

HURRICANE™ **HARMSCO**® **Filters**

**Combination centrifugal separator and up-flow cartridge filter
in a single compact design with one single cartridge
for easy installation, removal and service.**



The Revolutionary **HURRICANE** Filter!

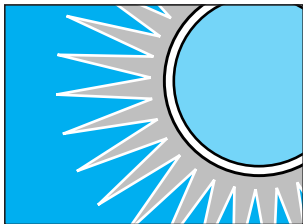
Combines three filtration technologies in a single compact design.

It's a Separator & Cartridge Filter in One

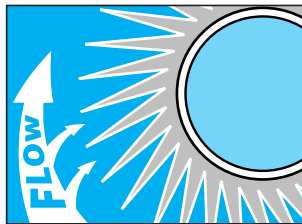
Hurricane filters provide unsurpassed performance because they separate dense solids prior to cartridge filtration for extended filter life, increased dirt holding capacity and reduced maintenance costs. In many respects Hurricane filters are two filters in one! Components include outer chamber for particle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

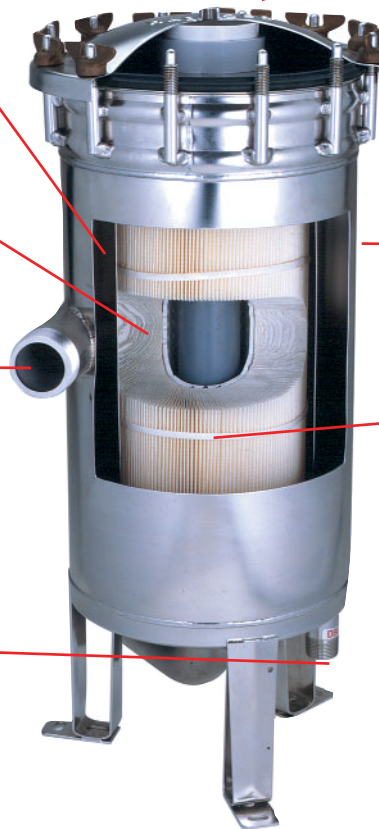
Rotational flow pattern

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



Flow rate (GPM)	Up to 50	Up to 100	Up to 150
Flow rate (LPM)	Up to 189	Up to 378	Up to 568
Flow rate (M3/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.



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, pressure gauges and electrical controls for optional electrical equipment.

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" NPT
PFS-3-P	15 HP	300	1,135	PFS-3	3	3" NPT
PFS-4-P	15 HP	400	1,514	PFS-4	4	4" FL
Series Installed Systems:						
PFSS-2-P	7.5 HP	100	378	PFSS-2	2	2" NPT
PFSS-3-P	15 HP	100	378	PFSS-3	3	2" 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.

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

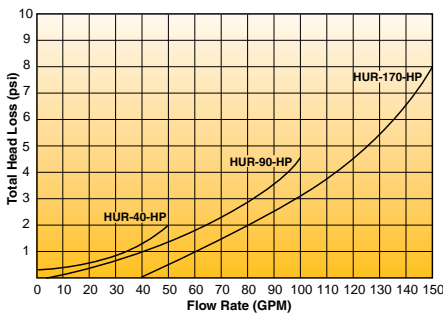
HURRICANE HARMSCO™ **Replacement Cartridges**
Standard pleated polyester filter elements



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.

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-40-20	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.
	HC-40-EZ-CLEAN**	N.R.	9-5/8"	7-3/4"	3" FPT	4 lbs.
HUR-90-HP	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-90-20	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.
	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.
HUR-170-HP	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-170-20	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.



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

* Hurricane activated carbon cartridges available. Call for details.

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

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.



Certified to
ANSI/NSF-61

Product Code	Hurricane Filter Model	Length	O.D.	No./Case
PP-HC-40-1	HUR-40-HP	9-5/8"	7-3/4"	1
PP-HC-90-1	HUR-90-HP	19-1/2"	7-3/4"	1
PP-HC-170-1	HUR-170-HP	30-3/4"	7-3/4"	1

Satisfied Customers!



Waste Treatment for Compliance

A metal finishing plant installed several Hurricane filters with 0.35 and one micron cartridges to lower zinc levels in their effluent. After installation the firm was in compliance, and written approval was granted.

Cooling Tower Filtration

Westory Building in Washington, D.C. installed a Hurricane filter on their forced draft cooling tower. Solids have been removed, and the customer reports he has been able to clean his cartridge over twenty-five times!

Surface Waters Filtration

Sandbar State Park in VT uses Hurricane filters, twenty and five micron sediment cartridges (for pre-filtration) and one micron absolute rated Poly-Pleat cartridges for Cryptosporidium control. Test results show removal requirements are achieved.

Some of the information contained 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 known 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.



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