

Big bag connection system with vacuum docking

For big bags with either a short or no outlet spout

Dust-free docking

Reliable discharge

Easy Handling

Low overall height

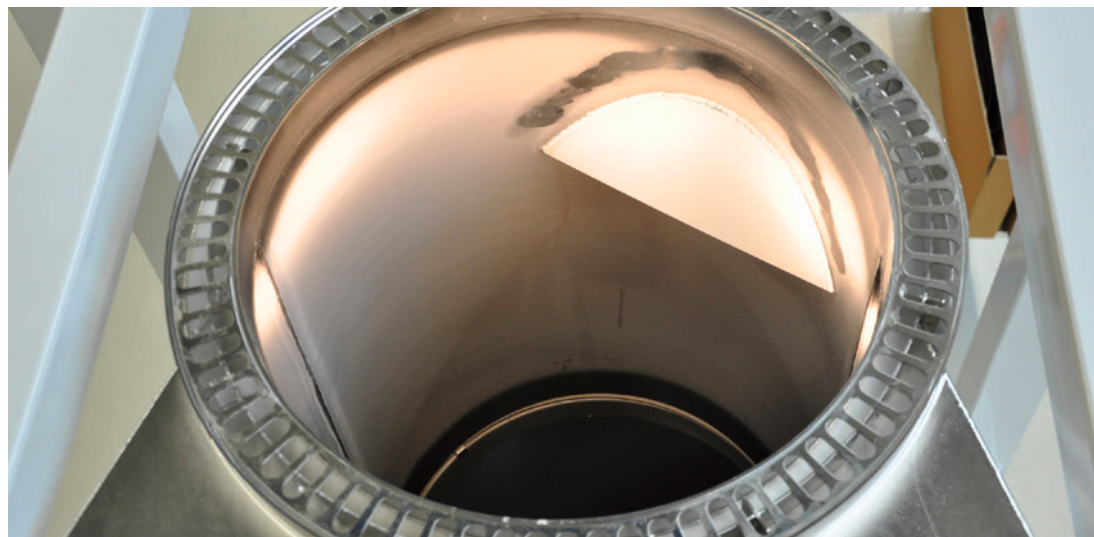
Preferred applications

The system for dust-free docking of big bags and for reliable discharge of free-flowing bulk solids is particularly suitable for big bags that have no discharge spout or only a short one. The complete content of a big bag can be emptied in a short time into a following container. In doing so the complete content of the big bag must fit into the container.

Special advantages

- No dependence on suppliers of raw materials
- For universal use
- Simple construction makes it easy to clean
- Saves height and space
- High-grade chromium-nickel steel design

THE INNOVATION



How it works

The big bag being discharged is lifted with hoisting gear and lowered onto the big bag discharge station until it comes into contact with the vacuum docking system. This system generally consists of a cylindrical housing around the top edge of which is a circumferential vacuum channel that is open at the top. The spacer grating covers the top opening.

An underpressure generator can be connected on the underside of the vacuum channel. As soon as the big bag is placed on the spacer grating, the underpressure generator creates a vacuum to form a temporary, dust-tight connection between the underside of the big bag and the docking system.

This new solution has been registered as a utility model under the number DE 20 2012 003 109.0 at the German Patent Office.

There are two different discharge systems offered, depending on the type of big bag being used.

