

# User Manual

## NX-2000/4000 without Fan. For Coolant/Oil Mist.

### Coolant or Oil Mist.

NX mechanical oil mist filter is designed to eliminate coolant or oil mist from lathing, milling, drilling, sawing, water cutting etc.

### Filter Cassettes.

NX-2000/4000 oil mist filters are equipped with two self-draining filter cassettes of nailed glass-fiber and a HEPA H13 filter. Each filter has a separate pressure gauge (manometer). Over 99,95% filter efficiency is achieved. The cleaned air can be re-circulated into the premises. Keeps heating costs down.

### Application.

NX-2000 for 1-4 machines. NX-4000 for 1-8 machines.

### Complete Unit without Fan.

NX is a complete unit of powder coated steel sheet with 2 nailed glass-fiber filter cassettes and HEPA filter. Inlet from left or right with inlet flange with inside measure D.200 mm (NX-2000) and D.315 mm (NX-4000). Cover for the not used inlet. Oil return pipe with 1 inch outside thread. The NX-2000/4000 oil mist filters without fan shall be connected to a separate fan or a central extraction system. The outlet flange has an inside measurement of D.200 mm (NX-2000) and D.315 mm (NX-4000).

### Accessories

As accessory you can get 0.5 m Extension Legs.



	Art.Nr.
<b>NX-2000 Filter without Fan for Coolant and Oil Mist</b> incl. filterbox and legs of powder painted steel sheet, oil return pipe with 1" outside thread, inlet from the right or left with 200mm inlet flange ( inside measure) and cover plate for the not used inlet side, outlet flange 200mm (inside measure), 2 filter cassettes of nailed glass-fiber, 10m <sup>2</sup> (10+10m <sup>2</sup> ) and 8 m <sup>2</sup> (8+8+8 m <sup>2</sup> ), HEPA H13 filter 22m <sup>2</sup> and 3 pcs pressure gauges (manometers). <b>Measurements: 1600x640x750mm.</b>	P-631
<b>NX-4000 Filter without Fan for Coolant and Oil Mist</b> incl. filterbox and legs of powder painted steel sheet, oil return pipe with 1" outside thread, inlet from the right or left with 315mm inlet flange ( inside measure) and cover plate for the not used inlet side, outlet flange 315mm (inside measure), 2 filter cassettes of nailed glass-fiber, 21 m <sup>2</sup> (21+21 m <sup>2</sup> ) and 15 m <sup>2</sup> (15+15+15 m <sup>2</sup> ), HEPA-filter 44 m <sup>2</sup> and 3 pcs pressure gauges(manometers). <b>Measurements: 1600x800x900mm.</b>	P-633
<b>Extension Legs 0.5 m (4 pcs.) for NX-1000/2000/4000</b>	P-322
<b>Replacement Nailed Glass-Fiber Filter Cassette (10m<sup>2</sup> EU-5). First from the bottom for NX-2000/6000 (NX-6000 3 pcs).</b>	P-318
<b>Replacement Nailed Glass-Fiber Filter Cassette (8m<sup>2</sup> EU-5/9). Second from the bottom for NX-2000/6000 (NX-6000 3 pcs).</b> This cassette is the only needed for NX-1000.	P-319
<b>Replacement Nailed Glass-Fiber Filter Cassette (21 m<sup>2</sup> EU-5). First from the bottom for NX-4000/8000 (NX-8000 2 pcs).</b>	P-320
<b>Replacement Nailed Glass-Fiber Filter Cassette (15 m<sup>2</sup> EU-9). Second from the bottom for NX-4000/8000 (NX-8000 2 pcs).</b>	P-321
<b>Replacement HEPA H13 Filter 22m<sup>2</sup> (99,95%) for NX-1000/2000/6000 (NX-6000 3 pcs)..</b>	P-264
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## 1.0 General Information

NX-2000/4000 Filters are mechanical Emulsion/Coolant Mist and Light Oil Mist separators with a degree of separation of 99,95 % for particles down to 0.1 micron.

The device is made of powder coated steel sheet with 4 integrated legs. As extra equipment there are 0.5m high legs.

The NX-2000 is equipped with an Expansion Chamber, one Glass-fiber Flies Filter Cassette with aluminium separators (E5) and one EU9, a HEPA H13 Filter and 3xPressure Gauge.

The NX-4000 is equipped in the same way as the NX-2000 but the second Glass-fiber Filter from the bottom is EU9.

