

Product Catalog



Harmsco® Filtration Products

Economical Solutions to Liquid Filtration Challenges

Catalog #4

Harmsco® Filtration Products



An American Family Business Success . . .

Harmsco was founded in 1958 by John Harms soon after he and his family relocated to Florida from the State of Ohio. At the time the company's primary assets were John's experience in the liquid filtration industry, his unique **Up-Flow** filter design, wife Laura's trustworthy assistance and John's resolve to manufacture high quality filtration equipment and market them worldwide.

Harmsco Up-Flow Cartridge Filters were patented and introduced to the market in 1968. Almost immediately, people in the filtration industry took note of the many advantages Harmsco Filters provide. As a result, sales began to accelerate.

In 1972 we developed a complete line of filter cartridges to market with Harmsco filter housings. John Harms wasn't satisfied, however, with conventional filter cartridges that provide marginal performance. John pioneered **pleated polyester filter cartridges**, which outperform conventional cartridges by lowering filtration costs.

In 1991, Harold (Hank) Harms II was elected President of Harmsco, Inc. During Hank's tenure as President and owner, there have been significant developments: **Hurricane Filters** were introduced in 1992 and became an over night success; marketing activities have been accelerated; expansion has been made to plant and facilities; as well as the addition of 90,000 square feet in Lake Wales, FL.

Today, we are a market leader in the water filtering industry. Our products are marketed through an extensive network of distributors located worldwide; and our dedication to research and development is ongoing, so our growth will continue into the 21st century.

Dedicated to Quality & Value

We provide economical solutions to liquid filtration challenges because we are dedicated to offering both **quality** and **value**. We control overhead expenses and produce in volume to lower production costs. Our designs are efficient. The **cornerstone** of our corporate philosophy is our dedication to quality. For these reasons, Harmsco filter housings and cartridges are your best buy considering price and performance!



Up-Flow Cartridge Filtration . . .

A design so superior it's patented!

Harmsco® Up-Flow Cartridge Filters outperform conventional filter designs because the outlet is located **above** the inlet to eliminate air entrapment during operation. With Up-Flow filters, liquid enters the vessel through the inlet, located at the bottom of the filter. As the liquid travels **upward**, it flows through the filter media, past the top seal,

separating the dirty and clean water chambers, and down the standpipe as it exits the filter. Because the top of the standpipe is located **above** the top seal, air is self-purged from the filter to eliminate vents and improve filtration efficiency. Additional features and benefits are described below:

Rugged stainless steel construction

Harmsco Up-Flow Filters are made of low carbon 304 stainless steel for durability and long equipment life.

Electro-polished for increased resistance to corrosion

All stainless steel components are electro-polished for a superior finish and increased durability.

Pressure rated and hydrostatically tested

All filters are pressure rated to 150 psi (10 bar) and hydrostatically tested.



Individual studs for safe, secure lid closure

We have the safest lid in the business with individual studs for optimum security. No v-clamps with only one bolt to secure lids.

Wing nuts

Wing nuts are used so no tools are required. Finger tight is generally sufficient. Hex nuts are recommended with 75 inch lbs. of torque above 100 psi.

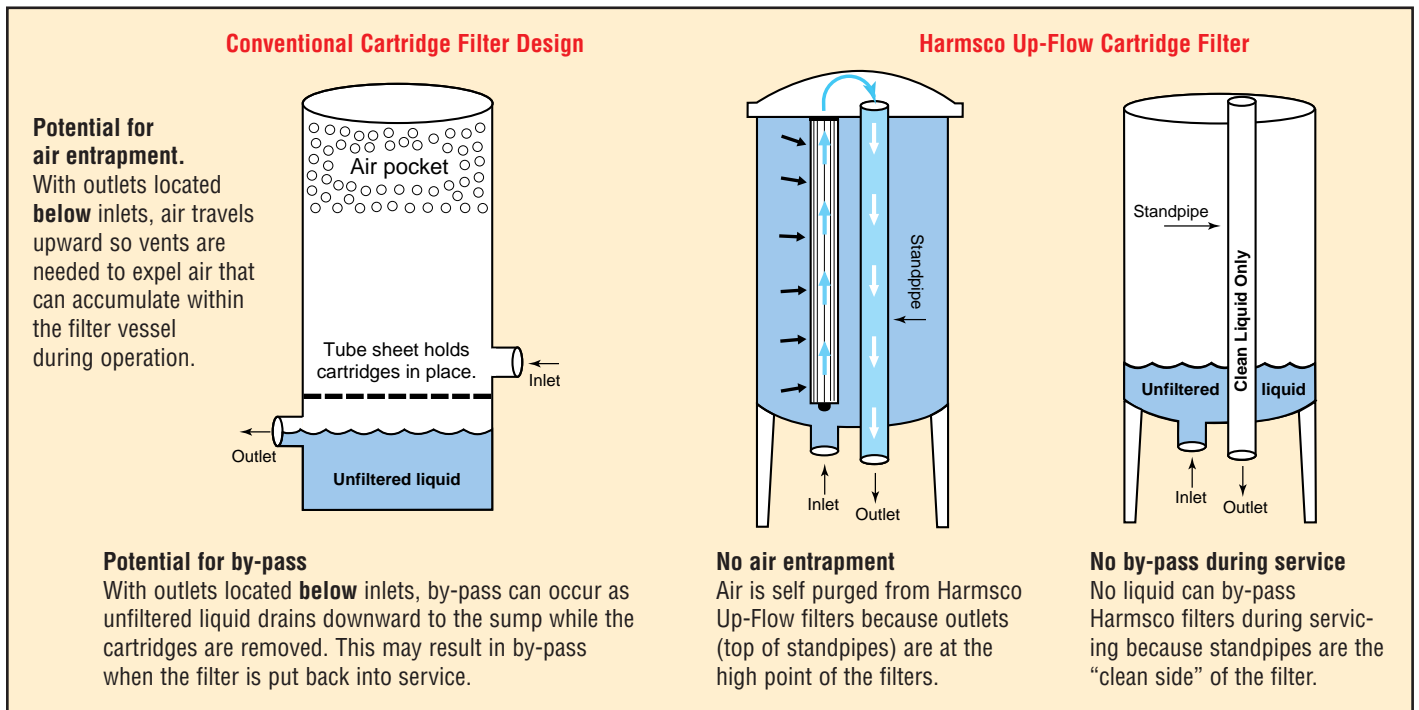


Easy cartridge installation, removal and service

Our 7, 14, 16, 21 and 24 cartridge models have all cartridges arranged in a single "cartridge cluster" for easy installation, removal and service. This makes maintenance a snap!

Harmsco Up-Flow Filters Outperform the Competition!

With conventional cartridge filter designs, inlets are located **above** outlets. Therefore, vents are required to relieve air that can accumulate within the filter vessel during operation. By-pass can also occur when unfiltered liquid drains to the sump while the cartridges are removed, when the filter is put back in service. Please see diagrams, below:



Cartridge Cluster Filters



With Harmsco **cluster filters**, the entire set of filter cartridges is removed at one time for cleaning or replacement.



Max. flow rate (U.S. GPM)	Up to 30	Up to 60	Up to 75	Up to 90	Up to 100
Max. flow rate (LPM)	Up to 113	Up to 226	Up to 284	Up to 340	Up to 397
Max. flow rate (M ³ /HR)	Up to 7	Up to 14	Up to 16	Up to 21	Up to 24
Number of std. cartridges	7	14	16	21	24
Alternative cartridge	Single only	Doubles	Doubles	Triples	Triples
Pipe size	1-1/2" NPT	1-1/2" NPT	2" NPT	1-1/2" NPT	2" NPT
Drain	1" NPT	1" NPT	1" NPT	1" NPT	1" NPT
Filter height	19.5" / 49 cm	28" / 71 cm	28" / 71 cm	37" / 94 cm	37" / 94 cm
Floor space requirement	13" x 13"	13" x 13"	13" x 13"	13" x 13"	13" x 13"
Service height clearance	35" / 89 cm	48" / 122 cm	48" / 122 cm	68" / 173 cm	68" / 173 cm
Shipping weight (approx.)	29 lbs. / 13 kg	39 lbs. / 18 kg	39 lbs. / 18 kg	50 lbs. / 23 kg	50 lbs. / 23 kg



Cartridge selection

Our single length cartridges fit all Harmsco filter housing models. HIF 14 and HIF 16 models also take our double length cartridges; HIF 21 and HIF 24 filter models can take triple length cartridges.



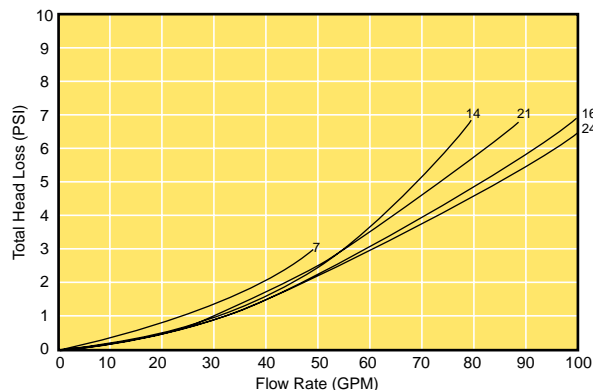
Cleanable & reusable!

Harmsco cartridges are reusable in most applications and micron ratings.

Initial Pressure Drop for Harmsco Cluster Filters in Clean Water (Models HIF 7, HIF 14, HIF 16, HIF 21 and HIF 24)

Low pressure drop

Initial pressure drop with Harmsco Filters and Replacement Cartridges is exceptionally low because our pleated cartridge design provides more surface area for reduced resistance to flow. This chart indicates the initial pressure drop for Harmsco cartridge cluster filters with 20 micron cartridges in clean water.



Temperatures

Standard filters with CPVC holding rods, pipe caps and standpipes with standard Harmsco cartridges are temperature rated to 140°F (60°C). Models with stainless steel internals are temperature rated to 200°F (93°C) with Harmsco High-Temp cartridges. Results may vary; ratings are based on pressures and time under load.

High Capacity Models



High capacity filters have lifting rods to remove a single stack of cartridges at one time.



