142 and 293 mm Stainless Steel Disc Filter Holders

- Designed for large-volume liquid clarification and sterilization applications.
- Provides up to 15% greater filtration area than most competitive units for higher flow rates and extended service life.
- Recommended for the filtration of laboratory solvents, cell culture media, ophthalmics, pharmaceuticals, vitamins, make-up water, antibiotics, and photoresists.
- Broad chemical resistance with corrosion-resistant type 316 stainless steel construction.

Specifications

Materials of Construction
Electropolished type 316 stainless steel except:
- Legs: 316 stainless steel with copper threads
- Knob Assembly: Aluminum with copper threads
- O-rings: Viton®

Effective Filtration Area
142 mm: 126 cm²
293 mm: 587 cm²

Dimensions
Clearance between flange and benchtop: 29 cm (11.4 in.)
Prefilter Size
142 mm: 127 mm if used with a final filter; 142 mm if used alone
293 mm: 265 mm if used with a final filter; 293 mm if used alone

Inlet/Outlet Connections
Sanitary 3.8 cm (1.5 in.) fittings

Maximum Operating Pressure
6.9 bar (600 kPa, 100 psi)

Maximum Operating Temperature
Limited by membrane filter type or Viton o-ring: 204 °C (399 °F)

Weight
142 mm: 7 kg (15 lb.)
293 mm: 17 kg (38 lb.)

Sterilization
Provided non-sterile; autoclavable if desired 142 mm: 121 - 123 °C (250 - 253 °F), 60 min at approximately 1.0 bar (100 kPa, 15 psi) (Do not autoclave with aluminum foil; use autoclave paper or other permeable wrap.)

Assembly/Disassembly
1. The legs of the disc filter holders slip into the bottom of the outlet flange and are held secure by Allen screws (accessible at the side of the flange). The top extensions of the legs serve as guides to align the inlet flange. The inlet flange is removed by unscrewing the hand knobs. Once the knobs are loosened, the inlet flange may be lifted off, exposing the internal parts of the filter holder.
2. Do not exceed the recommended temperature limitations for the O-ring or membrane filter.
3. To determine when the filter has collected contaminants to the point where flow becomes significantly reduced, pressure gauges may be installed in the system upstream and downstream of the filter holder. Or, a differential pressure gauge may be installed in parallel. It is recommended that the filter be replaced when differential pressure across the membrane rises to double that of a clean membrane filter at initiation. If desired, a differential pressure gauge may be installed to activate an alarm signal or automatic valves to divert flow through a standby filter holder.
4. To protect against contaminants from the outlet side of the filter holder being added to the process stream, liquid effluent from the first few minutes of operation should be discarded or recirculated back to the inlet side to flush the system clean.
5. The unit may be used with fluids known to be compatible with the materials of construction as listed in the specification area and with the particular membrane filter selected. Because chemical resistance is often dependent upon pressure and/or temperature and the presence of trace impurities, no warranty is extended on this filter holder with respect to material compatibility with any fluid. A PTFE coated O-ring is available for use in those situations where Viton® and ethylene propylene are not compatible.
6. If the unit is to be installed into a rigid piping system, care should be taken to avoid misalignments that would put stress on the holder and possibly impair sealing. Flexible connectors (bellows, etc.) are strongly recommended.

Instructions for Use
The disc filter holders may be used for either simple clarification or sterilization of liquids. The slightly differing procedures for each are provided for your convenience.

Clarification
1. Place the membrane filter in the holder. Be careful to position it on the support screen properly.
2. Check the O-ring to make sure it is in good condition and snugly seated in the O-ring groove.
3. Insert the inlet flange in position, locating it on the three centering pins. The support screen, a thin photoetched disc, should be placed on top of the support screen. Be careful to position it in the appropriate groove of the outlet flange to prevent damage when the inlet flange is replaced.
4. Gradually tighten the hand knobs or screws in opposing pairs. Avoid uneven tightening, which could cause misalignment of the flanges and prevent proper sealing.
5. Align the three holes at the edge of the flange with the leg extensions. The hand knobs should be tightened gradually in opposing pairs.

