Sarala

SUBURBAN INDUSTRIAL WORKS PVT. LTD.

SARALA CASED BAG FILTER

ABOUT US

SUBURBAN INDUSTRIAL WORKS PVT. LTD. was established in the year 1981 for manufacture of Centrifugal Fans, Axial Flow Fans, and other Ventilation and Pollution Control Equipment with complete infrastructure setup with design, manpower, plant, and machinery. Personnel with decades of experience in respective fields, along with technically and qualified support staffs, soon changed the complexion of the organization. Mingled with strong product quality, and a well-spread marketing network, within a short span of time, the Company emerged as a force to be reckoned with in the HVAC, processing and other core sector industries.

COMPANY PHILOSOPHY

With our established product credibility throughout the country, our mission is to keep pace with continuous up-gradation of technology as per demands of different segments of the industry, and simultaneously excel with the product quality. In support of our mission we are already an ISO 9001:2015 certified organization.

QUALITY MANAGEMENT

The Company has adopted very strict quality measures to ensure uniform acceptable quality in view of the requirement of products, and their applications, are met at all times. Right from inputs to finished products, the raw materials are tested from reputed and government approved test house before processing of the finished products.

During manufacture all products are subject to DP, radiographic, ultrasonic, x-ray tests, as and when required. All rotor portions are subject to Dynamic Balancing before assembly as per ISO: 1940.
Any further tuning required is carried out by our additional facility of Portable Dynamic Balancing Machine. To ensure meeting guaranteed performance of products, we have testing laboratory/ test beds for testing of fans as per IS 4894, BS, and AMCA standards, supported with varied range of measuring instruments with updated

SARALA AUTOMATIC REVERSE JET FILTER

SARALA Automatic Reverse Jet Filters are designed to filter heavy dust burdens continuously at a high filtration velocity and constant level of resistance with a collection efficiency often exceeding 99.99%. Air volume capacities range from 2500m^3/HR to more than 360,000m^3/HR.

Flat pad shaped filter elements contained in three basic module sizes of 10m^2 (Series 10), 15m^2 (Series 15) and 18m^2 (Series 18) make the SARALA Bag Filters exceptionally compact. Modules are built up in banks and tiers to match precisely the filter capacity required and to the most suitable configuration for the space available - a flexibility denied to more conventional, bulkier designs of dust collector.

FEATURES OF SARALA AUTOMATIC REVERSE JET FILTERS

➤ DOWNWARD FLOW

The filter has a top rear inlet to achieve downward fiow and more effective dust deposition

➤ CLEAN SIDE MAINTENANCE

Full width access from the clean side makes routine inspections and changing of filter pads easier and safer

➤ CONVENIENT ELEMENT SIZE

Filter elements are relatively light and can be handled by one man.

➤ MINIMUM HEADROOM

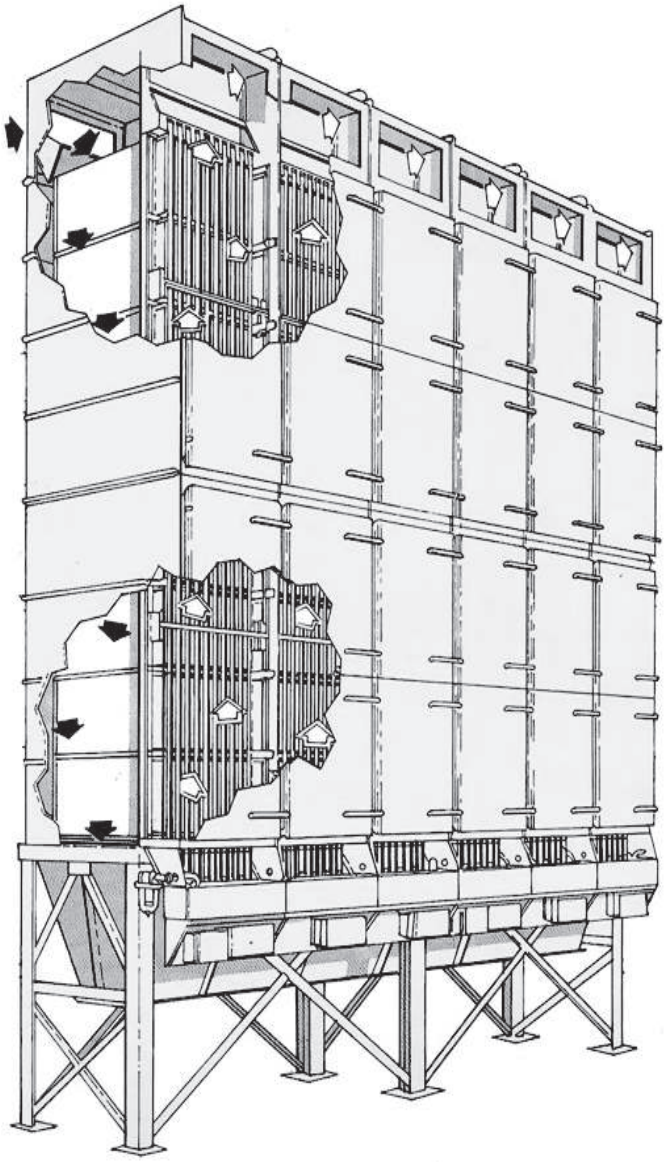
Front withdrawal of filter elements means no extra headroom required for filter bag removal

