

# KEEPING CALM AND CRUSHING ON

A Mid-Atlantic contract crusher works alongside manufacturers to optimize the conveyor drives on his portable plants.

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**W**hen John Mason started Black Rock Crushing to serve the specialty contract crushing market in 2010, his mantra was “standardize and minimize.”

In other words, “keep it simple.”

With a headquarters located in Ramseur, North Carolina, and plans to serve reclaimed asphalt product (RAP) customers within the Mid-Atlantic, Mason planned to purchase one portable crushing/screening plant per year and hire a highly mobile staff.

By December 2016, Black Rock Crushing was processing 2 million tpy of RAP, operating six Lippmann Milwaukee plants with a staff of 34 people throughout the Mid-Atlantic. With three 4800CC two-piece plants and three 4800CC one-piece plants, the company rapidly deploys from one site to another to operate

wherever a customer need exists. Typical jobs are within a three- to five-hour drive of headquarters, and a job lasts anywhere from one to four weeks.

Black Rock Crushing selected Lippmann Milwaukee plants because they are specifically designed for the recycling industry. Lippmann Milwaukee representatives have applied what they have learned over the years from customer feedback about the 4800 plants. The plants’ portability and adaptability allow customers to run them in both concrete and asphalt recycling. The ability to add additional screening capacity to the standard plant configuration allows the plant to be used for high-reduction asphalt applications.



Left: Rulmeca motorized pulleys enclose all moving parts within a hermetically sealed and oil-filled pulley shell, protecting parts from environments such as RAP processing.

Motorized pulleys are compact and eliminate the need for extensive guarding, streamlining the plant’s footprint and simplifying conveyor maintenance.





A Lippmann Milwaukee 4800CC two-piece plant, with a horizontal shaft impact crusher and Rulmeca motorized pulleys on all conveyors, enables operators to quickly deploy to high-reduction asphalt applications.

High-quality horizontal shaft impact crushers, vibrating screens, and plant chassis are important. However, reliable feed, as well as recirculating, cross and under-screen conveyors are essential to maintain product throughput. Therefore, Black Rock Crushing selected Rulmeca motorized pulleys as the conveyor drive of choice.

### Conveyor drive selection

The reasons for selecting these motorized pulleys were their small size and simplicity of the drive; improved safety; and the elimination of exposed items such as motors, gearboxes, pillow blocks, couplings and extensive guarding.

RAP is notorious for sticking to components and causing maintenance challenges. Sticky RAP dust frequently plugs cooling fins and fouls cooling fans on exposed drive motors, causing motor burnout. But motorized pulleys enclose all moving parts, including motors, within an oil-filled and hermetically sealed pulley shell, protecting them from harsh operating environments.

Rulmeca motorized pulleys were not a new idea for Lippmann Milwaukee because Rulmeca has been supplying these to the company since 2004. What was new, however, was a contractor who not only specifies that these motorized pulleys be used on all conveyors, but one who also actively participates in optimizing the drives that are used on the conveyors.

Black Rock Crushing's involvement included not only specifying the components, but also visiting the plant in Milwaukee during each plant's fabrication.

Why such involvement? According to Mason, Black Rock Crushing wants each plant to be as operator friendly as possible. For example, Mason required that all Black Rock plants



John Mason not only manages Black Rock Crushing and oversees all capital expenditures, but he also takes an active role in improving and maintaining the portable plants.

incorporate a hydraulically powered cross belt extender so that it would cantilever over the recirc conveyor for the ability to fractionate product in either direction, based on site layouts. Also, any worker should be able to run any plant within the Black Rock fleet, he says.

"Interchangeability of people and parts within our fleet has yielded the efficiencies foreseen at the company's startup," Mason says. "It is essential that we be able to deploy a two-man crew from a plant in Virginia, for example, to a plant in South Carolina, on short notice, without having to worry whether or not the crew can operate and maintain the plant."

Rulmeca's Wilmington, North Carolina, location was convenient to Black Rock Crushing, enabling the two companies to quickly improve or modify motorized pulleys as necessary.

According to Rulmeca, Black Rock Crushing's experience with its motorized pulleys is typical of operators faced with harsh operating conditions who select the internally powered conveyor drive instead of exposed drive systems. **PP&E**

*Information for this article courtesy of Rulmeca Corp.*



From left: Mike Gawinski, Rulmeca Corp. president; John Mason, Black Rock Crushing; Jay Graham, Rulmeca Corp. operations manager; and Fabio Ghisalberti, Rulmeca Corp. owner. Mason paid Rulmeca a visit in November 2016.