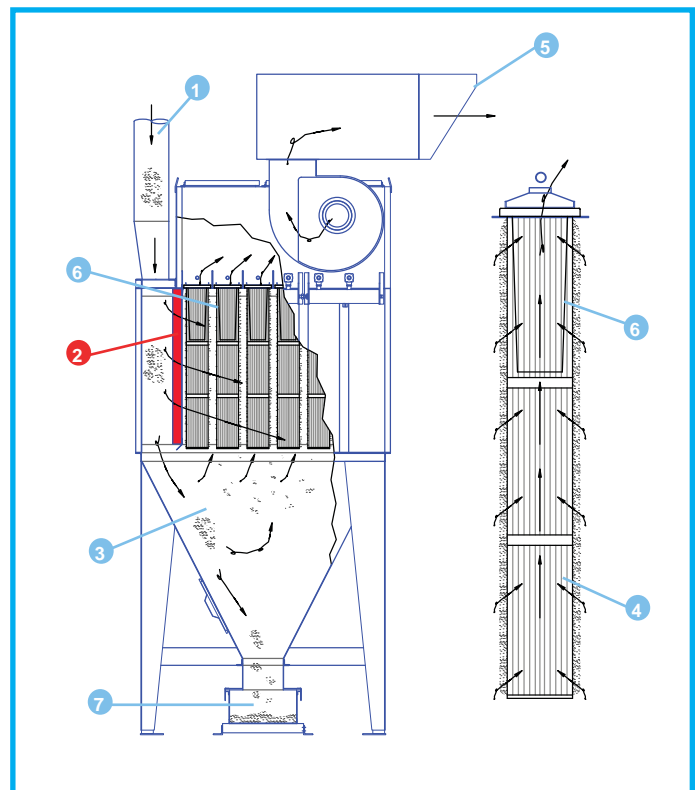


MJC Filter

How MJC Filter works

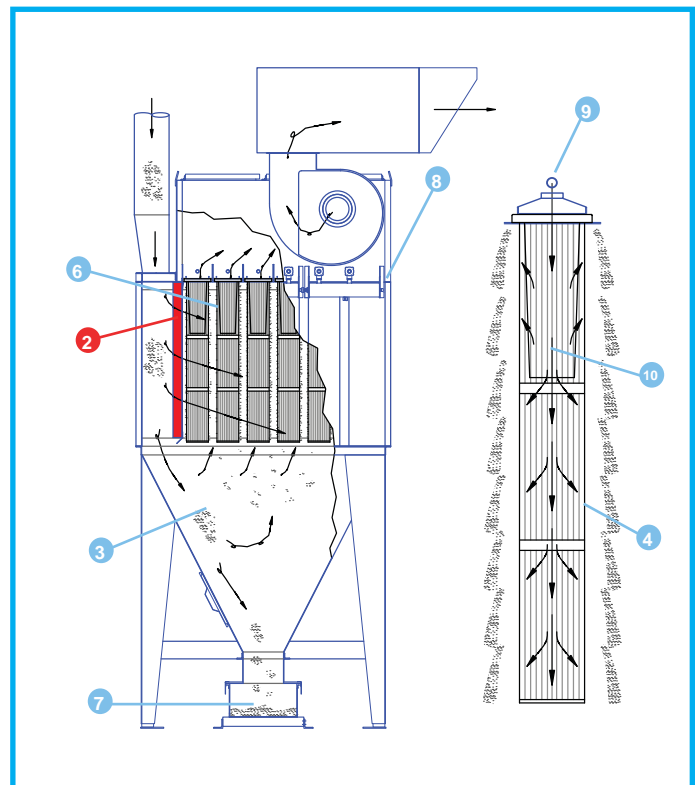
...during normal operation

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 air stream and directs dust downward into the hopper **3**, protecting the cartridges from direct abrasion but allowing air to pass horizontally between the cartridges.
3. The lighter dust collects on the outside of the filter cartridges **4** as clean air passes through to the inside of each cartridges. Finally, the clean air travels through the air outlet **6** where it may be returned to the plant or exhausted outdoors **5**.
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 valve.



...while cleaning

1. The MJC can utilize a differential pressure 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 into the jet tubes. The jet tubes are aligned above each row of the filter cartridges **9**.
4. The downward blast **10** blows the dust off the cartridges (from the inside out) **4** where it settles into the hopper section **3** to be collected in the metal bin **7** or other waste discharge system.



