



The **Hydroflow™ Oil Removal** media filter is the 8<sup>th</sup> generation in the evolution of these filters bringing major improvements to filtration technology as well as economic advantages.

The media scrubber device is designed with special clearances to allow media to pass through without damaging it. This device produces a high shear velocity, which is one of the major mechanisms for media clean-up. Positive clean-up of the media is 14 minutes long and the process ensures that all of the media participates in the clean-up preventing bed channeling.

After clean-up, **the media is “force set”** which prevents the media from stratifying and provides a homogeneous media bed. If the bed is allowed to settle by gravity, the small media particles will be on the top and the large particles will be on the bottom, thus all of the filtration will occur within the top few inches of the media bed. By “force setting”, the full bed volume can be used for dirt holding. This will provide longer run times and less scrubbing or backwash fluid, thereby reducing disposal cost.



- **Capable of removing more than 98% of oil contaminants and suspended solids from water stream.**
- **Specifically suited for filtering produced water used in the oil field (oil sands, refinery and off shore disposals).**
- **Efficient for use in the petrochemical, metal-working, and power generation industries.**

## Cost Benefits

Hydroflow is designed with the following cost saving features:

- The maximum recommended flux rate is 13.5 gpm/ft<sup>2</sup>, which allows for a design of smaller vessels at high flow rates and reduces space requirements.
- A very low scrubbing or backwash fluid volume which results in a substantial reduction in disposal cost and smaller tank requirements.
- The **ECO-H<sub>2</sub>Oil™** oil removal media is type 3 in military specifications MIL-G-5634A, which is very durable and has a high modulus elasticity under high shearing. By using this high quality media, the attrition rate is only 5% - 10% annually.
- The media retention screen is constructed of tubular screens wound around perforated pipe, rather than a flat screen. This allows for far simpler installations and less chance of plugging.

## Design Features

- **Does not require clean water** for filter cleanup, allowing the inlet water to be used which eliminates the need for clean water backwash storage tanks.
- **Simple automatic design** functions provide low operating, maintenance and training costs.
- **No gas or air scour required**, reducing potential for corrosion problems and providing a safer operating environment.
- **Positive retention of the media** in the vessel which prevents media loss and disposal problems.
- **The feed pump is never “dead headed”**. This eliminates pump damage, high pump wear and maintenance costs.
- **Upstream flow is not interrupted**. This lowers feed tank size and cost.
- **Eliminates compulsory chemicals** for the removal efficiency or filter cleanup, thereby reducing operation and maintenance cost.

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