

Dust Extraction Unit/System :

Mechanical separation of particulate matter from the gas stream by centrifugal force is commonly used in mechanical dust collectors. Aero Tech offers medium and high efficiency cyclones, multi clones, Pulse Jet and Reverse Jet and Bag Filter for different applications in Cement, Fertilizer, Pharmaceuticals, Coal Fired Boilers, Steel, Zinc and Coppers smelter and many others where dust extraction and control is required.

Aero Tech Bag Filters :

Aero Tech Pulse jet has a compressed-air jet operating for a fraction of a second causing rapid vibration or ripple of the fabric which dislodges accumulated dust cake. The Pulse-jet design is predominantly used, because it is easier to maintain. Flow rates for Pulse jet design ranges from 0.03 to 0.05 m/s for favorable dust. Felted fabrics are used for these designs because the cleaning mechanism is so vigorous that the pores of woven cloth are opened and excessive leakage may result.

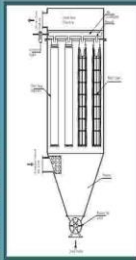
Aero Tech dust collectors are available in filter or bag fabric type removing fine solid contaminants from air by means of cloth filtration. To achieve high collection efficiency different material for filter bags like Polyester, Needle felt, Polypropylene, Nylon and Acrylic etc. are used as per applications. For unloading dust from bags, Mechanical, motorized or reversed air cleaning methods are incorporated. Casing Material MS and SS construction as per application is available.



Advantages of Bag Filter :

- High collection efficiencies even for very small particles.
- Can operate on a wide variety of dust concentration.
- Reasonable pressure drops.

For most bag-houses, the superficial filtering velocity must be kept very low (just a few meter per second) in order to provide for good filtration, and to avoid large pressure drops (and the accompanying high operating costs). Therefore, if we have a large gas flow to treat, we must provide an enormous amount of cloth area. Pulse-jet bag-houses have been introduced to the industry relatively recently (within the last 40 years), and have captured a large share of the bag-house market due to their advantages over traditional shaker or reverse-air methods of cleaning. In the pulse-jet bag-house, the bags are supported on wire cages, and the air is filtered from the outside of the bag to the inside, leaving the dust on the outside. A short pulse of high-pressure (about 100 psi) air is blasted through a venturi nozzle into the center of the bag, causing the fabric to ripple and knock off the dust from the outside. This happens every few minutes control by a microprocessor based sequential timer unit having a adjustable pulse time & pause time.



Aero Tech Cyclone Separators :

Aero Tech Cyclone are used for coarse dust particles cylindrical portion, which forms vortex resulting the separation of dust particles then move downwards into the hopper. Remaining fine dust particles along with the air move upwards separating more dust particles in to hopper. Rotary calva arrangement is provided, along with hopper for dust collection. If desired, Can be supplied in MS, SS construction to meet the requirement of stainless steel Buffing, Wood Sawing, Glass/Ceramic other powder materials, Powder Coating Plant etc.



There are numerous advantages to dust collection

1. Health: Numerous medical studies have deemed dust a major respiratory hazard. Legal obligations.
2. Beyond workers compensation, other legal ramifications exist as well.
3. Fire Hazards: Controlling the dust will reduce the risk of fire.
4. Finishing Quality: An abundance of dust in the shop also can create problems in finishing. That either results in reworking and lost production time or lower product quality.
5. Reduces accidents: Clean atmosphere increases illumination, clean floorings, etc. reduces accidents.

Wet Scrubbers :

Scrubbers are used for removal of particulate matters and toxic gases. These Scrubbers comprises a contact section in combination with a separator section. Dust laden gas is led into the section where it passes through a water screen at the throat at high velocity. This results in a thorough mixing of water droplets and dust particles which agglomerate to form large particles which are then collected from use gas in the separator section. The water supply units and the atomizing system permits recirculating of water with high dust content.

These Scrubbers have successfully been installed for cleaning particulate matter from exhaust gas streams of foundries, crushing plants, electric arc furnaces, basic oxygen furnaces, and urea prilling towers, phosphatic fertilizer plants and other chemical and petrochemical industries etc.



Flue Gas Desulfurization :

System (FGD) Based on wet / dry scrubbing principle and used for removal of SO₂, SPM and other pollutants from flue gases emitted from heavy oil / LDO HSO, coal husk fired D.G Sets and Boilers. A wide range of combination of different type of the scrubbers.

Packed Bed Scrubbers :

Aero Tech Vertical Packed Bed Scrubbers are equipped with a very efficient contact zone, a gas distribution section, a liquid distribution system and a mist eliminator. specially designed gas distribution section ensure even distribution of gases over the entire cross-section of the tower.

The highly efficient liquid distribution system combined with an even gas flow ensure a very intimate gas-liquid contact. The mist section effectively removes the carry over of liquid droplets from the contact zone, packed Bed Scrubbers offer very high collection efficiencies at comparatively lower pressure drops. The effluent liquid can be recycled in this process.

Packed Bed Scrubbers are used to remove corrosive fumes and toxic gases like sulphur dioxide, chlorine hydrochloric, hydrofluoric, hydrogen sulphide, phosphatic acid, cyanides, ammonia, and other organic and inorganic gases etc.

**OUTLET EMISSIONS
ARE EVEN LESS THAN 1PPm.
CAN BE ACHIEVED**