

FILTER ELEMENT – ODO 90'

Alternative filter elements for Donaldson - Ultrafilter

Series: 90'

DESCRIPTION

ODO 90' filter elements have been developed for highly efficient removal of solid particles, oil aerosols, water, hydrocarbons, vapours and odours from compressed air.



FILTER ELEMENT RATING ACCORDING TO ISO 8573-1

Filtration grade	Solid particles class	Water class	Oil class
PE/P	6	/	/
XFF	2	/	2
XMF	2	/	2
XSMF	1	/	1
AK/A	1*	/	0/1

Validated according to ISO12500-1, ISO12500-2 and ISO12500-3

* Valid if "S" filter cartridge is installed upstream

TECHNICAL SPECIFICATION

	PE/P ⁽⁶⁾	XFF ⁽⁶⁾	XMF ⁽⁶⁾	XSMF ⁽⁶⁾	AK/A ⁽⁶⁾
Operating temperature	1,5 - 65 °C/ 35 - 149 °F	1,5 - 65 °C/ 35 - 149 °F	1,5 - 65 °C/ 35 - 149 °F	1,5 - 65 °C/ 35 - 149 °F	1,5 - 45 °C/ 35 - 113 °F
Operating pressure	0 - 16 barg/ 0 - 232 psi	0 - 16 barg/ 0 - 232 psi	0 - 16 barg/ 0 - 232 psi	0 - 16 barg/ 0 - 232 psi	0 - 16 barg/ 0 - 232 psi
Differential pressure (dry)	10 mbar/ 0,145 psi	20 mbar/ 0,290 psi	50 mbar/ 0,725 psi	80 mbar/ 1,160 psi	60 mbar/ 0,870 psi
Differential pressure (wet)	20 mbar/ 0,290 psi	40 mbar/ 0,580 psi	120 mbar/ 1,740 psi	190 mbar/ 2,756 psi	/
Particle retention (nominal)	99,99% (3 µm)	99,9999% (0,1 µm)	99,9999% (0,1 µm)	99,9999% (0,01 µm)	/
Particle retention rate ISO ⁽³⁾	95 %	99,8 %	99,98 %	99,9994 %	/
Residual oil content ⁽⁴⁾	/	< 0,5mg/m ³	< 0,1mg/m ³	< 0,01mg/m ³	< 0,005mg/m ³
Flow Direction	INSIDE to OUTSIDE	INSIDE to OUTSIDE	INSIDE to OUTSIDE	INSIDE to OUTSIDE	INSIDE to OUTSIDE
Capacity (ISO12500-2) ⁽⁵⁾	/	/	/	/	20 min

⁽³⁾Tested according to ISO12500-3, 1bar(a), nominal flow, 06050 P, MPPS-(5µm) ; 06050 M, S, MPPS-(0,3µm)

⁽⁴⁾Tested according to ISO12500-1, 06050 M, S Oil aerosol viscosity 32mm²/s, inlet concentration 10mg/m³

⁽⁵⁾Tested according to ISO12500-2, 06050 A, tested with n-Hexane, test concentration 100mg/kg, 80% Saturation

⁽⁶⁾Cross reference Omega Air – Donaldson filtration grades: P=PE/P, XM=XFF, XM=XMF, XS=XSMF, A=AK/A

CORRECTION FACTORS

To calculate the correct capacity of a given filter based on actual operating conditions, multiply the nominal flow capacity by the appropriate correction factor(s). CORRECTED CAPACITY = NOMINAL FLOW CAPACITY x C_{OP}

OPERATING PRESSURE

[bar]	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
[psi]	29	44	58	72	87	100	115	130	145	160	174	189	203	218	232
C _{OP}	0,38	0,5	0,63	0,75	0,88	1	1,13	1,25	1,38	1,50	1,63	1,75	1,88	2,00	2,13

MATERIALS

	PE/P	XFF	XMF	XSMF	AK/A
Filter media	Acrylic fibers, cellulose	Borosilicate micro fibers	Borosilicate micro fibers	Borosilicate micro fibers	Borosilicate micro fibers
Protection media	Polyester fleece	Polyester fleece	Polyester fleece	Polyester fleece	Polyester fleece
Drainage media	/	Polyester needle felt	Polyester needle felt	Polyester needle felt	/
Adsorption media	/	/	/	/	Activated carbon granulate
Support (inner-outer)	Stainless steel 1.4301	Stainless steel 1.4301	Stainless steel 1.4301	Stainless steel 1.4301	Stainless steel 1.4301
Bonding	Polyurethane	Polyurethane	Polyurethane	Polyurethane	Polyurethane
Endcaps	PA6 with 30% glass fibers or aluminium	PA6 with 30% glass fibers or aluminium	PA6 with 30% glass fibers or aluminium	PA6 with 30% glass fibers or aluminium	PA6 with 30% glass fibers or aluminium
Sealing	NBR	NBR	NBR	NBR	NBR

SIZES

Model*	Diameter [mm]	Height [mm]	Flow Capacity [Nm ³ /h]	Flow Capacity [scfm]	Fits into filter housing
ODO 0205	35	62	20-40	12-24	0002
ODO 0305	35	76	40-60	24-35	0004
ODO 0310	42	76	60-90	35-53	0006
ODO 0410	42	104	90-120	53-71	0009
ODO 0420	52	104	120-180	71-106	0012
ODO 0520	52	128	180-270	106-159	0018
ODO 0525	62	128	270-360	159-212	0027
ODO 0725	62	180	360-480	212-282	0036
ODO 0730	86	180	480-720	282-423	0048
ODO 1030	86	254	720-1080	423-635	0072
ODO 1530	86	381	1080-1440	635-847	0108
ODO 2030	86	508	1440-1920	847-1129	0144
ODO 3030	86	760	1920-2880	1129-1693	0192
ODO 3050	140	760	2880-4320	1693-2540	0288

*Filter cartridge names consist of cartridge size and filtration grade. Place filtration grade designation after filter size (e.g. ODO 0205 PE/P). There is an option for **aluminum endcaps** (e.g. ODO 0205 PE/P Al).

MAINTENANCE

PE/P, XFF, XMF, XSMF - Replace filter element at least once per year or when pressure drop reaches 350mbar

AK/A - Replace filter element at least every 6 months

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	Our quality management system is certified by BUREAU VERITAS in conformity with ISO 9001:2015	
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