Meissner’s UltraCap® H.D. (Heavy Duty) capsule filters are ready-to-use assemblies that offer high flow and throughput with the convenience and cleanliness of a single-use filter assembly.

Designed for processing of medium to large liquid batches, UltraCap® H.D. high capacity capsule filters are optimized for continuous and batch processing in biomanufacturing and for final and prefiltration in pharmaceutical, food and beverage, and microelectronics applications. UltraCap® H.D. filters withstand higher operating pressure and are more robust than conventional UltraCap® capsule filters.

Meissner UltraCap® H.D. capsule filters are optimized for integration into single-use systems such as Meissner’s One-Touch® portfolio.

UltraCap® H.D. assemblies are available with a range of Meissner filter media for liquid, gas, and venting applications. They can be specified with a variety of inlet and outlet connections. An optional gauge port facilitates pressure measurement, while an optional filter stand facilitates fast, easy installation.

**Features and Benefits**

- Ruggedized polypropylene assembly withstands higher pressures than conventional high capacity capsule filters and resists damage, ensuring reliability and integrity under demanding conditions
- Encapsulated, integral assembly reduces operator contact with filtered liquids
- Extremely low hold-up volume design conserves valuable filtered liquids
- Single-use filter assembly saves installation, setup, cleaning and cleaning validation costs
- Seamlessly integrates into One-Touch® single-use systems or other single-use portfolios
- Removal ratings from 0.04 μm to 99 μm
- Final filtration through prefiltration media options include PVDF, PES, PP and PTFE membranes, as well as PP microfiber, borosilicate glass microfiber, and PP microfiber depth media
- Valved vent port for security and reliability in venting, draining and sampling
- Recessed filter vent/drain on T-style configuration prevents breakage in use
- UltraCap® H.D. filters can be easily configured in series or parallel to maximize design space. 10”, 20”, 30”, 40” and 50” lengths permit fast, easy scale-up
- Can be used with UltraSnap® connectors to configure multiple pre and final capsule filters into a presterilized, ready-to-use assembly
- Available gamma-irradiated for aseptic applications
Materials of Construction

UltraCap® H.D. Housing: Animal component free (ACF), gamma stable polypropylene (PP)

Filtration Media:

Hydrophilic Membranes
- SteriLUX® PVDF (polyvinylidene fluoride)
- EverLUX® PES (polyethersulfone)
- STyLUX® PES (polyethersulfone)

Hydrophobic Membranes
- Steridyne® PVDF (polyvinylidene fluoride)
- Chemdyne® PP (polypropylene)
- Ultradyne® PTFE (polytetrafluoroethylene)

Microfiber
- ALpHA® PP (polypropylene)
- ALpHA® G PBT (polyester)
- Vanguard® PP (polypropylene)
- Protec® RF GF (borosilicate glass)
- Protec® RM GF (borosilicate glass) + SteriLUX® PVDF membrane
- DeltaMax® PP (polypropylene)
- DeltaDepth® PP (polypropylene)

Support Components: Polypropylene (PP)
Sealing Method: Thermal Bonding

Cartridge Length (Nominal)
10", 20", 30", 40", or 50"
(25 cm, 50 cm, 75 cm, 100 cm, or 125 cm)

Max. Pressure & Temperature for Liquids
- 90 psig @ 32 °F to 100 °F (6.2 bar @ 0 °C to 38 °C)
- 55 psig @ 140 °F (3.8 bar @ 60 °C)

Max. Pressure & Temperature for Gases
- 60 psig @ 32 °F to 100 °F (4.1 bar @ 0 °C to 38 °C)
- 35 psig @ 140 °F (2.4 bar @ 60 °C)

Connections
- Inlet/Outlet: Sanitary flange, hose barb or Flaretek®
- Vent Port: Sanitary valve with hose barb; Sterile Process Design (SPD) vent (inline option only)
- Drain Port: Sanitary valve with hose barb; sanitary plug (T-style option only); Sterile Process Design (SPD) vent (inline option only)
- Gauge Port: ¾" sanitary flange (T-style option only)

Sterilization

The UltraCap® H.D. assembly should be autoclaved at a minimum of 121 °C for 60 minutes with the vents open to facilitate air removal and the outlet down. UltraCap® H.D. assemblies can be repeatedly autoclaved without loss of integrity. For critical applications, the autoclave cycle should be validated.

UltraCap® H.D. assemblies must not be in situ steam sterilized (SIP).

Gamma irradiated models are available.

