

APPLICATION REPORT : FOOD & AGRICULTURAL INDUSTRY

# SI Air Knockers from Cleveland Vibrator Help Eliminate Hopper Damage at Ebberts Field Seeds



“We installed SI Air Knockers on two of our hoppers. Now we have product that flows freely out of the hoppers and into the 50-pound bags.”

- Mark Brandt, Maintenance Director  
Ebberts Field Seeds

## CHALLENGE

Ebberts Field Seeds in Covington, OH, sells seeds in 50-pound paper bags and will typically handle up to 200,000 bags (or units) during the course of the growing season. When the seeds are elevated into a hopper, they retain some moisture and are prone to sticking inside the hopper. The old method to free up product flow was to hammer the side of the hopper with a 6-foot piece of wood until the company decided a better solution was warranted.

## SOLUTION

Ebberts contacted Cleveland Vibrator Company and eventually installed Model 1300 Single Impact Air Knockers with a lever-controlled manual valve. This allows Ebberts workers to flick the lever a few times to knock the hoppers and free up seed flow. Single impactors or “air knockers” act most like a hammer and are most effective for sticky materials because they are less likely than continuous vibration to cause packing in bins and hoppers.

## FEATURED PRODUCT

Model 1300 Single Impact Air Knocker



## SPECS

- Piston weight: 10 lbs (4.55 kg)
- Piston diameter: 3” (7.6 cm)
- Energy per impact @80 psi; 5.4 bar = 86 ft lbs (1,189 cm g)
- Air consumption @80 psi; 5.4 bar = .084 cf/stroke (24 liters)
- Force @60 psi; 4.1 bar = 1500 lbs

# 1300 SI Air Knockers from CVC Help Free Up Product Flow at Ebberts Field Seeds

Hammering away with a large piece of wood to get sticky seeds flowing through hoppers became a futile and somewhat dangerous job at Ebberts Field Seeds. The Covington, Ohio-based company fills quick turnaround seed orders over a four-state area, so finding an efficient and safe way to free up product flow from hoppers became a priority.

Ebberts originated in the early 1940s and was incorporated in 1963 and provides farmers the choices they need to maximize their farm's profit potential. Ebberts does this by selecting only the top seed genetics best suited for its 150-mile market radius, which includes Ohio, northern Kentucky, eastern Indiana and parts of West Virginia.

Processing the best seeds gives corn, soybean and wheat varieties a competitive edge against larger national brands that must select genetics to cover a much broader geography. "We start taking seed orders in December and run our equipment all winter for spring delivery," says Mark Brandt, maintenance director at Ebberts. "We have retail outlets in Covington and Decatur, Indiana and also rely on a dealer network to deliver the seeds to farmers throughout our market area."



Single Impact Air Knockers were installed on two hoppers at Ebberts Field Seeds. Product now flows freely out of the hoppers and into the 50-pound bags.

Ebberts sells seeds in 50-pound paper bags and will typically handle up to 200,000 bags (or units) during the course of the growing season. Corn, soybean and wheat are grown locally and the seeds are harvested and delivered to the Covington processing facility. Contaminants and low-quality seeds are removed using shaker screens before seed treatment is applied, according to Brandt.

Treatment includes adding a fungicide or insecticide which causes the seeds to become damp during the application process. Thus, when the seeds are

elevated into a hopper, they retain some moisture and are prone to sticking inside the hopper. The old method to free up product flow was to hammer the side of the hopper with a 6-foot piece of wood until Brandt decided a better solution was warranted.

"I figured there had to be something better out there and came across the Cleveland Vibrator website," he says. "There was a YouTube video on their Single Impact Air Knocker and we eventually installed them on two of our hoppers. Now we have product that flows freely out of the hoppers and into the 50-pound bags."

Ebberts installed the 1300 SI model with a lever-controlled manual valve. This allows Ebberts workers to flick the lever a few times to knock the hoppers and free up seed flow. Single impactors or "air knockers" act most like a hammer and are most effective for sticky materials because they are less likely than continuous vibration to cause packing in bins and hoppers.

"The seeds would settle and compact in the hopper bottoms because they were a little damp and our guys were spending time banging on the outside of the hoppers," Brandt recalls. "Now, they pull the handle for a few seconds and the CVC Air Knocker gets the product flowing quickly. Now we can run 8:00 to 5:00 every day during our peak season with very little downtime."

"We are using less manpower and getting better results with the CVC vibrators," Brandt says. "They have performed better than expected and are very low maintenance units. This allows us to process our different seed varieties faster and get them out to farmers for the planting season."

## ABOUT THE CLEVELAND VIBRATOR COMPANY

The Cleveland Vibrator Company has been driving innovations in materials handling since 1923. From its corporate headquarters in Cleveland, Ohio, and in partnership with HK Technologies in Salem, Ohio, the organization has met the challenges of more than 15,000 customers around the globe in a vast array of industries. Cleveland Vibrator Company's comprehensive product line includes air-piston, rotary electric, electromagnetic, turbine and ball vibrators, as well as a wide variety of fabricated feeders, vibratory screeners, ultrasonic screeners, vibratory conveyors and vibratory tables used for light, medium and heavy-duty industrial applications.

**For more information, contact Cleveland Vibrator Company at 800-221-3298 or visit [clevelandvibrator.com](http://clevelandvibrator.com).**