

Replacement Element FF / MF / SMF / AK

MARK new type P / G / C / V



Description

ultrafilter replacement filter elements have been developed for high efficient removal of solid particles, oil aerosols, water, hydrocarbons, vapours and odours from compressed air.

Filter Element Rating According ISO 8573-1:2010

Filtration grade	Solid particles class	Water class	Oil class
P/FF	3	/	3
G/MF	2-3	/	2
C/SMF	2	/	1
V/AK	2*	/	0/1

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

* Valid if "SMF" filter cartridge is installed upstream

Technical Specification

	P/FF ⁽⁶⁾	G/MF ⁽⁶⁾	C/SMF ⁽⁶⁾	V/AK ⁽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 - 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
Differential pressure (dry)	20 mbar/ 0,290 psi	50 mbar/ 0,725 psi	80 mbar/ 1,160 psi	60 mbar/ 0,870 psi
Differential pressure (wet)	40 mbar/ 0,580 psi	120 mbar/ 1,740 psi	190 mbar/ 2,756 psi	/
Particle retention (nominal)	99,9999% (1 µm)	99,9999% (0,1 µm)	99,9999% (0,01 µm)	/
Particle retention rate ISO ⁽³⁾	99,8 %	99,98 %	99,998 %	/
Residual oil content ⁽⁴⁾	/	< 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
Capacity (ISO12500-2) ⁽⁵⁾	/	/	/	20 min

⁽³⁾Tested according to ISO12500-3, 1bar(a), nominal flow, FF, MF & SMF 03/10, MPPS-(0,3µm)

⁽⁴⁾Tested according to ISO12500-1, MF & SMF 03/10, Oil aerosol viscosity 32mm²/s, inlet concentration 10mg/m³

⁽⁵⁾Tested according to ISO12500-2, AK 03/10, tested with n-Hexane, test concentration 100mg/kg, 80% Saturation

⁽⁶⁾Cross reference ultrafilter – MARF (new) filtration grades: FF = P, MF = G, SMF = C, AK = V

Materials

	P/FF	G/MF	C/SMF	V/AK
Filter media	Borosilicate micro fibers	Borosilicate micro fibers	Borosilicate micro fibers	Borosilicate micro fibers
Protection media	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
Bonding	Polyurethane	Polyurethane	Polyurethane	Polyurethane
Endcaps	PA6 with 30% glass fibers	PA6 with 30% glass fibers	PA6 with 30% glass fibers	PA6 with 30% glass fibers
Sealing	NBR	NBR	NBR	NBR

Size

Model	Diameter [mm]	Height [mm]	Flow Capacity [Nm ³ /h]	Flow Capacity [scfm]	Fits into filter housing
XX 7 –	46	55,5	43	25	FILTER 7
XX 15 –	46	90,5	90	53	FILTER 15
XX 21 –	46	146	126	74	FILTER 21
XX 30 –	61	155	180	106	FILTER 30
XX 48 –	61	195	288	170	FILTER 48
XX 84 –	86	288	504	297	FILTER 84
XX 114 –	86	323	684	403	FILTER 114
XX 156 –	86	367,5	936	551	FILTER 156
XX 216 –	101,5	420	1296	763	FILTER 216
XX 315 –	120	509	1890	1112	FILTER 315
XX 405 –	120	679	2430	1430	FILTER 405

XX = Filtration grade **ultrafilter** filter element type FF, MF, SMF or AK

– = Filtration grade MARK new filter element type P, G, C or V

Example: **ultrafilter** filter element type SMF 114 C (is alternative for MARK new filterelement type C 114)

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

Maintenance

P/FF, G/MF, C/SMF - Replace filter element at least once per year or when pressure drop reaches 350mbar.

V/AK - Replace filter element at least every 6 months.