



TETPOR AIR sterilizing filter elements offer outstanding performance combined with the highest level of biological safety. When used at room temperature, TETPOR AIR filter elements provide a highly effective and cost-efficient solution.

TETPOR AIR filter elements use a proven hydrophobic expanded PTFE membrane, which has also been validated as sterilizing for liquid applications in accordance with the current ASTM 828 method. This ensures the removal of all airborne bacteria and viruses.

Quality Standards

Pharmaceutical-grade products are manufactured in accordance with cGMP, 100% flushed with pharmaceutical-grade purified water, and integrity-tested prior to shipment. One filter element from each production batch is tested to demonstrate compliance with validated performance claims.

Pharmaceutical Validation

A complete validation guide is available upon request.

Non-Volatile Extractables (NVE)

The total amount of NVEs extracted in the first 5 liters of purified water for a 10" filter element is < 5 mg.

Oxidizable Substances

TETPOR AIR filter elements meet current USP and EP quality standards for sterile purified water with respect to oxidizable substances after a water throughput of < 1 liter.

Bacterial Retention

TETPOR AIR filter elements are validated by bacterial challenge testing using *Brevundimonas diminuta* in accordance with the current ASTM F838 method (10^7 organisms/cm² effective filter area). Typical internal challenge levels are 10^{11} organisms per 10" (250 mm) filter cartridge.

STERILIZATION

	Autoklave		Steam-in-Place	
	Cycles	Temperature	Cycles (30 min.)	Temperature
Filter cartridges:	120	142°C	120	142°C
MURUS:	5	130°C	-	-
DEMICAP:	100	135°C	-	-

TECHNICAL DATA

Filter medium:	PTFE
Stuport layer upstream:	Polypropylene
Stuport layer downstream:	Polypropylene
Micron rating:	0,2 µm

FILTER CARTRIDGES

Inner cage:	Polypropylene
Outer cage:	Polypropylene
End caps:	Polypropylene
End cap inserts:	Stainless steel 316L (not DOE)
Gaskets:	Silicone (Standard), EPDM, Viton, Silicone PTFE-ummantelt
Working temperature:	Max. 60°C

MURUS CAPSULES

Housing:	Polypropylene
Gasket standard:	Silicone
Gasket vent:	Silicone
Working temperature:	Max. 60°C

DEMICAP CAPSULES

Housing:	Polypropylene
Gasket vent:	Silicone
Working temperature:	Max. 60°C

INTEGRITY TEST

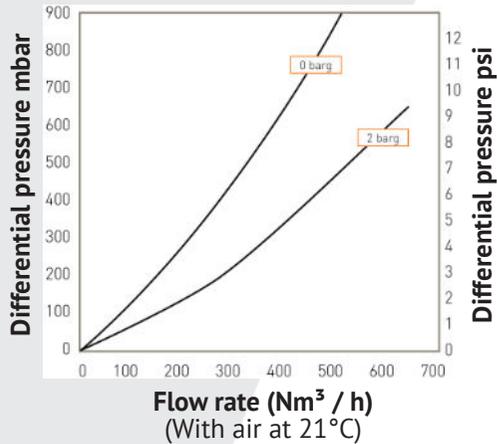
Filter element	Test pressure (bar)	Diffusional Flow (ml/min)	Water Intrusion		Water Flow (µl/10min)
			(bar)	(ml/10min)	
E	0,8	1,5	2,5	1,3	381
B		3,0		2,6	742
A		6,0		5,3	1514
K		8,3		7,2	2060
10"		17,7		15,3	4370

Wetting medium: 60 / 40 IPA / Water | Test gas: Air



-> TO THE PRODUCT

Cartridge 10" (250 mm)



TOC / Conductivity

The filtrate quality of a 10" (250 mm) TETPOR AIR filter element meets the requirements of the current USP <643> (TOC) and USP <645>.

Endotoxins

Aqueous extracts from a 10" (250 mm) TETPOR AIR filter element contain < 0.25 EU/mL when tested according to the Limulus Amebocyte Lysate (LAL) test.

