WE PROVIDE CLEAR SOLUTIONS

EVERFIBRE BED MIST ELIMINATOR

EVERFIBRE BED MIST ELIMINATORS ARE USED TO PROVIDE THE HIGHEST POSSIBLE COLLECTION EFFICIENCY FOR PROCESS OR PROCESS CONDITIONS REQUIRING STRINGENT PERFORMANCE

EVERFIBRE BED MIST ELIMINATOR

INTRODUCTION

FIBRE BED MIST ELIMINATORS are used to provide the highest possible collection efficiency for process conditions requiring stringent performance levels.

The **EVERFIBRE BED MIST ELIMINATOR** is manufactured under license from Begg Cousland & Co. Ltd., U.K. These mist eliminators are the cumulative result of detailed investigation of mist characteristic, laboratory studies of fibre and surface treatments. Both Begg Cousland and Evergreen have over 25 years experience in the design, manufacturing and installation of Candle Filter Elements.

CONSTRUCTION

The unit consists of fibres packed between a pair of concentric screens. Both screens are made of suitable corrosion resistant materials. Type, orientation, fibre bed depth and packing density are tailored to the needs of specific applications.

PRINCIPLE

Coarse mist particles are removed by impaction and direct interception. Finer particles are whisked away through Brownian diffusion. These particles coalesce into a liquid film which is forced by gas flow downstream of the fibre bed. The liquid then flows by gravity into the drain.

APPLICATIONS

The **EVERFIBRE** Bed Mist Eliminator is designed to rid air/gases of emissions which could harm human and plant life, affect downstream equipment and cause plume opacity. The world is concerned about an endangered environment and for industries conscious about an endangered environment and for industries conscious of the perils of pollution, the **EVERFIBRE** Bed Mist Eliminator is a viable solution to a vexing problem.

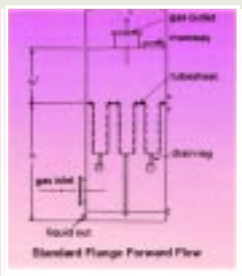
The **EVERFIBRE** Bed Mist Eliminator finds wide application in the field of sulphuric acid, sulphonation plants, chlorine plants, nitric acid and ammonium nitrate plants and compressed gas applications.

Today, hundreds of these mist eliminators are helping to clear the air in process plants through out the world. Plant managers report that these devices are working satisfactorily and our experienced technical cell has successfully carried out a number of field trials at customer locations.

INSTALLATION CONFIGURATIONS

Two possible installation configurations are available.

Standard flange forward flow **(SFFF)** in which the element hangs from a tubesheet. In this option, the mist laden gases flow from outside the element and clean gas exists through the inner center core. This installation features ease of installation and maintenance. The High Efficiency elements are

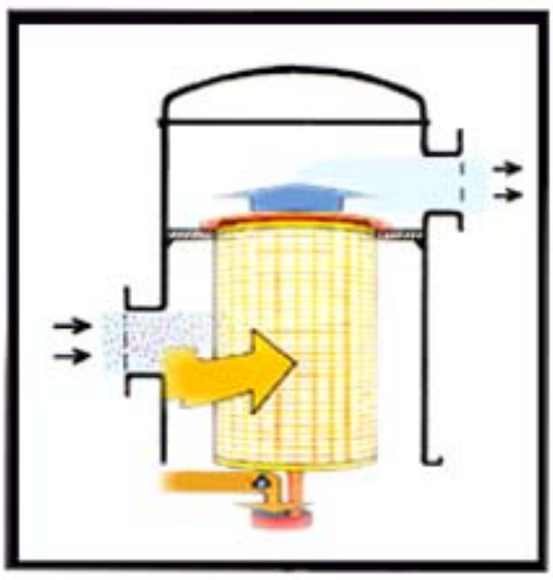


Reverse-flow upside down **(RFUSD)** in which the mist eliminator is placed vertically on a tubesheet. In this option, the mist laden gases flow from inside the central core of the element and the clean gas exists through the outside. This installation will result in reduction of housing vessel size. Both the HE HFseries mist eliminators are available in this con-figuration.

However due to exit velocity reentrainment consideration The High Throughput elements are recommended only in this configuration.

The Following Table Provides Performance Parameters Of Typical Fibre Materials and Specifications

