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Segregation Mitigation Pointers

Segregation prevention is accomplished by matching velocity flow patterns in the process unit operations to segregation patterns measured during testing. Page 6



A Complete Guide to Rotary Valve Safety

With all the moving parts in a material conveying system, manufacturing workers must take unique precautions with each piece of machinery in the line — including the rotary valve. — incluo Page 10



Safe, Efficient Dry Bulk Truck, Railcar Loading/Unloading

In a well thought out, properly designed dry bulk loading station, maintaining operator safety does not mean that efficiency and throughput take a back sec Page 28





High-Speed Capper

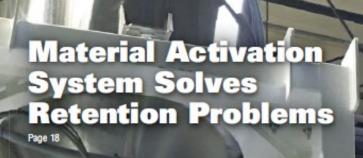
beauty, and numerous other industries. The triple-chuck capping machine accommodates various size jars and meets production rates of 100 cydes/min. A conveyor continuously leads bottles, containers, or jars to the star wheel. Chuck assemblies are rotated on the turret of the rotary capping machine. Empty chucks pass over the swinging arm carrying each cap for automatic pick and place. As each chuck is lowered over the container, the turret continues to rotate and the cap is precisely aligned with the revolving bottle, container, or jar then accurately torqued. Chuck assemblies release the cap and the chuck rises while capped bottles are neatly discharged from the machine. **ValTara S.R.L, SCHIO (VI)**, Italy +39 0445 576224 www.valtaratec.com

Online Valve Calculator



Online Valve Calculator This new online valve calculator helps process engineers and other specifiers determine the proper rotary valve for nearly any installation. Developed to provide a free, preliminary recommendation, the calculator walks users through selections by industry and hygienic requirements to reveal the ideal Gericke RotaVal rotary valve model, then invites data inputs for desired throughput, material buk density, and projected filling efficiency to reve the appropriate sizes. It is ideal for guidance in processing powders, pellets, granules, flakes, and chips. Gericke USA Inc., Somerset, NJ 855-888-0088 www.gerickegroup.com

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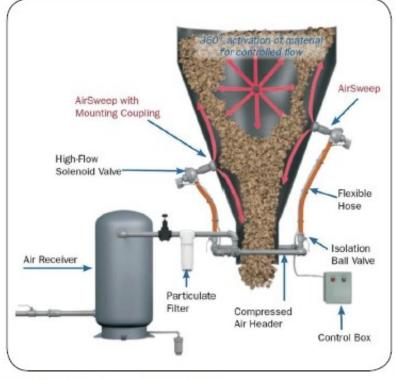
The Source for Dry Processing and Bulk Handling Technology

CaseStudy

Material Activation System Solves Retention Problems

Many ingredients in the food processing industry are prone to bridging, clinging, and clogging because of the high oil or moisture content. The stagnant material slows down production, compromises a company's recipe, and can even cause cross-batch contamination.

That was the problem encountered by Flax4Life, a commercial bakery that produces gluten-free muffins, brownies, and other baked goods. And it was happening at a critical stage when ingredients needed to flow at the right amount, at the right time, into the blending process.



AirSweep: How it works

The Problem

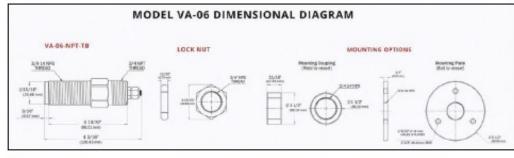
Blocks were wasting time, manpower, and material. The company used a vacuum convey system that handled materials at a rate of 6,000 b/hr. The incoming ingredients were divided into two receivers: Receiver 1 for sugar, oats, and tapioca flour; receiver 2 for ground flax and coccoa powder. However, the oils in the flax, compounded by the oil/fat content of the cocoa, as well as the general poor flow properties of both materials, allowed the material to not only bridge above the discharge, but also adhere to the vessel walls and cake the interior – all the way up to the filter bags. This led to numerous delays and expensive wastage. They had to throw away up to 40 lb of mixture a day, and even had to pay to have it hauled away (see photo of wasted product).

All the other material flow aids failed miserably. "The vibrators that came installed on the bottom of the hopper above the mixture practically turned the flax into concrete," said Stanley Rhea, maintenance department head at Flax4Life. "Then we installed fluidizers, which were terrible. We still had to use hammers and sticks, and spent an hour a day to clean and keep things flowing."



Hopper with Airsweep

CaseStudy



Hopper with Airsweep

The Solution: Small But Powerful

The company contacted Control Concepts USA Inc. about AirSweep after seeing a YouTube video that demonstrated its effectivity on wet, sticky materials. It installed six AirSweep VA-06, which was ideal for their small vessel size but still very powerful. Each 34-in. nozzle could activate up to 3 ft of material. These were positioned in pairs at the top, center, and bottom of the hopper to guarantee continuous flow and eliminate product caking (see photos of Flax4Life equipment).

How AirSweep Works

 Each AirSweep nozzle disperses a powerful burst of high-pressure, high-volume air or inert gas in 250-millisecond bursts.

 The quick pulse sends a shock wave along the inner vessel wall, lifting and activating stalled material and breaking the friction bond between the material and vessel wall.

 The system is pulsed in a pre-set sequence when material is to be discharged from the bin.

4. A typical system will consist of 3 or 4 AirSweep nozzles, highflow solenoid valves, a sequence timer/controller, an air filter, a regulator, an air receiver, flex hoses, and ball valves.

The Result

"We have been very successful with Airsweep," said Rhea. It has solved 90% of the company's material retention problems. Aside



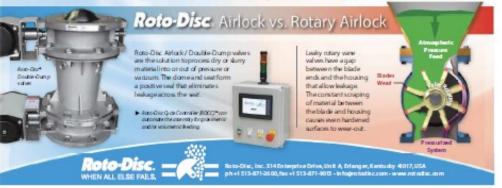
Wasted flax and cocoa

from reducing wastage and improving production speed, they no longer need to climb equipment to dismantle and clean the ingredient receiver. The company is happy with the results and its customer experience. "Customer service has

been very helpful," said Rhea. "I would call with some ideas and they would work with me on it, and they were right. Installation was awesome and easy, and the units have saved the company a lot of man hours. My experience totally exceeded my expectations – a 10 out of 10!"

Airsweep material activation systems have a warranty of seven years and are used by half of the SSP 500 companies, as well as thousands of small companies. For more information, contact Control Concepts USA (Brooklyn, CT) at 860-928-6551 or controlconceptsusa.com.

Don't Put Up With Leaky Rotary Airlocks!



The Disintegrator



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Your Ingredients, Perfectly Mixed.



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