



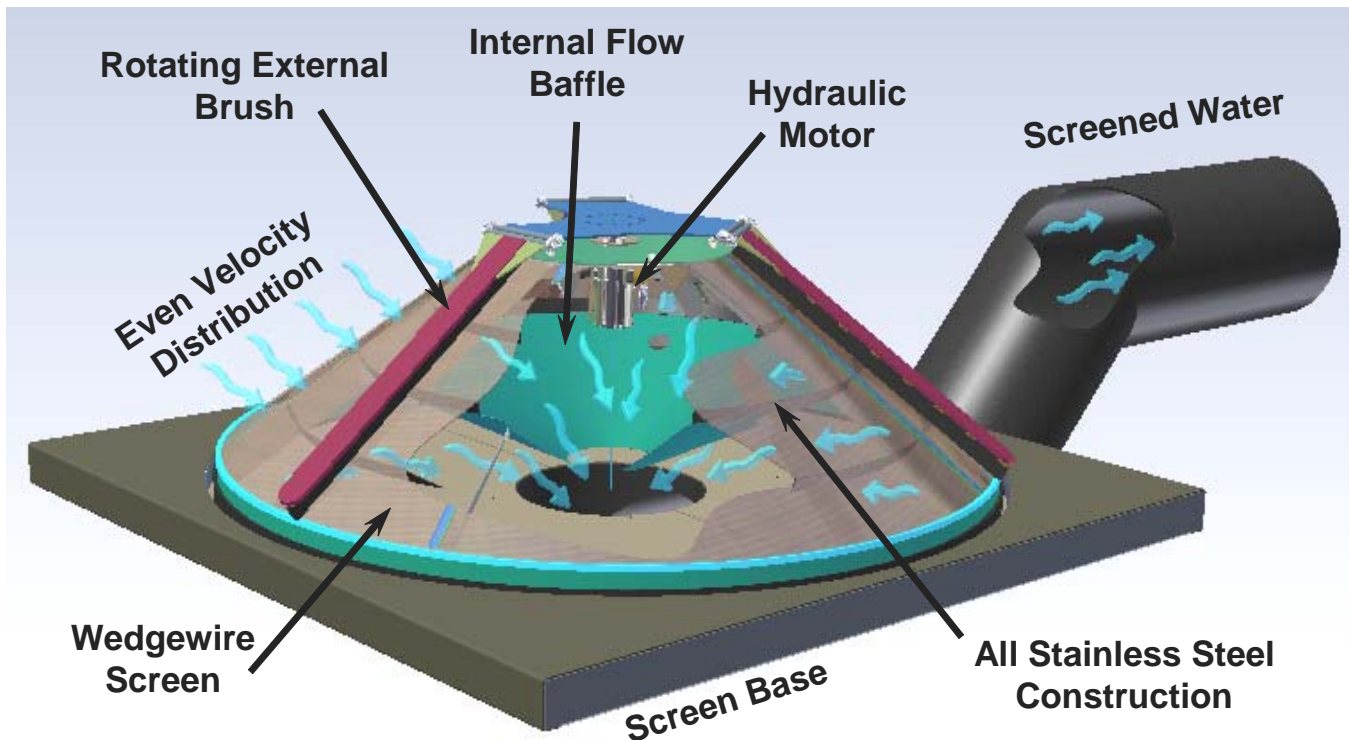
# Intake Screens, Inc.

Since 1996

## ISI Cone Screen for Shallow Problematic Intakes

(Patent Nos. 5,851,087 and 6,089,790)

- Rotating Brush Arms Keep Screen and Base Free of Silt and Debris Build-up
- External Brushing is a Durable and Proven Technology
- Minimizes Headloss and Clogging Even with Fine-Mesh Openings
- Complies with Regulatory Criteria



### FEATURES:

- ◆ Powerful brushing action and brush rake prevents biofouling and debris plugging
- ◆ Wedgewire screen designed for fish protection, filtration, and hydraulic loads
- ◆ Cone provides large screen area in shallow water applications (small footprint)
- ◆ Internal baffle distributes flow evenly across the screen surface
- ◆ Easy installation and removal
- ◆ Marine-duty hydraulic motor rotates brushes in BOTH directions
- ◆ Hydraulic system requires minimal input power — brush system can operate on standard line voltage, solar power, or propeller-drive
- ◆ Base diameters from 5.5 to 12 feet — adaptable to concrete or steel base structure
- ◆ Remote monitoring and control system—SCADA interface
- ◆ Design services and installation assistance available

