



Döbritz

QUICK DISMOUNTING SANITARY TYPE ROTARY VALVE

OVERVIEW

Material: SUS304 or SUS316L, rotor can also be made of PE.

Application: Food, chemical, grain, metallurgy, machinery industry

Positioning: suitable for powder and granular materials (material size to be provided) conveying.

HIGHLIGHTS

Quick disassembly: Valve routine maintenance and cleaning can be done by one person without additional support crane.

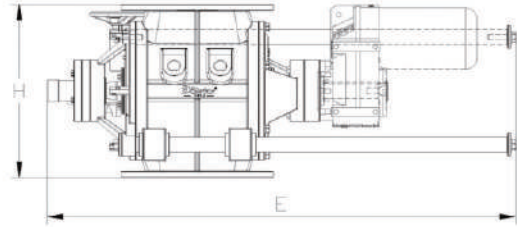
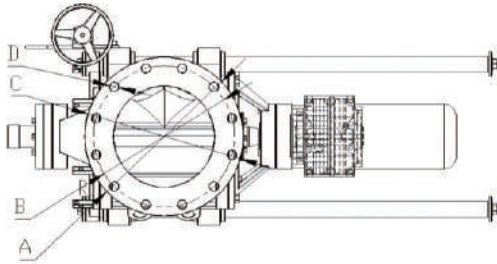
Sealing system: The rotary valve adopts **double sealing of compressed air** and sealing ring to reduce the contact between material and sealing ring; and the compressed air **can reduce the working temperature of the bearing and prolong the service life of the bearing.**

Provide proof of food-grade material, both inside and outside the equipment are food-grade polishing requirements $Ra < 0.8$. **(can be customized according to customer requirements)**

Working pressure: $-0.5 \sim 2$ bar, shell pressure resistance: 10 bar, can be applied to positive pressure conveying and negative pressure conveying conditions, can effectively withstand positive/negative pressure.

Explosion-proof and non-explosion-proof can be freely selected according to customer requirements. Equipment compact structure, bearing gear box, etc. are far away from the valve body, by the material dust influence is small; beautiful shape, smooth operation, low noise.

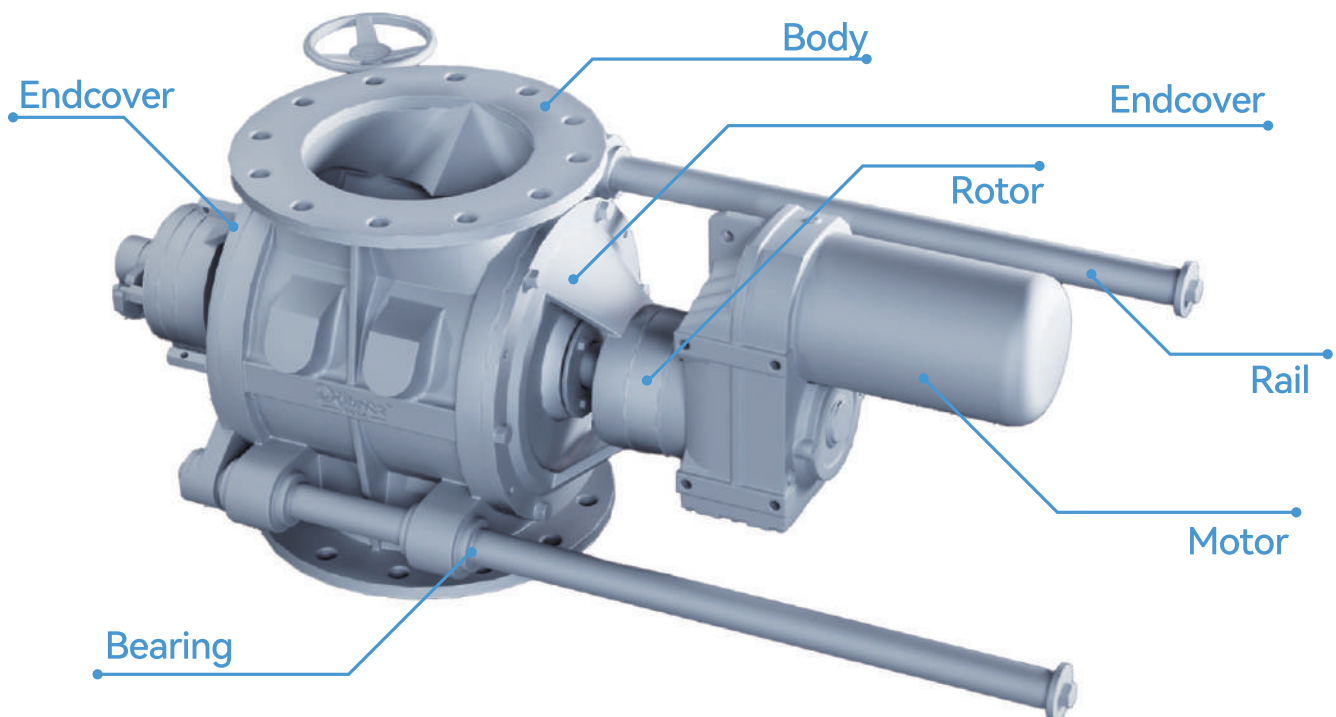
There are **multiple models available**, and the size and reducer motor model brand can be customized according to customer requirements. please see the table for specific parameters.



