



SOLUTIONS for

# Big Bag & Octabin

FILLING



**Palamatic**  
PROCESS >>> machines • engineering

Powder Handling Solutions

# CONTENT



Means that the equipment is available for testing at PALAMATIC PROCESS

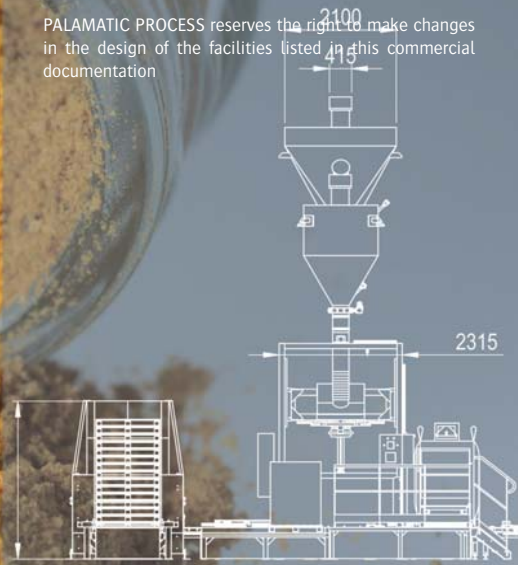


Means that the equipment can be installed in ATEX zone



Means that design and options can be customised

PALAMATIC PROCESS reserves the right to make changes in the design of the facilities listed in this commercial documentation



## ● RANGE OF BIG BAG FILLING STATIONS 02

- FlowMatic® 01 04
- FlowMatic® 02 06
- FlowMatic® 03 08
- FlowMatic® 04 10
- FlowMatic® 05 TE (Lifting Table) 12
- FlowMatic® 05 VH (Hydraulic Cylinder) 14
- FlowMatic® 06 16
- FlowMatic® 07 18
- FlowMatic® 08 20
- FlowMatic® 09 22
- FlowMatic® 10 Hygienic 24
- Customized big bag filling system 26

## ● BIG BAG FILLING OPTIONS 28

## ● RANGE OF OCTABIN FILLING STATIONS 32

- FlowMatic® Octabin Standard 32
- FlowMatic® Octabin Velocity 34
- FlowMatic® Octabin Automatic High Velocity 36

## ● AUTOMATION 38

# Big Bag Filling Stations Big Bag



											
10 - 20 big bags/h. Cost efficient & dust control solution	10 - 20 big bags/h. Efficient & ergonomic	10 - 20 big bags/h. Dosing & adaptable to any powder type	20 - 40 big bags/h. High rate & ergonomic filling station	10 - 30 big bags/h. Suspended weighing: hygienic and operator friendly	10 - 30 big bags/h. Hygiene & ergonomics of operators	30 - 60 big bags/h. Very high rate & ergonomic filling station	20 - 30 big bags/h. Mobile station & connexion under the truck loading hose	20 - 40 big bags/h. Big bag with 1 handle & conditioning bulk products	40 - 60 big bags/h. Very high flow rate for big bag with a single loop	30 - 50 big bags/h. Hygienic design suitable for white rooms	Flow rate, ATEX, made from 316L, inerting...
Page 04	Page 06	Page 08	Page 10	Page 12	Page 14	Page 16	Page 18	Page 20	Page 22	Page 24	Page 26

## Basic specifications for big bag filling systems and options

X Included    
  Option    
  Not available

	FlowMatic® 01	FlowMatic® 02	FlowMatic® 03	FlowMatic® 04	FlowMatic® 05-TE	FlowMatic® 05-VH	FlowMatic® 06	FlowMatic® 07	FlowMatic® 08	FlowMatic® 09	FlowMatic® 10
<b>Packaging flow rate</b> (the highest flow rate may vary according to the volume of big bags and the available flow rate)	10 - 20	10 - 20	10 - 20	20 - 40	10 - 30	10 - 30	30 - 60	20 - 30	20 - 40	40 - 60	30 - 50
Big bag with 4 handles	X	X	X	X	X	X	X	X			X
Big bag with 1 handle									X	X	
Gross weighing			X	X	X	X		X	X		X
Net weighing							X				
Width adjustment	X	X	X	X	X	X	X	X			
Inflatable seal	X	X	X	X	X	X	X	X			X
Tension cylinder		X	X	X		Lift table	Hydraulic cylinder	X	X	X	
Automatic hooks					X	X	X	X		X	X
Rotating head (ergonomic big bag implementation)							X				
Big bag pre-forming			X	X	X	X	X	X			
Vibrating table			X	X			X	X			X
Big bag ground wire and clamp									X	X	
Roller conveyor				X			X				X
Pallet unstacker				X			X				X
Mat laying											
Access platform				X			X		X	X	X
Internal bag welder											
Mobile station								X			
Big bag cover											

The flow rates can vary according to the handled material.

## Utilities

Input TOR	0	0	6	14	3	3	15	2	7	14	23
Output TOR	1	2	6	13	5	5	13	6	3	9	17
Load cells			4	4	4	4	3	4	3	3	4
Installed power (kW)	0.2	0.2	1.7	8.7	1.6	1.6	8.7	1.7	5.6	7.8	15.0
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	230V./400V. TRI
Service pressure (bar)	6	6	6	6	6	6	6	6	6	6	6
Average power consumption (kW)			0.2	1.1	0.2	0.2	1.5	0.2	0.3	1.4	3.8
Compressed air consumption (Nm <sup>3</sup> /hr.)	0.1	0.9	0.9	6.8	2.9	2.9	10.2	0.9	2.1	2.1	4.9
Dust collecting rate (m <sup>3</sup> /hr.)	300	300	300	300	300	300	600	300	300	600	300

# FlowMatic® 01



FlowMatic® 01

**Rate:** 10 to 20 big bags/hr.  
**Weight capacity:** 2 tons/big bag  
**Objectives:** cost efficient & dust containment

## TECHNICAL SPECIFICATIONS

**Rate:** 10 to 20 big bags/hr.  
**Manufacturing materials:** mild steel, SS 304L, SS 316L  
**Finishes:** RAL 9006, micro-blasted, electropolishing  
**Installed power:** 0.2 kW  
**Compressed air consumption:** 0.1 Nm<sup>3</sup>/h.  
**Service pressure:** 6 bars  
**Input TOR:** 0  
**Output TOR:** 1  
**Dust collecting rate:** 300 m<sup>3</sup>/hr.  
**Maximum dimensions of big bags:**  
**Length x width x height:** 1,550 x 1,550 x 2,400 mm  
**"U" version forks:** allows big bag removal with straps (optional)

## OPERATING SEQUENCE

1. The big bag is placed on the filling station
2. The big bag inlet is connected to the filling head by an inflatable gasket ensuring the sealing
3. Big bag filling process
4. When the big bag filling sequence is completed, the big bag can then be removed using either a forklift or a pallet truck



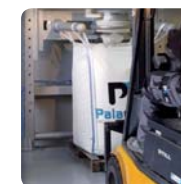
Adjustable fork height for an optimal filling of all types of big bags



