Chemlock® PFA Housing

Space-saving housing enables hassle-free cartridge changeouts and reduces exposure to chemicals

Entegris' Chemlock® PFA housing offers a space-saving solution like no other cartridge filter housing available today. This revolutionary housing locks the cartridge into the bowl, allowing the bowl and cartridge to be removed as a single unit.

Easier cartridge changeout

Cartridge changeout has never been easier. The Chemlock bowl is used as a tool when installing and removing a cartridge. After the cartridge is inserted into the bowl, a quarter turn locks the cartridge into place. The Chemlock bowl and cartridge filter can be installed into a Chemlock head quickly and easily. By turning the locking ring, the cartridge is pushed vertically into the housing head, ensuring perfect alignment and double O-ring engagement every time. Operators do not have to touch the cartridge body during cartridge changeout, which minimizes potentially hazardous exposure to chemicals and limits the possibility of process contamination.

Reduced footprint

The Chemlock PFA housing has fully molded fittings in several fitting types and sizes, in an extremely compact housing head design. The Chemlock housing is offered in a universal (nominal) 10" length, as well as 5", 20", and 30" lengths to accommodate a wide variety of cartridges.

Improved reliability

The cartridge locking feature prevents the cartridge from falling out or being pushed out by back pressure. Vertical installation ensures that O-rings will not roll.

Minimal space requirements

The compact design provides a vertical space-saving advantage for cartridge changeout. The Chemlock housing saves a minimum of 8" of vertical space over traditional housing installations. Cartridges can be removed with minimal clearance. Standard housings require dedicated space in the filtration system to lower a housing bowl below the cartridge. The fully molded Chemlock head also has the smallest footprint available anywhere.

FEATURES & BENEFITS

Smaller footprint, "minimal-clearance" cartridge/bowl design	Tremendous tool space savings over traditional housings; requires less space for cartridge changeout
Cartridge locks into bowl with a simple quarter-turn	Lock-in cartridge reduces required overall footprint and cartridge changeout space Turning the bowl locking ring perfectly seats the cartridge in the head with double O-ring engagement and straight alignment every time
Compact head with molded-on fittings	Minimal footprint with fittings and configurations ensures compatibility with most filtration applications
Easier cartridge changeout	Virtually hands-free cartridge changeout provides maximum safety and cleanliness Allows quick installation and minimizes downtime while limiting the handling of hazardous chemicals during installation and disposal process, promoting a safer workplace

SPECIFICATIONS

Materials	Head, bowl, molded-on fittings, nuts, plug	PFA 440 HP or equivalent
	O-ring	E-FKM, EP, Kalrez®, Viton®
	Nonwetted locking ring	PVDF or GFPP (glass-filled polypropylene)
	Universal locking ring	PTFE
	Mounting hardware – nuts and bolts (nonwetted parts)	PVDF
Fluid connections	PrimeLock®, Flaretek®, Super Type Pillar®, Super 300 Type Pillar, pipe fitting, FNPT	
Cartridge connections	Code 0, dual 2-222 O-rings, and Chemlock cartridges with key	
Operating conditions	**PVDF and GFPP Locking Rings** Maximum inlet pressure: 0.3 MPa (3.0 bar, 43 psi) @ 100°C (212°F) 0.76 MPa (7.6 bar, 110 psi) @ 25°C (77°F) Maximum operating temperature: 100°C (212°F)	**PTFE Locking Rings** Maximum inlet pressure: 0.3 MPa (3.0 bar, 43 psi) @ 95°C (203°F) 0.76 MPa (7.6 bar, 110 psi) @ 25°C (77°F) Maximum operating temperature: 95°C (203°F)
Torque	Torque specifications validated using Chemlock torque wrench	

Chemical compatibility — locking rings

	AQUEOUS ACIDS	AQUEOUS OXIDIZER	AQUEOUS BASES	SOLVENTS
	H_2SO_4, H_3PO_4, HNO_3	H_2O_2	NH_4OH, TMAH, KOH	IPA, DMSO
GFPP	Not recommended	Not recommended	Recommended	Recommended
PTFE	Recommended	Recommended	Recommended	Recommended
PVDF	Recommended	Recommended*	Not recommended	Not recommended

**PVDF is recommended up to 72°F (22°C) in <50% concentration.*
Contact Entegris for locking ring compatibility with chemicals not listed.