Rotary Valve Model	A	B	C	D	E	H
Diameter150	285	240	150	8- ϕ 22	1150-1750	340
Diameter200	340	295	200	8- ϕ 23	1200-1800	390
Diameter250	395	350	250	12- ϕ 422	1220~1870	450
Diameter300	445	400	300	12- ϕ 923	1250-1900	500

Rotary Valve Model	Rotor volume	Rotational Speed	Power Rating	Operating temperature	Rated conveying capacity	Weight
	L/r	r/min	KW	$^{\circ}$ C	L/min	kg
Diameter150	5.5	20	0.37	'-10~150 $^{\circ}$ C	110	120
Diameter200	11	20	0.37	'10~150 $^{\circ}$ C	220	150
Diameter250	19.6	20	0.55	'-10~150 $^{\circ}$ C	392	200
Diameter300	31.7	20	0.75	'-10~150 $^{\circ}$ C	634	300

Note: Capacity per revolution at 100% fill



The Döbritz logo is located in the top right corner of the page. It features a stylized white 'D' with a curved top, followed by the word 'öbritz' in a lowercase, sans-serif font. The background of the entire page is a dark, industrial setting with various stainless steel components, including valves and pipes, scattered around. A large, detailed image of the DB108 plug diverter is the central focus, shown from a three-quarter perspective. It has a cylindrical body with a large circular end cover and a long, angled actuator arm extending from the top. The diverter is mounted on a flange base. The overall aesthetic is clean and technical.

PLUG DIVERTER

DB108

HIGHLIGHTS

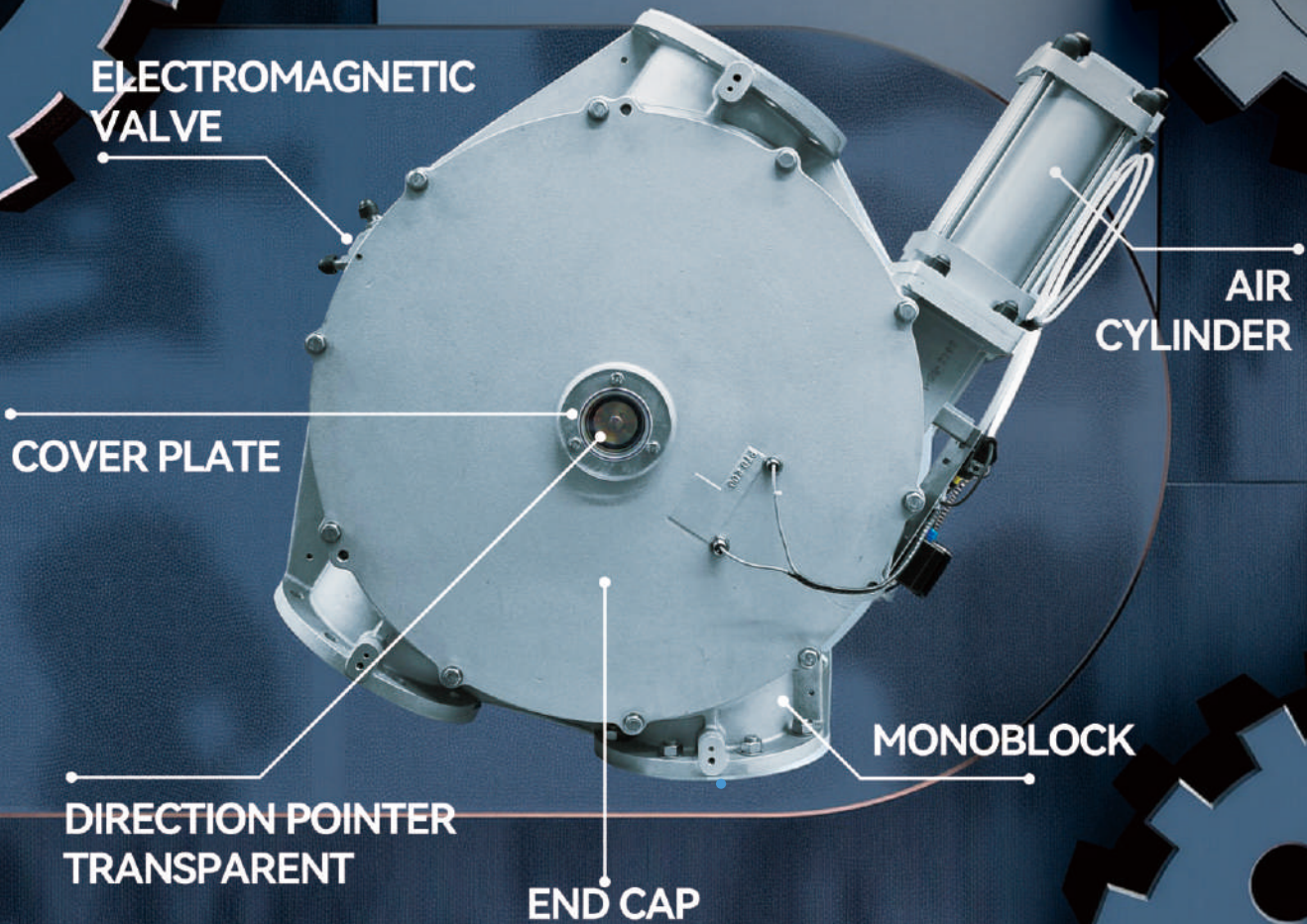
- Pressure shock resistant up to 10 bar* ◆
- Two channel design ◆
- Minimal maintenance ◆
- Quick clean version available compact form ◆
- User friendly design ◆
- No moving parts on the outside pressure up to 3 bar with static seals ◆
- Sizes 100-200 up to 6 bar with inflatable seals ◆
- Versions with electrical drive available ◆
- Wear resistant pipes are optionally available ◆

PRODUCT INFORMATION

The plug type diverter consists of a stainless housing and end covers in which a plug with two pipes is installed.

All product contact surfaces are made from stainless steel AISI 304/316L. Three silicone seals guarantee the sealing between housing and plug. The body is pressure tight, so ensuring no leakage to atmosphere. The standard diverter can be used in systems with positive pressures up to 3 bar (static seals). The sizes 100-200 are optionally available for pressures up to 6 bar (inflatable seals).