Max. Flow rate (U.S. GPM)	Up to 175	Up to 300	Up to 400	Up to 600	Up to 800
Max. Flow rate (LPM)	Up to 662	Up to 1,135	Up to 1,514	Up to 2,271	Up to 3,028
Max. Flow rate (M ³ /HR)	Up to 42	Up to 75	Up to 100	Up to 150	Up to 200
Number of std. cartridges	42	75	100	150	200
Alternative cartridge	Triples	Triples	Doubles	Triples	Doubles
Pipe size	2" NPT	3" NPT	3" NPT	4" flanged	4" flanged
Drain	1" NPT	1-1/2" NPT	1-1/2" NPT	1-1/2" NPT	1-1/2" NPT
Filter height	40" / 102 cm	42" / 107 cm	52" / 132 cm	48" / 122 cm	58" / 147 cm
Floor space requirement	18" x 18"	20" x 20"	20" x 20"	28" x 28"	28" x 28"
Service height clearance	68" / 173 cm	70" / 178 cm	87" / 221 cm	76" / 193 cm	93" / 236 cm
Shipping weight (approx.)	100 lbs.	129 lbs.	188 lbs.	274 lbs.	321 lbs.
Shipping weight (kg)	45 kg	59 kg	86 kg	124 kg	146 kg



Cartridge selection

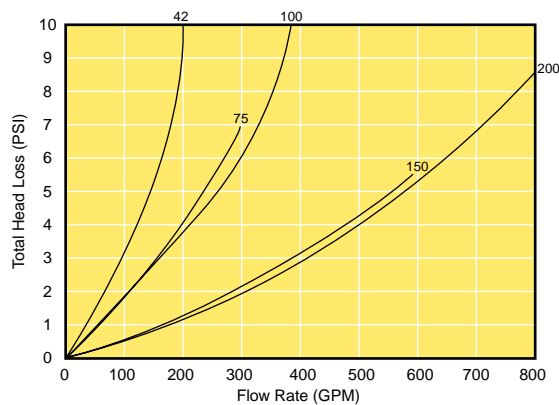
Our single length cartridges fit all Harmsco filter housing models. Models HIF 100 and HIF 200FL can take double length cartridges; HIF 42, HIF 75 and HIF 150FL can take triple length cartridges.



Victaulic fittings and adjustable legs

Models HIF 7, 14, 16, 21, & 24 available with victaulic fittings and adjustable legs. Models HIF 42, 75, and 100 available with victaulic fittings and fixed legs. Minimum orders apply. (See page 22 for more details.)

Initial Pressure Drop for Harmsco High Capacity Filters in Clean Water (Models HIF 42, HIF 75, HIF 100, HIF 150FL and HIF 200FL)



Low pressure drop

This chart indicates the initial pressure drop for our high capacity models with 20 micron cartridges in clean water.

Note:

Some of the information in this publication has been obtained from outside sources and is considered accurate. Temperature ratings, flow rates and chemical resistance can be affected by a number of unknown factors. For this reason, we do not assume any liability for the accuracy or completeness of the data in this publication. End users should perform their own tests to determine suitability for each application.

Here are Important Reasons to Select Genuine Harmsco Filter Cartridges . . .

Pleated design for more surface area for longer life, increased particulate removal and reduced filtration costs



Harmsco Filter Cartridge



Competitive Filter Cartridge



Certified to
ANSI-NSF 61

Harmsco cartridges have 50% more surface area than most other pleated filter cartridges.

Filter Life

The chart below is data from filter life tests conducted using a five micron nominal Harmsco cartridge:

Cartridge	Gallons Filtered to 30 psid	
	Municipal Water*	Well Water*
801-5	173,286	193,724

* Turbidity ranged between 0.3-0.7 for both tests. Your results may vary; filter life depends on micron rating, solids content and other factors.

- **Color coded end caps to easily identify micron ratings**
- **FDA listed materials for drinking water, beverages and liquid food applications**

Seven micron ratings

Harmsco cartridges are available in seven nominal micron ratings for a wide range of applications. Ratings include 0.35, 1, 5, 10, 20, 50 and 100 micron.



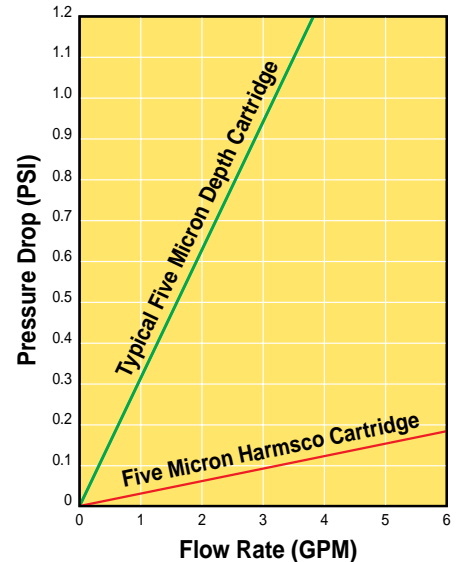
Cleanable and reusable in most applications and micron ratings for cost savings

Harmsco's unique Polyester-Plus™ filter media is cleanable so Harmsco cartridges can be reused in most water filtration applications and micron ratings. Filtration costs are reduced because fewer replacement cartridges are required!

Direct spray into pleated area to remove sediment and solids. You may also allow the cartridges to dry, tap the end caps and much of the filter cake will be dislodged.

Low pressure drop

Initial pressure drop with a Harmsco cartridge is dramatically lower than with a depth cartridge because our pleated design provides increased filter area. The chart at left compares the initial pressure drop with a Harmsco pleated cartridge to a conventional depth cartridge. With Harmsco cartridges, flow is less restricted and smaller pumps may be required.



Select the Best Product for Your Application

Harmsco® cartridges (with approx. 6 sq.ft. (0.56 M²) of media per 9-3/4" length)

Harmsco cartridges are ideal for heavy-duty filtration applications because these top-of-the-line cartridges contain up to 50% more surface area than conventional pleated cartridges, and up to twelve times more surface area than depth type elements. Select from seven nominal micron ratings and seven standard lengths. Reusable in most applications.



Harmsco®
With approx. 6 sq. ft. of media per 9-3/4" length.



WaterBetter®
With approx. 4 sq. ft. of media per 9-3/4" length.

WaterBetter® (with approx. 4 sq.ft. (0.37 M²) of media per 9-3/4" length)

WaterBetter cartridges are ideal for residential and light commercial applications because they are economical and offer many of the advantages Harmsco cartridges provide. WaterBetter cartridges are available in 1, 5, 20 and 50 nominal micron ratings. Reusable in most applications.



Big-Blue cartridges by Harmsco

We manufacture cartridges for 10" and 20" Big-Blue filter housings, made with our proprietary blend of Polyester-Plus™ filter media. Cleanable and reusable in most applications; individually shrink wrapped; available in 0.35, 1, 5, 20 and 50 nominal micron ratings.

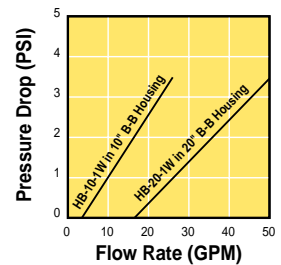


Certified to ANSI-NSF 61

Specifications

Filter media	Polyester-Plus™
End caps	Plastisol (pliable PVC)
Dimensions	4-1/2" OD x 1-1/16" ID x 9-3/4" L and 20" L
Flow rates	Up to 15 GPM (56 LPM) for 10"; 30 GPM (113 LPM) for 20"
Temperature	Up to 140°F (60°C)
Temperature limits based on pressure and time under load.	

Pressure Drop

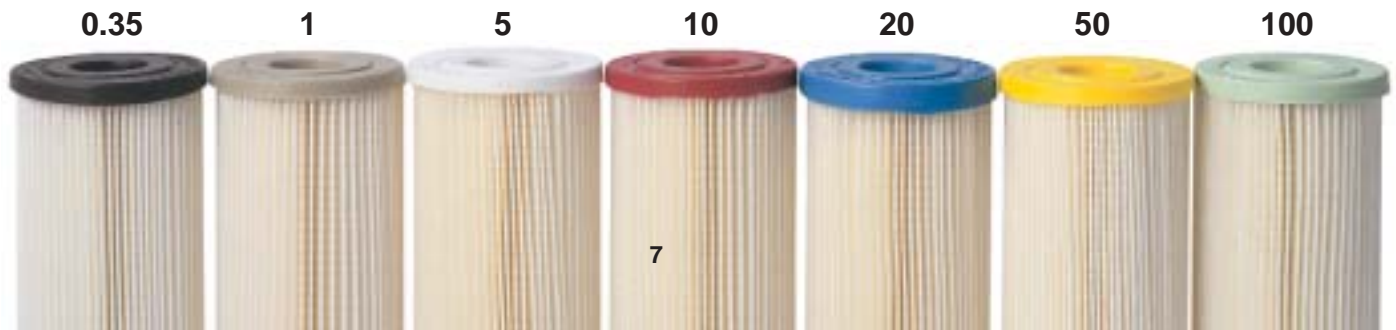


Data shown is Initial pressure drop for one micron Harmsco Big-Blue cartridges in Big-Blue housings with clean water. (Cartridge and housing.)

Big-Blue Filter Cartridges by Harmsco

Product codes	Micron	Length	No./case	Ship wt.	Product codes	Micron	Length	No./case	Ship wt.
HB-10-0.35W	0.35	9-3/4"	8	8 lbs.	HB-20-0.35W	0.35	20"	4	7 lbs.
HB-10-1W	1	9-3/4"	8	8 lbs.	HB-20-1W	1	20"	4	7 lbs.
HB-10-5W	5	9-3/4"	8	8 lbs.	HB-20-5W	5	20"	4	7 lbs.
HB-10-20W	20	9-3/4"	8	8 lbs.	HB-20-20W	20	20"	4	7 lbs.
HB-10-50W	50	9-3/4"	8	8 lbs.	HB-20-50W	50	20"	4	7 lbs.
Carton dimensions: 10" x 10" X 21"					Carton dimensions: 10" x 10" X 21"				

Seven nominal micron ratings available



Harmsco® Replacement Filter Cartridges

These top-of-the-line cartridges cost less to use regardless what they cost to buy!



