

Forty-X™ Disc Filter Technical Specifications

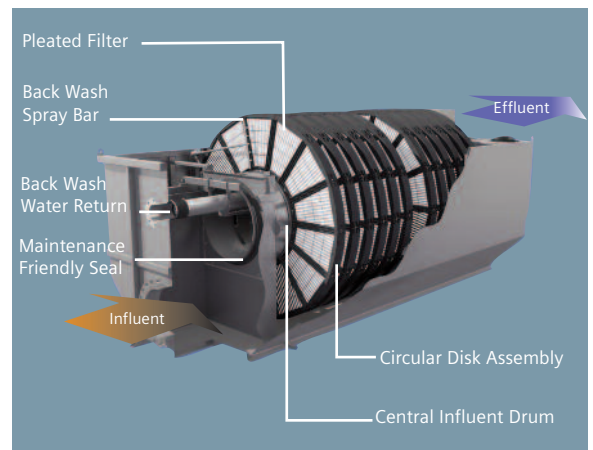
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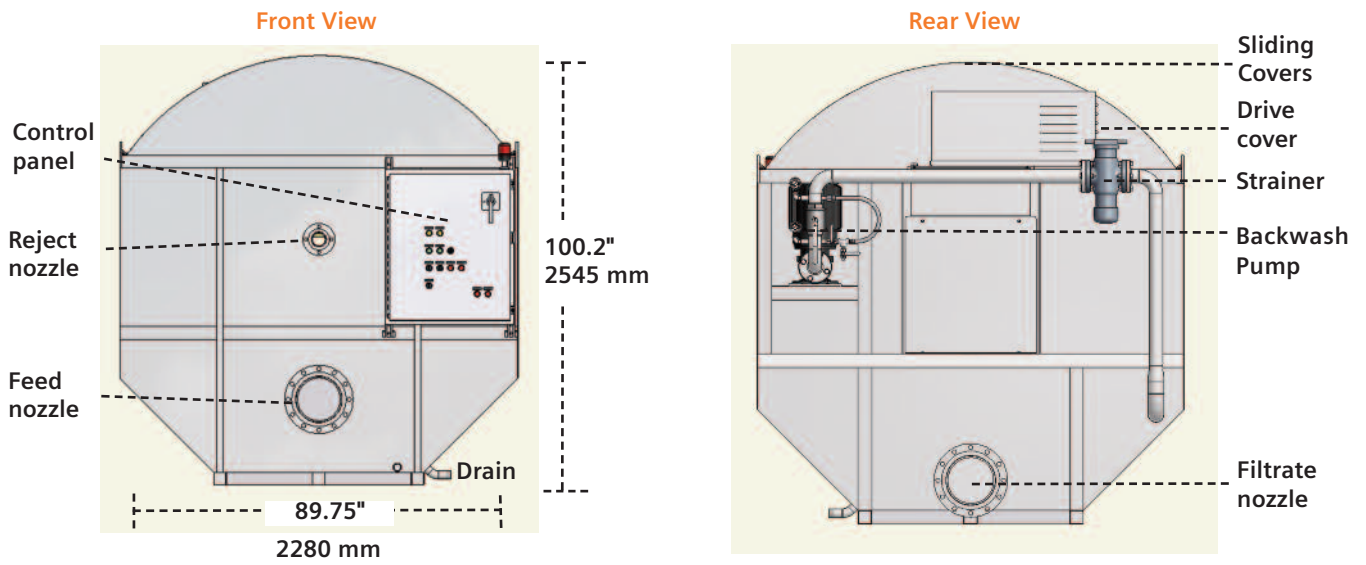
The Forty-X™ Disc Filter is a high-rate filtration device that utilizes an innovative woven polyester pleated filter panel design. The pleated filter panel provides significantly more filtration area than any other woven media flat panel designs and includes a 10 micron absolute media rating. The pleated panel configuration is stronger than comparable designs and includes a robust pressure-assisted seal that allows the panel to sustain and operate at a higher headloss of any other flat panel disc filter. Our filter panels are also housed in a trash tolerant filter panel housing, which assures the unhindered flow of water between panels and rejects plastics, algae clumps or other floatables.

