SELF-CLEANING CYLINDER SCREENS

Customizable Submerged Screen Solutions

INTAKE SCREENS, INC.

ISI cylinder screens are a rugged and reliable self-cleaning screen solution for challenging intake conditions. Designed to provide maximum screen surface area for a given project footprint, cylinder screens are highly customizable to suit the needs of your site. Customizations include cylinder size, slot size, configuration (T screen and drum screen), orientation (vertical and horizontal), drive type, and fixed and retrievable options.

The mechanical brushing action prevents debris buildup, sedimentation, biofouling, and increased head loss at the screen. ISI cylinder screens are a proven technology for irrigation, municipal, and industrial water supplies.

HOW IT WORKS

The screen unit consists of cylindrical-shaped wedgewire screen, an external and internal brush cleaning system, flow baffle, and brush drive assembly with controls. Gravity, siphon, or pumping is used to convey water through the screen.

Brush-cleaning is achieved by rotating the screen cylinder between the internal and external brushes. Frequency and duration of cleaning is programmed to meet site conditions using the provided control panel (excluding turbine drive screens).

The screen is sized to achieve low approach and through-screen velocities to meet head loss and fish protection requirements and minimize debris accumulation.

Screen configurations can be customized to include flange mounts, steel manifolds, and retrieval track systems. Retrieval track systems can be designed to include an electric hoist system, trash racks, isolation gates, and potentially other features.

FEATURES

Flow rates ranging from 2 cfs (898 gpm; 1.3 MGD; 204 m_3/h) for a single drum screen up to more than 200 cfs (89,766 gpm; 129.3 MGD; 20,388 m^3/h) from a single T screen with the opportunity to have multiple screens at a site.

Screen slot sizes ranging from 0.5 to 9-mm.

Brush-cleaning drive types to best suit site conditions: electric, hydraulic, and turbine.

Screen materials including Type 304 and 316 stainless steel with custom materials available (e.g., 2507 super duplex stainless steel).

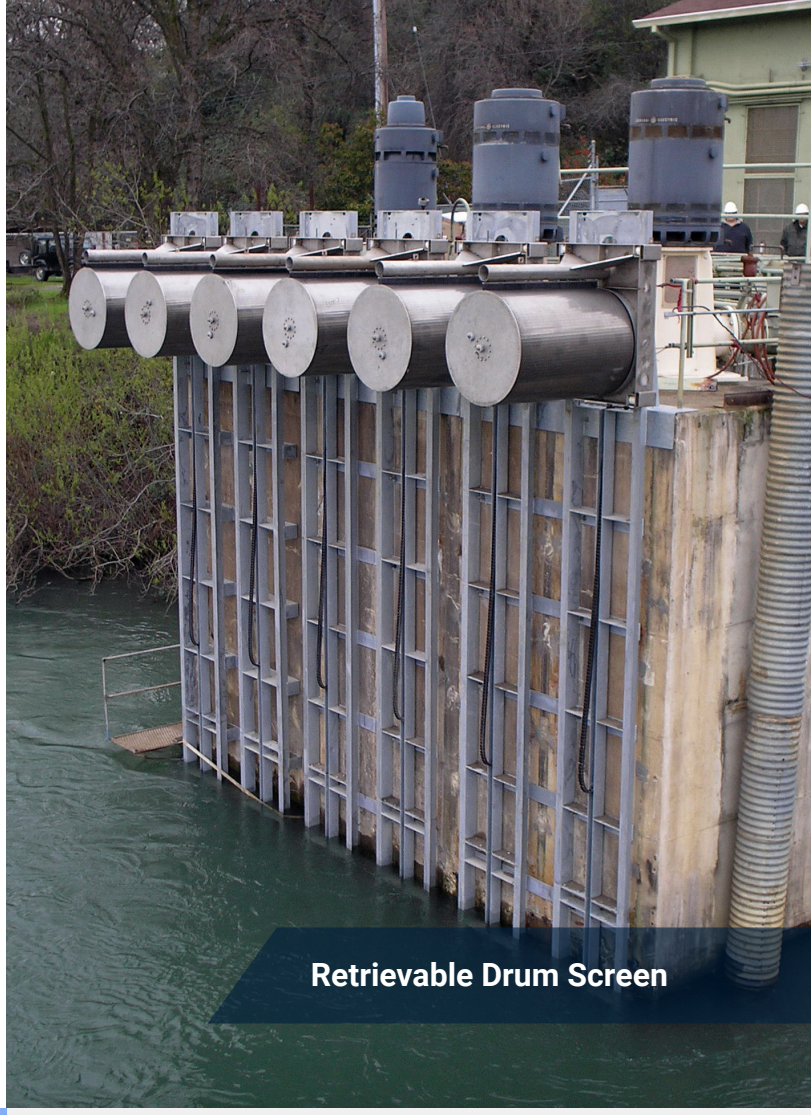
Sized to be compliant with state, federal, and international fish protection requirements.

