container onto the mixing platform by forklift truck



2 A sensor checks the locking of the facility and the closing of the conical valve

3 The mixing is performed by continuous rotation of the container around its central axis

Container Washing

Technical Characteristics

Rate: every 15 minutes
Capacity: 1 container
Objectives: complete cleaning of the container and time saving

TO RESPOND TO THE QUALITY CLEANING REQUIREMENTS

Washing stations are designed for effective cleaning and drying of containers with all sizes. The washing cycles are programmable according to the products previously stored. With a high-pressure washing, all interior and exterior surfaces of your container are cleaned up for total hygiene.
This solution promises a minimum commitment of your operators and helps you to save considerable time in the process of cleaning of your metal containers.

Equipment TEST CENTER Available

Ex AVAILABLE CUSTOM MADE

TECHNICAL SPECIFICATIONS

Rate: 1 container per washing cycle
Manufacturing: steel, 304L and 316L stainless steel
Pump: rate 5 m³/h. / manufactured in 316L stainless steel
Washing ball: spray with pneumatic lowering system and rotation for the internal cleaning of the container
Spray Nozzles: 25 mm. for washing and rinsing the external parts of the container
Control valves: 25 mm. and 38 mm. with pneumatic actuators for the global control of the circuit
Hot air system: it consists of fresh air pipings, a fan and a steam exchanger tube for heating the air at 80 °C.
Drainer: full dripping tray, machining of 3 mm. thick plates manufactured in 316L stainless steel with appropriate trap.

OPERATING MODE

1. The access door (inlet side) is opened by the operator and the container is inserted into the washing cabin (positioning wedges)
2. The access door locks automatically once it is closed
3. The operator selects the washing and drying program
4. The cleaning cycle starts
5. Once the cycle is completed, the operator unlocks the access door (outlet side)
6. The container is manually brought into the outside of the booth
7. The access door (outlet side) is manually closed by the operator
8. The following container is introduced to the washing cabin

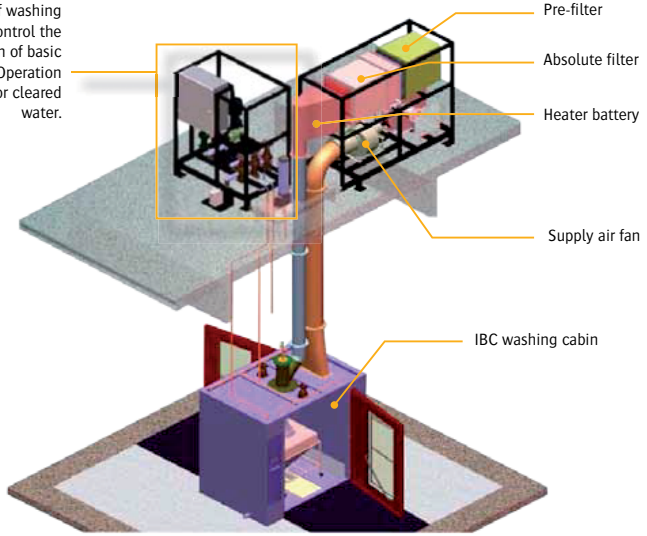
Advantages

Glass door with inflatable seals to monitor the washing process and ensure optimum sealing

External washing nozzles for a thorough cleaning of the IBC

Inside washing of the container using high pressure rotating cleaning nozzles to ensure removal of residues adhering to the inside of containers

Touch screen interface that simplifies the operation of the machine. The programmable controller drives the installation



