

# Big Bag Discharge Station

# EasyFlow® Flex



Multi-products big bag vacuum discharge

## PARTIAL EMPTYING, MULTI-PRODUCT AND INTEGRATED WEIGHING

The big bag discharge station EasyFlow® Flex was designed by PALAMATIC PROCESS for accurate emptying through a suction system a required amount of product (via a weighing device). The possibility to discharge a semi-started big bag is the main objective of this machine. With the EasyFlow® Flex system, a single station is sufficient to ensure a multi-products discharge. It is a combination of a VFlow® pneumatic vacuum system and a big bag discharge station. This station allows automatic emptying without operator's intervention. Big bags are positioned using a simple pallet truck or forklift.

Equipment  
TEST CENTER  
Available



See our range of vacuum conveying systems VFlow®



Tight connection of the big bag: no dust, no foreign bodies and limits the ATEX zoning



Fan for big bag shaping to help the suction of material at the bottom of the big bag



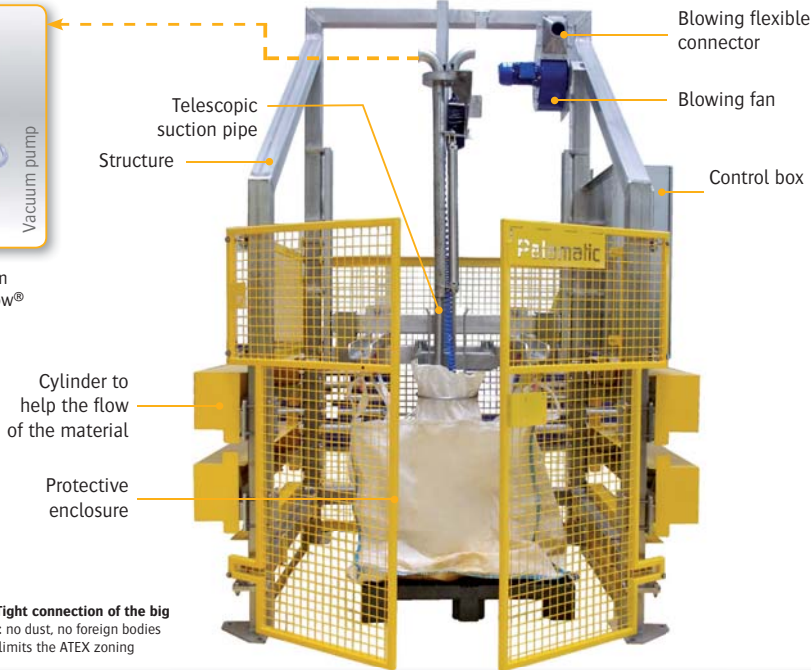
Weight cells for management of material vacuum



Adaptable to any big bag dimensions



Connection to the vacuum conveying system VFlow®, 50 kg to 2 t/h.



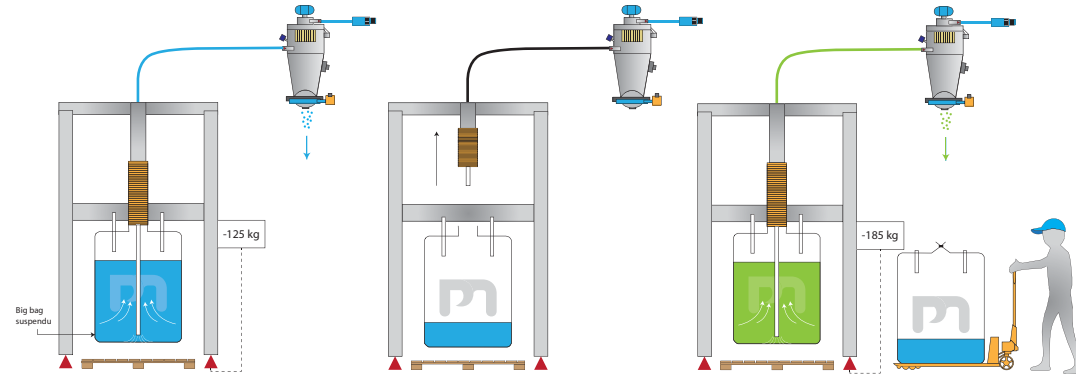
## TECHNICAL SPECIFICATIONS

Capacity: 50 kg to 2 t/h.  
Main structure manufacturing: mild steel, SS304L, SS316L  
Manufacturing of parts in contact with the product: mild steel, SS304L, SS316L  
Dosing accuracy: 500 grams\*  
\* may vary according to the material treated

## OPERATING MODE

1. The big bag is placed on the station with a truck. The operator connects the spout of the big bag
2. The telescopic suction pipe is connected to the vacuum conveyor and dips into the big bag
3. A big bag massaging device, connected to a ventilation system, allows the recentering of the material to ensure a complete emptying of the big bag
4. The big bag lifting device allows to achieve two objectives: 1) To ensure the weighing without interference ; 2) To optimize the product flow
5. Reclosing of the empty or semi-empty big bag

