



**MJB
Bag Filter**

MJB

Features



Suitable for collection of most fine dusts including metal grinding, welding fumes and most powders

400 to 18,000 CFM

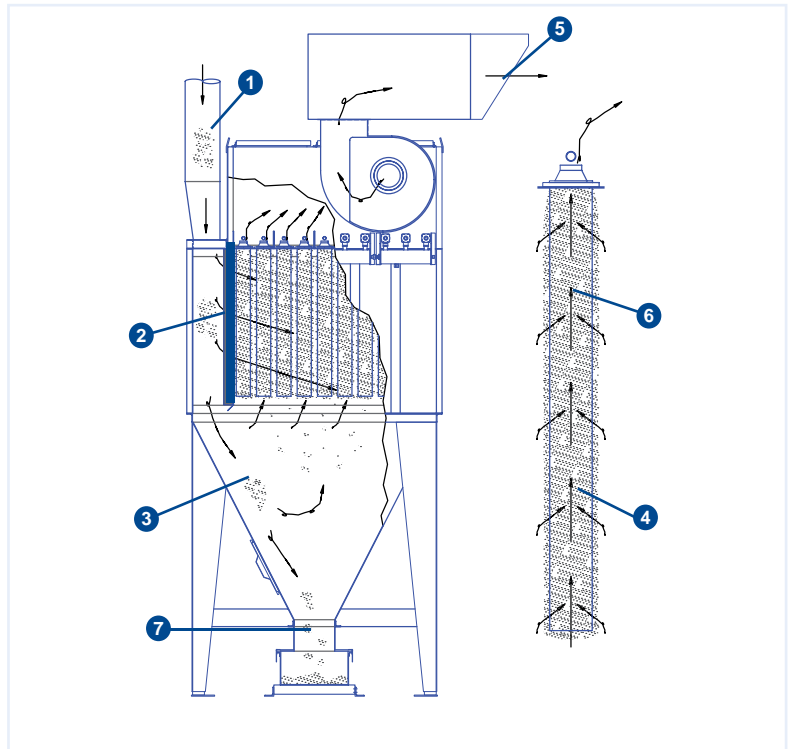
- Robust welded steel construction.
- Weatherproof for exposed locations.
- Two bag lengths available.
- Built-in pre-separation down flow / cross flow air distribution.
- Wide range of efficient detachable fans from 1 - 25 hp.
- Typical airflow volumes up to 18,000 cfm per single filter unit. Larger units available to special order.
- Bag replacement from clean air side.
- Multiple fans may be fitted to larger units.
- ATEX compliant for explosive dusts in categories St1, St2, and St3.
- Available with or without hopper.
- Hopper discharge options include bins, rotary valve, flap valves, screw conveyors.
- Higher temperature options.

***Metal • Cement • Powder Bulk • Welding • Plastic
Petro-Chemical • Pharmaceutical • Food***

How It Works

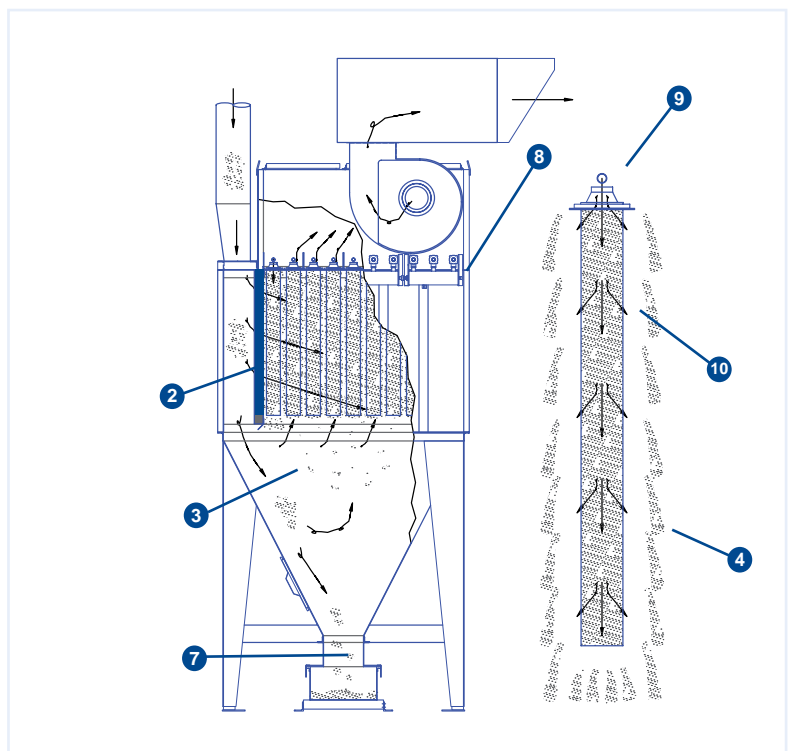
...during normal operation

1. During normal operation, the dust laden air from the plant travels down the supply duct **1**
2. A vertical slotted baffle **2** separates the inlet section that slows the airstream and directs dust downward into the hopper, **3** protecting the bags from direct abrasion but allowing air to pass horizontally between the bags.
3. The lighter dust collects on the outside of the tubular bag **4** as clean air passes inside of the cage to the **4** clean air chamber **6**. The clean air then travels through the air handling fan **5** where it can be returned to the plant or exhausted outdoors
4. The heavier dust settles in the hopper section **3** where it can be discharged into a metal bin **7** or through a rotary air lock



...while cleaning

1. The MJB can utilize a Delta-P gauge to control the compressed air cleaning. In essence, the filter cleans itself when it needs to!
2. A compressed air line must be connected to one end of the compressed air manifold **8**
3. A solenoid valve opens to allow compressed air from the manifold **8** into the jet tubes **9**. The jet tubes are aligned above each row of filter bags
4. The downward blast **10** blows the dust off the tubular filter bag (from the inside out) **4** where it settles into the hopper section **3** to be collected in the metal bin **7** or discharged through a rotary air lock