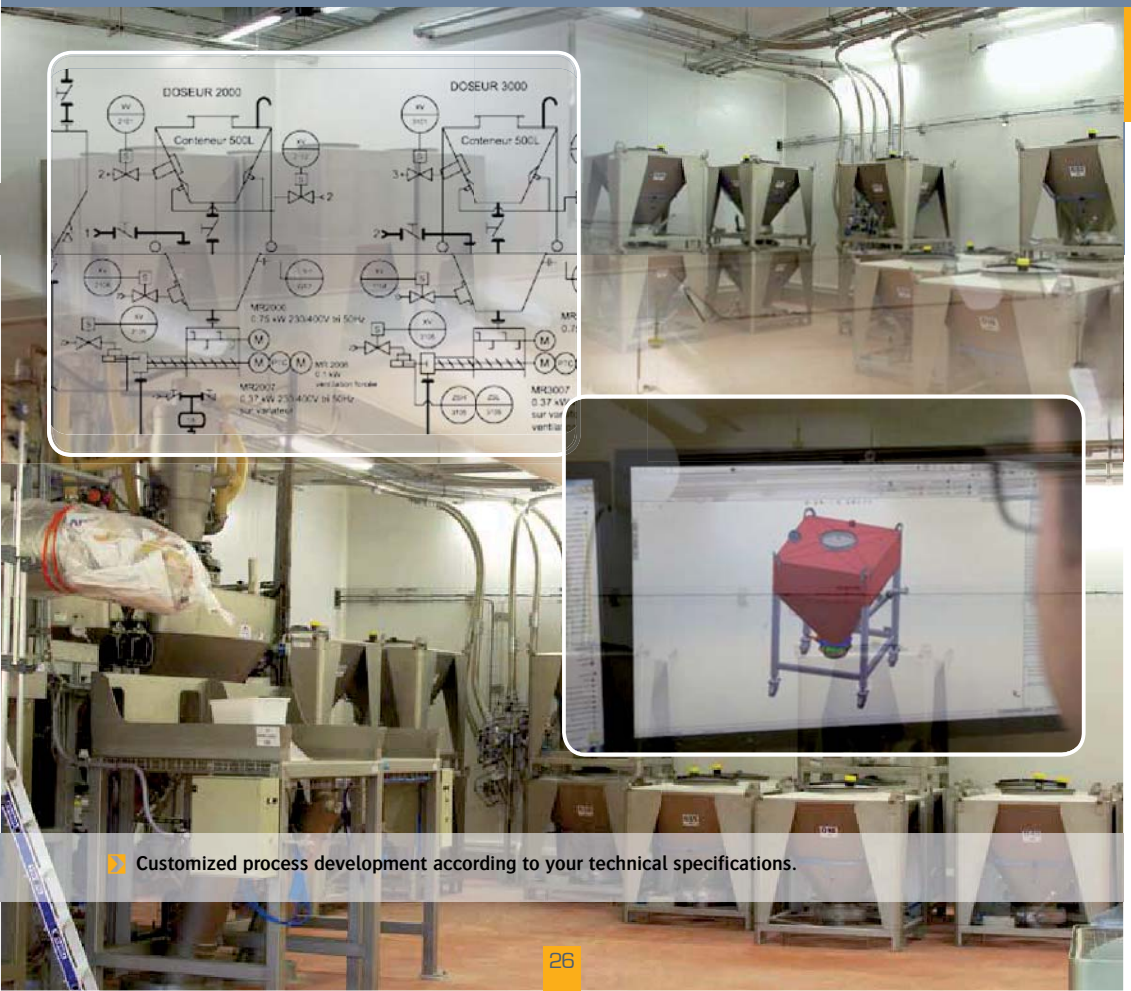
Complete Solutions

Containers

Ex AVAILABLE CUSTOM MADE

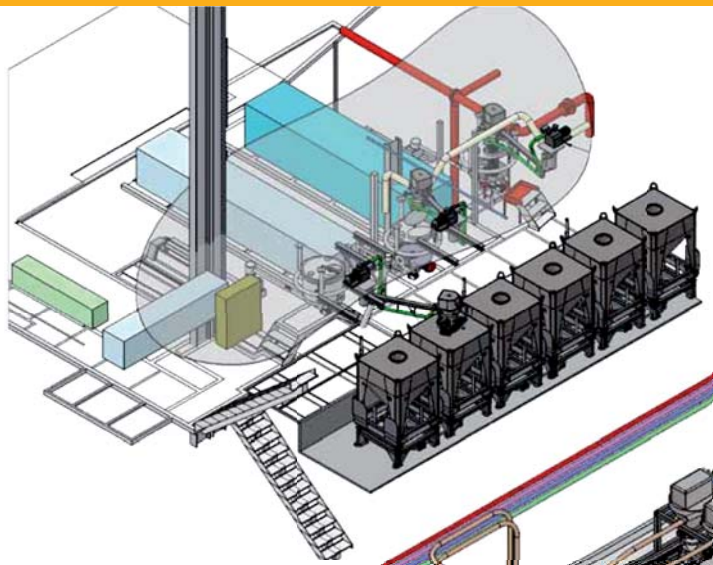
PALAMATIC PROCESS OFFERS COMPLETE AND AUTOMATED PRODUCTION LINES FOR HANDLING POWDERS

