PLYMOVENT®
clean air at work

ME-41/ME-42 BANKS

MIST ELIMINATOR; 5- AND 6-STEP FILTRATION

The MistEliminators ME-41 and ME-42 are stationary filter banks for mainly oil mist applications, to be used in machine tool processes. This comprises basically any process that uses metal working fluids like oil or an emulsion to cool or lubricate the operation.
The ME-41 bank is based on a 5-step filtration method which allows for exhaust to the atmosphere. In case of recirculation, it is recommended to use an ME-42 bank which is fitted with additional HEPA filters.

ME-4X/2 and ME-4X/3 are *single base filter banks*.
ME-4X/4 and ME-4X/5 are *dual base filter banks* that are composed of two interconnected single base ones.

Shown: ME-42/3

product data sheet

APPLICATIONS

The ME-41 and ME-42 banks are intended to be used for the following applications:
- metal working processes with "clean" or recycable low viscosity oil as a residue; e.g.
  - CNC machining centers for cutting, boring, drilling and honing
  - machines for metal forming operations like cold heading and stamping
  - oil mist produced by heat and surface treatments like hardening and wet grinding

Do **not** use the ME-41 and ME-42 banks for the following applications or in the following circumstances:
- oxy-fuel cutting
- aluminium laser cutting
- arc-air gouging
- paint mist
- extraction of hot gases (more than 45°C/113°F continuously)
- grinding aluminium and magnesium
- flame spraying
- extraction of cement, saw dust, wood dust, grit etc.
- explosive environments or explosive substances/gases

Note: this list is not all-embracing.

SPECIFICATIONS

Physical dimensions and properties				
Housing: • steel grade • steel grade no.	electro-zinc coated steel (according to DIN EN 10152) • DC01+ZE • 1.0330			
Colour: • air inlet module • filter modules	• grey RAL 7011 • grey RAL 7035			
Weight (net):	**ME-41/X**		**ME-42/X**	
	kg	*lbs*	kg	*lbs*
X = 2	206	*454*	274	*604*
X = 3	299	*659*	401	*884*
X = 4	420	*926*	555	*1,224*
X = 5	512	*1,129*	682	*1,504*
Filters				
Filter efficiency • ME-41 banks	ISO ePM1 90% according to EN ISO 16890			
Filter class • ME-42 banks	H13 according to EN 1822			
Pressure drop: • ME-41/X • ME-42/X	(for dimensional purpose) • 1300 Pa (5.1 in. WG) • 1500 Pa (6.0 in. WG)			
Negative pressure	max. 4000 Pa (16 in. WG)			
Performance				
Airflow: • ME-4X/2 • ME-4X/3 • ME-4X/4 • ME-4X/5	Max.: • 4000 m³/h (2350 CFM) • 6000 m³/h (3525 CFM) • 8000 m³/h (4700 CFM) • 10.000 m³/h (5875 CFM)			
Max. airflow is a ceiling value and generally not recommended as a design value for operating the ME unit, as it might lead to short lifespan of filters. The performance of the ME unit is next to airflow influenced by other variables like amount and composition of metal working fluid, process, temperature and pre-treatment. Ask your local expert on the recommended airflow for your system design.				
Ambient conditions				
Operating temperature: • min. • nom. • max.	 • 5°C (41°F) • 20°C (68°F) • 45°C (113°F)			
Max. relative humidity	80%			
Outdoor use allowed	no			
Storage conditions	• 5-45°C (41-113°F) • relative humidity max. 80%			
Options and accessories				
Selection required:				
Single base filter banks: • ME-INL-500 (1) • ME-INL-COV (1)	Ø 500 mm (19.7 in.): • inlet connection • inlet cover plate			
Dual base filter banks: • ME-INL-500 (1 or 2) • ME-INL-COV (max. 1)	Ø 500 mm (19.7 in.): • inlet connection • inlet cover plate			
Remaining options:				
CFD	constant flow damper			
OilPump 230V	oil container with electric pump			
OilPump 115V				

Scope of supply
• Single base filter banks: Assembled filter bank with common inlet - Oil container • Dual base filter banks: Assembled filter bank with common inlet (2) - Inlet join kit - Oil container (2)

Order information	
MistEliminator: • ME-41/2 • ME-41/3 • ME-41/4 • ME-41/5 • ME-42/2 • ME-42/3 • ME-42/4 • ME-42/5	Article no.: • 0000100796 • 0000100797 • 0000100798 • 0000100799 • 0000100801 • 0000100802 • 0000100803 • 0000100804
Number/package	1

Shipping data				
Gross weight (incl. pallet):	**ME-41/X**		**ME-42/X**	
	kg	*lbs*	kg	*lbs*
X = 2	236	*520*	309	*681*
X = 3	339	*747*	446	*983*
X = 4	480	*1,058*	625	*1,378*
X = 5	582	*1,283*	762	*1,680*
Harmonized Tariff Code	8421.39.2090			
Country of origin	Netherlands			

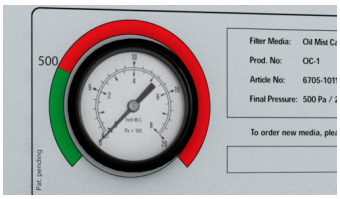
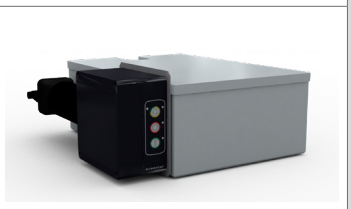
FILTER STAGES