# Applications for Shallow, Estuarine, Silty, and/or Backwater Areas with Heavy Debris Loads



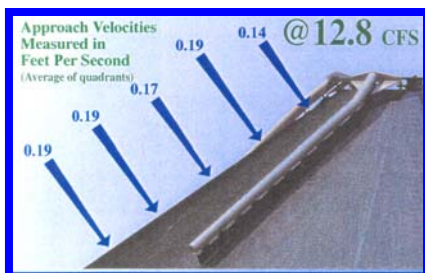
**Above:** Screen can be adapted to fit on existing intakes in shallow areas or be made retrievable.



**Above:** Screen installed at shallow impoundment behind inflatable dam.

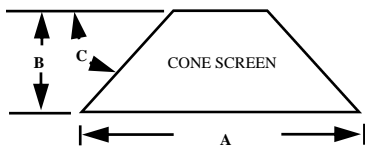


**Above:** Screens are built to operate in extreme conditions with heavy loads.



**Left:** Screens have been field tested by the National Marine Fisheries Service, California DWR, and UC Davis.

**Right:** Remote sites can be operated using solar power or by using a propeller-drive system as shown. Screen bases can be custom built to fit most any application.



## Cone Screen Specifications

| Model       | Unit Dimensions A - B - C | Unit Weight | Screen Surface Area                           | Allowable Flow Rates *                |   |  |
|-------------|---------------------------|-------------|---|---------------------------------------|---|--|
|             |                           |             |   | Slot Velocity @ 0.5 ft/sec (0.08 m/s) | Approach Velocity @ 0.2 ft/sec (0.06 m/s) | Approach Velocity @ 0.33 ft/sec (0.10 m/s) |
| ISI C66-18  | 66" - 18" - 35°           | 430 lbs.    | 26.8 ft <sup>2</sup> (2.49 m <sup>2</sup> )   | 6.7 cfs (190 l/s)                     | 5.4 cfs (153 l/s)                         | 8.8 cfs (249 l/s)                          |
| ISI C78-21  | 78" - 21" - 35°           | 650 lbs.    | 38.5 ft <sup>2</sup> (3.58 m <sup>2</sup> )   | 9.6 cfs (272 l/s)                     | 7.7 cfs (218 l/s)                         | 12.7 cfs (360 l/s)                         |
| ISI C96-24  | 96" - 24" - 35°           | 980 lbs.    | 54.8 ft <sup>2</sup> (5.09 m <sup>2</sup> )   | 13.7 cfs (388 l/s)                    | 11.0 cfs (311 l/s)                        | 18.1 cfs (512 l/s)                         |
| ISI C120-32 | 120" - 32" - 35°          | 1,170 lbs.  | 89.0 ft <sup>2</sup> (8.26 m <sup>2</sup> )   | 22.3 cfs (631 l/s)                    | 17.1 cfs (484 l/s)                        | 29.4 cfs (833 l/s)                         |
| ISI C144-41 | 144" - 41" - 35°          | 1,500 lbs.  | 131.9 ft <sup>2</sup> (12.25 m <sup>2</sup> ) | 32.7 cfs (926 l/s)                    | 26.2 cfs (742 l/s)                        | 43.2 cfs (1223 l/s)                        |

- \* 1) Allowable flows based on using wedgewire screens with 50% open area. Typical screen with 1.75mm wire is shown below;
- 2) If cone is not fully submerged, allowable flow rates will be reduced;
- 3) Maximum recommended slot velocity is 0.5 fps for most applications subject to heavy debris;
- 4) Many fisheries agencies use a maximum approach velocity criteria instead of slot velocity. Approach Velocity is the component of velocity perpendicular to the screen surface and measured 3 inches away. A minimum open area is generally specified;
- 5) Regulatory design criteria varies and typically depends on fish protection needs. Call for information on slot sizes below 1mm.



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