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# ENVIRONMENTAL

## NEWS



## ROUND-THE-CLOCK CRUSHER PRODUCTION





Ohio's Dependable Dealer

## Crusher Material Preparation: **AN OUNCE OF PREVENTION ... OR TONS OF LOST PRODUCTION**



One of the most important things you can do to maximize uptime on your crusher is prepping the material before feeding it into the crusher.

"Many people experience downtime due to clogs, jam-ups and oversized materials stalling the crusher," said Josh Lovett, aggregate PSSR for the Environmental Division. "Whether it's asphalt recycling, concrete recycling, virgin stone—any material needs to be prepped prior to crushing."

**"Whether it's asphalt recycling,  
concrete recycling, virgin  
stone—any material needs to  
be prepped prior to crushing."**

Josh Lovett; Aggregate PSSR, Columbus Equipment Company

A key part of prepping material is making sure it's not too big for the crusher. All crushers have a reduction ratio. "All our horizontal shaft impact crushers, for example, are designed to handle between a 12-to-1 and 18-to-1 reduction ratio. If you're looking for a 1-inch-minus output with an 18-to-1 ratio, the largest piece you could put in there would be 18 by 18 inches," he said.

When you prep materials to the right size, your crusher will operate more smoothly and be more fuel efficient. You'll also experience less downtime.

Asphalt recycling material might not need much prep because it's usually reduced enough during tearout. Using the right size helps the crusher to liberate the asphalt and minimize the amount of white rock produced.

In concrete recycling, check for steel as well material size. Cut any steel to 12 inches or less or remove it altogether to reduce the risk of breaking a bar or tearing a belt, which could result in significant downtime.

When blasting virgin stone from a high wall, some of the chunks in the muck pile are going to be too large. Use a hammer attachment, hydraulic hammer or pulverizer attachment to reduce the size before feeding it to the crusher.

"Most limestone quarries go 24 hours a day in season. They don't want downtime, and feeding stone that's too big can lead to just that ... for no good reason," Lovett said. "That's why prep is an important consideration for any efficient, consistent producer."

If you're not sure what your crushers' reduction ratios are, consult your PSSR. Reduction rates vary widely, depending on style and size of crusher, so get the specific ratio for your machine today.



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Ohio's Dependable Dealer

## JCI Kodiak® Plus K350+ Cone Crusher: **TURNING WASTE INTO PROFIT ... ALL YEAR ROUND**



Johnson Crushers International (JCI) has expanded its Kodiak® Plus cone crusher series with the K350+, offering high production with a small footprint. The crusher's footprint is similar in size to a 300-horsepower cone, but has a similar hold-down force to a 400-horsepower machine, producing results in tough applications.

**“Producers can use the K350+  
to transform a waste product  
into a useable, saleable product.  
That’s a win-win.”**

Josh Lovett; Aggregate PSSR, Columbus Equipment Company

The crusher can be used in applications from coarse secondary crushing to manufactured sand. “You can use the same Kodiak® cone crusher in a coarse application as you would in a fine application by simply changing the liner profile,” said Nick Hahn, product manager for JCI; part of the KPI-JCI and Astec Mobile Screens group.

The Kodiak® Plus line offers Ohio producers a solution to producing sand with a cone plant without the need to make significant changes to the crusher, according to Josh Lovett, aggregate PSSR for Columbus Equipment Company's Environmental Division.

Many producers use cones to make aggregate, but

they're left with an unusable byproduct; rock that is too small to be crushed into sand. However, with the K350+, producers can go from big rock to making sand with a simple liner change, Lovett said. “Producers can use the K350+ to transform a waste product into a useable, saleable product. That’s a win-win.”

Manufacturing sand with a cone crusher can be difficult and result in premature damage to the crusher, but not with the K350+. “Through a combination of speed, stroke and chamber geometry, the K350+ can handle a wide range of applications and, with the heavy-duty design and innovative features, can reduce the potential for damage to the crusher,” Hahn said.

Another advantage to the K350+ is its roller bearings. Kodiak® roller bearing machines need less than one-third of the lubrication oil that a bushing machine requires—25 to 40 gallons, depending on size, compared to up to 150 gallons on a crusher with bushings.

