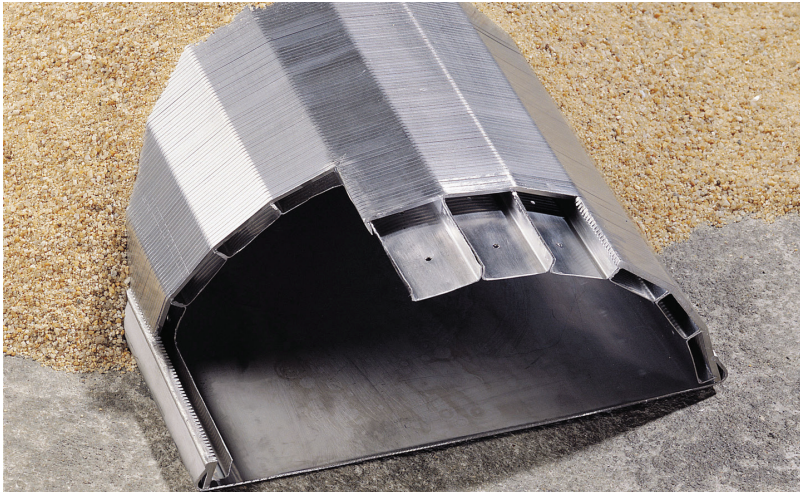


**Reliable Performance.
Sustainable Results.**

JOHNSON SCREENS® TRITON UNDERDRAINS™



FUNCTION

The Triton Underdrain™ system is made of Triton Underdrain™ filtering media support profiles that offer fine slots to suit the selected filter media specifications and U shaped perforated supports to allow flow control for both air and water.

The Triton Underdrain™ scalloped shaped element collects the filtered effluent and discharges it into a common flume which, in turn, routes the water out of the filter. During backwash mode, the flow is reversed and air & water enter the flume and are directed into the underdrain.

PRODUCT VARIATIONS

Standard slot width is 0.3mm (0.012 in.) but can be adjusted to suit individual needs.

TASK

Application as reliable and efficient underdrain system in gravity filters in order to retain the granular filter media in place and also to optimise the collection of filtered effluent and distribution of air & water during backwash mode.

SOLUTION

The Triton Underdrain™ system offered by Aqseptence Group is designed specifically for optimised collection and distribution with direct retention of the filtering media. It utilises world renowned Johnson Screens® Triton Underdrain™ screen technology and our wealth of filtration technology experience. With more than 25,000 m² of Triton Underdrain™ installed, the Triton Underdrain™ is the solution for all your filter beds needs.

BENEFITS

- Smooth, robust and plug free retention surface
- Improved backwash effectiveness
- Increased filter capacity
- Lower power consumption
- Elimination of filter bed upsets
- Reduction in major downtime costs
- Adaptable to any filter design
- Faster and easier installation

DESIGN SIZES

Triton Underdrain™ dimensions:

- Approximately 127 mm high x 260 mm wide x (5 in. high x 10 in. wide) custom length based on filter basin application
- Note: factory should be consulted if lateral exceeds 6 m (20 ft).

PERFORMANCE

Pressure drop across the underdrain:

- During backwash at 37 m³/h/m²: ±0.5 m (15 gpm/ft² ±1.64 ft)
- During filtration at 12.5 m³/h/m²: ± 0.05 m (5 gpm/ft²: ±0.164 ft)
- Application rates of 5-25 m³/h/m² (2 gpm/ft² - 10 gpm/ft²) depending on media type and size

MATERIALS

The Triton Underdrain™ system is available in:

- Stainless steel 304 / 304L; 316L
- PVC

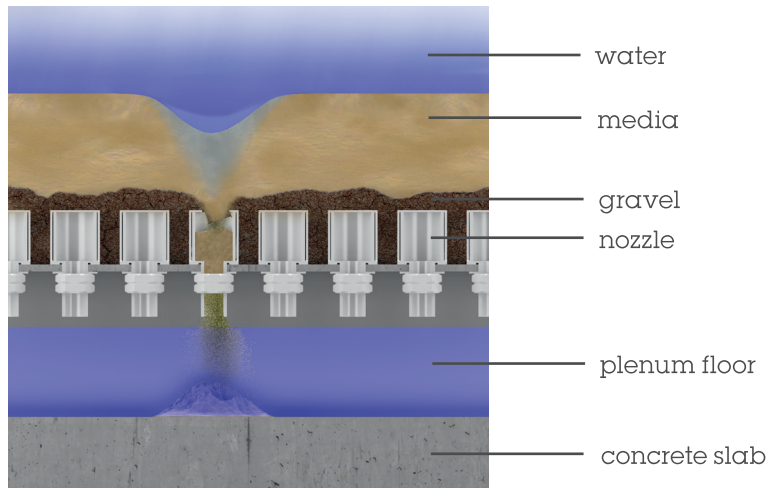
OPTIONS

- Either center or end feed connections can be supported.
- Air can be fed from the bottom or the top

