OPTIMIZED TERTIARY FILTRATION

WOVEN STAINLESS STEEL DISC FILTER PANELS

Evoqua's woven optimum tertiary mesh (OTM) filter panel utilizes 316L stainless steel threads to create a weave that improves solids collection and rejection in the Forty-X™ Disc Filter. The panel configuration includes a robust, molded structural frame and a pressure-assisted seal allowing the panels to sustain and operate at a higher headloss and provides higher throughput when compared to other woven polyester flat panel disc filter designs.

Woven stainless steel filter panels improve solids rejection.

INNOVATIVE DESIGN

The OTM disc filter panel is woven from 316L stainless steel threads which are attached to a polypropylene structural frame. The OTM media includes a porosity rating or percent open area of ≥ 60 % and a strength of 19-22 N/mm. Each panel is equipped with a molded EPDM edge gasket for a watertight seal between the OTM filter panel and the plastic filter support structure of the disc filter housing. The OTM panel is held in place with a molded plastic rim cap secured by conventional stainless steel hardware thereby allowing for easy maintenance and removal/replacement of the individual filter panels.

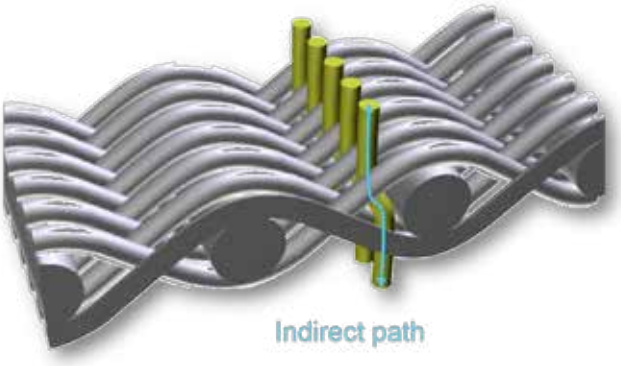
Advantages

- 316L stainless steel optimum tertiary mesh (OTM) weave for greater hydraulic throughput.
- Superior solids capture and holding capacity
- Less frequent backwash cycles resulting in energy reduction.
- Less routine chemical cleaning.
- Ideal for various filtration applications

Filter Design Data	
Filter Fabric	316L (Optimized Betamesh fabric)
Filter Disc Diameter	7.2 ft.
Filter Orientation	Inside-Out
Backwash Method	High Pressure Spray

PROVEN PERFORMANCE

The OTM woven stainless steel panel design has been engineered for municipal and industrial wastewater applications to maximize solids rejection and reduce backwash. The indirect flow through path of the OTM weave has the ability to hold more solids and reduces the chance of panel binding.



Extensive factory and field testing has proven the effectiveness and superior performance of the OTM stainless steel panel design. The chart below shows Turbidity testing results with flat panel polyester panels and Evoqua's OTM woven stainless steel panel design. This testing completed in conjunction with Emory University's wastewater treatment plant in September 2016 was for an application with very fine particulant.

Media Type	Filtered NTU
Baseline (No Media)	8.34
10µ Polyester	5.16
15µ Polyester	3.28
OTM 2 Woven Stainless Steel	1.55

** The OTM 2 woven stainless steel panel includes fabric for difficult fouling applications and for clean water.

APPLICATION EXPERIENCE

Evoqua's OTM panel is an ideal retrofit option for the Forty-X™ Disc Filter double plain weave pleated panels operating in harsh conditions. The OTM panel offers an option for municipal and industrial filtration applications that has not previously existed in barrier media filtration. The stainless steel OTM weave is dependable and provides a strong barrier for upset conditions which might involve organic and inorganic solids. The OTM filter panel is included as a standard feature in Evoqua's Forty-X™ Disc Filter Armor series design allowing for greater loading per square foot and fewer backwash cycles.

ABOUT US

Evoqua's DAVCO™ product line is dedicated to the advancement in disc filtration through ongoing research and development. Our industry leading expertise in wastewater filtration equipment design, steel fabrication, and field installation/construction services provide a single-source approach to municipal and industrial projects.

Learn more about Evoqua's Forty-X Disc Filtration systems at www.evoqua.com/forty-x.

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