The diverter is supplied with a complete electro pneumatic control system, including solenoids and inductive position sensors. The standard diverter can be used for product temperatures ranging from -25°C up to $+80^{\circ}\text{C}$ at ambient temperatures of -10°C up to $+40^{\circ}\text{C}$. Versions for higher temperatures are available on request



PLUG TYPE DIVERTER

The Doebritz plug type diverters have been specially designed to route powders and pellets with minimum degradation in pneumatic conveying systems. The plug type diverter is applied in the chemical, pharmaceutical, plastic, food and other related industries.

A smooth passage of products is guaranteed by precision machining, a good sealing and a complete obstruction free passage.

The user friendly fool proof design enables fast in situ internal examination, cleaning and, if necessary, replacement of seals.

The design conforms to all current legislation regarding safety in the workplace. Consequently there are no moving parts on the outside.

The Doebritz plug type diverters is available in 4 different pipe sizes: : Φ 100, 125, 150, and 200 mm.

CONE MILL

Overview

Cone mill is suitable for fat, heat sensitive, sticky, wet or other difficult products. The ability to control a limited range of gentle grinding action maintains a tight particle size distribution and produces a minimum of fines.

Highlights

- ◆ Hygienic Design – ideal for Food & Pharma use
- ◆ CIP Capable
- ◆ Versatile Grinding Capability thru – Speed, Cone Hole Size & Shape, Rotor to Cone Gap adjustment
- ◆ Inline Vacuum Capability

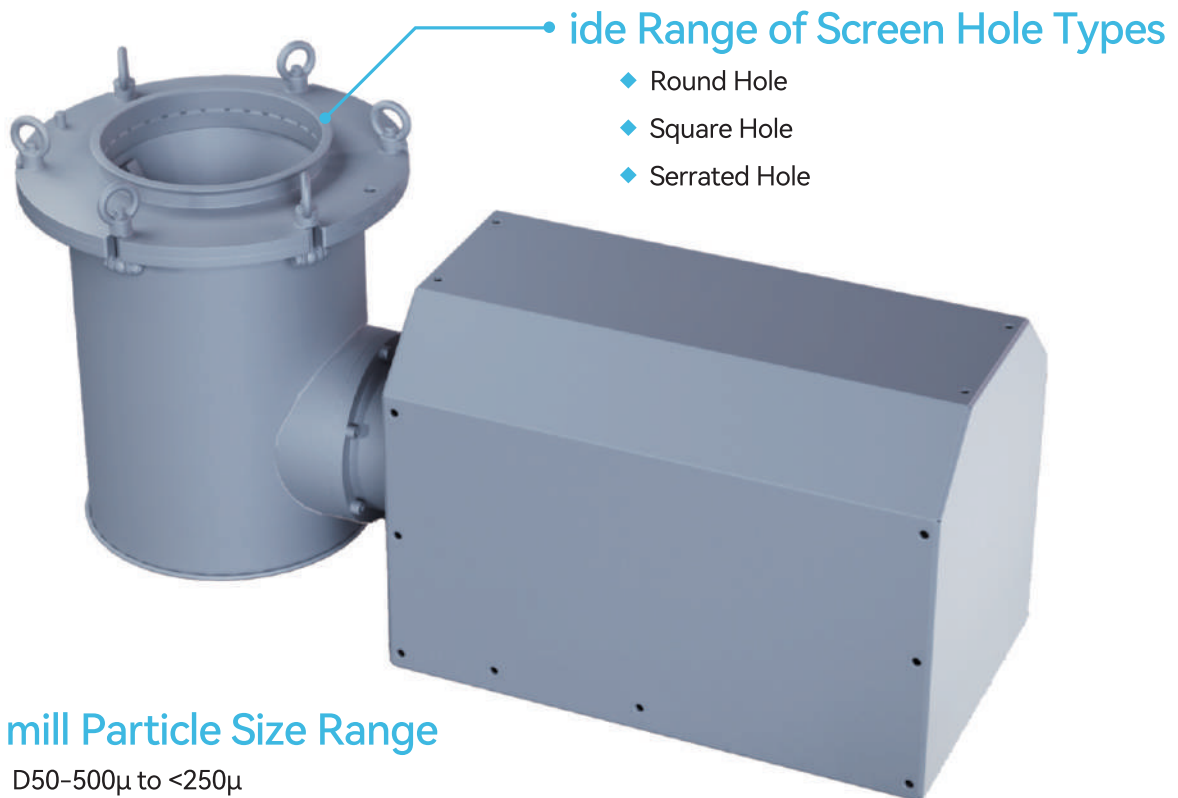
Application

FOOD INDUSTRY

- ◆ Bread-crumbing
- ◆ Cookie/Biscuit Rework
- ◆ Dairy Powder Size Reduction
- ◆ Dairy Powder Densification
- ◆ Chocolate Crumb Milling
- ◆ Spice Mix Delumping

Pharma & Chemical Industries

- ◆ Pharma Wet Granulation
- ◆ Pharma Dry Granulation
- ◆ Pharma Tablet Rework
- ◆ Detergent Tablet Rework



Working Principle

The material to be processed is fed by gravity into the pulverizing chamber. A low-speed grinding rotor forces the material into a vortex flow path. Individual particles of the unground product are centrifugally thrown against the walls of the conical grinding chamber, where they then rise in a spiral path.

The action of the rotor on the walls of the grinding chamber exerts high shear on the product. At initial impact, a large portion of the product is reduced below the cone aperture, which is instantly discharged to the mill discharge. The chute is designed to provide maximum free space for the discharged material, thus preventing the possibility of buildup.

A small fraction of the larger unground particles continue to travel up the conical walls within the product vortex, further reducing in size in the process. The largest particles eventually reach the top of the vortex where they re-enter the feed stream to repeat the cycle.

The logo for Döbritz, featuring a stylized 'D' followed by the brand name in a bold, sans-serif font.

COMPACT BAG TIPPING STATION

Highlights

- Dust-free ♦
- Easy cleaning ♦
- Vibrating sifter integrated ♦
- High standard of hygiene ♦
- Compact design ♦

Application

Compact manual bag-tipping station is specifically designed to manually dump any kind of powder received in bags. The unit is suitable for bag sizes up to 25 kg.

