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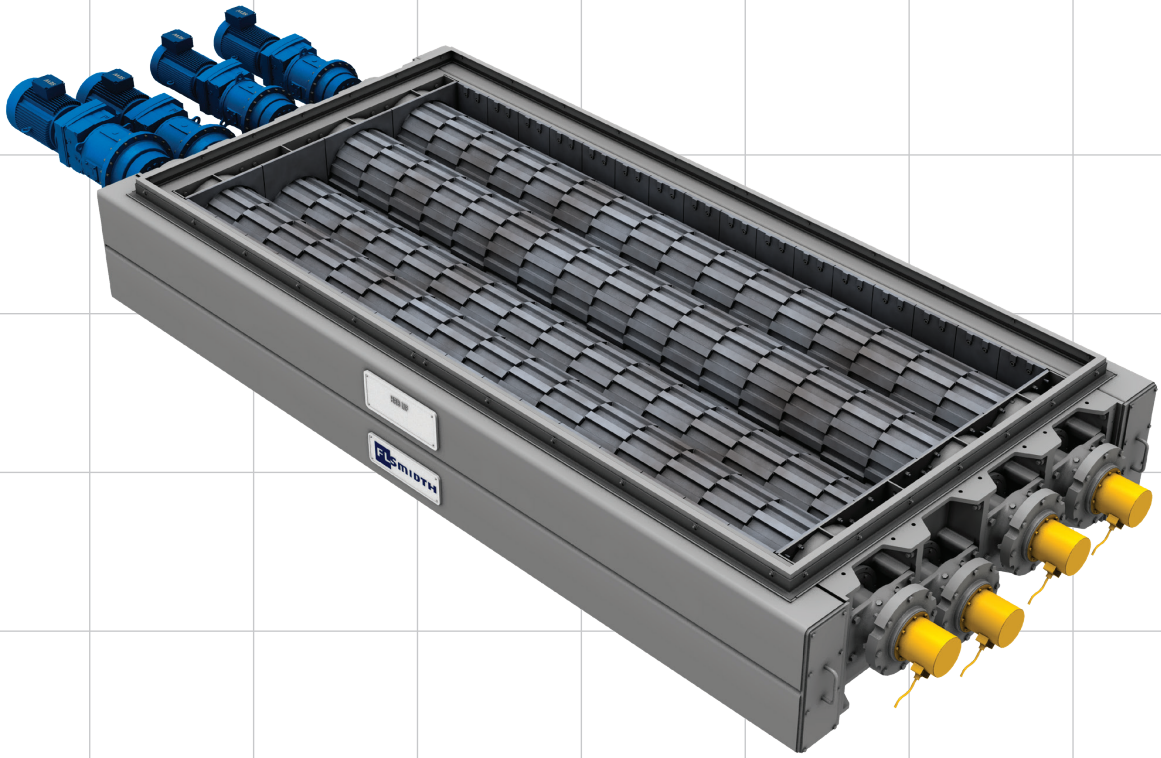


HEAVY-DUTY ROLLER BREAKER

Efficient clinker crushing with maximum uptime

DON'T LET YOUR CLINKER CRUSHER HOLD YOU BACK

When unable to crush clinker boulders, your pyro process goes down! Stopping the cooler to deal with oversized clinker is a huge cost burden. And if you have a Hammer crusher then it only adds to the significant sum you're already spending on maintenance.

Our Heavy-duty Roller Breaker can deal with clinker boulders crushing with ease – eliminating cooler downtime to clear boulder blockages in cases of Hammer crusher. And the long-life wear parts will save you huge amount of money in annual maintenance costs. Giving you a swift ROI of less than 2 years in case you replace your existing Hammer crusher. It's the switch you'll wish you made years ago.

KEY BENEFITS

Effective crushing of clinker boulders

Very low maintenance

High availability and long wear life

Flexible layout

Crushing it, 24/7

All cooler will experience clinker boulder or coating pieces from kiln time to time. And if your hammer crusher gets blocked, you have no option but to shut the cooler down while you clear it. Every hour of that shutdown is an hour of lost production you can't get back – so how can it be avoided?

You can't stop boulders from forming, but you can choose a clinker crusher capable of dealing with them. The Heavy-duty Roll Breaker (HRB) is designed for optimum crushing efficiency and minimum wear, ensuring maximum cooler uptime and very low maintenance costs. No more unplanned shutdowns. No more disruption to your pyroprocess. Just continuous, reliable crushing, 24/7.