Double envelope filling head allows big bag degassing in conditioning procedure

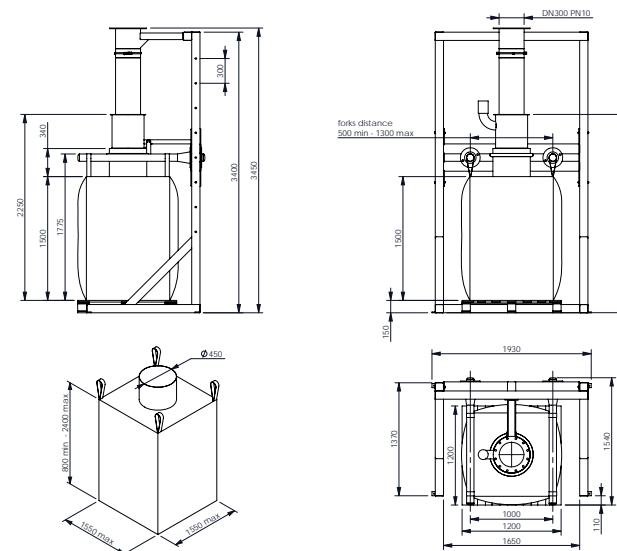


Hooking forks with adjustable height offer a maximum flexibility



Big bag removal with forklift or pallet truck

## Advantages



## Options



Big bag pre-forming fan



Big bag tension cylinder

**Rate:** 10 to 20 big bags/hr.  
**Weight capacity:** 2 tons/big bag  
**Objectives:** ergonomic and dust containment

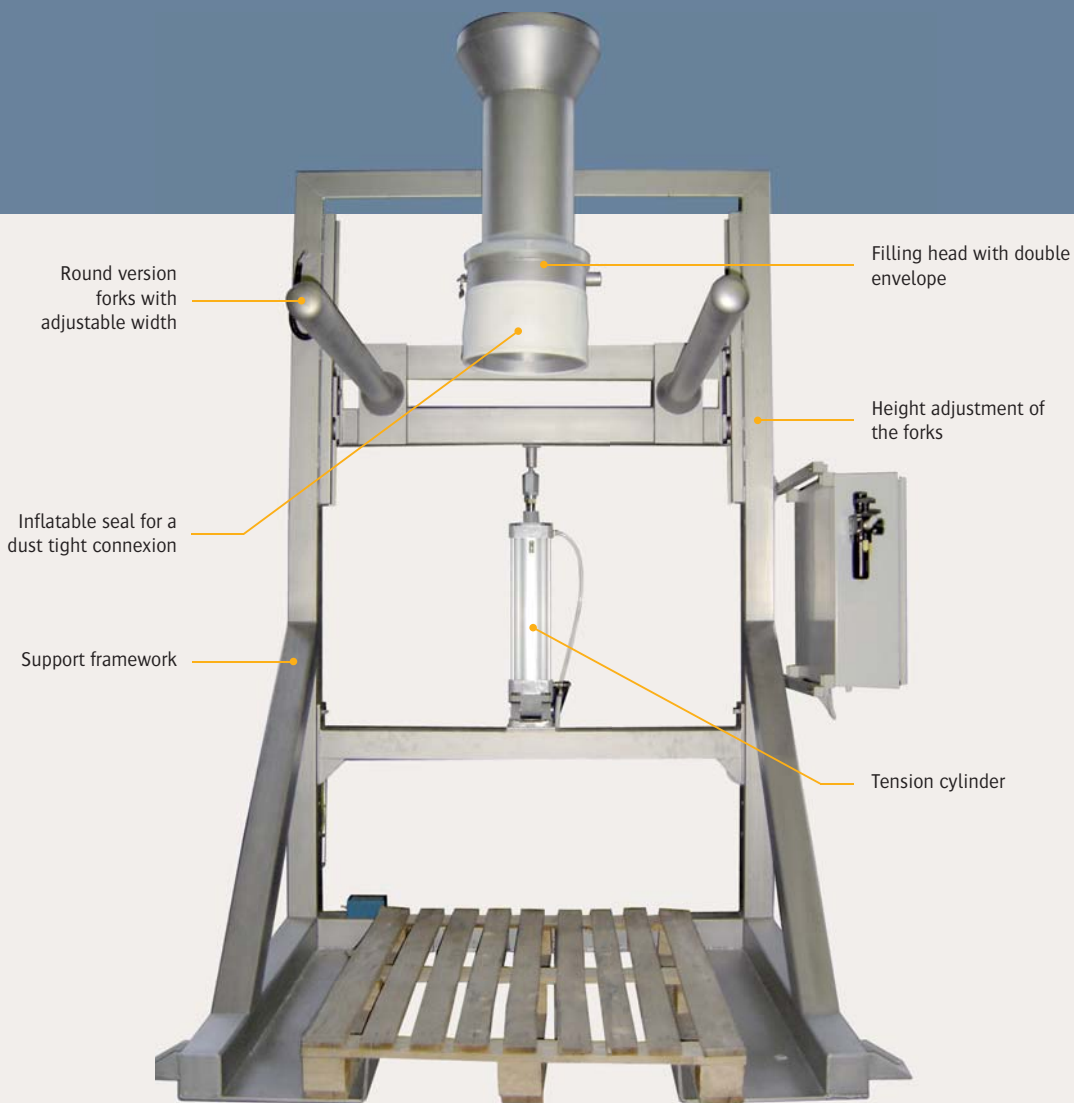
## TECHNICAL SPECIFICATIONS

**Flow rate:** 10 to 20 big bags/hr.  
**Manufacturing materials:** mild steel, SS 304L, SS 316L  
**Finishes:** RAL 9006, micro-blasted, electropolishing  
**Installed power:** 0.2 kW  
**Compressed air consumption:** 0.9 Nm<sup>3</sup>/hr.  
**Service pressure:** 6 bars  
**Input TOR:** 0  
**Output TOR:** 2  
**Dust collecting rate:** 300 m<sup>3</sup>/hr.  
**Maximum dimensions of big bags:**  
**Length x width x height:** 1,550 x 1,550 x 2,400 mm  
**"U" version forks:** allows big bag removal with straps (optional)

## OPERATING SEQUENCE

1. The big bag is placed on the filling station
2. The big bag inlet is connected to the filling head by an inflatable gasket ensuring the sealing
3. The height of the filling spout is adjusted by pneumatic cylinder according to the size of the big bag
4. Big bag filling process
5. Gradual lowering of the big bag with exhaust valve
6. Big bag laying on the pallet: bottom shaping (big bag stability during handling process)
7. When the big bag filling sequence is completed, the sealing gasket is deflated. The big bag is ready to be removed.
8. The big bag can be removed using either a forklift or a pallet truck

# 02



▶ **Hooking forks width adjustment** allows conditioning of all types of big bags



▶ **Inflating seal** to insure dust containment for a clean work area

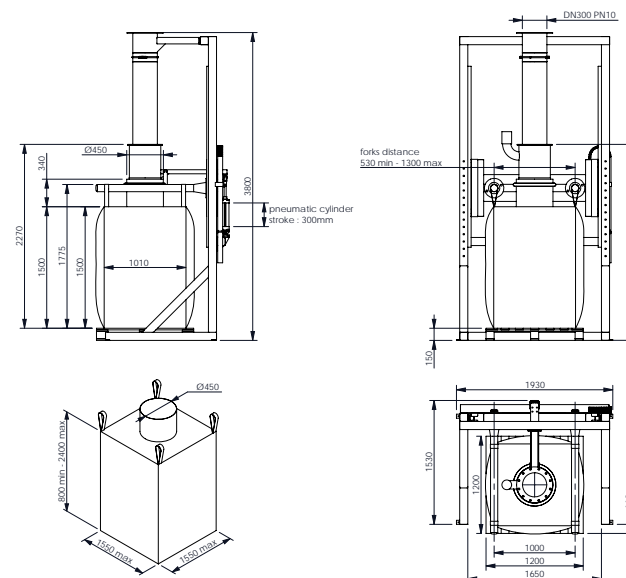


▶ **Tension cylinder** insures a perfect big bag filling and handling stability



▶ **Big bag removal** with fork or pallet truck

## Advantages



## Options



**Weighing system** integrated on big bag filling station



**Automatic big bag release**

**Rate:** 10 to 20 big bags/hr.  
**Weight capacity:** 2 tons/big bag  
**Objectives:** dosing & flexibility depending on powder characteristics

## TECHNICAL SPECIFICATIONS

**Flow rate:** 10 to 20 big bags/hr.  
**Manufacturing materials:** mild steel, SS 304L, SS 316L  
**Finishes:** RAL 9006, micro-blasted, electropolishing  
**Installed power:** 1.7 kW  
**Average power consumption:** 0.2 kW  
**Compressed air consumption:** 0.9 Nm<sup>3</sup>/hr.  
**Service pressure:** 6 bars  
**Input 4 - 20 mA:** 1  
**Input TOR:** 6  
**Output TOR:** 6  
**Weighing precision:** ± 500 grams  
**Dust collecting rate:** 300 m<sup>3</sup>/hr.  
**Maximum dimensions of big bags:**  
**Length x width x height:** 1,550 x 1,550 x 2,400 mm  
**"U" version forks:** allows big bag removal with straps (optional)

## OPERATING SEQUENCE

AVERAGE TIME FOR A COMPLETE CYCLE: 3 MIN.

1. The big bag is placed on the filling station
2. The big bag inlet is connected to the filling head by an inflatable gasket ensuring the sealing
3. The height of the filling spout is adjusted by pneumatic cylinder according to the size of the big bag
4. A fan inflates and shapes the big bag
5. Another fan is used to exhaust the air through a reverse jet filter
6. Big bag filling process at high flow rate
7. The big bag is laying on the pallet: bottom shaping (big bag stability during handling process)
8. The vibrating table provides material densification (operated by sequence during the filling process)
9. Weighing control: low filling flow rate to adjust final dosing
10. When the big bag filling sequence is completed, the sealing gasket is deflated. The big bag is ready to be removed
11. The big bag can be removed using either a forklift or a pallet truck

## CONTAINMENT, DENSIFICATION AND GROSS WEIGHING

The whole adjustable structure provides flexibility to accommodate a range of bag sizes. The filling head is designed with a double envelope to ensure volume balancing and avoid dust contamination of the workplace. The tension cylinder, fan and vibrating table gives an optimal shape to the big bags. Vibrating table provides material densification with low density. Handling filled big bag is safe and without any tipping risk.



**Dosing and weighing** enable business transactions for your products



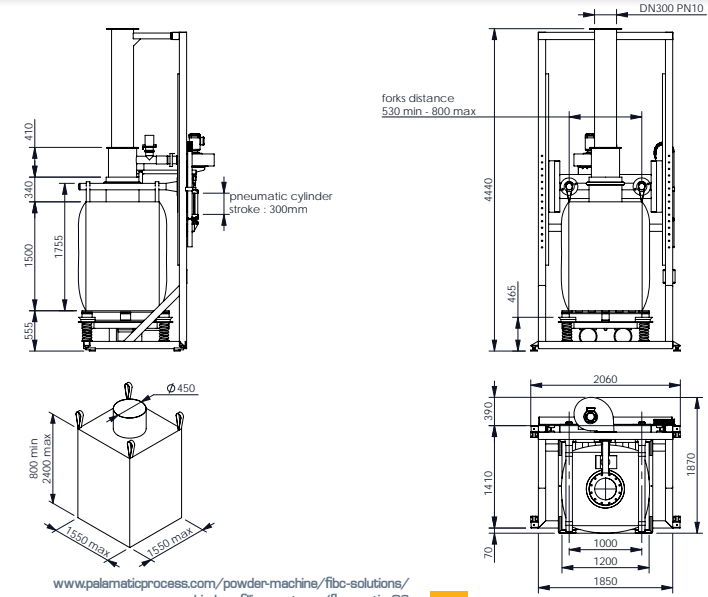
**Fan and tension cylinder** ensure big bag pre-forming and internal shaping



**Vibrating table** provides a compacted material by means of vibration ensuring a maximum of volume reduction of the material in the big bag



**"U" shaped forks** to remove big bag with straps



## Options



Mobile station



Rotating head

See all our options on page 28

# 04

**Rate:** 20 to 40 big bags/hr.  
**Weight capacity:** 2 tons/big bag  
**Objectives:** high flow rate & ergonomics of the filling station

## AUTOMATIC GROSS WEIGHING BIG BAG FILLING UNIT

The FlowMatic® 04 model is a complete solution for big bags automatic packaging with gross weighing (dosing / packaging / conveying). This model is designed for continuous operation at very high flow rate. The big bag FlowMatic® 04 is fitted with all the options necessary for big bag filling with minimal human intervention.

## TECHNICAL SPECIFICATIONS

**Flow rate:** 20 to 40 big bag/hr.  
**Manufacturing materials:** mild steel, SS 304L, SS 316L  
**Finishes:** RAL 9006, micro-blasted, electropolishing  
**Installed power:** 8.7 kW  
**Average power consumption:** 1.1 kW  
**Compressed air consumption:** 6.8 Nm<sup>3</sup>/hr.  
**Service pressure:** 6 bars  
**Input 4 - 20 mA:** 1  
**Input TOR:** 14  
**Output TOR:** 13  
**Weighing precision:** ± 500 grams  
**Dust collecting rate:** 300 m<sup>3</sup>/hr.  
**Maximum dimensions of big bags:**  
**Length x width x height:** 1,200 x 1,200 x 2,400 mm

## OPERATING SEQUENCE

AVERAGE TIME FOR A COMPLETE CYCLE: 1 MIN 30 S.

1. The empty pallets are automatically placed on a conveyor
2. The big bag is placed on the filling station
3. The big bag inlet is connected to the rotating filling head by an inflatable gasket ensuring the sealing
4. The height of the filling spout is adjusted by pneumatic cylinder according to the size of the big bag
5. A fan inflates and shapes the big bag
6. Another fan is used to exhaust the air through a reverse jet filter
7. Big bag filling process at high flow rate
8. The big bag is laying on the pallet: bottom shaping (big bag stability during handling process)
9. The vibrating table provides material densification (operated by sequence during the filling process)
10. Weighing control: low filling flow rate to adjust final dosing
11. When the big bag filling sequence is completed, the sealing gasket is deflated and the big bag is automatically released
12. Automatic big bag removal towards storage area (big bag stacker conveyor)



➤ **Conveyor and dynamic buffer storage:** high flow rate and flexible implantation



➤ **Dosing and weighing:** automation and ergonomics of filling station

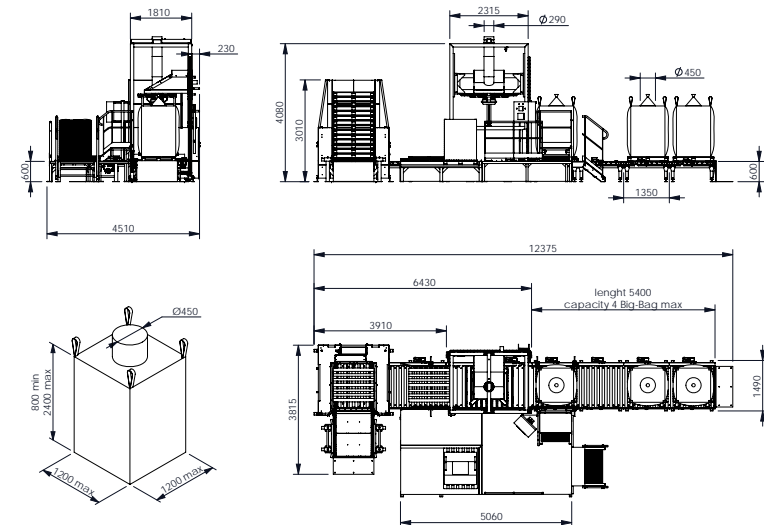


➤ **Automatic big bag release:** process time optimization



➤ **Pallet unstacker for 15 of multi-format pallets**

## Advantages



## Options



Welder for inner liner



Big bag covering

See all our options on page 28

# FlowMatic® 05 - LT\*

GROSS WEIGHT - COMMERCIAL WEIGHING



# 05

**Rate:** 10 to 30 big bags/hr.  
**Weight capacity:** 2 tons/big bag  
**Objectives:** hygienic & ergonomic system for operators

\* Lifting Table

## GROSS WEIGHING FILLING UNIT WITH SUSPENDED BIG BAG

The FlowMatic® 05 model is an effective and flexible solution for bulk packaging that are subject to strong hygiene constraints: the weighing system is implanted on the filling head which reduces retention areas on the ground. The big bag can be lowered with a lifting table and automatic hooks.

