



TETPOR AIR Air & Gas

Filter Cartridges



TETPOR AIR sterilization filter cartridges offer exceptional filtration performance while providing the highest levels of biosecurity throughout the process industry.

Operating at ambient temperature conditions, TETPOR AIR filter cartridges provide a cost-effective filtration solution. A unique polypropylene prefilter layer extends service life in heavily contaminated environments.

TETPOR AIR filter cartridges also utilize a well-proven, inherently hydrophobic expanded PTFE membrane validated as sterilizing grade in liquid in accordance with ASTM F838-05. This ensures the removal of all airborne bacteria, viruses and bacteriophage.

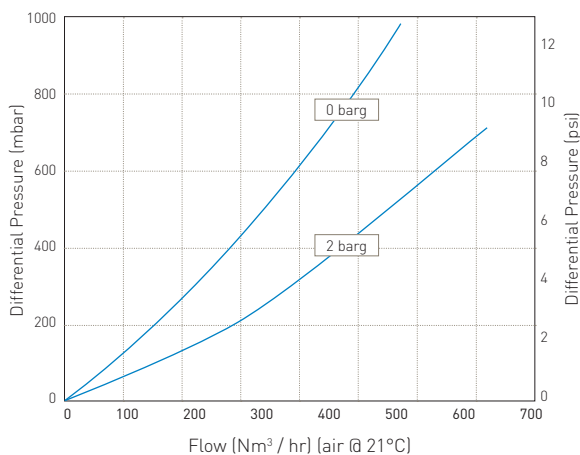
Features

- Highly hydrophobic PTFE membrane
- Fully validated to ASTM F838-05 liquid bacterial challenge
- Fully validated to aerosol and viral challenge

Benefits

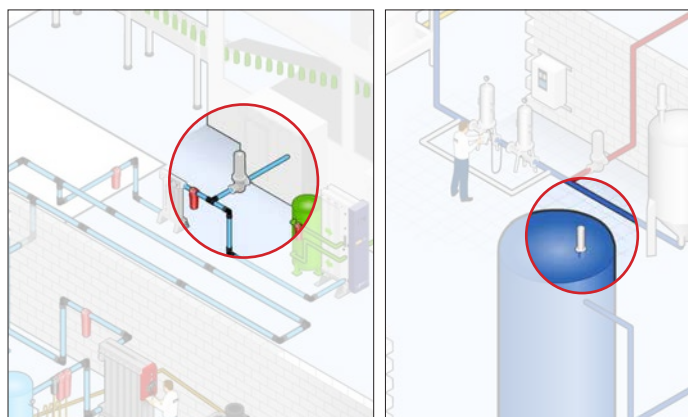
- Prevents membrane blinding during high humidity conditions
- Provides sterile effluent in high humidity environments and increased product protection
- Can be integrity tested in-situ using Valairdata 3

Performance Characteristics



Filtration Stage

Sterile Gas and Vent Filtration





Specifications

Materials of Construction

- Filter Membrane: Expanded PTFE
- Upstream Support: Polypropylene
- Downstream Support: Polypropylene

Filter Cartridges

- Inner Support Core: Polypropylene
- Outer Protection Cage: Polypropylene
- End Caps: Polypropylene
- End Cap Insert: 316L Stainless Steel
- Standard o-rings/gaskets: Silicone

Food Contact Compliance

Parker domnick hunter's range of TETPOR AIR filters are intended for indirect food contact and as such are manufactured from materials suitable for the sterilization of compressed gasses within Food and Beverage applications. Materials conform to the relevant requirements of the United States FDA 21 CFR part 177 and USP Plastics Class VI – 121°C.