PALAMATIC PROCESS designs, manufactures and installs complete lines composed of fully integrated and automated materials handling equipment. All systems for handling or recovery of bulk or powdery products are designed for sanitary, processing or packing applications. All PALAMATIC PROCESS infrastructures, needed for handling powders, operate through an automated control unit to meet any specific customer applications.
Within these complete production lines, IBC brand Containers® solutions can be used for storing, mixing, filling and emptying operations.

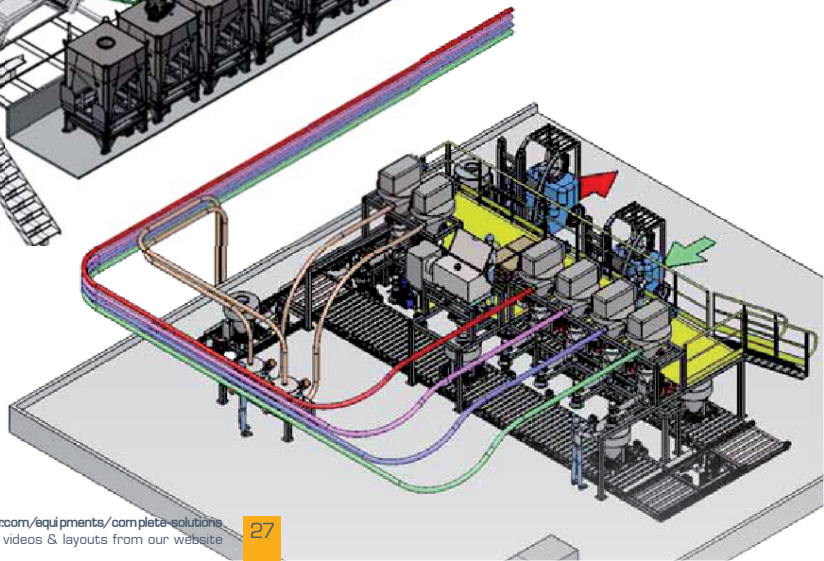


Customized process development according to your technical specifications.

PALAMATIC PROCESS turnkey installations for production lines using containers



Management of batches with Pal'Touch® PLC



EXAMPLES OF INSTALLATIONS

Materials conditioned in IBC Containers®

Big bag and container combined installation

Animal feed application

Pre-weighing in food factory

Containers

Pharmaceutical materials

Mixer in pharmaceutical plant

Sulfur packaging

Packaging system

Multi-material discharging set

Cleaning booth

Cleaning booth

Open container for sack discharging

Cement storage

Food processing industry

Conveying line

Container filling by pneumatic conveying

Standard discharge station

Discover our container solutions on our YouTube channel:
www.youtube.com/user/Palamaticprocess