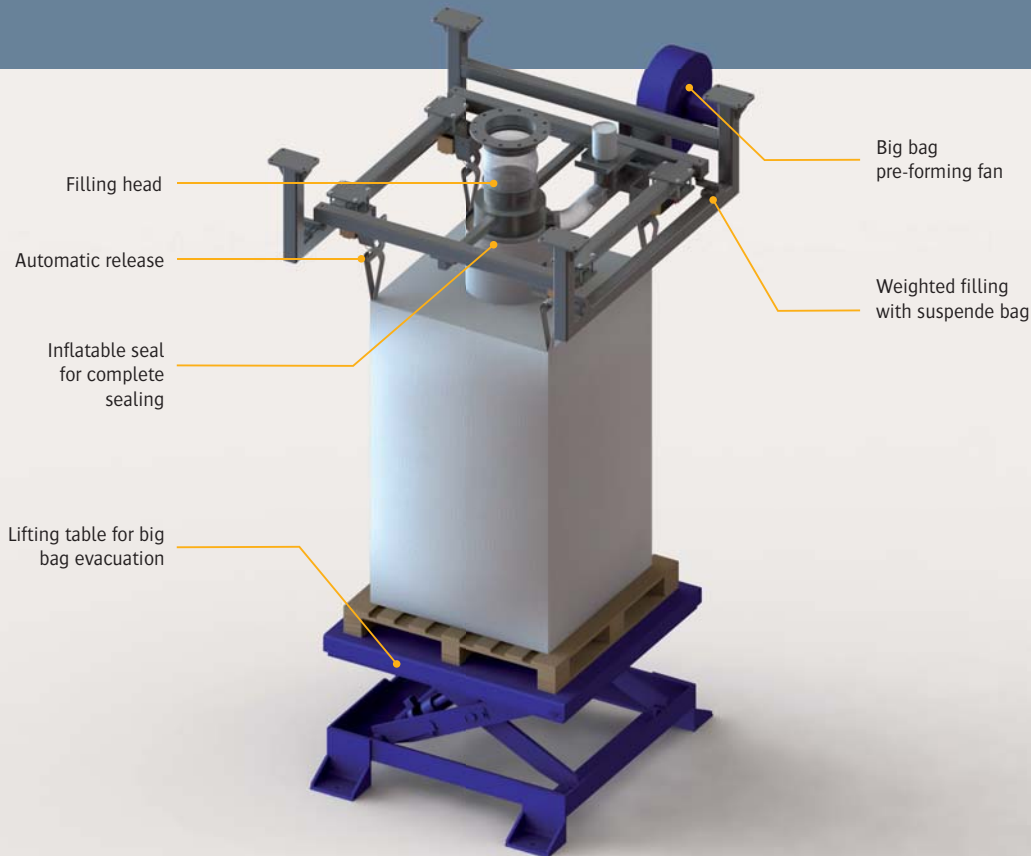
## TECHNICAL SPECIFICATIONS

**Flow rate:** 10 to 30 big bags/hr.  
**Manufacturing materials:** mild steel, SS 304L, SS 316L  
**Finishes:** RAL 9006, micro-blasted, electropolishing  
**Installed power:** 1.6 kW  
**Average power consumption:** 0.2 kW  
**Compressed air consumption:** 2.9 Nm<sup>3</sup>/hr.  
**Service pressure:** 6 bars  
**Input 4 - 20 mA:** 1  
**Input TOR:** 3  
**Output TOR:** 5  
**Weighing precision:** ± 500 grams  
**Dust collecting rate:** 300 m<sup>3</sup>/hr.  
**Maximum dimensions of big bags:**  
**Length x width x height:** 1,550 x 1,550 x 2,400 mm

## OPERATING SEQUENCE

AVERAGE TIME FOR A COMPLETE CYCLE: 2 MIN.

1. The big bag is placed on the filling station
2. The big bag inlet is connected to the filling head by an inflatable gasket ensuring the sealing
3. A fan inflates and shapes the big bag
4. Another fan is used to exhaust the air through a reverse jet filter
5. Big bag filling process at high flow rate
6. Weighing control: low filling flow rate to adjust final dosing
7. When the big bag filling sequence is completed, the lifting table is raised, the sealing gasket is deflated and the big bag is automatically released
8. Lowering the lifting table
9. Use a forklift to transport the pallet containing the big bag



▶ **Automatic release:** process time optimization



▶ **Suspended structure** facilitates floor cleaning

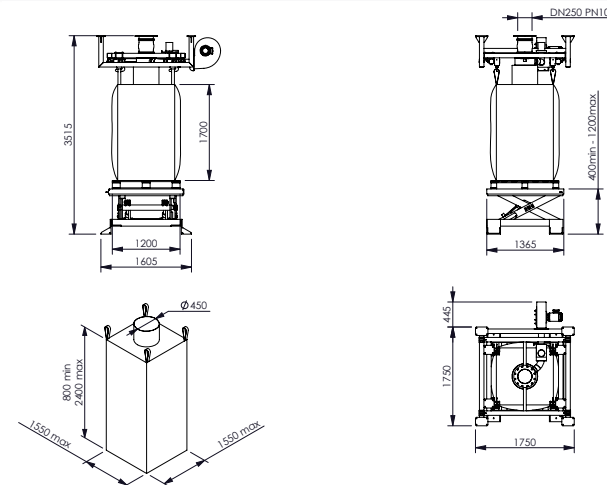


▶ **Filling head with double envelope** enables big bag air discharging through degassing line during the filling



▶ **Inflatable seal** to ensure dust containment for a clean workplace

## Advantages



## Options



Operator access platform



Vibrating table



# FlowMatic® 05 - HC\*

GROSS WEIGHT - COMMERCIAL WEIGHING



# 05

**Rate:** 10 to 30 big bags/hr.  
**Weight capacity:** 2 tons/big bag  
**Objectives:** hygiene & ergonomics for the operators

\*Hydraulic Cylinder

## GROSS WEIGHING FILLING UNIT WITH SUSPENDED BIG BAG

The FlowMatic® 05 model is an effective and flexible solution for bulk packaging that are subject to strong hygiene constraints: the weighing system is incorporated in the filling head which reduces retention areas on the ground. The big bag is designed to be actuated by a hydraulic cylinder.

## TECHNICAL SPECIFICATIONS

**Flow rate:** 10 to 30 big bags/hr.  
**Manufacturing materials:** mild steel, SS 304L, SS 316L  
**Finishes:** RAL 9006, micro-blasted, electropolishing  
**Installed power:** 1.6 kW  
**Average power consumption:** 0.2 kW  
**Compressed air consumption:** 2.9 Nm<sup>3</sup>/hr.  
**Service pressure:** 6 bars  
**Input 4 - 20 mA:** 1  
**Input TOR:** 3  
**Output TOR:** 5  
**Weighing precision:** ± 500 grams  
**Dust collecting rate:** 300 m<sup>3</sup>/hr.  
**Maximum dimensions of big bags:**  
**Length x width x height:** 1,550 x 1,550 x 2,400 mm

## OPERATING SEQUENCE

AVERAGE TIME FOR A COMPLETE CYCLE: 2 MIN.

1. The big bag is placed on the filling station
2. The big bag inlet is connected to the filling head by an inflatable gasket ensuring the sealing
3. The big bag is raised
4. A fan inflates and shapes the big bag
5. Another fan is used to exhaust the air through a reverse jet filter
6. Big bag filling process at high flow rate
7. Weighing control: low filling flow rate to adjust final dosing
8. When the big bag filling sequence is completed, the hydraulic cylinder is lowered, the sealing gasket is deflated and the big bag is automatically released
9. The big bag can be removed using either a forklift or a pallet truck



▶ **Big bag removal** with pallet truck or lift truck



▶ **Big bags stacking** for space optimization

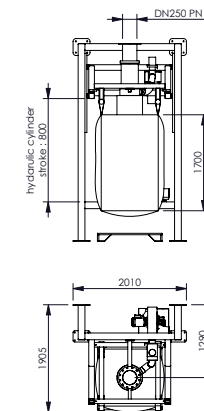
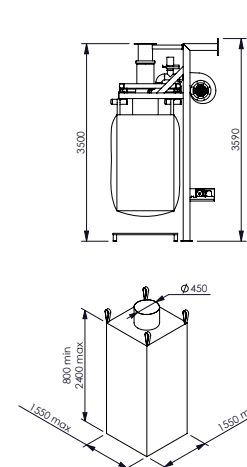


▶ **Hygienic design:** the low ground coverage facilitates the cleaning process



▶ **Inflatable seal** to ensure dust containment for a clean workplace

## Advantages



## Options



Automatic big bag release



Magnetic detector

# 06

**Rate:** 30 to 60 big bags/hr.  
**Weight capacity:** 2 tons/big bag  
**Objectives:** very high flow rate & loading station ergonomics

## NET WEIGHING FOR HIGH FLOW RATE AND 100% AUTOMATED

The FlowMatic® 06 model is a complete solution for big bag automatic net weighing packaging (dosing / packaging / conveying). This model is designed for a continuous operation with very high flow to maximize a number of simultaneous operator tasks. The FlowMatic® 06 is designed with all the options necessary for conditioning with minimal human intervention: pre-dosing weighed hopper, containment inflatable seal, big bag rotating head hooking, automatic release, height adjustable structure via a controlled pneumatic cylinder, commercial weighing, vibrating table for densification, pallet unstacker, handling conveyor...

