# Cavex® DE hydrocyclone

## Double Efficiency

Technical Specifications

Minerals


### Applications

- Grinding circuits
- Tailing dams
- Desliming

## Cavex® DE hydrocyclone: Double innovation in efficiency

The Cavex® DE hydrocyclone is a two stage classification and separation solution with a well proven track record. It consists of a primary cylindrical hydrocyclone with its underflow stream directly coupled to a secondary cylindrical-conical hydrocyclone without the need of intermediate pumping.

Several attempts have been made by competitors in the past to combine two stage classification into one unit. However, these designs had common problems including high wear in the transfer zone, poor control over the flow split to the secondary cyclone and the need to operate at high pressures.

Weir Minerals has expertly engineered the two stage classification of the Cavex® DE hydrocyclone by developing an innovative adjustable cone. This cone controls the flow split to the secondary hydrocyclone and also solves the wear problems in the transfer zone.

Cavex® DE hydrocyclones with air core boosters, installed at a mine site in Chile

### Available Sizes

- 150 mm
- 250 mm
- 400 mm
- 500 mm
- 650 mm

### Benefits

- Significantly reduces fines bypass to the overflow
- Maximises removal of fines in a grinding circuit
- Reduces operating costs as no pump is required and also reduces wear in the transfer zone
- Helps increase mill circuit capacity
- Excellent classification efficiency in the secondary hydrocyclone

Top: Six units of the Cavex® DE 500/400CVX hydrocyclones cluster at a copper mine in Chile

Bottom: Cavex® DE 500/400CVX10 hydrocyclone for tailings

## Configuration

The Cavex® DE hydrocyclone improves two aspects of classification: by-pass of fines to the underflow and the misplacement of coarse particles in the overflow.

The bottom of the primary cyclone consists of a cone within a cylindrical housing. The gap between this cone and the housing acts like a spigot and controls the underflow stream to the secondary cyclone.

The cone can be moved vertically to adjust this gap and can be used to optimise the flow split to the secondary cyclone.

## Cavex® DE hydrocyclone for grinding circuits

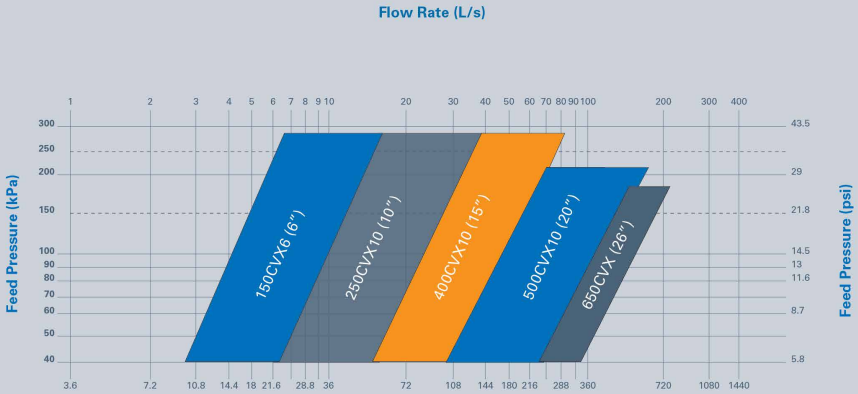
In a milling circuit, the Cavex DE® hydrocyclone's outstanding classification efficiency and reduced fines bypass mean that fewer fine particles will report to the underflow and back to the mill.

This minimises over-grinding, which is particularly critical in flotation circuits where over-grinding reduces mineral recovery.

## Tailing dams

The Cavex® DE hydrocyclone minimises the amount of -200 mesh material in the underflow resulting in safe construction of dam walls. It also produces an underflow with high solids content.

**Cavex® DE Hydrocyclone Capacities (approximate)**

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