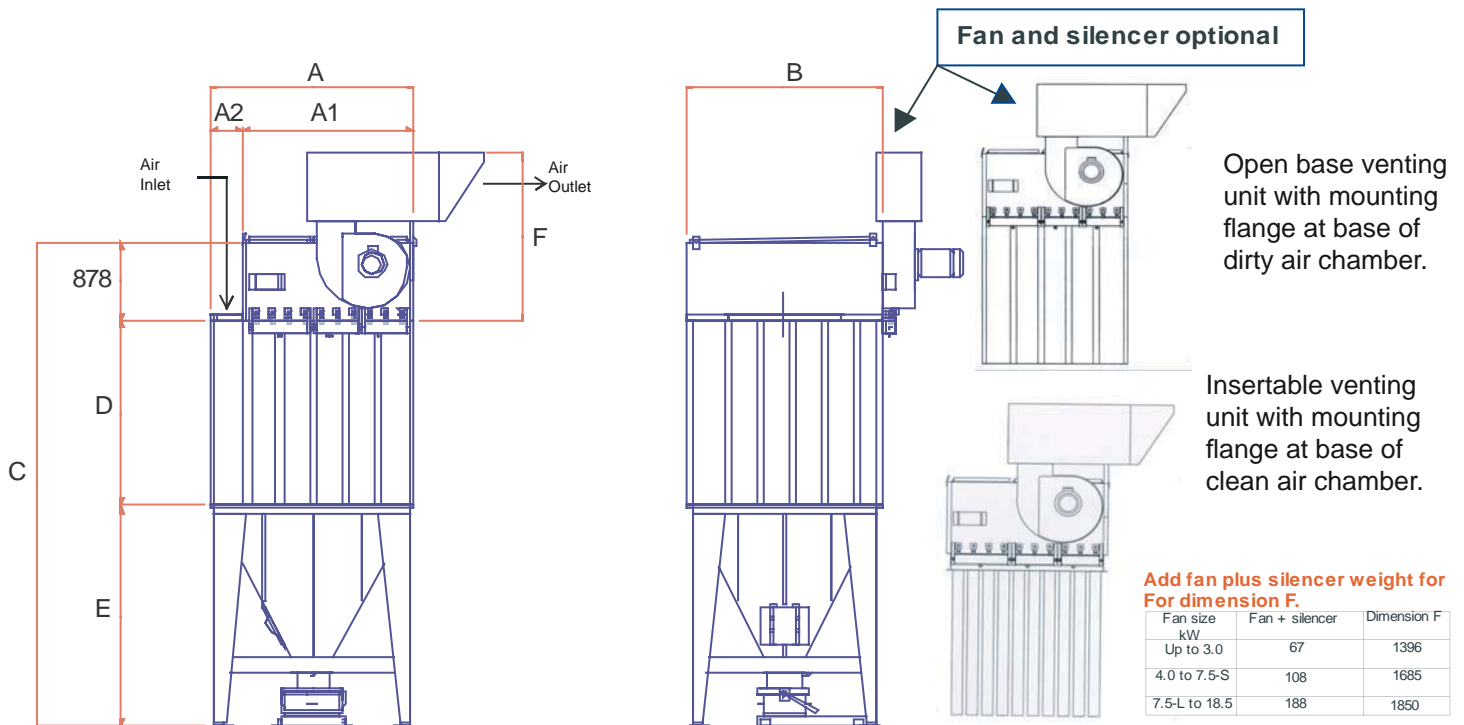


NOTE: Please consult with your Dantherm Filtration representative for compressed air requirements

MJB

Planning-in Data

MJB-S Short length bag



Front and side view of standard MJB complete with typical fan and silencer, mounted on a bin hopper. Rotary valve, flap valve and other discharge options available.

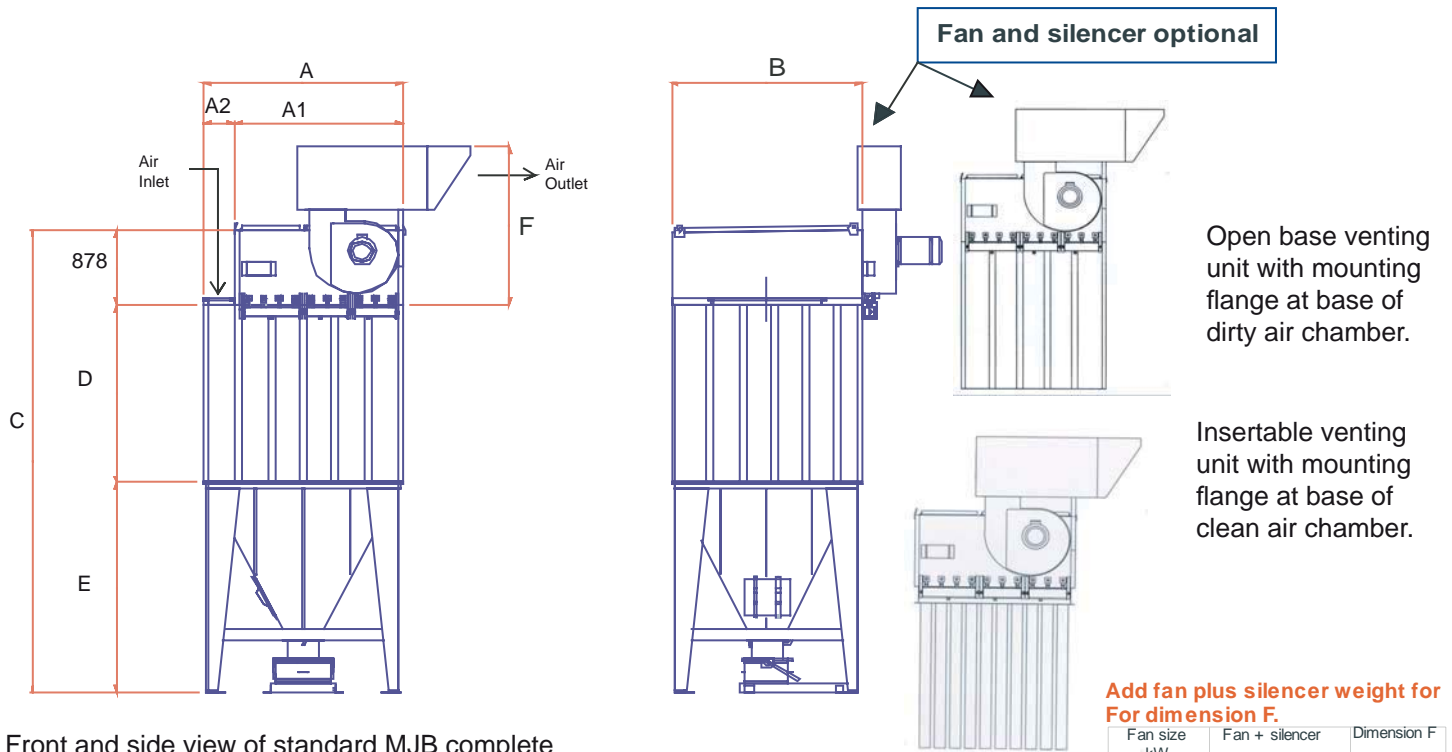
MJB Short	A1 Clean air chamber (CDC) width	A2 Add for side prepreparation chamber	A Dirty air Chamber (DAC) hopper width	B Depth of clean and dirty air chamber and hopper	C CAC plus DAC plus hopper height	D Dirty air chamber height	E Hopper height 75 litre bin	Typical weights using normal construction kg		Bins number of bins
								Filter Unit	Hopper	
7/S/36	800	350	1150	1220	3395	1050	1467	381	354	1
9/S/46	800	350	1150	1220	3595	1050	1467	397	354	1
10/S/38	800	350	1150	1570	3595	1050	1667	406	422	1
12/S/48	800	350	1150	1570	3595	1050	1667	428	422	1
14/S/58	1150	350	1500	1570	3755	1050	1827	563	490	1
16/S/4-11	800	350	1150	2095	4195	1050	2267	642	648	1
19/S/68	1150	350	1500	1570	3755	1050	1827	583	490	1
22/S/78	1500	350	1850	1570	3935	1050	2007	682	558	1
25/S/88	1500	350	1850	1570	3935	1050	2007	702	558	1
22/S/5-11	1150	350	1500	2095	4195	1050	2267	749	716	1
26/S/6-11	1150	350	1500	2095	4195	1050	2267	776	716	1
30/S/7-11	1500	350	1850	2095	4195	1050	2267	909	784	1
35/S/8-11	1500	350	1850	2095	4195	1050	2267	936	784	1

All dimensions are rounded to the nearest inch - see engineering drawings for installation details.