Sterilization
1. If there is a possibility of the system pressure exceeding 7 bar (700 kPa, 100 psi) because of extreme clogging, a suitable relief valve must be installed on the inlet side of the filter holder. A slight flex of the filter plates may be observed when operating at maximum pressure, but does not affect integrity of the filter holder.
2. Do not exceed the recommended temperature limitations for the O-ring or membrane filter.
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In the event of an emergency, follow all emergency procedures set forth in the current edition of the standard first aid manual or those as established by your employer, educational institution, or other relevant organization. 

1. If the filter holder is to be stored or left out of service for a long period of time,

2. The filter holders may be cleaned using fluids compatible with the materials of

3. Connections should be covered to prevent contamination.

4. Lightly secure the hand knobs or screws prior to autoclaving. This will avoid

5b. PN 11873: Autoclave at 121 - 123 °C (250 - 253 °F) at approximately 1.0

5a. PN 11872: Autoclave at 121 - 123 °C (250 - 253 °F) at approximately 1.0

6. When the filter holder has cooled, finish tightening the hand knobs or screws.

Cleaning, Maintenance, and Storage

1. The filter holders may be cleaned using fluids compatible with the materials of

2. For some applications, the outlet flare, underdrain screen and support screen will

3. Ultrasonic cleaning is recommended for all parts. If brushes or tools are used, care must

4. Carefully inspect for imbedded or sticky contaminants. In ultra-clean

5. Before initial use to remove all contaminating material below the filter, and

6. The filter holder should remain sufficiently clean after normal use. They should be carefully cleaned

Replacement Parts

<table>
<thead>
<tr>
<th>Prod. No.</th>
<th>Description</th>
<th>Packaging</th>
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</thead>
<tbody>
<tr>
<td>72191</td>
<td>Type 316 stainless steel deflector</td>
<td>1/pkg</td>
</tr>
<tr>
<td>72215</td>
<td>Anodized aluminum hand knob</td>
<td>1/pkg</td>
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<tr>
<td>72889</td>
<td>Viton O-ring, ARP No. -304 for 142 mm filter holder</td>
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<tr>
<td>70975</td>
<td>Viton O-ring, ARP No. -451 for 293 mm filter holder</td>
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<tr>
<td>72818</td>
<td>142 mm support screen type 316 stainless steel</td>
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<tr>
<td>72761</td>
<td>293 mm support screen type 316 stainless steel</td>
<td>1/pkg</td>
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<tr>
<td>72394</td>
<td>142 mm underdrain disc type 316 stainless steel</td>
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<tr>
<td>72391</td>
<td>293 mm underdrain disc type 316 stainless steel</td>
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<tr>
<td>70961</td>
<td>Screws, lockbolts</td>
<td>1/pkg</td>
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<tr>
<td>70638</td>
<td>Purge valve, 1/8 in. threaded FNPT type 316 stainless steel</td>
<td>1/pkg</td>
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<td>72206</td>
<td>Hose assembly of includes clamp and PTFE gasket, type 316 stainless steel/int/outlet adapter, 3.8 cm (1.5 in.) sanitary to 9.5 mm (3/8 in.) hose barb</td>
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<tr>
<td>72197</td>
<td>Int/Outlet adapter type 316 stainless steel, 3.8 cm (1.5 in) sanitary to 3/4 in. -16 NPT</td>
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<td>72202</td>
<td>Int/Outlet clamp: 38 mm, type 304 stainless steel</td>
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<td>Int/Outlet gasket, PTFE</td>
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<td>72205</td>
<td>Int/Outlet gasket, Viton</td>
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<tr>
<td>73242</td>
<td>O-rings, Buna-N, PTFE coated, ARP No. -354, for 142 mm Filter Holder</td>
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<tr>
<td>76425</td>
<td>O-ring ethylene propylene, ARP No. -354, for 142 mm Filter Holder</td>
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<tr>
<td>72220</td>
<td>O-rings, Buna-N, PTFE-coated, ARP No. -451, for 293 mm Filter Holder</td>
<td>1/pkg</td>
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</tbody>
</table>

WARNING

Employment of the products in applications not specified, or failure to follow all instructions contained in this product information insert, may result in improper functioning of the product, personal injury, or damage to property or the product. See Statement of Warranty in our most recent catalog.

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