Technical leaflet	Date
9880013100	2009-05-28

Nederman
IMPROVING YOUR WORKSPACE

FilterMax DX

Explosion protected filter for a dust free and safe environment

FilterMax DX is a module-built high capacity filter for explosive dry dust. The filter is designed for working environments that demand explosion protection. Each module has an airflow capacity of maximum 4.000 m^3/h (2350 cfm) and up to three modules can be combined for a total flow of 12.000 m^3/h (7000 cfm). For larger flows, several FilterMax DX units can be used in parallel. FilterMax DX has a strengthened chassis with double earthing and an explosion relief panel. It is also equipped with Nederman's unique pulse-jet system for filter cleaning. The FilterMax DX is designed for industrial handling of dry dust. With its sturdy design, smooth interior surfaces, optimised angles of repose and digital monitoring, the filter fulfils stringent demands for continuous operation and effective filtering.

- To simplify use and guarantee optimum performance, FilterMax DX 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 DX can also be cleaned after operation if so desired.

- The FilterMax DX 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. The filter cartridge is available in two materials, polyester with a conductive layer and condutive polyester laminated to a PTFE membrane.

Models

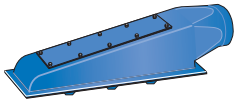
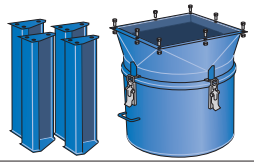
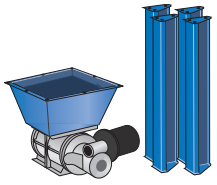
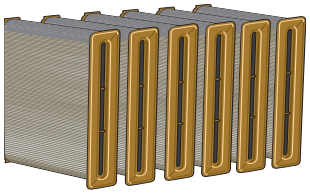
Description	Part No*
FilterMax DX 3000 TR (Top Relief)	12610167
FilterMax DX 3000 SR (Side Relief)	12610967
FilterMax DX 6000 TR (Top Relief)	12610267
FilterMax DX 6000 SR (Side Relief)	12610367
FilterMax DX 9000 SR (Side Relief)	12610467
FilterMax DX 9000 SR II (Side Relief)	12610567

* Units are only sold after special approval and evaluation of the applicant. Part numbers for ordering are given after approved dust application

FilterMax DX 3000 FilterMax DX 6000 FilterMax DX 9000

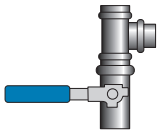
System Parts

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

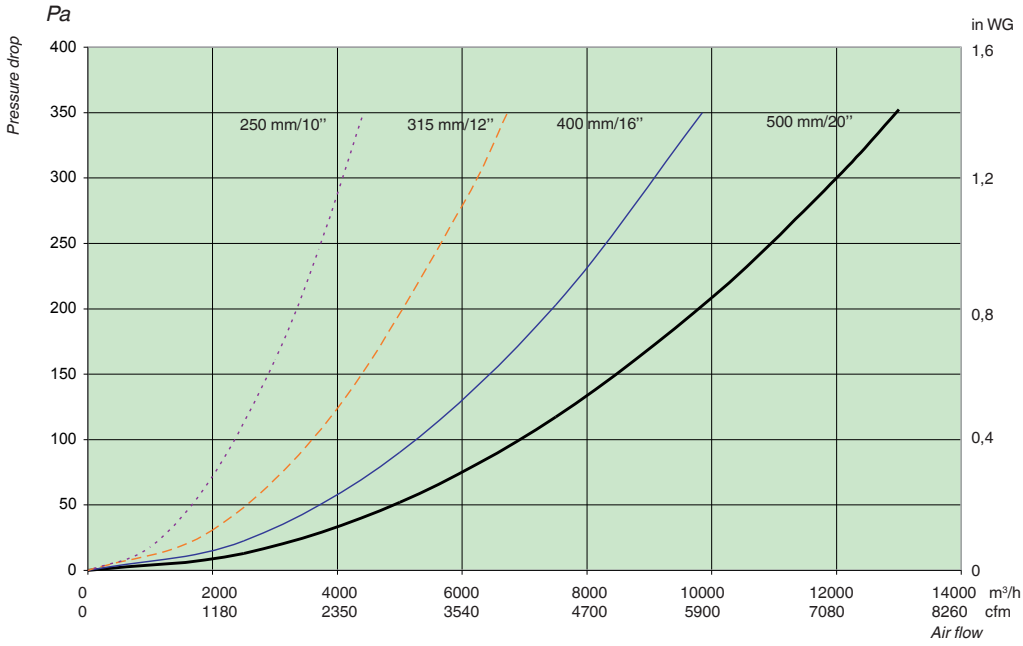
Description	Part No	
Inlet and outlet Ø 250 mm/10”	12372664	
Inlet and outlet Ø 315 mm/12”	12372665	
Inlet and outlet Ø 400 mm/16”	12372666	
Inlet and outlet Ø 500 mm/20”	12372667	
Dust handling system, container kit 50 l/13.2 gal. (includes adapter and suitable extension legs)	12372663	
Relief duct adapter, L=926mm/36.5” Rectangular - round transition.	12372765	
EX approved none-flame propagatory rotary valve kit. Rotary air lock kit DX, incl. starter for the rotary air lock, rotary valve, extension legs and safety switch.	12374576	
Filter cartridge, 10 m²/108 ft². Antistatic, PWA-95-10-6 (6-pack) Antistatic spun bound polyester. Suitable for dust. Efficiency 99% at 0.5 µm. Washable.	12372749*	
Filter cartridge, 12 m²/130 ft². Antistatic, PWA-95-12-6 (6-pack) Antistatic spun bound polyester. Suitable for dust. Efficiency 99% at 0.5 µm. Washable.	12373757*	
Filter cartridge, 10 m²/108 ft². Antistatic PTFE, PWA-95-10-6 (6-pack). Antistatic spun bound polyester laminated with a PTFE membrance. High efficiency filter with extremely good cleanability. Efficiency 99.9% at 0.5 µm. Washable.	12373337*	
Filter cartridge, 10 m²/108 ft² Antistatic, PWA NS -75-10-6 (6-pack) Antistatic spun bound polyester. Suitable for sticky dust. Efficiency 99% at 0.5 µm. Washable.	12374404*	
Filter cartridge, 10 m²/108 ft² Antistatic, PWA HD -95-10-6 (6-pack) Antistatic spun bound polyester. Suitable for medium/coarse asbrasive particles. Efficiency 99% at 0.5 µm. Washable.	12374636*	

