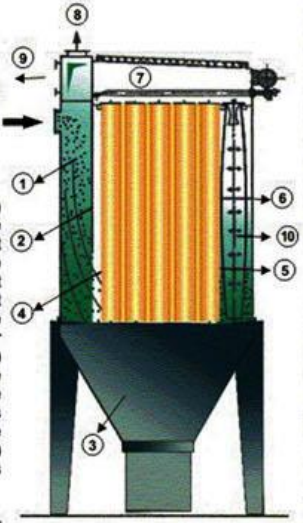
PULSE JET BAG FILTER

JET BAG FILTER

The Jet Bag Filter has so many advantages that demand is steadily growing.

Features :

- Heavier load of the filter
- Longer useful life of the filter sleeves
- Energy saving through return of filtered air
- Compact form, therefore small area required and reduced filter height.



Operation :

The dust - laden gases enter the pre-separation plenum (1) where they meet the low baffle plate (2) The baffle wall protects the sleeves against the direct flow. The air velocity is reduced in the pre -separation plenum. The coarse dust fraction leaves the air flow and falls into the dust collection hopper (3) The gas laden with the fine remaining dust enters the filter plenum (4) after deflection by the baffle plate. The sleeves (6) fitted over supports (5) receive the flow in the outside. The fine dust is deposited on the outside of the filter sleeves. The air penetrates through the filter fabric into the inside of the sleeves and rises into the clean air plenum (7) From here it can either be led out of the doors (8) or returned to the workshop (9).

The control of the cleaning process for the filter sleeves depends either on the differential pressure or an infinitely variable electronic timer. The dust particles clinging to the filter sleeves are removed through short, sharp compressed air impacts. Compressed air at 4-6 bar shoots out of electronically activated diaphragm valves into the corresponding opened distribution line and from there into the jet nozzles. The compressed air reaches a speed close to that of sound in the jet nozzles. The volume of the air sucked in is much larger than that of the compressed air. The cleaning stream causes a strong counterpressure in the sleeve. The sleeve, which until then was pressed against its support, is suddenly extended to its full size (10). The particles of dust are blown off. Small dust particles, which had penetrated the filter fabric, are loosened by the short, but strong cleaning flow, and pressed back to the dust-laden side.

When the diaphragm valves have closed the cleaned filter sleeves are once again ready for the normal filter process. All rows of sleeves are cleaned in a fixed sequence. The cleaning time is so short that practically always the whole filter surface of the filter is available. Moreover the necessary compressed air quantity in relation to the flow volume is the same up-and down-line of the filter.

The compressed air impacts are controlled by an electronic timer. Impact and regularity can be continuously set with the electronic timer, depending on the type and amount of dust.

PILANI ENVIROTECH PVT.LTD.
MFG. OF POLLUTION CONTROL EQUIPMENTS
121, Hammer Smith Indl. Area, Off Sitladevi Temple Road, Mahim (W.), Mumbai - 400 016.
Tel.: 022-2444 8321 Fax : 022-2444 8321
E-mail : pilanienviro@hotmail.com

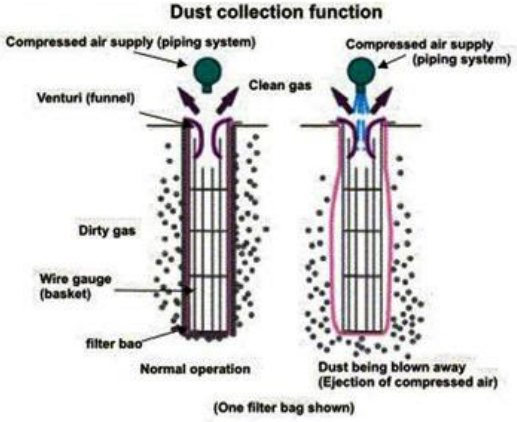
PILANI ENVIROTECH PVT. LTD.

MFG. OF POLLUTION CONTROL EQUIPMENTS

PRODUCT RANGE

- PULSE JET BAG FILTER
- VENTURI SCRUBBER
- CYCLONIC SCRUBBER
- PACKED TOWER
- TRAY SCRUBBER
- CYCLONE

PULSE JET BAG FILTER



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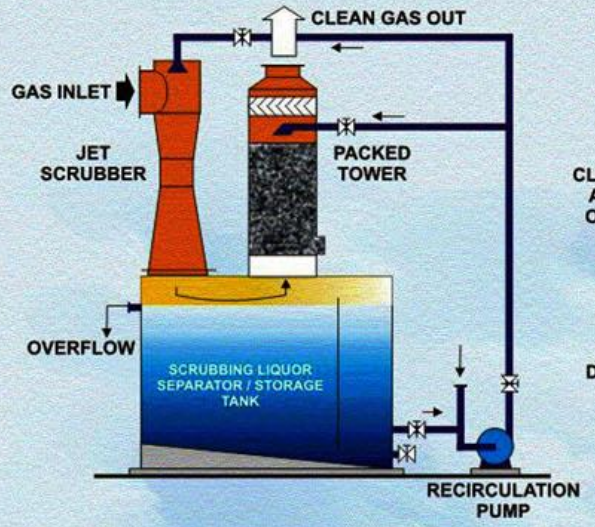
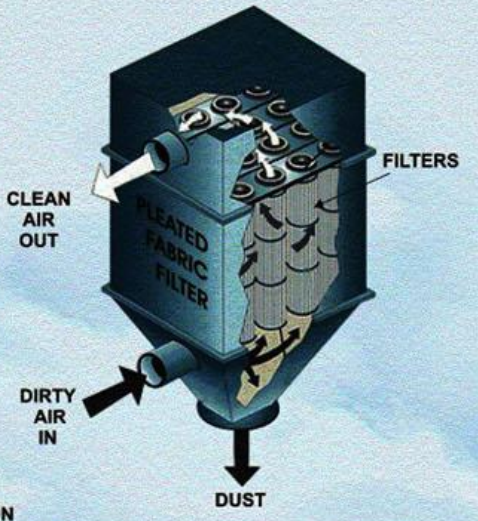


