

VIBRATORY FEEDER

DOSING SYSTEM



VOLKMANN

IDEAS AHEAD



A continuous feeding/volumetric dosing system featuring a pneumatic-driven piston vibrator for effective and gentle continuous feeding with high accuracy, low-wear and low noise.

Suitable for use in Exp areas. (Consult us.)



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DOSING SYSTEM

The VOLKMANN Vibratory Feeder features a self-made pneumatic piston vibrator which allows for safe powder handling even in dust explosion areas. It can be used for many different applications, providing a high degree (1g)* of accuracy. When used in combination with Volkmann Vacuum Conveyors, the Vibratory Feeder allows for an automated feeding process. Its simple construction allows for quick and easy cleaning of the system and all product contact parts are built with stainless steel 316L or 304, making the feeder ideal for pharmaceutical and food applications.

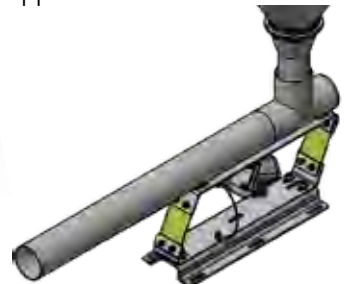
The detail design of the Volkmann Vibratory Feeder is always customizable to fit the application.

Custom variations include:

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

Additional options include:

- weighing frame
- dust tight connections
- combination with sieving
- quick release screener inlet



*Accuracy dependent on product.

Functionality and Applications of the Volkmann Vibratory Feeder

Continuous feeding / Volumetric dosing

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



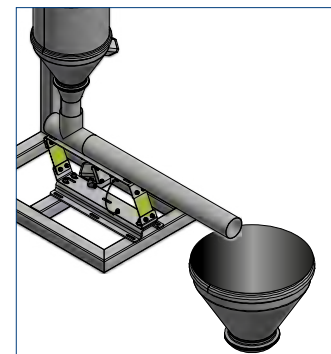
Loss-in-weight feeding

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 to provide the current weight to the PLC. The refilling process of the Volkmann Vibratory Feeder has no more influence on the dosing processes.



Blending

By using two or more Volkmann Vibratory Feeders it is also possible to create mixtures or pre-mixtures of different products.



Sieving

The Volkmann Vibratory Feeder is also suitable for simple sieving applications (e.g. protective sieving). Two Volkmann Vibratory Feeders are placed above each other with a screen surface in between.





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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