Additionally, roller bearing cones work in a wide range of temperatures, while bushing cones are limited by oil viscosity and temperature. Roller bearings are far more forgiving in varied climates.

For more information on how the K350+ can upgrade your crushing operation, contact your Environmental Division sales representative or PSSR today.



Where Profitability and Sustainability Meet™







# KPI-JCI and Astec Mobile Screens: FT4250 AND FT2650 CRUSH ROUND-THE-CLOCK PRODUCTION DEMANDS

Visit [columbusequipment.com/news/videos](http://columbusequipment.com/news/videos)  
for more on this producer's experience  
with the FT4250 and FT2650.



Thanks to two KPI-JCI and Astec Mobile Screens crushers rented from Columbus Equipment Company, a large, Ohio aggregate producer was able to maintain production without missing a beat when its primary jaw crusher went offline for a month.

The main crusher—a 3862 track jaw crusher—had a bearing failure this summer. The company needed a fill-in replacement while the machine was being repaired, and Columbus Equipment Company was able to supply two machines—an FT4250 horizontal impact crusher and a FT2650 jaw crusher—both tracked, portable machines.

**“Given the KPI-JCI machines were rated for 400 tons an hour, we were pleasantly surprised to be able to exceed that production.”**

Site Manager, Ohio Aggregate Producer

“We needed something to temporarily maintain or come close to maintaining production,” said the site manager. “We used the two KPI-JCI units in parallel to come up with the required tonnage. Using the two machines together, we were able to get about 800 tons of production an hour.”

“Given the KPI-JCI machines were rated for 400 tons an hour, we were pleasantly surprised to be able to exceed that production. With our normal crusher, we

get 800 to 1,000 tons per hour.” To maintain that level of production, the limestone plant needed to produce that same tonnage. The crushers were online 21.5 hours a day, seven days a week. Overall, the customer produced 383,000 tons through the rental crushers in one month.

The track-mounted, portable crusher is typically the primary limestone crusher, and is the first unit rock passes through after being blasted. After the initial crushing, the material goes into a surge pile for a controlled feed into the plant. Dry material goes through one more crusher and wash-end material goes through two additional crushers, the equipment operator explained.

The regular crusher handles 36-inch rock, but with the smaller, KPI-JCI rental units, “we adjusted our shot pattern to produce 24-inch-minus rock that we could feed into the crushers. We were looking for a nominal 10-inch-minus output,” the site manager said.

“We were able to get the desired size that we needed,” the operator said. “The horizontal impact crusher gives us a little finer material and the jaw crusher a little coarser, like we normally run. We had a good blend from the two.”

The customer’s load-and-carry operation uses two large wheel loaders to supply material to two, 36-ton excavators, with one excavator feeding each crusher.

“The KPI-JCI machines performed really well,” the operator said. “They are a lot smaller than what we’re used to, so we weren’t anticipating they would put out the tons per hour that they did. Bottom line, they exceeded our expectations.”

The crushers were also highly dependable, with no

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mechanical problems. “We ran them 21 hours a day, seven days a week. That’s probably double of what most people do, and they held up really well,” the operator said. “I’m really impressed overall.”

The customer particularly liked the machines’ portability. “We drill and blast, and we like to stay as close to the pile wall face as we can,” the site manager said. “The portability allowed us to do just that. We could easily move them out for a shot then put them back.”

**“We ran them 21 hours a day, seven days a week. That’s probably double of what most people do, and they held up really well.”**

Operator, Ohio Aggregate Producer

“Setup was also really easy compared to the regular setup,” the operator noted. “The existing primary is a lot bigger; it’s portable but it takes a long time to set up.”

A small but welcome feature of the KPI machines was remote control. “Remote control is not a new technology but it allowed the operator in the loader or excavator to control the machine and feed rate and to adjust on the fly without having to get out of the cab every two seconds,” the site manager said. Another benefit of the rentals was indicator lights to alert the operator if the crusher was overloaded.

Columbus Equipment Company took care of scheduled maintenance for the machines, which comes around

quickly when you’re running them for 21 hours a day, noted Bob Stewart, a sales representative for the Environmental Division. One crusher was brand new when it was sent to the plant, and at the end of the rental period it had clocked more than 800 hours.