4 Key: example MJB 22/S/5-11 has 22 sq.m filter area; Short S filter bags; 5 cleaning valves each cleaning 11 bags.

Planning-in Data

MJB-M Medium length bag



Front and side view of standard MJB complete with typical fan and silencer, mounted on a bin hopper. Rotary valve, flap valve and other discharge options available.

Add fan plus silencer weight for For dimension F.

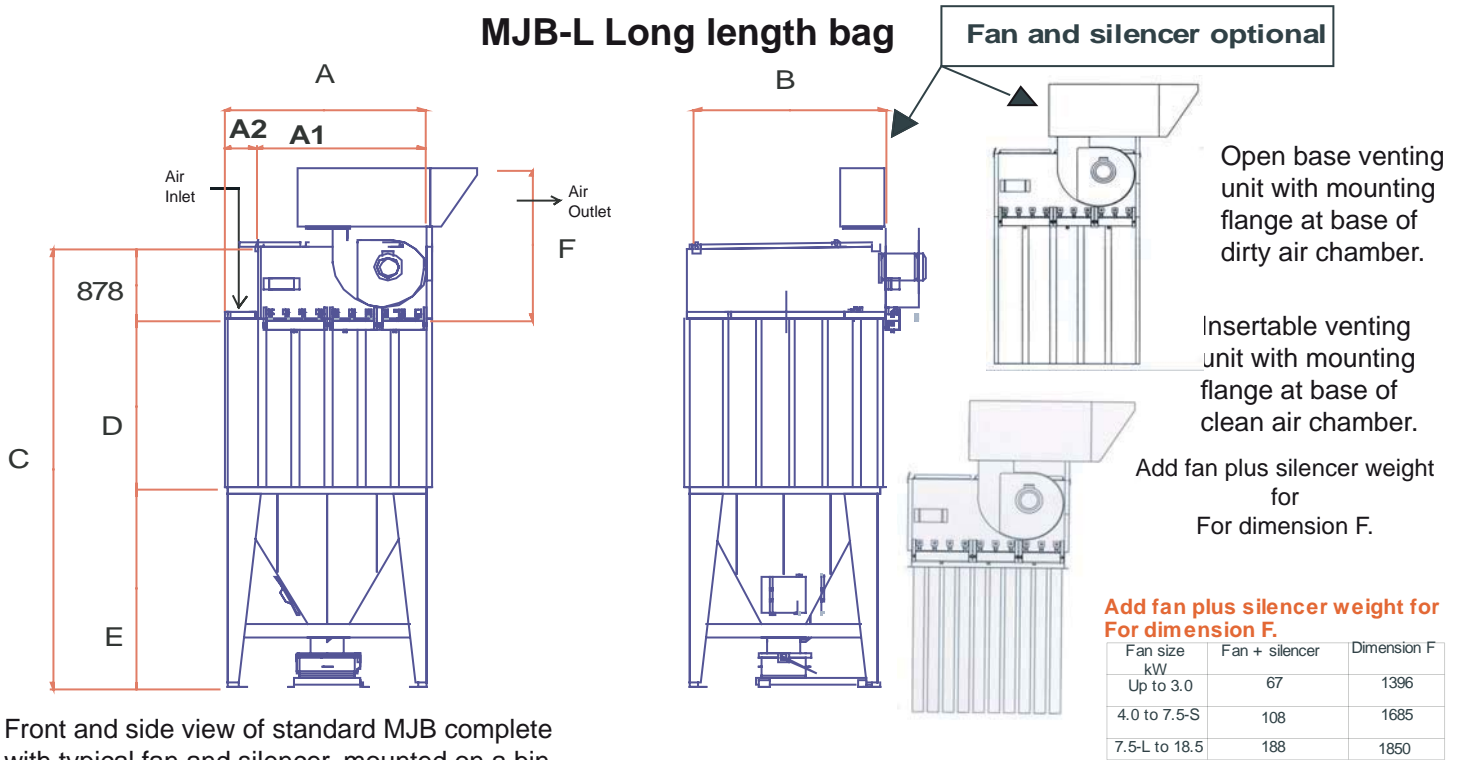
Fan size kW	Fan + silencer	Dimension F
Up to 3.0	67	1396
4.0 to 7.5-S	108	1685
7.5-L to 18.5	188	1850

MJB Medium	A1 Clean air chamber (CDC) width	A2 Add for side prepreparation chamber	A Dirty air Chamber (DAC) hopper width	B Depth of clean and dirty air chamber and hopper	C CAC plus DAC plus hopper height	D Dirty air chamber height	E Hopper height 75 litre bin	Typical weights using normal construction kg		Bins number of bins
								Filter Unit	Hopper	
9/M/36	800	350	1150	1220	3765	1420	1467	383	354	1
12/M/46	800	350	1150	1220	3765	1420	1467	401	354	1
12/M/38	800	350	1150	1570	3965	1420	1667	441	422	1
16/M/48	800	350	1150	1570	3965	1420	1667	465	422	1
20/M/58	1150	350	1500	1570	4565	1420	1827	619	490	1
22/M/4-11	800	350	1150	2095	4125	1420	2267	652	648	1
24/M/68	1150	350	1500	1570	4305	1420	1827	642	490	1
28/M/78	1500	350	1850	1570	4565	1420	2007	924	558	1
28/M/5-11	1150	350	1500	2095	4305	1420	2267	794	716	1
22/M/88	1500	350	1850	1570	4565	1420	2007	947	558	1
33/M/6-11	1150	350	1500	2095	4565	1420	2267	825	716	1
39/M/7-11	1500	350	1850	2095	4565	1420	2267	965	784	1
44/M/8-11	1500	350	1850	2095	4565	1420	2267	996	784	1
50/M/9-11	1850	350	2200	2095	4735	1420	2437	1146	852	1
55/M/10-11	1850	350	2200	2095	4735	1420	2437	1177	852	1

All dimensions are rounded to the nearest inch - see engineering drawings for installation details.