The specific design combined with an integrated sifter allows an end product free of foreign bodies (control sifting). In addition an optional integrated filtration system ensures a full sanitary process. The upper tilting part of the equipment facilitates easy cleaning of the vibrating sifter. Thanks to the high sanitary design, the compact manual bag-tipping station is particularly suitable for the food, dairy, pharmaceutical and chemical industries.

Prior to opening the bag, the operator opens the front door. The integrated vibrating sifter and the fan system start automatically. The operator places the bag on the tablet and opens it using a cutting device. The ergonomic level of the tablet prevents the operator from lifting the bag. He can then easily dump the product into the unit. The compact bag-tipping station can either have its own filtration system or be connected to the site dust collector.

The filtration system integrates an automatic dust unloading function. The cartridges are cleaned in turns allowing a continuous vacuuming.

Once the tipping process is finished, the front door has to be closed. Sifting and dust-free systems continue for a few seconds and stop automatically.

Dimensions and capacities

Type	A	B	C	Sieve screen	Sievea pertures	Weight	Fan power	Vibrating sifter power	Filtering area
VS600*	900mm	1100mm	1800mm	520mm	5mm	230kg	0.75kW	0.3kW	2m ²
VS600**	900mm	1100mm	1400mm	520mm	5mm	195kg	-	-	-

* With filtration system

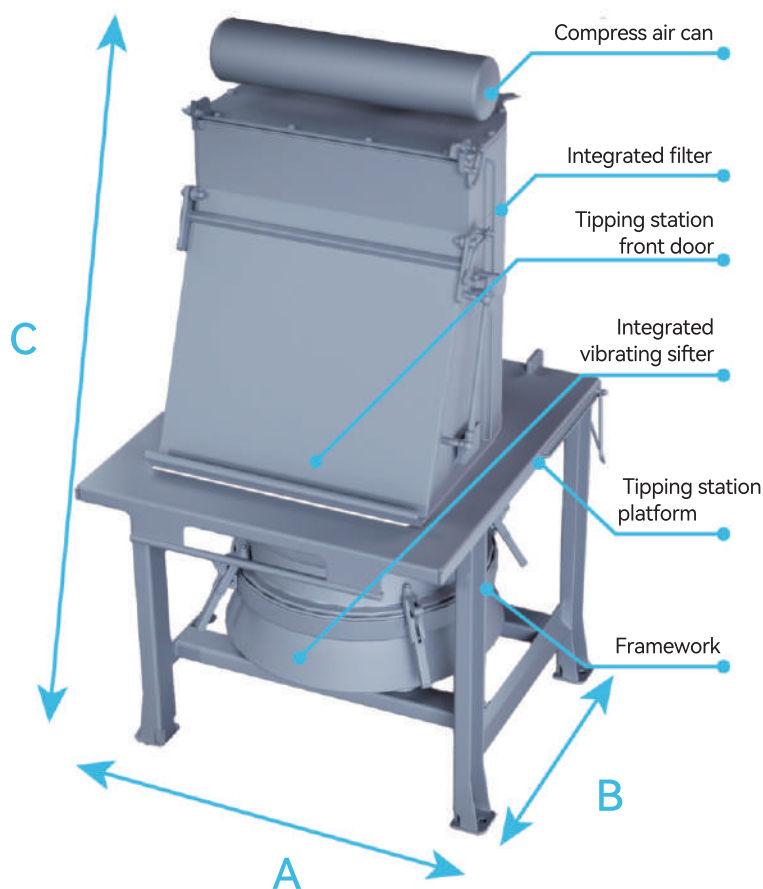
** Without filtration system

Options

- ◆ Integrated filtration system
- ◆ Stainless steel 316
- ◆ Different sieve aperture diameters to meet different product requirements
- ◆ Magnetic rod to prevent ferrous metal from entering the process

Standard scope of supply

- ◆ Housing of compact bag tipping station in stainless steel AISI 304
- ◆ Sifter
- ◆ Gas cylinder
- ◆ Sealing device
- ◆ Dust unloading system (with optional integrated filtration system)
- ◆ Fan with connection tubes (with optional integrated filtration system)
- ◆ Protection grid



Light Rotary Valve

Overview

- Material: SUS304 or SUS316L
- Application: food, chemical, grain, metallurgy, machinery industry
- Positioning: suitable for conveying powder and granular materials (material size must be provided)

Highlights

- It is suitable for continuous feeding in non-sealed conditions, and can serve as a substitute in non-pneumatic or non-explosion-proof condition.
- Simple valve body structure, easy to disassemble for maintenance; aesthetically designed, stable operation, and low noise.
- Performs the same conveying function as a traditional rotary valve, but with only one-third of the installation height, smaller size, lower cost, economical and space-saving, and easy to install.
- Quick-disassembly system: Valve body, rotor, and other components are bolted for easy removal and water cleaning.
- Provide proof of food - grade material, both inside and outside the equipment are food - grade polishing requirements $Ra < 0.8$. (can be customized according to customer requirements)



Specification

Material	Stainless steel valve body and rotor (SS316orSS304)			
Diameter	150	200	250	300

Dosing Valve

Overview

- Material: SUS304 or SUS316L
- Application: food, chemical, grain, metallurgy, machinery industry
- Positioning: suitable for conveying and dosing of excellent fluidity powder