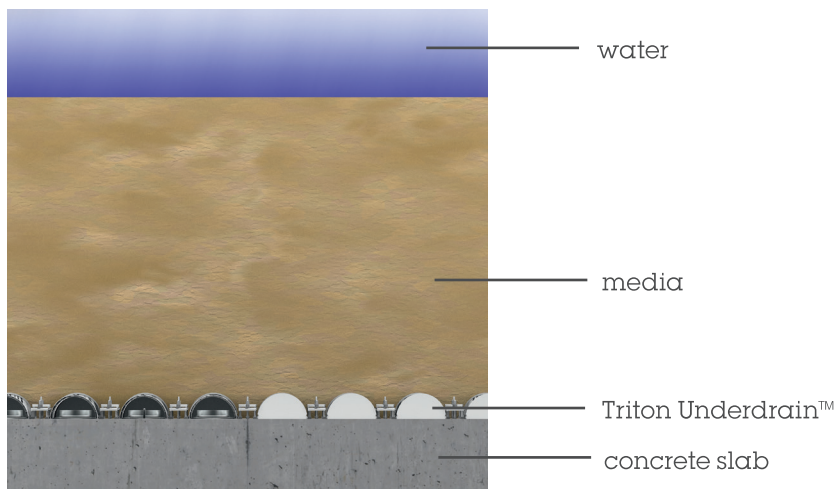
APPLICATIONS

Triton Underdrain™ can be used either in drinking water, tertiary filtration, industrial pre-treatment and desalination applications.

CONVENTIONAL SYSTEM



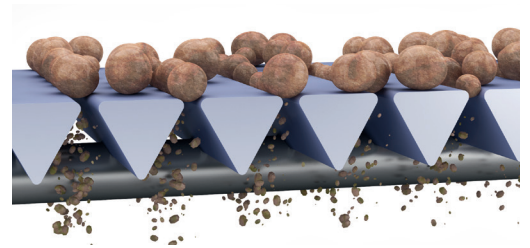
TRITON UNDERDRAIN™ SYSTEMS



UNIQUE FEATURES

Conventional systems require an intermediate layer of gravel between the treatment media and the underdrains. Vigorous backwashing can cause bed upset, reducing the hydraulic efficiency of the bed and allowing some media to migrate past the filter underdrain. Triton Underdrain™ systems retain the media directly, eliminating gravel as a potential problem.

Triton Underdrain™ Vee-Wire® media support surface has a larger open area, which provides plug-free and low headloss performance. The perforated slots of the louvered folded plate or block types with their centered plastic top underdrain systems do not provide the same area.