Rigid Silo

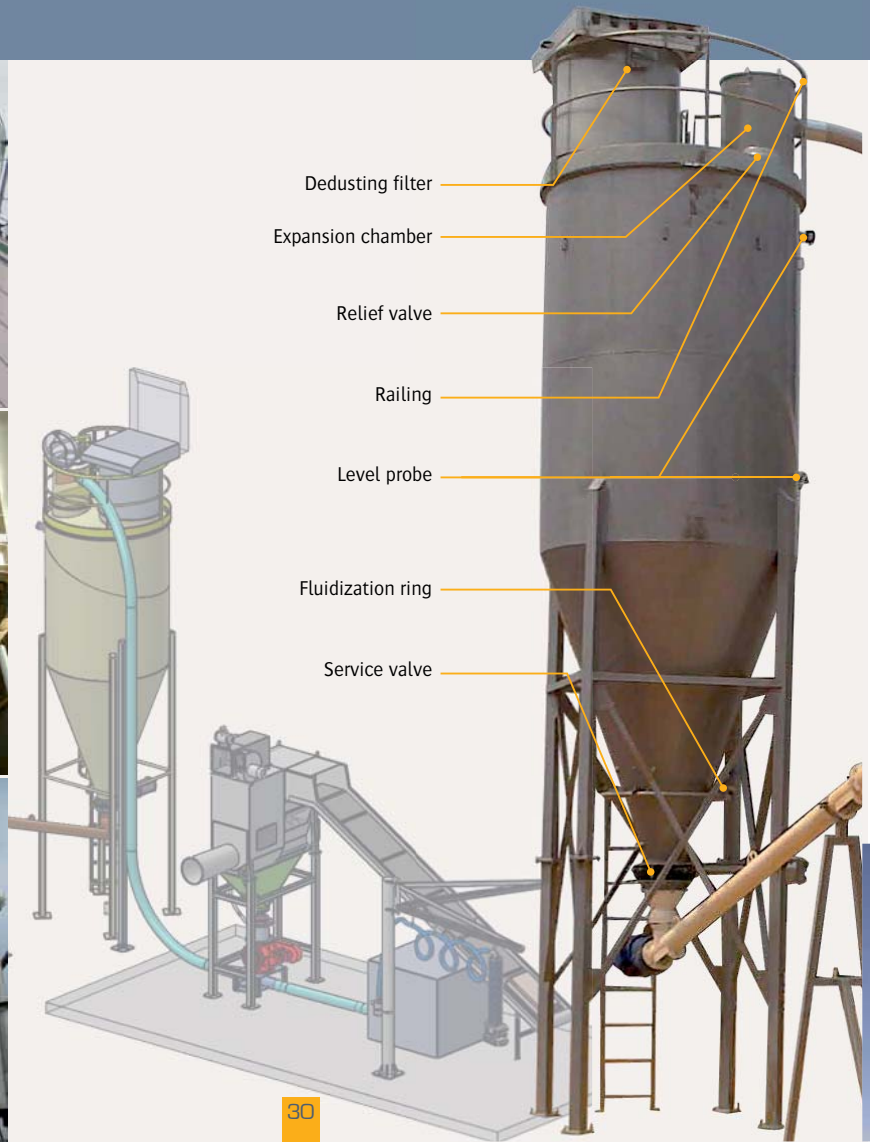
AVAILABLE CUSTOM MADE

LARGE VOLUME POWDER STORAGE FOR PROCESS FEEDING

PALAMATIC PROCESS, specialist in the integration of turnkey systems, offers the possibility to produce your silos and tanks regardless of their size and tailored to your requirements for storage and distribution.
Rigid silos allow contained storage of powders and high density bulk material.

TECHNICAL SPECIFICATIONS

Volume: up to 200 m^3
Bottom: conical
Dimensions: depending on the diameter of the silo, the delivery is made in standard or wide load transport (category 1: up to 3 meters wide / Category 2: from 3 to 4 meters wide).
Our assembly team travels on site for mounting the silo and its accessories.



MANUFACTURING


Steel


Stainless Steel


Aluminum


Resin

3 TYPES OF SUPPORT


On foot


With wrapped around bottom cover


On terrace


Crane and Installation on your site

EXAMPLES OF INSTALLATIONS

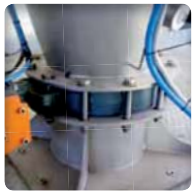
www.palamaticprocess.com/powder-machine/storage/silo/metal-silo
Download videos & layouts from our website

Rigid Silo

Equipment for Silo

AVAILABLE CUSTOM MADE

VALVES



Automatic butterfly valve: ensure tightness of the silo

Automatic slide valve: to ensure tightness of the silo and to allow a full bore

Rotary valve: to ensure tightness of the silo and product dosing

Service valve: to isolate the silo for maintenance operations

Inerting and nitrogen degassing: valves for inerting and nitrogen degassing

INSTRUMENTATION

Level probe (all or none): with pallet, vibration or capacitive technology

Continuous level probe: sets the silo filling level (guided radar, cable radar)

Load cells: to control the amount of material in the silo

Oxygen sensor: measuring the level of oxygen in the silo

Pressure sensor: measuring pressure in the silo

ANTI-BRIDGING DEVICES

Vibrating bin aerator: to ease the flow of the material with light pressures

Bin activator: vibration of the bottom of the silo for extraction

Air cannons: high rate air injection

Bridge breaker hammer: to avoid arches

Safety

Relief valve
Safety device to avoid rises of pressure

LADDER WITH SAFETY CAGE AND GUARD RAIL

To secure access to the roof of the silo

EXPLOSION VENT

To release the energy generated by the explosion
The sizing of the vent surfaces is determined according to the MIE of the material and the storage volumes.

