



# FULLER<sup>®</sup>

## SF<sup>™</sup> CROSS-BAR<sup>®</sup> COOLER UPGRADE

An easy upgrade that enhances productivity  
and reduces maintenance costs

Does your existing cooler limit you from increasing production, or is it time to do a major maintenance overhaul, or do you want to reduce the maintenance cost? A surprisingly simple upgrade helps you increase productivity and reduce maintenance costs at the same time.

### KEY BENEFITS

- 10% higher capacity with same grate area
- Lower maintenance cost
- Fewer wear parts
- Control red river
- At an attractive investment cost



SIMPLY PUT: IT'S ALL ABOUT THE TRANSPORT MECHANISM.

# A STEP FORWARD FOR YOUR SF™ CROSS-BAR® COOLER

Your existing SF Cross-Bar cooler has one stationary crossbar between every two moving crossbars and each crossbar covers four grates in width. By upgrading, the cooler will no longer have stationary crossbars. The newly installed moving crossbars cover two grates in width, thereby doubling the number of lanes. For instance if you have an SF 3x4 cooler it has 3 lanes, by upgrading you will then have 6 individual lanes that helps in controlling the red river.

By eliminating the stationary crossbars between the moving crossbars, doubling the lane function and operating only in shuttle mode, clinker transportation efficiency increases significantly. This allows the cooler to handle more clinker production than designed for. It also reduces the cooler drive speed to <60% of what you operate today. Lesser drive speed is directly proportional to the lifetime of the cooler parts, which ultimately reduces your maintenance cost and time.

Going forward you will have fewer wear parts in the cooler as the cooler will no longer have stationary crossbars, stationary and moving retainer brackets and base wall plates.

## How it's done

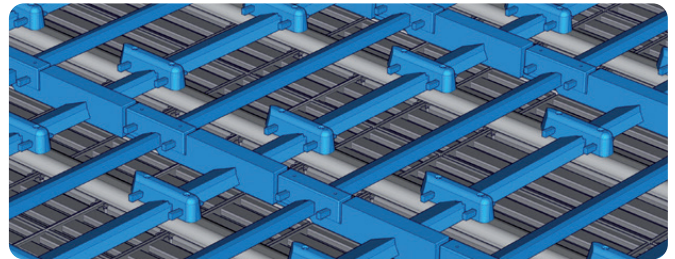
This upgrade is achieved with most of your existing SF Cross-Bar cooler untouched. Only the crossbars and hydraulic components are changed, thus at an attractive investment cost.

### Typical steps to upgrade:

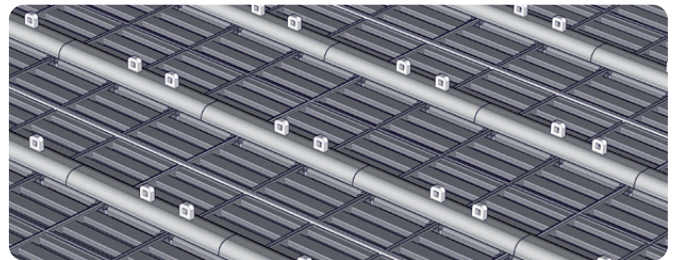
- Initial review of existing cooler from a mechanical and process perspective
- Replacement of crossbars with new design
- Mounting of new grate protection plates. If existing grates are worn out, then it is wiser to choose our latest Wave Grate design
- Division of drive frame, each existing lane is divided into two independent lanes
- Replace cylinder brackets and intermodular straps
- Install new valve block, hydraulic components, existing hydraulic cylinders are re-used
- Install new program and supplementary electrical parts on existing Machine Control System

The upgrade can be completed within a standard maintenance stop of 2-3 weeks, and no heavy equipment is needed to carry out the upgrade.

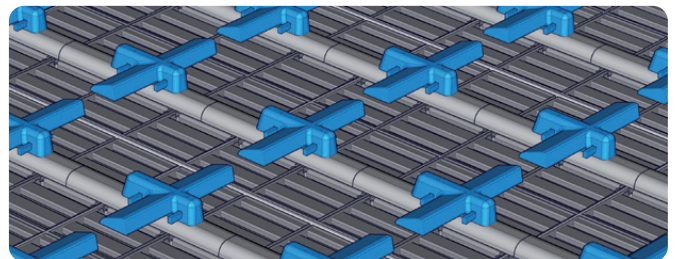
For the ultimate solution that will further increase grate lifetime, improve cooling efficiency and reduce operating costs, request information on our latest Wave Grate design. This solution supports more challenging financial and environmental sustainability targets.



Before upgrade



Cross bars removed from SF cooler



New cross bars installed

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