

ASEPT-X2

STERILIZING GRADE FILTERS

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).

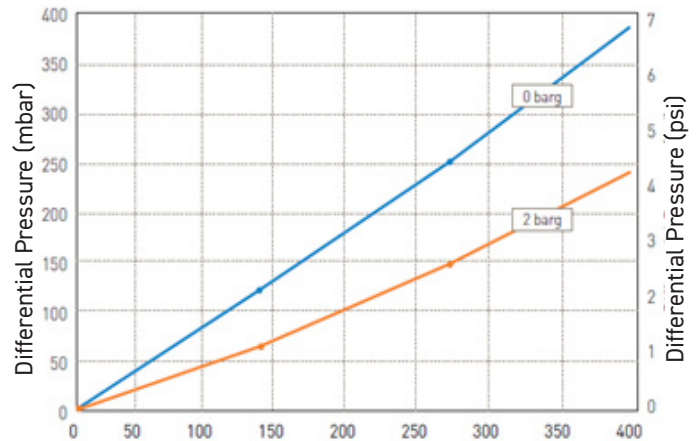
Features

- Fully validated bacterial, spore and bacteriophage retention
- Unique construction can withstand liquid condensate in air streams
- Resistant to high dP even at elevated temperatures in both forward and reverse directions
- Designed for extended service life within harsh and aggressive SIP processes.

Benefits

- Key tool in your HACCP regime
- Complete assurance of process sterility
- Reduced hardware and automation costs for SIP process
- Increased element lifetime whilst maintaining microbial security.

Performance Characteristics



Flow per 10" cartridge (Nm³ / hr) air @21°C
For A size filter, multiply dP by factor of 3 at same flow



Applications

Tank venting, aseptic packaging, in-line gas and air sterilization, fermenter off gas.

Specifications

Filtration Media	Expanded PTFE
Upstream Support	Polypropylene
Downstream Support	Polypropylene
Inner Support Core	316L Stainless Steel
Outer Protection Cage	Polypropylene
Endcaps	Polypropylene
Endcap Inserts	Polysulphone
Standard O-rings	Silicone

Recommended Operating Conditions

Maximum Operating Temperature	70°C
Maximum SIP Temperature	145°C

Steam Sterilization (SIP)

ASEPT-X2 filters have been validated to withstand 150 x SIP cycles in the forward and reverse direction without the requirement to drain bulk condensate.

ASEPT-X2 filters are also capable of withstanding aggressive differential pressures at steaming temperatures in both the forward and reverse directions.

Maximum Number of Cycles	150 x 30 min
Maximum dP in Forward Direction	1.5 barg @ 140°C
Maximum dP in Reverse Direction	1.5 barg @ 140°C

Food Contact Compliance

Parker's range of ASEPT-X2 filters are for indirect food contact and as such are manufactured from materials suitable for the sterilization of compressed gases within food and beverage applications. Materials conform to the relevant requirements of the United States FDA 21 CFR part 177.

Bacterial Retention Characteristics

The bacterial retention characteristics of ASEPT-X2 filters have been validated using both liquid and aerosol challenge methodologies.

Challenge Methodology	Test Organism	Total Challenge Level	Challenge Level per cm ²	Log Reduction Value (LRV)
Aerosol Bacterial Challenge	<i>Bacillus atrophaeus</i>	2.39 x 10 ¹⁰ cfu	3.78 x 10 ⁶ cfu	11.8
	<i>MS-2 Bacteriophage</i>	2.06 x 10 ¹¹ cfu	4.13 x 10 ⁸ cfu	11.3
Liquid Bacterial Challenge	<i>Brevundimonas diminuta</i>	1.66 x 10 ¹¹ cfu	2.65 x 10 ⁷ cfu	10.6

Product Assurance

All ASEPT-X2 filter cartridges undergo final product quality control prior to shipment, involving an aerosol challenge integrity test to ensure product integrity prior to dispatch. Product is packaged and sealed in a protective polyethylene bag within a controlled manufacturing environment.

Ordering information

ZCXX	-			-			
Code	Product	Code	Size	Code	Endcap	Code	O-ring
XX	ASEPT-X2	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"	*Demi only			
		3	30"				
		4	40"				

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