JET CUM PACKED BED SCRUBBER



DUST COLLECTOR

TURBULENT CONTACT TRAY SCRUBBER

For gas Absorption and dust removal

Tray scrubber is versatile, low pressure-drop scrubber, suitable for a broad range of applications where extremely efficient capture of dust above the submicron range is required. This unit is also suitable for the absorption of gases and vapours such as SO2, HF, HCl, NH3 and Cl2.

This scrubber can be fitted with either perforated turbulent contact tray or a target type turbulent contact tray or a combination of both depending upon application. The perforated turbulent contact tray contains a multitude of orifices. The target type is similar but has targets located directly over each orifice. The targets improve the dust collection efficiency of the unit since the dust impinges directly on the sub merged target and is washed away by the flowing liquor.

The scrubber can also incorporate other types of trays (e.g. venturi trays) and one or more stages depending upon the application. The unit can handle recycle streams containing up to 2% solids.

In operation, dirty gas enters at the bottom of the unit and passes up through orifices in the turbulent contact tray. Liquor enters at the top of contact stage and flows across the tray. The gas aspirates the liquor and capture of dust and intimate gas/ liquor mixing occurs. The gas then passes out of the unit through the mist eliminator, where complete removal of the entrained liquor droplets takes place.

Turbulent contact tray scrubbers can be constructed from carbon steel, stainless, specialty alloys and plastics. Units are available with capacities ranging from 600-300,000 cfm.
The pressure drop range is normally 3-15 in WC (76-381 mm WC)

Typical Applications

- Absorption of SO2, NH3, HCl, HF, H2S and Cl2.
- DG-Set exhaust.
- Exhaust gas cleaning in municipal sewage sludge incinerators.
- Gas sub cooling.
- Boiler flue gas coal/wood/Bagasse.
- Tablet coating.

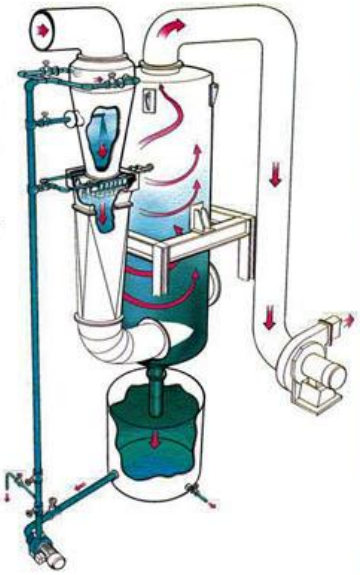
VENTRI SCRUBBERS

For High Efficiency Dust & Fume Control

This unit is particularly useful for scrubbing fine submicronic particulate matter. It includes wet-dry junctions and a variable throat operation can be manual or automatic as required. The unit can handle recycle streams of thick and viscous slurries containing up to 15% solids.

In operation, liquor is introduced via a multiple distributor pipe system. These special pipes are arranged to provide complete coverage of the throat and washing of the walls by the liquor. The dirty gas and liquor converge at the throat entrance where extreme agitation and turbulence atomizes the liquor and mixes it intimately with the gas. The dust/fume particles are captured by direct impingement and the droplets are further agglomerated and removed in the mist eliminator section.

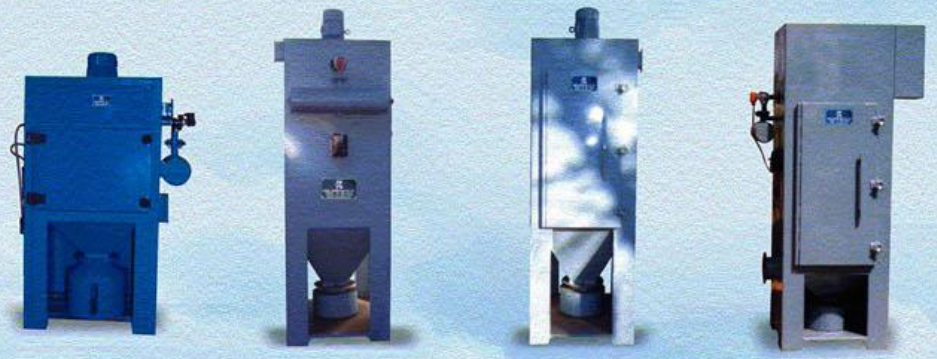
High energy venturi scrubbers can be constructed from carbon steel, stainless steel, specialty alloys or plastics. Units are available with capacities ranging from 600-200,000 cfm (17-5664 m3/min). The pressure drop range is 6-100 in. WC (152-2540mm WC).



Typical Applications

- Exhaust gas cleaning in : Metallurgical plant basic oxygen, metal melting, and sintering furnaces, cupolas, pelletizing and kilns.
- Municipal incinerators
- Pulp and paper mill lime sludge kilns, and black liquor recovery boilers.
- Chemical process plants.
- Non-ferrous metallurgical plants.
- Electric arc furnace, Induction furnace.
- Calciners, Roasters, Dryers
- Boiler flue gas
- Foundries.
- Crushing, Grinding, Screening.

OUR PRODUCTS



DUST COLLECTOR

DUST COLLECTOR

FILTER CLEANING SYSTEM

SCRUBBERS