Certified to
ANSI-NSF 61

Specifications

Filter media	Polyester-Plus™	pH	3 to 11 (see compatibility charts)**
End caps	Plastisol (pliable PVC)	Flow rate	3-6 GPM (11-22 LPM; One M ³ /hr.)
Surface area	Approx. 6 sq. ft. (0.56 M ²) per 9-3/4" length		per 9-3/4" length
Temperature*	Up to 140°F (60°C) for standard cartridges Up to 200°F (93°C) for high-temp cartridges	Dimensions	2-3/4" (70 mm) OD; 1-1/16" (27 mm) ID
		Shrink wrap	Available in single length 9-3/4" cartridges

*Temperature limits vary and depend on pressure and time under load. ** For housings and cartridges.

9-3/4" (248 mm) (For all Harmsco multi-cartridge filter housings and most other single cartridge filter housings.)

Micron	Product Code	Color End Cap	No./Case	Ship/Wt. (lbs)	Ship/Wt. (Kg)	Case Dimensions (in.)
0.35	801-0.35	Brown	24	11	5	12x17x11
1	801-1	Tan	24	11	5	12x17x11
5	801-5	White	24	11	5	12x17x11
10	801-10	Red	24	11	5	12x17x11
20	801-20	Blue	24	11	5	12x17x11
50	801-50	Yellow	24	11	5	12x17x11
100	801-100	Green	24	11	5	12x17x11

Harmsco 9-3/4" (248 mm) wrapped cartridges (Individually shrink wrapped.)

0.35	801-0.35W	Brown	24	11	5	12x17x11
1	801-1W	Tan	24	11	5	12x17x11
5	801-5W	White	24	11	5	12x17x11
10	801-10W	Red	24	11	5	12x17x11
20	801-20W	Blue	24	11	5	12x17x11
50	801-50W	Yellow	24	11	5	12x17x11
100	801-100W	Green	24	11	5	12x17x11

Harmsco 10" (254 mm) cartridges. (For competitive filter housings requiring 10" cartridges.)

0.35	801-0.35/10	Brown	24	11	5	12x17x11
1	801-1/10	Tan	24	11	5	12x17x11
5	801-5/10	White	24	11	5	12x17x11
20	801-20/10	Blue	24	11	5	12x17x11
50	801-50/10	Yellow	24	11	5	12x17x11

Harmsco 19-1/2" (495 mm) cartridges. (For Harmsco filter housings requiring "double" length cartridges.)

0.35	921-0.35	Brown	24	19	9	12x17x21
1	921-1	Tan	24	19	9	12x17x21
5	921-5	White	24	19	9	12x17x21
10	921-10	Red	24	19	9	12x17x21
20	921-20	Blue	24	19	9	12x17x21
50	921-50	Yellow	24	19	9	12x17x21

Harmsco 20" (508 mm) cartridges. (For competitive housings requiring 20" length cartridges.)

0.35	801-0.35/20	Brown	24	19	9	12x17x21
1	801-1/20	Tan	24	19	9	12x17x21
5	801-5/20	White	24	19	9	12x17x21
20	801-20/20	Blue	24	19	9	12x17x21
50	801-50/20	Yellow	24	19	9	12x17x21

Harmsco 29-1/4" (743 mm) cartridges. (For Harmsco filter housings requiring "triple" length cartridges.)

0.35	931-0.35	Brown	24	28	13	12x17x31
1	931-1	Tan	24	28	13	12x17x31
5	931-5	White	24	28	13	12x17x31
10	931-10	Red	24	28	13	12x17x31
20	931-20	Blue	24	28	13	12x17x31
50	931-50	Yellow	24	28	13	12x17x31

Harmsco 30" (762 mm) cartridges. (For competitive housings requiring 30" length cartridges.)

0.35	801-0.35/30	Brown	24	28	13	12x17x31
1	801-1/30	Tan	24	28	13	12x17x31
5	801-5/30	White	24	28	13	12x17x31
20	801-20/30	Blue	24	28	13	12x17x31
50	801-50/30	Yellow	24	28	13	12x17x31

Harmsco 40" (1016 mm) cartridges. (For competitive housings requiring 40" length cartridges.)

0.35	801-0.35/40	Brown	24	37	17	12x17x41
1	801-1/40	Tan	24	37	17	12x17x41
5	801-5/40	White	24	37	17	12x17x41
20	801-20/40	Blue	24	37	17	12x17x41
50	801-50/40	Yellow	24	37	17	12x17x41

WaterBetter® Cartridges

Our economy brand for residential and light commercial applications



Certified to
ANSI-NSF 61

Excluding High
Temp Cartridges

Specifications

Filter media	Polyester	Temperature limit	Up to 140°F (60°C) depending on pressure and time under load
End caps	Plastisol (pliable PVC)	pH	3-11 (see compatibility charts)*
Surface area	Approximately 4 sq. ft. (0.37 M ²) per 9-3/4" length	Dimensions	2-3/4" (70 mm) OD; 1-1/16" (27 mm) ID

* For housings and cartridges.

9-3/4" (248 mm) (For all Harmsco multi-cartridge housings and most other single filter cartridge housings.)

Micron	Product Code	Color End Caps	No./Case	Ship/Wt. (lbs.)	Ship/Wt. (Kg)	Case Dimensions (in.)
1	WB-1	Tan	24	10	4.5	12x17x11
5	WB-5	White	24	10	4.5	12x17x11
20	WB-20	Blue	24	10	4.5	12x17x11
50	WB-50	Yellow	24	10	4.5	12x17x11

9-3/4" (248 mm) Wrapped cartridges (Individually shrink wrapped.)

Micron	Product Code	Color End Caps	No./Case	Ship/Wt. (lbs.)	Ship/Wt. (Kg)	Case Dimensions (in.)
1	WB-1W	Tan	24	10	4.5	12x17x11
5	WB-5W	White	24	10	4.5	12x17x11
20	WB-20W	Blue	24	10	4.5	12x17x11
50	WB-50W	Yellow	24	10	4.5	12x17x11

19-1/2" (495 mm) Cartridges (For Harmsco filter housings requiring "double length" cartridges.)

Micron	Product Code	Color End Caps	No./Case	Ship/Wt. (lbs.)	Ship/Wt. (Kg)	Case Dimensions (in.)
1	WB-921-1	Tan	24	16	7.3	12x17x21
5	WB-921-5	White	24	16	7.3	12x17x21
20	WB-921-20	Blue	24	16	7.3	12x17x21
50	WB-921-50	Yellow	24	16	7.3	12x17x21

29-1/4" (743 mm) Cartridges (For Harmsco filter housings requiring "triple length" cartridges.)

Micron	Product Code	Color End Caps	No./Case	Ship/Wt. (lbs.)	Ship/Wt. (Kg)	Case Dimensions (in.)
1	WB-931-1	Tan	24	22	10	12x17x31
5	WB-931-5	White	24	22	10	12x17x31
20	WB-931-20	Blue	24	22	10	12x17x31
50	WB-931-50	Yellow	24	22	10	12x17x31

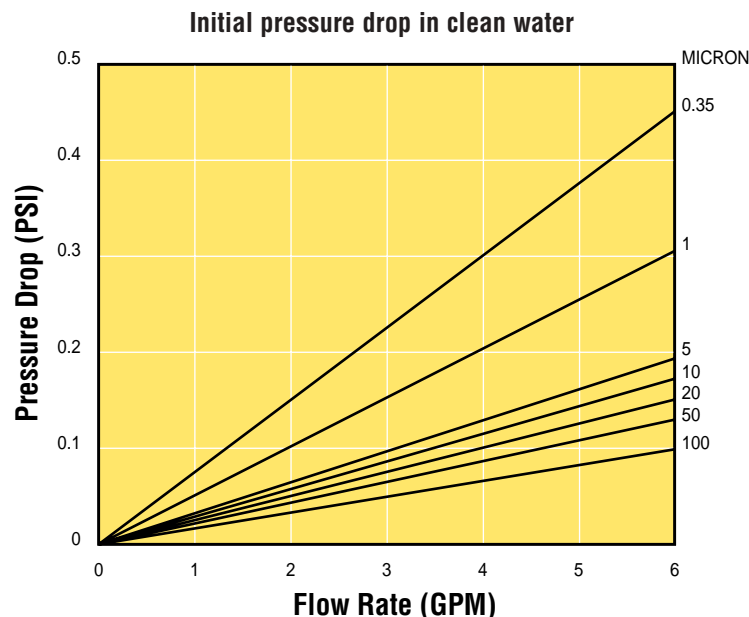
Applications

Here are typical applications for Harmsco filter cartridges:

- Drinking water
- Bottled water
- Beverages
- Drinking fountains
- Whole house
- Ground water
- Surface water
- R/O prefiltration
- Process water
- Waste water
- Rinse water
- Environmental
- Asbestos abatement
- Plating baths
- Cooling water
- Heating loops
- Chill water
- Desalination prefilters
- Ultrafiltration prefilters
- Spray nozzle protection
- Well water
- Municipal water
- Water vending equipment
- Ground water remediation

Low pressure drop

Pressure drop with Harmsco cartridges is exceptionally low due to our pleated design and increased filter area. Initial pressure drop for 9-3/4" Harmsco cartridge in clean water is shown below.



Harmsco High-Temp Cartridges

(with approx. 6 sq. ft. of media per cartridge)

Product Code	Micron	No./Case	Ship. Wt.	Dimensions
801-1HT	1	24	11 lbs.	12x17x11
801-5HT	5	24	11 lbs.	12x17x11
801-20HT	20	24	11 lbs.	12x17x11
801-50HT	50	24	11 lbs.	12x17x11

Rated up to 200°F, depending on pressure and time under load.

The Revolutionary **HURRICANE** Filter!

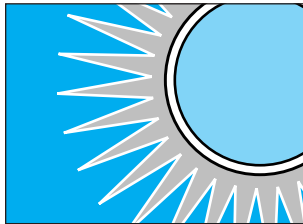
Combines three filtration technologies in a single compact design.

It's a Separator & Cartridge Filter in One

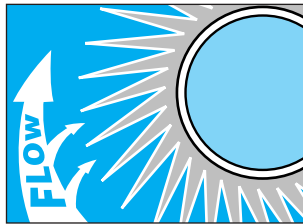
Hurricane filters provide unsurpassed performance because they separate dense solids prior to cartridge filtration for extended filter life, increased dirt holding capacity and reduced maintenance costs. In many respects Hurricane filters are two filters in one! Components include outer chamber for particle separation, inner chamber for cartridge filtration and built-in drain for purge, if required.

