UltraCap® H.D.
High Capacity Capsule Filters
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)
- Vangard®: 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" (68.1 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**
- **¼" Hose Barb**
- **Vent Port**
- **Drain Port**

**T-Style**
- **Vent Port**
- **1" Sanitary Flange**
- **Drain Port**

**Ordering Information**

**UltraCap® H.D. Model**
- **CR2**
  - **MF**
  - **Retention Rating (μm)**
  - **Cartridge Length**
  - **Body Style**
  - **Inlet/Outlet**
  - **Vent/Drain Ports**

**Filter Media - Grade**
- **Membrane Media**
  - SterilUX® PVDF
    - VTH
    - VMH
    - VLM
  - EverLux® PES
    - STM
    - SMH
    - SLH
    - SLM
  - StyLux® PES
    - ST
    - SM
    - SL
  - Steridyne® PVDF
    - VTV
    - VM
  - Gamma-irradiated model not available for media listed below:
    - Chemdyne® PP
      - PT
      - PM
    - Ultradyne® PTFE
      - TT
      - TA
      - TM
    - Microfiber Media
      - ALpha® PP
        - MF
      - ALpha® G PBT
        - MG
      - Vangard® PP
        - MN
      - Protec® GF
        - RF
      - Protec® GF + PVDF
        - RM
      - DeltaMax® PP depth
        - DM
      - DeltaDepth® PP depth
        - DD

**DeltaDepth**
- **UltraCap**
- **Gamma (non-sterile)**
- **Standard**
- **H.D., SteriLUX® STyLUX, DeltaDepth**, and **One-Touch** are registered trademarks of Meissner Filtration Products.
- **Flaretek** is a registered trademark of Entegris Inc.

**Filter Media Grade Descriptions**

1. **T-grade** (VTH, STW, ST, 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, SMW, VMW, PM, TA)
   - 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.

**UltraCap® G, Protec® RF, Protec® RM, and ALpha® 40 μm & 70 μm are gamma-irradiated.**