### 1.1 Safety Note!

**Always disconnect the supply voltage before opening or servicing the device. Don't exhaust sparks or other objects which can cause fire.**



### 1.2 Range of application

Indoors for separation of emulsion/coolant mist and light oil mist from Lathes, Milling Machines, Drilling Machines and other works with the same problems.

### 1.3 Unit Description NX-2000/4000 without Fan.

~~XXXXXXXXXXXXXXXXXXXX~~

HEPA H13 Filter Box with Exenter Locks to press the Filter Box upwards. Door with 3 Pressure Gauges. One for HEPA Filter and two for the Glass Fiber Filters.

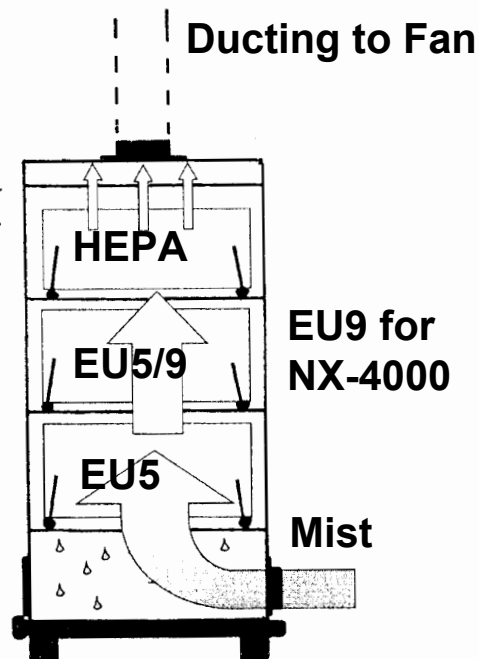
Glass Fiber Filter (EU5/EU9) with Aluminium Separators. Exenter Locks to press the Filter upwards.

Glass Fiber Filter(EU5) with Aluminium Separators. Exenter Locks to press the Filter upwards.

Air Inlet Flange: Alternatively left or right. Cover Lid.

Expansion Chamber.

2x1" Drainage pipes: Alternatively left or right. Cover Lid.



### 1.4 Installation.

The installation site is to be selected in such a way that the tubing distance is as short as possible. If possible mount the unit on a bracket on a wall or on a Stanchion to get the ducting leaning slightly downwards to the machine/machines. It makes liquid, which can condense in the ducting, go back to the machine/machines. It makes the filters last longer. The filtered liquid can be fed back to the machine/machines by it self. However a "Water trap" type Siphon has to be used at the drainage outlet of the NX unit to avoid air to be sucked through the drainage hose/pipe.

If you install the NX filter on the floor you need to equip it with 0.5m high legs (Extra equipment P-322). This to get enough height for having a collecting container for the filtered liquid on the floor.

Make certain that the accessibility for maintenance work is ensured.

The Machine/Machines normally have a connection tube to be used for mist extraction.

The connection of the ducting from the machine/machines to the NX Filter can take place alternatively to the left or to the right of the unit. The side which is not used shall be covered with the included lid. Only use oil/water tight and resistant tubes, bends and connections for the ducting.

The 1" drainage pipes for the filtered liquid are at the bottom of the unit, on the left and on the right side. Only one drainage pipe must be used. The other side shall be covered with the included lid.

The ducting system from the machine/machines shall be equipped with a lockable damper close to the NX filter's inlet. The damper is to be adjusted so only mist is extracted. No drops! Normally 0.5m/sec is needed in the door opening to avoid that mist will come out when the door of the machine is open.

## How to choose the right size of NX Filter.

Around 0.5m/sec. in the opening of a lathe or milling machine is needed to stop coolant mist from coming out when the door is opened.

To choose the right NX Filter you just need to measure the width and height of the opening, when the door is open. Multiply the figures with each other. With the measure in m<sup>2</sup> you can find the right NX Filter in the table below.

If you intend to have several machines on one NX Filter you just add the m<sup>2</sup> measures and check below.