MJB

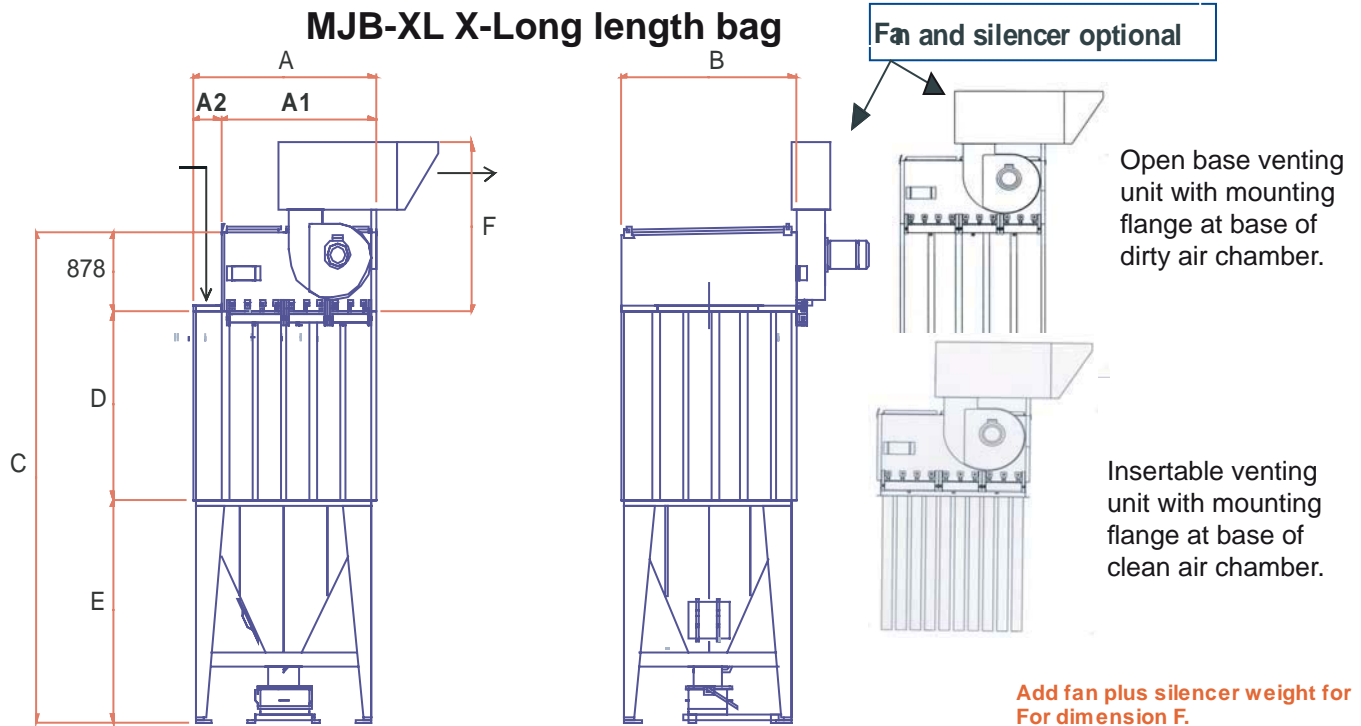
Planning-in Data



Front and side view of standard MJB complete with typical fan and silencer, mounted on a bin hopper. Rotary valve, flap valve and other discharge options available.

MJB Long	A1 Clean air chamber (CDC) width	A2 Add for side preseparation chamber	A Dirty air Chamber (DAC) hopper width	B Depth of clean and dirty air chamber and hopper	C CAC plus DAC plus hopper height	D Dirty air chamber height	E Hopper height 75 litre bin	Typical weights using normal construction kg		Bins number of bins
								Filter Unit	Hopper	
14/L/36	800	350	1150	1220	4395	2050	1467	490	354	1
19/L/46	800	350	1150	1220	4395	2050	1467	512	354	1
19/L/38	800	350	1150	1570	4595	2050	1667	595	422	1
26/L/48	800	350	1150	1570	4595	2050	1667	625	422	1
32/L/58	1150	350	1500	1570	4755	2050	1827	791	490	1
35/L/4-11	800	350	1150	2095	5195	2050	2267	831	648	1
38/L/68	1150	350	1500	1570	4755	2050	1827	821	490	1
44/L/78	1500	350	1850	1570	4935	2050	2007	908	558	1
44/L/5-11	1150	350	1500	2095	5195	2050	2267	981	716	1
50/L/88	1500	350	1850	1570	4935	2050	2007	938	558	1
52/L/6-11	1150	350	1500	2095	5195	2050	2267	1021	716	1
60/L/7-11	1500	350	1850	2095	5195	2050	2267	1181	716	1
70/L/8-11	1500	350	1850	2095	5195	2050	2267	1221	784	1
78/L/9-11	1850	350	2200	2095	5365	2050	2437	1392	784	1
87/L/10-11	1850	350	2200	2095	5365	2050	2437	1432	852	1
94/L/11-11	2200	350	2550	2095	5195	2050	2267	1627	957	2
104/L/12-11	2200	350	2550	2095	5195	2050	2267	1667	957	2
120/L/14-11	2550	700	3250	2095	5195	2050	2267	1930	1093	2
140/L/16-11	2900	700	3600	2095	5195	2050	2267	2129	1161	2

Planning-in Data



Front and side view of standard MJB complete with typical fan and silencer, mounted on a bin hopper. Rotary valve, flap valve and other discharge options available.

Fan size kW	Fan + silencer	Dimension F
Up to 3.0	67	1396
4.0 to 7.5-S	108	1685
7.5-L to 18.5	188	1850

MJB Medium	A1 Clean air chamber (CDC) width	A2 Add for side prepreparation chamber	A Dirty air Chamber (DAC) hopper width	B Depth of clean and dirty air chamber and hopper	C CAC plus DAC plus hopper height	D Dirty air chamber height	E Hopper height 75 litre bin	Typical weights using normal construction kg		Bins number of bins
								Filter Unit	Hopper	
23/XL/38	800	350	1150	1570	4995	2450	1667	774	422	1
31/XL/48	800	350	1150	1570	4995	2450	1667	808	422	1
38/XL/58	1150	350	1500	1570	5155	2450	1827	976	490	1
42/XL/4-11	800	350	1150	2095	5595	2450	2267	1083	648	1
46/XL/68	1150	350	1500	1570	5155	2450	1827	1010	490	1
54/XL/78	1500	350	1850	1570	5335	2450	2007	1171	558	1
52/XL/5-11	1150	350	1500	2095	5595	2450	2267	1263	716	1
60/XL/88	1500	350	1850	1570	5335	2450	2007	1205	558	1
63/XL/6-11	1150	350	1500	2095	5595	2450	2267	1309	716	1
74/XL/7-11	1500	350	1850	2095	5595	2450	2267	1488	784	1
84/XL/8-11	1500	350	1850	2095	5595	2450	2267	1534	784	1
94/XL/9-11	1850	350	2200	2095	5765	2450	2437	1734	852	1
105/XL/10-11	1850	350	2200	2095	5765	2450	2437	1780	852	1
115/XL/11-11	2200	700	2900	2095	5595	2450	2267	2089	1025	2
125/XL/12-11	2200	700	2900	2095	5595	2450	2267	2135	1025	2
145/XL/14-11	2550	700	3250	2095	5595	2450	2267	2360	1093	2
165/XL/16-11	2900	700	3600	2095	5595	2450	2267	2589	1161	2
190/XL/18-11	3250	700	3950	2095	5765	2450	2437	2842	1229	2
210/XL/20-11	3600	700	4300	2095	5765	2450	2437	3092	1297	2

MJB

Integral Fans

MJB Fan performance and selection

MJB units may be fitted with space saving integral high efficiency radial fans. Single fans can deliver up to 14000m³/h, but some larger units may be fitted with two fans. A floor mounted version of the same fan range is also available as an option.

