

Replacement Element MF / SMF / AK

Atlas Copco type DD / PD / QD

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

Atlas Copco / ultrafilter type	Solid particles class	Water class	Oil class
DD/MF	2	/	2
PD/SMF	1-2	/	1
QD/AK	/	/	0/1*

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

* Valid if "SMF" filter cartridge is installed upstream

Technical Specification

	DD/MF ⁽⁶⁾	PD/SMF ⁽⁶⁾	QD/AK ⁽⁶⁾
Operating temperature	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
Differential pressure (dry)	50 mbar/ 0,725 psi	80 mbar/ 1,160 psi	60 mbar/ 0,870 psi
Differential pressure (wet)	120 mbar/ 1,740 psi	190 mbar/ 2,756 psi	/
Particle retention (nominal)	99,9999% (0,1 µm)	99,9999% (0,01 µm)	/
Particle retention rate ISO ⁽³⁾	99,98 %	99,9994 %	/
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
Capacity (ISO12500-2) ⁽⁵⁾	/	/	20 min

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

(4) Tested according to ISO12500-1, MF 03/10, SMF - 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** – Atlas Copco filtration grades: **MF** = DD / **SMF** = PD / **AK** = QD

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

	DD/MF	PD/SMF	QD/AK
Filter media	Borosilicate micro fibers	Borosilicate micro fibers	Borosilicate micro fibers
Protection media	Polyester fleece	Polyester fleece	Polyester fleece
Drainage media	Polyester based polyurethane	Polyester based polyurethane	/
Adsorption media	/	/	Activated carbon granulate
Support (inner-outer)	Stainless steel 1.4301	Stainless steel 1.4301	Stainless steel 1.4301
Bonding	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
Sealing	NBR	NBR	NBR

Sizes

Type * <i>ultrafilter</i>	Type Atlas Copco	Diameter [mm]	Height [mm]	Flow Capacity [Nm ³ /h]	Flow Capacity [scfm]	Fits into filter housing
XX 2/1.5	__ 9	46	56	32,4	19	9 G
XX 4/1.5	__ 17	46	91	61,2	36	17 G
XX 5/1.5	__ 32	46	146	115,2	68	32 G
XX 6/2.5	__ 44	61	155	158,4	93	44 G
XX 8/2.5	__ 60	61	195	216	127	60 G
XX 11/3	__ 120	86	288	432	254	120 G
XX 12/3	__ 150	86	323	540	318	150 G
XX 14/3	__ 175	86	368	630	371	175 G
XX 16/3.5 AL **	__ 260/280	102	420	1008	593	280 G
XX 20/4	__ 390	120	509	1404	826	390 G
XX 26/4	__ 520	120	679	1872	1102	520 G
XX 26/4 F AL **	__ 520F	120	683	1872	1102	520 F
XX 24/3 AL **	__ 780F	88	584	2808	1653	780 F
XX 24/3 AL **	__ 850F	87,5	622	3780	2225	850 F

*Filter cartridge names consist of cartridge size and filtration grade.

XX = Filtration grade designation *ultrafilter* type **MF**, **SMF** or **AK**
before filter size (e.g. SMF 11/3 (PD120) = Atlas Copco type PD 120).

__ = Filtration grade designation Atlas Copco DD, PD or QD

There is an option for **aluminum endcaps** (e.g. SMF 11/30 AL (PD120) - Atlas Copco type PD 120). Atlas Copco Standard is with Polyamid end caps.

** only with aluminum endcaps available.

Maintenance

DD/MF, PD/SMF - Replace filter element at least once per year or when pressure drop reaches 350mbar.

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