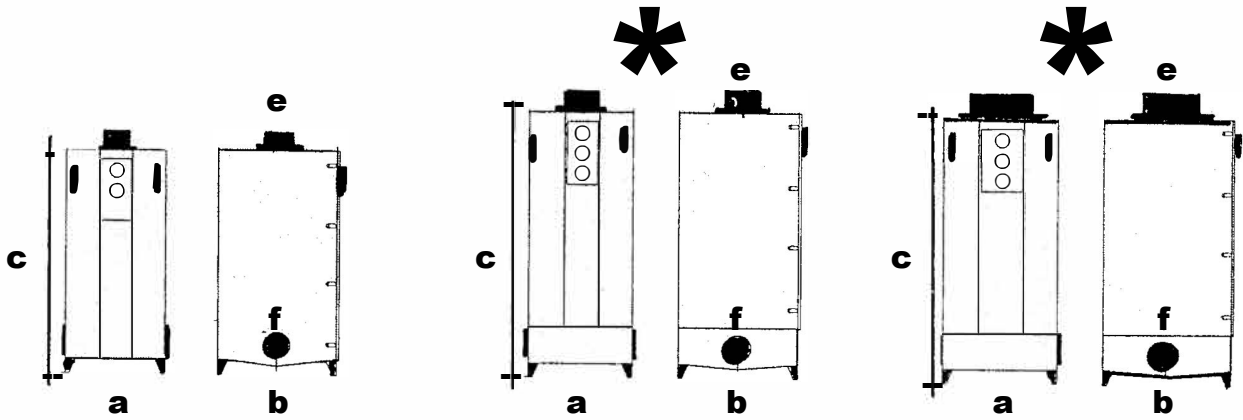
**To get 0.5m/sec. air velocity in the opening of the machine, the following NX Filters are recommended:**

Machin/Machines Opening size m <sup>2</sup>	Air Volume/hour	NX Filter
0.25m <sup>2</sup>	450m <sup>3</sup> /h	NX-400 or NX-600
0.5m <sup>2</sup>	900m <sup>3</sup> /h	NX-1000
0.75m <sup>2</sup>	1350m <sup>3</sup> /h	NX-1000 or NX-2000
1m <sup>2</sup>	1800m <sup>3</sup> /h	NX-2000
1.25m <sup>2</sup>	2250m <sup>3</sup> /h	NX-2000
1.5m <sup>2</sup>	2700m <sup>3</sup> /h	NX-4000
1.75m <sup>2</sup>	3150m <sup>3</sup> /h	NX-4000
2m <sup>2</sup>	3600m <sup>3</sup> /h	NX-4000 or NX-6000
2.25m <sup>2</sup>	4050m <sup>3</sup> /h	NX-4000 or NX-6000
2.5m <sup>2</sup>	4500m <sup>3</sup> /h	NX-6000
2.75m <sup>2</sup>	5000m <sup>3</sup> /h	NX-6000
3m <sup>2</sup>	5500m <sup>3</sup> /h	NX-6000
3.25m <sup>2</sup>	6000m <sup>3</sup> /h	NX-6000
3.5m <sup>2</sup>	6500m <sup>3</sup> /h	NX-8000
3.75m <sup>2</sup>	7000m <sup>3</sup> /h	NX-8000

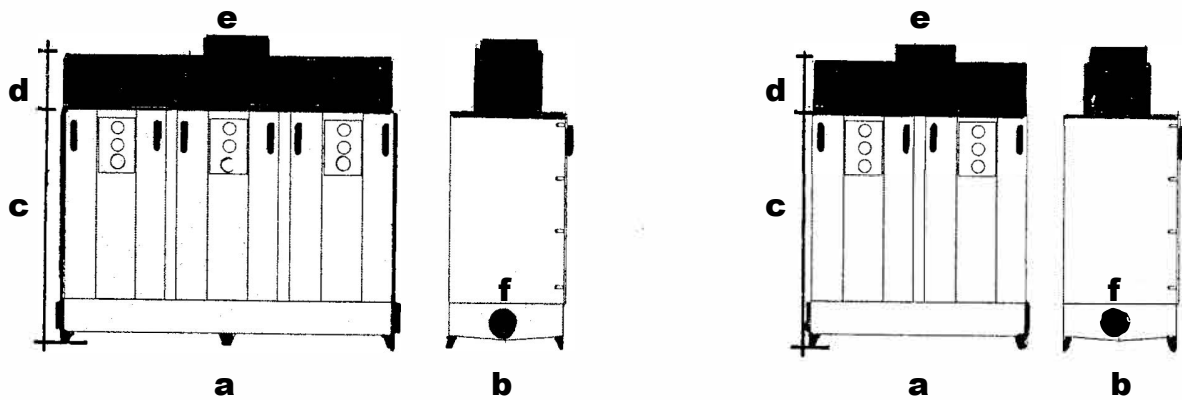
**Always choose the next larger size if you are unsure and if there are a lot of fine particles in the mist.**

