



ESLON AR PTFE Filter Cartridges

- Air / Gas Filters
- Expanded PTFE Membrane

ESLON AR gas sterilization filters have been developed to benefit from technological advances within the manufacture of PTFE membranes. This new generation of filter sets the standard with an unrivalled combination of efficiency, flow rate and strength.

The ESLON AR is validated as a 0.2 micron sterilizing grade filter in liquids through ASTM F838-05 in gas through full retention to an aerosol challenge of MS2 phage. This ensures the filter will guarantee the sterility of your process in the worst-case scenario where the filter may be subjected to bulk liquid due to a process problem. Subtle changes to the structure of the hydrophobic PTFE have also resulted in the production of an extremely robust product now validated for 225 steam sterilization cycles @ 142 °C (287.6 °F). The combination of non-woven supports upstream of the membrane and an expanded net layer downstream has significant benefits. It provides increased protection and service life while guaranteeing zero fibre shedding into the process.

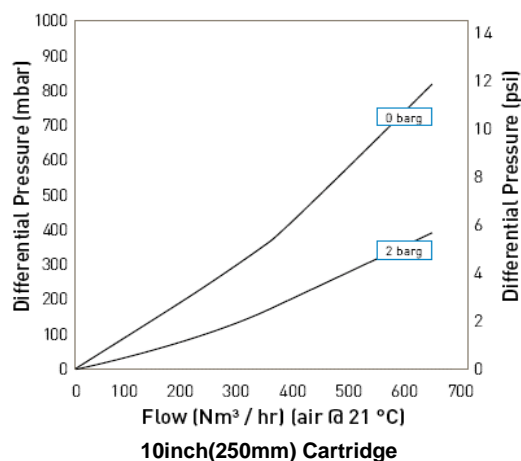
ESLON AR is suitable for all sterile gas applications including fermentation inlet and off gas streams, venting, lyophilisers, autoclave vacuum breaks and blow-fill-seal equipment as well as the provision of particle free air within the electronics industry

Features and Benefits

- Optimum pleat configuration
- Steam sterilizable
- Steam sterilizable up to 225 cycles at 142 °C (287.6 °F)
- Unrivalled flow rates combined with low pressure drops
 - Fully validated to ASTM 838-05 for liquid bacterial challenge
- Fully validated to aerosol and viral challenge
- Integrity testable by all methods including water intrusion test



Performance Characteristics



Specifications

Materials of Construction

■ Membrane:	Expanded PTFE
■ Upstream Support:	Polypropylene
■ Downstream Support:	Polypropylene
■ Inner Core:	316 Stainless Steel
■ Outer Cage:	Polypropylene
■ End Caps:	Polypropylene
■ End Cap Insert:	Polysulphone
■ Standard o-rings:	Silicone

Recommended Operating Conditions

The maximum differential pressure in direction of flow (outside to in) is 3.5 barg (50.76 psig) at 60 °C (140 °F).

The maximum recommended continuous inlet air temperature is 60 °C (140 °F).

Nominal Dimensions

Outside Diameter : 71.5mm

Inner Diameter : DOE(27.0mm), SOE(31.0mm)

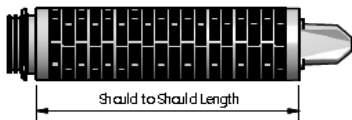
S-S Length of 10" Cartridge : 237.5mm

S-S Length of 20" Cartridge : 485.0mm

S-S Length of 30" Cartridge : 732.5mm

S-S Length of 40" Cartridge : 980.0mm

* S-S Length



Effective Filtration Area

0.71sqm / 10" cartridge

Sterilization

ESLON AR cartridges can be in situ steam sterilized for up to 225 cycles at 142 °C (287.6 °F).

Retention Characteristics

ESLON AR cartridges have been fully validated as 0.2 micron sterilizing grade filter cartridges, for compressed air and gas applications. They exceed liquid bacterial challenge levels as recommended by ASTM F 838-05.

In addition, ESLON AR is also validated by aerosol bacterial and MS-2 Coliphage challenge testing.

Food Contact Compliance

All materials of construction are FDA listed and conform to the relevant requirements of 21 CFR Part 177.

Biological Safety

All materials of construction conform to the relevant requirements of USP Class VI-121 °C Plastics.

Cleanliness

TOC (USP 643) : <500ppb

Conductivity (USP 645) : <1.3uS/cm

Endotoxin (USP85) : <0.25EU/ml

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		Diffusional Flow		Water Intrusion Test Pressure		Water Intrusion	
	[bar]	[psi]	[ml/min]		[bar]	[psi]	[ml/10min]	[ml/10min]
10"	0.8	11.6	16.50	2.5	36.2	13.5	3,857	
20"	0.8	11.6	33.00	2.5	36.2	27	7,714	
30"	0.8	11.6	49.50	2.5	36.2	40.5	11,571	
40"	0.8	11.6	66.00	2.5	36.2	54	15,428	

Ordering Information

E	L	A	R	-		-		A							
Nominal Length				Micron Rating				Endcaps				Seals			
1 : 10" (250mm)				02 : 0.2micron				C : 226INS/FIN				S : Silicone			
2 : 20" (500mm)								D : 222/FIN				E : EPDM			
3 : 30" (750mm)								E : 222/FLAT				V : Viton			
4 : 40" (1000mm)								F : 226INS/FLAT				P : FTFE			
												Encapsulated Silicone			