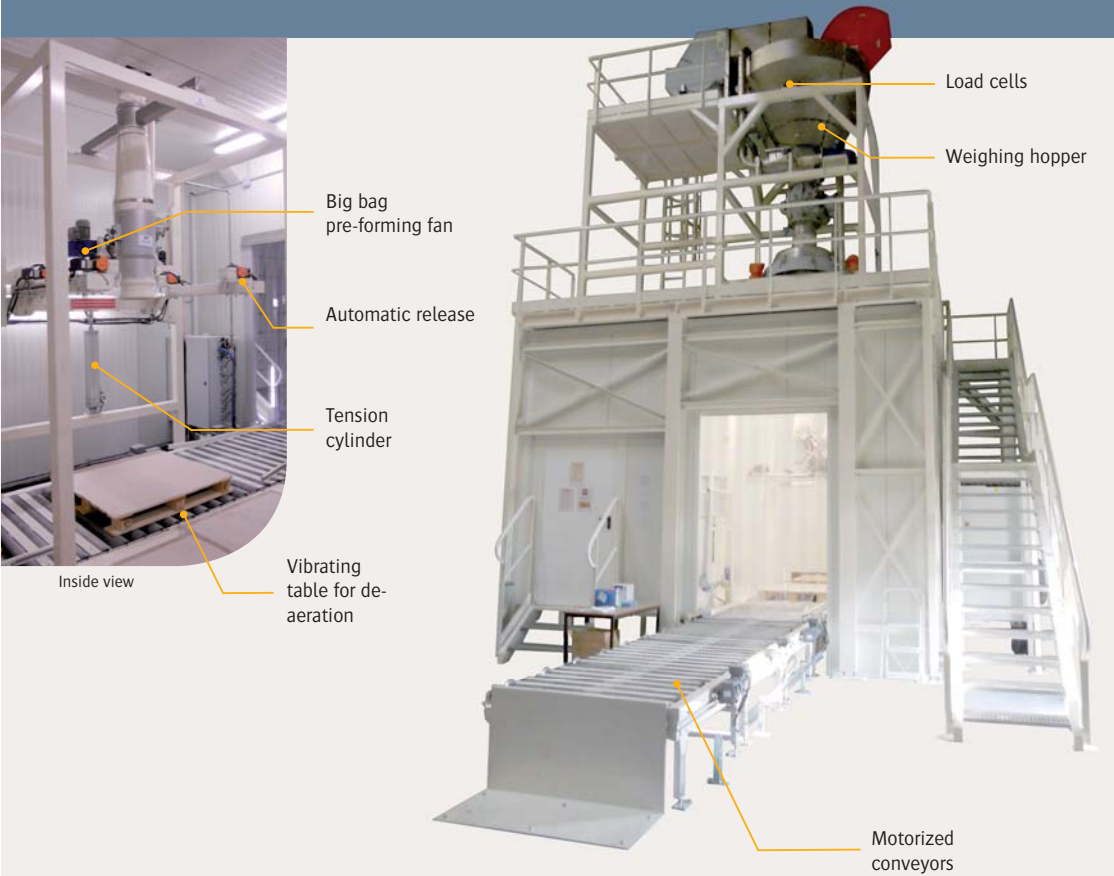
## TECHNICAL SPECIFICATIONS

**Flow rate:** 30 to 60 big bags/hr.  
**Manufacturing materials:** mild steel, SS 304L, SS 316L  
**Finishes:** RAL 9006, micro-blasted, electropolishing  
**Installed power:** 8.7 kW  
**Average power consumption:** 1.5 kW  
**Compressed air consumption:** 10.2 Nm<sup>3</sup>/hr.  
**Service pressure:** 6 bar  
**Input 4 - 20 mA:** 1  
**Input TOR:** 15  
**Output TOR:** 13  
**Weighing precision:** ± 500 grams  
**Dust collecting rate:** 600 m<sup>3</sup>/hr.  
**Maximum dimensions of big bags:**  
**Length x width x height:** 1,200 x 1,200 x 2,400 mm

## OPERATING SEQUENCE

AVERAGE TIME FOR A COMPLETE CYCLE: 1 MIN.

1. The empty pallets are automatically placed on a conveyor
2. The big bag is placed on the fillin station
3. The big bag inlet is connected to the rotating filling head by an inflatable gasket ensuring the sealing
4. The height of the filling spout is adjusted by pneumatic cylinder
5. A fan inflates and shapes the big bag
6. Another fan is used to exhaust the air through a reverse jet filter
7. Big bag filling process with hidden time
8. Start the preparation of another dose (hidden time)
9. The vibrating table provides material densification
10. When the big bag filling sequence is completed, the big bag is automatically released
11. Automatic big bag removal by motorized conveyor



Motorized conveyor for high production rates



Pallet unloader can handle 15 multistyle pallets

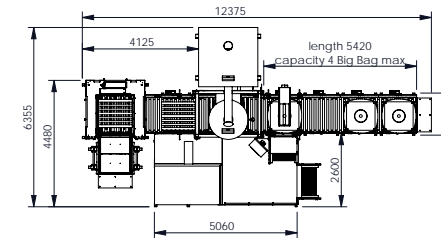
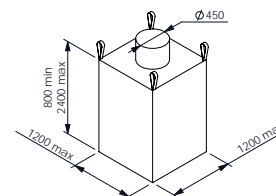
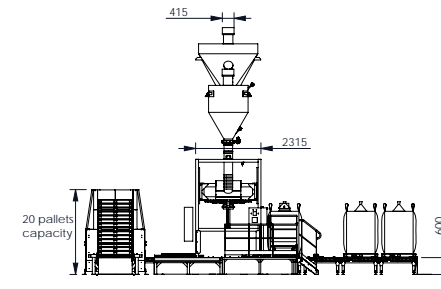
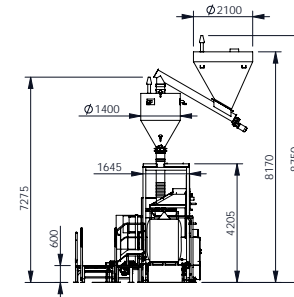


Net weighing hopper for customized filling



Big bag removal by lift truck

## Avantages



## Options



Welding system



Big bag covering

**Rate:** 20 to 30 big bags/hr.  
**Weight capacity:** 2 tons/big bag  
**Objectives:** mobile station & connection to trade loading spout

## MOBILE CONDITIONING UNIT FOR TRUCK CONNECTION OR SILO UNLOADING SPOUT

PALAMATIC PROCESS has developed a complete range of big bag filling stations to meet different industrial needs. The FlowMatic® 07 model is the most effective and flexible solution for simple packaging of bulk materials under multiple feeding points. It is particularly suitable for loading under silos or feeding points that require complete cleaning.

## TECHNICAL SPECIFICATIONS

**Flow rate:** 20 to 30 big bags/hr.  
**Manufacturing materials:** mild steel, SS 304L, SS 316L  
**Finishes:** RAL 9006, micro-blasted, electropolishing  
**Installed power:** 1.7 kW  
**Average power consumption:** 0.2 kW  
**Compressed air consumption:** 0.9 Nm<sup>3</sup>/hr.  
**Service pressure:** 6 bars  
**Input 4 - 20 mA:** 1  
**Input TOR:** 2  
**Output TOR:** 6  
**Weighing precision:** ± 500 grams  
**Dust collecting rate:** 300 m<sup>3</sup>/hr.  
**Maximum dimensions of big bags:**  
**Length x width x height:** 1,550 x 1,550 x 2,400 mm  
**Round forks or « U » version** (to remove big bag with the straps)



Load cells for dosing and commercial weighing



Connection to the trade loading spout

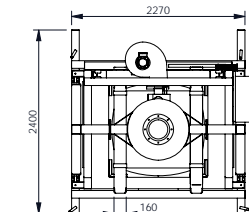
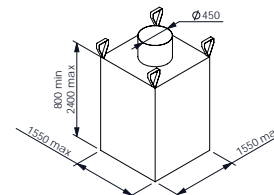
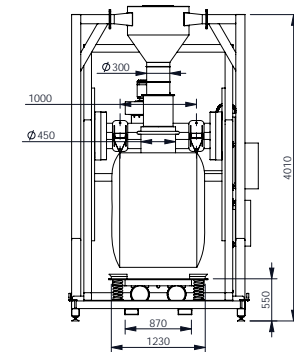
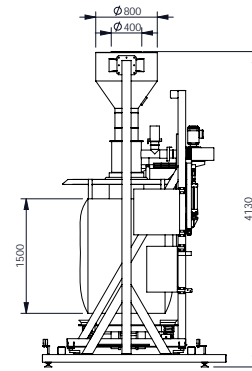


Unloading cone



Mobile station (wheels, forklift)

## Advantages



[www.palamicprocess.com/powder-machine/fibo-solutions/big-bag-filling-systems/flowmatic-07](http://www.palamicprocess.com/powder-machine/fibo-solutions/big-bag-filling-systems/flowmatic-07)  
 Download videos & layouts from our website

## Options



Automatic release



Clamping ring

See all our options on page 28

# FlowMatic® 08

GROSS WEIGHT - COMMERCIAL WEIGHING



FlowMatic® 08

# 08

**Rate:** 20 to 40 big bags/hr.  
**Weight capacity:** 2 tons/big bag  
**Objectives:** big bag with single handle & loading from the bulk products storage

## TECHNICAL SPECIFICATIONS

**Flow rate:** 20 to 40 big bags/hr.  
**Manufacturing materials:** mild steel, SS 304L, SS 316L  
**Finishes:** RAL 9006, micro-blasted, electropolishing  
**Installed power:** 5.6 kW  
**Average power consumption :** 0.3 kW  
**Service pressure:** 6 bars  
**Input 4 - 20 mA:** 1  
**Input TOR:** 7  
**Output TOR:** 3  
**Weighing precision:** ± 500 grams  
**Dust collecting rate:** 300 m<sup>3</sup>/hr.  
**Maximum dimensions of big bags:**  
**Length x width x height:** 1,300 x 1,300 x 2,400 mm



## PACKAGING UNIT FOR SINGLE HANDLE BIG BAG WITH TELESCOPIC FILLING TUBE

PALAMATIC PROCESS has designed a complete range of big bag filling stations to meet diverse needs of the industries. The FlowMatic® 08 model is an efficient and flexible solution for a simple conditioning of bulk materials with important tonnage, mainly dedicated to quarries, grain or fertilizer industries.



