The Up-Flo® Filter is a multi-stage stormwater treatment system that combines pretreatment with fluidized bed filtration technology for superior filtration rates and media longevity. The Up-Flo® Filter optimizes the balance between high treatment performance and total cost of ownership.

**Applications**

- Removal of sediment, nutrients and metals from runoff
- Source control for redevelopment or new construction
- Treatment downstream of Water Quality Volume detention systems
- Sites operating under an industrial or multi-sector general permits
- Protection for groundwater recharge systems
- LEED® construction projects

**Advantages**

- Sedimentation, screening and filtration in one structure
- Upflow fluidized bed technology prevents clogging of filter media
- Includes an integral high flow bypass and trap for oils and trash
- Economical media bag replacement process requires neither heavy lifting equipment nor purchase of entirely new cartridge
- Independently verified through TARP field monitoring program

**How it Works**

1. **Pretreatment:** Oil and floatables rise to the surface while sediment settles in the sump.
2. **Screening:** Flow is directed upward through an angled screen to remove debris before entering the filter module.
3. **Filtration:** Water flows upwards through engineered media bags (see Fig. 2) before leaving the outlet module to be discharged through the outlet pipe.

During peak flows, excess water is siphoned through the yellow bypass hood which also prevents the escape of oil and trash. As water levels return to normal, captured pollutants are washed off media bags, preventing blinding and prolonging media life.

**Filter Module Components**

Each Filter Module contains two filter bags containing an engineered media mix designed to optimize pollutant removal by evenly spreading the flow across the entire surface area.

**System Components**

1. Inlet grate (pictured) or Inlet Pipe (not shown)
2. Precast Filtration Chamber
3. Filter Module
4. 4mm Screening
5. Bypass Hood/Siphon
6. Outlet Module with Drain Down Filter
7. Pollutant Storage Sump
8. Media bags

Fig. 1 The Up-Flo® Filter includes sedimentation, screening and filtration in a single device.

Fig. 2 Engineered media mixes, include (a) CPZ™ Mix for TSS, Nutrients, Metals and Organics removal or (b) Hydro Filter Sand for TSS, Particle-bound Nutrients, and Metals removal.
Up-Flo® Filter

Sizing & Design

The modular design of the Up-Flo® Filter ensures that project specific treatment goals are easily met.

Standard and typical dimensions listed below. Use our sizing calculator to determine appropriate site-specific sizing.

![Fig. 3 Key dimensions of the Up-Flo® Filter.](image)

**FREE Up-Flo® Filter Sizing Calculator for Engineers**

This simple tool will recommend the best filter size and arrangement based on site-specific data entered by the user.

Go to [hydro-int.com/filtersizing](http://hydro-int.com/filtersizing) to access the tool.

### Sizing & Design Table

<table>
<thead>
<tr>
<th>Chamber</th>
<th>Diameter (ft/m)</th>
<th>Maximum Modules (No.)</th>
<th>Height (ft/m)</th>
<th>Sump Depth (ft/m)</th>
<th>Inlet/Outlet Drop (ft/m)</th>
<th>Maximum Pipe Diameter (in/mm)</th>
<th>Operating Head (ft/m)</th>
<th>Maximum Treatment Flow (cfs/L/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round Manhole</td>
<td>4 / 1.2</td>
<td>6</td>
<td>7.5 / 2.29</td>
<td>3.0 / 0.91</td>
<td>3.8 / 0.24</td>
<td>15 / 375</td>
<td>2.5 / 0.76</td>
<td>0.056 cfs per module</td>
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<tr>
<td>Rectangular Vault</td>
<td>6 x 8 / 1.8 x 2.4</td>
<td>7</td>
<td>6.5 / 1.98</td>
<td>2.0 / 0.60</td>
<td>2.5 / 0.76</td>
<td>24 / 609</td>
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<td>0.056 cfs per module</td>
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<tr>
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<td>6 x 13 / 1.8 x 3.9</td>
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**Inspection & Maintenance**

Nobody maintains our systems better than we do. To ensure optimal, ongoing device performance, be sure to recommend Hydro International as a preferred service and maintenance provider to your clients.

Filter modules are situated along chamber walls enabling easy sump access for vactor trucks.

Our light-weight media bags can be manually replaced without removing the entire module.

Call 1 (800) 848-2706 to schedule an inspection and cleanout or learn more at [hydro-int.com/service](http://hydro-int.com/service)

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