Fan Performance

The curves show the fan inlet static pressure vs. airflow volume for the integral fans running at 2-pole motor speed (2900/min with a 50Hz supply).

To select a fan for use with an MJB filter unit, first determine the airflow volume, then the static pressure required at that airflow volume as follows: -

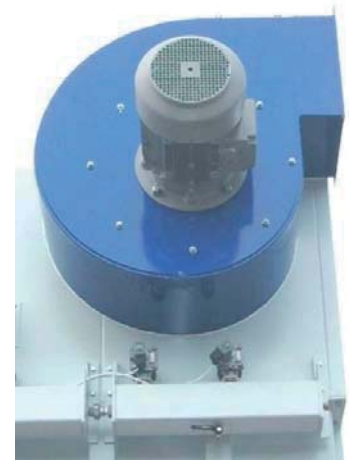
Determine the static pressure required for the application (hoods, ducts, cyclone if used).

Add 300Pa (30mm water) for the filter inlet resistance.

Add 1000Pa (100mm water) for bag resistance. For some "difficult" dust applications, add up to approx 2000Pa (200mm water).

Add 250Pa (25mm water). for a silencer, plus any outlet duct resistance.

The sum of 1+2+3+4 above is the static pressure required from the fan.



Fans for larger installations

Larger installations may be served by separately mounted Combifab fans when appropriate.

Combifab is a range of high efficiency low noise fans with three impeller types to suit clean air, dusty air or for waste transport duties.

For clean air extraction from an MJB filter unit, the Combifab Type R, with backward curved blades is the most suitable.



Combifab fans may be directly or belt driven, with drive arrangements to suit the site and impeller speed.

Airflow volumes up to 70,000 m³/h

High efficiency up to 87%

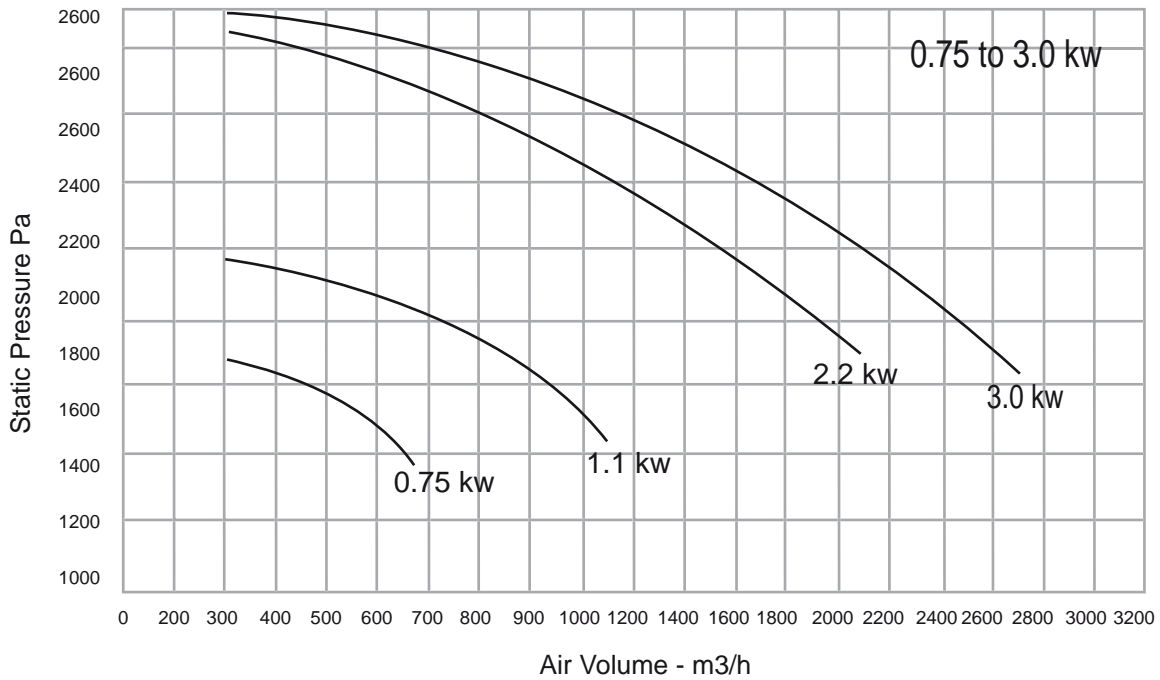
A floor mounted Combifab fan will be a practical, cost effective solution if more than one integral fan would otherwise be required to meet the airflow volume demand.

Please refer to the Combifab brochures for further details as required.