MJC Filter Technical and Dimensions

Dimension F: From the bottom of the clean air chamber to the top of the silencer

(Weight of the fan and silencer).

Fan up to 3 kW:

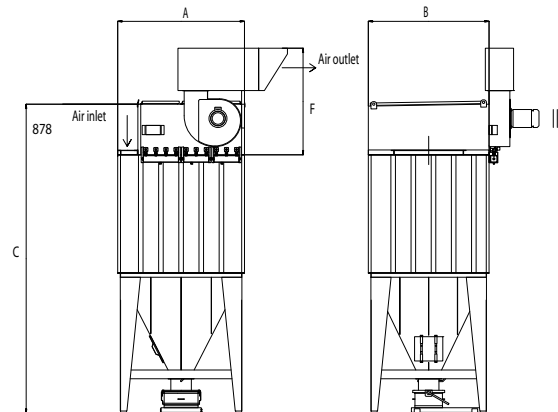
F = 1386 mm (67 kg)

Fan from 4 to 7.5 kW:

F = 1685 mm (108 kg)

Fan from 7.5 to 18.5 kW:

F = 1850 mm (188 kg)



MJC - 40 type filter

Technical parameters				Dimensions			With pre-separation section located on
Type	Number of filter bags	Filter area m ²	Typical maximum airflow volume m ³ /h	A	B	C	
				Width	Depth	Height	
MJC 48/40/43	12	48	4600	1150	1220	3395	Right or left side
MJC 64/40/44	16	64	6100	1500	1570	3755	Right or left side
MJC 80/40/54	20	80	7700	1850	1570	3935	Right or left side
MJC 96/40/38	24	96	9200	1500	2095	4195	In the middle
MJC 128/40/48	32	128	12300	2200	2095	4365	In the middle
MJC 160/40/58	40	160	15400	2550	2095	4195	In the middle
MJC 192/40/68	48	192	18400	2550	2095	4195	In the middle
MJC 224/40/78	56	224	21500	2900	2095	4195	In the middle
MJC 256/40/88	64	256	24600	3250	2095	4195	In the middle
MJC 288/40/98	72	288	27600	3600	2095	4195	In the middle

MJC - 66 type filter

Technical parameters				Dimensions			With pre-separation section located on
Type	Number of filter bags	Filter area m ²	Typical maximum airflow volume m ³ /h	A	B	C	
				Width	Depth	Height	
MJC 60/66/33	9	60	5700	1150	1220	3765	At rear
MJC 79/66/43	12	79	7600	1150	1220	3765	At rear
MJC 105/66/44	16	105	10100	1500	1570	4125	At rear
MJC 132/66/54	20	132	12700	1850	1570	4305	At rear
MJC 158/66/38	24	158	15200	1500	2095	4565	Right or left side
MJC 211/66/48	32	211	20200	2200	2095	4735	Right or left side
MJC 264/66/58	40	264	25300	2550	2095	4565	Right or left side
MJC 316/66/68	48	316	30300	2550	2095	4565	Right or left side
MJC 369/66/78	56	369	35400	2900	2095	4735	Right or left side
MJC 422/66/88	64	422	40500	3250	2095	4565	Right or left side
MJC 475/66/98	72	475	45600	3600	2095	4565	Right or left side
MJC 528/66/10-8	80	528	50700	4300	2095	4565	In the middle
MJC 580/66/11-8	88	580	55700	4650	2095	4565	In the middle
MJC 634/66/12-8	96	634	60700	4650	2095	4565	In the middle
MJC 686/66/13-8	104	686	65800	5000	2095	4565	In the middle
MJC 739/66/14-8	112	739	70900	5700	2095	4735	In the middle

Key example: MJC 48/40/43

48	Filter area m ²
40	Cartridge of 4.0 m ² per unit (66 = 6.6 m ²)
43	Number of cleaning valve (4) and number of cartridge per valve (3)

MJB Filter Filter Material

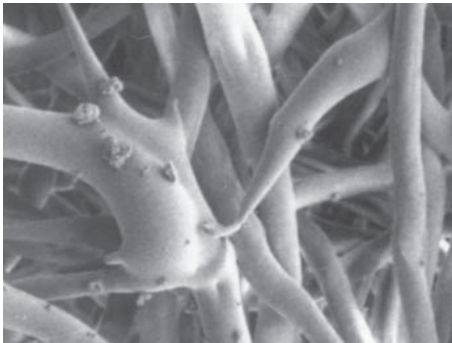


There are materials to resist attack from acidic and alkaline atmospheres; with enhanced abrasion resistance; for higher temperatures; with anti-static properties; with flame retardant treatments and with other special properties.