No boulder too big

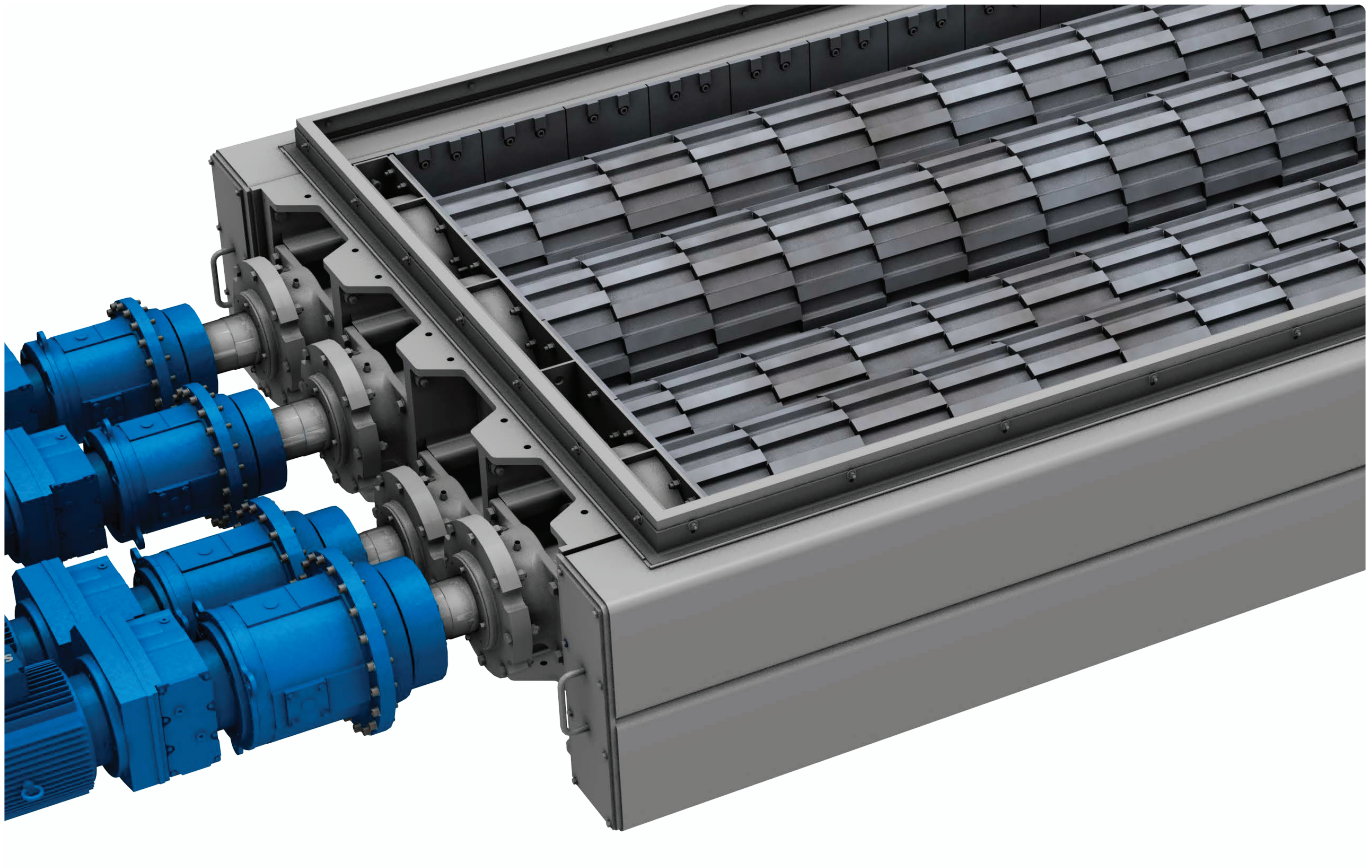
It's called 'Heavy-duty' for a reason. The HRB has been known to crush boulders as large as 1.5 m without any problems, thanks to the clever design and arrangement of the transport and crushing rollers.

The number of rollers varies from three to six, according to your clinker production.

Both the transport and crushing rollers are with wear segments featuring a toothed profile, which ensures a good grip on the oversized materials, while allowing right-sized materials to fall through. This common part also reduces inventory costs.

