

## Filtro industriale FilterMax DF

### Filtro modulare per aspirazione polvere



FilterMax DF is a efficient and compact solution to your dust and fume problems. FilterMax DF handles the air pollution from metal industries as well as non explosive dust from other industries. The filter has the capacity to handle up to 13 000 m<sup>3</sup>/h (7800 cfm). A wide range of cartridges for different purposes are available.

With it's sturdy design, smooth inner surfaces, optimized angles of repose and digital control system, the filter fulfils stringent demands for continuous operation and effective filtration.

The modular design makes it easy to expand the capacity of an installed system and will also make transportation, handling and installation as easy as possible.

To simplify use and guarantee optimum performance, FilterMax DF is equipped with Nederman's automatic cleaning system. The pulse-jet system shoots short, powerful jets of air into the filter cartridges. The dirt is released from the filter surface and falls down into a container. The pulse-jet system cleans the filter cartridges in sequence while the filter is in operation. The FilterMax DF can also be cleaned after operation if so desired.

The FilterMax DF cartridge is a high performance, compact filter cartridge. The design is optimized for efficient media use and good cleaning properties. The small inner volume in combination with the air distributing support cage gives efficient

cleaning. Shallow open pleats allows efficient removal of dust. The cartridges is available in different materials. The flat pocket shaped minimizes the area of the "lost" media on top of the cartridge.

- Automatic control system
- Pulse-jet cleaning system
- Dust-free filter replacement

### Models

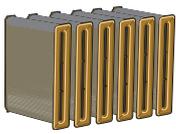
Description	Indoor usage	Outdoor usage (FO)	Part No.
FILTERMAX DFI 40	x		12620167
FILTERMAX DFO 40		x	12620467
FILTERMAX DFI 80	x		12620267
FILTERMAX DFO 80		x	12620567
FILTERMAX DFI 120	x		12620367
FILTERMAX DFO 120		x	12620667

**Please note:**

Does not include filter cartridges, inlets, outlets and dust handling system. These items must be ordered separately.

