



Hydro-Dyne Engineering Membrane Screening System

Superior Screening Systems that Address MBR Challenges

Wastewater Membrane Bioreactor Systems (MBRs) produce high-quality effluent in a smaller footprint. However, they must be properly protected to operate correctly and minimize any damage to the membranes.

The best way to protect your MBR investment is by screening out harmful inorganic debris and fibrous materials before they can damage the membranes. A properly designed screening system can reduce maintenance costs, prolong the life of your MBR and eliminate the risk of significant replacement costs associated with voiding the membrane warranty.

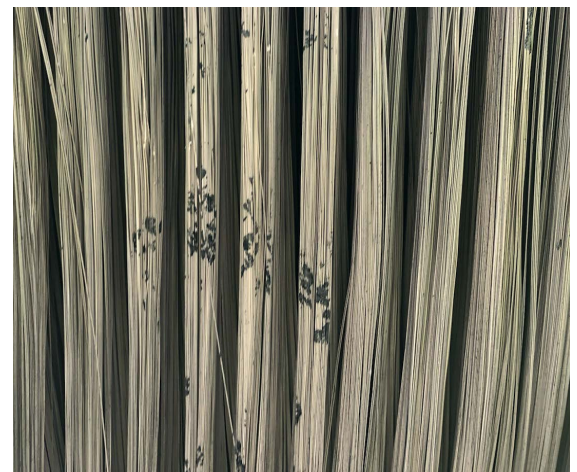
Drum screens are widely accepted for MBR screening. They are efficient and self-contained, and do an effective job in screening out solids. However, they also have several drawbacks resulting in a system which is difficult and costly, to design, operate and maintain:

- Channel design and operational flexibility to handle varied flows are limited as drum screens require wide and shallow channels
- Restricted capacity per screen will require more channels, larger footprint, and the need to open/close channels to meet high flow demands
- Wide channels make it difficult to maintain channel velocities at low flows to avoid grit settling out in front of screens
- Higher headloss and potential for blinding

Center Flow Screens Designed for Maximum MBR Protection

Hydro-Dyne Engineering's Great White Shark center flow band screens offer improved performance over both drum screens and other competing center flow screens. Like other center flow screens, Hydro-Dyne screens offer higher flow rates and a smaller footprint. However, our screens are engineered to overcome the limitations of similar screen types from other manufacturers:

- Patented sealing design prevents debris leakage, thus better protecting downstream equipment
- Greatly reduced maintenance and operations costs
- Each screen is custom engineered, with focus on incorporating expected coarse screen performance on screen sizing
- No submerged sprockets, bushings, or bearings – all maintenance occurs above the channel



Debris-free fiber bundle after one year of operation

To learn more visit: www.hydro-dyne.com
sales@hydro-dyne.com | +1 (813) 818-0777

Coarse Screens | Fine Screens | Screenings Handling | Grit Removal Equipment

Designed & Manufactured in the USA 
 4750 118th Avenue North Clearwater, FL 33762

ISO 9001:2015 Certified

HYDRO-DYNE[®]
 ENGINEERING
 Designed to Protect. Built to Perform.[™]

Hydro-Dyne Great White Shark Center Flow Screen Features

- Highest evaluated 2mm perforated plate grid Screening Capture Ratio (SCR) – 93.25% independently evaluated at UKWIR testing facility and 95.3% independently evaluated at Canton, OH MBR facility
- Uninterrupted seal between grid and frame, held to <0.5mm tolerance via labyrinth design
- Entire grid and drive design maintains 0.5mm tolerance between grid panels
- Elongated drum design ensures no screen bypass
- Virgin UHMWPE Guide Links do not stretch or require screen tension adjustment
- Perforated panel or woven mesh panels, with grid openings as low as 0.5mm, maintain tolerances for life
- All maintenance above channel
- Dual spray wash unloading
- Fractional hp direct drive uses no chains or sprockets
- Integrated screening handling
- Proprietary grid design supports panels every 3" (75mm) for high differential and impact resistance, allowing operators to change grid components on-site without modifying equipment



Available sizes

width	depth	height
23" - 74"	15" - 108"	5' - 60'+

grid opening range

0.5mm to 3mm prior to membranes
up to 25 mm for coarse screening applications

flow capacity

0.1MGD to 100+MGD

grid types

Stainless steel wire mesh
Stainless steel perforated panel
UHMWPE perforated panel

Contact Hydro-Dyne for reference MBR installations for 0.1MGD to 88 MGD.

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