Automatic HDF Series 4LF Disc Filters

Automatic self-cleaning disc filtration equipment with 3” valves and high density polyethylene manifolds.
Max. Flow: 3381 gpm (768 m³/h)

Applications
❖ Surface and well water containing both organic (algae) and inorganic materials
  - Rivers, reservoirs, canals and waste water
❖ Suited for areas with or without electricity.
❖ Well water containing light sand (<3 PPM) and other contaminants.
❖ Ideal for high flow rate applications.

Advantages
❖ Rain Bird HDF systems helical action provides efficient cleaning.
❖ Maximum filtering surface (463 in²/2984 cm²).
❖ Manufactured from engineered plastics to resist rust and corrosion from chemicals and water.
❖ All units are factory tested prior to shipment.
❖ Disc elements provide depth filtration not just surface filtration.
❖ Units are pre-assembled with HDPE (High Density Polyethylene) manifold for easy installation.
❖ Manual backflush cycle can be initiated from the controller.
❖ Plastic backflush valves are lightweight and corrosion resistant.
❖ Low maintenance and performs reliable backflush.
❖ Filtration disc versatility (filtration grade can be easily changed).
  - Standard filtration options:
    - 100 micron (150 mesh)
    - 130 micron (120 mesh)
    - 400 micron (40 mesh)
  - Custom filtration options (available by special request):
    - 200 micron (75 mesh)
    - 50 micron

How It Works
Rain Bird HDF Series 4LF systems backflush only one element, while the rest of the equipment is still in the filtration stage, supplying the remaining installation.

Filtration Stage: The helicoidal element generates a centrifugal effect of the water upon entry into the filter which moves the particulate away from the discs.

Backflushing Stage: The clean water from the auxiliary filter is introduced from the reverse direction through the filter element. This decompresses the stack of discs allowing the discs to separate and backwash effectively. The solids are expelled from the discs and evacuated through the backwash manifold. The filtration process then restarts with the compression of the discs.

The backwash is controlled by two valves and a controller, which integrate the filtration equipment.
**HOW TO CHOOSE RAIN BIRD HDF SERIES EQUIPMENT**

1. Determine the required filtration grade (micron).
2. Establish the quality of the water.
3. Calculate according to the following equation, the numbers of filters required.

   \[
   \text{Number of filters} = \frac{\text{Flow to filter in the installation}}{\text{Max. Flow per filter}}
   \]

**MATERIAL**

- **Manifolds**: High Density Polyethylene
- **Housing**: Polyamide reinforced with fiberglass
- **Filtering element**: PP grooved discs
- **Sealing element**: Nitrile rubber (NBR)

**ph=4 • Maximum pressure 145 psi / 10 bar • Maximum temperature 140°F / 60°C**

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**Table: Specifications**

<table>
<thead>
<tr>
<th>Model</th>
<th>N. of Filters</th>
<th>Manifold</th>
<th>Filtering Surface (cm²)</th>
<th>Dimensions (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDF-4</td>
<td>3</td>
<td>A</td>
<td>1024</td>
<td>122 x 40 x 72</td>
</tr>
<tr>
<td>HDF-4</td>
<td>4</td>
<td>B</td>
<td>1225</td>
<td>140 x 52 x 100</td>
</tr>
<tr>
<td>HDF-4</td>
<td>5</td>
<td>C</td>
<td>1500</td>
<td>162 x 65 x 150</td>
</tr>
<tr>
<td>HDF-4</td>
<td>6</td>
<td>D</td>
<td>1875</td>
<td>198 x 78 x 200</td>
</tr>
<tr>
<td>HDF-4</td>
<td>7</td>
<td>E</td>
<td>2240</td>
<td>237 x 92 x 250</td>
</tr>
<tr>
<td>HDF-4</td>
<td>8</td>
<td>F</td>
<td>2624</td>
<td>277 x 108 x 300</td>
</tr>
<tr>
<td>HDF-4</td>
<td>9</td>
<td>G</td>
<td>3040</td>
<td>321 x 121 x 350</td>
</tr>
<tr>
<td>HDF-4</td>
<td>10</td>
<td>H</td>
<td>3496</td>
<td>366 x 135 x 400</td>
</tr>
</tbody>
</table>

**Diagram:**

- **Model numbers follow the logic described below:**
  - **A = Drainage manifold**
  - **B = Inlet manifold**
  - **C = Outlet manifold**
  - **F = Flanged connection**
  - **10” HOPE MANIFOLD**

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**Rain Bird Corporation**
6991 E. Southpoint Road
Tucson, AZ 85736
Phone: (520) 741-6100
Fax: (520) 741-6522

**Rain Bird Technical Services**
(800) RAINBIRD (1-800-724-6247)
(U.S. and Canada)

**Rain Bird International, Inc.**
1000 West Sierra Madre Ave.
Azusa, CA 91702
Phone: (626) 963-9311
Fax: (626) 852-7343

**Rain Bird Corporation**
970 West Sierra Madre Avenue
Azusa, CA 91702
Phone: (626) 812-3400
Fax: (626) 812-3411

**Specification Hotline**
800-458-3005 (U.S. and Canada)

**www.rainbird.com**

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**NOTES:**

- Drainage manifolds included - Grooved connection.
- Rain Bird reserves the right to change the characteristics of these products without prior notice.