Deep, angled pleats are directed toward rotational flow for increased dirt holding capacity.

Unlike conventional designs, Hurricane's patented cartridges are made with deep, angled pleats to direct the flow into the pleated area for increased solids removal.



Conventional straight pleat



Angled Hurricane pleat

It's a Single "Jumbo Cartridge" Filter, Making Maintenance a Snap!

The rotational flow improves the Hurricane filter's performance, making it a favored choice over conventional filter designs, regardless of the need for pre-separation. The single "jumbo" cartridge design makes installation and maintenance a snap!



Single "Jumbo" Cartridge is Easy to Install, Remove, Clean and Service!

Hurricane cartridges are available in a wide assortment of micron ratings and may be used in a wide range of applications. Activated carbon Hurricane cartridges are also available!

Check Out These Features and Benefits!

Outer chamber for particle separation

Centrifugal separation occurs in the filter's outer chamber by rotational flow and centrifugal force. Heavy solids accumulate at the bottom of the filter's outer chamber which may be purged manually or automatically.

Inner chamber for cartridge filtration

Liquid flows from the outer chamber into an inner chamber where the single cartridge is located. Here, the liquid is filtered, and subsequently flows out of the filter through the standpipe and outlet fitting.

Tangential entry

Liquid enters the filter tangentially to provide rotational flow and centrifugal force for particle separation.

Rotational flow pattern

Continuously "fluffs" filter cake to increase dirt and debris holding capacity to extend filter life and time between cleaning.

Drain for manual or automatic purge

In heavy solids applications, manual or automatic valves may be used to purge solids from the outer chamber to extend filter life. (Valves not provided by Harmsco.)

Tests demonstrate approximately half of the heavy solids, such as sand, separate prior to the filtration chamber at 50 GPM.



Fail safe lids with wing nuts for easy closure without tools

Lids come standard with wing nuts for easy operation. Individual studs are provided for added security. No single bolt v-clamp closures are used!

Note: Hex nuts are recommended above 100 psi pressures, tightened to 75 inch lbs. of torque for best results.

304 electro polished stainless steel

Solid, stainless steel construction and electro polishing are standard for added resistance to corrosion. (Special coatings available for chemical resistance.)

Single "Jumbo" cartridge

Easy to install, remove, clean and replace!

Couplers for pressure gauges provided

1/4" FPT couplers are installed in inlet and outlet fittings for pressure gauges.



Hurricane cartridges are cleanable and reusable in most applications and micron ratings.

Three Standard Filter Housings Available

Three standard Harmsco Hurricane Filter models are available for a wide range of applications. Standard models are rated for pressures to 150 psi and temperatures to 140°F (60°C). See compatibility charts for chemical resistance to stainless steel.

Features & Specifications

- 304 stainless steel filter housings
- Electro-polished for superior finish
- Resistant coatings available
- Fail-safe lids with individual studs for security
- Bronze wing nuts for convenience
- 90° elbow and 45° sweep on outlet for staggered in-line vertical installation
- CPVC standpipe for up-flow design
- Cartridge not included



	HUR 40 HP	HUR 90 HP	HUR 170 HP
Max. flow rate (GPM)	Up to 50	Up to 100	Up to 150
Max. flow rate (LPM)	Up to 189	Up to 378	Up to 568
Max. flow rate (M ³ /HR)	Up to 12	Up to 24	Up to 36
Pipe size (NPT)	2"	2"	2"
Drain (NPT)	1"	1"	1"
Filter height	21" / 54 cm	31" / 79 cm	41" / 105 cm
Floor space requirements	15" x 15"	15" x 15"	15" x 15"
Service height requirements	31" / 79 cm	51" / 130 cm	72" / 183 cm
Shipping weight	40 lbs. / 18 kg	51 lbs. / 23 kg.	64 lbs. / 29 kg

Hurricane Filters to Meet ASME Design Requirements

Harmsco Hurricane filters are now available to meet ASME design code requirements for high pressure applications and insurance compliance. All ASME Hurricane filters include heavy-duty stainless steel construction, hinged lids with swing-bolts for easy operation and access to the filter cartridge(s).

Design Advantages

ASME filters help meet insurance requirements, safety standards and they provide exceptionally long equipment life.

Specifications

Filter Model	Pressure Rating	Cartridge (Qty.)	Max. Flow (GPM)	Inlet/Outlet	Floor Height	Space	Ship Wt.
HUR 90 ASME	200 psi	HC-90 + micron (1)	100	2" NPT	36"	15"x15"	225 lbs.
HUR 170 ASME	200 psi	HC-170 + micron (1)	150	2" NPT	48"	15"x15"	250 lbs.
HUR 850 ASME	200 psi	HC-170 + micron (5)	600	4" flanged	66"	30"x30"	1000 lbs.



Note: Filters listed above come with "U" stamp, 1" drain built-in, heavy-duty legs with mounting holes, 1/4" FPT coupler in lid for vent, 1/4" FPT coupler for pressure gauges in side-wall and outlet pipe. Lid for "850" model has spring assist.



Options: • Pump • NEMA enclosure for pump systems for outdoor installations • Filter service beacon • Automatic purge valve for high solids applications • Crating for export.

Filtration Systems by Harmsco Using Hurricane Filters

Skid mounted filtration systems are available to reduce labor and installation costs. All systems include steel skids assembled with shut-off valves, check valves and pressure gauges. Controls for pumps are included when pump systems are ordered. Please see our Systems Brochure for full details.

Standard Models

Model No. With Pump	Pump Size	Rated Flow Approx.		Model No. Without Pump	Number of HUR-170-HP Filters	Inlet/Outlet
		USGPM	LPM			
Parallel Installation Filters:						
PFS-1-P	5 HP	100	378	PFS-1	1	2" NPT
PFS-2-P	7.5 HP	200	757	PFS-2	2	3" FLG
PFS-3-P	15 HP	300	1,135	PFS-3	3	4" FLG
PFS-4-P	20 HP	400	1,514	PFS-4	4	4" FLG
Series Installed Systems:						
PFSS-2-P	7.5	100	378	PFSS-2	2	3" NPT
PFSS-3-P	15	100	378	PFSS-3	3	3" NPT

Shut-off and check valves installed to allow each individual filter to be isolated for servicing on all parallel systems. Filter Service Beacons and Automatic Purge Valves (if ordered) are tied in with all filters in parallel installations and with first filter only in series installations. NEMA 12 enclosure with 110V control standard for indoor installation. 110 vac/15 amp plug for beacon included if pump is not ordered.



Replacement Cartridges

Standard pleated polyester filter elements

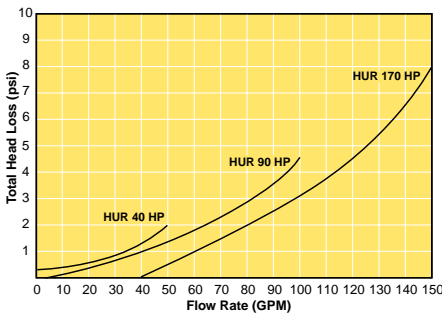


Certified to ANSI-NSF 61

Cartridges rated for temperatures to 140°F (60°C). * Polyester-Plus™ filter media is cleanable and cartridges are reusable in most applications and micron ratings. Cartridges can separate solids in liquids with a pH of 3 to 11. Packaged one per carton. Hurricane cartridges rated for pressures to 50 psid. * Temperature limits vary and depend on pressure and time under load.

Filter Model	Cartridge Product Code	Nominal Micron	Cartridge Dimensions			Ship wt./ctn. (One cartridge)
			L	x OD	x ID	
HUR 40 HP	HC/40-0.35	0.35	9-5/8"	7-3/4"	3" FPT	4 lbs.
	HC/40-1	1	9-5/8"	7-3/4"	3" FPT	4 lbs.
	HC/40-5	5	9-5/8"	7-3/4"	3" FPT	4 lbs.
	HC/40-10	10	9-5/8"	7-3/4"	3" FPT	4 lbs.
	HC/40-20	20	9-5/8"	7-3/4"	3" FPT	4 lbs.
	HC/40-50	50	9-5/8"	7-3/4"	3" FPT	4 lbs.
	HC/40-100	100	9-5/8"	7-3/4"	3" FPT	4 lbs.
	HC/40-150	150	9-5/8"	7-3/4"	3" FPT	4 lbs.
HUR 90 HP	HC/90-EZ-CLEAN**	N.R.	9-5/8"	7-3/4"	3" FPT	4 lbs.
	HC/90-0.35	0.35	19-1/2"	7-3/4"	3" FPT	7 lbs.
	HC/90-1	1	19-1/2"	7-3/4"	3" FPT	7 lbs.
	HC/90-5	5	19-1/2"	7-3/4"	3" FPT	7 lbs.
	HC/90-10	10	19-1/2"	7-3/4"	3" FPT	7 lbs.
	HC/90-20	20	19-1/2"	7-3/4"	3" FPT	7 lbs.
	HC/90-50	50	19-1/2"	7-3/4"	3" FPT	7 lbs.
	HC/90-100	100	19-1/2"	7-3/4"	3" FPT	7 lbs.
HUR 170 HP	HC/90-150	150	19-1/2"	7-3/4"	3" FPT	7 lbs.
	HC/90-EZ-CLEAN**	N.R.	19-1/2"	7-3/4"	3" FPT	7 lbs.
	HC/170-0.35	0.35	30-3/4"	7-3/4"	3" FPT	10 lbs.
	HC/170-1	1	30-3/4"	7-3/4"	3" FPT	10 lbs.
	HC/170-5	5	30-3/4"	7-3/4"	3" FPT	10 lbs.
	HC/170-10	10	30-3/4"	7-3/4"	3" FPT	10 lbs.
	HC/170-20	20	30-3/4"	7-3/4"	3" FPT	10 lbs.
	HC/170-50	50	30-3/4"	7-3/4"	3" FPT	10 lbs.
HC/170-100	100	30-3/4"	7-3/4"	3" FPT	10 lbs.	
HC/170-150	150	30-3/4"	7-3/4"	3" FPT	10 lbs.	
HC/170-EZ-CLEAN**	N.R.	30-3/4"	7-3/4"	3" FPT	10 lbs.	

