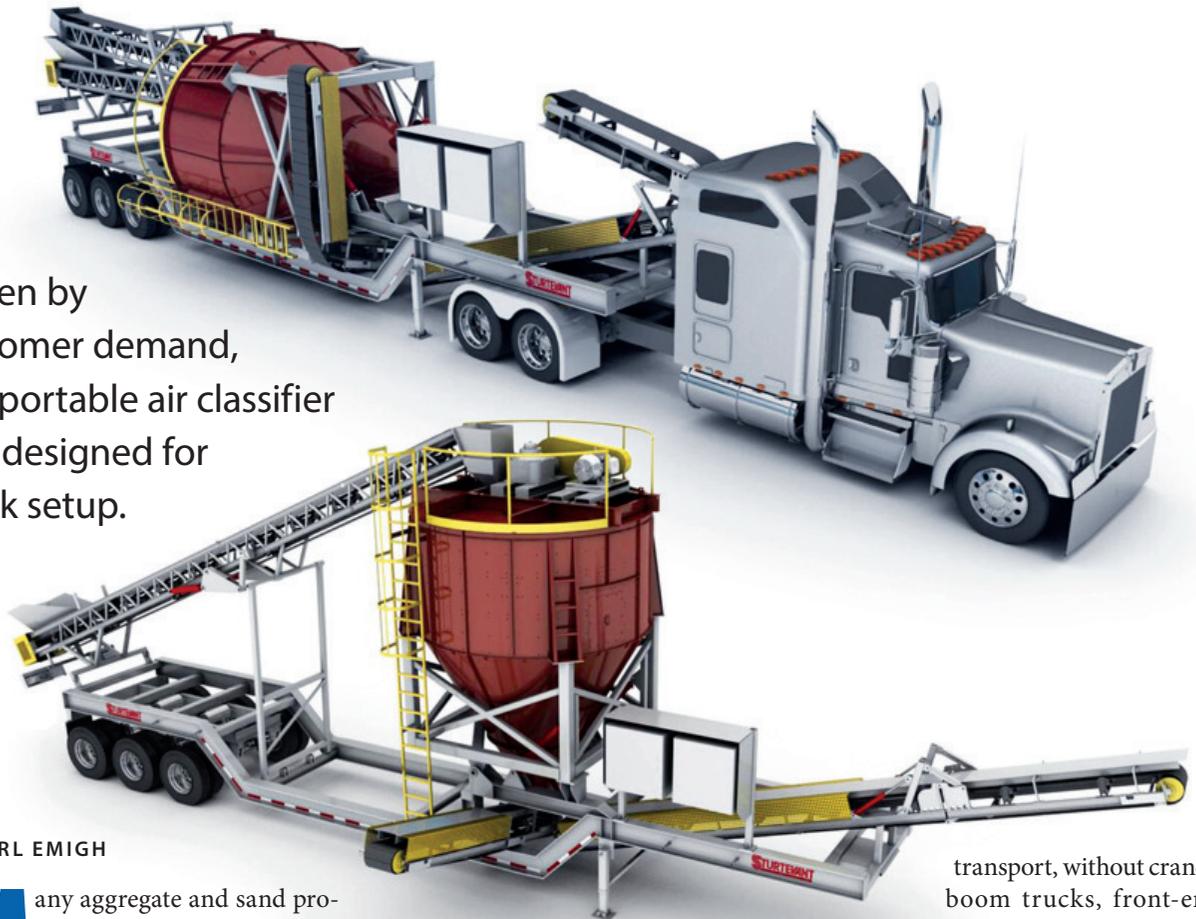


Technology Spotlight

Mobile air classifier

Driven by customer demand, this portable air classifier was designed for quick setup.



BY CARL EMIGH

Many aggregate and sand producers own multiple quarries. A portable air classifier eliminates the cost of owning and maintaining multiple stationary air classifiers. For major paving projects, it is more economical to move the air classifier to a quarry closer to the jobsite or onto the jobsite than to haul the dedusted manufactured sand.