Highlights

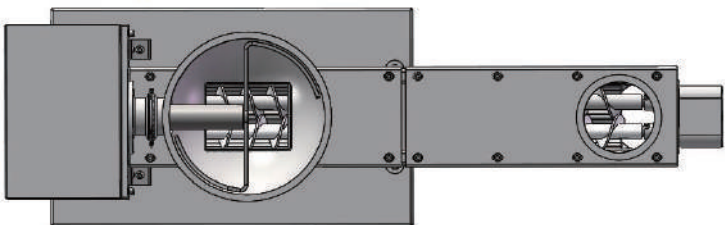
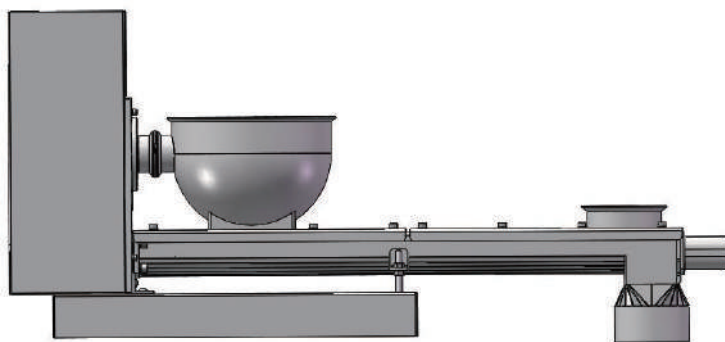
- Simple valve body structure, easy to disassemble for maintenance; aesthetically designed, stable operation, and low noise.
- Combines the functionality and accuracy of traditional metering screws, while installation height is only half that of conventional designs. More compact, cost-effective, and space-saving with easy installation.
- Quick-disassembly system: Valve body, rotor, and other components are bolted for easy removal and water cleaning.
- Provide Food-grade material certification - internal and external surfaces comply with food-grade polishing requirements ($R_a < 0.8$). (Customizable upon customer request).



Specification

Material	Stainless steel valve body and rotor (SS316 or SS304)			
Diameter	150	200	250	300

Loss-in-weight system



Overview

- Loss-in-weight weighing systems is applicable in any process requiring high-precision continuous dosing.
- By using a loss-in-weight system, mixing ratios can be adjusted in real-time, resulting in more accurate and uniform final products, thereby improving overall product quality.

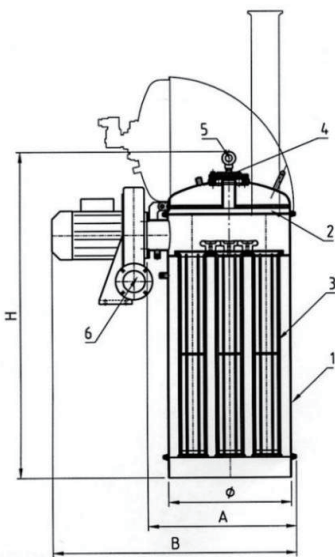
Highlights

- It can be designed and constructed according to customers' specific requirements to accommodate products with different characteristics.
- Maintains highly reliable dosing accuracy.
- Different screw designs available, single-helix, double-helix and other forms, to ensure higher operational reliability
- A lifting screw in the hopper optimizes material flow by eliminating material bridging.
- The removable extraction screw facilitates simple maintenance and cleaning.

Filter

Overview

Device for air treatment



PROCEDURE

- Dust laden air passes through a filtering device, where the dust is captured on the outer surface, allowing only clean air to exit from the clean air outlet.
- Regular cleaning of 7 filter bags

Bright points

- No maintenance required
- No mechanical parts
- Small volume
- Made entirely of stainless steel

Structure

- filter
- sleeve
- Quick overflow device
- reservoir
- solenoid valve
- fan

规格

model	area (m ²)	Ø	A	B	C	H	weight (kg)
FL 002	0.7	300	365	590	310	810	35

Cone Valve

For automatic filling, discharging and dosing of powders

Major component

The ConeValve system consists of the three main assemblies: an active ConeValve docking and filling/discharging unit; passive valves suitable for connection to different types of mobile containers; and an electro-pneumatic control cabinet with touch-panel, PLC and pneumatic control valves.

Appliance

- ConeValve is designed for automatic discharge and accurate controlled transfer of bulk powders from RIBCs (rigid intermediate bulk containers), FIBCs (flexible intermediate bulk containers). An automatic filling application is available with no transfer control required.

Highlights

- Dust-free
- Closed process
- Fully automatic
- Accurate dosing
- Universal compatibility with different types of containers

Working principle

- The main mechanical components of the active Cone Valve system include the conical probe, inner telescopic drive cylinder, outer cylindrical housing with a locking mechanism, transfer body with connection flanges and the pneumatic drive motor located inside a protective tube.
- When the active and passive units come into contact, two sensors trigger the locking mechanism of the active unit to create a dust-tight seal between the container and the docking station. The conical probe then internally engages with the passive cone valve, releasing and opening it to enable powder transfer into or out of the mobile container. In discharging mode, the powder flow rate can be adjusted continuously by varying and pulsing the stroke of the cone valve via the telescopic cylinder, as well as by activating the integrated fluidization system. For cohesive or poorly flowing powders, and for applications requiring precise dosing, an optional high-frequency vibrator can be integrated into the conical probe.

Working principle

At the end of the filling/discharging process, both the cone probe and the passive cone valve are closed. After a series of air wash cycles, the cone valve is clipped back into the inner ring of the passive ConeValve assembly, effectively resealing the mobile container, which can then be safely removed from the docking station.

Electro-pneumatic control

The control system for the automatic operation of the active ConeValve unit includes a touch-screen operator panel, a PLC (Programmable Logic Controller), and pneumatic control valves — all housed within a steel cabinet. Connection to the active ConeValve is achieved via three multi-tube hoses and one electrical cable, each equipped with quick-connect sockets. The dedicated software enables full control and monitoring of all functions of the active ConeValve unit and supports communication with other PLC and SCADA systems via a BUS network.

