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 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

- 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

- Can be used with UltraSnap™ connectors to configure multiple pre and final capsule filters into a presterilized, ready-to-use assembly

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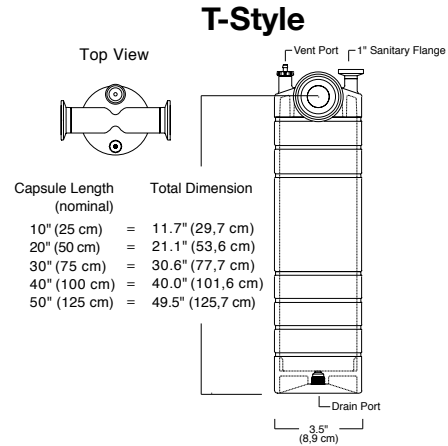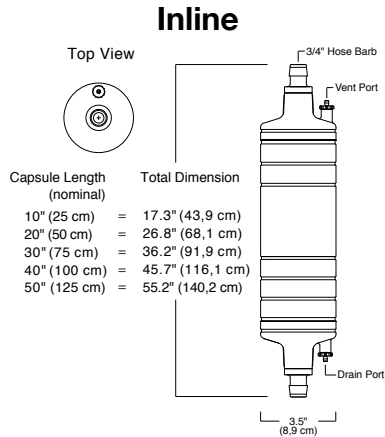
UltraCap® H.D. assemblies must not be insitu steam sterilized (SIP) as exposure to direct steam flow at 121°C, 15 psig (1 bar) will exceed material design limits and can result in rupture of the plastic housing.

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

Top View

3/4" Hose Barb

Vent Port

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)

Drain Port

3.5" (8,9 cm)

T-Style

Top View

Vent Port   1" Sanitary Flange

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)

Drain Port

3.5" (8,9 cm)

Ordering Information

UltraCap® H.D. Model	Filter Media - Grade		Retention Rating (µm)	Cartridge Length	Body Style	Inlet/ Outlet	Vent/Drain Ports
CR2	MF		5	— 2	T	00	2

UltraCap® H.D. Model	Filter Media - Grade		Retention Rating (µm)	Cartridge Length	Body Style	Inlet/Outlet	Vent/Drain Ports
CR2 = Standard (non-sterile)	**Membrane Media**	**Grade**	**Retention Rating (µm)**	1 = 10"	T = T-style	00 = 1" sanitary flange	**T-Style**
	SteriLUX® PVDF	VMH[2], VTH[1], VLH[3]	0.1, 0.2, 0.4, 0.6		N = Inline	77 = 3/4" sanitary flange	0 = No vent or drain
GR2 = Gamma-irradiated (sterile)	EverLUX® PES	SMH[2], SLH[3]	0.2, 0.4, 0.6	2 = 20"			1 = No vent; 1/4" sanitary drain plug
		STW[1], SLW[3]	0.2			02 = 1" sanitary flange inlet; 3/8" hose barb outlet	2 = Sanitary vent; 1/4" sanitary drain plug
	STyLUX® PES	SM[2], SL[3]	0.04, 0.1, 0.2, 0.4, 0.6	3 = 30"		0C = 1" sanitary flange inlet; 1/2" hose barb outlet	
		ST[1]	0.04, 0.1, 0.2, 0.4				3 = Sanitary vent; 3/4" sanitary flange gauge port; 1/4" sanitary drain plug
	Steridyne® PVDF	VMV[2], VTV[1]	0.2	4 = 40"		09 = 1" sanitary flange inlet; 9/16" hose barb outlet	
	Gamma-irradiated model not available for media listed below:						4 = Sanitary vent; no drain
	Chemdyne® PP	PM[2]	0.04, 0.1, 0.2	5 = 50"		08 = 1" sanitary flange inlet; 3/4" hose barb outlet	5 = Sanitary vent; 3/4" sanitary flange gauge port; no drain
		PT[1]	0.2				
	Ultradyne® PTFE	TM	0.05, 0.1, 0.2, 0.4, 1.0, 5.0			0D = 1" sanitary flange inlet; 1" hose barb outlet	6 = No vent or drain; 3/4" sanitary flange gauge port
		TA[2], TT[1]	0.2				
	Microfiber Media	**Grade**	**Retention Rating (µm)**			22 = 3/8" hose barb	A = No vent; sanitary drain valve
	ALpHA® PP	MF	0.45, 0.6, 0.8, 1.2, 2.4, 5, 7, 10, 20, 30, 40, 70			CC = 1/2" hose barb	B = Sanitary vent; sanitary drain valve
	Vangard® PP	MN	0.1, 0.2, 0.4, 1, 3, 5, 10, 30, 60, 99 (nominal)			99 = 9/16" hose barb	C = Sanitary vent; sanitary drain; 3/4" sanitary flange gauge port
	Protec® GF	RF*	0.5, 1			88 = 3/4" hose barb	
	Protec® GF + PVDF	RM*	0.2, 0.3, 0.5			DD = 1" hose barb	**Inline**
	DeltaMax® PP depth	DM	0.5, 1, 3, 5, 10, 20, 40, 70			AA = 1/2" Flaretek®	0 = No vent or drain
	DeltaDepth® PP depth	DD	0.5, 1, 5, 10, 25, 50 (nominal)			BB = 3/4" Flaretek®	2 = Two sanitary vent/drain valves
	*Protec® RF and RM are gamma-irradiatable						4 = One sanitary vent or drain valve

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.

SteriLUX®, STyLUX®, EverLUX®, Steridyne®, Chemdyne®, Ultradyne®, ALpHA®, Vangard,® Protec®, DeltaMax®, DeltaDepth®, UltraCap® and One-Touch® are registered trademarks of Meissner Filtration Products, Inc.

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MEISSNER FILTRATION PRODUCTS

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