VEOLIA

Dusenflo®
Gravity Filter

WATER TECHNOLOGIES

Dusenflo®

A final step towards achieving springlike water

Features

The Dusenflo® filter makes use of the most advanced known technology for achieving high rate filtration at minimum cost. The filter can be adapted to any water condition of turbidity, colour or odour. The Dusenflo® filter makes use of a number of well-proven techniques to achieve these objectives:

- An underdrain system equipped with specially designed nozzles which allow efficient and economical air and water backwashing of the filter;
- Filter media, uniform or mixed bed, selected and sized to suit specific raw and effluent conditions;
- Valving and controls to suit the customers needs, from simple manual controls to complete automation and remote monitoring.

Characteristics

- **Economy**

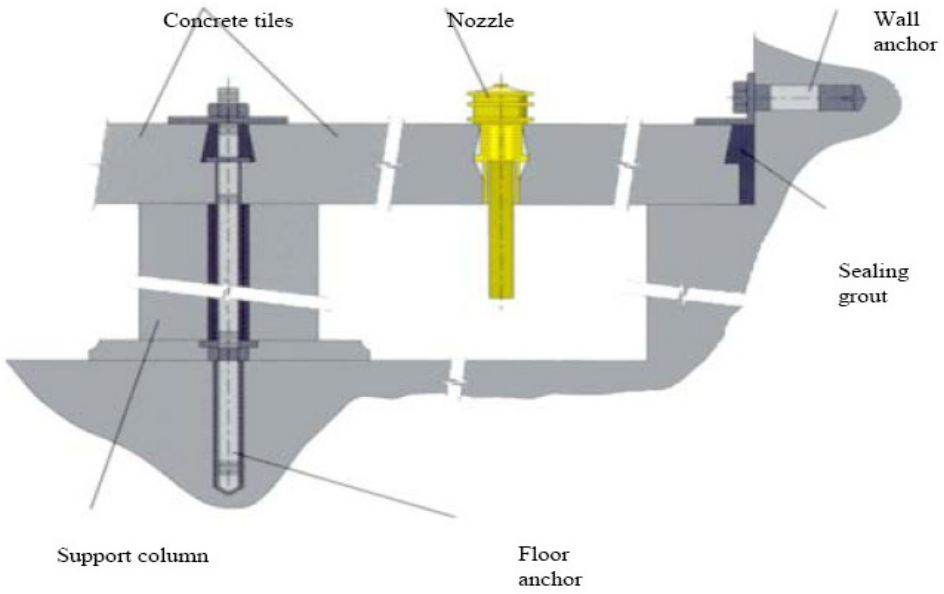
Backwashing with air and water, with the specially designed underdrain nozzles, ensures a perfectly clean filter media between cycles and reduces the required number of backwash cycles. This contributes to important savings in power and treated water consumption.

- **Adaptability**

A wide selection of media and underdrain nozzles are available and selected according to the specific treatment requirements of given water. The filter underdrain is designed to provide optimum hydraulic distribution across the filter surface while retaining the finest media particle.

- **Water Quality**

The Dusenflo® filter will consistently provide a high quality of filtered water for all water conditions. The filter is particularly effective at removing Giardia and Cryptosporidium cysts.



How does it work

The Dusenflo® filter can be furnished with a homogeneous media, normally sand, or with a mixed bed media such as sand, anthracite or activated carbon. Water percolates downwards through the media at a flow rate of up to 30m/h (12 usgpm/sq.ft.).

Uniform bed media:

The uniform bed media consists of fine sand having an effective size of 0.9 mm. With a homogeneous media, the filter retains particulate matter progressively in depth in the media mass instead of in the layers only. Cleaning a homogeneous bed filter requires air and water simultaneous backwashing.

Mixed bed media:

Mixed bed filter are normally used when a fine media is required. The mixed bed media normally consists of a layer of fine sand, which supports an upper layer of larger particles such as anthracite. To avoid carryover of anthracite during backwashing, air backwashing or fluidizing will alternate with water backwashing according to a defined flow rate and sequence.

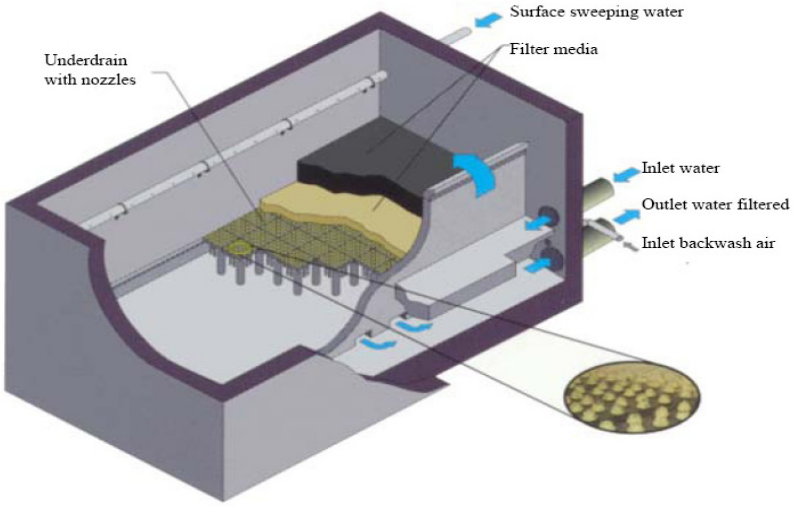
Underdrain system:

