

# Cyclonic Ultrafine Classifier

Adjustable ultrafine classifications from specially designed high efficiency cyclones with controllable reverse air flow systems

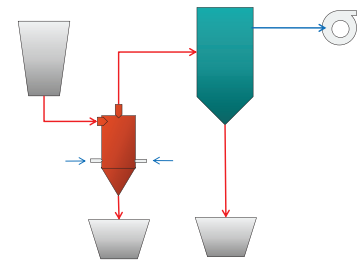
The Metso Cyclonic Ultrafine Classifier is a hybrid air cyclone that combines cyclone and classifier designs to separate very fine particles. This unit includes our unique inlet scroll which is designed with a smooth flow elbow to eliminate currents perpendicular to the main direction of gas flow that is present in standard conventional rectangular entrance cyclones. This creates a smooth and uniform flow in this unit which thus leads to higher efficiencies than conventional cyclones.

In conventional air cyclones, the aim is to remove as much of the particulate from the airstream as possible. However the Cyclonic Ultrafine Classifier is designed to allow the finest particles to be removed in the ascending vortex. This separation is achieved by introducing a reverse airflow into the specially designed disengaging hopper that weakens the descending vortex and creates a stronger entraining force in the ascending vortex that draws the required particles away to the fines collector. Control of the separation point is achieved by varying the percentage of reverse airflow relative to the total air.

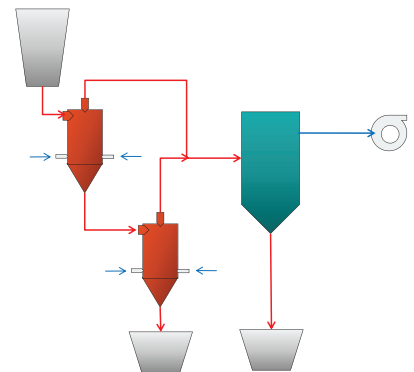
The Cyclonic Ultrafine Classifier is designed to achieve separations in the region of 50µm (#270) to 10µm (#1250) with a top feedsizes of 5mm (#4). Tonnages for single units are in the region of 0.1tph to 30tph. Above this level, 'cluster' systems are available where multiple units are operated in parallel.

The Cyclonic Ultrafine Classifiers are very low maintenance even on highly abrasive feeds. The unit contains no moving parts and adjustments can be made on-line. The range of manufacturing materials available includes abrasion resistant, stainless and mild steels and aluminum. For abrasive applications, ceramic lining is available which give exceptional sliding wear resistance.

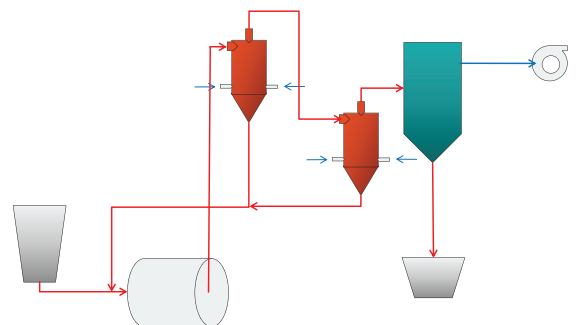
Single Stage Classification



Two Stage Classification



Grinding with Two Stage Classification



For more information, contact your local Metso representative.

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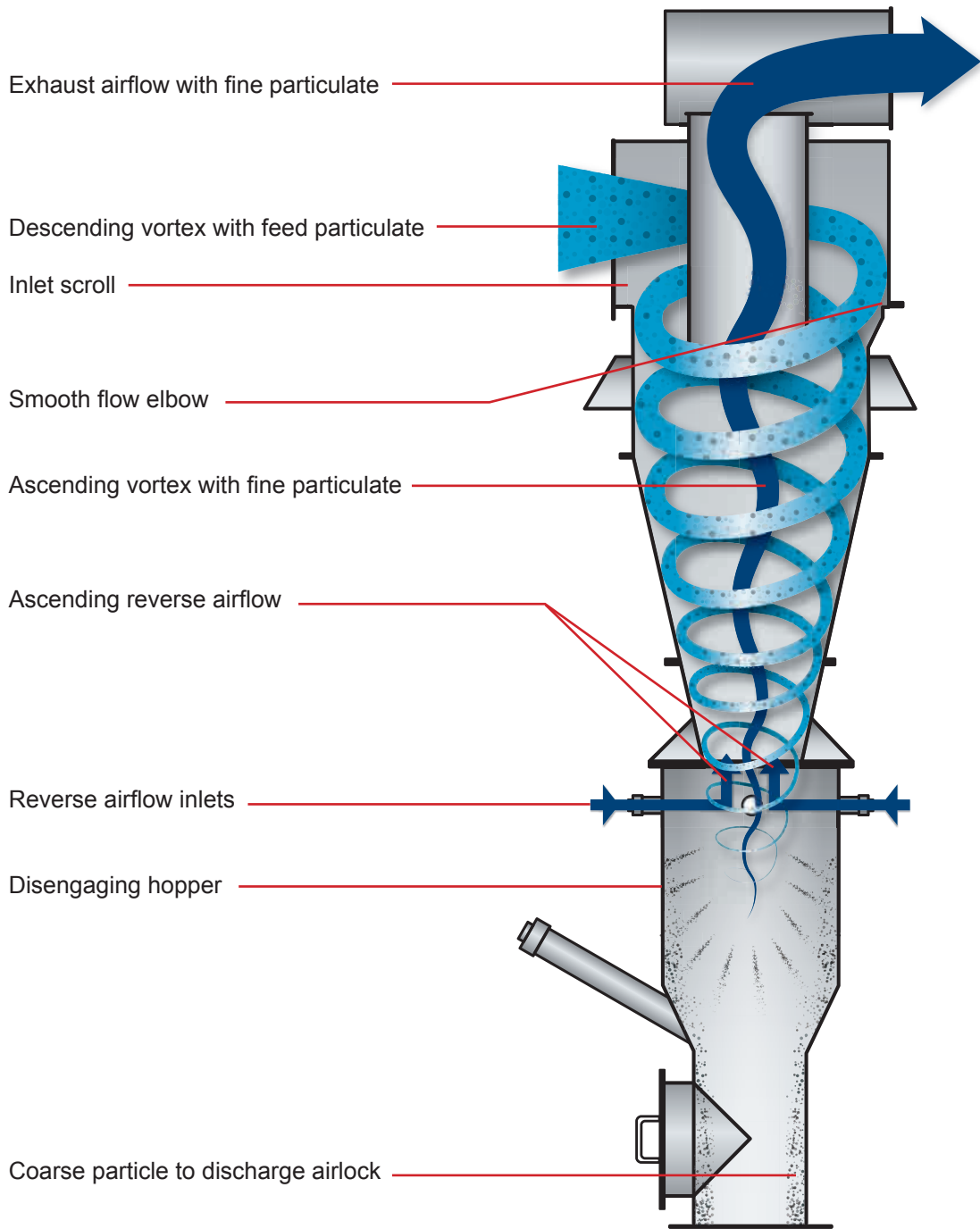
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