

Alpha® G Filters



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ALpHA® G Filters

ALpHA® G is an absolute rated depth type filter, which is made of gamma stable materials and optimized for use in single-use clarification operations. The filter is particularly suited for processes that involve the removal of colloidal protein aggregates and solids from cell culture fluid and the recovery of product or filtrate. The ALpHA® G filter is the ideal choice for removing the contaminants that foul downstream processing steps and lead to reduced product recoveries. It delivers high throughput with absolute particulate retention and high dirt holding capacity under demanding conditions. ALpHA® G filters can be gamma irradiated and provided sterile for immediate use.

Materials of Construction

The ALpHA® G filter is manufactured using high quality components made from non-toxic and biologically inert raw materials. All components of the ALpHA® G filter are FDA listed for food contact use in the Code of Federal Regulations (CFR), Title 21 as below:

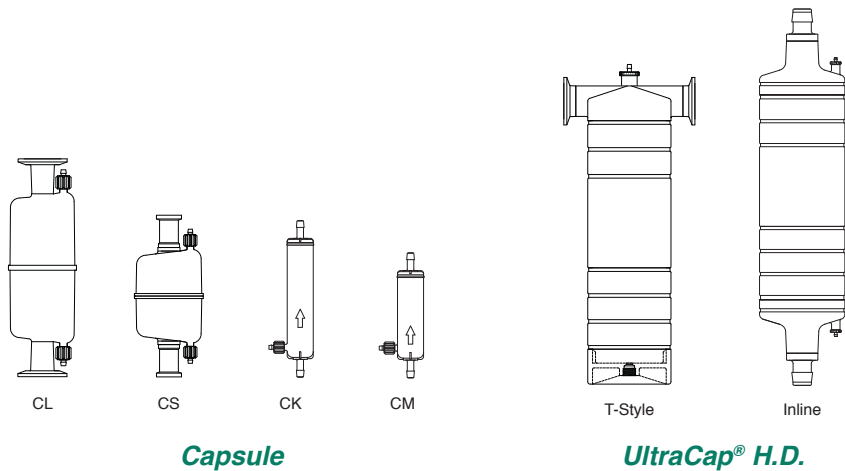
Components

Media:	Polyester (PBT)	CFR Title 21, 177.1520
Upstream/Downstream support:	Polypropylene	CFR Title 21, 177.1520
Core/Outer guard:	Polypropylene	CFR Title 21, 177.1520
End caps/Adaptors:	Polypropylene	CFR Title 21, 177.1520
Capsule housing:	Polypropylene	CFR Title 21, 177.1520
Sealing method:	Thermal bonding	

The ALpHA® G filter meets requirements as specified in the current USP Class VI plastics, pyrogen and cytotoxicity tests. No binders, adhesives or surfactants are used in the construction of ALpHA® G filters.

Configurations

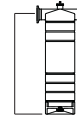
ALpHA® G can be ordered in a variety of capsule configurations.



Dimensions

<i>Capsule</i>	<i>Diameter</i>	<i>Length</i>	<i>EFA**</i>
CL2	2.75" (7,0 cm)	6.9" (17,5 cm)	2.0 ft ² (0.19 m ²)
CS2	2.75" (7,0 cm)	4.5" (11,4 cm)	1.0 ft ² (0.09 m ²)
CK2	1.15" (2,9 cm)	6.25" (15,9 cm)	0.36 ft ² (335
CM2	1.15" (2,9 cm)	5.50" (14,0 cm)	cm ²) 0.29 ft ²
			(270 cm ²)

