

LENNTECH

info@lennotech.com Tel. +31-152-610-900
www.lennotech.com Fax. +31-152-616-289

3M Housings HF Series For Cartridge Filters

The HF housings are constructed from 316 L or 304 stainless steel and manufactured in accordance to design and construction code EN13445 Group 3. They have a maximum pressure rating design of 10 bar g and can be used in temperatures up to 90 °C.

The HF housings are fully CE marked in accordance with the European Pressure Equipment Directive (PED) and are available in a variety of sizes to accommodate 1, 3, 5 or 7 cartridges, in either of two lengths - 40 inch and 60 inch.

Pressure Equipment Directive 97/23/CE

HF vessels are built to PED 97/23/CE Category 3.3 “Sound Engineering Practice” as standard. The vessel designs have been developed so that they can be manufactured for the highest demanding applications - Group 1 (Hazardous Gas) - upon request from existing and known production documentation. All dimensions remain as shown here.

ATEX Directive 94/9/CE

The HF housings are not ATEX approved as standard.

They can be approved for use in ATEX condition 11/2/G/T5 upon request.

The user of these housings must ensure that they are used in accordance with the requirements of these PED and ATEX directives at all times. Please consult your local 3M Purification representative for any other classification or further information.



Table 1: Housing Specifications

Materials of Construction	316L (1.4404 or equivalent) or 304 (1.4307 or equivalent) This applies to materials in contact with the product. Other non contact items (including bolts etc.) may vary from this.
Pressure Equipment Directive 97/23/CE Operating Conditions	PED 97/23/CE for Group 1 and Group 2 fluids. Restrictions will apply for gas or vapour applications. Please refer to 3M Purification for specific cases.
ATEX 94/9/CE	Group II Category 2 – T5 (Other ratings are possible, please refer to 3M Purification)
Recommended Maximum Flow per Cartridge: m³/hour	For 40 inch 80 m³/hour and for 60 inch 113 m³/hour (60" elements are available in horizontal vessel configuration only)

Features & Benefits

Compact design

- Smaller housing minimizes capital expense requirements
- Reduces system footprint

Robust cartridge centre-post design

- Eliminates bulky support plates providing easy access to housing internals

Manufactured from 304 or 316L stainless steel

- Excellent corrosion protection (carbon steel option available in multi-element housing)

Upstream and downstream gauge ports and drains

Hinged cover (horizontal housings) and user-friendly cover lifting device (vertical housings)

- For easy element change-outs

Applications

Industrial

- Municipal Water, RO Prefiltration, Reclaimed Water, Coolants, Nozzle Protection, Boiler Condensate

Chemical

- Quench Water, Aqueous Salt Solutions, Final Products

Petrochemicals

- Waterflooding, Produced Water, Enhanced Oil Recovery, Completion Fluids, Amine Sweetening, Final Products

Electronics

- RO Prefiltration, Process Water

Food & Beverage

- Process Water

Pharmaceutical

- Process Water

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Table 2: Other Specifications

Model	Nominal Diameter (mm)	Material	Inlet & Outlet Connection (DIN)		Recommended Maximum Flow m ³ /hr*		Maximum Pressure & Temperature	Vent & Drain Connections	
			40"	60"	40"	60"		Vent	Drain
1HF	219	316L or 304L Stainless Steel	DN100	DN100	80	113	10 bar at 90 °C	1/4" ***	1/2" ***
3HF	450		DN150	DN200	198**	339		1/2"	1"
5HF	500		DN200	DN250	352**	556**		1/2"	1"
7HF	600		DN250	DN300	556	791		1"	2"

* Pressure drop across cartridge not included (see figure 3)

