

# Replacement Element VF / MF / SMF / AK

ALMIG AFP / AFM / AFS / AFC

(Particulate, Coalescing, Oil vapour removal)

## Description

**ultrafilter** replacement filter elements have been designed for high efficient removal of solid particles, oil aerosols, water, hydrocarbons, vapours and odours from compressed air<sup>(1)</sup>.

Filter elements are designed to fit into Almig filter 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>**ultrafilter** 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 ISO 8573-1 (2010)

ALMIG / <b>ultrafilter</b> type	Solid particles	Water	Oil
AFP / VF	Class 6	-	-
AFM / MF	Class 2	-	Class 2
AFS / SMF	Class 2	-	Class 1
AFC / AK	-	-	Class 0/1

Validated according to ISO12500-1 and ISO12500-3

## Technical Specification

Filtration grade name	AFP / VF <sup>(6)</sup>	AFM / MF <sup>(6)</sup>	AFS / SMF <sup>(6)</sup>	AFC / AK <sup>(6)</sup>
Operating temperature		1,5 - 65 °C 35 - 149 °F		1,5 - 45 °C 35 - 113 °F
Differential pressure (dry)	10 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	120 mbar 1,740 PSI	190 mbar 2,756 PSI	N/A
Particle retention (nominal)	99,99% (3 Mic)	99,9999% (0,1 Mic)	99,9999% (0,01 Mic)	N/A
Particle retention rate ISO <sup>(3)</sup>	95 %	99,98 %	99,998 %	N/A
Residual oil content <sup>(4)</sup>	N/A	< 0,1mg/m <sup>3</sup>	< 0,01mg/m <sup>3</sup>	<0,005mg/m <sup>3</sup>
Capacitay (ISO12500-2) <sup>(5)</sup>		N/A		20 min

<sup>(3)</sup> Tested according to ISO12500-3, 1bar(a), nominal flow, 03/10 AFP/VF, AFM/MF, AFS/SMF, MPPS-(0,3µm)

<sup>(4)</sup> Tested according to ISO12500-1, 03/10 AFM/MF, AFS/SMF, oil aerosol viscosity 32mm<sup>2</sup>/s, inlet concentration 10mg/m<sup>3</sup>

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

<sup>(6)</sup> Cross reference **ultrafilter** vs. ALMIG filtration grades:

**ultrafilter** pre filter type **VF** = AFP/VF = AFP

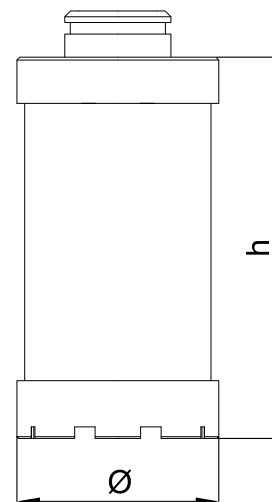
**ultrafilter** Microfilter type **MF** = AFM/MF = AFM

**ultrafilter** Submicrofilter type **SMF** = AFS/SMF = AFS

**ultrafilter** Activated Carbon filter type **AK** = AFC/AK = AFC

## Sizes

Filter Element Sizes	Dimensions	Flow Capacity	
		[mm]	[Nm <sup>3</sup> /h]
XXX 30 _ _ _	Ø=40; h=43	22,7	13,3
XXX 60 _ _ _	Ø=48; h=64	44,0	25,9
XXX 108 _ _ _	Ø=48; h=108	83,5	49,2
XXX 180 _ _ _	Ø=48; h=146	117,6	69,2
XXX 204 _ _ _	Ø=60; h=114	112,0	65,9
XXX 300 _ _ _	Ø=60; h=144	146,3	86,1
XXX 432 _ _ _	Ø=60; h=185	197,7	116,4
XXX 570 _ _ _	Ø=60; h=224	242,3	142,6
XXX 750 _ _ _	Ø=82; h=210	315,2	185,5
XXX 990 _ _ _	Ø=82; h=312	477,6	281,1
XXX 1140 _ _ _	Ø=82; h=398	614,4	361,7
XXX 1320 _ _ _	Ø=82; h=482	748,2	440,4
XXX 1680 _ _ _	Ø=121; h=484	1019,4	600,0
XXX 2100 _ _ _	Ø=121; h=636	1363,7	802,7
XXX 2640 _ _ _	Ø=121; h=760	1689,1	994,1



XXX = **ultrafilter** filtration grade VF, MF, SMF or AK

\_ \_ \_ = Filtration grade ALMIG AFP, AFM, AFS or AFC - Example for **ultrafilter** designation: SMF 990 AFS

## Materials

	AFP / VF	AFM / MF	AFS / SMF	AFC / AK
Filter media	Acrylic fibers, cellulose	Borosilicate micro fibers		Borosilicate microfibrils
Drainage media	Polyester	Polyester based polyurethane		/
Adsorption media	/	/	/	Activated carbon granulate PES (Polyester)
Support (inner-outer)			Stainless steel 1.4301	
Bonding			Polyurethane	
Endcaps			PA6 with 30% glass fibers	
Sealing			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

Replacement filter element grade AFP/VF, AFM/MF and AFS/SMF at least once per year or when pressure drop reaches 350mbar.

Replacement filter element grade AFC/AK at least every 6 months.