Recommended Operating Conditions

Filter Cartridges
Up to 60 °C (140 °F) continuous operating temperature and higher short-term temperatures during CIP to the following limits:

| Temperature | | Max Forward dP | |
|-------------|-----|----------------|--------|
| °C | °F | (bar) | (psil) |
| 20 | 68 | 5.0 | 72.5 |
| 40 | 104 | 4.0 | 58.0 |
| 60 | 140 | 3.0 | 43.5 |
| 80 | 176 | 2.0 | 29.0 |
| 90 | 194 | 1.7 | 24.6 |

Parker Hannifin certify that this product complies with the European Council Pressure Equipment Directive (PED) 97/23/EC Article 3, Paragraph 3 - Sound Engineering Practice (SEP). This product is intended for use with Group 1 & 2 Dangerous and Harmless Liquids and Group 2 Harmless Gases at the operating conditions stated in this document: In compliance with PED Article 3, Paragraph 3, SEP, this product does not bear the CE mark.

Effective Filtration Area

| | | |
|---------------|--------------------|-------------------------|
| 10" (250 mm): | 0.77m ² | (8.28 ft ²) |
| K Size: | 0.36m ² | (3.87 ft ²) |
| A Size: | 0.25m ² | (2.69 ft ²) |
| B Size: | 0.12m ² | (1.29 ft ²) |
| E Size: | 0.06m ² | (0.64 ft ²) |

Sterilization

| | Autoclave | | Steam-in-place | |
|------------|-----------|---------------|----------------|---------------|
| | Cycles | Temp | Cycles | Temp |
| Cartridges | 120 | 142°C (287°F) | 120 | 142°C (287°F) |
| DEMICALP | 100 | 135°C (275°F) | - | - |

For detailed operational procedures and advice on cleaning and sterilization, please contact the Technical Support Group through your usual Parker domnick hunter contact.

Integrity Test Data

All modules are integrity tested prior to despatch by diffusional flow. Values are for cartridges wetted with 60 / 40 IPA / Water.

| Cartridge | Test Pressure (barg) | (psig) | Diffusional Flow (ml / min) |
|-----------|----------------------|--------|-----------------------------|
| E | 0.8 | 11.6 | 1.5 |
| B | 0.8 | 11.6 | 3.0 |
| A | 0.8 | 11.6 | 6.0 |
| K | 0.8 | 11.6 | 8.3 |
| 10" | 0.8 | 11.6 | 17.7 |

Retention Characteristics

TETPOR AIR filter cartridges are validated by bacterial challenge testing with Brevundimonas diminuta to current ASTM F838-05 methodology (10⁷ organisms / cm² EFA minimum) with typical in-house challenge levels being 1011 organisms per 10" (250 mm) filter cartridge.

In addition, TETPOR AIR filter cartridges are also validated by aerosol bacterial and MS-2 coliphage challenge testing.

Ordering information

| ZCMT | | | | | | | |
|-------------------------|------------------|------|----------------------------|--|------------------|------|----------------|
| Code | Length (Nominal) | Code | Micron | Code | End Cap (10") | Code | End Cap (Demi) |
| B* | 2.5" (65 mm) | 020 | 0.2 | B* | dh DOE | SK | Retrofit |
| A* | 5" (125 mm) | | | C | BF / 226 Bayonet | T | TRUESEAL |
| K | 5" (125 mm) | | | D | Fin / 222 | X | 116 |
| 1 | 10" (250 mm) | | | E | Flat Top / 222 | Y | Demi Sub |
| 2 | 20" (500 mm) | | | F | BF / 216 / 218 | Z | Demi A & B Std |
| 3 | 30" (750 mm) | | | G | Recess / 222 | | |
| *Supplied in packs of 3 | | | | H | UF Retrofit | | |
| | | | | R | BF / 222 Bayonet | | |
| | | | | *EPDM gaskets supplied as standard | | | |
| Code | Variant | Code | O-rings | | | | |
| A | Air / Gas | E | EPDM | | | | |
| | | P | PTFE Encapsulated Silicone | | | | |
| | | S* | Silicone | | | | |
| | | V | Viton | | | | |
| | | | | *Silicone o-ring supplied as standard without having to specify the 'S' code | | | |

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