Commercial weighing



Loading from the storage of bulk materials area

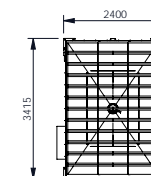
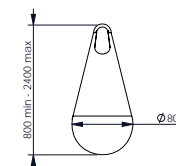
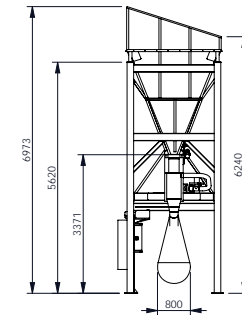
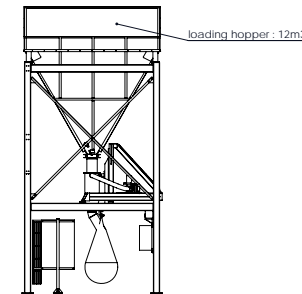


The fan inflates and shapes the big bag



Holding hook for big bag and feeding tube

## Advantages



## Options



Big bag pre-forming fan



Belt conveyor

# FlowMatic® 09

NET WEIGHT - COMMERCIAL WEIGHING



FlowMatic® 09

# 09

**Rate:** 40 to 60 big bags/hr.  
**Weight capacity:** 2 tons/big bag  
**Objectives:** very high flow rate & single handle big bag

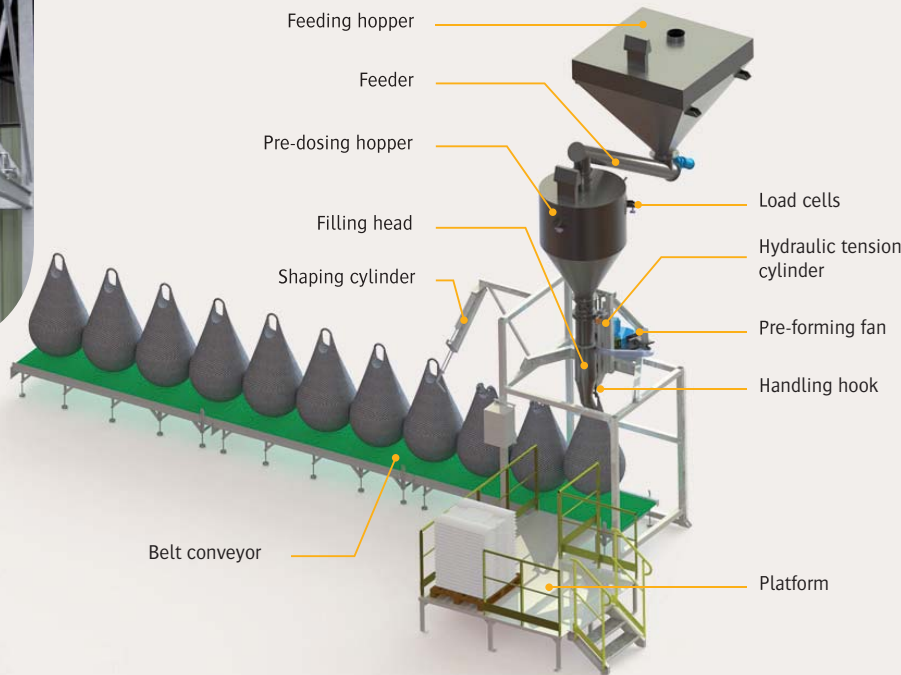
## TECHNICAL SPECIFICATIONS

**Flow rate:** 40 to 60 big bags/hr.  
**Manufacturing materials:** mild steel, SS 304L, SS 316L  
**Finishes:** RAL 9006, micro-blasted, electropolishing  
**Installed power:** 7.8 kW  
**Average power consumption:** 1.4 kW  
**Compressed air consumption:** 2.1 Nm<sup>3</sup>/hr.  
**Service pressure:** 6 bars  
**Input 4 - 20 mA:** 1  
**Input TOR:** 14  
**Output TOR:** 9  
**Weighing precision:** ± 500 grams  
**Dust collecting rate:** 600 m<sup>3</sup>/hr.  
**Maximum dimensions of big bags**  
**Length x width x height:** 1,300 x 1,300 x 2,400 mm



## HIGH FLOW RATE FIBC FILLING UNIT WITH NET WEIGHING FOR SINGLE HANDLE BIG BAG

The FlowMatic® 09 model is intended for a continuous use with high flow rate by optimizing process time with hidden process tasks. The FlowMatic® 09 big bag filler is equipped with all the necessary options for packaging with minimum human intervention: pre-dosing weighing hopper, containment inflatable seal, automatic cluster removal, height adjustable structure via a controlled pneumatic cylinder, big bag pre-forming fan, optional commercial weighing, vibrating table for densification, pallet unstacker, handling conveyor...



➤ Tension hook implanted on a hydraulic actuator



➤ Commercial weighing with net weight (time optimization)

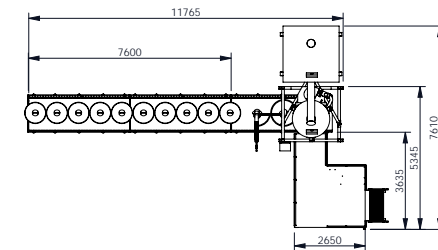
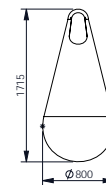
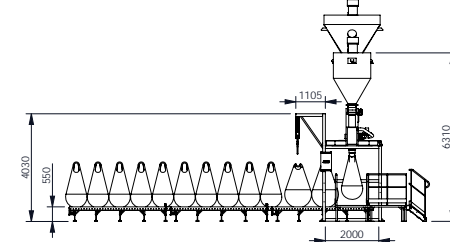
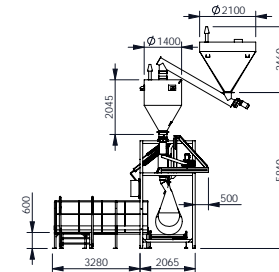


➤ Station with pre-dosing hopper (optional)



➤ Conveyor and automation

## Advantages



## Options



Vibrating table



Grounding clamp

# FlowMatic® 10

# Hygienic



FlowMatic® 10

**Rate:** 30 to 50 big bags/hr.  
**Weight capacity:** 2 tons/big bag  
**Objectives:** high flow rate & maximal hygiene

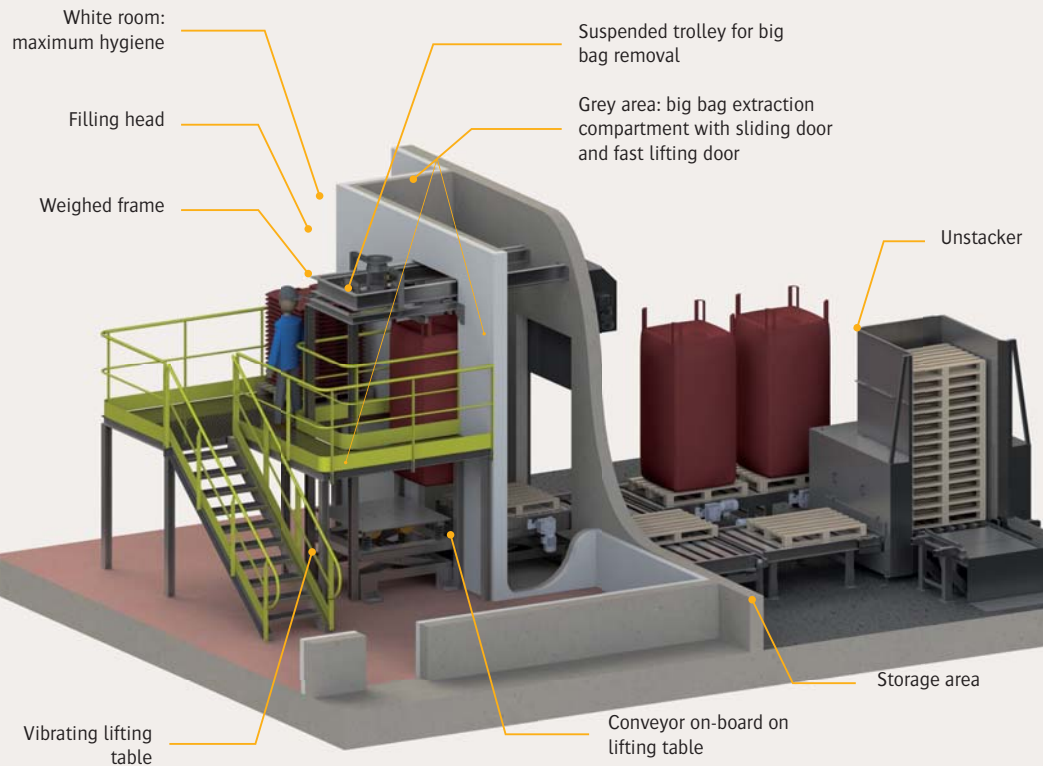
## TECHNICAL SPECIFICATIONS

**Flow rate:** 30 to 50 big bags/hr.  
**Manufacturing materials:** painted steel, SS 304L, SS 316L  
**Finishes:** RAL 9006, micro-blasted, electropolishing  
**Installed power:** 15.0 kW  
**Average power consumption:** 3.8 kW  
**Compressed air consumption:** 4.9 Nm<sup>3</sup>/hr.  
**Service pressure:** 6 bars  
**Input 4 - 20 mA:** 1  
**Input TOR:** 23  
**Output TOR:** 17  
**Weighing precision:** ± 500 grams  
**Dust collecting rate:** 300 m<sup>3</sup>/hr.  
**Maximum dimensions of big bags:**  
**Length x width x height:** 1,300 x 1,300 x 2,400 mm



## HIGH RATE LOADING WITH MAXIMUM HYGIENE

Developed for pharmaceutical and agro-food industries, the FlowMatic® 10 model is designed for filling big bags in white room and extract them towards the storage area. A compartment (grey area) closed by two sealed doors can make the link between the two areas and prevents the pallets from being introduced into the sensitive area. The commercial weighing associated to feeding pallets and big bag extraction line allows the preparation of big volume ready to ship with little intervention from operator.



Automatic big bag release: process time optimization



Commercial weighing with net weight (save time)

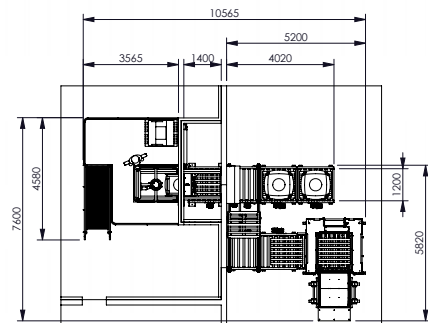
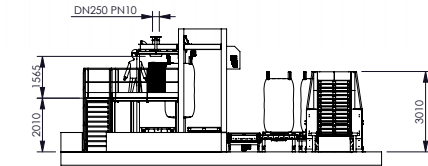
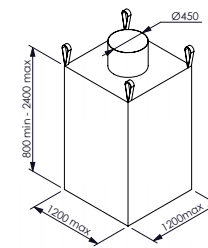
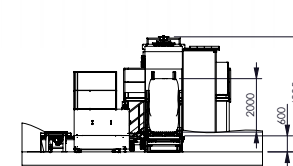


Station with pre-dosing hopper (optional)