* Only for ordering together with FilterMax DX.
Part No. for replacement filters can be found in the Instruction Manual.

Accessories

Description	Part No	
Shut off valve 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	
Pressure switch (compressed air) Protects the filter from damage during use without compressed air. Shall not be placed in explosion risk areas.	12372142	
Filter regulator Fit to set the correct air pressure. Remove both particles and liquid in the compressed air to protect the valves. Must be placed frost free.	12372064	
IIsolation valve* Isolation device preventing explosion in one system part from spreading to another.		
Dim. 200 mm	12374427	
Dim. 250 mm	12374399	
Dim. 315 mm	12374398	
Dim. 400 mm	12374397	
Dim. 500 mm	12374396	
*) Shall be installed 4 - 6 m away from the FilterMax. A pressure resistant pipe must be used to connect between Isolation valve and FilterMax.		

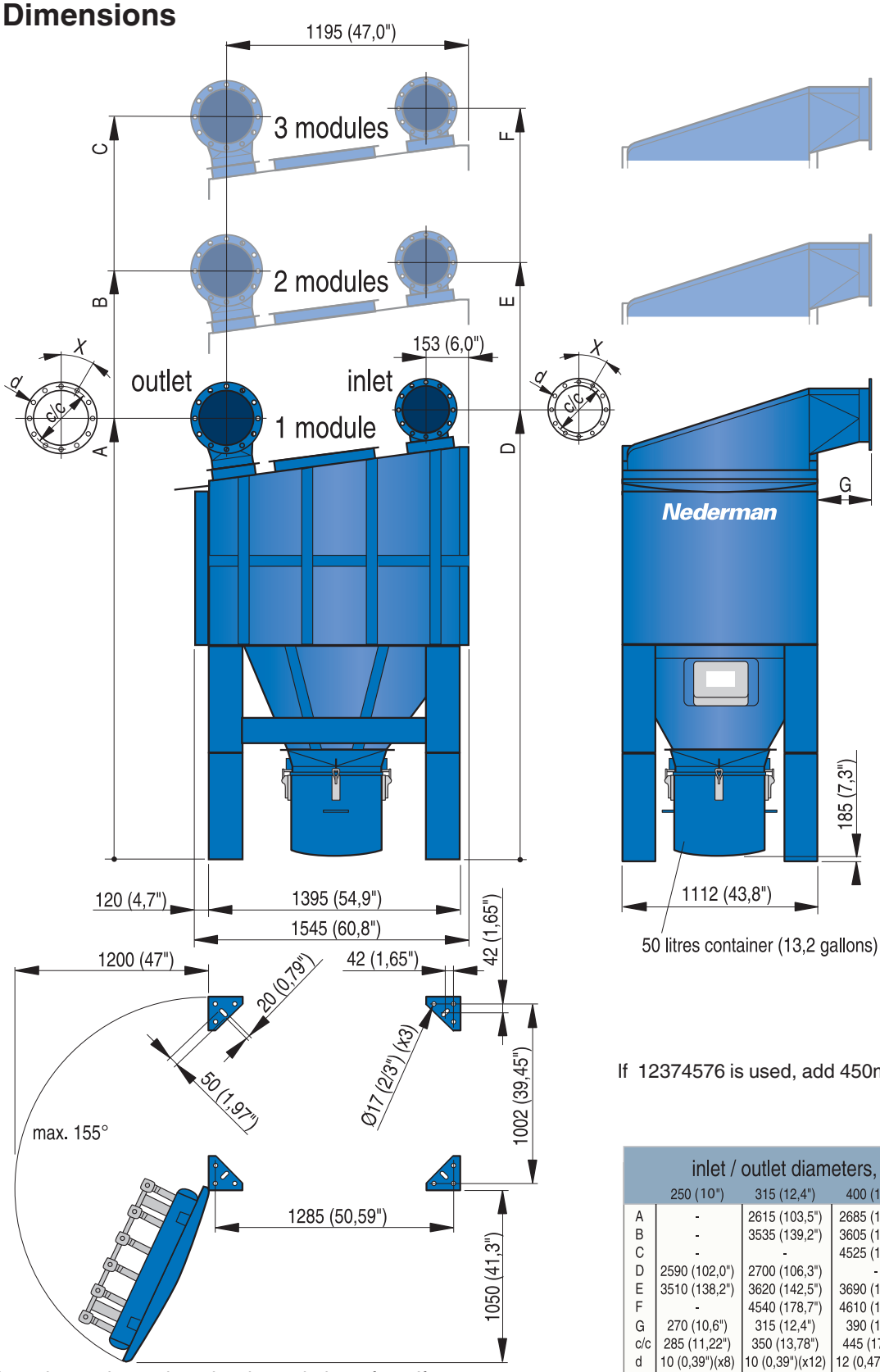
Pressure drop for inlet plus outlet



Environmental data			
Model	3000	6000	9000
Weight (kg/lbs)	720/1587	1170/2579	1630/3594
Noise, LpAcq pulse*	50 dB	50 dB	50 dB
Recovery level, % of weight	94%	93%	93%