TGW 15 COLLECTION MECHANISMS SELECTION CRITERIA DESIGN CRITERIA	GLASS FIBRE BROWNIAN DIFFUSION HIGHEST EFFICIENCY MIST REMOVAL 100% REMOVAL > MICRON 98% REMOVAL < 1 MICRON	SMALLEST FIBRE DIA. POSSIBLE INTERCEPTION INVISIBLE STACK EMISSION < 20MG/NM3 150 - 250 MM H20 PRESSURE LOSS	HANGING OR STANDING TYPE IMPACTION CORROSION PROTECTION LESS THAN 0.2 M/SEC BED VELOCITY
B 14 COLLECTION MECHANISMS SELECTION CRITERIA DESIGN CRITERIA	GLASS FIBRE BROWNIAN DIFFUSION VERY HIGH EFFICIENCY MIST REMOVAL 100% REMOVAL > 3 MICRONS 98% REMOVAL < 3 MICRONS	MEDIUM FIBRE DIAMETER INTERCEPTION LIMITED SPACE 150 - 250 MM H20 PRESSURE LOSS	HANGING OR STANDING TYPE IMPACTION LIMITED PRESSURE AVAILABLE 0.15 - 0.25 M/SEC BED VELOCITY
B 12 COLLECTION MECHANISMS SELECTION CRITERIA DESIGN CRITERIA	GLASS FIBRE LIMITED BROWNIAN DIFFUSION HIGH EFFICIENCY MIST REMOVAL 100% REMOVAL > 3 MICRONS 95% REMOVAL 1 < 3 MICRONS 80% REMOVAL 0.5 - 1 MICRON	MEDIUM FIBRE DIAMETER INTERCEPTION LIMITED SPACE 120 - 250 MM H20 PRESSURE LOSS	STANDING TYPE IMPACTION LITTLE FINE MIST CONTENT 0.25 - 0.6 M/SEC BED VELOCITY
G 25 COLLECTION MECHANISMS SELECTION CRITERIA PER FILTER DESIGN CRITERIA	GLASS FIBRE COALESCENCE HIGH GAS VOLUME THROUGHPUT 100% REMOVAL > 3 MICRONS 95% REMOVAL 1 < 3 MICRON	COARSE FIBRE DIAMETER INTERCEPTION LIMITED SPACE 100 - 200 MM H20 PRESSURE LOSS	STANDING TYPE IMPACTION MAINLY DROPLET REMOVAL 0.8 - 2.0 M/SEC BED VELOCITY
PP 12 COLLECTION MECHANISMS SELECTION CRITERIA DESIGN CRITERIA	POLYPROPYLENE FIBRE BROWNIAN DIFFUSION HIGH EFFICIENTY MIST REMOVAL 100% REMOVAL > 3 MICRONS 95% REMOVAL 1 < 3 MICRONS 90% REMOVAL 0.5 - 1 MICRON	SMALL FIBRE DIAMETER INTERCEPTION ALKALINE PROCESS CONDITIONS 120 - 250 MM H20 PRESSURE LOSS	STANDING TYPE IMPACTION FLUORINE PRESENCE < 0.2 M/SEC BED VELOCITY

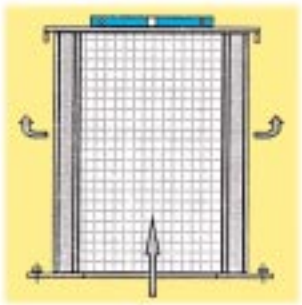


SALIENT FEATURES

- Mist loading fluctuation (within design values) do not interfere with particle removal efficiencies. Stable operation is ensured at high turndown ratios.
- Designs are computerised for an optimum sized unit selection based on separation efficiency and allowable pressure drop with an aim to maintain minimum installed and operating costs.
- Efficiency of unit is guaranteed to conform to mist emission standards set by pollution boards in India (MINAS) as well as those stipulated by Environmental Protection Agency (EPA), U.S.A.

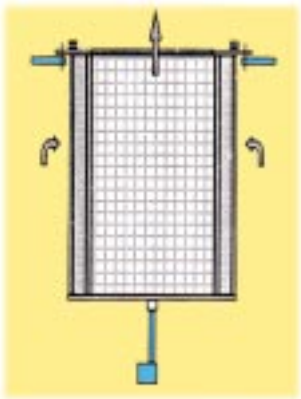
INSTALLATION CONFIGURATIONS

'F' TYPE SERIES GAS FLOW FROM BELOW



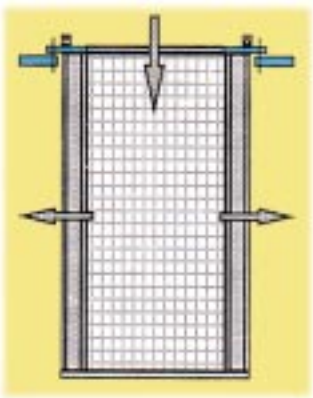
- SUITABLE FOR ALL FIBRE TYPES - TGW15,B12, B14, G25, PP12.
- SUITABLE FOR ANY LENGTH. EVEN WITH JOINED SECTIONS.
- AVAILABLE IN OUTER DIAMETERS OF 800,607, 508, 456, 406, 354, 305, 254, 203 & 173MM
- AVAILABLE WITH TYPE 'F2' BOLTING OUTSIDE FIBRE (SHOWN HERE), TYPE 'F1' BOLTING INSIDE FIBRE, AND TYPE 'F3' BOLTING INTO THE FIBRE.
- SUITABLE FOR SUPPLY AS 'STAR' TYPE FOR HIGH LIQUID LOADS.

'HT' TYPE SERIES GAS FLOW FROM BELOW



- ONLY SUITABLE FOR LOW VELOCITY FIBRE TYPES -TGW15,B14 & PP12
- ONLY SUITABLE FOR LENGTHS UP TO 4575MM.
- AVAILABLE IN OUTER DIAMETERS OF 800, 607, 508, 456, 406, 354, 305, 254, 203 & 173MM
- AVAILABLE WITH TYPE 'TH1' DRAINTUBE & SEAL POT (SHOWN HERE), WITH TYPE 'HT3' DRAINTUBE ONLY.
- SUITABLE FOR SUPPLY AS 'STAR' TYPE FOR HIGH LIQUID LOADS.

'HT' TYPE SERIES GAS FLOW FROM ABOVE (E.G. OIL COLLECTION)



- ONLY SUITABLE FOR MOST FIBRE TYPES- TGHW15, B12, B14 & PP12
- ONLY SUITABLE FOR LENGTHS UP TO3660MM.
- AVAILABLE IN OUTER DIAMETERS OF 800, 607, 508, 456, 406, 354, 305, 254, 203 & 173MM
- AVAILABLE AS TYPE 'HT2' WITHOUT DRAIN.
- SUITABLE FOR SUPPLY AS 'STAR' TYPE FOR HIGH LIQUID LOADS.

EVERGREEN

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