



eVOQUA
WATER TECHNOLOGIES



FORTY-X™ DISC FILTER ARMOR LITE SERIES

ARMORED DISC FILTRATION DEFENDS AGAINST INFLUENT CHALLENGES

The Forty-X™ Disc Filter Armor Lite series is a high rate filtration device that utilizes an integrated pre-screen and stainless steel panel, designed to accommodate high solids loading capacities and greater hydraulic throughput all within a small, compact footprint. The design is plug-and-play and ideal for Primary Filtration, Stormwater Flows (CSO), and tertiary filtration applications.

Evoqua's woven optimum tertiary mesh (OTM) filter panel utilizes 316L stainless steel threads to create a weave that improves solids collection and rejection. The panel frame is constructed of 304 stainless steel and held in place by an innovative clamp design. A robust design of the filter media allows 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.

Evoqua's Forty-X Disc Filter Armor Lite Filter combines the technology of outside-in and inside-out filtration into a single PLC controlled unit. Influent water flows through the prescreen (outside-in) into the disc filter panels (inside-out). This innovative combination of two filtration technologies into one unit provides an effective and robust option for those difficult applications. The Forty-X Disc Filter Armor Lite series uses one common backwash pump and level sensor for backwashing both the pre-screen and disc filter panels. The captured solids are backwashed into a reject trough using this positive pressure spray cleaning system. The level sensor is located in the influent channel and automatically controls the backwash cycle. Both the pre-screen and disc filter continue to filter during backwash. The unique construction of the SS panels allow greater loadings per square foot and as a result less backwash cycles.



The plug and play design of the Forty-X™ Disc Filter Armor Lite series is a perfect solution for Primary Filtration, StormFlows (CSO), and Tertiary Filtration applications.

Features

- Small, compact footprint.
- The pre-screen is designed to accommodate high solids loading capacities.
- 316 stainless steel flat media panel for greater hydraulic throughput.
- Modular design offers flexibility and expandability.
- Wind safe sliding arch covers for easy access and maintenance.
- Easy to operate and maintain.
- Direct Drive
- Stainless steel tank or stainless steel frame designs.
- Automated Chemical CIP System
- Heavy Solids/Grit handling capabilities

Chemical CIP provisions for Automated CIP System

Independent Level Sensors

Grit & Heavy Solids Handling Flush Port

All SS Frame and Panel Design

Backwash and Chemical Cleaning Spray System

The woven stainless steel media is ultrasonically bonded to the stainless steel flat bar frame. The OTM weave improves solids collection and rejection. The simple clamp in design makes changing filters quick and easy.

The Forty-X™ Disc Filter Armor Lite offers a modular design that is flexibility and dependable for municipal and industrial filtration applications. The pre-screen is like “Armor” for the disc filter, providing initial filtration of large organic and inorganic materials.



Typical Performance

Filtrate TSS	< 5 mg/l
Filtrate Turbidity	< 2 NTU

Pre-Screen Design Data

Filter Type	Wedgewire
Drum Diameter	14 in.
Flow Orientation	Outside-In
Rotational Speed	1-3 RPM
Backwash Method	High Pressure Spray and Scraper Blade

Filter Design Data

Filter Fabric	OTM (Optimized 316 stainless steel)
Filter Disc Diameter	4 ft.
Filter Orientation	Inside-Out
Backwash Method	High Pressure Spray

Filter Drive Unit

Drive motor (per unit)	.5-2.0 hp
Drive Assembly	Direct Drive

Backwash Cleaning System

Backwash Nozzles (per disc)	5
Backwash Pump	.75-5 hp
Nominal backwash pressure	100 psi



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May be covered by one or more of the following patents 7,597,805; 7,972,508; 8,118,175; 8,409,436; 8,801,929; 8,808,543; 8,961,784; and other international and pending patents.

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