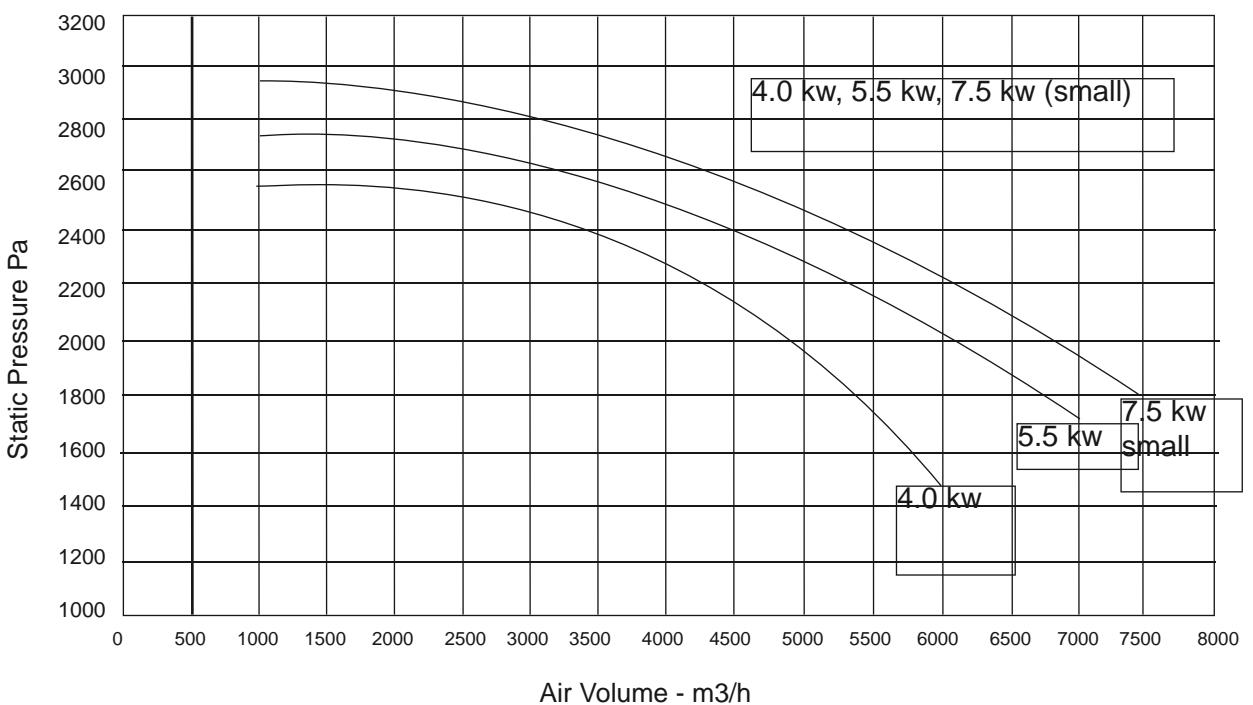
Fan Curves

Performance of standard integral fans 0.75 to 18 kw

Fan performance, with open outlet, at running speed 2900/min. Detachable fan used on MJB and MJC.

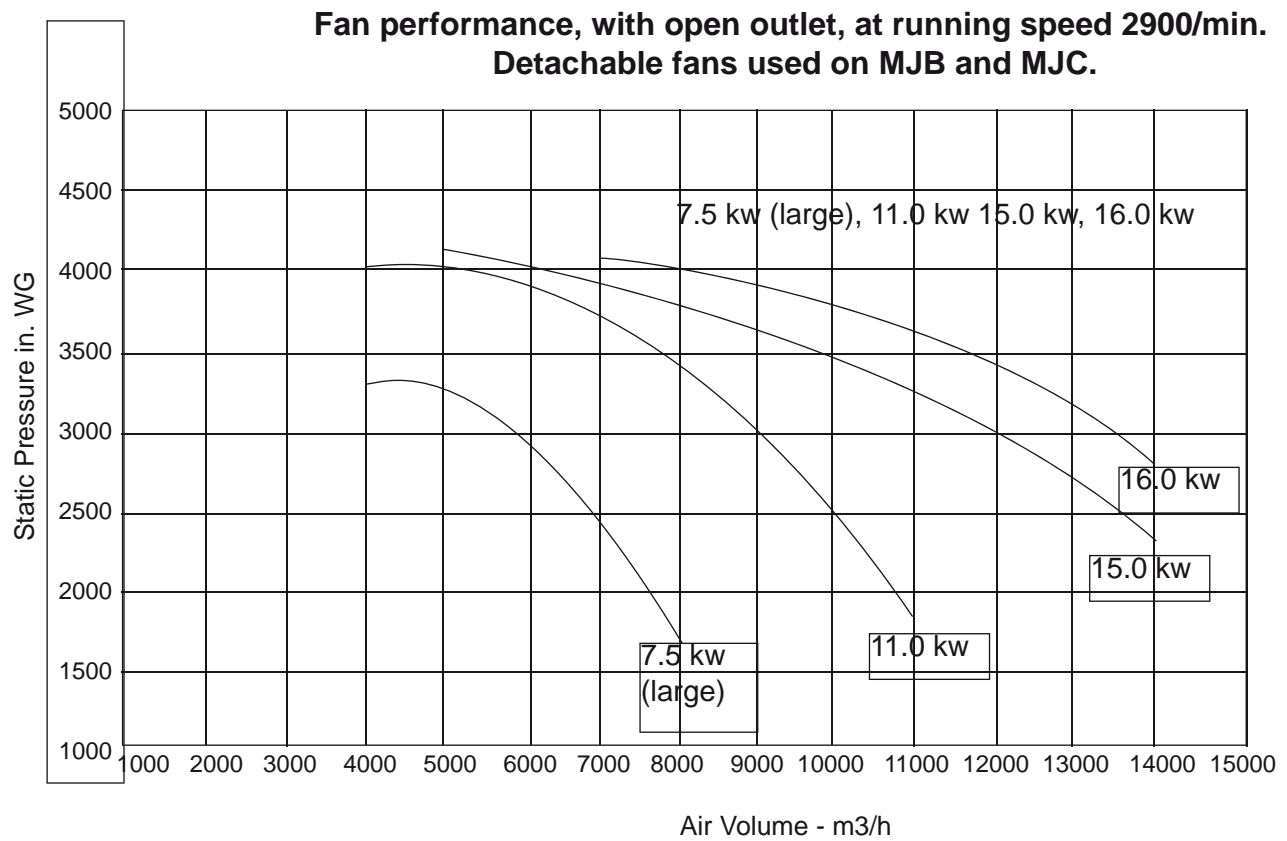


Fan performance, with open outlet, at running speed 2900/min. Detachable fans used on MJB and MJC.



MJB

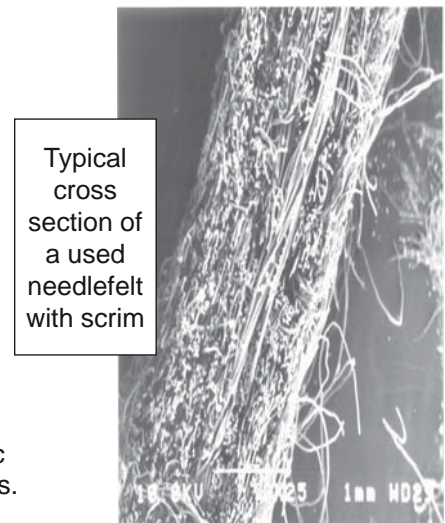
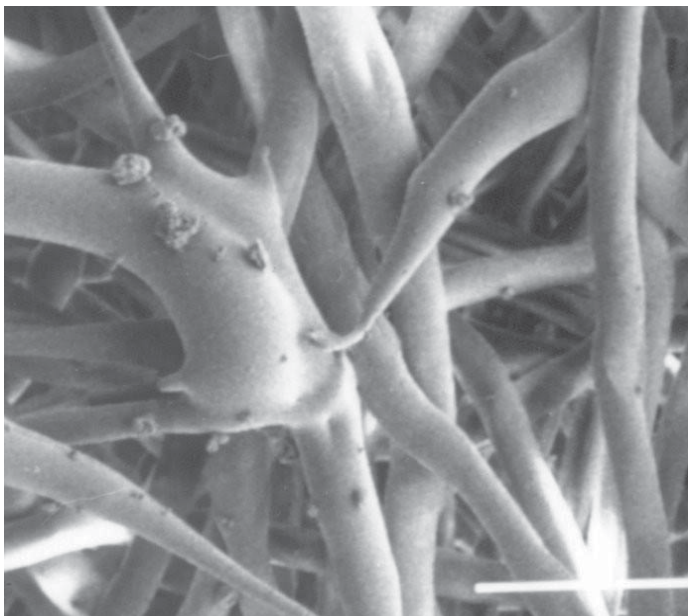
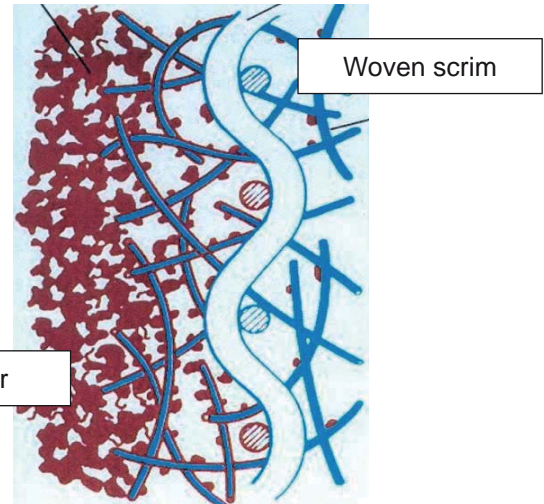
Fan Curves Cont...



