

FILTER ELEMENT – ORION

Alternative filter elements for Orion

Series: DSF, LSF, MSF, KSF Series



DESCRIPTION

These 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 TO ISO 8573-1

| Filtration grade | Solid particles class | Water class | Oil class |
|------------------|-----------------------|-------------|-----------|
| DSF | 6 | / | / |
| LSF | 3 | / | / |
| MSF | 1 | / | 1 |
| KSF | 1* | / | 0/1 |

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

TECHNICAL SPECIFICATION

| | DSF | LSF | MSF | KSF |
|---|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| 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 |
| Differential pressure (dry) | 10 mbar/ 0,145 psi | 20 mbar/ 0,290 psi | 80 mbar/ 1,160 psi | 60 mbar/ 0,870 psi |
| Differential pressure (wet) | 20 mbar/ 0,290 psi | 40 mbar/ 0,580 psi | 190 mbar/ 2,756 psi | / |
| Particle retention (nominal) | 99,99% (3 µm) | 99,9999% (1 µm) | 99,9999% (0,01 µm) | / |
| Particle retention rate ISO ⁽³⁾ | 95 % | 99,8 % | 99,9994 % | / |
| Residual oil content ⁽⁴⁾ | / | / | < 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, 06050 P, MPPS-(5µm) ; 06050 R, S, MPPS-(0,3µm)

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

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

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

| | DSF | LSF | MSF | KSF |
|-----------------------|--|--|--|--|
| Filter media | Acrylic fibers, cellulose | 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 | / |
| 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 or aluminium |
| Sealing | NBR | NBR | NBR | NBR |

SIZES

| Model* | Diameter [mm] | Height [mm] | Flow Capacity [Nm ³ /h] | Flow Capacity [scfm] | Fits into filter housing |
|-------------|---------------|-------------|------------------------------------|----------------------|--------------------------|
| OR 75 | 58 | 42 | 21 | 12 | 75B |
| OR 150 | 58 | 97 | 72 | 42 | 150B |
| OR 200 | 68 | 95 | 108 | 64 | 200B |
| OR 250 | 68 | 137 | 162 | 95 | 250B |
| OR 400 | 86 | 123 | 234 | 138 | 400-1 |
| OR 500 | 86 | 159 | 336 | 198 | 500 |
| OR 700 | 86 | 190 | 396 | 233 | 700-1 |
| OR 850 | 86 | 244 | 516 | 304 | 850 |
| OR 1000 | 86 | 297 | 636 | 374 | 1000-1 |
| OR 1300 | 86 | 377 | 828 | 487 | 1300-1 |
| OR 1700** | 87 | 471 | 1038 | 611 | 1700 |
| OR 2000 | 86 | 534 | 1200 | 706 | 2000-1 |
| 2x OR 1300 | | | 1656 | 975 | 2700C |
| 2x OR 2000 | | | 1920, 2400 | 1130, 1412 | 3200C, 4000C |
| 3x OR 2000 | | | 3000, 3600 | 1765, 2118 | 5000B, 6000B |
| 4x OR 2000 | | | 4668 | 2747 | 7700B |
| 6x OR 2000 | | | 6222 | 3662 | 10300B |
| 7x OR 2000 | | | 7782 | 4580 | 12900B |
| 9x OR 2000 | | | 9336 | 5495 | 15500B |
| 12x OR 2000 | | | 12450 | 7328 | 20700B |
| 18x OR 2000 | | | 19134 | 11262 | 31800B |

*Filter cartridge names consist of cartridge size and filtration grade. Place filtration grade designation after filter size (e.g. OR 75 DSF). There is an option for **aluminum endcaps** (e.g. OR 75 DSF AI).

**Filtration grade DSF is not available for size OR 1700

MAINTENANCE

DSF, LSF MSF - Replace filter element at least once per year or when pressure drop reaches 350mbar

KSF - Replace filter element at least every 6 months



Strength

- We export to almost 100 countries.
- We have more than 2000 global customers.
- We can provide a total filtration solution.

- Filter-Online & Nordic Filtration offers a wide selection of filtration products for Domestic and Industrial Application.

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