➤ EASY ACCESS TO CONTROLS

The controls and filter cleaning assembly are fitted below the clean air chamber to ensure easy access

➤ EXPLOSION PROTECTION

Tested and proven top or rear explosion panels for filters handling explosive dusts



RANGE

Between 20 m^2 and 2400 m^2 fabric area there is a range of 82 sizes of SARALA Cased Bag Filters and 165 different filter configurations. Multiplying banks when multiplied by 10, 15 or 18 gives the total fabric area.

EXAMPLE
SBF 1/2/10 = 1 bank x 2 tiers (2 modules) x 10 M2 = 20 m^2 total fabric area.

APPLICATIONS

SARALA Automatic Reverse Jet Filters are most suitable for continuous process applications involving heavy-duty product recovery, or the collecting of heavy concentrations of nuisance dust, where high collection efficiencies are required. They are applied in almost every industry, which handles and processes powdered and granulated materials, or uses machinery and equipment generating large quantities of dust.

CONSTRUCTION

SARALA Automatic Reverse Jet Filters comprises an outer case enclosing the required number of Series 10 or Series 15, or Series 18 modules.

Each filter module comprises ten flat rectangular pad-shaped filter elements (1.0 m long - Series 10; 1.5 m long - Series 15; 1.8 m Long - Series 18) inserted through parallel recessed slots in a seal frame that separates the dust side from clean side of the filter. Each filter element consists of a needle - felt pad supported on a rigid open mesh or insert which has an integral header and sealing flange welded to its mouth. A continuous sealing ring of the same material is stitched round the open end of each pad. When the filter is assembled, clamps compress the sealing ring between the flange and seal frame slots to give an exceptionally tight and effective seal. The clamps also ensure that the elements are properly aligned.

A multi-hole jet tube is located along the mouth of each insert header and is connected via a diaphragm valve to a compressed air manifold. The valves are linked to solenoid pilot valves, which are governed by an electronic timer.

EXPLOSION RELIEF

The SARALA Bag Filter explosion relief panel consists of a special antistatic membrane, designated 'Membrex' and specifically developed by us for explosion relief, together with a supporting mesh and frame which are fitted into the rear or on the top of the dirty side of each filter bank. The casing of the filter fitted with explosion relief panels is also specially stiffened for extra safety

OPERATION

The dust-laden air enters SARALA Automatic Reverse Jet Filters through an inlet near the top of each bank and is directed downwards onto the filter elements, where the dust is retained on the outer surface of the fabric. The air passes through the fabric and out of the insert header. It is then discharged through an outlet above the clean side of each bank.

