

Idealtec 

FIBC UNLOADERS

IDEAL

STORAGE

WE LISTEN TO and STUDY each client's specifics,
to achieve **QUALITY** in the **DESIGN, MANUFACTURING**
and **INSTALLATION** of machines and systems
for **STORING, DOSING** and **CONVEYING** powders.

OPERATING PRINCIPLE

IDEALTEC FIBC UNLOADERS ARE COMPOSED OF A MAIN FIXED FRAME, INCLUDING UPWARDLY EXTENDING LEGS TO BE FIXED TO THE GROUND AND HORIZONTAL AND DIAGONAL CROSS BEAMS LOCATED AT VARIOUS ELEVATIONS.

The bag hanger, secured to the topmost beam frame, is shaped so as to facilitate the handling of the fully loaded bag by means of a fork lift.

The hanger is fitted with hooks **facilitating the lifting and positioning** of the bulk bag onto the unloader frame, preventing the manual handling of loads and the operator's direct exposures to fumes and dust pollutants.

The forks of the lift truck are inserted into the guides of the upper support frame which is kept in position by **horizontally extending or cantilevered beams**.

To avoid the fall risk, the hanger support frame is provided with containment brackets solidly anchored to their supporting basements.

According to the bulk bag dimensions, the cantilevered arms or the upper telescopic frame can be **adjusted at proper height on the vertical axis** of the main frame and locked in place with pins and circlips.



GUARANTEE

HYGIENE

SECURITY

INNOVATION

The background image shows an industrial facility. On the left, there is a large, dark-colored cylindrical tank with various pipes and a corrugated metal duct extending upwards. In the center and right, several large white bulk bags (FIBCs) are suspended from a yellow metal frame structure. The floor is concrete, and there are some blue steps or platforms in the foreground. The overall lighting is industrial and somewhat dim.

**FEASIBILITY
AND PROJECT REPORTS**

**INSTALLATION AT THE
CUSTOMER'S PREMISES**

**TECHNICAL AND
MANAGEMENT CONSULTANCY**

AFTER-SALES ASSISTANCE

**SCHEDULED MAINTENANCE
COMMISSIONING**

**IDEALTEC ALSO SUPPLIES
TURN-KEY PLANTS**

EACH REALIZATION IS **PROPERLY SIZED** AND **ACCOMPANIED WITH FINITE ELEMENT CALCULATIONS** OBTAINED WITH CUSTOMIZED REPORT GENERATION SOFTWARE

The forklift loaded model

The hoist loaded model

The models with safety gate

The lower support base, anchored to cantilevered arms or to main support frame, is fitted with pneumatic actuators (massaging paddle system) fostering the rapid and complete emptying of the bag content. The system employs **pneumatic drive cylinders**, attached to paddles pairs, in order to facilitate the unloading of the bag and the material outflow through the spout at the bag-bottom.

The paddles, parallel aligned and attached to a support frame so as to be able to freely pivot, abut alternatively (in single mode) the bottom surface of the bag so as to urge the contents in the bottom of the bag through the (opened) discharge spout. Compressed air is supplied to the cylinders so as to cause the **cyclic extension** and **retraction of the piston rod** and cyclically force the paddles against the bottom section of the bag.

The paddle plates have a slight incline in the outer portions thereof so as to facilitate the inward movement of the bag against which the paddle plates abut and not damage the bag. The **repetitive motion** of the massager paddles fosters the breaking up of material clogging. The massaging paddle system is coupled with a bag untie chamber and with a filter bag trunk for the dust collection. **The bag** untie chamber may also be furnished with a security switch capable of stopping the downline equipment with moving transmission parts, in case of unintentional opening of the bag spout access door.





To facilitate the opening of the bag spout and make the operations more safe and comfortable, a manual or pneumatic operated diaphragm valve can be mounted between the pneumatic actuators support frame and the bag untiie chamber.

To ensure complete sealing and avoid dust escaping into the environment, the actuators support frame may instead be equipped with a pneumatic operated bag spout tensioning and closing device.

The material can be delivered in controlled amounts and at controlled rates by means of load cells mounted beneath the legs of the frame from which the bulk bag is suspended; while the downline equipment controlled feeding can be achieved by means of volumetric or gravimetric feeders (screw conveyors) coupled with the bag unloader discharge trunk.



ADVANTAGES

Ideal for facilitating the operator in the powder and **bulk material loading and discharge operations directly off the ground**, IDEALTEC wheeled stations prevent overground maneuvers and direct exposure to fumes and vapors pollutants.

Furnished with sack tip stations or FIBC unloaders, coupled with screws and aeromechanical conveyors, they guarantee **adequate hygiene working conditions**, healthiness and environmental wellness, assisting the operator in the load handling task and in the flexible organization of the work spaces. The electrical panel mounted onboard, contributes to the **automatic management** of the control and command operations.



STANDARDS & CERTIFICATIONS

The **EU-type-examination Certification** pursuant to Annex III of Atex Directive 2014/34/EU makes our **aeromechanical, mechanical** and **screw conveyors** the indisputable protagonists, attesting to the conformity with the essential health and safety requirements of the Directive, **for the transport of a 0/20 ZONE**.

The **production quality assessment notification**, pursuant to Annex IV of the Atex Directive 2014/34/EU proves **the validation of the corporate quality system for production** and seals our strong propensity towards spreading a culture of health and safety in the workplace.

The **EAC EX Certification** of our aeromechanical and mechanical conveyors for classified atmospheres.



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