ASEPT-X2

Technical changes reserved | Rev.: 001.26.04

-> TO THE PRODUCT

The ASEPT-X2 range of sterilizing grade gas filters provide increased microbial security and reduced operational costs for aseptic processing and packaging applications in the food and beverage industries, in addition to sterile gas and air filtration within industrial fermentation applications.

ASEPT-X2 gas filters have been validated to withstand reverse steam sterilization processes at elevated temperatures, without the need for condensate management. This unique feature allows a reduction in hardware and process CAPEX while improving the automation capability, ultimately reducing the engineering costs per filter application. Maintaining filter integrity under these harsh conditions also safeguards the sterile gas process, reduces the risk of contamination, and improves filter lifetime significantly over alternatives.

Advancements in membrane technology partnered with the unique construction of the ASEPT-X2 gives it unmatched performance in harsh process environments, where condensate management is ineffective or not possible. The specialist hybrid membrane gives the ASEPT-X2 the capability to withstand significant stressors from high differential pressure at elevated temperatures – common issues in applications that involve automated steam sterilization (SIP).

Quality standards

Before shipment, all ASEPT-X2 filter elements undergo a final quality control. This includes an aerosol challenge integrity test to ensure product integrity prior to dispatch, a final inspection, and final packaging in a polyethylene protective bag within a controlled manufacturing environment.

Integrity testing

The filters can be subjected to routine in-process integrity testing using the aerosol challenge method to meet HACCP requirements, demonstrate filter integrity, and ensure process reliability.

TECHNCAL DATA

Filter medium:	Expanded PTFE
Support layer:	Polypropylene
Support core:	Stainless steel 316L
Cage, End caps:	Polypropylene
Endkappeneinsatz:	Polysulphone
Gasket:	Silicone (Alternatively EPDM on demand)
Micron rating:	0,2 µm in liquid | 0,01 µm in gas
Max. working temperature:	70°C
Max. SIP temperature:	145°C

Retention Characteristics

The retention characteristics of the ASEPT-X2 filters have been validated using challenge tests with live bacteria, in which various organisms were added to both liquids and aerosols.

Food Contact Compliance

Parkers range of ASEPT-X2 filters are 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.

Steam Sterilization (SIP)

The ASEPT-X2 sterilizing filter elements have been validated for steam resistance for up to 150 steam sterilization cycles in both forward and reverse direction, without the need for condensate drainage.

ASEPT-X2 filters withstand aggressive differential pressures at steam temperatures in both forward and reverse direction—up to 1.5 barg at 140 °C.

BACTERIAL RETENTION

Method	Test organism	Total challenge level	Challenge level per cm^2	LRV (Log Reduction Value)
Aerosol bacterial challenge	Bacillus atrophaeus	2.38×10^{10} cfu	3.78×10^{6} cfu	11.8
	MS-2 Bacteriophage	2.06×10^{11} pfu	4.13×10^{8} pfu	11.3
Liquid bacterial challenge	Brevundimonas diminuta	1.66×10^{11} cfu	2.65×10^{7} cfu	10.6

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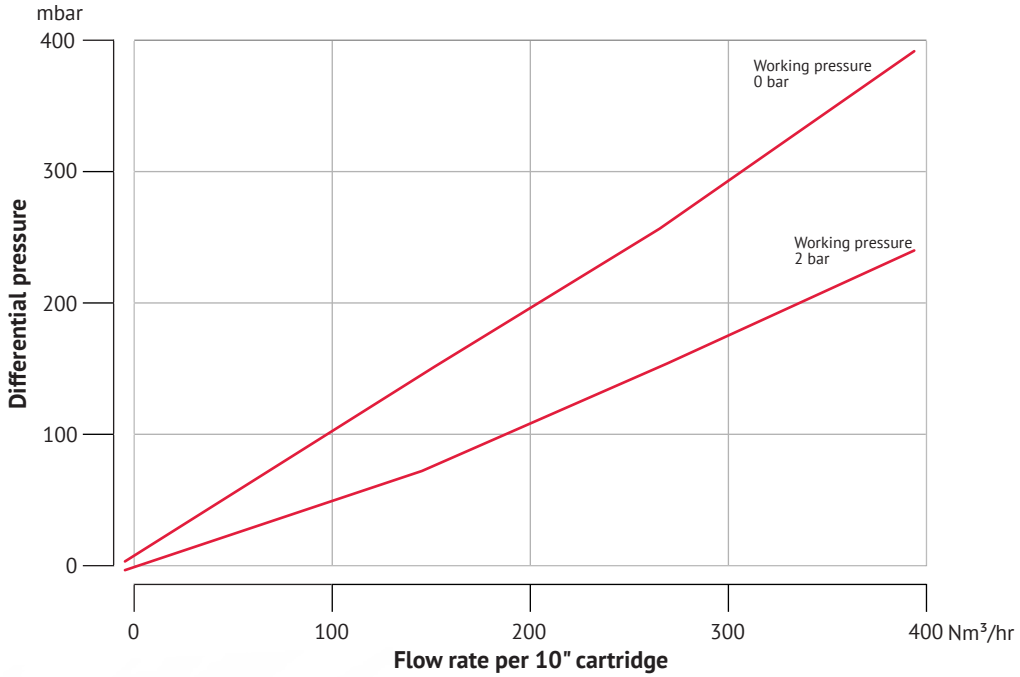

For cartridges of size A (ZCAX-AT), the differential pressure (dP) multiplies by 3 at the same flowrate.

Order information

ZCXX- [ ] [ ] - [ ]

Length		Adapter		Gasket	
B	2,5"	T*	Trueseal	S	Silicone
A	5"	Z*	Demi A&B Std		
K	5"	H	UF Retrofit		
1	10"	C	P-7		
2	20"				
3	30"				
4	40"				

*Only Demi

Order example: ZCXX-1C-S