**If you need further advice don't hesitate to contact our specialists on [info@plymoth.com](mailto:info@plymoth.com)**

# 1.5 Technical Data



Product	a(width)mm	b(depth)mm	c(mm)	d(mm)	e	f	Weight
NX-1000	640	750	1300	-----	d.160	d.160	134kg
NX-2000	640	750	1600	-----	d.200	d.200	176kg
NX-4000	800	900	1600	-----	d.315	d.315	248kg
NX-6000	2200	750	1600	500	d.400	d.400	522kg
NX-8000	1700	900	1600	500	d.400	d.400	496kg



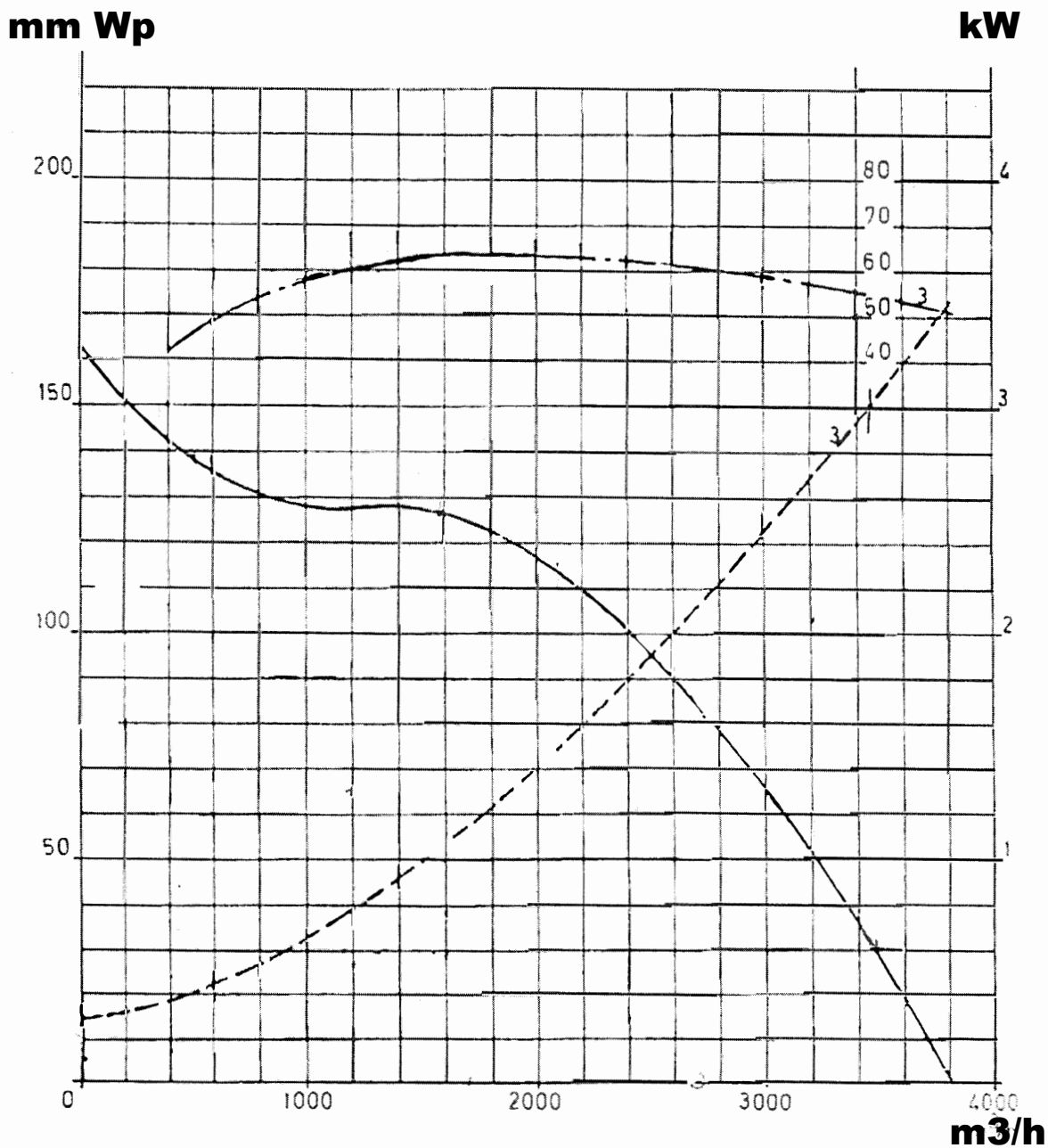
**Measures NX 1000-8000 without Fan.**

## Data Fan NX-2000.

The diagram below shows the Fan Data for the fan used in "NX-2000 with Fan".