## OPERATING MODE

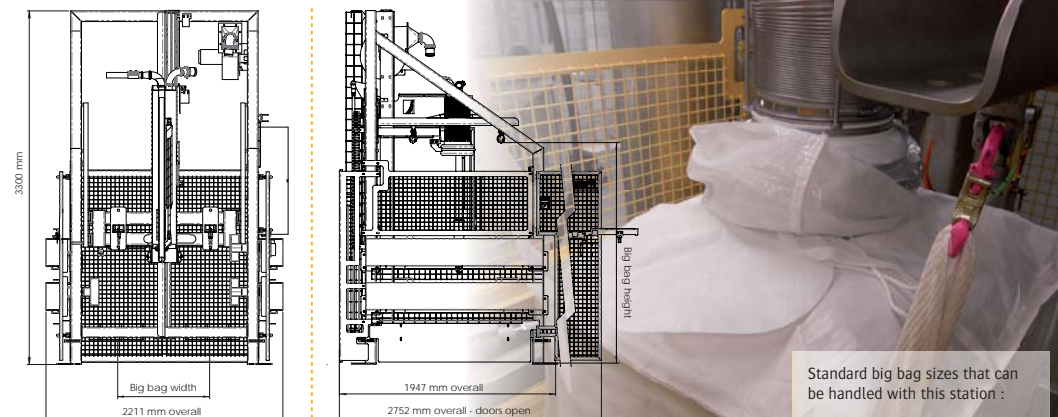


1. Placing of the big bag.
2. Aspiration of the amount needed for the recipe.

1. Stop of the vacuum.
2. Withdrawal of the suction pipe.

1. The started big bag is removed.
2. Change of product.

## SKETCH



Standard big bag sizes that can be handled with this station :

- Length: 1300 mm
- Height: 1800 mm

## Advantages

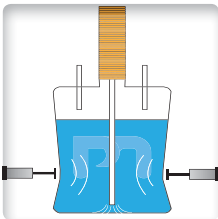




### ▶ SCREENED AREA

#### Operator protection zone

It does not permit the operator to access to the work area during a big bag emptying phase. The operator can make a request via the control unit and thus allow the opening of the door, preventing any movement of the big bag emptying station.



### ▶ BIG BAG MASSAGE SYSTEM

#### Helps the material to flow towards the center of the big bag

Pneumatic cylinders avoid caking of the powder.



### ▶ HYGIENIC SYSTEM

#### The guarantee of a «clean» product

To prevent cross contamination and allow discharge of multiple products on the same station, the suction pipe and the connection head are removable. Several sets are supplied.



### ▶ MOBILE STATION

#### Moving of the whole station



### ▶ MANAGEMENT OF THE HEIGHT OF THE BIG BAG

#### Motorized support system

The big bag is tightened progressively during the draining to recenter the material towards the middle of the big bag, thus limiting material residue inside the big bag.

### ▶ DOSING MATERIALS FOR EXTRUSION FEEDING

**Customer:** Manufacturing company of electric high-tech batteries

**Product:** Powders and granules (polymers)

#### Installation details:

The pneumatic conveying system sucks up the powder from a 200 l. drum or a big bag through an automated suction pipe. The maximum throughput of the installation is 100 kg/h.

The station consists of a supporting system adjustable in width to facilitate the setting up of the big bag. The big bag is supported on the station by means of quick hooks. The big bag filling spout is connected to an inflatable seal to ensure tightness of the assembly. A flexible cuff allows a tight compensation of the ascent/descent of the pipe. The cuff is fixed by clamp, easily removable for cleaning. The fork support system is motorized, allowing the constant tension of the big bag throughout its drain.

The aim is to bring the powder towards the center of the big bag, where the suction pipe plunges. The big bag never rests on the ground during the discharge phase. The suction pipe is also mounted on a motorized translation post. The descent of the pipe can be driven continuously (single application) or controlled by the level sensor fixed at the end of the pipe for detecting the «lack of product.»

The adjustment of the conveying by means of the suction pipe is provided by the air intake valve and by the addition of compressed air directly into the tube. The adjustment of the dilution is an essential parameter for the efficiency of the conveying process.

The big bag inflating fan ensures a constant shaping of the big bag to facilitate its complete draining (no creases). The fan system is preferred to air by inflation because of its speed and a much lower energy balance.

Massage cylinders complete the installation to ensure a constant supply of the suction pipe. The product is regularly brought towards the center of the big bag under the action of massage plates.

The entire big bag emptying station EasyFlow® Flex is equipped with a screened enclosure securing the installation and preventing access (guard locking) to the station during operation.