The transport rollers are spaced to allow the fine clinker particles to fall through, while oversized materials are transported to the crushing rollers, where it is crushed to the required size by heavy-duty crushing rollers that rotate in opposite directions. This action pulls the material into the nip – a key feature of the HRB that is integral to its success. One of the crushing rollers is positioned slightly below the horizontal plane of the other rollers, enabling the crusher to easily grip and break down the boulders.

Reversible crushing rolls also contribute to the roller breaker's continuous operation. When the maximum system load is reached, the last of the crushing rolls reverses automatically to optimally crush the boulders to the required size. If jamming continues, both rolls will reverse.



Reliable operation, high availability and minimal maintenance

Crushing clinker between rollers is a much less wear-intensive operation compared to the striking motion of the hammer crusher, where hammers require regular replacement and the impact causes bits of clinker to fly off and hit the machinery, causing yet more wear for instance to your cooler refractories.

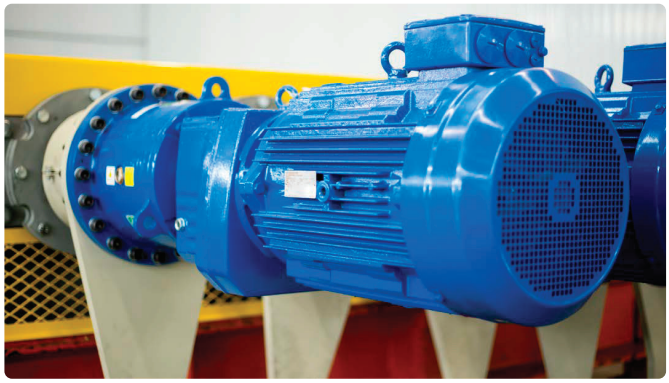
In addition, whereas maintenance costs for hammer crushers mount up year after year, the HRB's main wear part – the cast segments covering the roller – have a life expectancy of at least 3 years and have been known to last more than 5 years, depending on cooler capacity and clinker chemistrygranulometry. A simple check-up during your annual maintenance outage and proper lubrication is all that is needed to keep this mighty machine in good working order.

Flexible layout

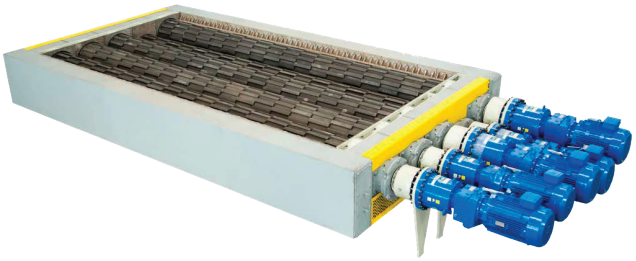
The HRB is the default clinker crusher type with our Cross-Bar® cooler. The HRB can be retrofitted to any existing cooler models. Because you can choose the number of rollers and the width of the HRB suitable to an existing layout it is easy to fit the crusher to coolers of all sizes.

Mid-HRB option

Every cooler experiences boulder formation in kiln from time to time, but in some processes it is a regular occurrence. In these cases, we can fit the HRB near to the middle of the cooler to not only crush the boulders, but also give the clinker plenty of time to cool before reaching the cooler outlet.



The cast wear segments are designed to handle clinker temperature suitable for mid cooler application, while an air-cooling system is added to protect the crusher frame and shafts. In a mid-HRB arrangement it is also possible to recover as much as excess heat to a waste heat recovery system by recovering the heat coming from the crushed clinker boulders and oversized clinker.



Easy access

The HRB is designed for easy maintenance access with a special 'roll out' feature. You can choose whether to have the rollers roll out of the left side, right side or rear of the cooler (in a standard end-of-cooler arrangement) according to the space available at your site, making wear part changes quick and easy.

Quick installation

The HRB arrives on site pre-assembled and pre-tested. Installation is simple and can be completed in less than two weeks to fit in with your annual shutdown.

Full control

The HRB's control system continuously monitors the torque of the rollers. When torque exceeds a certain limit, the system knows that a blockage needs attention. The rollers will automatically stop, reverse, then start again. This process is repeated until the lump has been crushed to appropriate size.

The control system is IOT-ready and can be connected to the internet for remote commissioning and assistance if required.

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