## System Parts

To get a complete system you need to choose your system parts

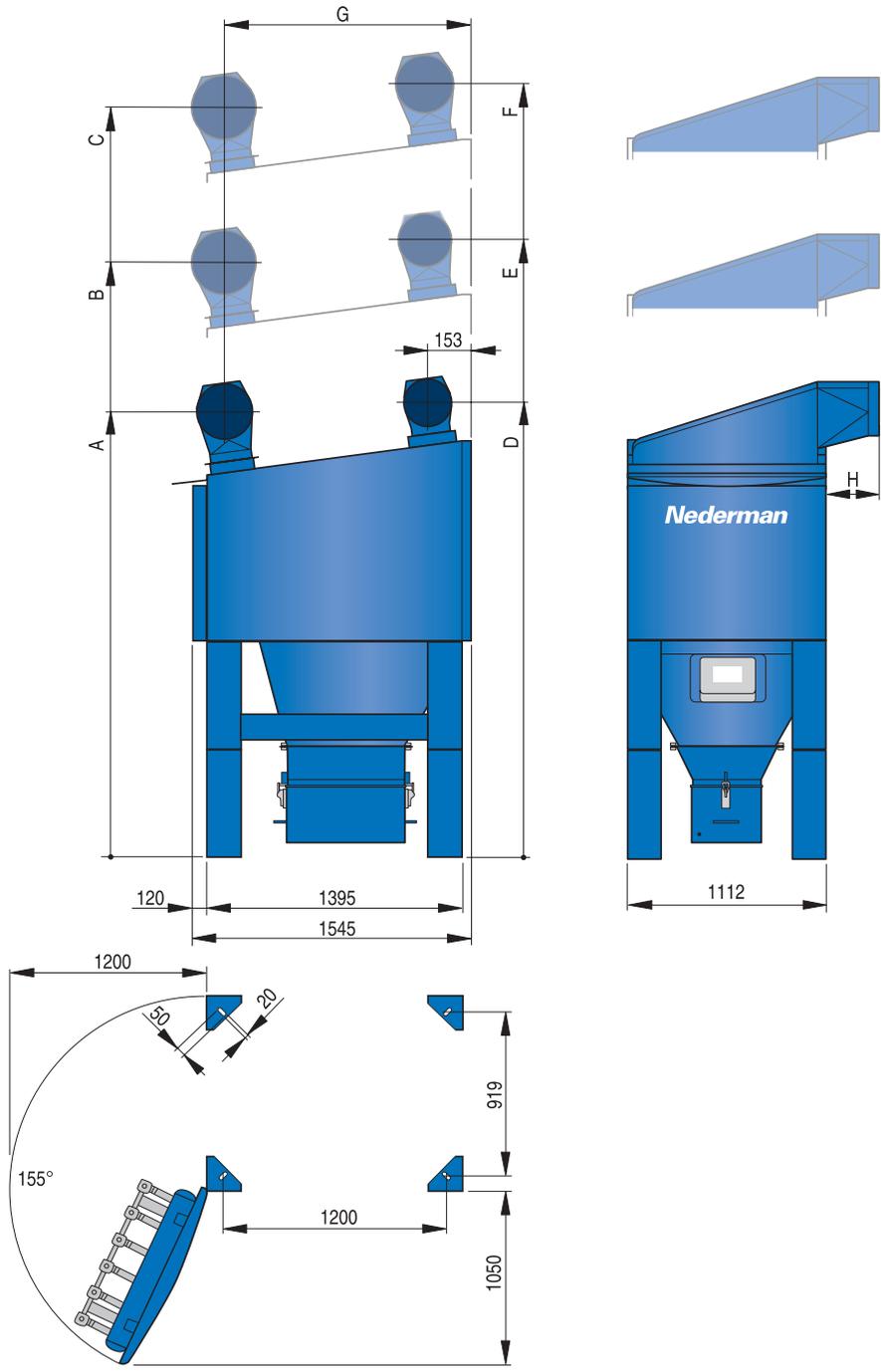
Description	FilterMax DFI Part. No	FilterMax DFO Part. No	
<b>Inlet:</b> Connection diameter Ø250 mm / 10"	12372070	12373561	
<b>Inlet:</b> Connection diameter Ø315 mm / 12"	12372071	12373562	
<b>Inlet:</b> Connection diameter Ø400 mm / 16"	12372072	12373563	
<b>Inlet:</b> Connection diameter Ø500 mm / 20"	12372073	12373564	
<b>Outlet:</b> Connection diameter Ø315 mm / 12"	12372057	12373565	
<b>Outlet:</b> Connection diameter Ø400 mm / 16"	12372058	12373566	
<b>Outlet:</b> Connection diameter Ø500 mm / 20"	12372059	12373567	
<b>Dust handling system:</b> Container kit 50 lit / 13.2 gal. The kit contains adapter and suitable extension legs.	12373549	12373550	
<b>Dust handling system:</b> Container kit on wheels, 100 lit / 26.5 gal. The kit contains adapter and suitable extension legs.	12373572	12373571	
<b>Rotary air lock dust feeder kit</b> For automatic transport of collected dust. The kit contains adapter and suitable extension legs.	12373574	12373573	
<b>Filter cartridge, 12m<sup>2</sup> / 130 ft<sup>2</sup>, PW NS-95-12-6, (6-pack) / W3</b> PTFE impregnated (Non-Stick), spun bound polyester. Suitable for fumes and fine to medium dust. Washable. Efficiency 99% at 0.5 µm.	12373301*	12373301*	
<b>Filter cartridge, 12m<sup>2</sup> / 130 ft<sup>2</sup>, PW-PTFE-95-12-6, (6-pack)</b> PTFE membrane, laminated to spun bound polyester. For fine to medium particles. Washable. Efficiency 99.9% at 0.5 µm.	12375387*	12373558*	
<b>Filter cartridge, 10m<sup>2</sup> / 108 ft<sup>2</sup>, Antistatic, PWA-95-10-6, (6-pack)</b> Aluminium coated spun bound polyester. Suitable for ignition sensitive, medium to coarse particles. Washable. Efficiency: 99 % at 0.5 µm.	12372749*	12372749*	
<b>Filter cartridge, 10m<sup>2</sup> / 108 ft<sup>2</sup>, Antistatic PTFE, PWA-PTFE-95-10-6, (6-pack)</b> Aluminium coated spun bound polyester, laminated with a PTFE membrane. Suitable for ignition sensitive, medium to coarse particles. Washable. Efficiency: 99.9 % at 0.5 µm.	12373337*	12373337*	

\* Only for ordering with a FilterMax DF. Part numbers for replacement filter cartridges can be found in the instruction manual or [www.nederman.com](http://www.nederman.com).