⚠ **WARNING: Using a locking ring that is not fully compatible with your chemical may result in a seriously hazardous condition due to sudden breakage of the locking ring and chemical exposure.**

SPECIFICATIONS (CONTINUED)

Chemical compatibility — O-rings

Part number	Material	Torque	Temp	Solvents	Acid	Base	Oxidizers	Notes
YY5610102	E-FKM (TEV)	45 N•m	<100°C	C	A	C	A	PFA encapsulation provides better cleanliness and compatibility; however, due to diffusion, avoid polar solvents, amines, and anhydrous ammonia
YY3510103	EP	28.5 N•m	<60°C	C	B	B	C	Good resistance to mild acids, detergents, alkalis; fair to poor resistance to solvents
YY5610106	Kalrez W6375	28.5 N•m	<100°C	A	A	A	A	Excellent compatibility
P01002J	Viton	28.5 N•m	<100°C	D	A	D	B	Avoid polar solvents, amines, and anhydrous ammonia

A = Good; B = Fair; C = Poor; D = Not recommended

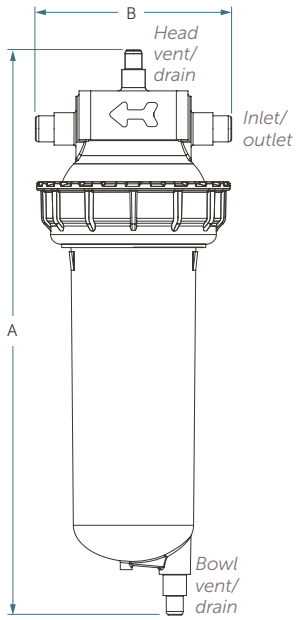
The distinction above is a general guideline based on the relative compatibility in common chemicals. For product recommendations in specific chemicals or if you cannot find the configuration you need, please contact your customer representative.

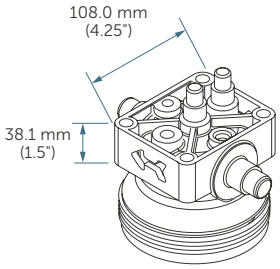
Chemlock cartridges are compatible with the Chemlock PFA and Chemlock PP housings. Cartridges can be ordered by adding either a "K" or a "Y" to the end of a standard cartridge part number depending on the product family. Standard cartridges (without the key) are still available under their usual part number.

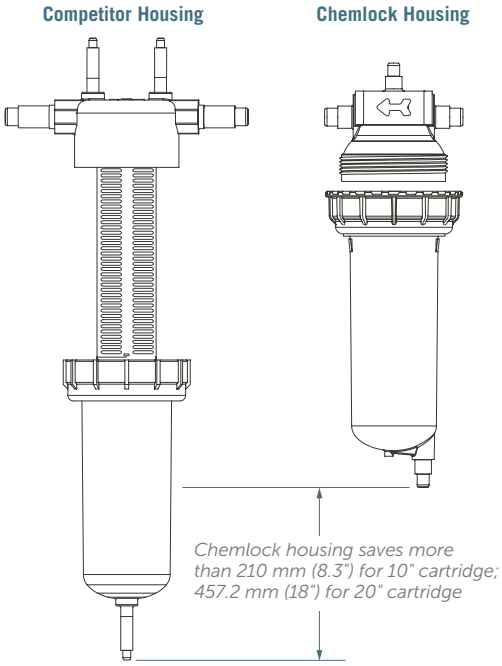
Any standard 10" Code 0 cartridge can be used with the universal Chemlock PFA housing. Only Chemlock cartridges can use the cartridge locking mechanism. Use of a Chemlock key or any other key with a third party cartridge voids the housing warranty and may infringe one or more Entegris U.S. and foreign patents, issued or pending. Such patents and warranties do not apply to use of third party cartridges without any key.

Refer to individual cartridge datasheets on *www.entegris.com* for cartridge ordering information.

DIMENSIONS


B
Head vent/ drain
Inlet/ outlet
A
Bowl vent/ drain


108.0 mm (4.25")
38.1 mm (1.5")


Competitor Housing
Chemlock Housing
Chemlock housing saves more than 210 mm (8.3") for 10" cartridge; 457.2 mm (18") for 20" cartridge

DIMENSIONS (CONTINUED)

PFA housing (head + bowl)