Needlefelt can be made from many other kinds of fiber for example:

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

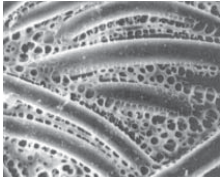
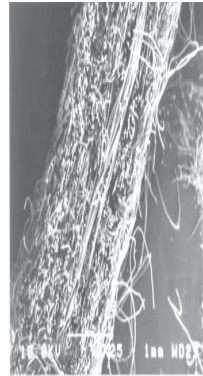
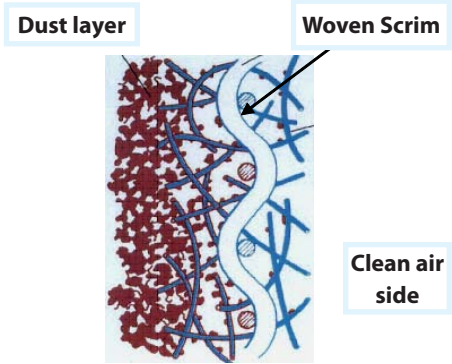
MJB reverse jet tubular bag filters typical utilize robust high efficiency nonwoven needlefelt materials incorporating a woven scrim for stability, with various finishes to suit the application and materials to be filtered or collected.



Self supported (scrimless) materials are economic for many general applications.

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 magnified.

Typical cross section of a used needlefelt with scrim



Ravlex PTFE surface

The basic material is polyester needlefelt with a sintered dust collection surface. However, many other base materials are available to suit particular applications.

Typical standard filter materials

Type	Material	Weight g/m ²	Permeability under 200 Pa (m ³ /m ² /h)	Characteristics
NF100	Polyester	500	1800	Sintered
NF130	Polyester	500	1050	Glazed oil/water resistant *
NF142	Polyester	500	750	Glazed, antistatic, oil/water resistant *
NF301	Polyester	300	2200	Standard finish
NF304	Polyester	300	1550	Glazed

Many other types available for particular applications upon request. The residual dust emissions will depend upon on the filter speed, the dust loading and the efficiency when filtering the particular dust and other characteristics relating to the application, operating conditions and dust type

* For higher humidity or slightly oily dusts.

MJC Filter Filter Material



At the heart of every MJC cartridge filter is the UniClean patent pleated cartridge element.

The overall dimensions, including pleat depth and spacing were designed uniquely for the MJC range. More than ten year's experience in many applications and the more recent introduction of the UniClean feature ensure maximum performance and long life.

The MJC range uses a **Type 40** with 4.0m² or a **Type 66** with 6.6m² per element.

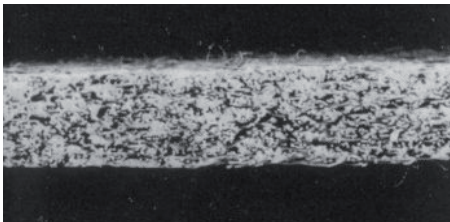
Filter materials are:

- **CA100** high quality thermal bonded polyester pleated fabric as standard.
- **CA140**, similar to CA 100, with adding metalized antistatic treatment.
- **CA190**, similar to CA100, with adding PTFE treatment for ease of dust release (sticky dust)
- **CA175** is 80% cellulose, 20% polyester material available to special order.

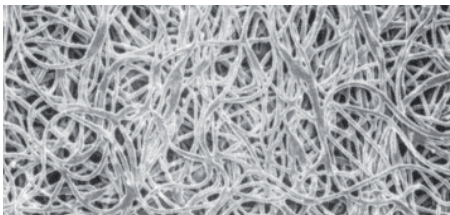


Surface filtration

The filter media is typically around 1.7mm thick but contains many layers of random fibers. Filtration occurs at or very near the surface of the materials and its efficiency (BIA class U, S, G, and C) may be further enhanced by a surface layer of dust. For light dust loads, or very fine dust, it may be beneficial to pre-coat the filter by introducing used dust, or a special pre-coat material.



