

STEAM SCRUBBER STAINLESS STEEL FILTER

Pressures To 145 PSIG (10 barg)
Temperatures to 353°F (178°C)



Applications

- Culinary Grade Steam
- Sterilizers
- Autoclaves
- Pharmaceutical & Biotechnology Process Equipment
- Clean Room Humidification
- Chemical Industry
- Electronic Industry
- Plastic Industry

Option

- 1, 5 or 25 micron filter

Etched and Passivated 304 Stainless Steel Housing, Externally Polished—Free of inaccessible crevices. Optional 316L housing available.

Double O-ring EPDM Housing Gasket—Designed to reduce potential downstream leakage of unfiltered medium. Other gasket materials available.

Inline NPT Connections—Simple to install. Optional flange or welded ends.

Single Clamp Closure—Allows rapid removal of filter element for cleaning or replacement.

Sintered 316 Stainless Steel Filter Media—Porosity level greater than 50% assures good flow rate at low differential pressure.

Filter Media in 1, 5 or 25 Micron Absolute Ratings—1 and 5 micron ratings suitable for culinary steam.

Filter Element Endcaps of 304 Stainless Steel—Plug connection assures element remains fixed.

Renewable Filter Media—Element may be regenerated in ultrasonic bath.

Single Open End Filter Element—Provides consistent, reliable filtering.

Audible Pressure Warning—Sounds loud warning whistle if disassembly is attempted when pressurized.

Models

- SS12–1/2" standard capacity
- SS34–3/4" standard capacity
- SS1–1" standard capacity
- SS114–11/4" standard capacity
- SS112–11/2" standard capacity
- SS2L–2" low capacity
- SS2–2" standard capacity
- SS212–21/2" standard capacity
- SS3L–3" low capacity
- SS3–3" standard capacity

Operation

Steam enters the filter body and is directed through the sintered stainless steel element. Particulate matter is retained on the element while filtered steam

passes through and exits the filter body. Element may be removed and renewed when pressure differential peaks.

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Specification

Furnish and install as shown on the plans, high efficiency inline horizontal filter for air, steam or gas constructed with housing of 304 or 316L stainless steel and single, open ended element. Filter shall have an absolute rating of 1, 5 or 25 microns and utilize double o-ring gaskets to reduce potential downstream leakage of unfiltered medium. External surface finish of filter housing shall be no less than 180 grit (25-35 Ra microinch) and joined utilizing a single clamp. Filter media shall be of sintered 316L stainless steel and be regenerable. 1 and 5 micron media shall conform to 3A sanitary standards for production of culinary steam and be USDA accepted. Connections shall be NPT, flanged ANSI 150 or welded.

Construction

Housing	304 Stainless Steel Std. 316L Stainless Steel Opt.
Clamp	304 Stainless Steel
Plug	304 Stainless Steel
Gaskets	EPDM Std. Silicone Opt. Viton Opt. Buna N Opt.
Filter Media	Sintered 316L Stainless Steel
Filter End Caps	304 Stainless Steel

Maximum Operating Conditions

PMO: Max. Operating Pressure	145 psig (10 barg)
Limit for Saturated Steam	125 psig (8.6 barg)
TMO: Max. Operating Temperature	353°F (178°C)
PMA: Max. Allowable Pressure	232 psi/g0-400°F (16 barg/0-204°C)
TMA: Max. Allowable Temperature	400°F/0-232 psig (204°C/0-16 barg)

Connections:
1/2" – 3" NPT, Flanged or Welded

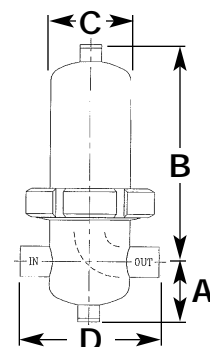
Selection Example

For optimum service life, the filter should have a 1 psi maximum pressure drop. Select a 5 micron filter for a flow rate of 110 lbs/hr (w) of saturated steam at 45 psi.

$$\text{Where: } Cs = \frac{w}{CmCp}$$

Designing for .75 PSI differential pressure, Cm is 225 from the capacity chart and Cp is 2.0.

$$\text{Therefore: } Cs = \frac{110}{(225)(2.0)} = .24 \text{ so } 3/4" \text{ should be used.}$$

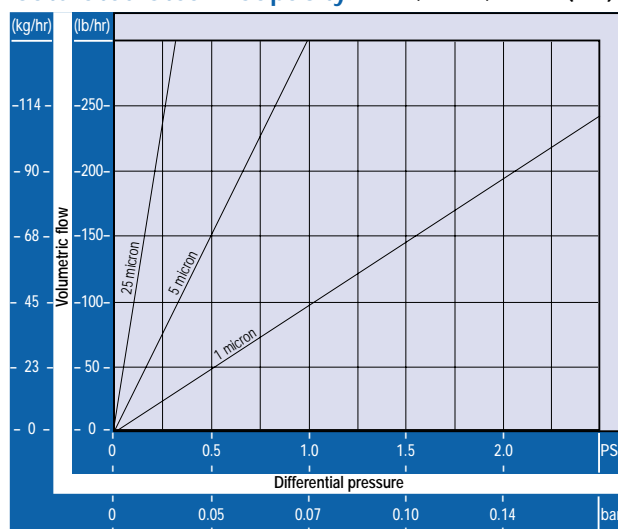


DIMENSIONS

Size in.(mm)	Dimensions, Inches (mm)				Weight lbs (kg)	Conversion Factors (Cs)
	A	B	C	D		
1/2 (13)	2 1/8 (55)	7 3/8 (188)	2 3/4 (70)	4 1/8 (108)	4.2 (1.9)	0.17
3/4 (19)	2 1/8 (55)	8 3/8 (211)	2 3/4 (70)	4 7/8 (125)	4.4 (2.0)	0.25
1 (25)	2 7/8 (74)	8 5/8 (219)	3 3/8 (85)	4 7/8 (125)	5.7 (2.6)	0.39
1 1/4 (32)	2 7/8 (74)	10 5/8 (270)	3 3/8 (85)	5 1/2 (140)	6.6 (3)	0.50
1 1/2 (38)	3 3/4 (94)	11 1/2 (292)	4 1/8 (104)	6 5/8 (170)	10.1 (4.6)	0.67
2L (51)	3 3/4 (94)	14 3/8 (366)	4 1/8 (104)	6 5/8 (170)	10.6 (4.8)	1.00
2 (51)	3 3/4 (94)	19 3/8 (493)	4 1/8 (104)	6 5/8 (170)	11.7 (5.3)	1.50
2 1/2 (64)	4 1/4 (106)	24 5/8 (626)	5 1/8 (129)	8 1/2 (216)	19.8 (9)	2.00
3L (76)	4 1/4 (106)	34 5/8 (881)	5 1/8 (129)	8 1/2 (216)	23.8 (10.8)	2.70
3 (76)	4 5/8 (119)	35 3/4 (907)	6 (154)	9 3/8 (240)	35.6 (16.2)	4.00

L denotes low capacity

Saturated Steam Capacity — 2"L, 250°F, 15 PSI (Cm)*



*For other pressures and sizes, see conversion factors.

Steam Pressure Conversion Factors (Cp)											
Steam Pressure	PSI	0	15	30	45	60	75	90	105	120	135
	bar	0	1	2	3	4	5	6	7	8	9
Conversion factor		0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0