A specially designed underdrain system allows the introduction of air and water to fluidize and scour the complete filter bed. Backwash air is used to vigorously stir and vibrate the media particles while backwash water expands the filter bed. Individual grains of media collide with each other, resulting in a scrubbing action, which effectively detaches solids. Backwashing with air and water is made feasible through the use of specially designed nozzles evenly distributed over the underdrain surface.

Easy to install, the heavy-duty underdrain system lends itself well to upgrading and retrofitting filtration plants.

Underdrain nozzles:

The underdrain nozzles are specially designed to allow backwashing with air and water. The nozzles slots are sized to prevent the escape of the media; the nozzle head is attached to a tube slotted at its lower section through which air is introduced. Depending on the media that is used, nozzles can be provided with slot openings ranging between 0.2 and 2.0 mm.



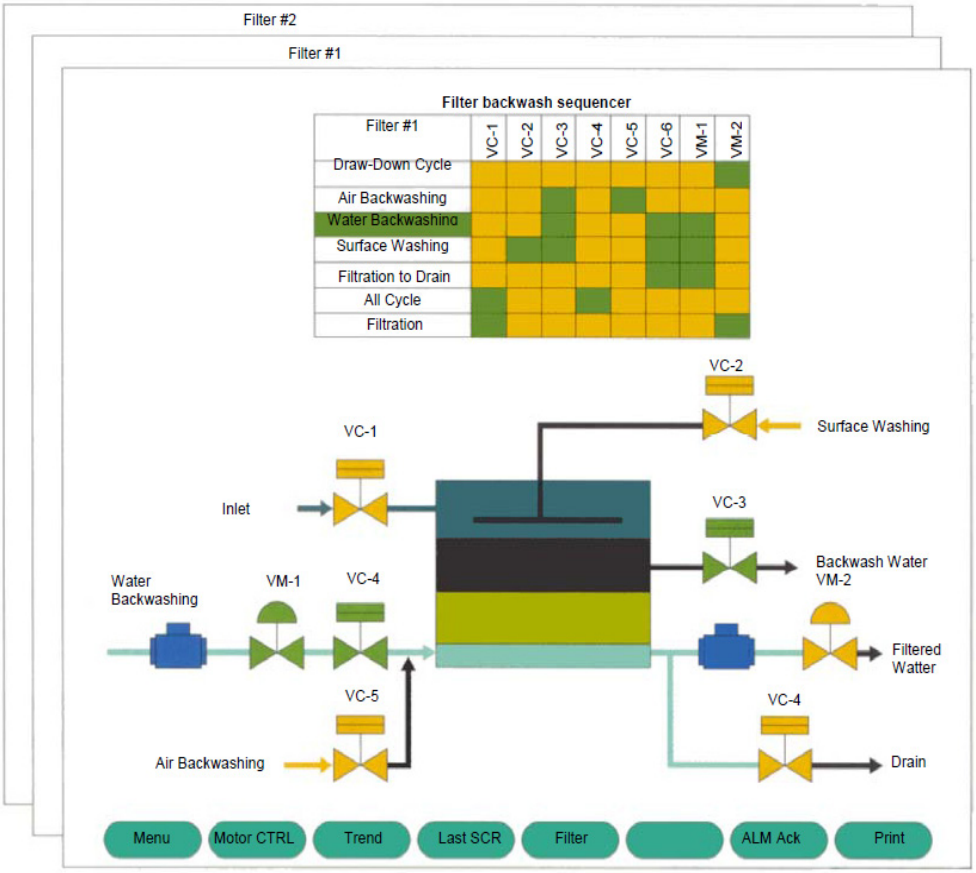
Surface washing:

During the backwash cycle, retained solids scoured from the media are directed to the backwash water gutter by a surface sweeping action of flushing water introduced from the clarifier. This feature eliminates the need for transversal collecting troughs.

Control Strategies

Veolia Water Technologies Canada Inc. provides a wide choice of controls to regulate filtration, cycle backwashing, measure turbidity, regulate chemical dosages, etc. From basic manual controls to the most sophisticated programmable logic controllers, John Meunier Inc. provides the appropriate controls for your system.

Coupled with the Actiflo® rapid settling process, the Dusenflo® filter completes a unique, very compact and highly effective potable water treatment train, which will provide consistent high quality, crystal clear water.



Resourcing the world

Veolia Water Technologies
2000 Argentia Road, Plaza IV, suite 430 • Mississauga, Ontario • L5N 1W1 Canada
tel: 905-286-4846 • fax: 905-286-0488
salescanada@veolia.com • www.veoliawatertechnologies.ca