Cross section CA100

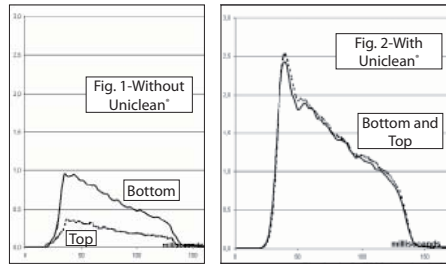


Surface magnified x 200

UniClean® in detail

UniClean® provides more uniform cleaning air pressure over the whole cartridge during pulse cleaning. With conventional cartridges, the thick dust layer tends to form at the top section of the filter due to uneven and ineffective pulse cleaning and cause less filtration area.

The UniClean® concept overcomes this problem, dust accumulations being directed towards the middle of the cartridge. Another advantage is that it guarantees uniform cleaning pressure, as explained above.



The internal air cleaning pressure is considerably higher than conventional cartridges with a similar reverse jet cleaning system. (Compare figures 1 and 2).

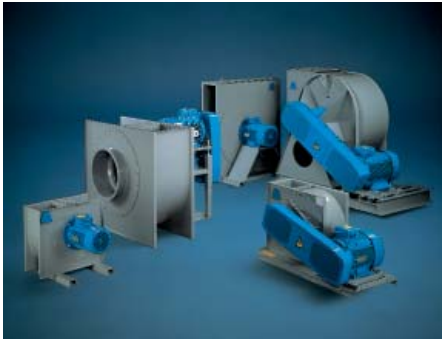
Effective cleaning reduces the number of cleaning impulses required. Consequently, the lifetime of the filter medium is longer and energy consumption for cleaning lower.

Patents
Germany: 19909075.0
International: PCT/EP00/01801

MJ Filter

Integral Fans for MJ Filter

MJ units may be fitted with space saving integral high efficiency radial fans. Single fans can deliver up to 14,000 m³/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.



Combifab fan can be arranged in direct drive or belt driven to suit the installation site and impeller speed. Variable speed inverter is available upon specified.

- Airflow volumes up to 70,000m³/h
- High efficiency up to 87%


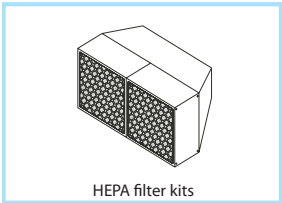
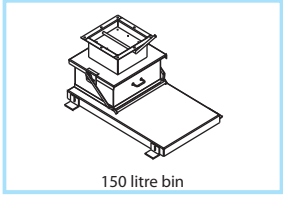
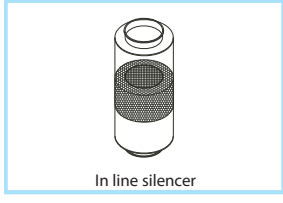
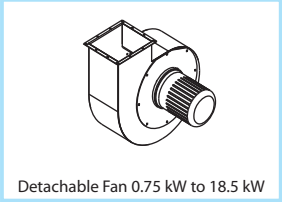
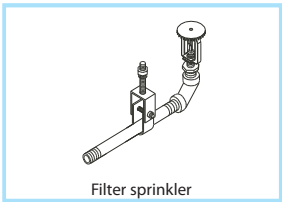
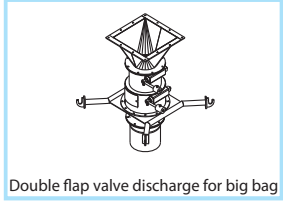
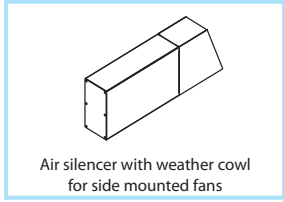
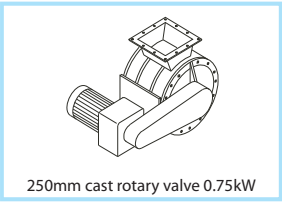
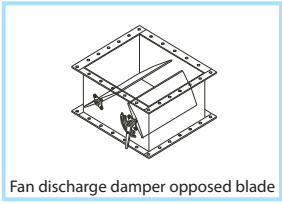
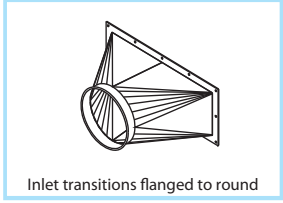
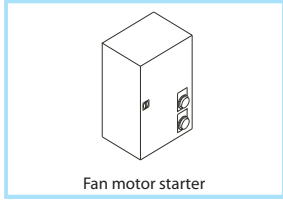
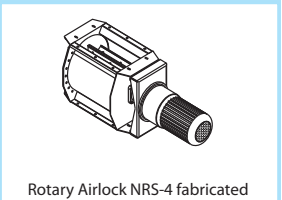
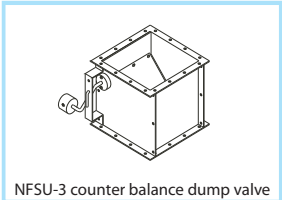
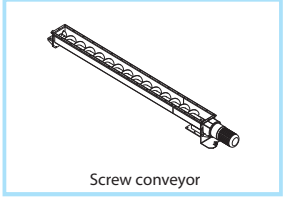
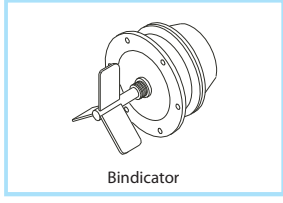
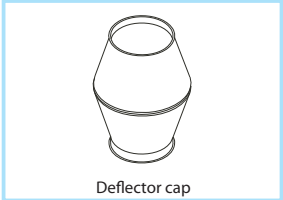
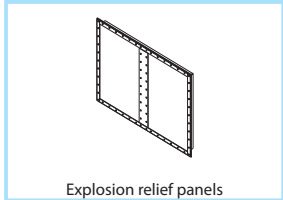
Fans for larger installations