1	**Air inlet module**; pre separator that distributes the air and prevents large particles from entering the filter package
2	**HydroFilter**; impinger to separate oil droplets and coalesce oil mist into droplets
3	**Aluminium mesh pre filter** to keep larger particles
4	**OC-1**; self-draining cassette filter that coalesces oil mist to droplets and collects *medium sized* particles
5	**OC-2**; self-draining cassette filter that coalesces oil mist to droplets and collects *fine* particles
6	**HEPA filter** for final filtration (ME-42 series only)

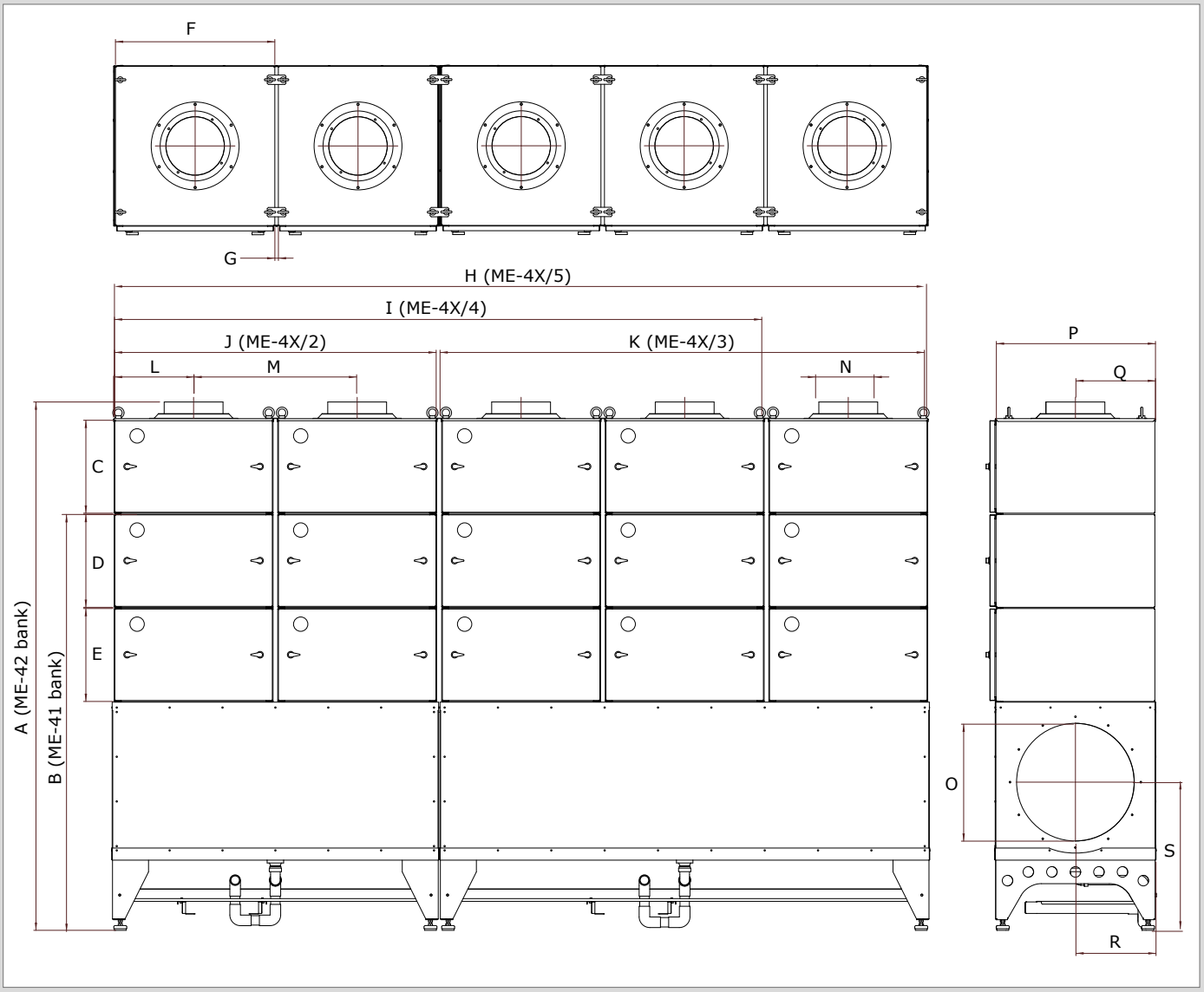
CONFIGURATIONS

Single base filter banks	ME-4X/2 and ME-4X/3
Dual base filter banks	ME-4X/4 and ME-4X/5, which are composed of two interconnected single base filter banks

FEATURES

A differential pressure gauge on each filter module indicates status and need for filter replacement.	
Easy to handle oil container. Contents: 8 liters (2 gallon).	
Option: OilPump; oil container with electric pump, serving both single and dual base filter banks.	

DIMENSIONS



	mm	inch
A	2245	88.4
B	1845	72.6
C	395	15.6
D	395	15.6
E	395	15.6
F	680	15.0
G	15	0.6
H	3460	136.2
I	2765	108.9
J	1375	54.1
K	2070	81.5
L	340	13.4
M	695	27.4
N	Ø 250	Ø 9.8
O	Ø 500	Ø 19.7
P	680	26.8
Q	340	13.4
R	342	13.5
S	630	24.8

Product type	**ME-41 / ME-42 banks**
Article no.	*refer to order information*
Product category	oil mist filters
Version	100821/D

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