To maintain continuous operation the filter fabric must be regularly cleaned. This is achieved by reverse jet cleaning. An electronic timer activates a series of pilot valves in sequence at predetermined intervals on a continuous cycle. The pilot valves in turn open a series of diaphragm valves. A short burst of compressed air is released and injected by the jet tube through the insert header into the filter pad. This together with the large amount of ambient air induced by the force of the jet causes a momentary reversal of the airflow through the filter element. The effect is a brief controlled inflation of the pad so that the accumulated dust or dust cake is dislodged from its surface. Simultaneously the reversed airflow through the fabric assists dust removal. The collected dust then falls into the hopper beneath.

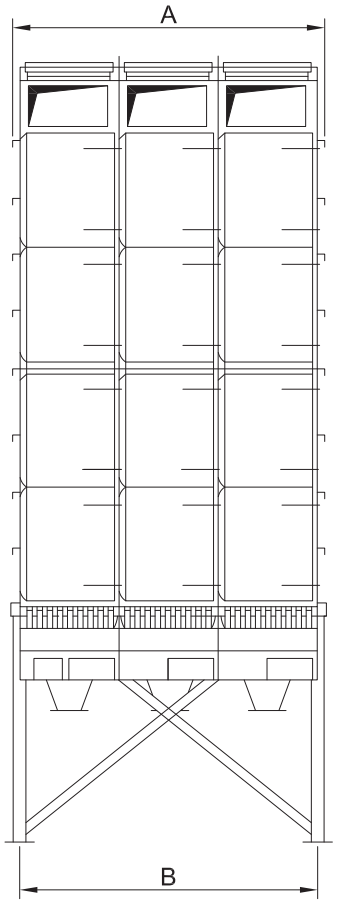
FILTER FABRIC

Many applications are best served by a standard polyster felt such as Terylene or Dacron, although a wide range of other felts is available, including polyacrylonitrile (Dralon), polyamide (Nylon), poly-propylene, and for temperatures up to 200˚C aromatic polyamide (Nomex). Antistatic felts containing carbon impregnated fibres or stainless steel can also be supplied. Most felts are singed on one side to encourage dust cake release. For certain applications felts can be chemically treated to make them oil - or water - repellent and mechanically treated to increase efficency and / or, aid dust cake release, particularly for 'sticky' dusts.

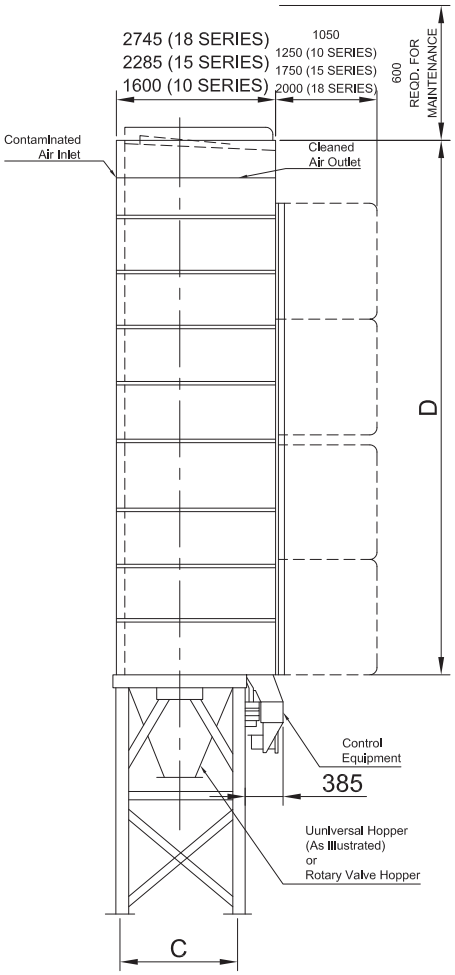
CONTROLLERS

A 10 valves controller assembly is fitted to all SALARA cased Bag Filters - up to four banks being served by any one controller functioning as a dual timer, it activates the solenoid valves in the required sequence and governs the duration of, interval between, the pulses of compressed air. Pulse duration is set at 60 millisec for Series 10 and 110 millisec for Series 15 filters & 18 filters. The interval on all is adjustable between 10 and 300 seconds to suit the application.

