UltraCap® H.D.

MEISSNER FILTRATION PRODUCTS, INC.

UltraCap® H.D. High Capacity Capsule Filters

Meissner 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. assemblies 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® assemblies.

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 are supplied with sanitary flange 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
- 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
- Removal ratings from 0.04 µm to 99 µm
- 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
- Extremely low hold-up volume design conserves valuable filtered liquids
- Valved vent port for security and reliability in venting, draining and sampling
- Recessed filter vent/drain on T-style configuration prevents breakage in use
- 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
- Available gamma-irradiated for aseptic applications

Materials of Construction

UltraCap® H.D. Housing:	Polypropylene (PP)
Filtration Media:	
Hydrophilic Membranes	
SteriLUX®	Polyvinylidene fluoride (PVDF)
EverLUX®	Polyethersulfone (PES)
STyLUX®	Polyethersulfone (PES)
Hydrophobic Membranes	
Steridyne®	Polyvinylidene fluoride (PVDF)
Chemdyne®	Polypropylene (PP)
Ultradyne®	PTFE
Microfiber	
ALpHA®	Polypropylene (PP)
Vangard®	Polypropylene (PP)
Protec® RF	Borosilicate glass (GF)
Protec® RM	Borosilicate glass (GF) + SteriLUX® PVDF membrane
DeltaMax®	Polypropylene (PP) depth
DeltaDepth®	Polypropylene (PP) depth
Support Components:	Polypropylene (PP)
Sealing Method:	Thermal Bonding

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
Drain Port:	Sanitary valve with hose barb; Sanitary plug (T-style option only)
Gauge Port:	3/4" sanitary flange (T-style option only)

Cartridge Length (Nominal)

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

Sterilization

The UltraCap® H.D. assembly must be autoclaved at a minimum of 121°C for 60 minutes with the inlet/outlet down. UltraCap® H.D. assemblies can be repeatedly autoclaved without loss of integrity.

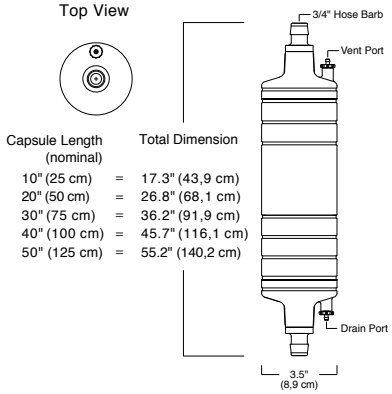
UltraCap® H.D. assemblies must not be insitu steam sterilized (SIP) as exposure to direct steam flow at 121°C, 15 psig (1 bar) will exceed material design limits and can result in rupture of the plastic housing.

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.

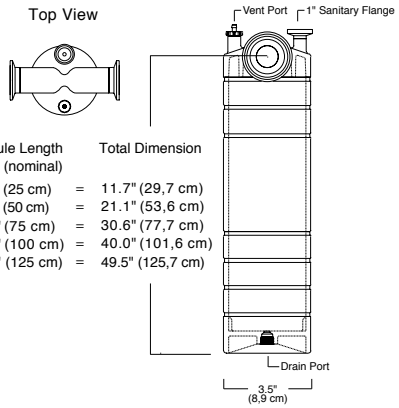
Configuration Dimensions

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
CR	MF	5	— 2	T	00	2

UltraCap® H.D. Model

CR = Standard (non-sterile)

GR = Gamma-irradiated

Filter Media - Grade

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

Gamma-irradiated model not available for media listed below:

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

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
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)

*Protec® RF and RM are gamma-irradiatable

Cartridge Length

1 = 10"

2 = 20"

3 = 30"

4 = 40"

5 = 50"

Body Style

T = T-style

N = Inline

Inlet/ Outlet

00 = 1" sanitary flange

77 = 3/4" sanitary flange

02 = 1" sanitary flange inlet; 3/8" hose barb outlet

0C = 1" sanitary flange inlet; 1/2" hose barb outlet

09 = 1" sanitary flange inlet; 9/16" hose barb outlet

08 = 1" sanitary flange inlet; 3/4" hose barb outlet

0D = 1" sanitary flange inlet; 1" hose barb outlet

22 = 3/8" hose barb

CC = 1/2" hose barb

99 = 9/16" hose barb

88 = 3/4" hose barb

DD = 1" hose barb

AA = 1/2" Flaretek®

BB = 3/4" Flaretek®

Vent/Drain Ports

T-Style

0 = No vent or drain

1 = No vent; 1/4" sanitary drain plug

2 = Sanitary vent; 1/4" sanitary drain plug

3 = Sanitary vent; 3/4" sanitary flange gauge port; 1/4" sanitary drain plug

4 = Sanitary vent; no drain

5 = Sanitary vent; 3/4" sanitary flange gauge port; no drain

6 = No vent or drain; 3/4" sanitary flange gauge port

A = No vent; sanitary drain valve

B = Sanitary vent; sanitary drain valve

C = Sanitary vent; sanitary drain; 3/4" sanitary flange gauge port

Inline

0 = No vent or drain

2 = Two sanitary vent/drain valves

4 = One sanitary vent or drain valve

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.

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