Conveyor and automation

## Advantages



## Options



Mat laying



Grounding clamp

# Filling system

# Custom Made



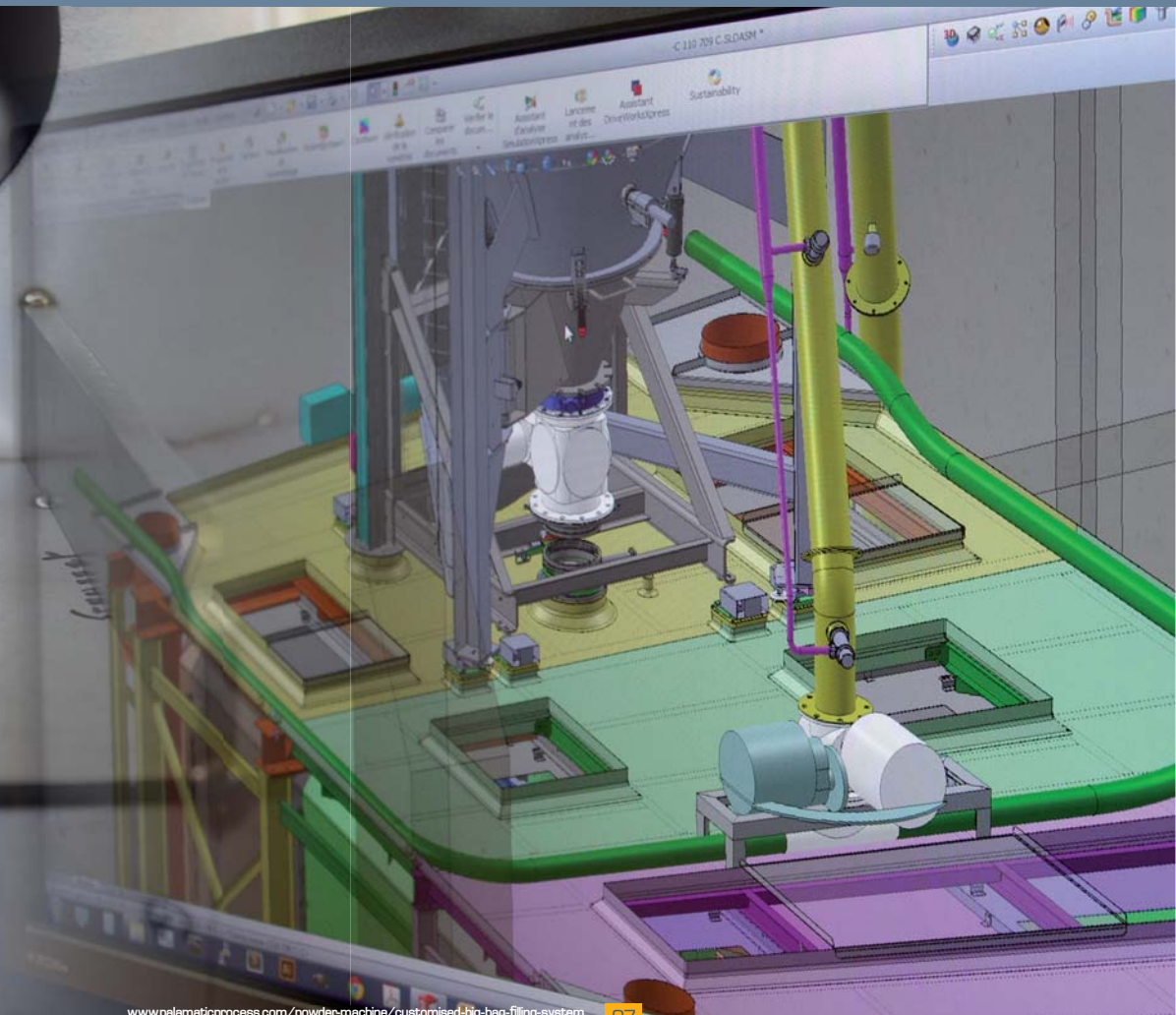
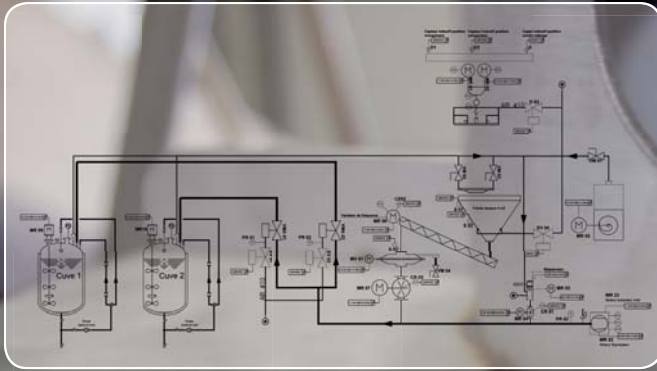
Customized

Painted steel manufacturing  
SS 304L, SS 316L

PALAMATIC PROCESS engineering office offers custom-made solutions for your filling station with different types of flexible or rigid containers: big bag, octabins, cardboards, drums, buckets... depending on your implementation restrictions and your flow rate. We define together the customized solution after visiting your site and according to your detailed specifications.

## POSSIBLE FUNCTIONALITIES

- Containment adapted to your powders
- Extraction of extremely difficult products (vibration, massage...)
- Reduced installation height
- Ergonomic station
- Hygienic system
- CIP/NEP integrated
- Conditioning station for flexible or rigid containers: big bags, drums, cardboards, octabins, buckets...
- Nitrogen ( $N_2$ ): controlled atmosphere packaging area with continuous flow extraction or by breaking the vacuum





## WEIGHING & DOSING PRECISION

**To control the filling flow and ensures final dosing.**

Unit capacity: 1,000 kg  
 Number of unit echelons: 3,000 points (+/-166 g.)  
 Commercial weighing: yes  
 Deformation measurement with Wheatstone bridge  
 Installation with shock absorber  
 Communication: profibus, modbus, ethernet  
 Compatible with PALAMATIC PROCESS vibrating tables  
 Weighing label printing with tracking  
**Our partners:** Precia Molen, Sartorius, Master-K, Mettler Toledo, Philips, Siemens, Vishay Nobel...



## OPERATOR ACCESS PLATFORM

**To facilitate access to the upper part of the conditioning unit to close a filling spout of the flexible container.**

Steel and inox manufacturing  
 Specific certifications  
 Access improved with retractable projection  
 Possibility to include reclining barrier



## MOBILE BIG BAG CONDITIONING UNIT

**The handling forks can be fitted to the packaging system, which allows the safe displacement of the entire station with a fork lift or a pellet truck.**

These mobile big bag conditioning units allow to fill big bags under multiple separated feeding points or lorry loading spouts.  
 The versions with rails and wheels are also standard models at PALAMATIC PROCESS.



## GROUNDING CLAMP

**Ground clamps are fitted on the whole station. A rapid connection allows big bag grounding for an equipotential bonding of the entire unit.**

Amount of clip per station: 1 or 2  
 Grounding controller: 24VDC power  
 Intrinsic Circuit: Ex ia IIC  
 Big bag: class C



## HOOK FOR BIG BAG WITH SINGLE LOOP

**Filling system for FIBC with one loop. The technology involves bags that are filled, weighed and transported while hanging, and assures bag stability for transport by forklift.**

For filling, the spout is inserted into the bag opening. The bag loop is hooked to the suspension hook which in its turn is connected to the suspension eyelet of the weigher load cell.  
 Loading capacity: 2,000 kg  
 Lifting: with a hydraulic tension cylinder  
 Maximum pressure: 230 bars



## VIBRATING TABLE

**Very fluidisable materials make big bags unstable and dangerous to handle. The vibrating table enables the product to be de-aerated and compacted by means of vibration ensuring maximum volume reduction as well as stable shape.**

Quantity of unbalanced motors: 2  
 Loading capacity: 2,000 kg  
 Isolation: calibrating springs  
 Oscillation by counterbalance  
 Compatible with PALAMATIC PROCESS' weighing systems



## FAN

**The fan, fitted on the main structure, shapes the big bag.**

It facilitates the big bag filling fitted with an inner line (PE or aluminized). A by-pass valve completes the aeratic line for degassing fines, captured by the double envelope tube during the conditioning phase.  
 Noise level: 68 dBA  
 Blowing rate: 600 m<sup>3</sup>/h.  
 Rotation speed: 3,000 tr./min.



## AUTOMATIC BIG BAG RELEASE

**Automatic hooks with latch spring for easy big bag handles hooking**

Unit loading capacity: 500 kg  
 Service pressure: 6 bar  
 Developed torque: 156 Nm



## PALLET UNSTACKER

**Automation of the big bag packaging station for automatic stacking/unstacking and pallets positioning.**

The stacked pallets are stored in the storehouse and then placed one by one on the packaging line via a motorized conveyor.  
 Storage capacity: 15 pallets (maximum 450 kg)  
 Unstacking cycle: 15 sec./pallet  
 Pallet dimensions: 1,200 x 1,000 mm / 1,000 x 1,000 mm (adjustable unstacker thanks to flexible indexing pins)



## OUTFEED CONVEYOR

**It enables the big bag removal on pallet through a motorized roller conveyor for process time optimization.**

Loading capacity: 2,000 kg/m<sup>2</sup>  
 Drive train: chain bracelet  
 Motorization by section  
 Accumulation sensor: by roller-feeler  
 Conveying speed: 9 m/min.

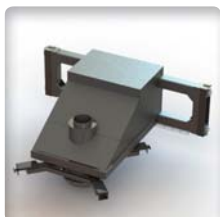




## ▶ WELDING MACHINE FOR INNER LINER

### The thermo-welding system enables to seal the big bag.

After welding, there is the possibility to put a big bag under vacuum by a nitrogen conditioning.  
 Welded materials: PE, PA/PE bags, aluminium, paper, 4 envelopes  
 Seal length: 350 to 1,000 mm  
 Power consumption: 200 à 630 VA  
 Bi-manual control (optional)



## ▶ ROTATING HEAD AND HOOKS LED

### System allowing an ergonomic positioning of the big bag with a high resistance bearing.

A simple rotation (+ 180°/- 180°) of the handling system allows the operator to position the 4 handles from his workstation. The automatic handles release, once the big bag filled, completes the system and makes it a perfect equipment, particularly suitable for high conditioning cadences. The big bag pre-forming fan is fitted to the casing of the whole system, enabling use in harsh environments subject to strong hygiene constraints.  
 Loading capacity: 2,000 kg  
 Rotation: -180°/+ 180°  
 E/S TOR: 1E / 5S  
 Hooks: automatic with linear pneumatic cylinder



## ▶ MAT LAYING

### A post for mat laying is located between the unstacker and the big bag filling unit.

It enables the automatic setting up of a mat (cardboard or PE film) on the empty pallet, before the filling. This post is necessary for a maximum big bag hygiene for meeting the quality standard of many industries.  
 Mat: roller or precut  
 Staple: optional  
 Equipment casing: included in the option



## ▶ HYGIENIC DESIGN

### For environments particularly binding in terms of hygiene, we adapt all components of the conditioning system:

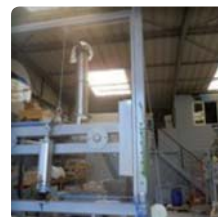
Manufacturing materials (stainless steel 316L, polished finish...)  
 Quick disconnection system (clamp connection, sms, harting socket and staubli connector)  
 Welded conception adapted (tube on the field, closing pipes or open profile, minimizing congestion on the ground and bolted systems)  
 All equipment is removable for an easy cleaning. We pay special attention to the weight of detachable equipment and to the ergonomic access for the operator.



## ▶ BIG BAGS COVERING

### At the output of big bag filling unit, an automatic coverer provides the final containment of big bag on its pallet.

The feeding of the big bag is performed by a motorized conveyor.



## ▶ HOIST FOR HEIGHT ADJUSTMENT

### Facilitate big bag format change.

The hoist enables the filling station adjustment in height in order to raise or lower the big bag supporting structure.  
 Leverage capacity: 270 kg  
 System: self-locking  
 Cable length: 6 m of galvanized cable



## ▶ BIG BAG TENSION CYLINDER

### The big bag filling unit integrates on the back of its structure a pneumatic cylinder to adjust big bag tension.

During the conditioning process, the pneumatic cylinder compression ensures big bag laying on the handling pallet (or vibrating table) in order to ensure big bag stability. The cylinder position can be modified to adapt to different heights of the big bag.  
 Effort capacity: 250 kg adjustable with integrated valve  
 Type: double acting ISO range  
 Service pressure: 3 bars and adjustable valve



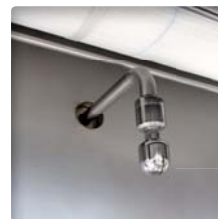
## ▶ CLAMPING RING

### Positioned around inflatable seal, the clamping ring permits the connection of different diameters of big bag cuffs. It is removable.