Internal flow baffle distributes flow evenly across the screen surface.

Optional retrieval track systems to support inspection and maintenance or to raise the screens when not in service.

Control panel to match customer equipment and remote monitoring and control needs.

Bar racks, isolation gates, antifouling coatings, and debris jetting systems provided as optional equipment.



Retrievable Drum Screen

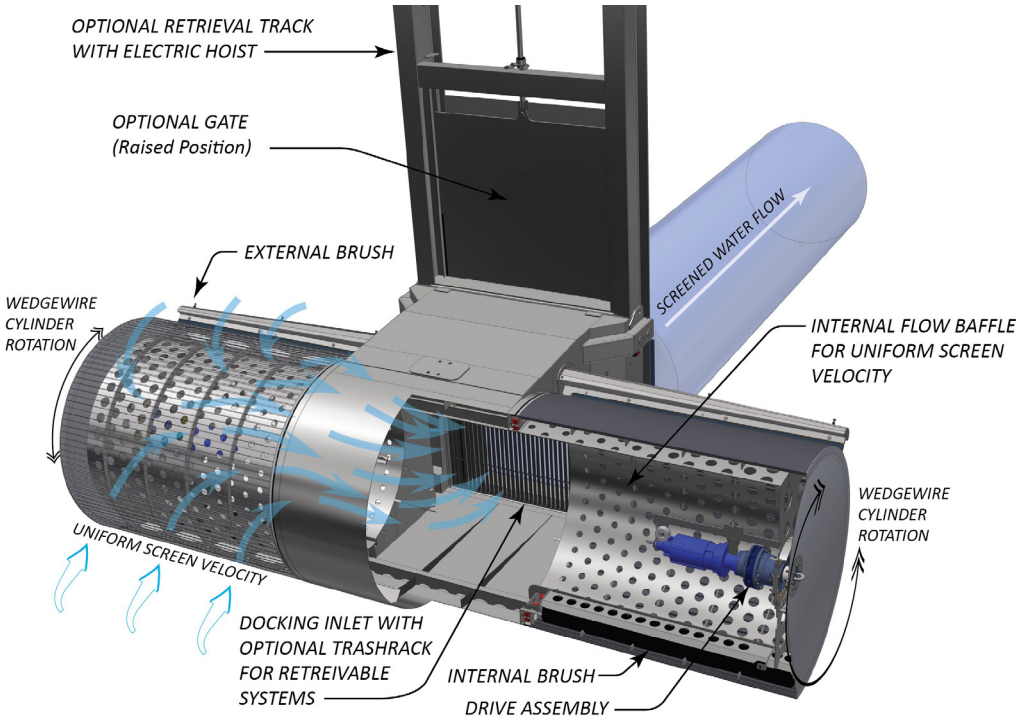
Retrievable T Screen

BENEFITS

- **Ideal solution for** rivers and streams, lakes, estuaries, and marine waters including areas with high biofouling, silty conditions, and heavy debris loads.
- **Designed to exceed** fish and marine mammal protection requirements
- **Protects pump** and other downstream equipment from clogging debris
- **Low head loss**, low maintenance, and minimal power input
- **Highly customizable** to site conditions

8417 River Road | Sacramento, California 95832 | (916) 665-2727 | info@isi-screens.com

SCREEN DESIGN & OPERATION



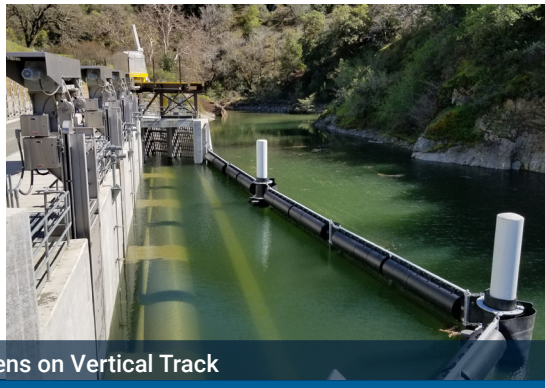

Fixed Vertical Drum Screens


Retrievable Drum Screens on Vertical Track


Retrievable T Screens on Incline Track


Fixed Horizontal Drum Screen


Retrievable T Screens on Vertical Track



DESIGN AND OPERATION SUPPORT

Working with ISI means access to over 25 years of experience in intake screen design and fabrication including design-build project delivery. Detailed documentation on operation and maintenance provided with all ISI screens. On-site installation guidance and operator training available.

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