## Accessories

Description	FilterMax DFI Part. No	FilterMax DFO Part. No	
<b>Extra dust container 50 lit / 13.2 gal</b>	12373482	12373547	
<b>Extra dust container (incl. lid) 100 lit / 26.5 gal</b>	12373899	12373899	
<b>dP control kit</b> Is used for controlling the cleaning more efficiently and with better supervision. Saves pressured air in some applications with intermittent load. Equipped with alarm functions for high fall of pressure for filter.	12373603	12373603	
<b>Shut off valve</b> An air venting type. Should be installed in the compressed air pipe line. Is used to shut off the compressed air supply before any service on the system is done.	12372083	12372083	
<b>Pressure switch for compressed air</b> Protects the filter from damage during use without compressed air. Must not be placed in explosion risk areas.	12372142	12372142	
<b>Filter regulator</b> Is used for setting the correct air pressure. Separates dust in the pressured air why it also protects the valves. Should be installed in the compressed air pipe line. Must be positioned in a frost free environment.	12372064	12372064	
<b>Pressure gauge kit</b> Measures the pressure drop over the filter cartridges. Is mounted on the FilterMax stand.	12372063	12372063	
<b>Filter module</b> Filter module for additional capacity, max 4 modules in one unit.	12373659	12373660	
<b>FilterMax DF W3 kit</b> The kit includes dP Control kit, filter regulator, shut off valve, flashlight and plastic bags for the dust container. With this kit the FilterMax DF is BGIA-certified for the highest available welding fume category (W3). Welding fume category W3 means that the unit is able to reliably extract and clean low, medium and high alloyed steels, e.g. containing a part of nickel and chrome of 30% and more with a separation efficiency of ≥ 99%. With this kit the FilterMax DF is certified according to the international effective standard DIN EN ISO 15012-1 (2005) that controls industrial and health protection for welding and related processes and the requirements, examination and identification of air cleaning systems.	12375080	12375080	

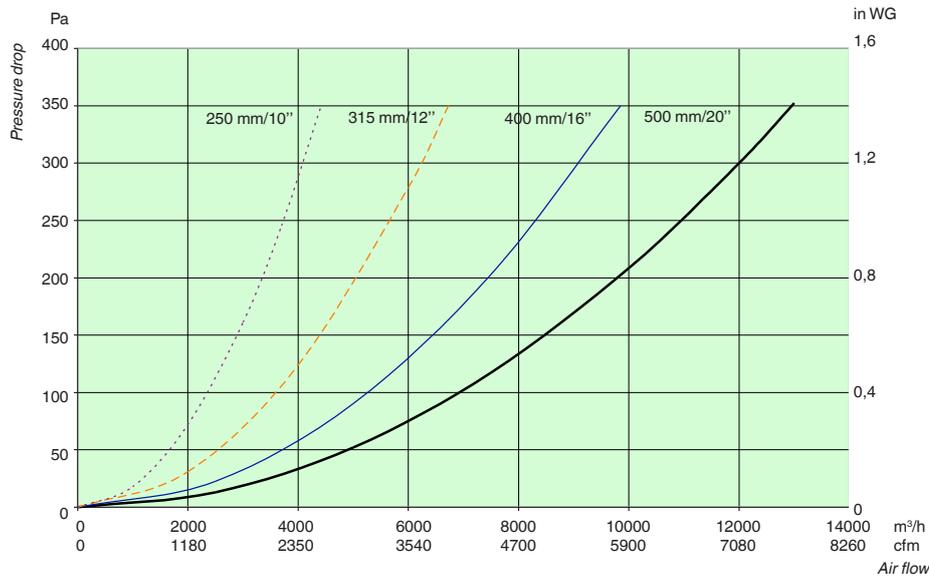
## Dimensions



Inlet/Outlet inner diameters (mm / inch)				
	250 / 10	315 / 12	400 / 16	500 / 20
A	-	2615 / 103	2685 / 106	2810 / 111
B	-	3535 / 139	3605 / 142	3730 / 147
C	-	-	4525 / 178	4650 / 183
D	2590 / 102	2700 / 107	-	-
E	3510 / 139	3620 / 143	3690 / 146	-
F	-	4540 / 179	4610 / 182	4740 / 187
G	-	1195 / 47	1195 / 47	1195 / 47
H	270 / 11	315 / 12 ½	390 / 15 ½	440 / 17 ½

\* The height dimensions are valid with a 50 l / 13.2 gallon bin.  
If a 100 l / 26.5 gallon bin is used add 450 mm / 18"

## Pressure drop for inlet plus outlet



Actual working pressure will depend on application and dimensioning.