**100% Synthetic media to prefilter organic matter and particulate.



Pressure drop shown above is for filter housing and 20 micron filter cartridge in clean water. Data developed by NSF International.



Certified to ANSI-NSF 61

Poly-Pleat™ Cartridges for One Micron Absolute Rated Filtration

Poly-Pleat cartridges are designed for drinking water applications to remove **Cryptosporidium** and **Giardia Cysts** and when one micron absolute rated filtration is required. Cartridges are rated for temperatures to 140°F (60°C). * Polypropylene filter media offers compatibility with many aggressive chemicals. Check compatibility charts for PVC center tubes and end caps.

HUR 40 HP	PP-HC/40-1	1	9-5/8"	7-3/4"	3" FPT	4 lbs.
HUR 90 HP	PP-HC/90-1	1	19-1/2"	7-3/4"	3" FPT	7 lbs.
HUR 170 HP	PP-HC/170-1	1	30-3/4"	7-3/4"	3" FPT	10 lbs.

Activated Carbon Cartridges for Hurricane Filter Housings

With outer wrap of pleated five micron polyester media to extend filter life.

Activated carbon cartridges for Hurricane filter housings for taste, odor and chlorine removal. High carbon content for extended throughput. Outer wrap of pleated five micron Polyester-Plus™ filter media to protect the carbon by removing sediment and extend filter life. Not recommended in drinking water applications where water is not micro-biologically safe.

Specifications

Carbon	High performance extruded activated carbon block
Outer wrap	Five micron pleated polyester media
End caps	Plastisol (pliable PVC)
Directional Flow	Radial (outside to in) for low pressure drop
Temperature	Rated to 125°F (52°C).
Pressure	Rated for differential pressures to 50 psi (3.5 bar)
Flow rate	10 GPM for optimum performance
Dimensions	See above. (Same as standard Hurricane cartridges)

Product Codes

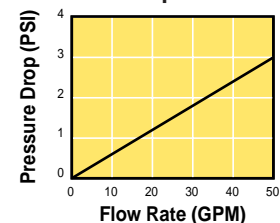
Product code	Carbon content (lbs.)**	Capacity (gals.)**	Chlorine reduction*
HC/40-AC-5	3	15,000	90%-95% at 5 GPM
HC/90-AC-5	6.25	30,000	90%-95% at 10 GPM
HC/170-AC-5	10	100,000	90%-95% at 15 GPM

*Results may vary and are based on flow and other factors. **Approx.



Hurricane A/C cartridge

Pressure Drop



Initial pressure drop in clean water (HC/170-AC-5).

Harmsco Up-flow Filter HIF 5x170FL

Filter features a convenient five jumbo-cartridge cluster design using 170 size Hurricane cartridges. Rated for pressures to 125 PSI and temperatures to 140°F (60°C). Cartridges available in nine micron ratings and activated carbon.

Max. flow rate (U.S. GPM)	Up to 600
Max. flow rate (LPM)	Up to 2270
Max. flow (M ³ HR)	Up to 150
Pipe size	4" flanged
Drain	1 1/2" NPT
Filter height	47" / 120 cm
Floor space requirement	28" x 28"
Service height clearance	85" / 216 cm
Shipping weight (approx.)	230 lbs. / 105 Kg



Hurricane Model HUR 850-ASME

Municipal Water Filtration

Our HUR 850 ASME Hurricane Filters are ideal for municipal water filtration to remove turbidity, sediment and harmful microorganisms that can be found in water. These heavy-duty filters meet ASME design standards, and they are "U" stamp certified. Each filter requires five HC 170 cartridges. Maximum capacity is 0.85 million GPD per filter housing, with higher flow rates using parallel installation. Installation shown is Township of Shenandoah, VA, using six HUR 850 ASME filter housings.

Federal and State Parks

Harmsco Up-Flow filters, Hurricane filters and Harmsco cartridges are ideal for small systems located at state and federal parks. The N.Y. State Park installation shown at right uses Harmsco housings, five micron pre-filters and Poly-Pleat cartridges as final filters to remove turbidity, Cryptosporidium, Giardia Cyst and to meet Federal guidelines for surface water filtration.



Harmsco All Stainless Filter Housing

Filters come with stainless steel holding rods and standpipes for high temperatures and aggressive chemicals. O-rings are Buna-N; rim gaskets are EPDM; other options, including viton available. All filters come with 1" NPT drain.

Note:

Model HIF 7SS-222 accepts seven cartridges with 222 adapters, eliminating the need for holding rods. For cartridges with 222 adapters please see All-Poly cartridges listed on page 19g.

Model	Flow rate	Pipe size	Ship wt.	
HIF 7SS	To 30 GPM	1-1/2" NPT	30 lbs.	14 Kg
HIF 7SS-222	To 30 GPM	1-1/2" NPT	35 lbs.	16 Kg
HIF 14SS	To 60 GPM	1-1/2" NPT	40 lbs.	18 Kg
HIF 16SS	To 75 GPM	2" NPT	42 lbs.	19 Kg
HIF 21SS	To 90 GPM	1-1/2" NPT	51 lbs.	23 Kg
HIF 24SS	To 100 GPM	2" NPT	52 lbs.	24 Kg



Once Upon-A-Time No One Ever Questioned the Quality of Our Drinking Water!

Years ago, our water supplies were crystal clear and no one questioned the quality of our drinking water. But this was before the industrial revolution, our expanded population growth and the urbanization of our society. Today, contamination from waste sites, factories, leaking fuel storage tanks, run-off from some of the chemicals used in farming, lead

from pipes and harmful chlorine by-products have seriously threatened the water we drink. However, foul tastes, odors, lead and harmful organic chemicals can be substantially removed by using filter cartridges from Harmsco Filtration Products that contain specially formulated activated carbon and other adsorbent materials.

Features... Activated Carbon Filter Cartridges by Harmsco®

Wet molding process...

bonds high amounts of pulverized activated carbon with polyolefin filter media to provide increased pore volume, superior filtration and chlorine removal up to 99%.

Thermally bonded...

outer layer eliminates channeling of sediment through the filter media, by-pass and migration.

Dual-stage depth filtration...

with activated carbon and filter media for a cost effective approach to carbon treatment and sediment removal in a **single filter cartridge**.

Heat-fused inner layer...

to trap carbon particles so they will not migrate downstream.

Five micron filtration...

to assure high drinking water quality.

Cellulose-free construction...

to provide added protection against bacteria degradation.



COMPONENT

HAC-10-W, HAC-20-W, HAC-10-LR-W and WBAC-10-W Filter Cartridges are Tested and Certified by NSF International Under ANSI / NSF Standard 42 Materials.



Molded end caps...

made of pliable PVC for excellent end sealing and knife-edge seal.

FDA approved components...

to allow use in potable water and liquid food applications.

Individually shrink wrapped...

to retain adsorption capabilities.

Polyolefin outer netting...

for integrity and improved appearance.

Polypropylene inner core...

for added strength and support.

Substantially removes:

- Chlorine
- Organic chemicals
- Lead*
- Bad tastes
- Foul odors
- Turbidity
- Sediment
- Rust particles

*With lead-removal cartridge.

Benefits...



Improved drinking water quality for you and your family!



Better tasting coffee, tea and other beverages made with water.



Crystal clear water with sediment, rust and other particles removed.

Premium Quality Activated Carbon Cartridges . . .

For chlorine, taste, odor, organic chemical and lead removal.

When your customers demand the very best quality for their process, select Harmsco® activated carbon cartridges with high carbon content for superior performance and long life. All cartridges individually wrapped.

Specifications

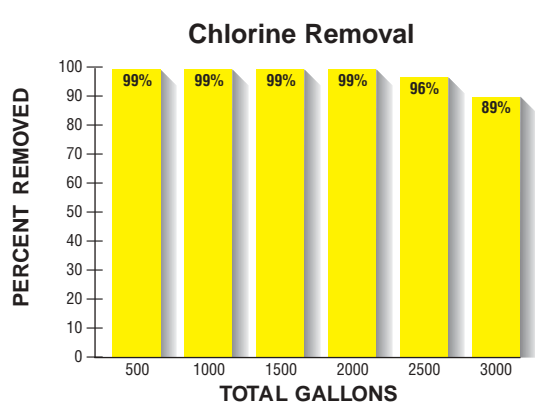
Filter media:	Composite of pulverized activated carbon and polyolefin fibers, bonded with wet molding process to eliminate channeling.
Micron rating:	Five (5) micron nominal.
Temperature:	170°F (70°C) limit.
Types:	Standard activated carbon and activated carbon with lead removal.
Removes:	Chlorine, organic chemical, bad tastes, foul odors, turbidity, sediment, rust particles and lead with lead removal cartridge.

Performance

Harmsco activated carbon cartridges have high carbon content to provide superior performance and long life compared to other brands. Chlorine removal performance data is shown below.



We offer a wide range of activated carbon cartridges for water quality improvement.



Test data generated by independent laboratory at 1 GPM using test procedures described in NSF Standard 42. Average chlorine feed at 2 ppm using HAC-10-W cartridge.

Code	Length	No./Case	Ship Wt.
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Standard cartridges (2-3/4" OD)

HAC-10-W	9-3/4"	24	14 lbs.
HAC-20-W*	20"	24	30 lbs.

*For competitive housings. Will not fit Harmsco housings.

Big-Blue cartridges (4-1/2" OD)

HAC-BB-10-W	9-3/4"	8	14 lbs.
HAC-BB-20-W	20"	4	12 lbs.

Activated carbon plus lead removal cartridges (2-3/4" OD)

HAC-10-LR-W	9-3/4"	24	18 lbs.
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Note: Hurricane activated carbon cartridges available. (See page 14.)

Activated carbon is not recommended for drinking water where water is not micro-biologically safe.



COMPONENT

HAC-10-W, HAC-20-W, HAC-10-LR-W and WBAC-10-W Filter Cartridges are Tested and Certified by NSF International Under ANSI / NSF Standard 42 Materials.