PNEUMATIC CONVEYING PIPING

Connection for tank truck or pneumatic conveying line

EXPANSION CHAMBER

End point of pneumatic conveying system feeding the silo
The expansion chamber allows stopping the speed of the material when it arrives into the silo. The product falls as rain and prevents abrasion of the walls of the silo.

SILO FILTER

Separating the material from the air flow
The filter cleaning is automatic according to the pressure difference. ATEX and/or food grade versions are possible.

Flexible Silo

SIMPLE AND ECONOMIC STORAGE OF YOUR BULK MATERIALS

Flexible silos are highly relevant for the internal storage. The high strength polyester antistatic canvas allows storage of powders and food granules. The fabric, slightly porous and rot-proof, avoids the formation of condensation inside the silo while maintaining its dustproof properties.
The shape of these silos can be square or rectangular for optimal use of space and provides filling capacities up to 60 m³. The flexible walls allow discharge of the product by gravity and prevents arching. Flexible silos are an ideal solution for industrial use thanks to their compact design, fast installation and longevity.

TECHNICAL SPECIFICATIONS

- **Modular frame made of hot galvanized piping**
- **Body with fabric bag**
- **Top made of antistatic fabric suitable to breath and filter the air when loading**
- **Loading hose diam. 100 mm manufactured in SS304L with spherical joint 4L and sealing cap to load the silo from a truck**
- **Dust-proof material**
- **Reinforced fabric, very resistant**
- **Antistatic fabric**

Advantages

Porous fabric very permeable to air to let the material breathe

Quick and easy assembly and disassembly due to its compact design

Economic solution with **low transport costs**

Robust structure filled with a galvanized steel frame

READY TO USE COMPLETE SOLUTIONS

The flexible silos PALAMATIC PROCESS are durable due to the high quality of used material. These flexible containers allow rapid and efficient storing of your products. Thanks to our expertise and experience, our engineers offer you complete storage projects starting from the solution development and its planification till the installation of the equipment on site.

