UltraCap® H.D.

High Capacity Capsule Filters

MEISSNER FILTRATION PRODUCTS

UltraCap® H.D. 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

Product Specifications

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).

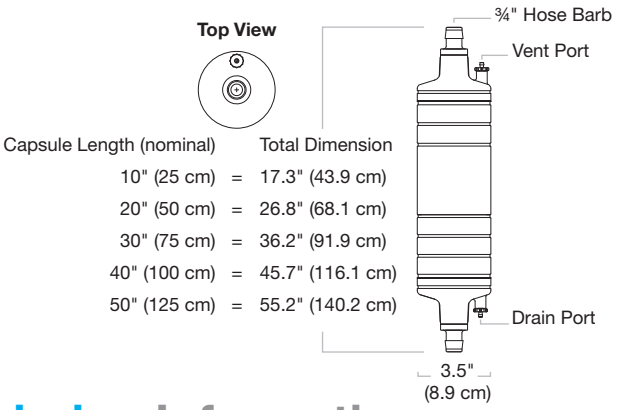
Gamma irradiated models are available.

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.

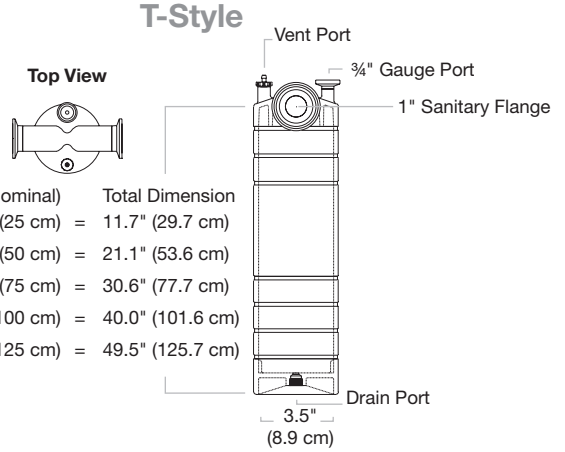
Configurations

Inline



Capsule Length (nominal)		Total Dimension
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)

T-Style



Capsule Length (nominal)		Total Dimension
10" (25 cm)	=	11.7" (29.7 cm)
20" (50 cm)	=	21.1" (53.6 cm)
30" (75 cm)	=	30.6" (77.7 cm)
40" (100 cm)	=	40.0" (101.6 cm)
50" (125 cm)	=	49.5" (125.7 cm)

Ordering Information

UltraCap® H.D. Model	Filter Media - Grade	Retention Rating (µm)		Cartridge Length	Body Style	Inlet/ Outlet	Vent/Drain Ports
CR2	MF	1.2	—	2	T	00	2

CR2 = Standard (non-sterile)

GR2 = Gamma irradiated

Membrane Media	Grade	Retention Rating (µm)
SteriLUX® PVDF	**VTH**[1]	**0.1, 0.2, 0.4, 0.6**
	VMH[2]	**0.1, 0.2, 0.4, 0.6**
	VLH[3]	**0.1, 0.2, 0.4, 0.6**
EverLUX® PES	**STW**[1]	**0.2**
	SMH[2]	**0.2, 0.4, 0.6**
	SLH[3]	**0.2, 0.4, 0.6**
	SLW[3]	**0.2**
STyLUX® PES	**ST**[1]	**0.04, 0.1, 0.2, 0.4**
	SM[2]	**0.04, 0.1, 0.2, 0.4, 0.6**
	SL[3]	**0.04, 0.1, 0.2, 0.4, 0.6**
Steridyne® PVDF	**VTV**[1]	**0.2**
	VMV[2]	**0.2**

Gamma-irradiated model not available for media listed below:

Chemdyne® PP	**PT**[1]	**0.2**
	PM[2]	**0.04, 0.1, 0.2**
Ultradyne® PTFE	**TT**[1]	**0.2**
	TA[2]	**0.2**
	TM	**0.05, 0.1, 0.2, 0.4, 1.0, 5.0**

Microfiber Media	Grade	Retention Rating (µm)
ALpHA® PP	**MF**	**0.45, 0.6, 0.8, 1.2, 2.4, 5, 7, 10, 20, 30, 40*, 70***
ALpHA® G PBT	**MG***	**0.6, 1.2, 2.4, 5, 7, 10, 20**
Vangard® PP	**MN**	**0.1, 0.2, 0.4, 1, 3, 5, 10, 30, 60, 99 (nominal)**
Protec® GF	**RF***	**0.5, 1**
Protec® GF + PVDF	**RM***	**0.2, 0.3, 0.5**
DeltaMax® PP depth	**DM**	**0.5, 1, 3, 5, 10, 20, 40, 70**
DeltaDepth® PP depth	**DD**	**0.5, 1, 5, 10, 25, 50 (nominal)**

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

1 = 10"
2 = 20"
3 = 30"
4 = 40"
5 = 50"

T = T-style
N = Inline

00 = 1" sanitary flange
77 = ¾" sanitary flange
02 = 1" sanitary flange inlet; 3/8" hose barb outlet
0C = 1" sanitary flange inlet; ½" hose barb outlet
09 = 1" sanitary flange inlet; 9/16" hose barb outlet
08 = 1" sanitary flange inlet; ¾" hose barb outlet
0D = 1" sanitary flange inlet; 1" hose barb outlet
22 = 3/8" hose barb
CC = ½" hose barb
99 = 9/16" hose barb
88 = ¾" hose barb
DD = 1" hose barb
AA = ½" Flaretek®
BB = ¾" Flaretek®

T-style

0 = No vent/drain
1 = No vent; ¼" sanitary drain plug
2 = Sanitary vent; ¼" sanitary drain plug
3 = Sanitary vent; ¾" sanitary flange gauge port; ¼" sanitary drain plug
4 = Sanitary vent; no drain
5 = Sanitary vent; ¾" sanitary flange gauge port; no drain
6 = No vent/drain; ¾" sanitary flange gauge port
A = No vent; sanitary drain valve
B = Sanitary vent; sanitary drain valve
C = Sanitary vent; sanitary drain; ¾" sanitary flange gauge port

Inline

0 = No vent/drain
2 = Two sanitary vent/drain valves
4 = One sanitary vent or drain valve
K = Two SPD vent/drain valves at inlet and outlet
L = One SPD vent at outlet only

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, SM, VMV, 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.

CR 3.1

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