Leading Edge Powder Processing Technology

Gericke

GERICKE BBU BIG-BAG UNLOADER®

FIBC Handling: Modular, flexible and dust-tight by design

SYSTEM STRUCTURE

THE DESIGN OF THE BIG-BAG UNLOADING STATION IS DETERMINED BY THE FOLLOWING

1 Loading infrastructure

- Top frame
- Electric hoist
- Lifting traverse (standard)
- Lifting traverse with oil collector

2 Discharge options

- Big-Bag resting table
- Vibrating resting table
- Under massager
- Vibrating resting table incl discharge box (with or without door)
- Stretch unit
- Flow choke

3 Dust containment of the product

- Twin ring docking station

4 Transfer to the process

BBU – ADVANTAGES

- Emptying Big-Bag's dust tight and safely
- Modular systems consisting of standardised components
- BBU can be adjusted later, should the application change
- Minimum maintenance effort
- Optional hygienic execution
- Optional ATEX solution
- State-of-the-art handling with up to date safety features

BBU - BIG BAG UNLOADER

The following design features are available.

Material	Frame: Stainless steel 304 Product contact: Stainless steel 316
	Frame: Mild steel, painted Product contact: Stainless steel 316
Design	Hygienic design preventing accumulation of product residues
ATEX	Outside: No zone Inside: No zone
	Outside: ATEX 22 Inside: No zone
	Other options available on request
Options	Security fence, light barriers
	Weighing frame
	Surface finish Ra < 0,8 µm
	Automatisation
	Dedusting unit

BBU - LOADING INFRASTRUCTURE

Characteristics

- Hoist beam: 2800 mm length, 2000 kg
- Lifting cross made of carbon steel or stainless steel
- Hoist with 1000 or 2000 kg load capacity

Options

- Hygienic execution lifting traverse with oil collector and angled bars on top frame
- Reduced installation height
- ATEX-executions for dust or gas zones

Installation alternatives

- Hoist bean mounted to the building

BBU - DISCHARGE OPTIONS

The different modules are designed for safety and to improve the flowability of the product.

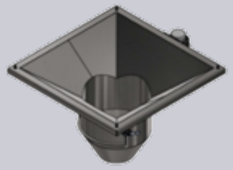
Versions

- Big-Bag resting table (resting point for Big-Bag)
- Vibrating table (for medium flowing powders)
- Under massagers (for poor flowing powders)

Discharge boxes are a simple mechanical execution and used for low dusting products in which the sealing is done by the Big-Bag itself. (Optional dedusting at the back of the station is possible).

- Resting table incl discharge box with door (for flowing powders)
- Vibrating resting table incl discharge box with door (for poor flowing powders)

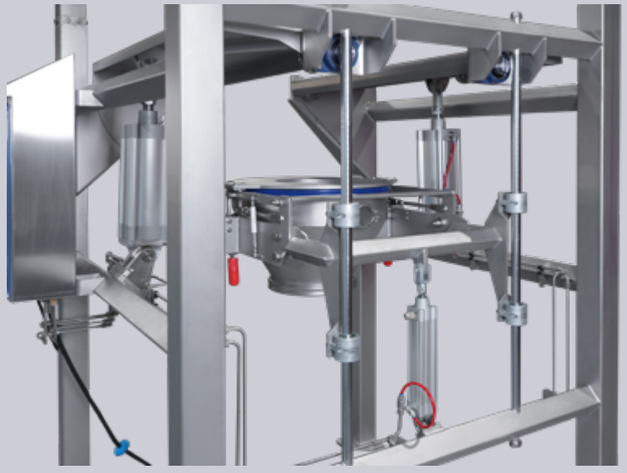
Big-Bag under massager



Big-Bag resting table incl discharge box with door

BBU – EXTRA FLOWABILITY (STRETCH UNIT)

The stretch device is used for stretching the outlet spout after opening to improve product flow.



BBU – DUST CONTAINMENT

A Gericke dust-free docking station ensures optimum process safety and is maintenance free.

Features

- Multiple sizes available to fit to the Big-Bag discharge spout
- Contact pressure of cover is adjustable
- Optional dedusting at the back of the station

Procedure

- Lift Big-Bag into the station
- Open cover of docking station
- Pull outlet spout over the inner ring of the docking station
- Close cover of docking station
- Open outlet spout
- Material starts to flow

Docking station opened

Docking station closed

BBU – DUST CONTAINMENT (FLOW CHOKE)

Pneumatically operated closing system for closing a half full Big-Bag.

