



**MATERIAL ACTIVATION SYSTEMS**

## FULL SPEED AHEAD: AIRSWEEP® HELPED A TIRE MANUFACTURER ACHIEVE FASTER FLOW AT LOWER ENERGY COST

One of the world's largest tire manufacturers had hit a roadblock in production, because of the poor flow characteristics of one of its most important materials.

Carbon black is used in the production of rubber tires to improve durability and performance. It conducts heat away from the tread and belt area, and can reduce rolling resistance.

However, carbon black is a very challenging material to handle. It cakes and packs easily, and leaves deposits on every surface it touches.



*Fluidizers are a pneumatic flow aid that use a combination of aeration and gentle vibration to promote material flow.*

### THE PROBLEM

#### THE MANUFACTURER FACED TWO PROBLEMS THAT WERE COSTING THEM TIME AND MONEY.

First, carbon black bridged above the discharge. This stalled the weighed batch of material and caused frequent process delays.

Second, it coated the interior of the vessel and compromised batch uniformity. Several batches that proved off-spec during quality testing had to be thrown out.





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## THE SOLUTION

### TWO AIRSWEEP VA-12 UNITS WERE INSTALLED ON THE WEIGH HOPPER.

This size is ideal for medium to large vessels when it's important to limit the volume of air introduced into the system —either to avoid over-aeration of the product, or when plant air is limited or costly.

The AirSweep system could be set up to release pulses in a specific time and sequence. It used less compressed gas than fluidizers, which would run continuously.

The pulses could also be positioned at problem spots to prevent bridging and flush away residue.

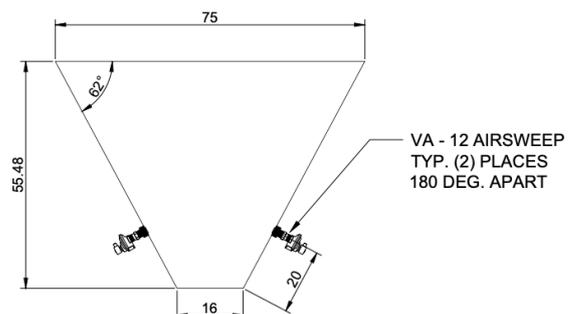
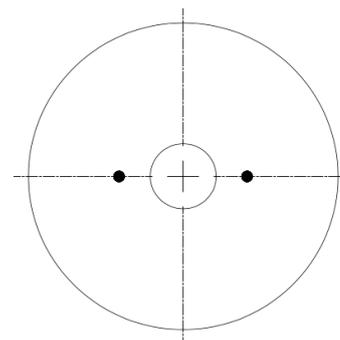


MODEL VA-12 (1 1/2") AIRSWEEP®

## THE RESULT

The AirSweep system ensured smooth, continuous flow of the carbon black material. The plant achieved higher production and batch uniformity, and saved a lot of money because of lower energy consumption and product waste.

Because of AirSweep's proven success, the tire manufacturer has installed additional units in other parts of the plant. The system is now being used in several of their facilities in the United States and Canada.





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*"The fluidizers were really ineffective," said the manufacturer's engineering technology specialist. "Airsweep has provided us with reliable flow and reliable batch uniformity."*

The manufacturer has also been very happy with the service of the Control Concepts team. *"They have been very responsive to the process needs of our factory."*

## MORE INFORMATION

[What is a Fluidizer?](#)

[Model VA-12](#)

## OUR CARBON BLACK CLIENTS INCLUDE



**CABOT**



**EVONIK**  
Leading Beyond Chemistry

**AIRSWEEP® IS USED BY MORE THAN HALF OF S&P 500 COMPANIES**

*Contact us for a custom engineered AirSweep solution*



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