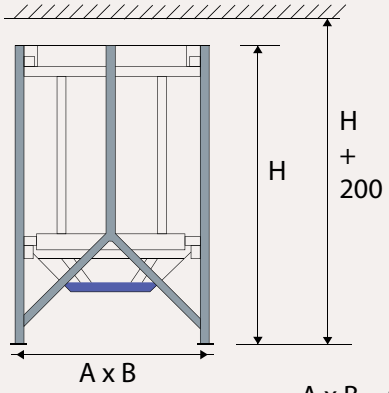
Options

Level probe

Vibrating bottom

Flexible Silo

Dimensions and Capacities



A x B = C

Dimensions	A	mm.	1,600		1,600		1,800		1,800		2,000		2,000		2,200		2,400		2,400		2,600	
	B	mm.	1,600		2,000		1,800		2,200		2,000		2,000		2,200		2,600		2,400		2,600	
Surface	C	m²	2.56		3.20		3.24		3.96		4.00		4.80		4.84		5.72		5.76		6.76	
H.mm			*m³*	*t.*	*m³*	*t.*	*m³*	*t.*	*m³*	*t.*	*m³*	*t.*	*m³*	*t.*	*m³*	*t.*	*m³*	*t.*	*m³*	*t.*	*m³*	*t.*
1,800			3.1	1.8	3.5	2.1	3.74	2.2	4.2	2.5	4.4	2.6	4.7	2.8	5.1	3.0	5.3	3.2	5.6	3.3	6.2	3.7
2,000			3.5	2.1	4.1	2.4	4.3	2.6	4.9	2.9	5.1	3.1	5.6	3.3	6.0	3.6	6.4	3.8	6.7	4.0	7.5	4.5
2,200			4.0	2.4	4.7	2.8	4.9	2.9	5.6	3.4	5.9	3.5	6.5	3.9	6.9	4.1	7.4	4.4	7.8	4.6	8.8	5.2
2,400			4.5	2.7	5.3	3.2	5.5	3.3	6.4	3.8	6.6	4.0	7.4	4.4	7.8	4.7	8.5	5.1	8.9	5.3	10.0	6.0
2,600			4.9	2.9	5.9	3.5	6.1	3.6	7.1	4.3	7.4	4.4	8.3	5	8.7	5.2	9.6	5.7	9.9	5.9	11.3	6.8
2,800			5.4	3.2	6.5	3.9	6.7	4.0	7.9	4.7	8.1	4.9	9.2	5.5	9.6	5.7	10.7	6.4	11	6.6	12.6	7.5
3,000			5.9	3.5	7.1	4.2	7.3	4.4	8.6	5.1	8.9	5.3	10.1	6	10.5	6.3	11.7	7	12.1	7.2	13.2	7.9
3,200			6.3	3.8	7.7	4.6	7.9	4.7	9.3	5.6	9.6	5.7	11	6.6	11.4	6.8	12,8	7.7	12.7	7.6	14.5	8.7
3,400			6.8	4.1	8.2	4.9	8.5	5.1	10.1	6	10.3	6.4	11.9	7.1	12.3	7.4	13.4	8	13.7	8.2	15.8	9.5
3,600			7.3	4.4	8.8	5.3	9.1	5.4	10.8	6.5	11.1	6.6	12.8	7.7	13.2	7.9	14.4	8.6	14.8	8.9	17.1	10
3,800			7.7	4.6	9.4	5.6	9.7	5.8	11.5	6.9	11.8	7.1	13.2	7.9	13.7	8.2	15.5	9.3	15.9	9.5	18.4	11
4,000			8.2	4.9	10	6	10.3	6.2	12.3	7.3	12.6	7.5	14.1	8.5	14.6	8.7	16.6	10	17.0	10	19.6	12

Dimensions	A	mm.	2,600		2,600		2,800		2,800		3,000		3,000		3,200		3,400		3,400		3,600	
	B	mm.	2,600		3,000		2,800		3,000		3,000		3,400		3,200		3,600		3,400		3,600	
Surface	C	m²	6.76		7.80		7.84		8.96		9.00		10.20		10.24		11.52		11.56		12.96	
H.mm			*m³*	*t.*	*m³*	*t.*	*m³*	*t.*	*m³*	*t.*	*m³*	*t.*	*m³*	*t.*	*m³*	*t.*	*m³*	*t.*	*m³*	*t.*	*m³*	*t.*
3,500			16	9	18	10	18	10	20	12	20	12	22	13	22	13	24	14	24	14	27	16
4,000			19	11	22	13	22	13	24	14	24	14	27	16	27	16	29	18	30	18	33	20
4,500			22	13	25	15	25	15	28	17	29	18	31	19	32	19	35	21	36	21	38	22
5,000			25	15	28	17	30	18	32	19	33	20	36	21	36	21	39	23	40	24	44	26
5,500			28	17	33	20	33	20	36	21	36	21	40	24	41	25	44	26	45	27	50	30
6,000			31	19	36	21	36	21	40	24	40	24	45	27	46	28	50	30	51	31	56	34

Examples of Implementations

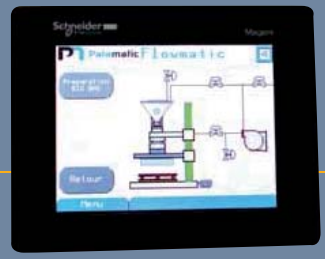
PLASTIC PRODUCTS STORAGE

Customer: Extrusion for insulation, electric cable
Product: Plastic, compound
Installation details:
The storage silos ensure the storage of different raw materials for a continuous feeding of extruders.
Product changing is facilitated by a silo hygienic conception.
The silos are loaded by a pneumatic conveyor from sacks and bulk tanks.

FLOUR STORAGE

Customer: Industrial bakery
Product: Flour
Installation details:
The different flour types are stored in silos connected with the mixer by means of pneumatic transfer system that ensures the forming of the premix.
The multi-output suction box connected to the silo bottom ensures the feeding of three mixers.
The pneumatic suction transfer is adjusted by cyclone load cells.