If the KPI-JCI and Astec Mobile Screens crushers were the productive, dependable solution for this customer,



Columbus Equipment Company was an equally dependable source of support. “Columbus Equipment got us dialed in, found ways to tie into our interlocking systems, and helped us troubleshoot some sensor readings. They were very responsive. If we had issues, they came right out,” the site manager said.

Contact your Columbus Equipment Company Environmental Division representative today—Bob Stewart at (440) 752-0836 (Eastern Region), or Jesse Garber at (937) 239-7180 (Western Region)—for more information on KPI-JCI and Astec Mobile Screens’ world-class, aggregate-processing products.





# New and Previously-Owned, Late-Model EQUIPMENT FOR SALE AND RENT



**2009 Valmet 430FXL  
Feller Buncher**  
22" Hot Saw Clean and Work Ready

**\$165,000**



**2018 Vermeer HG4000  
Mobile Wood Grinder**  
Fiat C13 T4F (515HP) 44,000 lbs.  
Machine Weight Duplex Drum

**\$339,000**



**2011 TimberPro 735B  
Harvesters and Processors**  
Good Condition, Work Ready, Rolly II Head

**\$230,000**



**2019 CMI C300 Mulch and  
Mowing**  
Cummins QSL9 Tier IVF (300HP), 4 Pump  
Hydraulic System, D3 Type Undercarriage,  
22" Track Pads, Standard Winch

**FROM \$379,000**



**2017 Komatsu XT430L-3  
Feller Buncher**  
280HP, 22" Quadco 360 Degree Rotate,  
24" Pads, Undercarriage 80%, Cab  
Very Clean, Preheater

**\$385,000**



**2017 Morbark 3400XT  
Hogs and Wood Grinders**  
765HP, Tier II, Cat ESC Through  
2023/5000 Hrs.

**\$450,000**



**2017 Morbark 4600XL  
Mobile Wood Grinder**  
Cat C27 1,050HP Tier 2, Cat Warranty thru  
2021, Cat ESC 5/5000 2024

**\$760,000**



**2017 Morbark 40/36NCL  
Mobile Wood Chipper**  
765HP Cat C18 Tier II, PT Tech Clutch,  
Advantage 3 Drum, 8 Knife, 320L Cat  
Undercarriage

**\$465,000**



**2017 Terex Ecotec TDS 820**  
Scania 440HP HAAS 2000XL, Twin Shaft,  
9/9-4 Configuration

**\$460,000**



**2018 Rotobec 960D Log  
Loader Knuckleboom**  
Cummins Tier III (173HP), 32'6" Reach Boom,  
40"X60"X62" Pressurized Cab, Lexan  
Windshield, Heating & Air Conditioning,  
AM/FM Radio

**\$220,000**



**2018 Terex Ecotec PH2100  
Screening System**  
Cat C4.4 Tier 4 Final (173HP), 60,500 lbs.,  
6'4" X 21'2" Drum, Heavier and more pro-  
ductive than other 6' X 21' Trommels

**\$275,000**



**2019 Terex PH1600  
Screening System**  
Cat C4.4 Tier 4F (110HP), 5' X 16' Screen,  
3.3 cu yd Hopper, Radial Conveyor, W/180  
Degree Swing, 39,700 Low Level Remote  
Greasing Heavier

**\$170,000**

Call Mark DiSalvo at (937) 424-7678, or your local Columbus Equipment representative, for complete listing information today!







ENVIRONMENTAL DIVISION  
Regional Commitment

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# PDQ PARTS PROGRAM

Columbus Equipment Company's PDQ Parts Program is a best-fit product line, offering thousands of after-market parts engineered as solutions to a wide range of aggregate equipment parts needs.



Rooted in our mission to continuously elevate the bar in meeting customers' needs, PDQ parts are equivalent in quality to OEM parts from a wide variety of manufacturers, and are guaranteed with a 6-month, 1,000-hour warranty.



Looking for high-performance, after-market parts at competitive prices? Look no longer ... maximize the uptime and life of your equipment with affordable, dependable, high-quality PDQ Parts by calling Columbus Equipment Company's Aggregate Product Support Specialist Josh Lovett at (614) 980-1466 today.

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