The Forty-X™ Disc Filter inside out filtration design allows the water to flow into the center drum and then out through the disc filters capturing solids on the inside surface of the media. This filtration characteristic eliminates the need for a separate system for handling floating material and settling sludge. The captured solids are also backwashed into a reject trough using a one-pass spray cleaning system. A backwash cycle is automatically initiated by a level probe in the influent channel with filtration continuing during backwash. The reinforced pleated panels perform with a “pressure-assisted” seal to allow operation at a higher headloss vs. conventional designs. With a higher headloss, the number of backwash cycles are reduced and throughput is increased.

The modular design offers flexibility for a broad range of flows and applications including: municipal tertiary filtration, water reuse and process water filtration. With more filtration area, higher operational headloss capabilities, water pressure assisted seals and trash tolerant filter panel housings, the Forty-X™ Disc Filter is able to sustain and produce a high amount of filtrate in a small footprint.

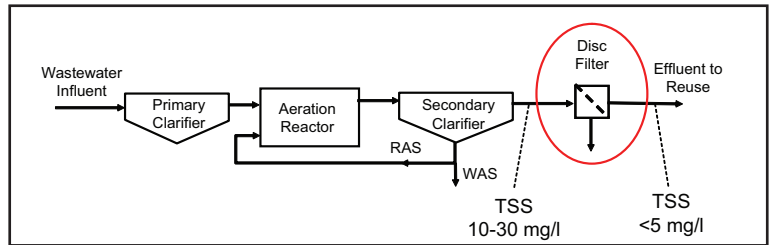
Typical Performance		
	English units	Metric units
Filtrate TSS	< 5 mg/l	
Filter Design Data		
Filter Pore size	10 um	
Filter Cloth Material	Polyester	
Filter Disc Diameter	7.2 ft	2.2 m
Filter rotational speed (rpm)	Variable	
Materials of construction (disc)	ABS plastic and polyester cloth	
Filter Drive Unit		
Drive motor (per unit)	1.5 HP	1.1 kW
Drive motor service Factor	1.5	
Drive Assembly	Helical wormgear with chain and sprocket	
Backwash Cleaning System		
No. of Backwash Nozzles (per disc)	22	
No. of Backwash Pump	1	
Nominal backwash pressure	112 psi	7.7 bars





Features

- Small footprint
- Innovated pleated panel filter design provides more filtration area than existing woven disc filters
- Woven polyester media with absolute micron rating
- Trash tolerant filter panel housing
- Modular design offers flexibility and expandability of unit
- Suitable for retrofit of existing conventional filters
- Wind safe sliding arch covers for easy access and maintenance
- Easy to operate and maintain
- Non-metallic chain / sprocket
- Stainless steel tank or stainless steel frame designs



Typical flow diagram for wastewater treatment

Forty X Model	1403		1406		1412		1418		1424	
Maximum Number of Discs per unit	3		6		12		18		24	
True Cloth Filtration Area	135 ft ²	13 m ²	270 ft ²	25 m ²	538 ft ²	50 m ²	808 ft ²	75 m ²	1077 ft ²	100 m ²
Influent & Effluent Flange Size	10 in	250 mm	14 in	350 mm	20 in	500 mm	24 in	600 mm	30 in	700 mm
Backwash Pump Power HP @ 60 Hz	5 HP	3.7 kW	10 HP	5.6 kW	15 HP	11.2 kW	25 HP	14.9 kW	30 HP	22.4 kW
Typical Reject	0.5 - 2 % of Flow									
Number of Spraybars	1		1		2		3		4	
Dimensions										
Tank Length	122 in	3099 mm	149 in	3785 mm	213 in	5410 mm	289 in	7341 mm	353 in	8966 mm
Tank Width	89.75 in	2280 mm	89.75 in	2280 mm	89.75 in	2280 mm	89.75 in	2280 mm	89.75 in	2280 mm
Tank Height	100.2 in	2545 mm	100.2 in	2545 mm	100.2 in	2545 mm	100.2 in	2545 mm	100.2 in	2545 mm
Frame Length - Concrete unit	122 in	3099 mm	149 in	3785 mm	213 in	5410 mm	277 in	7036 mm	341 in	8661 mm

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