

Cyclone Collectors

- Designed to separate product from an air stream
- Highly efficient system
- No moving parts or maintenance
- Wide range of cyclones for dust collection or product receiving



Application

Cyclones are capable of handling very heavy dust loads. Because cyclones are easy to wash down and sanitize, the risk of cross contamination is minimized. Cyclones are more efficient on particulate 50 micron and larger. Used in applications such as:

- Human/pet food where high moisture and high fat content are commonly used in equipment configurations, that include dryers and coolers, coating drums for flavors, centrifuge exhausts and extruder negative lift applications.
- Areas where the potential for fire is high such as wood sanders, direct fired dryers, cabinet and furniture manufacturing, coffee and grain roasters, wood and hay grinding operations.
- Pre-separators for material that may not be suited to collect directly in a baghouse such as paper trim, buffing dust, biomass from land fill products and wood chips.
- Reducing loading into a baghouse so that a high entry inlet may be used to reduce interstitial velocity and protect product from degradation.

Operating Principle

Standard efficiencies have relatively low differential pressure – 3"-7" W.C. Adding expansion chambers increases efficiency. The higher the pressure drop, the more efficient the cyclone.

H Cyclone

H Cyclone was designed to efficiently handle large air volumes economically. It is often used as a primary pre-collector in a dust collection system or as a product receiver. This is the largest cyclone receiver Coperion offers with airflow ranging from 6,000 to 71,000 CFM.

High Efficiency (HE) Cyclone

The Coperion HE Cyclone is most efficient as a pneumatic receiver for material separation of particles up to 20 microns. Pressure loss across collectors within the recommended CFM range is 3.25" W.C. or less. Inlet and outlet flanges can be drilled to mate existing or new equipment. For larger airflows, multiple collector units are available in "In-Line" arrangements of 2, 3 or 4 units. Multiple cyclone units include ducting to a common inlet and a common screw conveyor at cyclone discharge (drive package not included). Airflows available from 2,188 - 50,400 CFM.

Ultra HE Cyclone

Offers very high efficiency under normal operating conditions. Each system is designed and manufactured to meet the unique efficiency needs of your application. The UHE can be configured as a clean-in-place system. Typical applications include, but are not limited to: pharmaceutical, fluid bed dryer exhaust, food and wood. Ultra high efficiency models will have high differential pressure – 10"-15" W.C.

CT Cyclone

Primarily used as a pneumatic receiver and in plastic pellet de-dusting. Multiple inlet sizes accommodate appropriate convey line size. An expansion chamber can be added for higher efficiency. Available in sizes from 13" to 68" and airflows from 120 CFM – 8,000 CFM.

HECR Cyclone

Used to collect product out of an air stream. This collector was designed for use with powders and is available in aluminum, stainless steel and carbon steel.

Fan Powered Cyclone

FPC is a high efficiency centrifugal collector with a deep body and long cone. The FPC is an economical solution for a wide range of dust collection applications, including woodworking, metal grinding, buffing, etc. The FPC can also be used on operations that create sparks.