<i>UltraCap® H.D.</i>	<i>Diameter *</i>	<i>Length (nominal)</i>	<i>Capsule Dimension (overall)</i>	<i>EFA**</i>
T-style	3.5" (9 cm)	10" (25 cm) 20" (50 cm) 30" (75 cm) 40" (100 cm) 50" (125 cm)	11.7" (29.7 cm) 21.1" (53.6 cm) 30.6" (77.7 cm) 40.0" (101.6 cm) 49.5" (125.7 cm)	5.2 ft ² (0.48 m ²) 10.4 ft ² (0.97 m ²) 15.6 ft ² (1.45 m ²) 20.8 ft ² (1.93 m ²) 26.0 ft ² (2.42 m ²)
Inline	3.5" (9 cm)	10" (25 cm) 20" (50 cm) 30" (75 cm) 40" (100 cm) 50" (125 cm)	17.3" (43.9 cm) 26.8" (68.1 cm) 36.2" (91.9 cm) 45.7" (116.1 cm) 55.2" (140.2 cm)	5.2 ft ² (0.48 m ²) 10.4 ft ² (0.97 m ²) 15.6 ft ² (1.45 m ²) 20.8 ft ² (1.93 m ²) 26.0 ft ² (2.42 m ²)



**inlet/outlet fittings extend beyond stated diameter **EFA = Effective Filtration Area*

Operating Characteristics

Capsules - CS/CL Model

Maximum Operating Pressure, Liquids
75 psig @ 32°F to 100°F
(5.2 bar @ 0°C to 38°C)

Maximum Operating Temperature Rating
160°F @ 35 psig
(71°C @ 2.4 bar)

Maximum Operating Pressure, Gas
50 psig @ 32°F to 100°F
(3.4 bar @ 0°C to 38°C)

Capsules - CM/CK Model

Maximum Operation Pressure & Temperature, Liquids
100 psig @ 32°F to 122°F
(6.9 bar @ 0°C to 50°C)

Maximum Operating Pressure & Temperature, Gas
75 psig @ 32°F to 122°F
(5.2 bar @ 0°C to 50°C)

UltraCap® H.D. Model

Maximum Operating Pressure & Temperature, 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)

Maximum Operating Pressure & Temperature, Gas
60 psig @ 32°F to 100°F
(4.1 bar @ 0°C to 38°C)

35 psig @ 140°F
(2.4 bar @ 60°C)

Particle Retention Data

The removal ratings given in this chart represent actual dynamic measurements obtained from controlled laboratory tests using latex spheres in DI water at a flow rate of 2 gpm/10-inch element. The particle retention efficiencies were determined using a particle counter that accurately measured particles down to 0.3 µm.

Pore size (µm)	Removal Rating in Microns (µm) at % Efficiency		
	100%	99%	90%
0.6	0.6	0.56	0.38
1.2	1.2	1.1	0.7
2.4	2.4	2.3	2.0
5	5.0	4.5	3.0
7	7.0	6.5	5.0
10	10.0	9.5	7.5
20	20.0	19.0	12.0

Storage and Shelf Life

Meissner manufactures a complete line of filter products and One-Touch® single use assemblies. Products are suitably bagged and boxed for shipping and may be stored in the original packaging in a clean dry area between 0°C and 40°C (32°F to 100°F). The following gives the minimum shelf life expectancies for ALpHA® G products.

Filters

The ALpHA® G filter has an expected shelf life greater than 5 years in non-irradiated large and small capsule configurations. Filter product age can be determined from the date on the original Certificate of Conformance.

Gamma irradiated filters, which include capsule and UltraCap® H.D. capsules have a shelf life of at least 2 years from the date of irradiation. Gamma irradiated capsules are distinguished with part numbers beginning with the letter “G”.

One-Touch® Products

The One-Touch® product line of single-use systems, including but not limited to biocontainers, tubing, and/or filter assemblies, has labeling which identifies the product specific expiration date. The standard shelf life of nonsterile and gamma irradiated One-Touch® products is 2 years from the date of manufacture. These standard time periods may be amended to reflect the various components included in a specific configuration, a change that will be indicated on the product label. Filters that are part of a One-Touch® single-use system begin with “C” and are irradiated once with the One-Touch® assembly.