** Maximum flow rate based on nozzle size

*** Only for Vertical Housings and with plug

Figure 1: Typical Housing Flow Rates

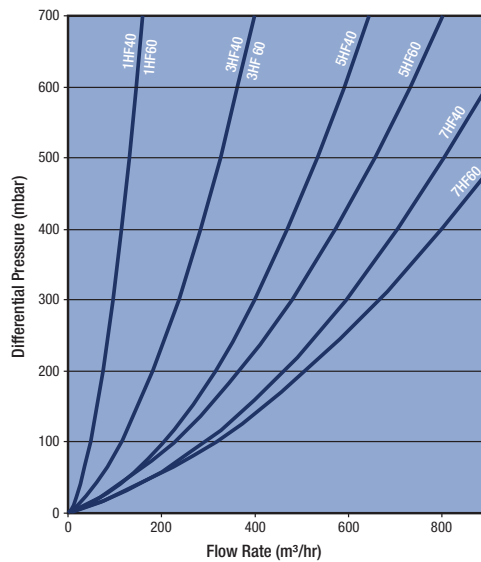


Table 3: Dimensions in mm

Vertical Housing Models (available for 40" cartridges only)					
Model	A Floor to Inlet	B Total Height	C Outlet to Floor	H Clearance	
01HFB1V	680 ¹	1873 ¹	430 ¹	2860 ¹	
03HFB1V	1010	2715	400	3500	
05HFB1V	1115	2815	500	3600	
07HFB1V	1210	2995	600	3700	
Horizontal Housing Models					
Model	A Top to Inlet	C Top to Vent	E Inlet to Floor	H Middle to Floor	L Total Length
01HFB1H	1170	-	614	814	1425 ¹
01HFB2H	1680	-	614	814	1935 ¹
03HFB1H	1340	1510	500	810	1950
03HFB2H	1850	2020	500	810	2500
05HFB1H	1340	1510	550	900	1950
05HFB2H	1850	2020	550	900	2500
07HFB1H	1340	1510	650	1060	1950
07HFB2H	1850	2020	650	1060	2500