* Noise generated by the cleaning, fan noise not included

Dimensions

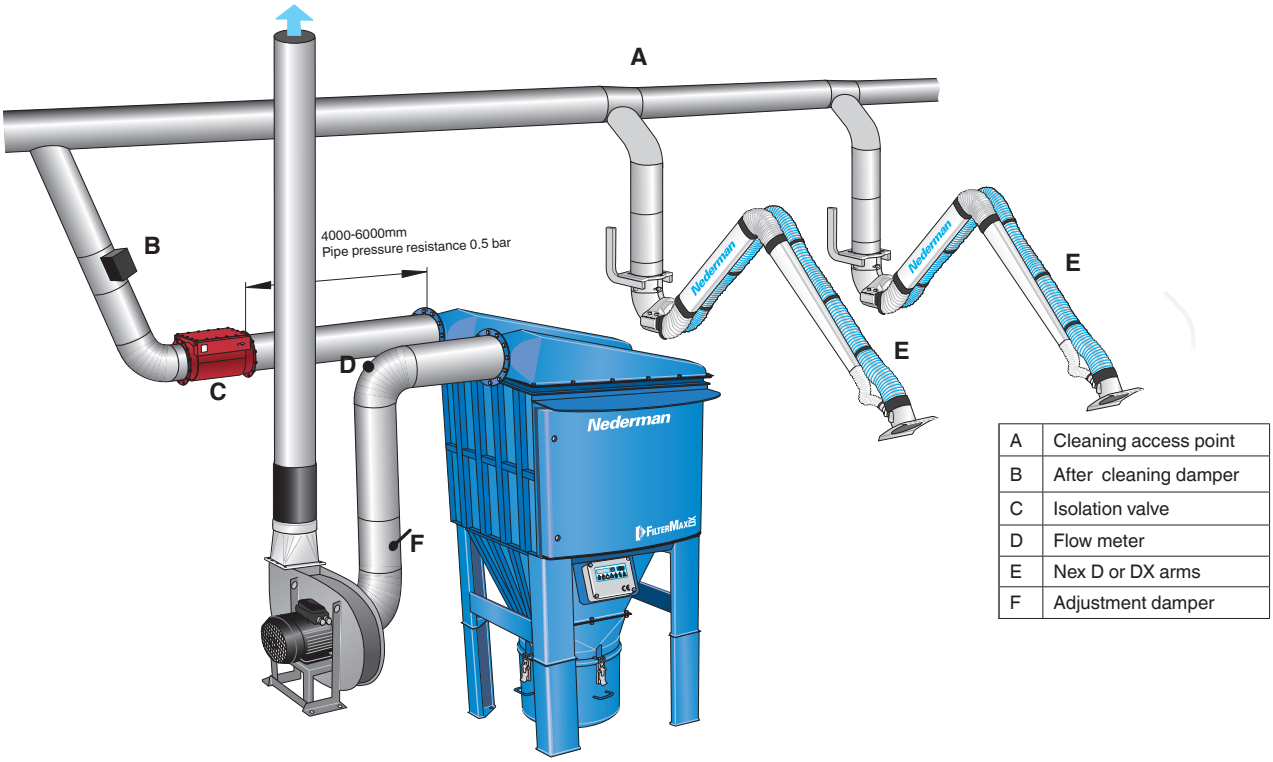


The unit must be anchored to the underly surface. If concrete is used it must be at least 380 mm (15") thick and of good quality. Anchoring by safety approved expansion bolts, M16 125 mm.

If 12374576 is used, add 450mm/18" to the height.

inlet / outlet diameters, mm (inch)				
	250 (10")	315 (12,4")	400 (15,7")	500 (20")
A	-	2615 (103,5")	2685 (105,7")	2810 (110,6")
B	-	3535 (139,2")	3605 (141,9")	3730 (146,9")
C	-	-	4525 (178,1")	4650 (183.1")
D	2590 (102,0")	2700 (106,3")	-	-
E	3510 (138,2")	3620 (142,5")	3690 (145,3")	-
F	-	4540 (178,7")	4610 (181,5")	4740 (186,6")
G	270 (10,6")	315 (12,4")	390 (15,4")	440 (17,3")
c/c	285 (11,22")	350 (13,78")	445 (17,52")	545 (21,46")
d	10 (0,39")(x8)	10 (0,39")(x12)	12 (0,47")(x12)	12 (0,47")(x16)
X	45°	30°	30°	22,5°

System installation example



A	Cleaning access point
B	After cleaning damper
C	Isolation valve
D	Flow meter
E	Nex D or DX arms
F	Adjustment damper

To avoid pressure losses and dust deposits in the system it is important to use the correct duct diameter. The transport velocity must be at least 15-20 m/s (3000-4000 ft/min). Take velocity into account when choosing the duct diameters. The velocity must never decrease in the system to the FilterMax. Use only large radius bends with 30°-45° branches. In some cases it is necessary to install an explosion-safe damper in the duct to prevent the spreading of explosions.