## Environmental data

Model	DF 40	DF 80	DF 120
Weight (kg/lbs)	630 / 1386	900 / 1980	1200 / 2640
Noise, LpAeq pulse and air flow*	50 dBA	63 dBA	73 dBA
Recovery level % of weight	94%	93%	93%

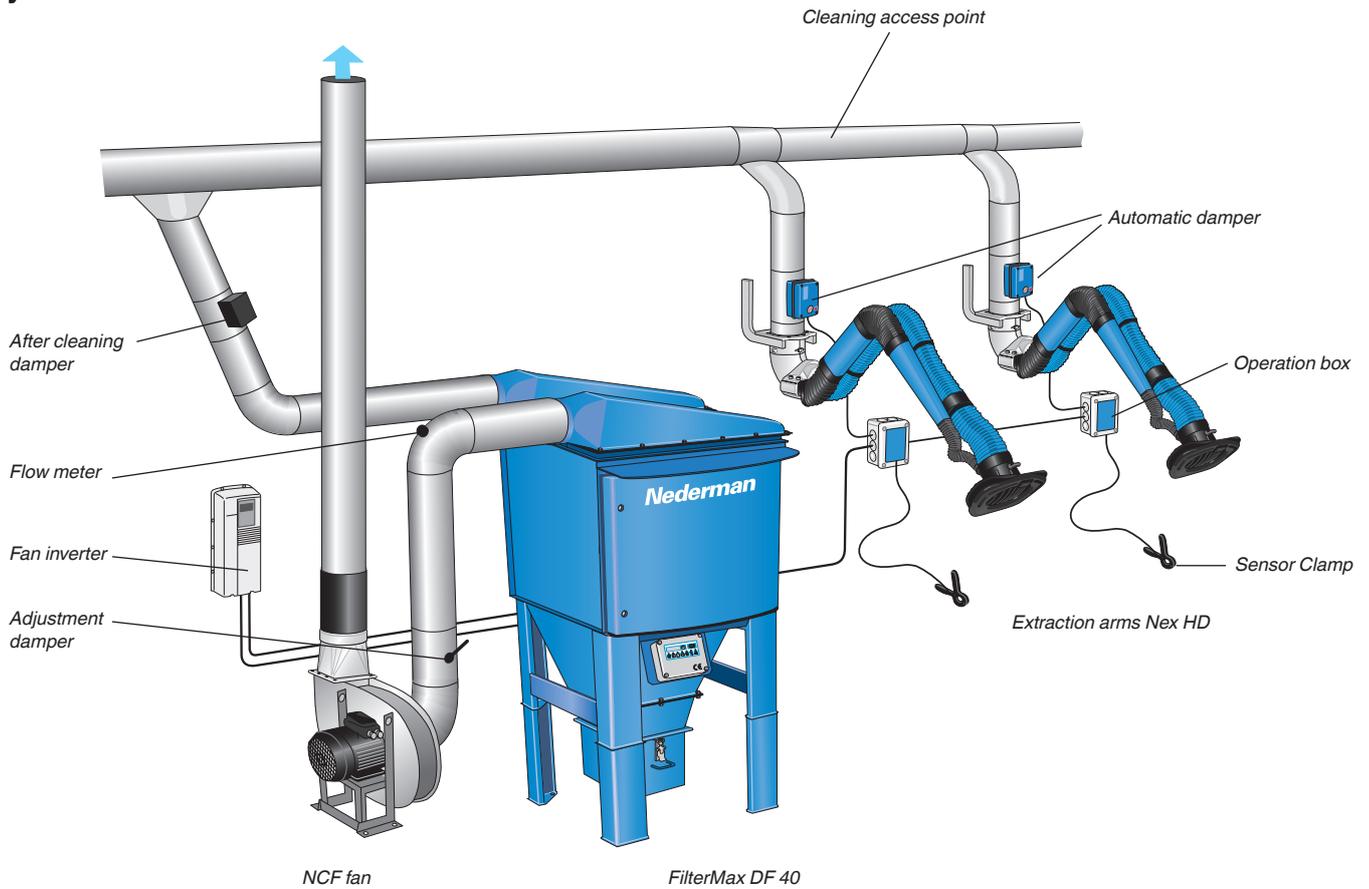
\*According to ISO 11203

## Technical data

Model	DF 40	DF 80	DF 120
Weight	630 kg / 1386 lbs	900 kg / 1980 lbs	1200 kg / 2640 lbs
Number of filter cartridges	6	12	18
Total filter area	72 m <sup>2</sup> / 780 ft <sup>2</sup> 60 m <sup>2</sup> / 648 ft <sup>2</sup> (antistatic)	144 m <sup>2</sup> / 1560 ft <sup>2</sup> 120 m <sup>2</sup> / 1296 ft <sup>2</sup> (antistatic)	216 m <sup>2</sup> / 2340 ft <sup>2</sup> 180 m <sup>2</sup> / 1944 ft <sup>2</sup> (antistatic)
Airflow (depending on load and application)	2200 - 4300 m <sup>3</sup> /h 1300 - 2600 cfm	4300 - 8600 m <sup>3</sup> /h 2600 - 5200 cfm	6500 - 13000 m <sup>3</sup> /h 3900 - 7800 cfm
Compressed air requirements	4 - 6 bar / 60 - 90 psi, water and oil free		
Compressed air consumption	70 N-litres/min at 30 sec intervals, 35 N-litres/cleaning pulse 2.5 cfm/min at 30 sec intervals, 1.25 cfm/cleaning pulse		
Voltage supply	100 V, 120 V, 230 V, 50/60 Hz		
Ambient temperature	-20°C to +60°C / -5°F to 140°F		
Process air (dry) temperature	0°C to +60°C / 32°F to 140°F, Not condensing		
Dimensioned pressure drop*	1200 Pa / 5" WG		
Filtration	99% or 99.9% (PTFE-filter) at 0.5 µm (after some time in operation), BGIA class M**		
Material description	3 mm painted steel (FilterMax DFI, DFO), epoxy based zinc primer and top coat (DFO only))		
Environment classes ***	C2 = low corrosion risk, indoors, unheated air varying temperature (FilterMax DFI) C4 = high corrosion risk, outdoors polluted urban areas and coastal areas (FilterMax DFO)		
