

Product Data Sheet

Filter Elements EROM-..


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Field of application

Type EROM filter elements of filtration grades V, ZF, XF and A are suitable for OMI filter housings. We recommend the following filtration grade assignment:

		OMI
Coarse	V	DF / QF
General purpose	ZF	PF
Fine	XF	HF
Activated carbon	A	CF

Features

Filter elements of filtration grade V (coarse filter) consist of a pleated coarse filter media, filter elements of filtration grades ZF and XF (coalescing filters) of a pleated depth filter media and a separated external drainage sock (outside foam sock). Thanks to the pleating technology the effective filter surface is increased many times, resulting in much higher dirt holding capacity and a longer service life. At the same time, flow resistance and therefore differential pressure, generated by the filter element, are considerably reduced. To ensure a high operational safety, the pleated depth filter cylinder has at least two or even more layers.

Filter elements of filtration grade A (adsorption filter) comprise of activated carbon granulate, embedded between two coarse filter layers. Using loose activated carbon granulate results in an averagely large amount of activated carbon (1.2 kg of activated carbon for each m² of filter surface). This considerably increases the separation capability and the service life. The 3-layer design contributes to an adequate thickness of the activated carbon bed and thus to a long contact time between compressed air and activated carbon. This results in extremely low residual oil contents.

All the features mentioned above contribute to a filter element which has a high performance (high separation efficiency) combined with economic efficiency (low differential pressure, long service life).



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Specifications subject to change without notice

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Latest version see www.fstweb.de

Basic Data

Model	Nominal volume flow (VN) ^{*1}	Max. operating pressure	Min./Max. operating temperature
EROM-0004	33 m ³ /h	---	+2°C - +65°C
EROM-0008	70 m ³ /h		
EROM-0016	108 m ³ /h		
EROM-0025	204 m ³ /h		
EROM-0030	180 m ³ /h		
EROM-0036	300 m ³ /h		
EROM-0060	620 m ³ /h		
EROM-0070	770 m ³ /h		
EROM-0072	432 m ³ /h		
EROM-0090	770 m ³ /h		
EROM-0120	990 m ³ /h		
EROM-0185	1,320 m ³ /h		
EROM-0190	1,140 m ³ /h		
EROM-0280	1,680 m ³ /h		
EROM-0350	2,100 m ³ /h		
EROM-0440	2,640 m ³ /h		

*1 - refers to 1 bar(a) and 20°C at 7 bar operating pressure

Purity classes according to ISO 8573-1

Contamination	V	ZF	XF	A
Solid particles ^{*2}	Class 6	Class 2	Class 1	(Class 2)
Water content	---	---	---	---
Total oil content ^{*2}	Class 4 ^{*3}	Class 2 ^{*3}	Class 1 ^{*3}	Class 0-1 ^{*4}

*2 - typical result, on the assumption of suitable inlet concentrations as well as operating and marginal conditions

*3 - the oil vapour content is not taken into account, it may reduce the purity class

*4 - the liquid residual oil content is not taken into account and may reduce the purity class (should be separated in advance by means of fine filtration)

Volume flow conversion factors

«F1» - Pressure (in bar)

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0.125	0.25	0.38	0.50	0.63	0.75	0.88	1.00	1.13	1.25	1.38	1.50	1.63	1.75	1.88	2.00	2.13

«F2» - Temperature (in °C)

2	5	10	15	20	25	30	35	40	45	50	55	60	65
1.07	1.05	1.04	1.02	1.00	0.98	0.97	0.95	0.94	0.92	0.91	0.89	0.88	0.87

Calculation of the converted volume flow

Converted volume flow VK	Nominal required volume flow VN _{min}
$VK = VN \times F1 \times F2$	$VN_{min} = VK / F1 / F2$

VK : Converted volume flow calculated for the operating conditions

VN_{min}: Nominal required volume flow calculated for the operating conditions, based on the volume flow at operating conditions

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Maintenance rules

Pressure range	V, ZF, XF	A
0-4 bar	Replacement of filter element once a year, the latest on a differential pressure of 50 mbar	Replacement of filter elements every 3 months, depending on the operating temperature and therefore on the specified oil vapour amount earlier, if required
5-16 bar	Replacement of filter element once a year, the latest on a differential pressure of 350 mbar	

Product specific data

Specification	V	ZF	XF	A
Differential pressure	40 mbar	80 mbar	120 mbar	90 mbar
Separation efficiency, dry (nominal)	99.99% (5 μ)	99.9999% (0.1 μ)	99.9999% (0.01 μ)	---
Residual oil content (nominal)	---	$\leq 0.5 \text{ mg/m}^3$	$\leq 0.01 \text{ mg/m}^3$	$\leq 0.005 \text{ mg/m}^3$

Materials

Component	
Coarse filter media	Cellulosic fibres, impregnated (acrylic basis)
Depth filter media, drainage media	Glass fibres, PE (polyester)
Foam sock	PU (polyurethane)
Filter media activated carbon	Activated carbon granulate, PES (polyester) fibre layer
Bonded joint	PU (polyurethane)
Cylinders	Stainless steel 1.4301
End caps	PA6 (polyamide) 30% glass fibres
Sealing materials	NBR

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Dimensions

Model	Height (total height)	Ø	Ø Inlet (inside)
EROM-0004	43 mm (56,5 mm)	40 mm	13 mm
EROM-0008	64 mm (77,5 mm)	48 mm	13 mm
EROM-0016	108 mm (121,5 mm)	48 mm	13 mm
EROM-0025	114 mm (127 mm)	60 mm	26,5 mm
EROM-0030	146 mm (158,5 mm)	48 mm	13 mm
EROM-0036	144 mm (157 mm)	60 mm	26,5 mm
EROM-0060	224 mm (237 mm)	60 mm	26,5 mm
EROM-0070	210 mm (224,5 mm)	82 mm	42,5 mm
EROM-0072	185 mm (196,5 mm)	60 mm	26,5 mm
EROM-0090	210mm (224,5 mm)	82 mm	45 mm
EROM-0120	312 mm (326,5 mm)	82 mm	42,5 mm
EROM-0185	482 mm (496,5 mm)	82 mm	42,5 mm
EROM-0190	398 mm (412,5 mm)	82 mm	42,5 mm
EROM-0280	185 mm (196,5 mm)	60 mm	60 mm
EROM-0350	636 mm (660,5 mm)	120 mm	59 mm
EROM-0440	760 mm (780 mm)	121 mm	60 mm

Classification according to Pressure Equipment Directive 2014/68/EU for group 2 fluids

Model	Volume	Category
All models	Filter elements are not part of the Pressure Equipment Directive 2014/68/EU	

Other Directives

Model	
All Models	---