AUTOMATION & ELECTRICITY



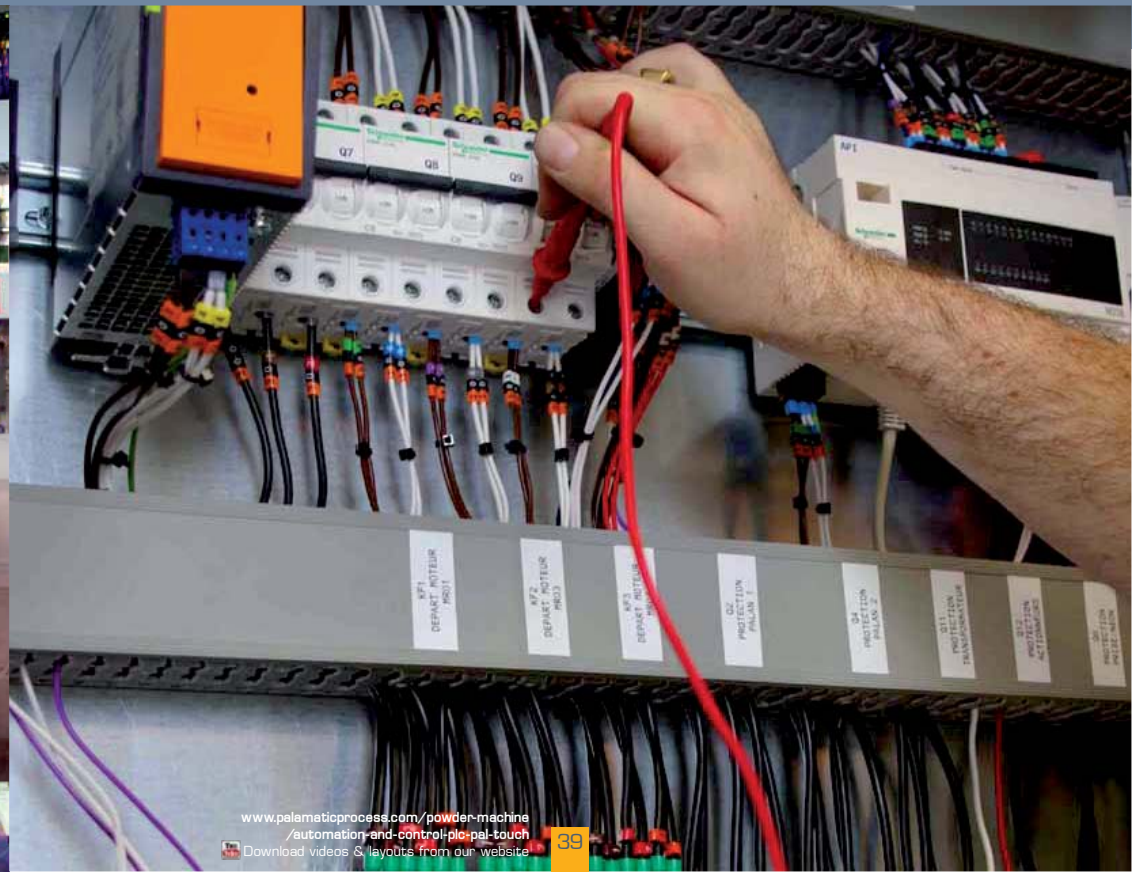
PAL'TOUCH® TECHNOLOGY

As a designer of complete production lines, PALAMATIC PROCESS associates ergonomically and visually programmed PLCs with its production units. Production monitoring is as important for us as the result. That is why PALAMATIC PROCESS's automation and computer engineers include fool-proofing in raw material inputs, lot traceability, operator identification and dosing reliability... The production line steering screens provide ergonomics and comfort with continuous dialogue during the project execution phase between your production team and our design office. Monitors in our process lines provide ergonomics and ease of use with a unique customization.

Equipment and programs used : Schneider, Siemens, Rockwell, Omron, Philips, Intouch, Pc View, VijeoDesigner...