Product Code	Type / Descriptions	Dimensions (in.)	Flow Rate	Capacity	No./Case	Ship. Weight
WBAC-10-W	Molded, pulverized activated carbon; economically priced.	9-3/4" x 2-5/8" x 1-1/16"	1.5 GPM	1,500 gals.	30	13 lbs. (5.9 kg)

Ten micron nominal

Temperature limits: WBAC-10-W: 140°F (60°C)
Carton size 14"x16"x11"



COMPONENT

HAC-10-W, HAC-20-W, HAC-10-LR-W and WBAC-10-W Filter Cartridges are Tested and Certified by NSF International Under ANSI / NSF Standard 42 Materials.

Product Code	Type / Descriptions	Dimensions (in.)	Flow Rate	Capacity	No./Case	Ship. Weight
HSBAC-10-W	Solid block activated carbon for long life and reduced filtration costs.	9-3/4" x 2-3/4" x 1-1/16"	1.0 GPM	9,000 gals.	20	13 lbs. (5.9 kg)
	Ten micron nominal	Temperature limits:	HSBAC-10-W: 125°F (52°C)			Carton size 14"x16"x11"



POLY-PLEAT™ Filter Cartridges

One micron absolute rated cartridges for Cryptosporidium & Giardia Cyst removal.



Certified to
ANSI-NSF 61

Absolute rated POLY-PLEAT cartridges meet or exceed the three-log (99.9%) removal requirements described in National Sanitation Foundation Standard 53 for cyst sized particles. POLY-PLEAT cartridges are recommended to control Cryptosporidium, Giardia Cysts and other harmful microorganisms to help ensure cyst-free drinking water.

It's the law!

In 1966, the U.S. Congress approved legislation to toughen federal regulations to protect the nation's drinking water. Part of this comprehensive legislation calls for the EPA to establish more stringent standards to control cryptosporidium, giardia cysts and other common drinking water contaminants that pose significant risks. Cryptosporidium is the protozoan that reportedly infected over 400,000 people in Milwaukee, Wisconsin, resulting in a number of deaths related to the outbreak. Surface waters are more susceptible because animals live nearby, contributing to the cyst population found in water. The Surface Water Treatment Rule was established to regulate drinking water from reservoirs, lakes, rivers, ponds and streams.

Independent Lab Validated

To demonstrate the performance of POLY-PLEAT™ cartridges and HARMSCO filter housings, Analytical Services, Inc., a highly respected independent testing facility, was selected to conduct challenge studies using live organisms. The challenge system was composed of a reservoir, pump, static mixer, pressure gauges and challenge bleed-off assembly. The test protocol has been reviewed and approved by leading states in the country and is considered the most stringent method used for cyst reduction testing. The protocol includes two separate spikes on two different but identical test filters using live giardia lamblia

cysts and cryptosporidium parvum oocyst. An initial giardia/cryptosporidium spike is performed early in the filter run to document the filter's efficiency. After injection of the challenge organisms, test samples are collected in two phases during an uninterrupted 36 hour run. During the first sampling phase of 1-18 hours, calibrated side-stream samples were collected from both the influent and the effluent of the test filter. Because no cysts are injected during the second phase, only effluent samples are collected during the 19-36 hour test period. Results of the 19-36 hour challenge tests are as follows:

Results of Cryptosporidium and Giardia Cysts Challenge Study

Cartridge Tested	Filter Housing	Tested Flow Rate	Challenge Organisms	Percent Removed
PP-D-1	HIF 14 Filter	50 GPM	Giardia lamblia cysts	99.99%
PP-HC/170-1	HUR 170 HP Hurricane Filter	100 GPM	Cryptosporidium parvum oocysts Giardia lamblia cysts	99.98% 99.99%

Tests conducted by Analytical Services, Inc. / Williston, VT

Features & Benefits

- ✓ Absolute rated one micron filter media removes cyst sized particles for safe, cyst-free drinking water.
- ✓ Pleated polypropylene filter media provides more surface area for longer filter life and increased particle removal.
- ✓ FDA listed materials for use in potable water and liquid food applications.
- ✓ End caps, center tubes and media are thermally bonded as one integral component for added strength and to provide superior end sealing.



- ✓ Full product line for standard, Big-Blue and Hurricane filter housings.
- ✓ Economical cartridges from the value leader in the industry!

Substantially removes:

- Cryptosporidium
- Giardia cysts
- Harmful organisms
- Sediment
- Silt
- Turbidity
- And more!

Types

POLY-PLEAT™ cartridges are available in the following types for a variety of filter housings:



Standard
(2-3/4" O.D.)

Big Blue
(10" & 20")

Hurricane
(40, 90, & 170)

Product Codes

Product Code	Micron Rating	Type	Length	x O.D.	No./Case
PP-S-1	1 absolute	Standard	9-3/4"	2-3/4"	24
PP-D-1	1 absolute	Standard	19-1/2"	2-3/4"	24
PP-20E-1	1 absolute	Standard	20"	2-3/4"	24
PP-T-1	1 absolute	Standard	29-1/4"	2-3/4"	24
PP-BB-10-1	1 absolute	Big Blue	9-3/4"	4-1/2"	8
PP-BB-20-1	1 absolute	Big Blue	20"	4-1/2"	4
PP-HC/40-1	1 absolute	Hurricane	9-5/8"	7-3/4"	1
PP-HC/90-1	1 absolute	Hurricane	19-1/2"	7-3/4"	1
PP-HC/170-1	1 absolute	Hurricane	30-3/4"	7-3/4"	1

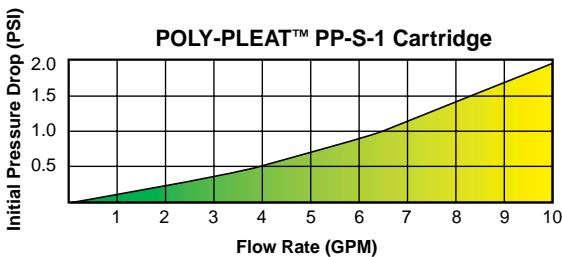
Note: The Water Quality Association defines absolute cartridges as being 99.9% efficient or more at stated micron ratings.

Specifications

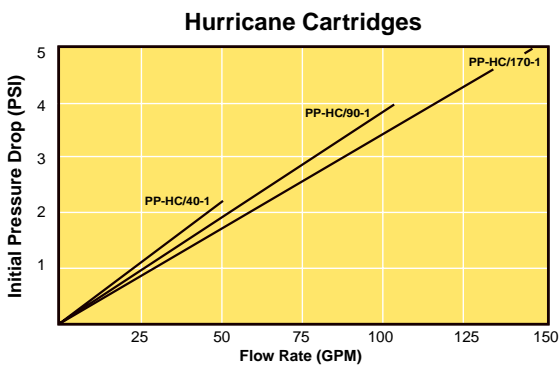
Micron ratings:	One micron absolute for cryptosporidium and giardia cysts.
Filter media:	Meltblown polypropylene inner layer with outer layers of polypropylene scrim material for support.
End caps:	Plastisol (Pliable PVC)
Temperature:	140°F / 60°C temperature limit.*
Flow rates:	Up to 6 GPM per 9-3/4" standard cartridge. For Hurricane and Big-Blue cartridges, flow rates are limited by the housing used.
Netting:	Polypropylene netting standard for 2-3/4" O.D. Big-Blue cartridges use polyethylene netting.
Shrink wrap:	Standard for all POLY-PLEAT™ cartridges.
*Temperature limits vary and depend on pressure and time under load.	

Low Pressure Drop

Initial pressure drop using POLY-PLEAT™ cartridges is exceptionally low due to our pleated design and increased surface area. Pressure drop data is shown below, calculated for new cartridges in clean water:



Data include cartridge and single-cartridge housing.



Data include cartridge and Hurricane filter housing.

Long Filter Life

POLY-PLEAT™ cartridges are ideal as final filters for municipal water filtration without pre-filtration required. In high turbidity water, pre-filtration is recommended using Harmsco sediment cartridges with two or three step filtration, depending on the source water. POLY-PLEAT™ cartridges provide long filter life due to their pleated design and increased surface area. The data shown below indicates typical filter life with POLY-PLEAT™ cartridges for municipal water filtration or in high turbidity water supplies, following pre-filtration.

Typical POLY-PLEAT™ Filter Cartridge Life			
Cartridge Code	Source Water Tested	Average GPM	Total Gallons to 30 psid
PP-S-1	0.2-0.4 NTU Municipal	5	21,028
PP-HC/170-1	0.2-0.4 NTU Municipal	100	1,846,000

Study conducted at Harmsco test facility.

Harmsco Filter Housings for POLY-PLEAT™ Cartridges



Up-Flow

Uses standard cartridges in single, double or triple lengths. Select from ten models, based on flow rate.



Hurricane

Uses single "jumbo" cartridge for easy cartridge replacement. Select from three models for flow rates to 150 GPM.



Single Cartridge Filter Housings and Drinking Water Systems by Harmsco®

Single cartridge filter housings

A wide selection of high quality, single filter cartridge housings are available for low flow rates and when multi-cartridge filter housings are not required. Made of polypropylene for durability, strength and chemical compatibility. Rated for temperatures to 100°F (38°C) and pressures to 125 psi (8.5 bar). Slimline and Big-Blue housings available.

Drinking water systems

Counter top and under counter model for two housings are available. Rated for temperatures to 100°F (38°C) and pressures to 125 psi (8.5 bar). Individually boxed; installation instructions included.