Installation	Indoor / outdoor		
Protection class	IP 54		
Relay voltage, accessory	24 V AC, maximum 60 VA		
Working pressure	0 to -5 kPa, not overpressure		
Pulse noise	50 dB Lp Aeq, 30 s		
Noise level	DF40: 50 dBA, DF80: 63 dBA, DF120: 73 dBA		

\*Not including inlet/outlet \*\*According to EN 60335-2-69 \*\*\*According to EN ISO 12944

## System installation



- To avoid pressure losses and dust deposits in the system it is important to use the correct duct diameter. The transport velocity shall be at least 10-12 m/s (2000-2400 ft/min) for fume and 15-20 m/s (3000-4000 ft/min) for dust. Take velocity into account when choosing the duct diameters. The velocity must never decrease on the way to the FilterMax. Use large radius bends and 30° branches.
- If the filtered air shall be recirculated, we recommend that you install a safety filter between the fan and the FilterMax, for example the FilterMax SFC.
- Take the fire risk into account when you are working with oily materials or thermal cutting.
- Use a pre-separator/spark trap before the filter if there is a risk of sparks reaching the filter (grinding, cutting).
- Use pre-coating and install a fire extinguisher system if you are working with a heavily oiled material.

Model	Inlet (mm / Inch)	Outlet (mm / Inch)
FilterMax DF 40	Ø 250/315 / 10"/12"	Ø 315/400 / 12"/16"
FilterMax DF 80	Ø 315/400 / 12"/16"	Ø 400/500 / 16"/20"
FilterMax DF 120	Ø 400/500 / 16"/20"	Ø 500 / 20"

# KOMSA

KOMSA ITALIA SRL - Via A. Moro, 18 - 40068 S. LAZZARO DI SAVENA (BO)

Tel. +39.051.625.55.33 +39.051.625.60.61 Fax +39.051.625.51.88

www.komsa.it e-mail info@komsa.it