

Pollution Control Equipments ➡

Shanti Enviro Division was established in 2006 to serve the needs of Industries requiring Air Pollution control System. Our factory is Located in Hyderabad Industrial Zone, Our aim is to meet India's standards for air emission norms. We manufacture Pollution Control Equipments like Dust Collecting Systems Like Pulse jet Bag filter, Reverse Air Bag House, Industrial Fans Cyclone Dust Collectors & Ventilation & Extraction system for cement plants, Industrial Boilers around the world.

Shanti Enviro Division intends to be your single source for all the

pollution control Equipments
like Dust collector, Bag Houses, Industrial

Blowers & Industrial Fans
, Spares etc.,

Shanti Enviro Division, Industrial Blowers / Industrial Fans has been solving Air and Dust Pollution Problems and offers wide range of

Types of Pollution Control Equipments

- Bag Filters
- Pulse Jet bag Filters
- Single Cone Dust Collectors
-

Multi Cone Dust Collectors

- Wet Scrubbers
 - Conveying Systems
-

Bag Filter

Online Pulse jet Bag filter: In an online pulse jet Bag filter, the Dust /Ash from the Industrial Boilers gets trapped in the specially installed high temperature Bags through which flue gas is allowed to pass. Such Dust and Ash is cleaned row by row, even when the dust ladden gas is filtered. This sequence is controlled through a controller. The Dust particulars Pollution Control Equipments deposited at the outer surface of Bag.

The Dust is removed in a pre timed cycle by a pulse jet of high Pressure air is sourced from a air compressor which is sent through a solenoid valve in to common header which inturns blows in to the respective Bags. Due to this process the Dust particulars falls down in to the RAV with the help of Hopper, This ensures filtration after which only clean air moves out from the center of the Bag & escapes out of flue gas outlet, As such we get clean air at the stack.

Mechanical Dust Collectors



The primary operating parameter for evaluating mechanical collector performance is the static pressure drop. Other performance indicators include opacity and solids discharge rates.

Type of mechanical dust collectors

1. **Single Cone Dust Collectors** : They are large Diameter cyclones
2. **Multi Cone Dust Collectors**

1. Single Cone Dust Collectors

Operating Principles: Pollution Control Equipments



Mechanical Collectors are particulate mater control devices that use gravity settling inertia, dry impaction processes to collect pollutants. Mechanical collectors are reasonably tolerant of high dust loadings. Cyclones force incoming gas streams to abruptly change direction in tight, spiral pattern. Large Particulars entering with the gas stream cannot turn with the gas because of their momentum (or inertia). As a result, these particulars "break out" of the gas stream and hit the wall of the cyclone. The particles then fall down the wall and collected in hopper.

The spiral pattern of gas flow in a cyclone is influenced by the method in which the gas is introduced. Typically, the gas enters along the side of the cyclone body wall and turns a number of times to spiral down to the bottom, much like the funnel of a tornado. When the gas reaches the bottom of the cyclone, it reverses direction and flow up the center of the tube, also in a spiral pattern a typical top entry cyclone.

How Efficient are Cyclone Collectors?

The particle collection efficiency of a cyclone depends on a number of factors, including the dimensions (Length and Diameter) or cyclone, the inlet gas velocity, the particle size and the dust concentration in the gas stream. Collection efficiency tends to increase when inlet gas velocity increases and when particles size and dust concentration increases. Also, smaller cyclones are usually more efficient than are larger cyclones. Large-diameter cyclones are most effective in removing relatively large particles from a gas stream.

1. Multi Cyclone Collectors



The Flue gas stream enters the multi cyclone between the clean- and dirty-side tube sheets. Spinner Cast Iron Vanes, mounted near the top of each cyclone tube, cause the gas to rotate as it passes downward.

Multi cyclone Collectors Pollution Control Equipments are more efficient, because they use a number of small- diameter cyclone tubes mounted in a single chamber. Commercial multi cyclone Pollution Control Equipments units have many tubes depending on the Boiler capacity and air Volume. The higher centrifugal forces within the small (3 to 12 in.). Tubes of a multi cyclone increase the collection efficiency for small particles. This increased efficiency is achieved at the expense of a higher static pressure drop (2 to 8 inch Water Column) across the unit.

Mechanical collectors control particulate pollutant emission by using gravity settling, inertia, and dry impaction. Static pressure drop is the most important factor in evaluating these control devices. Capacity and solids discharge rates are other factor helpful when evaluating mechanical collector performance. These are most effective in arresting smaller size particles.