Big bag connection system with slitting device

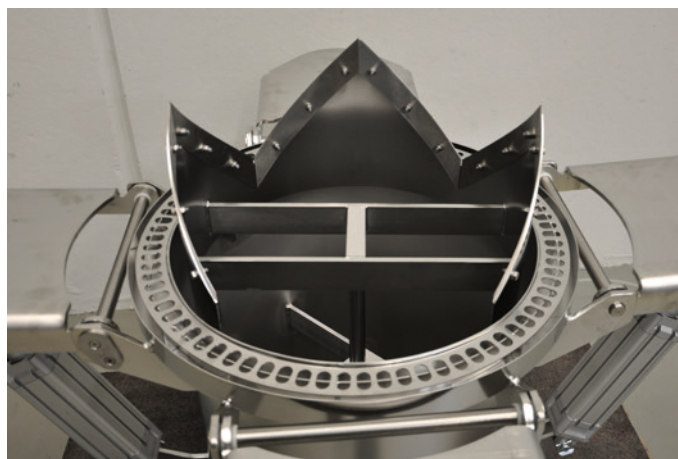
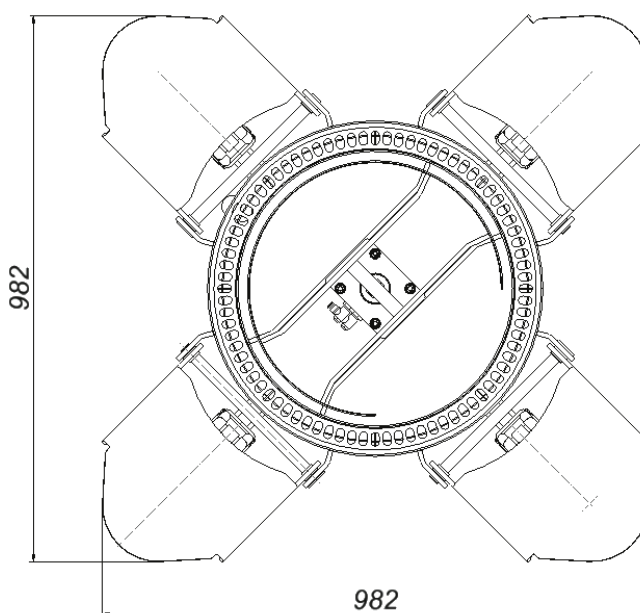
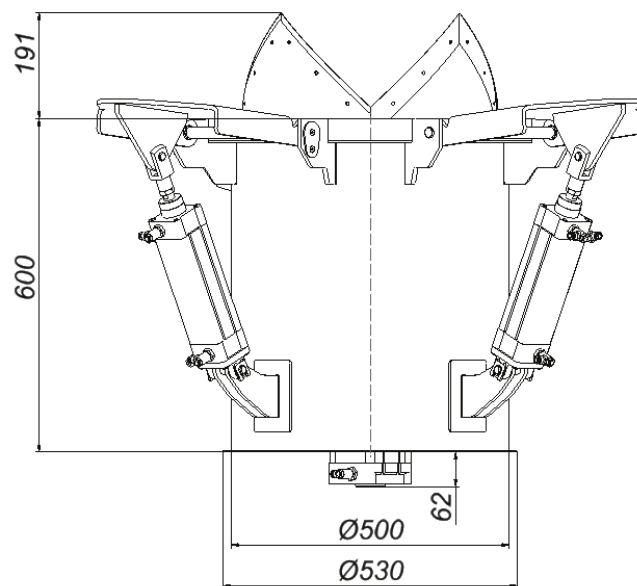
Special advantages

- Reliable discharge of big bags with either a short or no discharge spout
- Ideal solution for low ceiling clearance
- Dust-free docking
- Reliable discharging
- Easy handling
- Thanks to a 4-fold massager device, big bags, which have hardened and where clumps have formed as a result of extended storage, can be discharged reliably.

How it works

Automatic docking of big bags is performed as described above. One advantage of this solution is that manual docking and opening of big bag discharge spouts are dispensed with. Docking is also possible at any height. However, docking close to ground level is the obvious choice so that subsequent surge bins can be accommodated on the floor below. This means that this solution in particular can also be used where the overall height is low. After

docking, the big bag is slit open at the bottom with a pneumatically operated, circular blade that results in a 270° cut. The fabric segment can be folded down out of the way to create an opening out of which the product can flow. A massager device can be used to aid discharge in the case of poorly flowing bulk solids.