Please see "Ducting NX-2000 with Fan" on next page. It shows which Airvolume you get with different length of Ducting, with this fan.

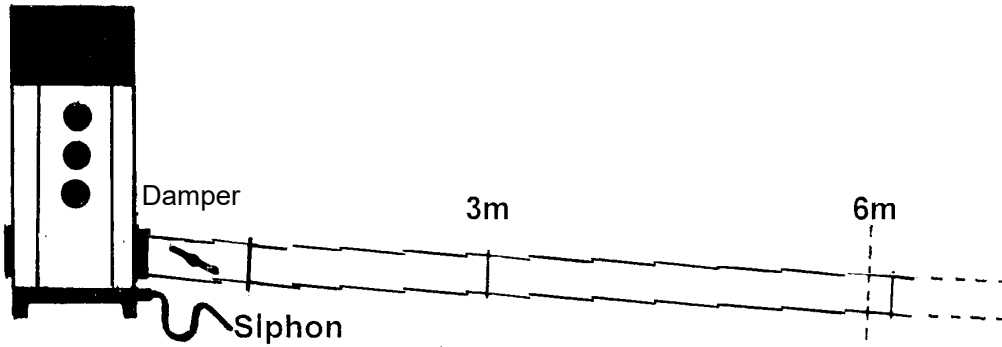
It is advisable to choose a fan with somewhat higher curves than the one below when the fan is separately mounted.



## NX-2000 Ducting, Pressure Drop, Airvolume and dB(A).

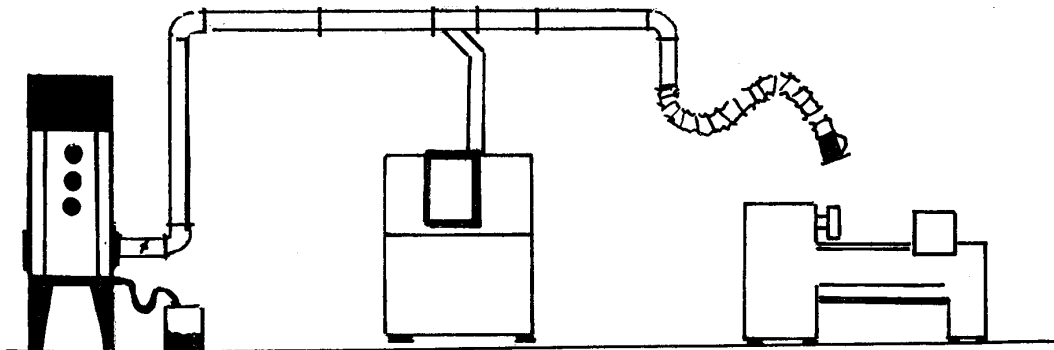
Pressure Drop is measured over each Filter. Meter/Sec and Airvolume are measured at the end of the ducting system. Noise level in dB(A) is at a 2m distance from the NX unit. The values bellow are measured with Clean Filters and the Damper horizontal (Full open). The Air Velocity and Airvolume have been measured at the end of a ducting system without bends. Depending on number of bends the figures become lower. Over time the measured values will become lower.

NX-2000 mounted high. (Wall, Stanchion or Ceiling)



Dia. 160mm Ducting	Pressure Drop over			m3/h	dB(A)
	HEPA	F5+F9	F5		
3m	165 Pa	270 Pa	260 Pa	2300	68
6m	160 Pa	260 Pa	250 Pa	2150	68
12m	155 Pa	240 Pa	235 Pa	2100	68
18m	150 Pa	230 Pa	220 Pa	1950	68
24m	145 Pa	220Pa	200 Pa	1800	68
30m	130 Pa	205 Pa	180 Pa	1750	68

NX Filter mounted on the floor with 0.5m Legs.