## ▶ NITROGEN

### Controlled atmosphere packaging with continuous flow or by vacuum breaker. The conditioning with nitrogen involves introduction of specific big bag and an internal bag closing by welding.



## ▶ CIP

### CIP (Clean in Place):

PALAMATIC PROCESS integrates washing nozzles to ensure a perfect hygiene at the end of the usage period.

# FlowMatic® Octabin

# Standard



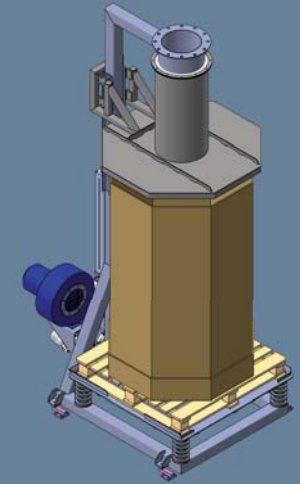
**Rate:** 10 to 30 octabins/hr.  
**Weight capacity:** 2 tons/octabin  
**Objectives:** efficient & ergonomical station

## SEMI-AUTOMATIC CONDITIONING LINE

The FlowMatic® Octabin model represents the complete solution for a semi-automatic conditioning with gross weighing for octabins (dosing/conditioning/conveying). This model ensures containment, safety and commercial weighing.

## TECHNICAL SPECIFICATIONS

**Flow rate:** 10 to 30 octabins/hr.  
**Manufacturing materials:** mild steel, SS 304L, SS 316L  
**Finishes:** RAL 9006, micro-blasted, electropolishing  
**Installed power:** 1.7 kW  
**Average power consumption:** 0.2 kW  
**Compressed air consumption:** 0.7 Nm<sup>3</sup>/h.  
**Service pressure:** 6 bars  
**Input 4 - 20 mA:** 1  
**Input TOR:** 2  
**Output TOR:** 5  
**Weighing precision:** ± 500 grams  
**Dust collecting rate:** 300 m<sup>3</sup>/h.  
**Maximum dimensions of octabin:**  
**Length x width x height:** 1,200 x 1,200 x 2,400 mm



FlowMatic® Octabin



Feeding hopper (optional)

Filling head

Support framework

Retractable access platform

Vibrating table for material densification



▶ **Vibrating table** provides a compacted material by means of vibration ensuring a maximum of volume reduction of the material in octabin



▶ **Fan** for internal bag pre-forming

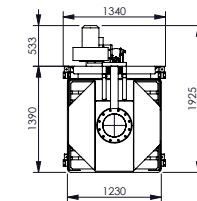
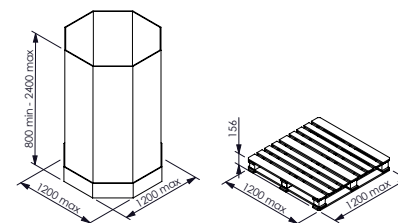
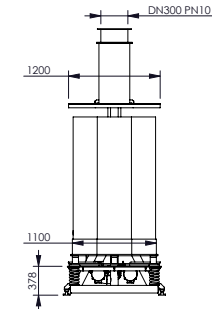
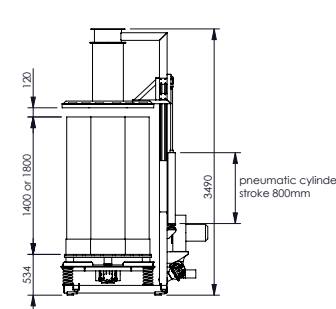


▶ **Dosing and weighing** to control business transaction of your products



▶ **Automatic adjustment of covering plate** adaptable to several octabin sizes

## Advantages



## Options



Welding for inner liner



Magnetic detector

See all our options on page 28

# FlowMatic® Octabin

# High velocity



**Rate:** 20 to 40 octabins/hr.  
**Weight capacity:** 2 tons/octabin  
**Objectives:** efficient & ergonomical station

## HIGH LOADING RATE WITH GROSS WEIGHING

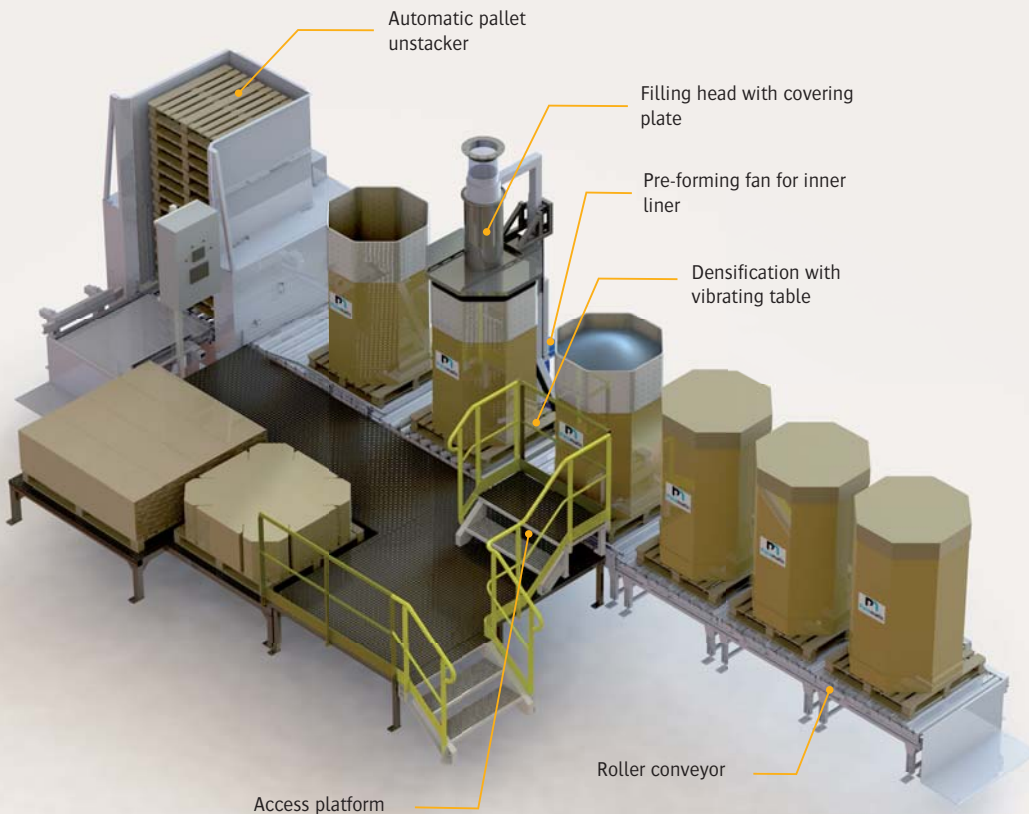
The FlowMatic® Octabin high flow rate model is designed to optimize the conditioning rate of your octabins. The pallet unstacker associated to the conveying line and to net weighing system allows the conditioning of large ready to sell quantities. The access platform and overall ergonomics simplify and optimize operator process.

## TECHNICAL SPECIFICATIONS

**Flow rate:** 20 to 40 octabins/h.  
**Manufacturing materials:** painted steel, SS 304L, SS 316L  
**Finishes:** RAL 9006, micro-blasted, electropolishing  
**Installed power:** 10.9 kW  
**Average power consumption:** 1.0 kW  
**Compressed air consumption:** 1.1 Nm<sup>3</sup>/h.  
**Service pressure:** 6 bars  
**Input 4 - 20 mA:** 1  
**Input TOR:** 10  
**Output TOR:** 15  
**Weighing precision:** ± 500 grams  
**Dust collecting rate:** 300 m<sup>3</sup>/h.  
**Maximum dimensions of octabin:**  
**Length x width x height:** 1,200 x 1,200 x 2,400 mm



FlowMatic® Octabin



▶ **Vibrating table** provides a compacted material by means of vibration ensuring a maximum of volume reduction of the material in octabin



▶ **Conveyor** for high rates

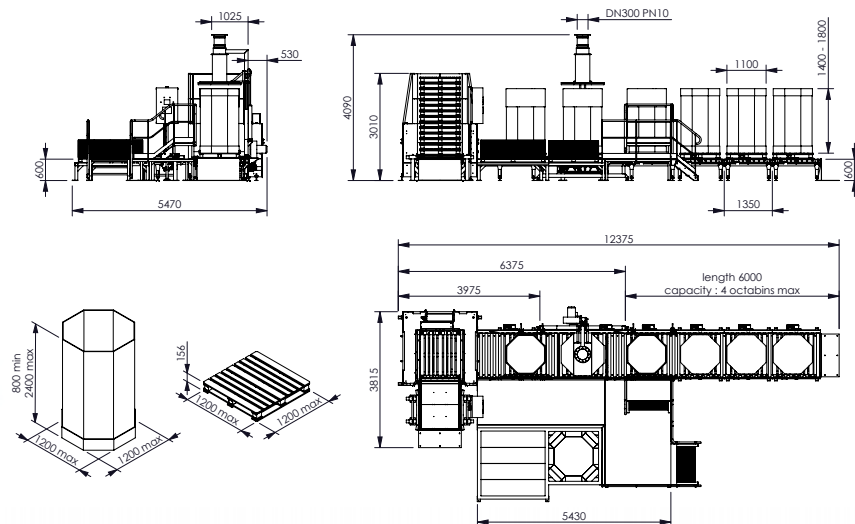


▶ **Dosing and weighing** for commercial dosing of your materials



▶ **Motorized conveyor** for high production rates

## Advantages



## Options



Welding for inner liner



Octabin covering

# FlowMatic® Octabin

## Automatic high velocity



**Rate:** 30 to 60 octabins/hr.  
**Weight capacity:** 2 tons/octabin  
**Objectives:** efficient & ergonomical station

### AUTOMATIC CONDITIONING LINE

In order to minimize the number of operator tasks, the majority of operations is automated on FlowMatic® Octabin automatic high flow rate design. This installation is designed for a continuous use with high flow rate; it includes automatic covering plates, conveying, filling and weighing, closing and wrapping of octabins.