COMMERCIAL WEIGHT MANAGEMENT

In order for you to market your products, PALAMATIC PROCESS integrates commercial weighing systems to its equipment.
Conform to the NAWI directive, our equipment is calibrated during commissioning by our authorized partner organizations.
Your packaged products are immediately ready for sale.
Along with our customizable labels printing solutions, these reliable systems are ideal for distributing large quantities of your powders with minimum intervention.



www.palamaticprocess.com/powder-machine/automation-and-control-plc-pal-touch
Download videos & layouts from our website

Test Plant

Equipment TEST CENTER Available

Laboratory for Powders

Ex AVAILABLE CUSTOM MADE

PALAMATIC PROCESS laboratory for powders was built for the attention of all our industrial customers wishing to define production machines that will meet their expectations.

Our test center is made up of the latest machinery in the powder handling sector. Specialist engineers are there to advise you on the industrial processes the best suited to your requirements and to guide you at every stage of the decision to design the most efficient installation.

3 STEPS TO VALIDATE YOUR PROCESS

Step1 - Before Test

- Select the likely optimal machine configuration based on your technical requirements (powders, flow rate, dosing)
- Draft test proposal by our sales-engineers representatives

Step 2 - During Test

- Process validation for product testing
- Perform testing and sample collection
- Discussion on results after the test with machines (phase diagram, degradation tests, fines content)

Step 3 - After Test

- Analysis of machine test data and samples
- Write a summary report
- Collaborate on the optimal solution for your requirements
- Submit a quotation

THE BENEFITS OF MECHANICAL TESTING

- An individual consultation with and on-going support by our R&D engineers
- Confirmation of the appropriate machines to conduct a test with your product
- Tests at various operating conditions to define the most efficient process according to your industrial requirements
- Evaluation of the profitability of equipment configuration
- Possibility to test additional options using PALAMATIC PROCESS' range of products
- Maximize the return of your investment
- Maximize the optimum selection of the proper machine
- Capitalize on the wide experience of our experts

- Come with your materials
- Participate in selecting the test machines
- Maximize your productivity

300

+ than **300** configurations

- + than **300** process configurations
- **2,400** sq. feet of surface dedicated to the test
- **35** industrial machines
- **35** feet of ceiling
- Test with **all types of products**
- **2 support engineers**
- **ATEX** configurations

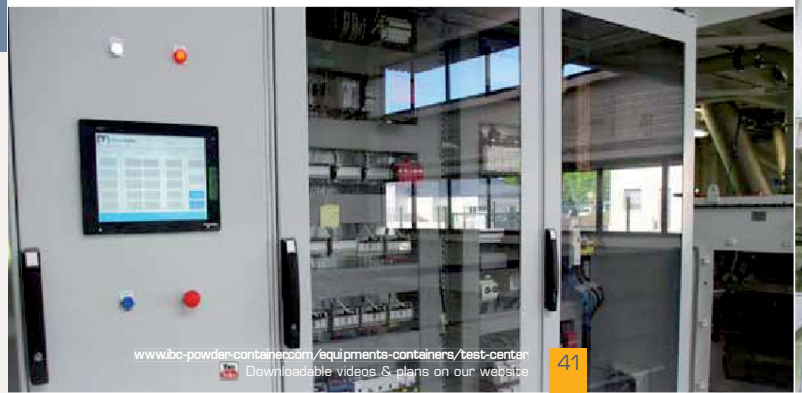
TREATED PRODUCTS

- Boric acid
- Citric acid
- Clay
- Glucose
- Ammonium nitrate
- Barite nitrate
- Sodium nitrate
- Lampblack
- Salt
- Sugar
- Magnesium Sulphate
- Talc
- Urea
- Sludge
- Milk powder...

TESTS ON AN INDUSTRIAL SCALE & FLEXIBILITY

Our systems for containers are available for testing in our workshop. They can also be installed in real process conditions to reproduce normal operating conditions. These «industrial scale» simulations help to apprehend better the behavior of powders during emptying or filling process (vibration, fluidization...)

Possible configurations for conducting tests are numerous.



www.ibc-powder-containercom/equipments-containers/test-center
Downloadable videos & plans on our website

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 EMTYING 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

Palamatic PROCESS >>> machines • engineering

contact@palamatic.fr

Sales Department: +33 (0)2 22 93 63 08

ZA La Croix Rouge • 35530 Brécé • France

Tel: +33 (0)2 99 86 06 22 • Fax: +33 (0)2 99 86 08 10

SAS au capital de 331 822 euros • R.C.S. Rennes B 384 894 093 • APE 4669B • N° T.V.A. : FR 14 384 894 093