Volkmann Lump Breakers and Material Agitators

9 Systems and Solutions for the Hygienic and Safe Handling of Powders for the Chemical, Food, Pharmaceutical and Pigment Industries



Lump Breakers and Material Agitators



Lump Breakers

Volkmann Lump Breakers with their rotating blades can be used in a wide variety of applications where material lumps can hamper the production process. They often play an integral role in a pneumatic conveying line, where it is necessary to reduce the size of agglomerate powders or granules before introducing them to the conveying system.

Volkmann lump breakers can be installed within down pipes or can be directly combined to hoppers, product feeding stations or bulk bag unloading stations. The Volkmann lump breaker features:

- Nominal diameters 250 mm and 350 mm
- Easy removal of the shaft, blades and actuator
- An EC design inspection certificate according to 94/9/EG directive (ATEX) (inside: class level 20/0; outside: class level 21/1)*
- Simple combination with vacuum conveyors
- Options of compressed air flushing and temperature control of the bearings
- Simple installation and commissioning

*Subject to the correct choice of the electric motor and drive

Accessories for Volkmann Lump Breakers

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- Motor protection switch.
- Control synchronization with a vacuum conveyor. A motor protection switch is required when synchronizing with non-Volkmann controls. When there is a pneumatic control, the lump breaker should only be activated during the suction cycle. Electro-pneumatic and intelligent compact controls in accordance with ATEX requirements are also available.
- Electro-pneumatic compact control.
- Compressed air flushing of the bearings (pmax< 0.2 bar), used with very fine material to protect bearings and seals. This option is essential in ATEX areas.
- Temperature control of the bearings used when the crushed material has a smoldering temp of < 150°C and ATEX is applicable.
- Trolley to assist with connection to plant equipment and/or for mobile use.
- Pick up interface for use with a vacuum conveyor.
- Hoppers and delivery systems.

Trials

Throughput, performance of the lump breaker, final particle size and particle structure will depend on the original product characteristics and its "previous history." Because of this, Volkmann recommends that trials on the respective material be conducted in advance at our test facility. Please contact us for a quote.

Lump Breakers and Material Agitators



Agglomerates of Various Types – From Flakes to Lumps





Lump Breaker in Action

Agglomerates in Bags

Lump Breakers and Material Agitators

Technical Information

Type of bearingAntifriction bearingTemperature of the product-40°c + 80°CTemperature of the environment-20°c + 60°CSound emission< 70 dB			
Temperature of the product -40°c + 80°C Temperature of the environment -20°c + 60°C Sound emission < 70 dB	IN GENERAL		
Temperature of the environment -20°C + 60°C < 70 dB			
Sound emission < 70 dB TECHNICAL INFORMATION 250er Nominal diameter 350er Nominal diameter Height 244 mm* 344 mm* Width of the motor depending on motor type Depth Depth 160 mm* 210 mm* Depth of motor depending on motor type Height of flange Height of flange 134 mm* 134 mm* Pitch circle F 295 mm* (8 x M8) 392 mm* (12 x M8) Inner diameter E 250 mm* 350 mm* Number of blades 8 pcs. /10 pcs. 12 pcs. Weight 39 kg* 48 kg* Weight with motor 68 kg* 77 kg* ACTUATOR			
TECHNICAL INFORMATION 250er Nominal diameter 350er Nominal diameter Height 244 mm* 344 mm* Width 369 mm* 469 mm* Width of the motor depending on motor type 10 mm* Depth 160 mm* 210 mm* Depth of motor depending on motor type 134 mm* Height of flange 134 mm* 134 mm* Pitch circle F 295 mm* (8 x M8) 392 mm* (12 x M8) Inner diameter E 250 mm* 350 mm* Number of blades 8 pcs. /10 pcs. 12 pcs. Weight 39 kg* 48 kg* Weight with motor 68 kg* 77 kg* ACTUATOR Type of motor electric motor (A pneumatic motor is an option) Power supply 230/460/575/3/60 Hz Power supply Prode IP 65 Power supply 230/460/575/3/60 Hz Prode IP 65 Power supply 230/460/575/3/60 Hz Power supply Speed max. 35 rpm Stall file. (1.4404) product contact CONTROL Control option pneumatic or electric options <td></td> <td></td> <td></td>			
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	-	ll 2 / 2 G c T 4	(E)
			

*Technical Data subject to change without notice · Version 02-2016_EN



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