ALpHA® G Media Grade Description

MG = This pleated polyester depth-type filter is absolute rated. It has been optimized for gamma irradiation compatibility for use in single-use systems. A Certificate of Conformance is available on a lot basis.

Capsule (CS/CL) Ordering Matrix Description

G	S	2	MG	0.6	—	02	2
			MG		—		
Sterile Option	Filtration Area (nominal)	Material Code	Filter Grade	Absolute Rating (µm)	—	Inlet/Outlet Connections	Vent/Drain Ports
C = Standard (non-sterile)	S = 1.0 ft² (0.09 m²)	2 = Animal component free polypropylene capsule shell material, optimized for gamma irradiation compatibility	MG	0.6, 1.2, 2.4, 5, 7, 10, 20	—	00 = 1" sanitary flange	0 = No vent/drain port
G = Gamma irradiated	L = 2.0 ft² (0.19 m²)					02 = 1" sanitary flange inlet; 3/8" hose barb outlet	1 = 1 luer port with cap, outlet side
						0C = 1" sanitary flange inlet; 1/2" hose barb outlet	2 = Standard - 2 luer ports with caps
						22 = 3/8" hose barb	4 = 2 sanitary valves with hose barb
						2B = 3/8" hose barb with filling bell	5 = 1 sanitary valve with hose barb connection, outlet side
						CC = 1/2" hose barb	6 = 1 sanitary valve with hose barb connection, inlet side
						44 = 1/4" MNPT	
						55 = 3/8" FNPT	
						66 = 3/8" MNPT	
						77 = 3/4" sanitary flange	
						88 = 3/4" hose barb	
						99 = 1/2" hose barb flexible tubing	

Capsule (CM/CK) Ordering Matrix Description

G	K	2	MG	0.6	—	77	4
		2	MG		—		
Model	Filtration Area (nominal)	Material Code	Filter Grade	Absolute Rating (µm)	—	Inlet/Outlet Connections	Vent/Drain Ports
C = Standard (non-sterile)	M = 0.29 ft² (270 cm²)	2 = Animal component free polypropylene capsule shell material, optimized for gamma irradiation compatibility	MG	0.6, 1.2, 2.4, 5, 7, 10, 20	—	11 = 1/4" hose barb	0 = No vent/drain port
G = Gamma irradiated	K = 0.36 ft² (335 cm²)					1B = 1/4" hose barb w/ filling bell	1 = 1 luer port with cap, inlet side
						22 = 3/8" hose barb	2 = Standard - 2 luer ports with caps
						2B = 3/8" hose barb w/ filling bell	4 = 2 sanitary valves with hose barb
						41 = 1/4" MNPT; 1/4" hose barb out	5 = 1 sanitary valve with hose barb connection, inlet side
						44 = 1/4" MNPT	6 = 1 sanitary valve with hose barb, outlet side
						71 = 3/4" TC in; 1/4" hose barb out	
						72 = 3/4" TC in; 3/8" hose barb out	
						77 = 3/4" sanitary (TC) flange	

UltraCap® H.D. (T-Style & Inline) Ordering Matrix Description

GR	2	MG	0.6	—	2	T	00	2
	2	MG		—				
Model	Material Code	Filter Grade	Absolute Rating (µm)	—	Cartridge Length	Body Style	Inlet/Outlet Connections	Vent/Drain Ports T-Style
CR = Standard (non-sterile) GR = Gamma-irradiated	2 = Animal component free polypropylene capsule shell material, optimized for gamma irradiation compatibility	MG	0.6, 1.2, 2.4 5, 7, 10, 20	—	1 = 10" 2 = 20" 3 = 30" 4 = 40" 5 = 50"	T = T-style N = Inline	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®	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
								Vent/Drain Ports Inline
								0 = No vent or drain 2 = Two sanitary vent/drain valves 4 = One sanitary vent or drain valve, outlet side

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