

FILTER ELEMENT – OBE ARS

(Particulate, Coalescing, Oil vapour removal)

DESCRIPTION

OBE ARS filter elements have been developed for high efficient removal of solid particles, oil aerosols, water, hydrocarbons, vapours and odours from compressed air ⁽¹⁾.

APPLICATIONS ⁽²⁾

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

⁽¹⁾ For any other technical gas please contact us or your local dealer

⁽²⁾ OBE ARS 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 |
|------|-----------------|-------|-----------|
| RM/P | Class 6 | - | - |
| RF/R | Class 3 | - | - |
| RB/M | Class 2 | - | Class 2 |
| RA/S | Class 1 | - | Class 1 |
| CA/A | Class 1 | - | Class 0/1 |

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

TECHNICAL SPECIFICATION

| Filtration grade name | RM/P ⁽⁶⁾ | RF/R ⁽⁶⁾ | RB/M ⁽⁶⁾ | RA/S ⁽⁶⁾ | CA/A ⁽⁶⁾ |
|--|----------------------|----------------------|----------------------------|-------------------------|----------------------------|
| Operating temperature | | | 1,5 - 65 °C 35 - 149 °F | | 1,5 - 45 °C 35 - 113 °F |
| 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 % | 99,998 % | / |
| Residual oil content ⁽⁴⁾ | / | / | < 0,1mg/m ³ | < 0,01mg/m ³ | < 0,005mg/m ³ |
| Capacity (ISO12500-2) ⁽⁵⁾ | / | / | / | / | 20 min |

⁽³⁾ Tested according to ISO12500-3, 1bar(a), nominal flow, 06050 RM/P, MPPS-(5µm); 06050 RF/R, RB/M, RA/S, MPPS-(0,3µm)

⁽⁴⁾ Tested according to ISO12500-1, 06050 RF/R, RB/M, RA/S Oil aerosol viscosity 32mm²/s, inlet concentration 10mg/m³

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

⁽⁶⁾ Cross reference BEA – Omega Air filtration grades: RM=RM/P=P, RF=RF/R=R, RB=RB/M=M, RA=RA/S=S, CA=CA/A=A

FILTER CARTRIDGE NAMES

Filter cartridge names consist of cartridge size and filtration grade. Place filtration grade designation after filter size instead of dash.

E.g. OBE ARS 100 CA/A

SIZES

| SIZES | DIMENSIONS | FLOW CAPACITY | | FITS INTO FILTER HOUSING |
|--------------|---------------|----------------------|--------|--------------------------|
| | [mm] | [Nm ³ /h] | [scfm] | |
| OBE ARS 30 | Ø=45 ; h=60 | 40 | 24 | CDF-30 |
| OBE ARS 100 | Ø=45; h=150 | 120 | 72 | CDF-60/CDF-100 |
| OBE ARS 180 | Ø=59; h=150 | 220 | 132 | CDF-180 |
| OBE ARS 290 | Ø=59; h=250 | 330 | 198 | CDF-290 |
| OBE ARS 460 | Ø=71,5; h=250 | 500 | 300 | CDF-460 |
| OBE ARS 610 | Ø=71,5; h=350 | 680 | 408 | CDF-610 |
| OBE ARS 930 | Ø=81,5; h=373 | 1000 | 600 | CDF-930 |
| OBE ARS 1050 | Ø=81,5; h=473 | 1300 | 780 | CDF-1050 |
| OBE ARS 1400 | Ø=120; h=344 | 1600 | 960 | CDF-1500/CDF-2200/ACF |

Ø=Diameter; h=Height

MATERIALS

| | RM/P | RF/R | RB/M | RA/S | CA/A |
|------------------------------|---------------------------|------------------------------|---------------------------|---------------------------|---|
| Filter media | Acrylic fibres, cellulose | Borosilicate micro fibres | Borosilicate micro fibres | Borosilicate micro fibres | |
| Adsorption media | | | | | Activated carbon granulate PES (Polyester) |
| Drainage media | / | Polyester based polyurethane | | | |
| Protection media | Polyester fleece | | | | |
| Support (inner-outer) | Stainless Steel 1.4301 | | | | |
| Bonding | Polyurethane | | | | |
| Endcaps | Aluminium | | | | |
| 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_{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

Replace filter element grade RM/P, RF/R, RB/M, and RA/S at least once per year or when pressure drop reaches 350mbar.

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

INFORMATION IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE

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