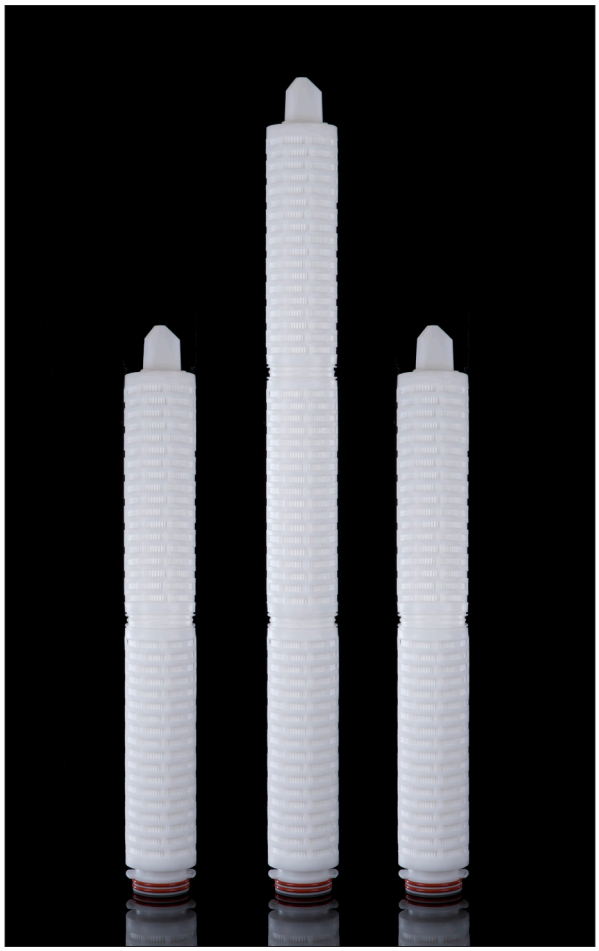
TETPOR AIR

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.

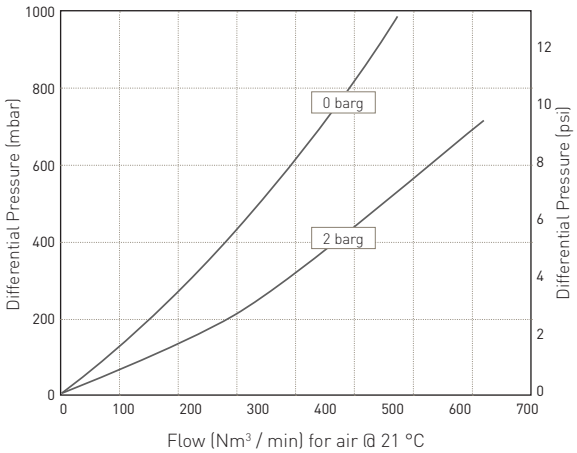
Features

- Highly hydrophobic PTFE membrane
- Fully validated to ASTM 838-05 liquid bacterial challenge
- Fully validated to aerosol & 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

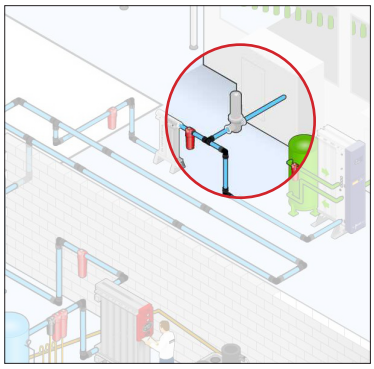
Performance Characteristics

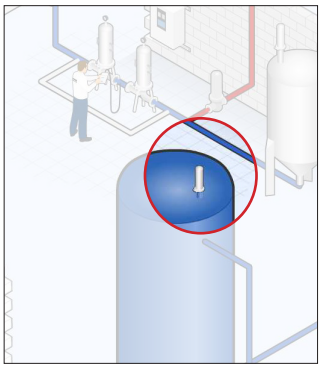


For A size filter, multiply dP by factor of 3 at same flow

Filtration Stage

Sterile Gas and Vent Filtration





Specifications

Materials of Construction

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

Filter Cartridges

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

DEMICAP Filter Capsules

- Core: Polypropylene
- Sleeve: Polypropylene
- End Caps: Polypropylene
- Capsule Body: Polypropylene
- Capsules Vent Seals: Silicone
- Filling Bell: Polycarbonate

Food and Biological Safety

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 21CFR part 177 and USP Plastics Class VI – 121°C and ISO 10993 equivalents.

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 °C	Temperature °F	Max Forward dP (bar)	Max Forward dP (psi)
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.

DEMICAP Filter Capsules

Up to 40 °C (104 °F) at line pressures up to 5.0 barg (72 psig).

Effective Filtration Area

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

Sterilization

	Autoclave Cycles	Autoclave Temp	Steam-in-place Cycles (30 min)	Steam-in-place Temp
Cartridges	120	142°C (287°F)	120	142°C (287°F)
DEMICAP	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 cartridges are integrity tested prior to despatch by the pressure decay and aerosol challenge test methods. Values are for cartridges wetted with 60 / 40 IPA / Water.

Cartridge	Test Pressure (barg)	Test Pressure (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	8.5
10"	0.8	11.6	18.0

Retention Characteristics

TETPOR AIR filter cartridges are validated by bacterial challenge testing with *Brevundimonas diminuta* to current ASTM F838-05 methodology (10^7 organisms / cm^2 EFA minimum) with typical in-house challenge levels being 10^{11} 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

Cartridges

ZCMT □ / □ □ - □ □

Code	Length (Nominal)	
B*	2.5"	(65 mm)
A*	5"	(125 mm)
K	5"	(125 mm)
1	10"	(250 mm)
2	20"	(500 mm)
3	30"	(750 mm)

** Supplied in packs of 3*

Code	Micron
020	20.0

Code	Endcap (10 inch)
B*	dh DOE
C	BF / 226 Bayonet
D	Fin / 222
E	Flat Top / 222
F	BF / 216 / 218
G	Recess / 222
H	UF Retrofit
R	BF / 222 Bayonet

**EPDM gaskets supplied as standard*

Code	Endcap (Demi)
SK	Retrofit
T	TRUESEAL
X	116
Y	Demi Sub
Z	Demi A & B Std

Code	Variant
A	Air / Gas

Code	O-rings
E	EPDM
P	PTFE Encapsulated Silicone
S*	Silicone
V	Viton

** Silicone o-ring supplied as standard without having to specify the 'S' code*

Demicap Capsules

ZEMT □ - □ □ □ - □ □ □

Code	Length (Nominal)	
E	4.4"	(113 mm)
B	5.5"	(140 mm)
A	7.9"	(200 mm)

Code	Micron
020	20.0

Code	Inlet Connection
T	1" Tri-Clamp
N	1/2" NPT Male
H	1/2" Hosebarb
G	Stepped Hosebarb
M	1/4" NPT Male
Q	Walther QC
R	Grommel / QC
V	3/8" NPT Female

Code	Outlet Connection
T	1" Tri-Clamp
N	1/2" NPT Male
H	1/2" Hosebarb
G	Stepped Hosebarb
M	1/4" NPT Male
Q	Walther QC
R	Grommel / QC
V	3/8" NPT Female

Code	Variant
A	Air / Gas

Code	Grade
N	None Sterile

Code	Pack N°
3	Pack of 3

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