NB! To adjust the arirflow, a damper in the clean air duct is recommended. As an alteranitve the airflow can be controlled with Nederman Fan Inverter (accessory)

Technical data

Model	**DX3000**	**DX6000**	**DX9000**
Weight Kg/(lbs)	720 / (1587)	1170 / (2579)	1630 / (3594)
No. of filter cartridges	6	12	18
Total filter area m^2 /(ft^2)	60 m^2 / (645ft^2)	120 m^2 / (1290ft^2)	180 m^2 / (1930ft^2)
Airflow (depending on application) m^3/(cfm	2000 - 4000m^3 1200 - 2350 cfm	4000 - 8000 m^3 2350 - 4700 cfm	6500 - 12000 m^3 3800 - 7000 cfm
Explosion panel area m^2/(ft^2)	3000 SR 0,5 m^2 / (5.4 ft^2) 3000 TR 0,5 m^2 / (5.4 ft^2)	6000 TR 0,5 m^2 /(5.4 ft^2) 6000 SR 0,5 m^2/(5.4 ft^2)	9000 SR 0,5 m^2 /(5.4 ft^2) 9000 SR II 1,0 m^2 /(10.8 ft^2)
Relief direction	Upwards TR Backwards SR	Upwards TR Backwards SR	Backwards
Compressed air pressure	4-6 bar (58 - 87 PSI)		
Compressed air use	70 N-litres/min at 30 sec intervals (35 N-litres/pulse) (9.2 gallon/pulse)		
Supply voltage	100V, 110V, 230V AC 50/60 Hz		
Ambient temperature	-20°C to +40°C (-4 - 104 F)		
Process air	0 to 60°C (32 - 140F) Non-condensing		
Dimensioned pressure drop*	1,200 Pa (5" WG)		
Separation efficiency	99% or 99.9% (PTFE) by weight (BIA class M)		
Protection class	IP65		
Pulse noise	50 dB LpAeq, 30s		

* Not including inlet/outlet