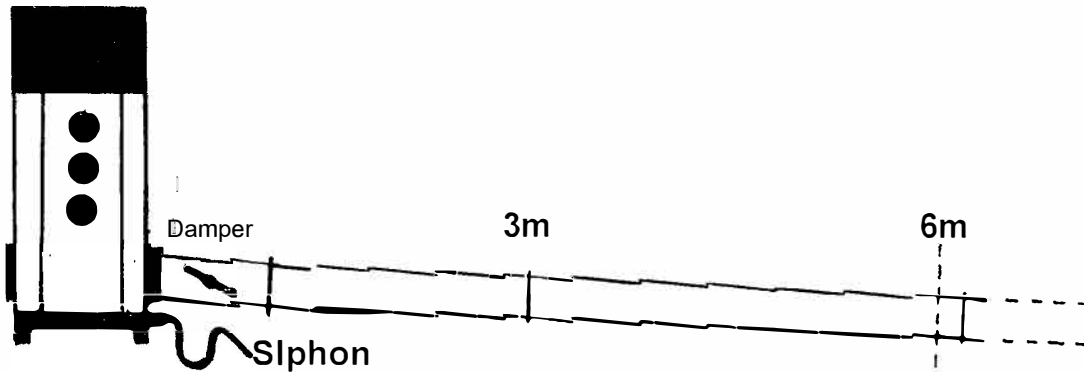
# NX-4000 Ducting, Pressure Drop, Airvolume and dB(A).

Pressure Drop is measured over each Filter. Airvolume is measured at the end of the ducting system.

Noice level in dB(A) is at a 2m distance from the NX unit.

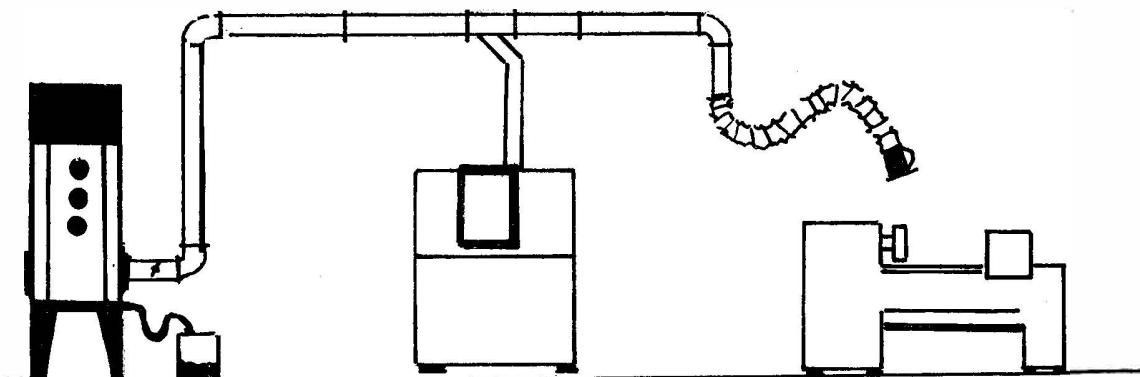
The values bellow are measured with Clean Filters and the Damper horizontal (Full open). The Airvolume hasbeen measured at the end of a ducting system without bends. Depending on number of bends the figures become lower. Over time the measured values will become lower.

## NX-4000 mounted high (Wall, Stanchion or Ceiling).



Duct	Pressure Drop over Filters			m3/h	dB(A)
	HEPA	F5+F9	F5		
3m(d. 250mm)	235 Pa	400 Pa	215 Pa	4650	75
6m(d. 200mm)	220 Pa	370 Pa	200 Pa	4350	75
12m -"-	215 Pa	345 Pa	190 Pa	4200	75
18m -"-	210 Pa	335 Pa	190 Pa	4100	75

## NX Filter mounted on the floor with 0.5 m Legs.



## 2.0 Maintenance

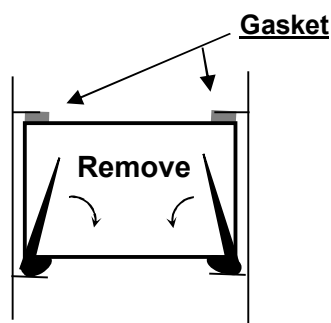
### 2.1 General Information

The filter cassettes are self cleaning and service life is normally around 2 years or more.

The HEPA-Filter should be changed after around 18 months or when the extraction is not good enough.

### 2.2 Filter Changes.

1. Turn unit off and loosen the quick-locking of the door. Remove the door from the device.
2. To remove the Filter Cassette, turn the exenter buckles down horizontally. Draw it out.
3. To remove the HEPA Filter, turn the exenter buckles down horizontally. Draw it out.

