

HARMSCO®

WW WaterWarmer™

Heat Exchanger/Cartridge Filter

Improve your machining quality!

The Only Cartridge Filter With A Built-In Heat Exchanger.

- Heat or cool as you filter. WW WaterWarmer™ eliminates the need for separate heat exchanger. Compact design and dual-purpose features save space, piping and installation time. Improves lubrication and cutting performance.



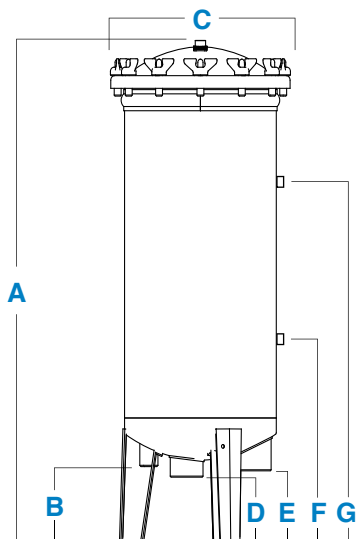
Features

- ▶ Patented Up-flow design
- ▶ Electropolished 304 stainless steel housing
- ▶ Cartridge cluster removes easily for cartridge cleaning/replacement
- ▶ Three sizes for greater media surface area and thermal output
- ▶ Equipped with Harmsco® Premium 801-20-HT polyester filter cartridges
- ▶ Fail Safe lid closure, rated for 150 psi

Applications

- ▶ Viscous fluid filtration
- ▶ Chilling coolants for sawing/machining
- ▶ Chilled Water Recirculation/Loops
- ▶ Parts washers
- ▶ Plating industry
- ▶ Ultrasonic cleaning

Harmsco® WW WaterWarmer™ Filter Housings



HIF-7-WW



HIF-14-WW

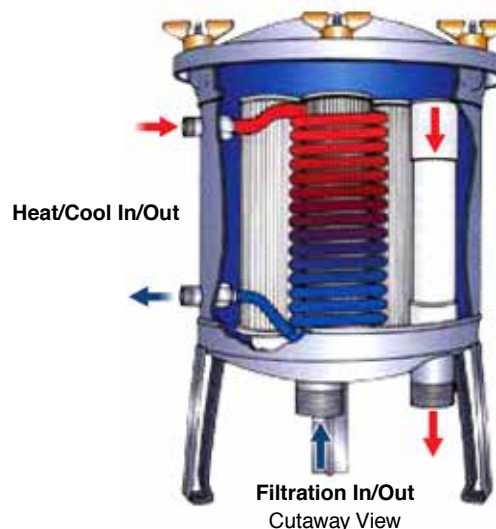


HIF-21-WW

Filter Model	A Filter Height	B Drain	C Diameter	D Outlet	E Inlet	F Heat-Cool Inlet Ht.	G Heat-Cool Outlet Ht.	Pipe Size NPT	Drain Size NPT	Floor Space In.	Service Ht.
HIF-7-WW	19-1/4"	4-1/2"	13"	3-7/8"	4-1/4"	8-1/8"	15-3/8"	1-1/2"	1"	15x15	31"
HIF-14-WW	29-3/8"	4-1/2"	13"	3-7/8"	4-1/4"	8-15/16"	24-15/16"	1-1/2"	1"	15x15	51"
HIF-21-WW	39-1/8"	4-1/2"	13"	3-7/8"	4-1/4"	9-13/16"	25-13/16"	1-1/2"	1"	15x15	72"

Specifications

- ▶ Electropolished 304 stainless steel
- ▶ Standpipe - 304 stainless steel
- ▶ Temperature - Up to 200°F (93°C)
- ▶ Pressure - 150 PSI (10 bar) max
- ▶ Lid Closure - Wing nuts, brass
- ▶ Rim Gasket - EPDM (Buna-N, Viton avail.)
- ▶ Inlet/Outlet Connections - standard (1-1/2" NPT plumbing; 1/2" NPT heating/cooling loop)



Mechanical Specifications

Model	Filter Area (sq. ft.)	Height (in.)	Floor (in.)	Weight (lbs.)	Coil Area (sq. in.)	Thermal Output (BTUs)	Coil Hot/Cold Water Flow (gpm)	Coil Pressure Drop (ft. of head)	Water Flow (gpm)
HIF-7-WW	42	19-1/2	13	30	245	45,000	3	12.7	22
HIF-14-WW	84	28	13	43	434	90,000	6	35.88	45
HIF-21-WW	126	37	13	54	434	90,000	6	35.88	45

Operating Specifications For Heat Exchanger*

* Thermal output is based upon a temperature difference of 80°F between incoming hot and incoming cold water at the given flow rate. U.S. Patent #4,455,227

Note: This publication is to be used as a guide. The data within has been obtained from many sources and is considered to be accurate. Harmsco does not assume liability for the accuracy and/or completeness of this data. Changes to the data can be made without notification. Temperature, Pressure, Flow Rates, Differential Pressures, Chemical Combinations and other unknown factors can affect performance in unknown ways. **Limited Warranty:** Harmsco warrants their products to be free of material and workmanship defects. Determination of suitability of Harmsco products for uses and applications contemplated by Buyer shall be the sole responsibility of Buyer. The end user/installer/buyer shall be liable for the product's performance and suitability regarding their specific intended applications. End users should perform their own tests to determine suitability for each application.