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.

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### 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

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### 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

---

Table 1: Housing Specifications

<table>
<thead>
<tr>
<th><strong>Materials of Construction</strong></th>
<th>316L (1.4404 or equivalent) or 304 (1.4307 or equivalent)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pressure Equipment Directive 97/23/CE Operating Conditions</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>ATEX 94/9/CE</strong></td>
<td>Group II Category 2 – T5 (Other ratings are possible, please refer to 3M Purification)</td>
</tr>
<tr>
<td><strong>Recommended Maximum Flow per Cartridge: m³/hour</strong></td>
<td>For 40 inch 80 m³/hour and for 60 inch 113 m³/hour (60” elements are available in horizontal vessel configuration only)</td>
</tr>
</tbody>
</table>
Table 2: Other Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Nominal Diameter (mm)</th>
<th>Material</th>
<th>Inlet &amp; Outlet Connection (DIN)</th>
<th>Recommended Maximum Flow m³/hr*</th>
<th>Maximum Pressure &amp; Temperature</th>
<th>Vent &amp; Drain Connections</th>
</tr>
</thead>
<tbody>
<tr>
<td>1HF</td>
<td>219</td>
<td>316L or 304L Stainless Steel</td>
<td>DN100 DN100</td>
<td>80</td>
<td>10 bar at 90 °C</td>
<td>1/4&quot;*** 1/2&quot;***</td>
</tr>
<tr>
<td>3HF</td>
<td>450</td>
<td></td>
<td>DN150 DN200</td>
<td>198**</td>
<td></td>
<td>1/2&quot; 1&quot;</td>
</tr>
<tr>
<td>5HF</td>
<td>500</td>
<td></td>
<td>DN200 DN250</td>
<td>352**</td>
<td></td>
<td>1/2&quot; 1&quot;</td>
</tr>
<tr>
<td>7HF</td>
<td>600</td>
<td></td>
<td>DN250 DN300</td>
<td>556**</td>
<td></td>
<td>1&quot; 2&quot;</td>
</tr>
</tbody>
</table>

* Pressure drop across cartridge not included (see figure 3)
** Maximum flow rate based on nozzle size
*** Only for Vertical Housings and with plug

Table 3: Dimensions in mm

<table>
<thead>
<tr>
<th>Vertical Housing Models (available for 40&quot; cartridges only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>01HFB1V</td>
</tr>
<tr>
<td>03HFB1V</td>
</tr>
<tr>
<td>05HFB1V</td>
</tr>
<tr>
<td>07HFB1V</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Horizontal Housing Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>01HFB1H</td>
</tr>
<tr>
<td>01HFB2H</td>
</tr>
<tr>
<td>03HFB1H</td>
</tr>
<tr>
<td>03HFB2H</td>
</tr>
<tr>
<td>05HFB1H</td>
</tr>
<tr>
<td>05HFB2H</td>
</tr>
<tr>
<td>07HFB1H</td>
</tr>
<tr>
<td>07HFB2H</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Number of Filter Elements</th>
<th>Model</th>
<th>Closing</th>
<th>Size *</th>
<th>Configuration</th>
<th>Housing Material</th>
<th>Gasket Material **</th>
<th>Surface Finish</th>
<th>Connections ***</th>
<th>Outlet</th>
<th>Elbow</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>HF</td>
<td>B</td>
<td>1 = 40°</td>
<td>H = Horizontal</td>
<td>4 = 304L</td>
<td>NB = Nitrile</td>
<td>FO = Pickled &amp; Passivated or Glass Bead Blasted</td>
<td>BP = Flanged (ISO PN 16)</td>
<td>D</td>
<td>N</td>
</tr>
<tr>
<td>03</td>
<td></td>
<td></td>
<td>2 = 60°</td>
<td>V = Vertical</td>
<td>6 = 316L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>07</td>
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<td></td>
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</tr>
</tbody>
</table>

** 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
- 05 HFB 1 V 6 NB F0 BP D N

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**Important Notice**

3M Purification MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Since a variety of factors can affect the use and performance of a 3M Purification product in a particular application, some of which are uniquely within the user’s knowledge and control, user is responsible for determining whether or not the 3M Purification product is fit for a particular purpose and suitable for user’s method of application.

**Limited Warranty**

3M Purification warrants this product to be free from defects in material and workmanship during normal use for a period of one (1) year from the date of shipment from the factory. If the Product(s) is (are) defective within this warranty period, your exclusive remedy and 3M Purification’s sole obligations shall be, at 3M Purification’s option, to replace or repair the Product(s) or refund the original purchase price of the Product(s). This warranty does not apply to failures that result from abuse, misuse, alteration or damage not caused by 3M Purification or failure to properly follow installation and use instructions.

**Limitation of Liability:** 3M Purification will not be liable for any loss or damage arising from the use of the Product(s), whether direct, indirect, special, incidental, or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.

This warranty gives you specific legal rights and you may have other rights which vary from state to state, or country to country.
01 HFB 1 V 4 NB F0 BP D N
01 HFB 1 V 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
01 HFB 2 H 4 NB F0 BP D N
01 HFB 2 H 6 NB F0 BP D N
02 HFB 1 V 4 NB F0 BP D N
02 HFB 1 V 6 NB F0 BP D N
02 HFB 1 H 4 NB F0 BP D N
02 HFB 1 H 6 NB F0 BP D N
02 HFB 2 V 4 NB F0 BP D N
02 HFB 2 V 6 NB F0 BP D N
02 HFB 2 H 4 NB F0 BP D N
02 HFB 2 H 6 NB F0 BP D N
05 HFB 1 V 4 NB F0 BP D N
05 HFB 1 V 6 NB F0 BP D N
05 HFB 1 H 4 NB F0 BP D N
05 HFB 1 H 6 NB F0 BP D N
05 HFB 2 V 4 NB F0 BP D N
05 HFB 2 V 6 NB F0 BP D N
05 HFB 2 H 4 NB F0 BP D N
05 HFB 2 H 6 NB F0 BP D N
07 HFB 1 V 4 NB F0 BP D N
07 HFB 1 V 6 NB F0 BP D N
07 HFB 1 H 4 NB F0 BP D N
07 HFB 1 H 6 NB F0 BP D N
07 HFB 2 V 4 NB F0 BP D N
07 HFB 2 V 6 NB F0 BP D N
07 HFB 2 H 4 NB F0 BP D N
07 HFB 2 H 6 NB F0 BP D N