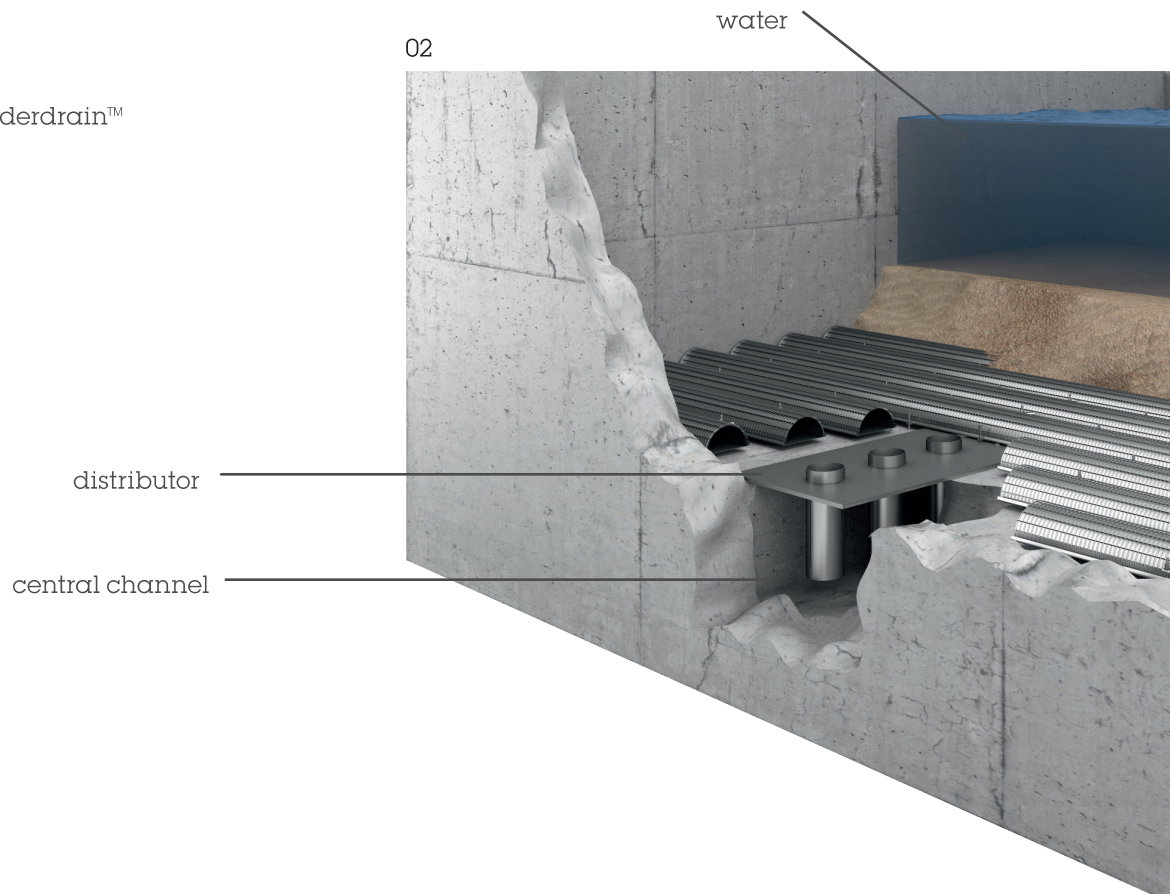


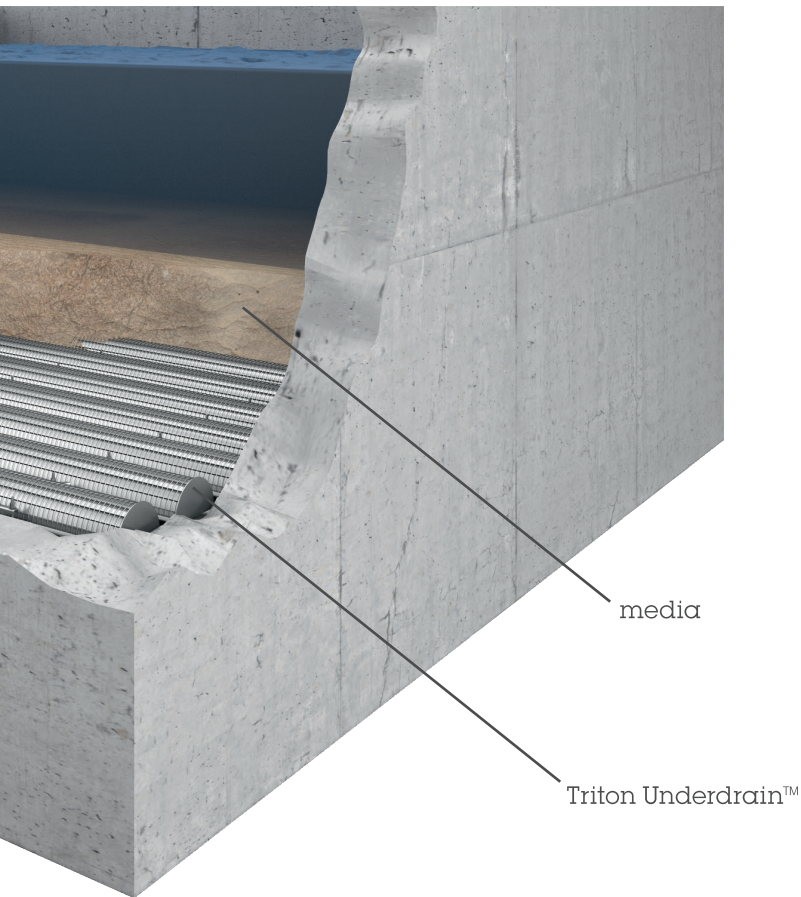
Vee-Wire® filter media retaining surface.

01 Installation of Triton Underdrain™

02 Schematic overview

03 Bubble Test





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