solids Pressure Tight Chamber Valve
Type DSP

Discharging and metering from a pressure/vacuum system or feeding into a reactor, intermittent filling and emptying, lock for gases or vapours

Advantages:
- Fail-safe due to the electro-pneumatic installation
- Without a slide passage on the outside; as a result, dust cannot escape into the environment
- When the slide is open, the passage is free, which prevents the product from bridging
- Less wear since the gasket and the slide plate do not come in contact with the product flow when the slide is open
Two vessels with defined effective content are arranged on top of each other, pressure-tight up to 6 bar.
Each has a pressure-tight pivoting shutter, type SSP.
Continuous operation.

Examples of application:
- Entry in the reactor: The pressure tight chamber valve is flanged directly at the reactor inlet.
- Continuous entry in a pneumatic conveying system in combination with the solids blow through rotary valve, that is fixed directly below the chamber valve.
- Discharge from a cyclone or filters that work as separators in the vacuum conveying system and are operated in underpressure.
Two pressure-tight pivoting shutters of the SSP type are arranged on top of each other; with an intermediate vessel and top level sensor

- Intermittent operating mode
- Filling: upper slide open, lower slide closed, quantities are filled up to the top level sensor.
- Emptying: Upper slide closes, lower slide opens
- Free flow cross-section in the slide
- Sizes NW 150 to 500 mm
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Type DSP

- Pressure or pressure-shock resistant intermediate and outlet vessels
- For discharging from the pressure system for feeding into a pressure system, e.g. reactor
- Pressure-tight up to 6 bar, pressure shock resistant 10 bar
- For temperatures up to 240 °C
- Sizes NW 150 to 500 mm
- Continuous operating mode: see functional principle
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Functional principle:

The upper pivoting shutter (1) is opened; material flows in the chamber valve (3). Displacement air is carried off through the aeration and bleeding connection (2).

The lower pivoting shutter (4) is closed pressure-tight. Pressure and volume-controlled compressed air is fed to the pneumatic sender (6) through the aeration connection (5). The material to be fed enters the conveying line through the special outlet bend (7) continuously.

The upper pivoting shutter (1) was closed pressure-tight after filling the chamber valve (3). The chamber valve (3) was aerated at the conveying pressure through the aeration and bleeding connection (2) and then the lower pivoting shutter (4) is opened in the pressure compensation phase. The product to be fed continues to enter the conveying line continuously without any interruption.

The lower pivoting shutter (4) was closed pressure-tight after emptying the chamber valve (3). The chamber valve (3) is bled through the aeration and bleeding connection (2) and can be refilled.

The pneumatic sender (6) continues to convey through its special outlet bend (7) without interruption.