Note: All Dimensions approximately for guidance only

¹ Maximum height

Figure 2: HF Horizontal Housings

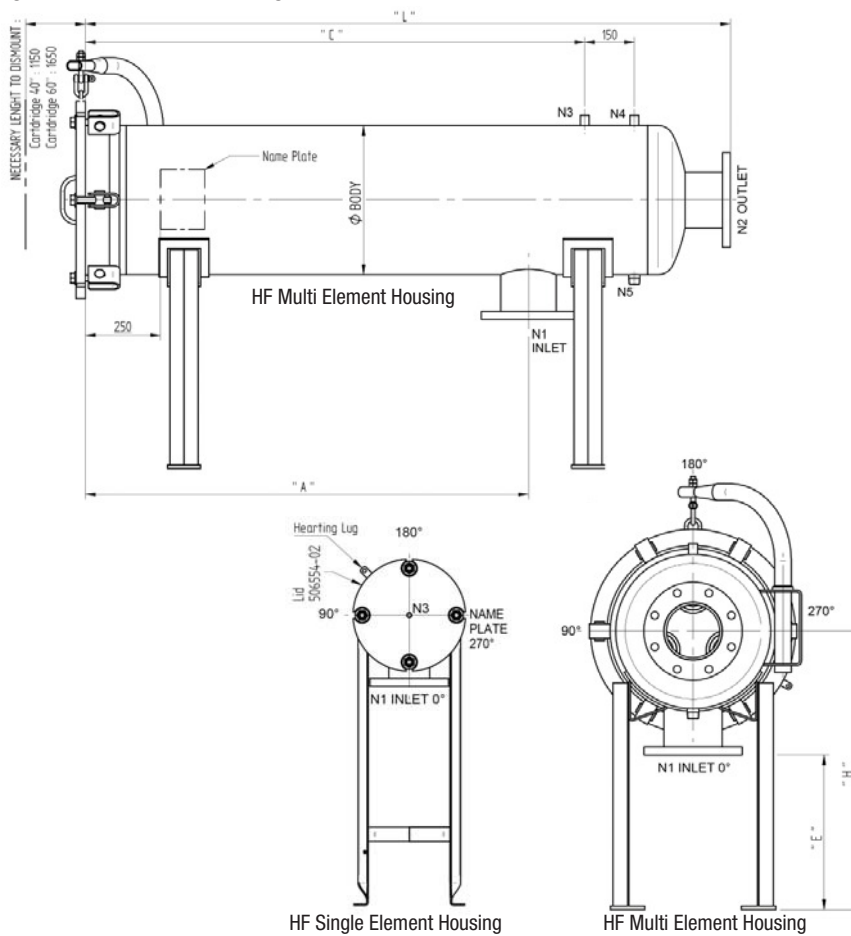
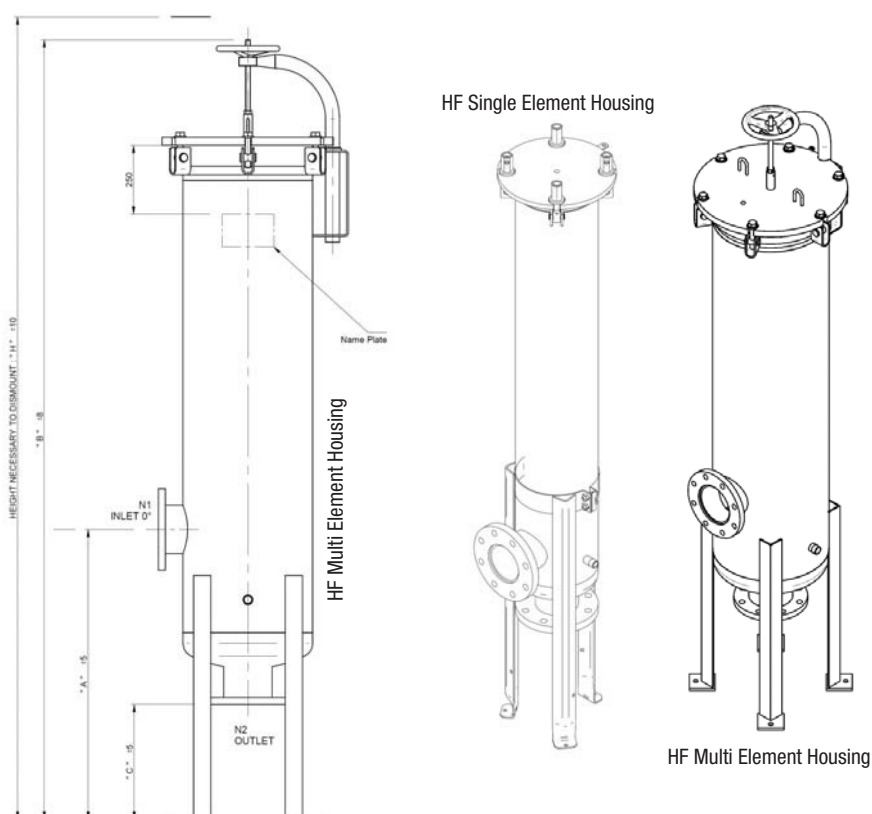


Figure 3: HF Vertical Housings



Ordering Guide HF Series Housings

Number of Filter Elements	Model	Closing	Size *	Configuration	Housing Material	Gasket Material **	Surface Finish	Connections ***	Outlet	Elbow
01 03 05 07	HF	B = Bolted	1 = 40" 2 = 60"	H = Horizontal V = Vertical	4 = 304L 6 = 316L	NB = Nitrile	F0 = Acid Pickled & Passivated or Glass Bead Blasted	BP = Flanged (ISO PN 16)	D = Bottom Outlet	N = None

* 60" Elements are available for horizontal housings only

** For other Gasket Materials or spare parts, please contact a 3M Purification representative

*** Flange size will vary with number of filter elements and element length (refer to table 2 on page 2)

Examples: 03 HFB 2 H 6 NB F0 BP D N
or 05 HFB 1 V 6 NB F0 BP D N

Important Notice

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LITHSHF1.E - 0710

01 HFB 1 V 4 NB F0 BP D N
01 HFB 1V 6 NB F0 BP D N
01 HFB 1 H 4 NB F0 BP D N
01 HFB 1 H 6 NB F0 BP D N
01 HFB 2 V 4 NB F0 BP D N
01 HFB 2 V 6 NB F0 BP D N
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