

Ceramic lined coal classifying cyclones



Unique design

It's all by design — Cavex® hydrocyclones feature a unique laminar spiral inlet geometry designed to deliver excellent efficiency and capacity, and longer wear life than conventional involute or tangential feed cyclone designs. Not just a cone modification, Cavex® hydrocyclones utilize an entirely new feed geometry that allows the slurry to follow a natural flow path within the cyclone. This results in a reduction of turbulence which in turn substantially increases hydraulic capacity while minimizing localized wear on the feed chamber and vortex finder.

The unique shape of the Cavex® hydrocyclone has no sharp edges or corners. These design improvements result in lower operating costs and fewer cyclones required for a given duty.

Longer wear life

Turbulence is also the cause of uneven wear in hydrocyclones. The revolutionary design of Cavex® cyclones helps reduce turbulence, resulting in improved wear life.

In conventional cyclones, slurry bursts into the cylinder with no flow control. The resulting turbulence is responsible for gouging the liner walls, leaving major portions of the liner unworn. Cavex® cyclones have been shown to deliver significantly longer wear life than conventional feed head liners in comparable applications.

Cavex® cyclone vs conventional cyclone design



Cavex® cyclone

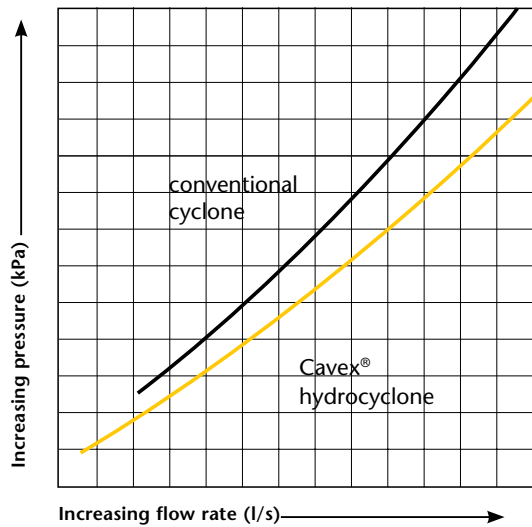
A controlled feed stream blends progressively and smoothly so turbulence is reduced throughout the Cavex® cyclone.



conventional cyclone

Liner failure in conventional cyclones is highly localized while major portions remain unworn.

Increased hydraulic capacity



As a result of less turbulence and a larger blending zone, material flows more freely through a Cavex® cyclone. The Cavex® design requires less energy to pass fluid at comparable inlet velocities than conventional cyclone designs.

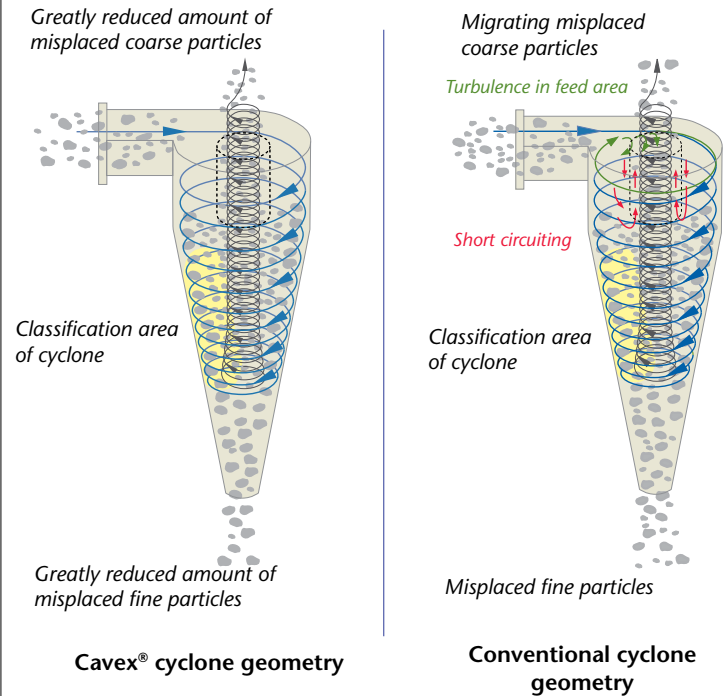
Cavex® hydrocyclone features

- The Cavex® shape — providing excellent separation efficiency, hydraulic capacity and feed chamber wear life
- Available in 15-inch and 20-inch hydrocyclone sizes
- Corrosion resistant polyurethane exterior reinforcement
- Monolithic ceramic internal components
- Wide range of vortex finder and spigot sizes are available

Higher separation efficiency

When turbulence is reduced, sorting efficiency is enhanced. As shown in the illustration, fewer misplaced fines report to the underflow and less grit reports to the overflow.

Classification efficiency: Cavex® cyclone versus conventional cyclone



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