Passive ConeValve for mobile containers

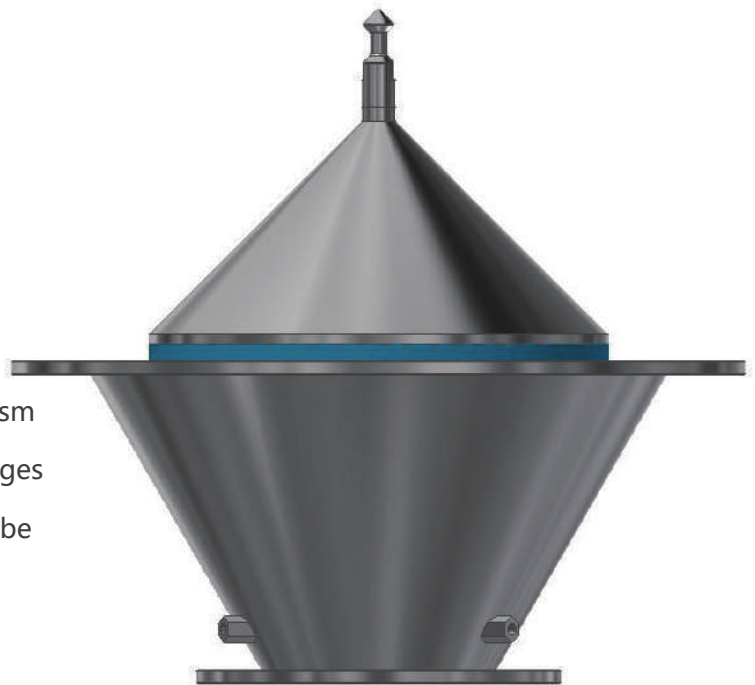
- A variety of passive ConeValve models are available to suit the inlet or outlet of different types of flexible and rigid mobile powder containers, such as big bags, steel or plastic bins, and drums etc.
- The passive valve consists of 3 main components: the cone valve, the internal clamping/fluidization ring, and the external docking ring with a Tri-Clamp flange, along with various internal and external seals.
- The connection to the mobile container depends on the type and the execution of the latter and can be either permanent (e.g. for flat-top or flat-bottom big bags) or removable/reusable (e.g. for big bags with filling/discharging spouts, or rigid containers with standard Tri-Clamp flanges).
- Once connected to the mobile container, the passive ConeValve allows automatic docking and filling/discharging of the bulk powder as described above.

Standard scope of supply

- Cone valve
- Cone probe
- Inner telescopic drive cylinder
- External docking ring with TriClamp flange
- Outer cylindrical housing with locking mechanism
- Transfer body with connection sleeves and flanges
- Pneumatic drive motor inside the protection tube

Options

- High-frequency vibrator



Hygienic Bag Dump - 25 kg bags

Overview

The whole system is modular, which allows installation of any station as a stand-alone unit, with the flexibility for future upgrades or integration with other modules. The bag dumping station can be upgraded with fully automated bag de-palletizing also paper and plastic waste evacuation, so that the entire system can be fully automated to increase productivity and reduce labour costs. Among other benefits, the hygienic dumping of powders before dosing or mixing minimizes the need for heat treatment of the final product, enhances flavor, and lowers overall processing costs.



Appliance

Designed for opening and cutting plastic liners, with environmentally friendly recycling of paper and plastic waste. Fully modular in design, with optional automated, semi-automated, or stand-alone versions available.

Highlights

- Fully hygienic solution
- For 25 kg / 55 lb paper bags
- Automatic, semi-automatic or stand-alone design options
- Modular design
- Upgradeable to any configuration
- Environmentally friendly recycling of paper and plastic waste

Hygienic design features

- Paper materials are removed outside the hygiene area; only the plastic inner bag enters the hygiene area.
- Paper bags do not come into contact with any surfaces that touch the plastic bag.
- Automatic plastic bag cutting and powder discharge prevent external contamination of the powder; no hand knives are used, and no additional dust is generated.
- Complies with the "Red Line" hygiene standards of dairy processing.

Design Brief

Modular scope of supply

- De-palletizing & paper-cutting station
- De-papering conveyor
- Evacuation of paper waste
- Plastic bag cutting station
- Powder dumping station
- Evacuation of plastic waste

Upgrade options

- Each module is stand-alone and can be supplied on demand
- Every configuration is upgradeable
- Every module can be retrofitted
- Stand-alone modules can be upgraded with other modules at a later stage

Integration

- Suitable for vacuum and positive-pressure powder transport
- Accessible from floor level (vacuum transfer only)
- Complies with dust explosion regulations
- Option: full CIP compatibility
- Integrated dust control
- No tools are required for disassembly and cleaning
- Integral sifter screen and/or in-line magnets

Product Description

Hygienic Bag Dump - 25 kg bags is a semi-automatic system comprising the following stations:

- Ergonomically designed outer paper bag opening station that completely removes the paper layer, ensuring only the plastic inner liner enters the hygiene area;
- cutting of the plastic inner liner;
- dumping of the powder.

Powder dumping design

The system is designed for vacuum or positive-pressure powder conveying and complies with hygiene standards and dust explosion regulations. It can be operated by just 1 to 2 people and processes up to 3 bags per minute. The design effectively prevents powder contamination and eliminates the need for manual cutting tools. A dual-start button ensures hands are kept safely away from the automated bag cutting mechanism, significantly improving operator safety. Integrated dust extraction keeps dust emissions to a minimum. The system also features separate discharge for paper and plastic waste, supporting environmentally friendly recycling practices. Additionally, the bag dumping unit can be configured to integrate with CIP lines, with tool-free assembly and disassembly for easy maintenance.

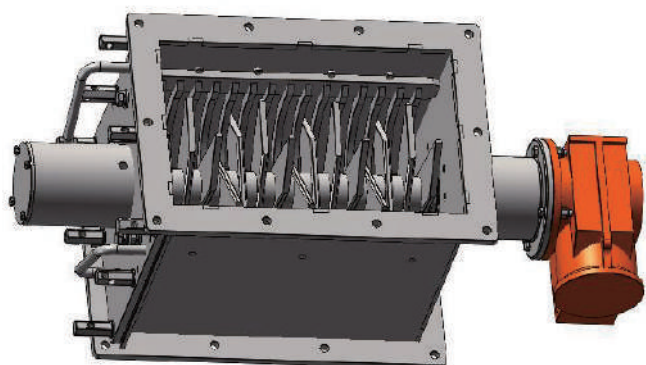


Lump breaker

Overview

Lump breaker to break the sugar caking pieces into small size.