### TECHNICAL SPECIFICATIONS

**Flow rate:** 30 to 60 octabins/h.  
**Manufacturing materials:** painted steel, SS 304L, SS 316L  
**Finishes:** RAL 9006, micro-blasted, electropolishing  
**Installed power:** 16.3 kW  
**Average power consumption:** 4.1 kW  
**Compressed air consumption:** 0.6 Nm<sup>3</sup>/h.  
**Service pressure:** 6 bars  
**Input 4 - 20 mA:** 1  
**Input TOR:** 13  
**Output TOR:** 24  
**Weighing precision:** ± 500 grams  
**Dust collecting rate:** 300 m<sup>3</sup>/h.  
**Maximum dimensions of octabin:**  
**Length x width x height:** 1.200 x 1.200 x 2.400 mm



FlowMatic® Octabin

**STEP 1**  
Loading empty octabins with forklift

**STEP 2**  
Automatic covering plate

**STEP 3**  
Octabins transfer

**STEP 7**  
Removal of filled octabins with forklift

**STEP 6**  
Automatic wrapping

**STEP 5**  
Manual closing

**STEP 4**  
Automatic filling process



**▶ Vibrating table** provides a compacted material by means of vibration ensuring a maximum of volume reduction of the material in octabin



**▶ Adaptable conception** depending on your octabin dimensions

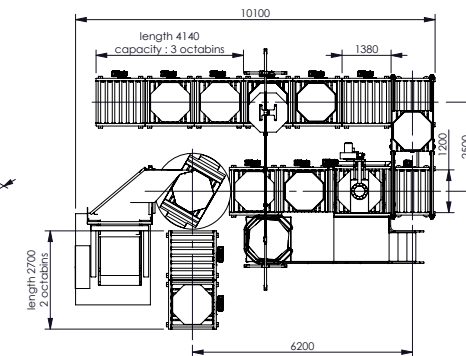
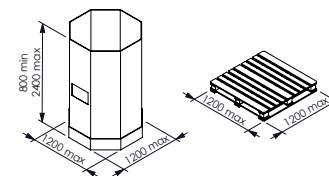
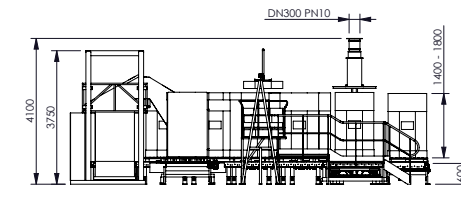
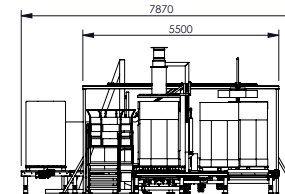


**▶ Dosing and weighing** for commercial dosing of your materials



**▶ Conveying and dynamic buffer storage:** high flow rates and flexible implementation

Advantages



Options



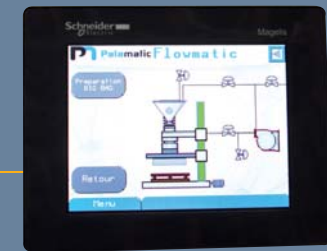
Welding for inner liner



Octabin covering

See all our options on page 28

# AUTOMATION & ELECTRICITY



## PAL TOUCH® TECHNOLOGY

As the designer of specific equipments, PALAMATIC PROCESS associates programmed PLCs with its production units in an ergonomic and visual way. The production control is as important for us as the result. That is why automation and IT engineers of PALAMATIC PROCESS review the raw material feeding, the batches traceability, operators identification and dosings database. Thanks to continuous exchanges, during the step of project realization, between production team and our engineering office, screens of packaging lines control offer ergonomic and easy use with unique personalization.

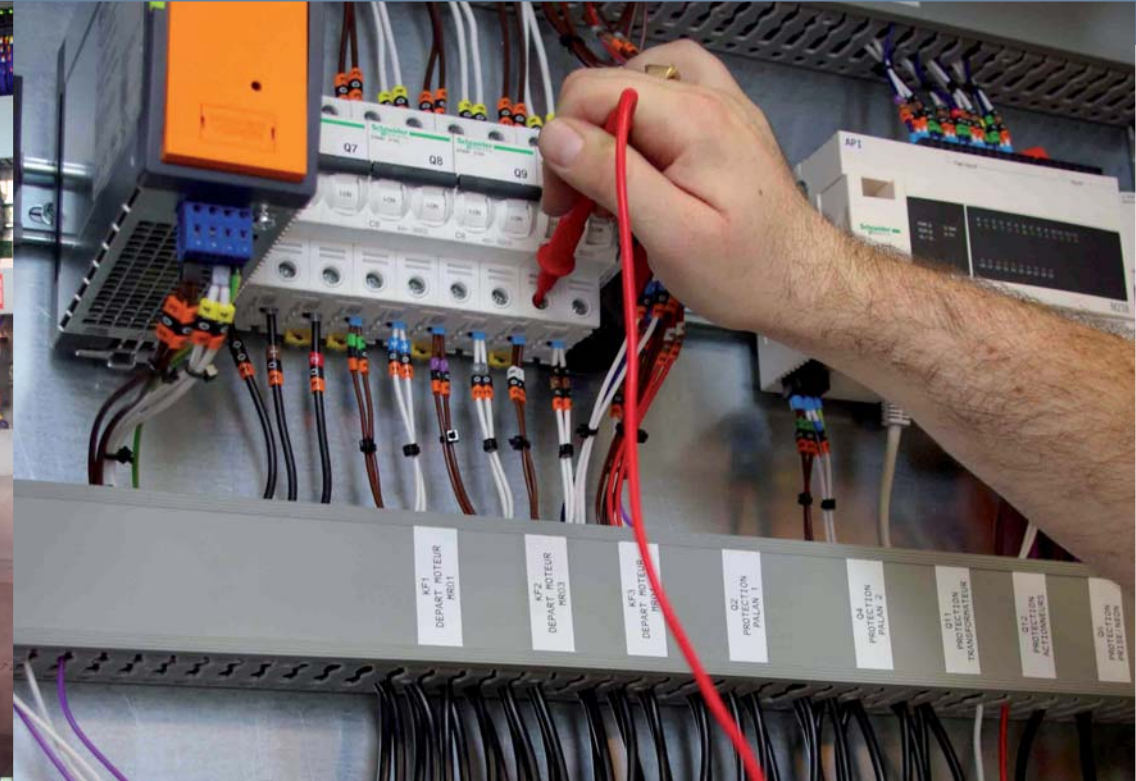
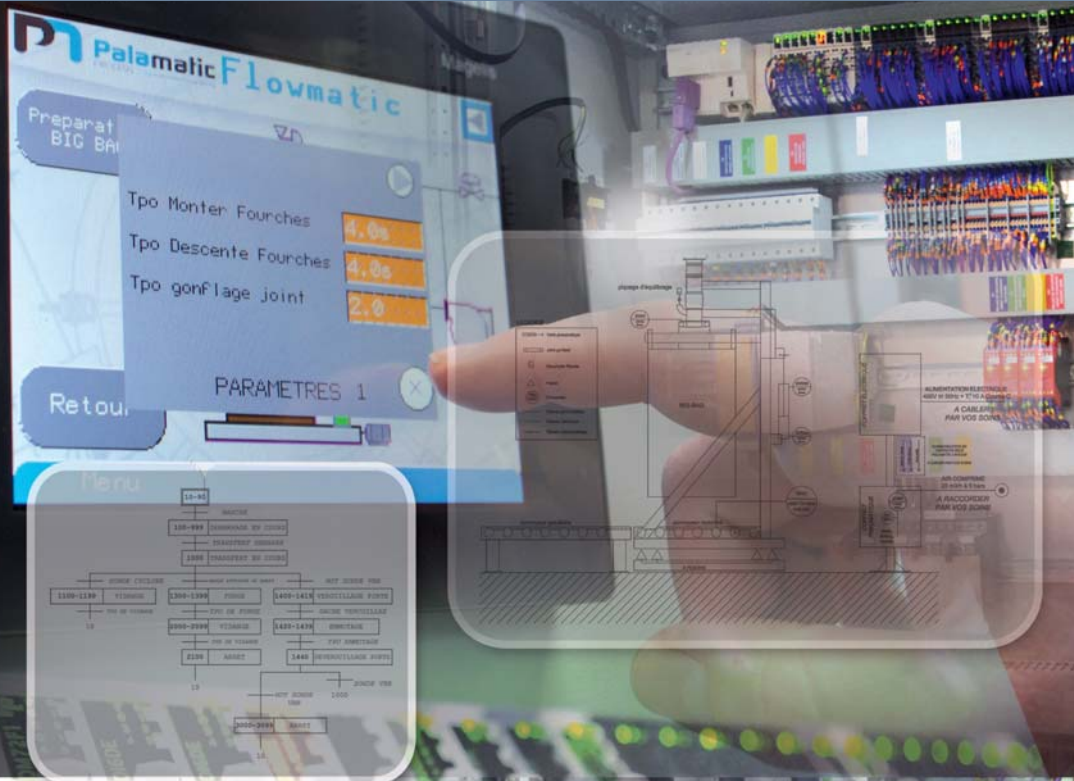
**Equipments and programs:** Schneider, Siemens, Rockwell, Omron, Philips, In-touch, Pc Vue, VijeoDesigner, ...

## COMMERCIAL WEIGHING CONTROL

In order to help you to sell your final products in big bag or in sacks, PALAMATIC PROCESS integrates commercial weighing systems to its filling unit. Compliant to IPFNA directives, our equipment is calibrated during commissioning by our partners recognized organisations.

Your materials conditioned in big bags or sacks are hence immediatly ready to sell.

Associated with our customizable labels printing systems, these reliable systems represent a perfect solution to distribute your powders in large quantities with minimum human intervention.



# EXAMPLES OF OUR PRIOR INSTALLATIONS



▶ Cacao



▶ Animal food



▶ Plastic



▶ Cleaning products



▶ Chemical components



▶ Paints



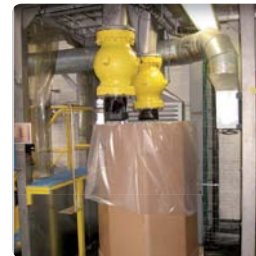
▶ Nutrition



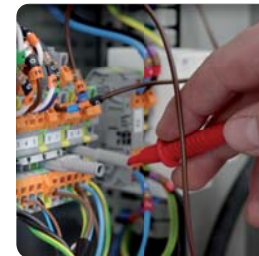
▶ Aromas



▶ Pharmaceutical products



▶ Plastic pellets



▶ Wiring



▶ Minerals



▶ Veterinary products



▶ Milk powder



▶ Cosmetics



▶ Control cabinet



▶ See our big bag filling unit in video on our YouTube channel:  
[www.youtube.com/user/Palamaticprocess](http://www.youtube.com/user/Palamaticprocess)

**500**  
+ 500 installations  
of big bag filling unit in  
FRANCE and ABROAD

# Our expertise:

## FILLING SOLUTIONS FOR BIG BAG AND OCTABIN

To fill

## EMPTYING SOLUTIONS FOR BIG BAG AND OCTABIN

To empty, compact and massage

## SACK, DRUM AND CARDBOARD FILLING SOLUTIONS

To fill, package, handle

## SACK AND DRUM EMPTYING SOLUTIONS

To empty, compact, handle, discharge

## SOLUTIONS FOR PNEUMATIC CONVEYING

Vacuum, pressure

## SOLUTIONS FOR MECHANICAL CONVEYING

To transfer with screw, belt conveyor, bucket elevator, aeromechanical or vibratory conveyor, truck loading spout

## CRUMBLING AND GRINDING EQUIPMENT

To granulate, crumble, grind, pound, micronise, disagglomerate

## SIFTING EQUIPMENT

To sift, segregate, sieve, protect

## CONTAINERS AND STORAGE SOLUTIONS

To fill, charge, empty, contain

## DOSING EQUIPMENT

To control, regulate, empty, extract

## MIXING EQUIPMENT

To homogenise, incorporate, fluidify, stir, mix

## FLOW AND CONNECTION

To vibrate, fluidise, unclog, drain, facilitate extraction, control the descent, prevent stacks and vaults, connect

## INDUSTRIAL DUST COLLECTING EQUIPMENT

To filter, clean, confine, secure



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