

# FILTER ELEMENT – ODO 80'

(Particulate, Coalescing, Oil vapour removal)

## DESCRIPTION

ODO 80' filter elements have been developed for high efficient removal of solid particles, oil aerosols, water, hydrocarbons, vapours and odours from compressed air<sup>(1)</sup>.

ODO 80' filter elements are designed to fit into Donaldson - Ultrafilter housings.

## APPLICATIONS <sup>(2)</sup>

- Automotive
- Electronics
- Food & Beverage
- Chemical
- Petrochemical
- Plastics
- Paint
- General industrial application



<sup>(1)</sup>For any other technical gas please contact us or your local dealer

<sup>(2)</sup>DONALDSON 80' filter element can be used in variety of applications. For applications not listed please contact us or your local dealer.

## FILTER ELEMENT RATING ACCORDING TO ISO8573-1

	Solid particles	Water	Oil
PE/P	Class 6	-	-
FF	Class 2	-	Class 2
MF/M	Class 2	-	Class 1
SMF/S	Class 1	-	Class 1
AK/A	-	-	Class 0/1

Validated according to ISO12500-1 and ISO12500-3

## TECHNICAL SPECIFICATION

Filtration grade name	PE/P <sup>(6)</sup>	FF <sup>(6)</sup>	MF/M <sup>(6)</sup>	SMF/S <sup>(6)</sup>	AK/A <sup>(6)</sup>
Operating temperature		1,5 - 65 °C/ 35 - 149 °F			1,5 - 45 °C/ 35 - 113 °F
Operating pressure	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	N/A
Particle retention (nominal)	99,99% (3 µm)	99,9999% (0,1 µm)	99,9999% (0,1 µm)	99,9999% (0,01 µm)	N/A
Particle retention rate ISO <sup>(3)</sup>	95 %	99,8 %	99,98 %	99,9994 %	N/A
Residual oil content <sup>(4)</sup>	N/A	< 0,5mg/m <sup>3</sup>	< 0,1mg/m <sup>3</sup>	< 0,01mg/m <sup>3</sup>	< 0,005mg/m <sup>3</sup>
Capacity (ISO12500-2) <sup>(5)</sup>	N/A	N/A	N/A	N/A	20 min

<sup>(3)</sup>Tested according to ISO12500-3, 1bar(a), nominal flow, 06050 PE/P, MPPS-(5µm); 06050 MF/M, SMF/S, MPPS-(0,3µm)

<sup>(4)</sup>Tested according to ISO12500-1, 06050 MF/M and SMF/S Oil aerosol viscosity 32mm<sup>2</sup>/s, inlet concentration 10mg/m<sup>3</sup>

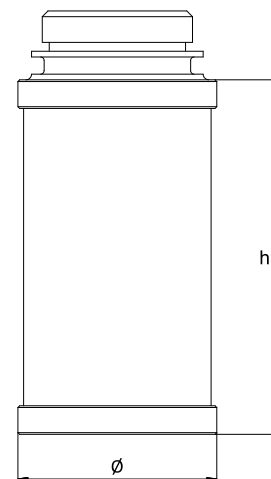
<sup>(5)</sup>Tested according to ISO12500-2, 06050 AK/A, tested with n-Hexane, test concentration 100mg/kg, 80% Saturation

<sup>(6)</sup>Cross reference Donaldson - Omega Air filtration grades: P=PE/P=PE, M=FF/M=FF, S=SMF/S=SMF, AK=AK/A=AK

**SIZES**

ALUMINIUM END CAPS	DIMENSIONS [mm]
ODO 031	Ø=42; h=76
ODO 031.5	Ø=50; h=76
ODO 041.5	Ø=50; h=111
ODO 042.5	Ø=62; h=104
ODO 052.5	Ø=62; h=128
ODO 053	Ø=86; h=127
ODO 103	Ø=86; h=254
ODO 153	Ø=86; h=381
ODO 203	Ø=86; h=508
ODO 305	Ø=140; h=760

Ø=Diameter; h=Height



**MATERIALS**

	PE/P	FF	MF/M	SMF/S		AK/A
<b>Filter media</b>	Acrylic fibers, cellulose	Borosilicate micro fibers	Borosilicate micro fibers	Borosilicate micro fibers	<b>Filter media</b>	Borosilicate micro fibers
<b>Drainage media</b>	/	Polyester based polyurethane			<b>Adsorption media</b>	Activated carbon granulate PES (Polyester)
<b>Support (inner-outer)</b>	Stainless Steel 1.4301				Stainless Steel 1.4301	
<b>Bonding</b>	Polyurethane				Polyurethane	
<b>Endcaps</b>	Aluminium				Aluminium	
<b>Sealing</b>	NBR				NBR	

**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<sub>OP</sub>

**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 <sub>OP</sub>	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

**MAINTENANCE**


Replace filter element grade PE/P, FF, MF/M and SMF/S at least once per year or when pressure drop reaches 350mbar.

Replace filter element grade AK/A at least every 6 months.

**FILTER CARTRIDGE NAMES**

Filter cartridge names consist of cartridge size and filtration grade. E.g. ODO 0205 SMF/S

INFORMATION IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE

	Our quality management system is certified by BUREAU VERITAS in conformity with ISO 9001:2008 Reg. number: 200285	
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