Device designed to break up lumps or agglomerates of crumbly products (bags reception, outlets of hoppers or silos).



Working process

The body of the device consists of built-in bars. A rotor equipped with blades crushes the lumps or compacted material that enter the chamber. To ensure stable operation and prevent excessive material from entering at once, a flow rate control device should be installed before feeding the lump breaker.

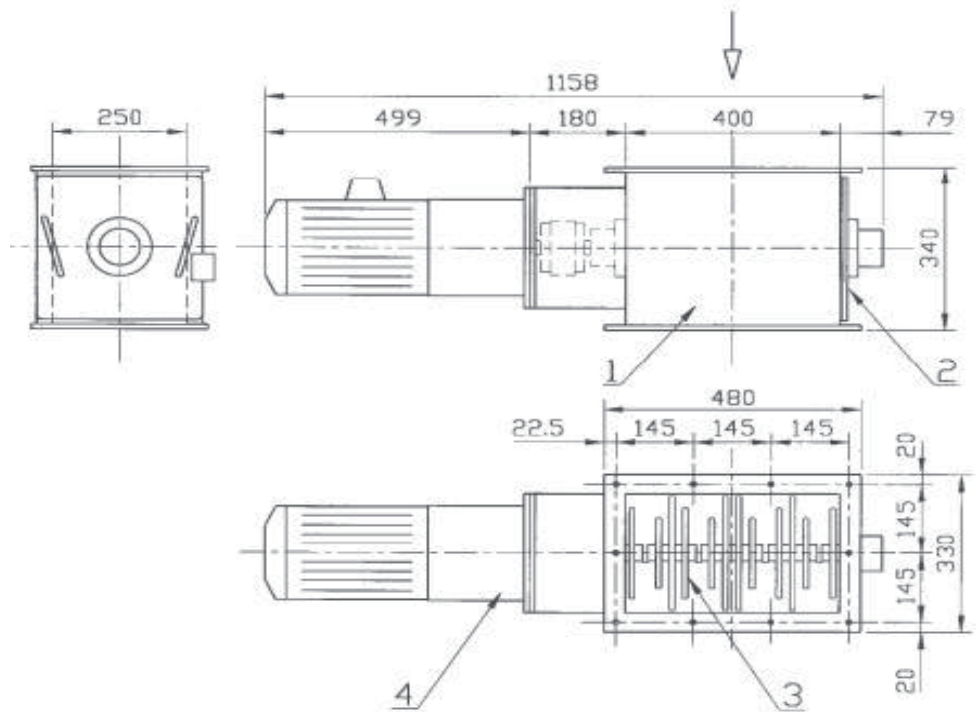
Highlights

- Small power consumption
- Small space requirement
- Low rotation speed
 - No product overheating
 - No dust emanation
- Sanitary rules

Construction

- Body
- Flanges
- Rotating blades
- Control set

Fabricated manufacturing made in stainless steel or carbon steel.



Live Photos





Automatic Powder Sampler

Overview

The Automated Powder Sampler features an air-driven sampling shovel, a sample bottle diverter (for dual-bottle configurations), and a bottle adapter customized to fit the customer's sample bottle design. During operation, a pneumatic cylinder extends the shovel into the product to collect the sample. Once the desired amount is collected, the shovel retracts, allowing the sample to fall into the bottle by gravity. In dual-bottle mode, a pneumatically controlled diverter directs the sample to either bottle based on the preset sampling program.



Appliance

Automated Powder Sampler is a hygienic solution for quality inspection in powder or granule conveying, processing, and packaging systems. Its fully air-driven design prevents sample damage or compaction, ensuring that the powder particles in the sample consistently reflect the quality of the product being tested.

Highlights

- Ideal for mounting on silos, drop tubes or batch hoppers
- Specifically designed for use in aseptic environments
- Samples retain all physical properties of the powder
- Powder samplers can be integrated into existing PLCs or controlled by stand-alone PLCs.
- Minimized component count, simple design and easy installation.

Hygienic design features

- Fully automatic circulation, operated by pneumatic columns
- Stainless steel body
- No metal-to-metal contact
- Sealed and insulated from dust due to double sealing design
- Complete isolation of the sample storage area from the collection point

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Technical parameters

Mounted on hopper wall

Connector: Tri-Clover™ 4

Service requirements

Food grade air: 6 bar

Power supply: 24 VDC

Sampling Bottle

Both single and double bottle versions are supplied with a standard sampling bottle. Customized adapters for the sampling bottle are available.

- Capacity: 0.5
- Material: Plastic
- Threads: 75 (diameter) x 16.5 (offset trapezoidal thread, ISO 4 mm pitch)

Cleaning and Maintenance

The Tri-Clover™ mounting fittings allow for simple disassembly and easy access to the sampler components for servicing and replacement.

Product Description

Automation Options

The automatic powder sampler can be integrated into a PLC system, allowing powder testing to be controlled via the HMI interface and operator panel. The standalone version comes with a pre-configured control box, enabling independent operation of powder testing.

Dual Sampling Bottle Design

If required by process quality and hygiene control standards, a dual-sampling bottle design can be adopted, allowing collected samples to be directed to either of the two bottles. For instance, one bottle can be used to monitor product performance on a daily or per-shift basis, while the other can be reserved for quality control over a longer period, such as for an entire product batch.

