

Replacement Element ARS

BEA technologies ARS (Air Vip) RM / RF / RB / RA / CA
(Particulate, Coalescing, Oil vapour removal)

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
RM / VF	6	/	/
RF / FFR	3	/	/
RB / MF	2	/	2
RA / SMF	1/2	/	1
CA / AK	1/2*	/	0/1

Validated according to ISO12500-1, ISO12500-2 and ISO12500-3
* Valid if "SMF" filter cartridge is installed upstream

Technical Specification

	RM/VF ⁽⁶⁾	RF/FFR ⁽⁶⁾	RB/MF ⁽⁶⁾	RA/SMF ⁽⁶⁾	CA/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 - 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% (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⁾	/	/	< 0,1mg/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, VF 03/10, MPPS-(5µm); FFR 03/10, MPPS-(1µm); MF 03/10, SMF 03/10, MPPS-(0,3µm)

⁽⁴⁾Tested according to ISO12500-1, MF 03/10, 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** – BEA technologies filtration grades: VF = RM/VR, FFR = RF/FFR, MF = RB/MF, SMF = RA/SMF, AK = CA/AK

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

	RM/VF	RF/FFR	RB/MF	RA/SMF	CA/AK
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	Aluminium	Aluminium	Aluminium	Aluminium	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
XX ARS 30	45	60	30	18	CDF-30
XX ARS 100	45	150	60 100	35 59	CDF-60 CDF-100
XX ARS 180	59	150	180	106	CDF-180
XX ARS 290	59	250	290	171	CDF-290
XX ARS 460	71,5	250	460	271	CDF-460
XX ARS 610	71,5	350	610	359	CDF-610
XX ARS 930	81,5	373	930	547	CDF-930
XX ARS 1050	81,5	473	1050	618	CDF-1050
XX ARS 1400	120	344	1500 2200	883 1295	CDF-1500 CDF-2200/ACF
XX ARS 2300	81,5	473	2300	1354	CDF-2300

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

Place filtration grade designation before filter size (e.g. SMF ARS 30 RA AL).

XX = Filtration grade **ultrafilter** type VF, FFR, MF, SMF or AK

= Filtration grade BEA ARS type RM, RF, RB, RA, CA

Maintenance

RM/VF, RF/FFR, RB/MF, RA/SMF - Replace filter element at least once per year or when pressure drop reaches 350mbar.

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