SARALA BAG FILTER 10, 15 & 18



FRONT ELEVATION



SIDE ELEVATION

C - FOR 15 SERIES - 1830
C - FOR 18 SERIES - 2200

Designation	No. of Banks (a)	No. of Tiers (b)	No. of cells (axb)	Dimensions (appx.)			
				A	B		D
SBF 1/2/10	1	2	2	1100	1014	1131	1610
SBF 1/3/10	1	3	3	1100	1014	1131	2135
SBF 1/4/10	1	4	4	1100	1014	1131	2660
SBF 1/6/10	1	6	6	1100	1014	1131	4120
SBF 2/2/10	2	2	4	2105	2029	1141	1610
SBF 2/3/10	2	3	6	2105	2029	1141	2135
SBF 2/4/10	2	4	8	2105	2029	1141	2660
SBF 2/6/10	2	6	12	2105	2029	1141	4120
SBF 2/8/10	2	8	16	2105	2029	1141	5170
SBF 3/2/10	3	2	6	3110	3058	1141	1610
SBF 3/3/10	3	3	9	3110	3058	1141	2135
SBF 3/4/10	3	4	12	3110	3058	1141	2660
SBF 3/6/10	3	6	18	3110	3058	1141	4120
SBF 3/8/10	3	8	24	3110	3058	1141	5170

Large filters are assembled on site from suitable combinations of the above sizes
There is no limit to the number of banks which can be joined together – e.g., SBF 20/8/10 (160 cells 1600 m^2 , fabric area), or – e.g., SBF 20/8/15 (160 cells, 2400 m^2 , fabric area).

Designation	No. of Banks (a)	No. of Tiers (b)	No. of cells (axb)	Dimensions (appx.)		
				A	B	D
SBF 1/2/15 & 18	1	2	2	1100	1080	1620
SBF 1/3/15 & 18	1	3	3	1100	1080	2145
SBF 1/4/15 & 18	1	4	4	1100	1080	2980
SBF 1/5/15 & 18	1	5	5	1100	1080	3630
SBF 1/6/15 & 18	1	6	6	1100	1080	4375
SBF 1/7/15 & 18	1	7	7	1100	1080	4900
SBF 1/8/15 & 18	1	8	8	1100	1080	5425
SBF 2/2/15 & 18	2	2	4	2105	2085	1620
SBF 2/3/15 & 18	2	3	6	2105	2085	2145
SBF 2/4/15 & 18	2	4	8	2105	2085	2980
SBF 2/5/15 & 18	2	5	10	2105	2085	3630
SBF 2/6/15 & 18	2	6	12	2105	2085	4375
SBF 2/7/15 & 18	2	7	14	2105	2085	4900
SBF 2/8/15 & 18	2	8	16	2105	2085	5425
SBF 3/2/15 & 18	3	2	6	3110	3090	1620
SBF 3/3/15 & 18	3	3	9	3110	3090	2145
SBF 3/4/15 & 18	3	4	12	3110	3090	2980
SBF 3/5/15 & 18	3	5	15	3110	3090	3630
SBF 3/6/15 & 18	3	6	18	3110	3090	4375
SBF 3/7/15 & 18	3	7	21	3110	3090	4900
SBF 3/8/15 & 18	3	8	24	3110	3090	5425

Large filters are assembled on site from suitable combinations of the above sizes.
There is no limit to the number of banks which can be joined together – e.g. SBF 20/8/15 (160 cells, 240 m^2 fabric area)

OUR OTHER PRODUCTS

- CYCLONE SEPARATOR

- HI – PRESSURE FANS
  - INDUCED DRAFT (ID) FAN
  - FORCED DRAFT (FD) FAN

- AXIAL FLOW FANS
  - TUBE AXIAL FLOW FANS
  - BIFURCATED AXIAL FLOW FAN
  - ROOF EXTRACTOR/ ROOF VENTILATOR

- CENTRIFUGAL FANS FOR INDUSTRIAL AND PROCESS APPLICATION

- MINE VENTILATION FANS
  - MAIN MINE VENTILATION FANS
  - AUXILIARY MINE VENTILATION FANS

AXIAL FLOW FAN

CENTRIFUGAL FAN

MAIN MINE VENTILATION FAN

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