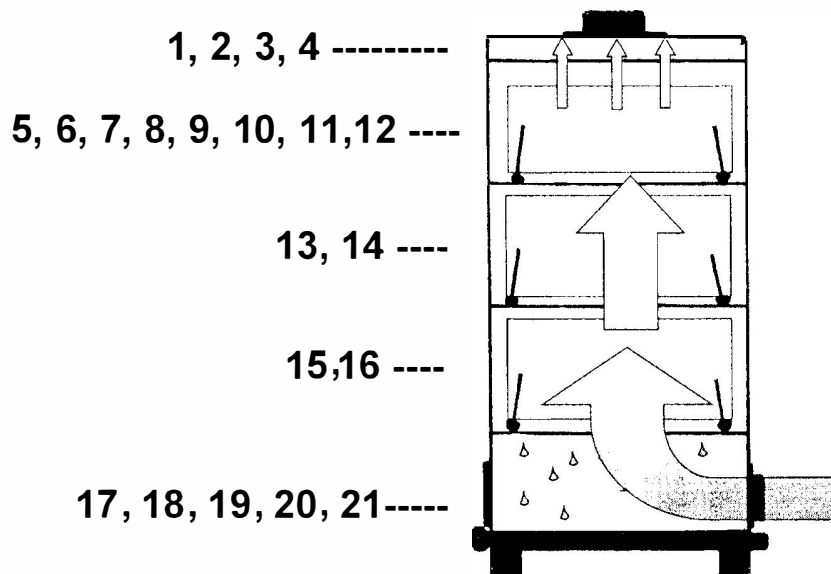


4. Install the new Filter/Filters with GASKET UPWARDS. Turn the exenter BUCKELS UPWARDS.

### 2.3 Replacement Filters

PRODUCT	NX-1000	NX-2000	NX-4000	NX-6000	NX-8000
Glass-fiber EU5/9	P-319	P-319	-----	3xP-319	-----
Glass-fiber EU5	-----	P-318	P-320	3xP-318	2xP-320
Glass-fiber EU9	-----	-----	P-321	-----	2xP-321
HEPA Filter	P-264	P-264	P-266	3xP-264	2xP-266

## 2.4 Spare Parts NX-2000/4000 without Fan.



**When ordering Spare Parts: Specify Name of Product. Number and Name from below. Quantity of each Part.**

1. Outlet Flange dia. 200mm.
2. Outlet Flange dia. 315mm.
3. -----
4. -----
5. NX-2000 Door complete (without Pressure Gauges).
6. NX-4000 Door complete (without Pressure Gauges).
7. NX-2000 Pressure Gaughe (1pc).
8. NX-4000 Pressure Gaughe (1pc).
9. NX-2000 Exenter Locker (1pc).
10. NX-4000 Exenter Locker (1pc).
11. NX-2000 HEPA Filter H13.
12. NX-4000 HEPA Filter H13.
13. NX-2000 Glass-fiber Filter EU5/EU9.
14. NX-4000 Glass-fiber Filter EU9.
15. NX-2000 Glass-fiber Filter EU5.
16. NX-4000 Glass-fiber Filter EU5.
17. NX-2000 Cover Lid Inlet.
18. NX-4000 Cover Lid Inlet.
19. NX-2000/4000 Cover Lid Drainage Pipe 1".
20. NX-2000 Inlet Flange d. 200mm.
21. NX-4000 Inlet Flange d. 315mm.



### **Declaration of conformity**

We, J. Plymoth AB, declare under our sole responsibility that the product lines **WF-Eco, MF-F9/HEPA, MF-Active Carbon, MF-HEPA/W3 18M2, MF-Eco/F9, MF-Eco/HEPA, MF-Filter-Tables, MF-Eco Filter-Tables, FK-Mesa Backdraft Filter-Tables, MKF Filter-Tables, Labbe, MF-Lab, MF-Eco Lab, CF Central Filters, Mobi-Oil, NX-Filters, Denta-Flex, Fica-Flex and VBF-Office** to which this declaration relates are in conformity with Directives 2006/42/EC, 2014/30/EU, 2011/65/EU and Standards EN 60204-1:2006, EN ISO 12100:2010, EN ISO 15012-1:2013, EN 61000-6-2:2005, EN 61000-6-3:2007, EN ISO 20607:2019.

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