Model Selection

Automatic Powder Sampler

Mechanical Options

PS-2 □□□

Number of sampling bottles

1 bottle

1

2 bottles (splitter management)

2

Sampling bottle adapter

Standard type

1

Specialized type

2

Automation Options

Self-contained control cabinet

1

Stand-alone sampler

2

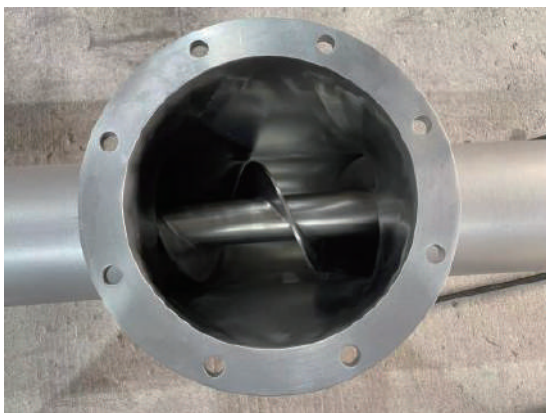
Sampler connected to PLC



Quick release screw

Overview

The Quick-Release Screw is specially designed for short-distance conveying and/or precise dosing of various granular or powder materials. The inlet and outlet can be customized to meet specific application needs. The pressurized bearing design effectively prevents powder from entering the bearings.



Appliance

This quick release screw allows for easy installation and removal. The all-stainless-steel hygienic design makes it ideal for handling products with MIE > 3mJ in the food, plastics, and chemical industries.

Highlights

- Accurate dosing
- Tilttable
- Heavy duty operation
- High outflow rate
- Can be customized with inlets and outlets
- pressure-bearing
- Easy to install and remove
- Atex compliant



Design Brief

Standard scope of supply

- Gear motor
- Product inlet
- Archimedes screw
- Spiral tube
- Product outlet
- Pressurized stainless steel bearing
- Flange safety sensor

Options

- Gearmotors with integrated frequency converter - Anti-tamper sensors
- Support brackets
- Guide rail gearmotors for full tube cleaning

Working Principle

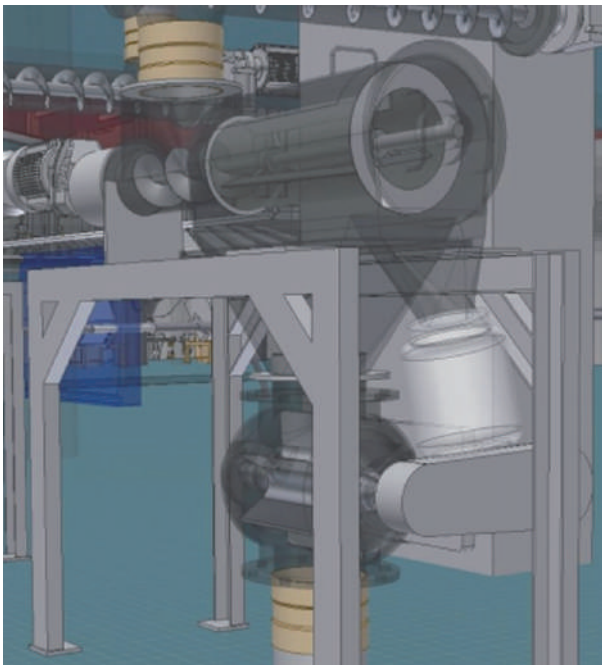
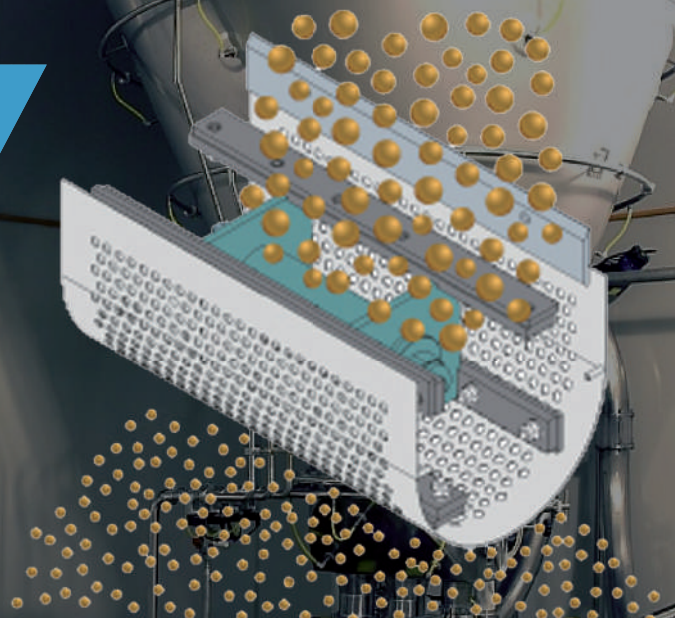
- This quick-release screw feeder relies on gravity feeding (e.g., from hoppers, discharge stations) and can be installed at an incline of up to 30°.
- The product is conveyed from the inlet to the outlet through an Archimedean screw. This heavy-duty screw (with inner shaft) is driven by a directly coupled gear motor. For dosing applications, the motor can be connected to a frequency converter for precise speed and dosing control.
- The screw pitch is specially designed to regulate material flow while preventing product compression. The maximum discharge capacity reaches up to 53 m³/h.

Rotary Sifter

Overview

material quality: SUS304

Positioning: Designed for the coarse crushing and sieving of agglomerated powders or bulk materials.



Highlights

- High shear breaking machine
- Sturdy structure
- Completely sealed design to prevent material contamination
- Ensure that the distance between the rotating blade and the screen is minimized and does not cause hard contact between metals
- Wide selection range of screen mesh
- Can quickly and conveniently disassemble equipment
- Easy and fast cleaning
- The bearings are sealed with air
- Integrated design, easy to operate, and achieve ideal screening effect
- 150mm block shape reduced to <3mm
- Cantilevered design
- Low speed - high torque -65rpm
- 4 specifications: from 200 kg/hour to 10 tons/hour
- Meets explosion-proof requirements

The logo for Döbritz, featuring a stylized 'D' followed by the word 'öbritz' in a bold, sans-serif font.

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