A surprisingly simple upgrade gives your SF cooler increased clinker transport, allowing greater throughput and more control of the clinker bed under heavily loaded conditions – all with fewer wear parts.
Increase capacity – and more

An advance in technology
The key change involves an upgraded transport mechanism. A shuttle drive motion is used, where all cross bars move forward together, and alternative lanes of newly designed 2-wide cross bars move together in the reverse stroke. Because each cross bar covers only 2 grates instead of 4, you achieve more finite control across the width of the cooler. Furthermore, while your existing SF cooler has 6 moving and 6 stationary cross bars, the upgrade has only 6 moving cross bars along the length of a module.

In practice, this requires changing the cross bars and dividing the drive frame into 2 separate, independent drive plates. By increasing the clinker transport efficiency with the same hydraulic flow volume and with fewer strokes, you achieve greater throughput without enlarging the grate area. And since the drive now moves more slowly, the lifetime of wear parts is also extended.

How it’s done
The upgrade is achieved with the majority of your SF cooler untouched, and essentially only requires a change in cross bars and hydraulic system.

Typical steps to the upgrade process include:

1. Replace cross bars with a new design.
3. Divide the drive frame into 2 drive plates (dismantle the connections between drive plates and original cylinder bracket).
4. Replace cylinder brackets and inter-modular straps.
5. Install hydraulic blocks for flow dividers and directional valves (existing hydraulic cylinders reused).
6. Modify hydraulic piping as required.
7. Install new PLC program and supplementary electrical parts.

A project includes a thorough review of all existing SF cooler equipment from both a mechanical and process perspective to ensure a successful upgrade.

Fast installation
Your installed SF cooler can be upgraded within an estimated 2-3 weeks – in other words, during a normal maintenance stop. And, no heavy equipment is needed to carry out the changes. Contact your FLSmidth representative to learn more.

Potential benefits
- Greater throughput/capacity with the same grate area
- More cooler control under heavily loaded conditions
- Fewer cast parts for low, easy, predictable maintenance
- Longer lifetime of wear parts
- Improvements in thermal efficiency and power consumption
- Fast, simple installation
- Attractive investment level