Inlet/outlet	Head vent/drain	Bowl vent/drain	A (5" housing)	A (10" housing)	A (20" housing)	A (30" housing)	B
¾" PrimeLock	¼" PrimeLock	¼" PrimeLock	—	424 mm (16.7")	671 mm (26.4")	—	157 mm (6.2")
¾" PrimeLock	½" PrimeLock	½" PrimeLock	—	401 mm (15.8")	678 mm (26.7")	—	157 mm (6.2")
1" PrimeLock	¼" PrimeLock	¼" PrimeLock	—	424 mm (16.7")	671 mm (26.4")	—	166 mm (6.5")
1" PrimeLock	½" PrimeLock	½" PrimeLock	—	401 mm (15.8")	678 mm (26.7")	—	166 mm (6.5")
¾" Flaretek	¼" Flaretek	¼" Flaretek	—	450 mm (17.7")	696 mm (27.4")	—	156 mm (6.1")
¾" Flaretek	½" Flaretek	½" Flaretek	—	434 mm (17.1")	681 mm (26.8")	930 mm (36.6")	156 mm (6.1")
1" Flaretek	¼" Flaretek	¼" Flaretek	—	450 mm (17.7")	696 mm (27.4")	—	168 mm (6.6")
1" Flaretek	½" Flaretek	½" Flaretek	—	434 mm (17.1")	681 mm (26.8")	930 mm (36.6")	168 mm (6.6")
¾" FNPT	¼" FNPT	¼" FNPT	—	378 mm (14.9")	622 mm (24.5")	—	134 mm (5.3")
¾" Pipe	¼" Pipe	¼" Pipe	—	416 mm (16.4")	663 mm (26.1")	—	201 mm (7.9")
¾" Pipe	—	¼" Pipe	—	398 mm (15.7")	644 mm (25.4")	—	201 mm (7.9")
1" Pipe	¼" Pipe	¼" Pipe	—	416 mm (16.4")	663 mm (26.1")	—	172 mm (6.8")
¾" Super Type Pillar	½" Super Type Pillar	½" Super Type Pillar	—	431 mm (17.0")	683 mm (26.9")	—	146 mm (5.7")
1" Super Type Pillar	½" Super Type Pillar	½" Super Type Pillar	—	431 mm (17.0")	683 mm (26.9")	—	154 mm (6.1")
¾" Super 300 Type Pillar	¼" Super 300 Type Pillar	¼" Super 300 Type Pillar	320 mm (12.6")	438 mm (17.2")	—	—	146 mm (5.7")
¾" Super 300 Type Pillar	½" Super 300 Type Pillar	½" Super 300 Type Pillar	—	431 mm (17.0")	678 mm (26.7")	926 mm (36.5")	146 mm (5.7")
1" Super 300 Type Pillar	¼" Super 300 Type Pillar	¼" Super 300 Type Pillar	320 mm (12.6")	438 mm (17.2")	—	—	154 mm (6.1")
1" Super 300 Type Pillar	½" Super 300 Type Pillar	½" Super 300 Type Pillar	—	431 mm (17.0")	678 mm (26.7")	926 mm (36.5")	154 mm (6.1")

ORDERING INFORMATION

Chemlock PFA housing heads, bowls, and kits

T-line housing heads

	Inlet/outlet	Vent/drain
YY56HL10LM	¾" PrimeLock	¼" PrimeLock
YY56HL20LM	¾" PrimeLock	½" PrimeLock
YY56HL14LM	1" PrimeLock	¼" PrimeLock
YY56HL24LM	1" PrimeLock	½" PrimeLock
YY56HF10F	¾" Flaretek	¼" Flaretek
YY56HF20F	¾" Flaretek	½" Flaretek
YY56HF14F	1" Flaretek	¼" Flaretek
YY56HF24F	1" Flaretek	½" Flaretek
YY56HA20A	¾" FNPT	¼" FNPT
YY56HB20B	¾" pipe	¼" pipe
YY56H000B	¾" pipe	—
YY56HB24B	1" pipe	¼" pipe
YY56HP20P	¾" Super Type Pillar	½" Super Type Pillar
YY56HP24P	1" Super Type Pillar	½" Super Type Pillar
YY56HP103	¾" Super 300 Type Pillar	¼" Super 300 Type Pillar
YY56HP203	¾" Super 300 Type Pillar	½" Super 300 Type Pillar
YY56HP143	1" Super 300 Type Pillar	¼" Super 300 Type Pillar
YY56HP243	1" Super 300 Type Pillar	½" Super 300 Type Pillar

ORDERING INFORMATION (CONTINUED)

Housing bowls (locking ring material)

PART NUMBER				
5" BOWL LENGTH	10" BOWL LENGTH			
PVDF	PVDF	PTFE	GFPP	Vent/drain
—	YY5611190M	YY5611190TM	YY5611190GFM	¼" PrimeLock
—	YY5611290M	YY5611290TM	YY5611290GFM	½" PrimeLock
—	YY5611180	YY5611180T	YY5611180GF	¼" Flaretek
—	YY5611280	YY5611280T	YY5611280GF	½" Flaretek
—	YY5611160	YY5611160T	—	¼" FNPT
—	YY5611170	YY5611170T	YY5611170GF	¼" pipe
—	YY5611250	YY5611250T	YY5611250GF	½" Super Type Pillar
YY5605153	YY5611153	YY5611153T	YY5611153GF	¼" Super 300 Type Pillar
—	YY5611253	YY5611253T	YY5611253GF	½" Super 300 Type Pillar

