

VIBRATORY FEEDER

DOSING PIPE



Characteristics:

- continuous feeding
- high accuracy 1 g (product specific)
- effective and gentle process
- stainless steel AISI 304 or AISI 316 for product contacting parts
- easy cleaning
- suitable for ex-areas
- pneumatic driven piston vibrator
- low-wear
- low-noise

Variations:

- open/closed U-beam/tray
- closed pipe
- optional clamp connections
- different lengths

Options:

- weighing frame
- dust tight connections
- WIP/CIP suitable



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Description

The VOLKMANN vibrating feeder can be used for many different applications and, in combination with the Volkmann vacuum conveyors, it allows for a high grade of automation within feeding processes.

The simple construction allows for quick and easy cleaning of the system. With regard to pharmaceutical and food applications only quality materials (stainless steel 316L or 304) are used for product contacting parts. The detail design of the Volkmann vibrating feeder is always customized and can include.





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The main part of the Volkmann vibrating feeder is the vibration drive which allows for safe powder handling even in dust explosion areas. The following examples should give an overview about the functionality and applications of the Volkmann vibrating feeder.

Continuous feeding / Volumetric dosing

Many processes require a continuous supply of product. Due to different parameters (vibration intensity, layer height etc.) the Volkmann vibrating feeder can realize a huge range of different conveying capacities.

Loss in weight feeding

The loss in weight feeding option is perfect for dosing processes with small amounts and at high accuracies. The buffer module can be refilled by the vacuum conveyor discontinuously so that the dosing process is always gravimetric.

Gain-in-weight feeding into target bin/container

As an alternative to the loss in weight feeding it is also possible to put the target bin/container on a floor scale which gives the current weight to the PLC. The refilling process of the Volkmann vibrating feeder has no more influence on the dosing processes.

Blending

By using two or more Volkmann vibrating feeders it is also possible to create mixtures or pre-mixtures of different product.





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Examples:

Product	Dosing amount	Dosing capacity	Dosing accuracy	Type of dosing
Ceramic powder	164,5 g	46,5 kg/h	+/- 1,5 g	Gain-in-weight into the target bin/container
	120,5 g	43,5 kg/h	+/- 1 g	
	93 g	35,8 kg/h	+/- 2 g	
Powder coating granule	8.900 g	1.068 kg/h	+/- 5 kg/h	Continuous feeding / loss in weight feeding
	5.070 g	608 kg/h	+/- 5 kg/h	
Vanillin	1.245 g	74,7 kg/h	+/- 1 g	Loss in weight feeding
	2.167 g	130 kg/h	+/- 1 g	
Wheat flour	530 g	95,4 kg/h	+/- 3,2 kg/h	Continuous feeding
Paprika powder	550 g	99 kg/h	+/- 1,8 kg/h	Continuous feeding
Wasabi powder	432 g	103,7 kg/h	+/- 4,9 kg/h	Continuous feeding
Plastic granule	1.353 g	76,1 kg/h	+/- 0,1 kg/h	Continuous feeding
	2.742 g	156,7 kg/h	+/- 0,9 kg/h	
Ammonium sulfate	5.000 g	451,4 kg/h	+/- 15 g	Continuous feeding / loss in weight feeding
Aluminium sulfate	1.000 g	23,2 kg/h	+/- 7 g	Continuous feeding / loss in weight feeding
Dolomite	5.000 g	155,2 kg/h	+/- 5 g	Continuous feeding / loss in weight feeding
	5.000 g	439,8 kg/h	+/- 9 g	

To create an offer we need the following information:

1. Material definition of the product to be conveyed

Trade name: _____ Chemical designation: _____

Manufacturer: _____ Particle size min. _____ max. _____ (please state in µm or mm)

Bulk density: _____ kg/dm³ Density (basic materials): _____ kg/dm³ Humidity content. max. _____ %

Particle description: _____ Particle geometry: _____

Flowing characteristics (estimation): ☐ good flowing ☐ sticky ☐ bridging

Is the material scouring/wearing? ☐ No ☐ Yes

Is the material sensitive to mechanical loads? ☐ No ☐ Yes

2. Dust tight design at the output required? ☐ Yes ☐ No

3. The desired material throughput _____ (kg/h) ☐ continuously ☐ discontinuously

4. Dosing? ☐ Yes, accuracy _____ g 5. Open or closed design? ☐ open ☐ closed

6. Open or closed dispensing (closed = pipe or clamp)? ☐ open ☐ closed -> ☐ pipe ☐ clamp

