Dust Collection Systems
Designer-Manufacturer-Exporter-Supplier
Filter Concept is a manufacturer of Dust Collection systems for various industries. They improve air quality by collecting dust and other impurities from air or gas. They provide highly customized units to accurately match your application requirements. They offer customized Ducting & Blower solutions along with their dust collectors for specific dust collection needs.

Dust Collection systems are further classified as:
- Manual Shaker Mechanism Dust Collector
- Motorized Shaker Mechanism Dust Collector
- Pulse Jet Dust Collector
- Cartridge Dust Collector

**Manual Shaker Mechanism Dust Collector**

**Construction**

Manual dust collectors consist of Filter Housing, baffle plate, Filter Bags, Manual shaker mechanism, and dust collection bin.

**Operation**

Contaminated air enters the Dust collector through the inlet. Due to the baffle plate, heavy particles are trapped and do not damage the filter bags. This will greatly reduce the load on filter bags. Further, contaminated air with lighter particles will pass through the Filter Bags chamber where filtration takes place from inside to outside. Particles get deposited inside filter bags and clean air passes through the outlet connection. Particles deposited inside the filter bag shall fall down during shaking operation performed with manual operated mechanism.
Motorized Shaker Mechanism Dust Collector

Construction
Dust Collection Unit, Baffle Plate, FILTER Bags, Motorized Shaker mechanism, Drain Chamber, Differential Pressure Gauge, Leaver/ Locator

Operation:
Contaminated air enters into Dust collector through inlet. Due to baffle plate heavy particles coming with contaminated air shall fall down and shall not damage the filter Bags. This will greatly reduce load on filter bags. Further contaminated air with lighter particles shall pass through Filter Bags chamber. Where filtration takes place from inside to outside. Particles get deposited inside of filter bags and clean air pass through outlet connection. Particles deposited inside of filter bag shall fall down during shaking operation performed with motor operated mechanism.

Pulse Jet/Cartridge Dust Collector

Construction
Pulse jet/Cartridge type dust collector is consist of Filter Housing, baffle plate, Filter Bags/Cartridge, solenoid valve, sequential timer, compressed air header, drain valve, safety valve, differential pressure gauge & rotary valve

Operation:
The dirty or contaminated air enters the dust collector through the inlet. Due to baffle plate heavy particles coming with contaminated air shall fall down and will not damage the filter Bags/Cartridges. This will greatly reduce load on filter bags/cartridges. Further contaminated air with lighter particles shall pass through Filter Bags chamber. Where filtration takes place from outside to inside.

Particles which deposited on the exterior surface while allowing clean air to pass through the outlet. As the collector operates, the collected dust begins to form dust cake, which eventually diminishes the porosity of the filter Bags/Cartridges.

To maintain a moderate pressure drop, the cleaning cycle is employed to provide continuous cleaning of the filter Bags/Cartridges. The cleaning system consists of a Sequential time controller, which actuates Solenoid Valve and the Compressed Air Header. These Compressed Air Header momentary burst or pulse of high pressure compressed air through the blow pipe into the filter tube. This Pulse of air creates reverse flow of air, which expands the filter cartridges to remove the collector dust. The cleaning procedure occurs on a row-by-row basis therefore only a fraction of total filter air is interrupted for cleaning allowing continuous ventilation. The dust cake when pulsed from the filter bag/Cartridges falls directly into the bucket at the bottom where it is removed.

Features & Benefits
- Easy to operate and Handle
- Easy to install & remove
- Low consumption of compressed air (for cleaning)
- High Filtering efficiency even for the finest dusts
- Filter media selection as per application
- Accessories as per client’s request

Applications
- Pharmaceuticals
- Cement
- Powder & Coating
- Metals & Minerals
- Chemicals
- Steel & Power

www.dustcollectionsystems.net
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