MJB filter materials

MJB reverse jet tubular bag filters typically utilize robust high efficiency non-woven needle felt materials incorporating a woven scrim for stability, with various finishes to suit the application and material to be filtered or collected.

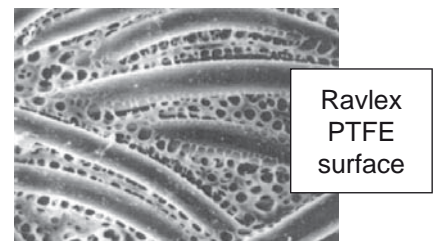
The material may have a glazed dust collection surface. This improves the dust release properties for use with "difficult" dust materials. This is shown here as seen, and magnified. The basic material is polyester needle felt with a singed dust collection surface. However, many other base materials are available to suit particular applications.



There are materials to resist attack from acidic and alkaline atmospheres; with enhanced abrasion resistance; for higher temperatures; with anti-static properties; with flame retardant treatments and with other special properties.

Needle felt can be made from many kinds of fiber: - for example

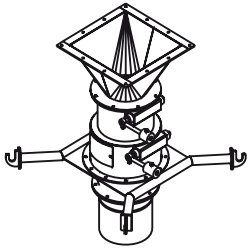
- Polypropylene (PP)**
- Polyamide (NOMEX)**
- Polyphenyl sulphide (PPS) (Ryton)**
- Polyimide (P84)**
- Homopolymer-acrylic (PAN) (Dralon)**
- PTFE (Gore-Tex) (Ravlex)**



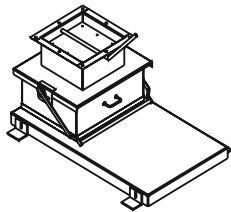
Dantherm Filtration applications engineers will carefully assess your requirements to ensure optimal selection of equipment and filter material, based upon 30+ years' experience of successful installations worldwide.

MJB

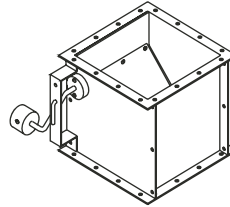
Options



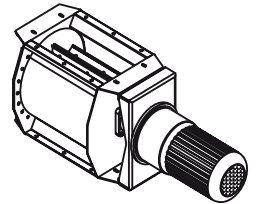
Double flap valve
discharge for big bag



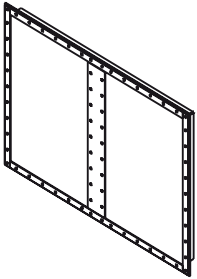
20 Gallon Bin



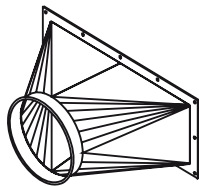
call for price
NFSU-3 counter balance
dump valve



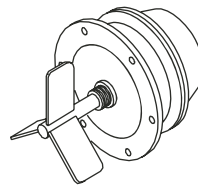
Rotary Airlock
NRS-4 fabricated



Explosion relief panels

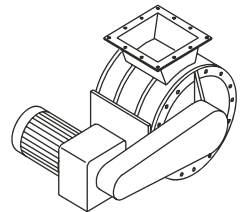


Inlet transitions
flanged to round

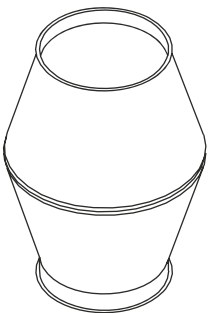


call for price

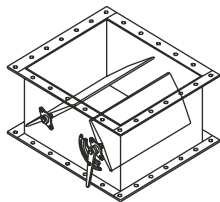
Bindicator



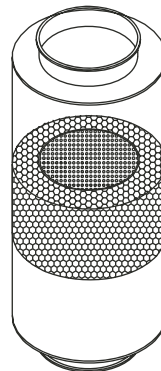
10" cast rotary airlock.
Flex tip w. 1 hp - 230/460V