Product Code	Type	Pipe Size	Pr. Relief	No./Case	Color	Ship Wt.	Carton Dimensions
Polypropylene filter housings for one 9-3/4" cartridge (2-3/4" OD). NSF 42 component listed.							
HSL-10-0.25-W	Slimline	1/4" NPT	No	12	White	25 lbs.	19x15x13
HSL-10-0.375-W	Slimline	3/8" NPT	No	12	White	25 lbs.	19x15x13
HSL-10-0.75-WPR	Slimline	3/4" NPT	Yes	12	White	25 lbs.	19x15x13
HSL-10-0.75-WCP	Slimline	3/4" NPT	Yes	12	Wt./Clear	32 lbs.	19x15x13
HSL-10-0.75-222*	Slimline	3/4" NPT	No	12	Natural	38 lbs.	36x12x15
* Filter housing for 10" cartridge with 222 end caps. Made with all natural pure polypropylene.							
Polypropylene filter housings for one 20" cartridge (2-3/4" OD).							
HSL-20-0.75-WPR	Slimline	3/4" NPT	Yes	6	White	35 lbs.	18x13x25
Polypropylene filter housings for Big-Blue filter cartridges (4-1/2" OD).							
HBB-10-1-WPR	10" Big-Blue	1" NPT	Yes	4	White	22 lbs.	15x15x15
HBB-20-1-WPR	20" Big-Blue	1" NPT	Yes	4	White	35 lbs.	16x16x26
HBB-20-1.5-WPR	20" Big-Blue	1-1/2" NPT	Yes	4	White	35 lbs.	16x16x26
Counter Top Filter (Complete with slimline housing, stainless steel faucet, tubing and instructions.)							
HCT-100	Slimline	1/4" NPT	No	1	White	2 lbs.	6x6x15
Under Counter Model (Two Slimline housings w/bracket, installed in series, instructions included.)							
HUC-200	Slimline	1/4" NPT	No	1	White	7 lbs.	13x7x15

All-Poly Cartridges for Fine Retention Ratings, Ultrapure Water and Chemical Compatibility

High efficiency cartridges for wide range of filtration requirements. All polypropylene construction for chemical compatibility; non-leaching. Pleated for increased surface area, low pressure drop and long life. Ideal for food, beverage, deionized water, fine chemicals, wastewater, plating chemicals, pharmaceutical, R/O pre-filtration and more!

Specifications:

Media (microfibers)	Polypropylene
Media (membrane)	Polyethersulfone
Center tubes, end caps, cage/netting	Polypropylene
Micron ratings	Nominal and absolute
O-rings (for 222 end caps)	Viton
Flow Rate (per 9-3/4" length cartridge)	3-6 GPM in water



All-Poly cartridges fit in slimline plastic housings and Harmsco high capacity filters. Knife edge gasket NOT required using All-Poly cartridges between top plate and cartridge using Harmsco cluster filters.

All-Poly Cartridges by Harmsco®

Product Code	Micron	Rating	End Cap	Length	No./Case	Shipping Wt.	Carton Dimensions
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High Efficiency Cartridges (98% efficient.)

0.2 micron, DOE with rigid cage; temperature rated to 200°F (93°C)

PP-10-0.2-DOE	0.2	Nominal	DOE	9-3/4"	6	4	6 x 9 x 13
PP-20-0.2-DOE	0.2	Nominal	DOE	19-1/2"	6	7	6 x 9 x 24
PP-20E-0.2-DOE	0.2	Nominal	DOE	20" Exact	6	7	6 x 9 x 24
PP-30-0.2-DOE	0.2	Nominal	DOE	29-1/4"	6	9	6 x 9 x 34
PP-40-0.2-DOE	0.2	Nominal	DOE	40"	6	11	6 x 9 x 44

0.2 micron, with 222 o-ring end caps and rigid cage; temperature rated to 200°F (93°C)

PP-10-0.2-222	0.2	Nominal	222	9-3/4"	6	4	6 x 9 x 13
PP-20-0.2-222	0.2	Nominal	222	19-1/2"	6	7	6 x 9 x 24
PP-30-0.2-222	0.2	Nominal	222	29-1/4"	6	9	6 x 9 x 34
PP-40-0.2-222	0.2	Nominal	222	40"	6	11	6 x 9 x 44

1 micron, DOE with netting cage; temperature rated to 125°F (52°C) @ 35 psid

PP-10-1-DOE	1	Nominal	DOE	9-3/4"	6	4	6 x 9 x 13
PP-20-1-DOE	1	Nominal	DOE	19-1/2"	6	7	6 x 9 x 24
PP-30-1-DOE	1	Nominal	DOE	29-1/4"	6	9	6 x 9 x 34
PP-40-1-DOE	1	Nominal	DOE	40"	6	11	6 x 9 x 44

1 micron, with 222 o-ring end caps and netting cage; temperature rated to 125°F (52°C) @ 35 psid

PP-10-1-222	1	Nominal	222	9-3/4"	6	4	6 x 9 x 13
PP-20-1-222	1	Nominal	222	19-1/2"	6	7	6 x 9 x 24
PP-30-1-222	1	Nominal	222	29-1/4"	6	9	6 x 9 x 34
PP-40-1-222	1	Nominal	222	40"	6	11	6 x 9 x 44

5 micron, DOE with netting cage; temperature rated to 125°F (52°C) @ 35 psid

PP-10-5-DOE	5	Nominal	DOE	9-3/4"	6	4	6 x 9 x 13
PP-20-5-DOE	5	Nominal	DOE	19-1/2"	6	7	6 x 9 x 24
PP-30-5-DOE	5	Nominal	DOE	29-1/4"	6	9	6 x 9 x 34
PP-40-5-DOE	5	Nominal	DOE	40"	6	11	6 x 9 x 44

Absolute Rated Cartridges (Temperature rated to 200°F (93°C); >99.9% efficient.)

0.2 micron, DOE with rigid cage

PP-A-10-0.2-DOE	0.2	Absolute	DOE	9-3/4"	6	4	6 x 9 x 13
PP-A-20-0.2-DOE	0.2	Absolute	DOE	19-1/2"	6	7	6 x 9 x 24
PP-A-20E-0.2DOE	0.2	Absolute	DOE	20" Exact	6	7	6 x 9 x 24
PP-A-30-0.2-DOE	0.2	Absolute	DOE	29-1/4"	6	9	6 x 9 x 34
PP-A-40-0.2-DOE	0.2	Absolute	DOE	40"	6	11	6 x 9 x 44

0.2 micron, with 222 o-ring end caps and rigid cage

PP-A-10-0.2-222	0.2	Absolute	222	9-3/4"	6	4	6 x 9 x 13
PP-A-20-0.2-222	0.2	Absolute	222	19-1/2"	6	7	6 x 9 x 24
PP-A-30-0.2-222	0.2	Absolute	222	29-1/4"	6	9	6 x 9 x 34
PP-A-40-0.2-222	0.2	Absolute	222	40"	6	11	6 x 9 x 44

Membrane Cartridges (Polyethersulfone membrane; temperature rated to 175°F (80°C) 100% efficient.)

0.2 micron, with 222 o-ring end caps and very heavy duty rigid cage

PP-M-10-0.2-222	0.2	Absolute	222	9-3/4"	1	1	3 x 3 x 10
PP-M-20-0.2-222	0.2	Absolute	222	19-1/2"	1	2	3 x 3 x 20
PP-M-30-0.2-222	0.2	Absolute	222	29-1/4"	1	3	3 x 3 x 30
PP-M-40-0.2-222	0.2	Absolute	222	40"	1	4	3 x 3 x 40

Membrane cartridges: Efficiency >10¹⁰. 100% bacteria retentive at 0.2 micron.

Temperature limits vary and depend on pressure and time under load. *Check catalog or Filter Housing brochure for temperature limits of housings to be used.

NOTE: The Water Quality Association defines absolute as >99.9% efficient at stated micron rating.

Harmsco Spare Parts

Description	Part Number	Size / Use	Material	Filter Model
O-Rings				
O-Ring	551-B	2-1/8" for standpipe	Buna-N	HIF 7, 14, 21
O-Ring	551-E	2-1/8" for standpipe	EPDM	HIF 7, 14, 21
O-Ring	551-V	2-1/8" for standpipe	Viton	HIF 7, 14, 21
O-Ring	930-B	2-3/4" for standpipe	Buna-N	HIF 16, 24 and swingbolt models
O-Ring	930-E	2-3/4" for standpipe	EPDM	HIF 16, 24 and swingbolt models
O-Ring	930-V	2-3/4" for standpipe	Viton	HIF 16, 24 and swingbolt models
O-Ring	552-B	1-5/16" for holding rods	Buna-N	HIF 7, 14, 16, 21, 24 models
O-Ring	552-E	1-5/16" for holding rods	EPDM	HIF 7, 14, 16, 21, 24 models
O-Ring	552-V	1-5/16" for holding rods	Viton	HIF 7, 14, 16, 21, 24 models
Rim Gaskets				
Rim Gasket	550-E	Cluster, bag, Hurricane	EPDM	HIF 7, 14, 16, 21, 24, HUR 40, 90, 170
Rim Gasket	550-B	Cluster, bag, Hurricane	Buna-N	HIF 7, 14, 16, 21, 24, HUR 40, 90, 170
Rim Gasket	550-V	Cluster, bag, Hurricane	Viton	HIF 7, 14, 16, 21, 24, HUR 40, 90, 170
Top Seals				
Top Seal	635-E	16" top seal	EPDM	HIF 28 and HIF 42
Top Seal	635-B	16" top seal	Buna-N	HIF 28 and HIF 42
Top Seal	636-E	16" top seal	EPDM	HIF 56
Top Seal	636-B	16" top seal	Buna-N	HIF 56
Top Seal	671-E	18" top seal	EPDM	HIF 75 and HIF 100
Top Seal	671-B	18" top seal	Buna-N	HIF 75 and HIF 100
Top Seal	653-E	24" top seal	EPDM	HIF 150FL and HIF 200FL
Top Seal	653-B	24" top seal	Buna-N	HIF 150FL and HIF 200FL
Top Seal	654-E	24" top seal	EPDM	HIF 5x170FL
Bottom Seals				
Bottom Seal	639-N	Nat. gum rubber seal	NGR	HIF 28 through HIF 200FL
Bottom Seal	639-E	EPDM bottom seal	EPDM	HIF 28 through HIF 200FL
Bottom Seal	639-B	Buna-N bottom seal	Buna-N	HIF 28 through HIF 200FL
Bottom Seal	640-N	Nat. gum rubber seal	NGR	HIF 5x170FL
Bottom Seal	640-E	EPDM bottom seal	EPDM	HIF 5x170FL
Top Plates				
Top plate	519SS-222	Top plate - cluster	Stainless	HIF 7SS-222
Top plate	519SS	Top plate - cluster	Stainless	HIF 7, 14 and HIF 21
Top plate	901SS	Top plate - cluster	Stainless	HIF 16 and HIF 24
Top plate	309SS	Top plate - Hurricane	Stainless	HUR 40 HP, 90 HP and 170 HP
Top plate	633SS	Top plate - Commercial	Stainless	HIF 28 and HIF 42
Top plate	670SS	Top plate - Commercial	Stainless	HIF 75 and HIF 100
Top plate	651SS	Top plate - Commercial	Stainless	HIF 150FL and HIF 200FL
Top plate	650SS	Top plate - Commercial	Stainless	HIF 5x170FL
Lids				
Lid	530-A	Lid for 12 studs	Stainless	HIF 7, 14, 16, 21 and 24
Lid	611-A	Lid for 16 studs	Stainless	HIF 42
Lid	669-A	Lid for 20 studs	Stainless	HIF 75 and HIF 100
Lid	613-A	Lid for 40 studs	Stainless	HIF 150FL, HIF 200FL and HIF 5x170FL
Lid	530-AC	Lid, 12 studs w/vent	Stainless	HUR 40 HP, 90 HP, 170 HP
Lid vent	Vent up-charge	For air release	1/4" FPT	Up-charge for any 11" diameter lid
Lid vent	Vent up-charge	For air release	1/4" FPT	Up-charge for 16" dia. lids and larger