Larger installations may be served by separately mounted Nederman Combifab fans when appropriate. Combifab is a range of high efficiency low noise fans.

The clean air impeller, Combifab Type R is closed bladed impeller with backward curved blades. It is the most suitable for MJ filter unit.

Floor mounted larger Combifab will be more practical and cost effective solution compared to multiple integral fan to meet the higher air volume demand.

MJ Filter Options

 Ground mounted fans	 HEPA filter kits	 150 litre bin	 In line silencer
 Detachable Fan 0.75 kW to 18.5 kW	 Filter sprinkler	 Double flap valve discharge for big bag	 Air silencer with weather cowl for side mounted fans
 250mm cast rotary valve 0.75kW	 Fan discharge damper opposed blade	 Inlet transitions flanged to round	 Fan motor starter
 Rotary Airlock NRS-4 fabricated	 NFSU-3 counter balance dump valve	 Screw conveyor	 Bindicator
		 Deflector cap	 Explosion relief panels

Application



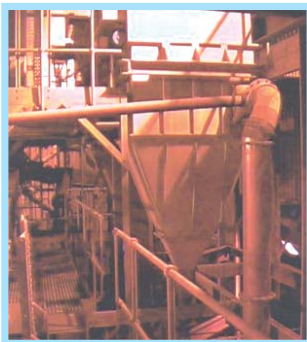
Fume extraction from hot-dip galvanizing process



Conveying and handling hydrated lime for steel production



Extraction from rice polishing



Cement uploading and conveying for production and distribution



Extraction of cleaning and packing process from rice mill, Agriculture industry



Cutting, trimming and finishing gypsum products



Waste gas cleaning for garbage disposal plant separating of dust and sulphur dioxide



Dockside handling, conveying and storage, of grain



Cement Plant / Belt Conveyor Process, Cement / Lime industry

Applications for wide range of process include:

Industry
<ul style="list-style-type: none"> - All powder, pellets and granulated material - Agriculture - Ceramic - Chemicals & Pharmaceutical - Food processing - Foundry - Galvanizing - Metal & Casting - Shot blast - Surface finishing, decorative coating ... and many more

Process
<ul style="list-style-type: none"> - Conveying, mixing, blending - Bag filling and emptying - Blast cleaning - Crushing, screening, sieving - Milling - Melting and sand reclamation to fettling and finishing - Hot metal processes - Grinding, polishing, finishing - Machines and booths. - Powder coating



FACTS ABOUT NEDERMAN

The Nederman Group is one of the world's leading suppliers of products and solutions within the environmental technology sector, focusing on industrial air filtration and recycling.

Nederman products and solutions contribute to reducing environmental impacts from industrial production and to creating safe and clean working environments whilst boosting production efficiency.

The group's offering covers everything from the design stage through to installation, commissioning and servicing. Nederman has subsidiaries in 29 countries and agents and distributors in over 30 countries.

Nederman is ISO 9001 and 14001 certified. The group develops and produces in its own manufacturing and assembly units in Europe, North America and Asia.

In 2010 Nederman acquired Dantherm Filtration, thereby forming the world's leading group within industrial air filtration.

Nederman

www.nederman.com

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