Mounting

The UltraCap® H.D. assembly can be mounted and supported on suitably braced, rigid, inline pipe connections. A wall mounting bracket and accessory stand are also available. For applications requiring multiple UltraCap® H.D. capsule filters, Meissner’s UltraSnap® filter assembly is recommended. This assembly secures pre and final capsule filters into a single-use filtration system for plug and play use. Contact Meissner for details.
## Configurations

### Top View
- **Capsule Length (nominal)**
  - 10" (25 cm) = 17.3" (43.9 cm)
  - 20" (50 cm) = 26.8" (67.1 cm)
  - 30" (75 cm) = 36.2" (91.9 cm)
  - 40" (100 cm) = 45.7" (116.1 cm)
  - 50" (125 cm) = 55.2" (140.2 cm)

### Inline
- **%" Hose Barb**

### T-Style
- **Vent Port**

### Ordering Information

### UltraCap® H.D. Model

<table>
<thead>
<tr>
<th>CR2</th>
<th>MF</th>
<th>Retention Rate (μm)</th>
<th>Cartridge Length</th>
<th>Body Style</th>
<th>Inlet/Outlet</th>
<th>Vent/Drain Ports</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR2 = Standard (non-sterile)</td>
<td></td>
<td>1</td>
<td>2</td>
<td>T</td>
<td>00</td>
<td>2</td>
</tr>
<tr>
<td>CR2 = Gamma irradiated</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tbody>
</table>

### Filter Media - Grade

<table>
<thead>
<tr>
<th>Media</th>
<th>Grade</th>
<th>Retention Rate (μm)</th>
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</thead>
<tbody>
<tr>
<td>SteriLUX® PVDF</td>
<td>VTH</td>
<td>0.1, 0.2, 0.4, 0.6</td>
</tr>
<tr>
<td></td>
<td>VMH</td>
<td>0.1, 0.2, 0.4, 0.6</td>
</tr>
<tr>
<td></td>
<td>VLH</td>
<td>0.1, 0.2, 0.4, 0.6</td>
</tr>
<tr>
<td>EverLUX® PES</td>
<td>STW</td>
<td>0.2</td>
</tr>
<tr>
<td></td>
<td>SMH</td>
<td>0.2, 0.4, 0.6</td>
</tr>
<tr>
<td></td>
<td>SLH</td>
<td>0.2, 0.4, 0.6</td>
</tr>
<tr>
<td></td>
<td>SLW</td>
<td>0.2</td>
</tr>
<tr>
<td>StyLUX® PES</td>
<td>ST</td>
<td>0.04, 0.1, 0.2, 0.4</td>
</tr>
<tr>
<td></td>
<td>SM</td>
<td>0.04, 0.1, 0.2, 0.4, 0.6</td>
</tr>
<tr>
<td></td>
<td>SL</td>
<td>0.04, 0.1, 0.2, 0.4, 0.6</td>
</tr>
<tr>
<td>Steridyne® PVDF</td>
<td>VTV</td>
<td>0.2</td>
</tr>
<tr>
<td></td>
<td>VMV</td>
<td>0.2</td>
</tr>
</tbody>
</table>

Gamma-irradiated model not available for media listed below:

- Chemdyne® PP: PT, PM
- Ultradyne® PTFE: TT, TA, TM
- Microfiber Media: MF, MG, MN, RF
- Protect® RF, Protect® RM
- AlphaMax® PP depth, DeltaDepth® PP depth

### T-Style
- **Vent Port**

### T-Style
- **Vent Port**

## Filter Media Grade Descriptions

1. **T-grade** (VTH, STW, ST, VTV, PT, TT)
   - This absolute, microbially rated filter meets full traceability requirements for the pharmaceutical industry. It is 100% integrity tested during manufacture. Each T-grade filter is shipped with a Certificate of Quality stating exact quality control criteria and test performance results. This is a validatable product to meet the stringent requirements of the pharmaceutical industry.

2. **M-grade** (VMH, SMH, SLH, SLW, TM)
   - This absolute, microbially rated filter is 100% integrity tested during manufacture. It is suited for critical applications when regulatory documentation requirements are minimal.

3. **L-grade** (VLH, SLH, SLW, SL)
   - This filter is not 100% integrity tested or flushed during manufacture. It is offered as an economical prefilter or final filter when sterility assurance is not required.

4. **ALpHA® G, Protect® RF, Protect® RM, and ALpHA® 40 μm & 70 μm are gamma-irradiatable.**

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