Food Contact

The materials comply with the relevant requirements of FDA 21 CFR Part 177, USP Plastics Class VI – 121 °C, and ISO 10993 equivalents.

Sterilization

TETPOR AIR filter elements can be sterilized with hot water at temperatures up to 90 °C.

Order information cartridges

ZCMT [] - [] [] - [] [] - []

Length			Micron rating	
B ⁴	2,5"	65 mm	020	0,20 µm
A ⁴	5"	125 mm		
K	5"	125 mm		
1	10"	250 mm		
2	20"	500 mm		
3	30"	750 mm		

⁴only available in packs of 3

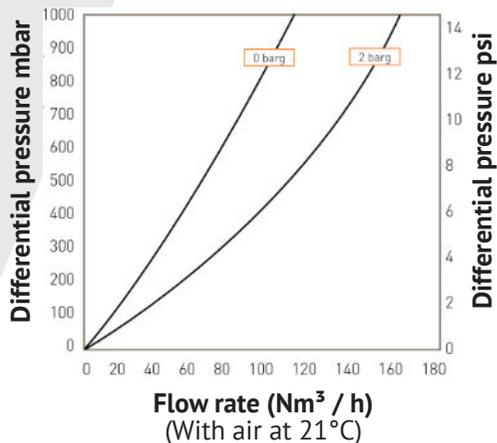
Adapter Cartridge 10"		Variant		Gasket	
B*	dh DOE	A	Air/Gas	E	EPDM
C	BF / 226 Bayonet			P	Silikon, PTFE coated
D	Fin / 222				Silicone
E	Flat / 222			V	Viton
F	BF / 216/218				
G	Recess / 222				
H	UF Retrofit				
R	BF / 222 Bayonet				

*Standard gasket EPDM

Adapter Cartridge (Demi)	
SK	Retrofit
T	Trueseal
X	116
Y	Demi Stub
Z	Demi A&B Std

Order information: ZCMT1-020C-A

Cartridge Size B (65 mm)



Order information MURUS

ZLMT [] - [] [] - [] [] - [] [] - []

Length			Micron rating	
K	5"	125 mm	020	0,20 µm
1	10"	250 mm		
2	20"	500 mm		
3	30"	750 mm		

Inlet connection		Outlet connection	
A	3/4" Tri-Clamp	A	3/4" Tri-Clamp
B	1 1/2" Tri-Clamp	B	1 1/2" Tri-Clamp
D	1" Hose barb	D	1" Hose barb
T	1" Tri-Clamp	T	1" Tri-Clamp
H	1/2" Hose barb	H	1/2" Hose barb

Option		Grade		Variant		Gasket	
A	Air-/Gas	N	Non sterile	L	In-Line	E	EPDM
				T*	T-Port		Silikon
				M**	Streamline Valves	V	Viton

*Only available with 1" Tri-Clamp
**Only available with 1" or 1 1/2" Tri-Clamp Fitting

Order information: ZLMT1-020BB-ANL

Order information DEMICAP

ZEMT [] - [] [] - [] [] - [] [] - []

Length			Micron rating	
E	4,4"	113 mm	020	0,20 µm
B	5,5"	140 mm		
A	7,9"	200 mm		

Inlet connection		Outlet connection	
T	1" Tri-Clamp	T	1" Tri-Clamp
N	1/2" NPT Male thread	N	1/2" NPT Male thread
H	1/2" Hose barb	H	1/2" Hose barb
G	Stepped hosebarb	G	Stepped hosebarb
M	1/4" NPT male thread	M	1/4" NPT Male thread
Q	Walther QC	Q	Walther QC
R	Grommel QC	R	Grommel QC
V	3/8" NPT female thread	V	3/8" NPT Female thread

Option		Grade		Pack number	
A	Air-/Gas	N	Non sterile	3	3 Stk. pro Pack

Order information: ZEMTE-020GG-AN3