BBU – KEY INNOVATIVE DESIGN SOLUTIONS FOR SAFETY & HYGIENE

- Angled bar frames designed to meet hygiene requirements
- Frame support bars – strengthened and welded
- Stretch unit – designed to improve hygiene, safety and reduce production cost
- Open accessibility from the front - designed to improve operator safety
- Hoisting big-bag from the side or back of station - designed to improve operator safety and stability of frame
- Twin ring docking station with preventative external Big-Bag contamination solution
- Polished finish for all contact parts
- Drip pan attached to traverse
- Protection cover open inlet
- Optimised flowability modules designed to improve hygiene, safety and reduce production costs

BBU – PROCESS INTERFACE

Our Big-Bag Unloader can fit into your whole process line.
The bottom frame of the Big-Bag unloading station is adapted to the specific requirements of the plant.

Some connection options

- Direct discharge into a hopper
- Discharge into intermediate container
- Via Nibbler and Rotary Valve into a lean-phase pneumatic conveying line
- Into sending vessel and dense-phase pneumatic conveying
- Direct discharge into vacuum conveying
- Feeding into hopper or reactor
- Inclined conveying screw

BBU – OTHER MODULAR OPTIONS

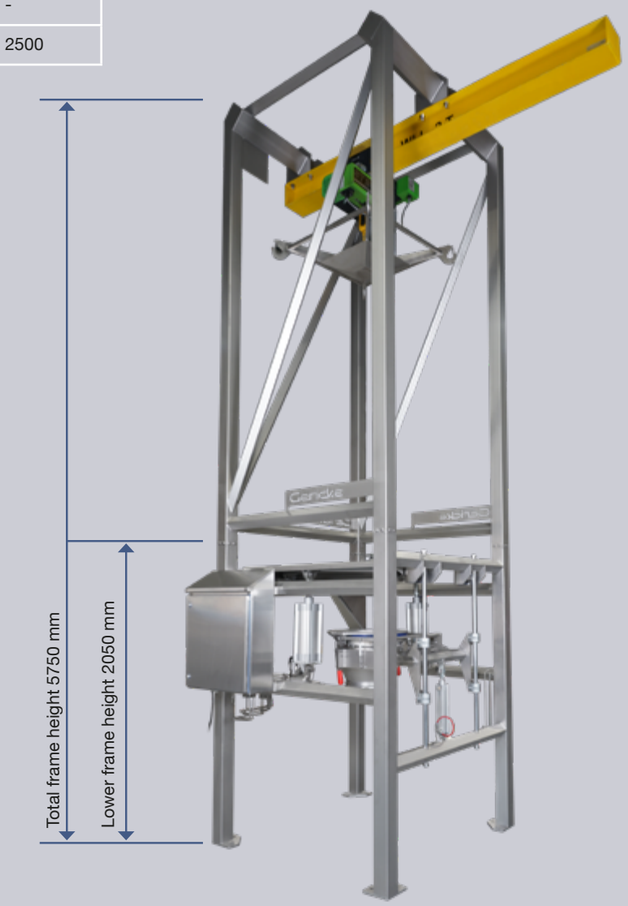
- Weighing Big-Bags via load cells
- Vacuuming of the Big-Bag before dismantling
- Dedusting filter unit
- Logistic – roller conveying system
- Empty Big-Bag disposal
- Closing device to partially empty Big-Bags

BBU – TECHNICAL DATA

Big-Bag outlet size			
Outlet diameter [mm]	**Outlet length straight (advised) [mm]**	**Min. outlet length fastened [mm] (with flowchoke)**	**Advised docking size**
250 - 300	500	300 (375)	GDS - 550.210
300 - 350	500	315 (390)	GDS - 550.260
350 - 400	500	330 (405)	GDS - 550.310
400 - 450	550	350 (425)	GDS - 550.360
450 - 500	600	365 (440)	GDS - 650.410

Big Bag Technical Data:			
Big-Bag Measurements	**Min**	**Standard**	**Max**
Big-Bag length [mm]	-	900	1200
Big-Bag width [mm]	-	900	1200
Big-Bag height [mm]	-	1500	2000
Big-Bag length of hoist loops [mm]	200	300	-
Big-Bag weight [kg]	-	1000	2500

Configurator calculation example	
Big-Bag height [mm]	2000
Big-Bag length of hoist loops [mm]	300
TOTAL Frame height [mm]	**5750**
Min installation height required [mm]	5900



TEST CENTRE

Tests on an industrial scale reduce planning time and increase process safety!

Test centres in Switzerland, France, England, Brazil, USA and Singapore are available for customer tests under near-production conditions. The test centres are equipped with original machines. Experienced specialists design the test layout according to your wishes and perform the tests.

- Testing of machines and prototypes with original products
- Checking of performance ranges and accuracies
- Testing of the interaction of multiple machines
- Gaining of experience for product processing
- Sampling for laboratory tests and market response
- Customer training

SERVICE

Worldwide support for commissioning, maintenance and service.

We highly value punctual delivery, reliable assembly and thorough assembly monitoring. With well-planned commissioning and intensive on-site training we create the prerequisites for a smooth production start-up. Our service team and the global spare parts service combine to ensure long service life and high availability of systems with consistent product quality.

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