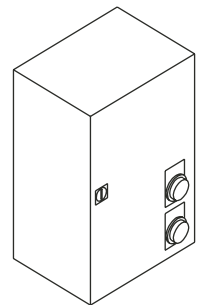
Fan outlet
weather cowl



Fan discharge damper
opposed blade

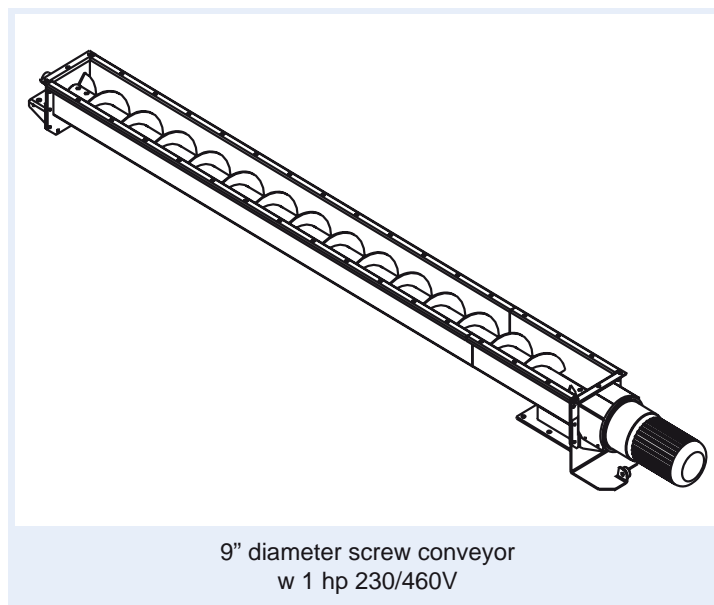
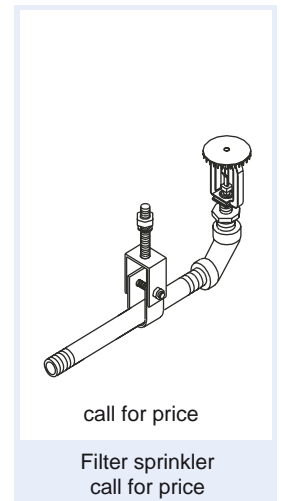
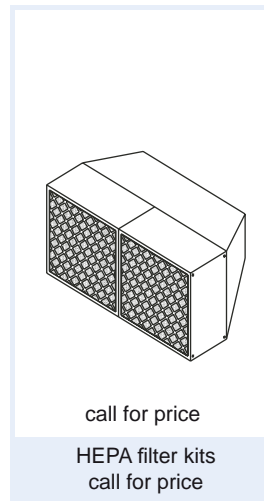
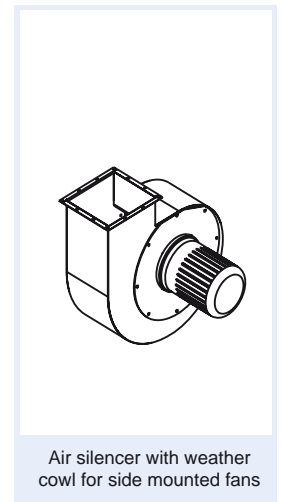
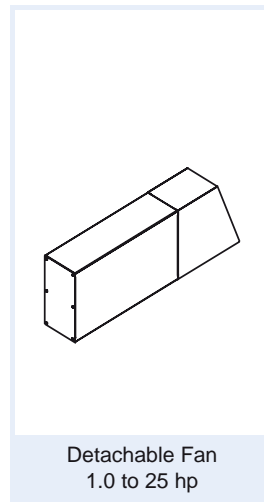
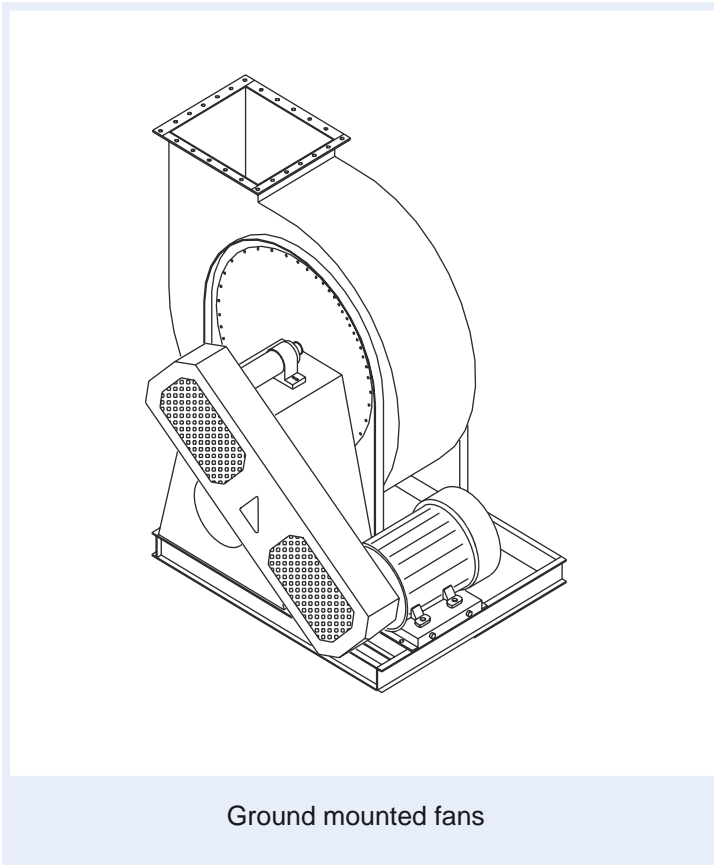


In line silencer



Fan motor starter
230/460V - 3 hp

Options



MJB Specification

Construction

Welded painted steel, clean air chamber 2.0mm thick steel; dirty air chamber 2.0mm or 3.0mm; hopper typically 2.5mm thick.

Strength

Maximum negative and positive operating pressures: -

Standard: minus 8000mm to plus 2000mm

Optional: minus 15000mm to plus 5000mm

Optional version has 3.0mm steel dirty air chamber plus extra internal stiffening in clean air chamber; to special order.

For explosion relief area calculation St1, St2, St3: -

Reduced explosion pressure Pred = 0.2 bar.

Operating temperature

Standard unit: - -10 to +80°C

Optional high temp. unit: - -10 to +250°C

Features:

- Viton diaphragm and seals
- Silicone panel sealant
- High temp. paint
- Suitable filter bags

Compressed air requirement

Normal operating pressure for cleaning air: - 6.2 barg. (dry and oil free)

Typical compressed air consumption for 2 minute continuous cleaning cycle (for units with up to 12 valves); or 10 second interval between pulses (for units with more than 12 valves). Based upon 75 liters at NTP per pulse.

No. of Valves	3	4	5	6	7	8	9	10	11	12	<12
Cu. m/h at NTP	6.7	9.0	11.2	13.5	15.8	18.0	20.2	22.0	24.7	27.0	27.0

Note: - use of "clean-on-demand" or increased cleaning cycle time will reduce typical compressed air consumption.

Electrical requirement

Controller: - 240/220/110Vac input (24 Vdc to special order only)

Fan: - 380/420V 3ph 50Hz (European)

460V 3ph 60Hz (USA) (other voltages available by request)

Applications



Fume extraction from hot-dip galvanizing process



Conveying and handling hydrated lime for steel production



Cement outloading and conveying for production and distribution



Cutting, trimming and finishing gypsum products



Conveying and Transferring chrome ore at high temperatures



Dockside handling, conveying and storage, of grain

Dust control applications include:

Bag filling and emptying - animal feed, building products, additives...

Blast cleaning - metals, ceramics...

Conveying, mixing, blending - all powders, pellets and granulated material...

Crushing, screening, sieving - from quarried minerals to pharmaceutical powders...

Grinding, polishing, finishing: - metals and other materials...

Foundry processes - melting and sand reclamation to fettling and finishing...

Milling - food and feed raw materials, grains, pulses...

Cutting and shaping - laser, plasma, mechanical sawing...

Powder coating - surface finishing, decorative coatings...

Hot metal processes - galvanizing, metal spraying.....and many more

World wide sales companies



The world leader in air pollution control

Dantherm Filtration focuses on individual solutions for individual customer needs. We benefit from the experience and expertise of more than 30,000 air cleaning systems. And we deliver unbeatable reliability, low energy consumption and compliance with all mandatory require-

ments for a wide range of applications in many different industries all over the world.

Dantherm Filtration is a part of Dantherm Group - a leader in industrial air management, offering industrial cooling,

heating, dehumidification, ventilation, air filtration and mobile air management. The Group has 3,000 employees and operates globally with production and sales companies in Europe, US and Asia.



Dantherm Filtration A/S

Industrivej 13, Assens

DK-9550 Mariager

Tlf: +45 99 68 09 00

Fax: +45 99 68 09 01