PART NUMBER					
20" BOWL LENGTH			30" BOWL LENGTH		
PVDF	PTFE	GFPP	PVDF	GFPP	Vent/drain
YY5620190M	YY5620190TM	YY5620190GFM	—	—	¼" PrimeLock
YY5620290M	YY5620290TM	YY5620290GFM	—	—	½" PrimeLock
YY5620180	YY5620180T	YY5620180GF	—	—	¼" Flaretek
YY5620280	YY5620280T	YY5620280GF	YY5630280	YY5630280GF	½" Flaretek
YY5620160	YY5620160T	—	—	—	¼" FNPT
YY5620170	YY5620170T	YY5620170GF	—	—	¼" pipe
YY5620250	YY5620250T	YY5620250GF	—	—	½" Super Type Pillar
YY5620253	YY5620253T	YY5620253GF	—	YY5630253GF	½" Super 300 Type Pillar

ORDERING INFORMATION (CONTINUED)

Housing kits (bowls and heads, locking ring material)

PART NUMBER						
5" BOWL LENGTH	10" BOWL LENGTH		20" BOWL LENGTH			
PVDF	PVDF	GFPP	PVDF	GFPP	Inlet/outlet	Vent/drain
—	YY561120E	YY5611G0E	YY562020E	YY5620G0E	¾" Flaretek	¼" Flaretek
—	YY561120F	YY5611G0F	YY562020F	YY5620G0F	¾" Flaretek	½" Flaretek
—	—	YY5611G1E	—	—	1" Flaretek	¼" Flaretek
—	YY561121F	YY5611G1F	YY562021F	YY5620G1F	1" Flaretek	½" Flaretek
—	YY561120A	—	YY562010NS	—	¾" FNPT	¼" FNPT
—	YY561120B	YY5611G0B	YY562020B	—	¾" pipe	¼" pipe
—	YY561120P	YY5611G0P	YY562020P	—	¾" Super Type Pillar	½" Super Type Pillar
—	YY561121P	YY5611G1P	YY562021P	YY5620G1P	1" Super Type Pillar	½" Super Type Pillar
YY5605203*	YY5611203	YY5611G03	YY5620203	—	¾" Super 300 Type Pillar	½" Super 300 Type Pillar
—	YY5611213	YY5611G13	YY5620213	—	1" Super 300 Type Pillar	½" Super 300 Type Pillar

**5" housing kit includes a housing head (YY56HP203) and a 5" bowl (YY5605153).*
Note: See page 2 for locking ring compatibility and warning.

Accessories

Part number	Description	Quantity/pkg.
YY4600005	Chemlock wrench with integrated torque	1
YY4600006	Chemlock wrench head	1
YY5610102	Spare O-ring, 2-344, E-FKM	3
YY4610108	Spare O-ring, 2-344, Kalrez perfluoroelastomer resin	1
YY561010RJ	Spare O-ring, 2-344 Kalrez perfluoroelastomer resin	1
P01002J	Spare O-ring, 2-344, Viton fluoropolymer resin	1
YY3510103	Spare O-ring, 2-344 EP	5
YY5600010	Spare mounting hardware kit: (4) PVDF ⅜"-16 × 63.5 mm (2.5") hex head cap screw (4) PVDF nuts ⅜"-16	1 kit
YY4610190	L-mounting bracket	1

INSTALLATION*

1. Insert cartridge into bowl.

3. Attach head to bowl.

2. Twist filter ¼-turn to lock.

4. Tighten locking ring to easily seat double O-rings.

WARNING: Use a Chemlock integrated housing wrench to ensure proper tightening. Failure to follow procedure can lead to safety risks including equipment failure and chemical exposure.

Retrofitting

Chemlock PFA bowls are easily retrofitted to Chemgard™ housings. They are designed to fit with Entegris T-Line PFA Chemgard heads. An installed Chemgard housing may be retrofitted with a Chemlock bowl and cartridge.

**IMPORTANT: To ensure a leak-free seal, it is vital you follow the instructions from the Chemlock PFA Housings installation and use manual found at www.entegris.com.*

FOR MORE INFORMATION

Please call your Regional Customer Service Center today to learn what Entegris can do for you. Visit entegris.com and select the Contact Us link to find the customer service center nearest you.

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Entegris

Corporate Headquarters
129 Concord Road
Billerica, MA 01821
USA

Customer Service
Tel +1 952 556 4181
Fax +1 952 556 8022
Toll Free 800 394 4083

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