Blade for opening big bags without a discharge spout



Massager device to help discharge

Big bag docking system for big bags with very short discharge spouts

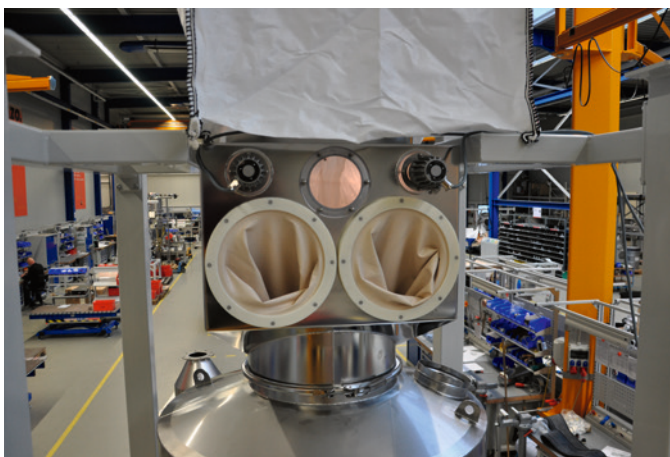
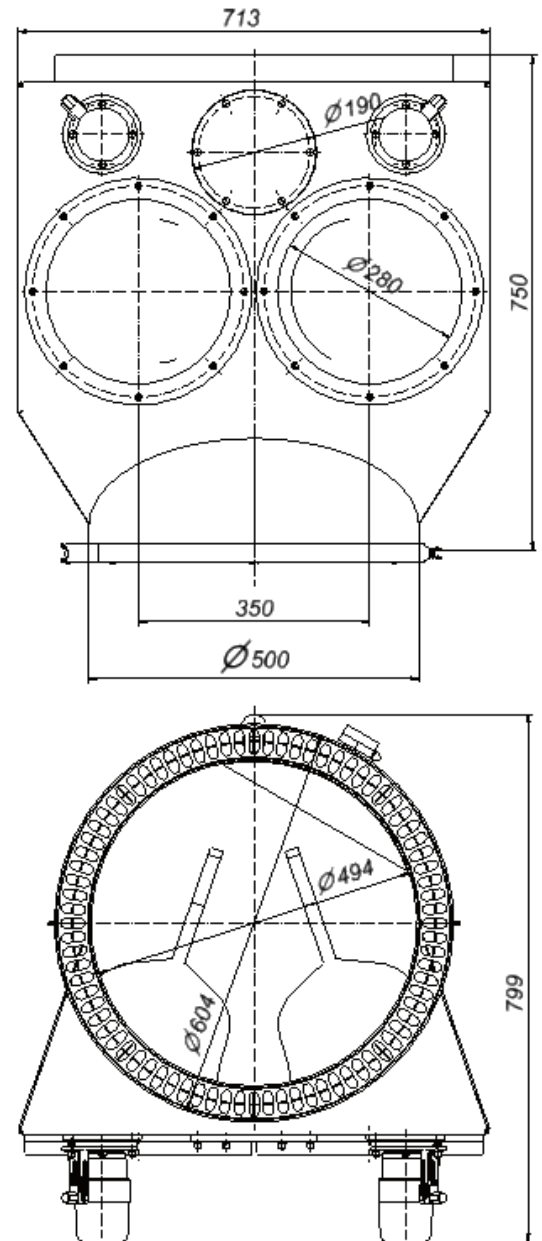
Special advantages

- Avoidance of foreign particles and packaging residue in bulk goods
- No destruction of big bags
- Visual inspection of the discharge process is ensured
- Dust-free docking
- Reliable discharging
- Easy handling

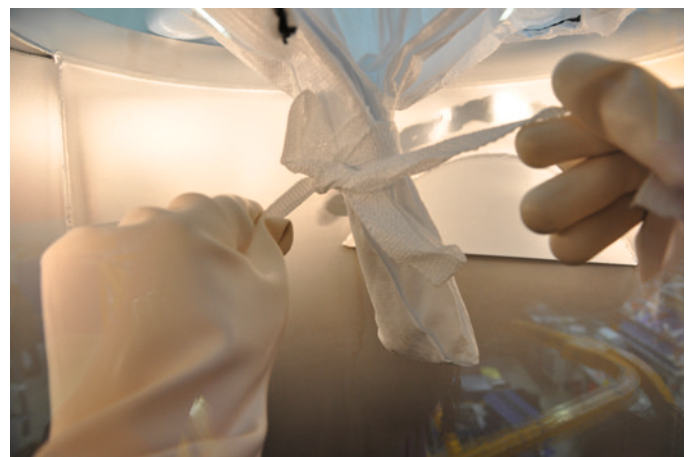
How it works

Big bags are docked as described above in this solution too. Once docked, it is possible to reach into the interior of the housing using the gloves. The big bag outlet is opened and the product can be discharged into the following hopper in the closed system without generating dust. By using gloves, it is possible to close the outlet of the empty big

bag again to prevent any residue from escaping when it is undocked. The integrated illumination and generously sized sight glass provide an free view of the big bag outlet.

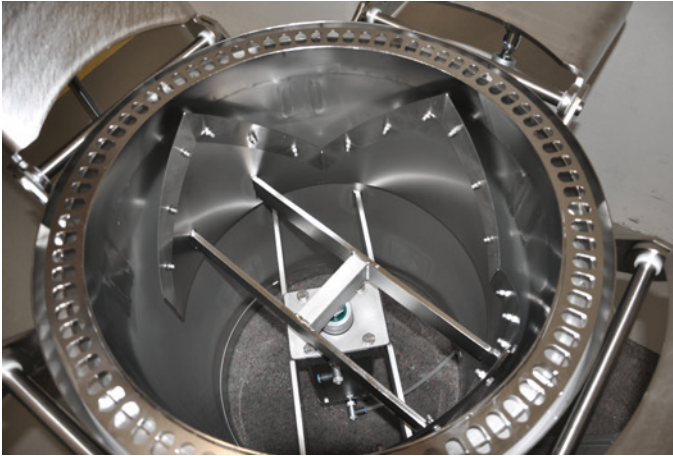


Big bag vacuum docking system with gloves



Opening the big bag spout using the gloves

Application examples



Circular vacuum aspiration for dust-free docking and fixing the big bag in place
Alternative: with slitting device



Circular vacuum aspiration for dust-free docking and fixing the big bag in place
Alternative: with gloves



Pneumatically operated massager device



Example of an entire big bag discharge station