Description	Part Number	Size / Use	Material	Filter Model
Tanks				
Tank	HIF 7TANK	Tank, standpipe, o-ring	Stain/CPVC	HIF 7
Tank	HIF 14TANK	Tank, standpipe, o-ring	Stain/CPVC	HIF 14
Tank	HIF 16TANK	Tank, standpipe, o-ring	Stain/CPVC	HIF 16
Tank	HIF 21TANK	Tank, standpipe, o-ring	Stain/CPVC	HIF 21
Tank	HIF 24TANK	Tank, standpipe, 0-ring	Stain/CPVC	HIF 24
Tank	HIF 42TANK	Tank, standpipe	Stain/CPVC	HIF 42
Tank	HIF 75TANK	Tank, standpipe	Stain/CPVC	HIF 75
Tank	HIF 100TANK	Tank, standpipe	Stain/CPVC	HIF 100
Tank	HIF 150FLTANK	Tank, standpipe	Stain/CPVC	HIF 150FL
Tank	HIF 200FLTANK	Tank, standpipe	Stain/CPVC	HIF 200FL
Tank	HUR 40 HPTANK	Tanks & standpipe	Stain/CPVC	HUR 40 HP (inner and outer tanks)
Tank	HUR 90 HPTANK	Tanks & standpipe	Stain/CPVC	HUR 90 HP (inner and outer tanks)
Tank	HUR 170 HPTANK	Tanks & standpipe	Stain/CPVC	HUR 170 HP (inner and outer tanks)

Standpipes

Standpipe	560-C	Standpipe, 1-1/2"	CPVC	HIF 7
Standpipe	531-C	Standpipe, 1-1/2"	CPVC	HIF 14
Standpipe	965-C	Standpipe, 2"	CPVC	HIF 16
Standpipe	532-C	Standpipe, 1-1/2"	CPVC	HIF 21
Standpipe	1445-C	Standpipe, 2"	CPVC	HIF 24
Standpipe	630-C	Standpipe, 2"	CPVC	HIF 42
Standpipe	672-C	Standpipe, 3"	CPVC	HIF 75
Standpipe	673-C	Standpipe, 3"	CPVC	HIF 100
Standpipe	646-C	Standpipe, 4"	CPVC	HIF 150FL
Standpipe	647-C	Standpipe, 4"	CPVC	HIF 200FL
Standpipe	645-C	Standpipe, 4"	CPVC	HIF 5x170FL
Standpipe	316-C	Standpipe, 2"	CPVC	HUR 40 HP
Standpipe	317-C	Standpipe, 2"	CPVC	HUR 90 HP
Standpipe	315-C	Standpipe, 2"	CPVC	HUR 170 HP
Standpipe	560-SS	Standpipe, 1 1/2"	Stainless	HIF 7-SS, HIF 7-SS-222
Standpipe	531-SS	Standpipe, 1 1/2"	Stainless	HIF 14-SS
Standpipe	965-SS	Standpipe, 2"	Stainless	HIF 16-SS
Standpipe	532-SS	Standpipe, 1 1/2"	Stainless	HIF 21-SS
Standpipe	1445-SS	Standpipe, 2"	Stainless	HIF 24-SS
Standpipe	315-SS	Standpipe, 2"	Stainless	HUR 170 HP
Standpipe	316-SS	Standpipe, 2"	Stainless	HUR 40 HP
Standpipe	317-SS	Standpipe, 2"	Stainless	HUR 90 HP

Nuts & Washers

Nut	202-B	1/2" wing nut	Brass	For all filters
Nut	202-BT	1/2" wing nut	Brass	HIF 150FL ,HIF 200FL and HIF 5x170FL
Nut	202-H	1/2" hex nuts	Brass	All units use nuts specified
Washer	203	1/2" washer	Stainless	All units if hex nuts are used

Holding Rods

Holding rod	555-C	To install cartridges	CPVC	HIF 7
Holding rod	512-C	To install cartridges	CPVC	HIF 14, HIF 16 and HIF 16-SB
Holding rod	534-C	To install cartridges	CPVC	HIF 21, HIF 24
Holding rod	555-SS	To install cartridges	Stainless	HIF 7SS
Holding rod	512-SS	To install cartridges	Stainless	HIF 14SS, HIF 16SS
Holding rod	534-SS	To install cartridges	Stainless	HIF 21SS, HIF 24-SS

Description	Part Number	Size / Use	Material	Filter Model
Lifters & Rods				
Lifter	621-C	To install cartridges	CPVC	HIF 28
Lifter	622-C	To install cartridges	CPVC	HIF 42, HIF 75 and HIF 150FL
Lifter	623-C	To install cartridges	CPVC	HIF 56, HIF 100 and HIF 200FL
Centering rod	625-P	Centering rod	PVC	HIF 28 through HIF 200FL
Pipe caps				
Pipe cap	513-C	To secure cartridges	CPVC	HIF 7, 14, 16, 21, 14 and SB models
Pipe cap	513-SS	To secure cartridges	Stainless	HIF 7, 14, 16, 21, 14 and SB models
Hurricane Filters				
Retainer nut insert	312	To secure cartridge	PVC	HUR 40 HP, HUR 90 HP, HUR 170 HP
Retainer nut	905-P	To secure cartridge	PVC	HUR 40 HP, HUR 90 HP, HUR 170 HP
Inner can isolator	329	To support inner can	CPVC	HUR 40 HP, HUR 90 HP, HUR 170 HP
Miscellaneous				
Leg extension (3)	525-A	To extend legs	Aluminum	HIF 56 through HIF 200FL (set of three)
Flange (each)	327	For 2" inlet, outlet	Stainless	HUR 40 HP, HUR 90 HP, HUR 170 HP
Knife edge gasket	509	To seal cartridges	PVC	HIF-7, 14, 16, 21, 24 if required
1/4" cartridge spacer	801-GSKT	To add length	EPDM	When needed
Cartridge coupler	801-CPLG	Joins two cartridges	Plastic	All cartridges with 1-1/16" ID

Standby Clusters for Quick and Easy Access to Cartridge Cluster (For HIF 7 through HIF 24 filters.)

Part Number

- HIF 7CO (specify choice of cartridge. All poly, polypleat and carbon; call for additional cost.)
- HIF 14CO (specify choice of cartridge. All poly, polypleat and carbon; call for additional cost.)
- HIF 16CO (specify choice of cartridge. All poly, polypleat and carbon; call for additional cost.)
- HIF 21CO (specify choice of cartridge. All poly, polypleat and carbon; call for additional cost.)
- HIF 24CO (specify choice of cartridge. All poly, polypleat and carbon; call for additional cost.)

Spare Parts for Single Filter Cartridge Housings

10" Slimline Housings

HSL-10-0.25-HD	Head, 1/4"
HSL-10-0.375-HD	Head, 3/8"
HSL-10-0.75-HD	Head, 3/4"
HSL-10-W-SUMP	White Sump, 1/4", 3/8" & 3/4"
HSL-10-C-SUMP	Clear Sump, 3/4"
HSL-10-W-ORING	O-ring, 1/4", 3/8" & 3/4"
HSL-10-S-BRKT	Bracket (1)
HSL-10-D-BRKT	Bracket (2)
HSL-10-T-BRKT	Bracket (3)
HSL-10-WRENCH	Wrench

20" Slimline Housings

HSL-20-0.75-HD	Head, 3/4"
HSL-20-W-SUMP	Sump
HSL-20-W-ORING	O-ring
HSL-20-S-BRKT	Bracket (1)
HSL-20-WRENCH	Wrench

Big Blue Housings

HBB-10-1-HD	Head, 1"	HBB-20-W-SUMP	Sump, 20"
HBB-20-1.5-HD	Head, 1-1/2"	HBB-BRKT	Bracket for 10" and 20"
HBB-ORING	O-ring, 10" & 20"	HBB-WRENCH	Wrench for 10" and 20"
HBB-10-1-W-SUMP	Sump, 10"		

Fusion Bonded Epoxy Coating for Chemical Resistance

Filter Models

HIF 7, HIF 7-222, HIF 14, HIF 16
HIF 21, HIF 24
HUR 40 HP, HUR 90 HP, HIF 42, HUR 170 HP
HIF 75
HIF 100
HIF 150FL
HIF 200FL

Fusion bonded epoxy coating material is NSF Std. 61 certified. Allow additional 2-3 weeks lead time for special coating.

Up-Flow filter housings with victaulic fittings and adjustable legs

Model	Inlet/Outlet	Drain	Legs
HIF 7-VFAL	1-1/2" Victaulic	1" NPT	Adjustable
HIF 14-VFAL	1-1/2" Victaulic	1" NPT	Adjustable
HIF 16-VFAL	2" Victaulic	1" NPT	Adjustable
HIF 21-VFAL	1-1/2" Victaulic	1" NPT	Adjustable
HIF 24-VFAL	2" Victaulic	1" NPT	Adjustable
HIF 42-VF	2" Victaulic	1" NPT	Fixed
HIF 75-VF	3" Victaulic	1-1/2" NPT	Fixed
HIF 100-VF	3" Victaulic	1-1/2" NPT	Fixed

Note: Minimum order quantities may apply.

Harmsco Product Notes



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