So says Joe Muscolino, senior product manager for Sturtevant Inc., based in Hanover, Mass. Muscolino says there has not been a mobile air classifier that can go from transport to production without delay from special lifting equipment.

"People have been asking us for years to design a portable plant to solve this serious problem," Muscolino says.

He says Sturtevant's answer to the problem is its Whirlwind air classifier and conveyor, which is the only self-contained, 100 percent mobile air classifying plant with integral collapsible conveyors. The plant allows for parking and processing in one hour or less.

According to Sturtevant, the Whirlwind hydraulically unfolds for setup and folds away for the breakdown and

transport, without cranes, boom trucks, front-end loaders or special crews needed. It can be done with the push of a button. Dual hydraulic cylinders provide smooth, steady raising and lowering of the Whirlwind air classifier and its collapsible feed and dual discharge conveyors.

The plant is mounted on a rugged chassis frame with tri-axle suspension for stable travel on highways or back roads. The plant is designed and constructed for vibration-free operation and long service life with low maintenance. The compact design features a low transport height (13 ft., 5 in.), short trailer transport length (61 ft., 9 in.) and trim transport width (12 ft., 7 in.) for easy maneuvering on the road.

Take note

Entirely portable air classifiers allow for parking and processing in about an hour.

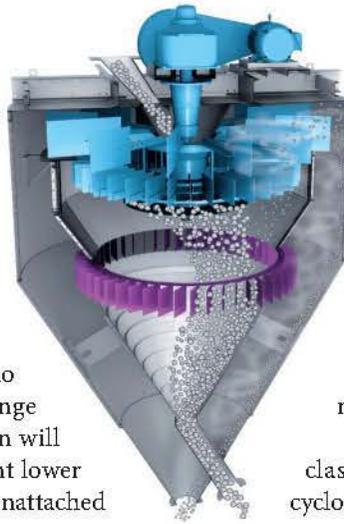
TECHNOLOGY SPOTLIGHT

Feed capacity is 30 to 90 tph with a 50 hp variable-frequency motor for low energy consumption.

“Producers tell us they want a portable unit large enough for high feed rates, but compact and completely mobile to keep transportation costs reasonable,” Muscolino says. “We estimate that our ample tph range and compact, totally self-contained design will keep transportation costs 40 to 50 percent lower than if we had designed a larger plant with unattached conveyors that require assembly.”

Other features requested by aggregate producers are a long, high-discharge conveyor for increased stockpile heights of de-dusted manufactured sand, and a feed conveyor intake hopper that is low to the ground and can be fed by a front-end loader, eliminating the need for an intermediate conveyor. Also, the feed hopper is located behind the trailer rear wheels to prevent spillage of feed material onto the chassis where it could cause damage and requires cleanup.

For safety and nuisance dust control, all three of the belt conveyors are covered and can be easily vented. In addition, the gravity feed inlet at the top of the classifier is under a



A view of the inner workings.

slight vacuum to prevent airborne nuisance dust during material transfer. The conveyor covers also help reduce moisture during rain to ensure efficient performance. The air classifier is designed for dry operation. Material moisture preferably should not exceed 2 to 3 percent with 4 to 5 percent as a maximum level for most materials.

According to Sturtevant, its Whirlwind air classifier can eliminate the need for screening, cyclones, bag houses or wet washing where water is not readily available or where water disposal is a problem. The unit has an automatic lubrication system for low maintenance and a time-tested, gear unit drive for long service life.

An internal fan lifts minus 200 mesh fines out of the feed. Removable selector blades within the housing control the amount of fines to be removed so the process can be adjusted to nearly any material or spec requirement. Any additional fine-tuning and quick adjustments can be made with easy-to-use speed controls. **P&Q**

Carl Emigh of CME Creative Services Inc., Marion, Ohio, is a freelance writer and marketing communications specialist serving the aggregates, recycling and construction industries.

- ▶ Get set-up and operational or tear down for transport in 1 hour or less
- ▶ No cranes, boom trucks or loaders needed