Steam Scrubber
Stainless Steel Filter

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

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

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

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.
STEAM SCRUBBER
STAINLESS STEEL
FILTER

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 of saturated steam at 45 psi.

Where: \( C_s = \frac{W}{C_m C_p} \)

Designing for .75 PSI differential pressure, \( C_m \) is 225 from the capacity chart and \( C_p \) is 2.0.

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

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

Steam Pressure Conversion Factors (Cp)

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Conversion factor

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*For other pressures and sizes, see conversion factors.