ENVIROVENT

DUST CYCLONES

Engineered Solutions for Cleaner Industrial Air

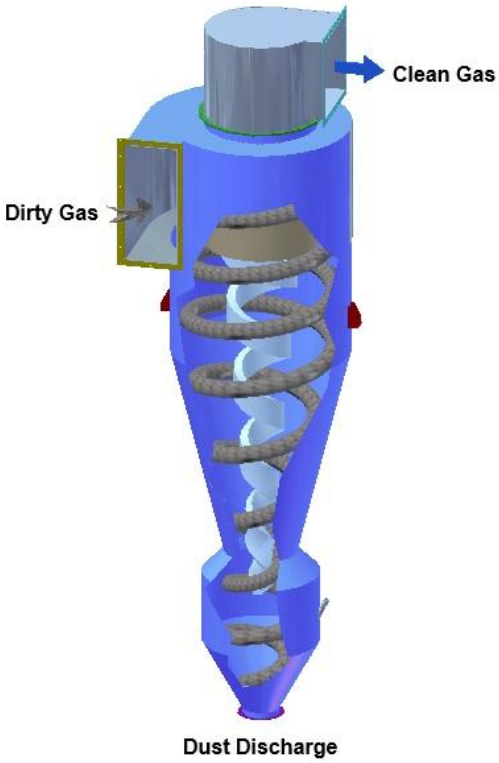
DESIGNERS & SUPPLIERS OF COMPLETE PLANTS FOR VENTILATION, DUST AND FUME EXTRACTION.

ENVIROVENT is a leading provider of engineered air pollution control solutions for the mining, mineral processing, bulk materials handling and industrial sectors. We specialise in the design, manufacture, installation and commissioning of complete ventilation, dust and fume extraction systems, supported by experienced engineers, skilled technicians and comprehensive after-sales service.

Our solutions are developed to address a wide range of industrial air pollution challenges, including dust control, fume extraction and product recovery. Every system is engineered to suit the specific application, delivering reliable performance, efficient operation and long-term value for our customers.

DUST CYCLONES

Envirovent Dust Cyclones are simple, robust dust collectors with no moving parts that efficiently separate particulate matter from gas streams using centrifugal force. They are widely used for product recovery, primary dust collection and coarse particulate separation across a broad range of industrial applications. They are particularly well suited to high-temperature and high-pressure process applications where robust, low-maintenance separation is required.



OPERATING PRINCIPLE

Dust-laden gas enters the cyclone tangentially, creating a high-velocity spiral vortex within the cylindrical body. Centrifugal forces separate the dust particles from the gas stream, causing them to move towards the cyclone wall before falling into the collection hopper.

The cleaned gas exits through the outlet tube, while the collected dust is continuously discharged through a rotary vane feeder, double flap valve or other suitable discharge device.

The discharge system should operate continuously to prevent dust accumulation within the hopper. Hopper level switches may be installed to monitor the collected material and provide an indication of excessive dust build-up, allowing corrective action to be taken before cyclone performance is affected.

MODEL VM700 DUST CYCLONE

The Envirovent VM700 Dust Cyclone is our proven high-efficiency cyclone separator, designed for reliable coarse particulate collection and product recovery. As illustrated in the typical collection efficiency curve below, the VM700 can achieve collection efficiencies exceeding 99% with a system pressure loss of approximately 1.5 kPa, depending on particle size and operating conditions.

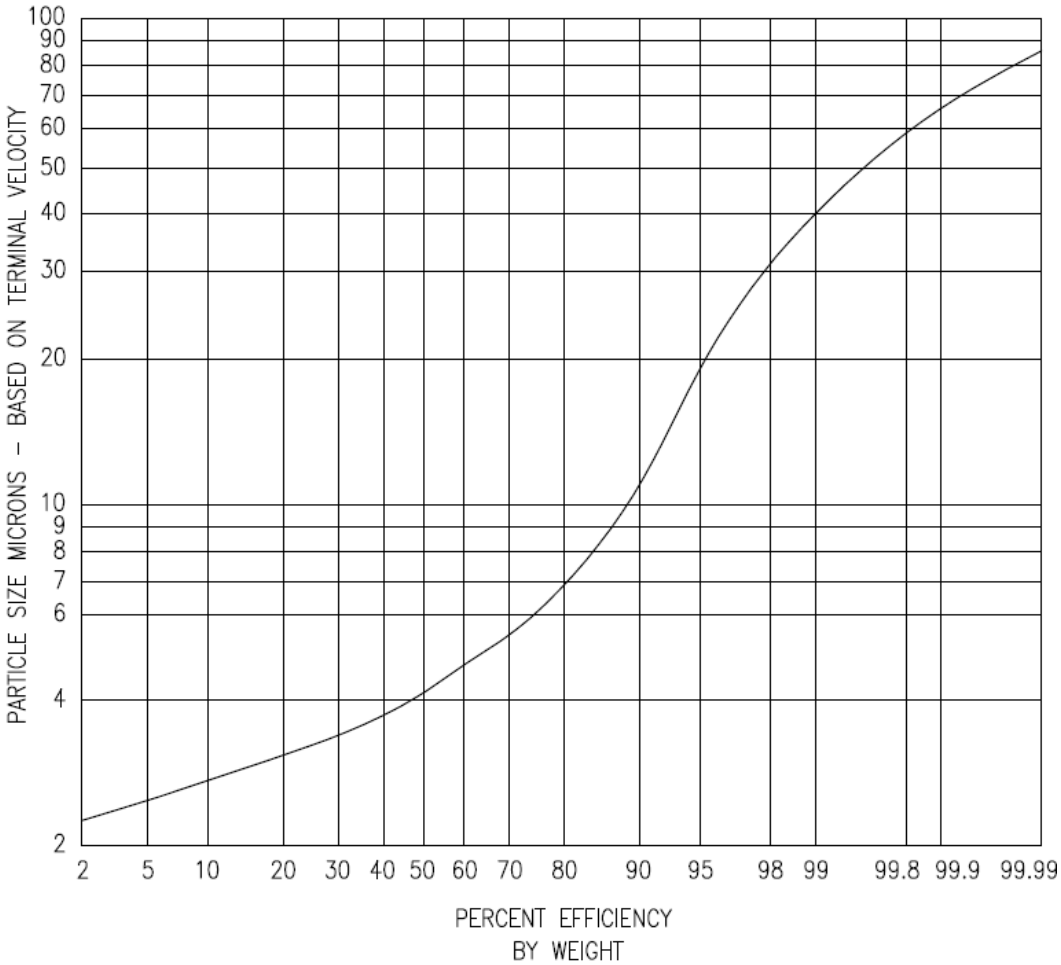
The VM700 is ideally suited as a primary collector for coarse particulate collection and dry product recovery, reducing dust loading on downstream filtration equipment and improving overall system efficiency.

KEY BENEFITS

- ✓ Proven and reliable design
- ✓ No moving parts
- ✓ Low maintenance requirements
- ✓ Low pressure drop
- ✓ High dust loading capacity
- ✓ Suitable for high-temperature applications

TYPICAL CYCLONE COLLECTION EFFICIENCY

Typical collection efficiency varies with particle size, gas velocity and cyclone geometry.



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At Envirovent, we believe every application deserves the right solution—not simply the biggest solution. We work closely with our clients to develop engineered solutions that deliver cleaner industrial air through practical, reliable and cost-effective air pollution control systems.

Contact our engineering team to discuss an air pollution control solution tailored to your application.

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