ISI Intake Screens, Inc.

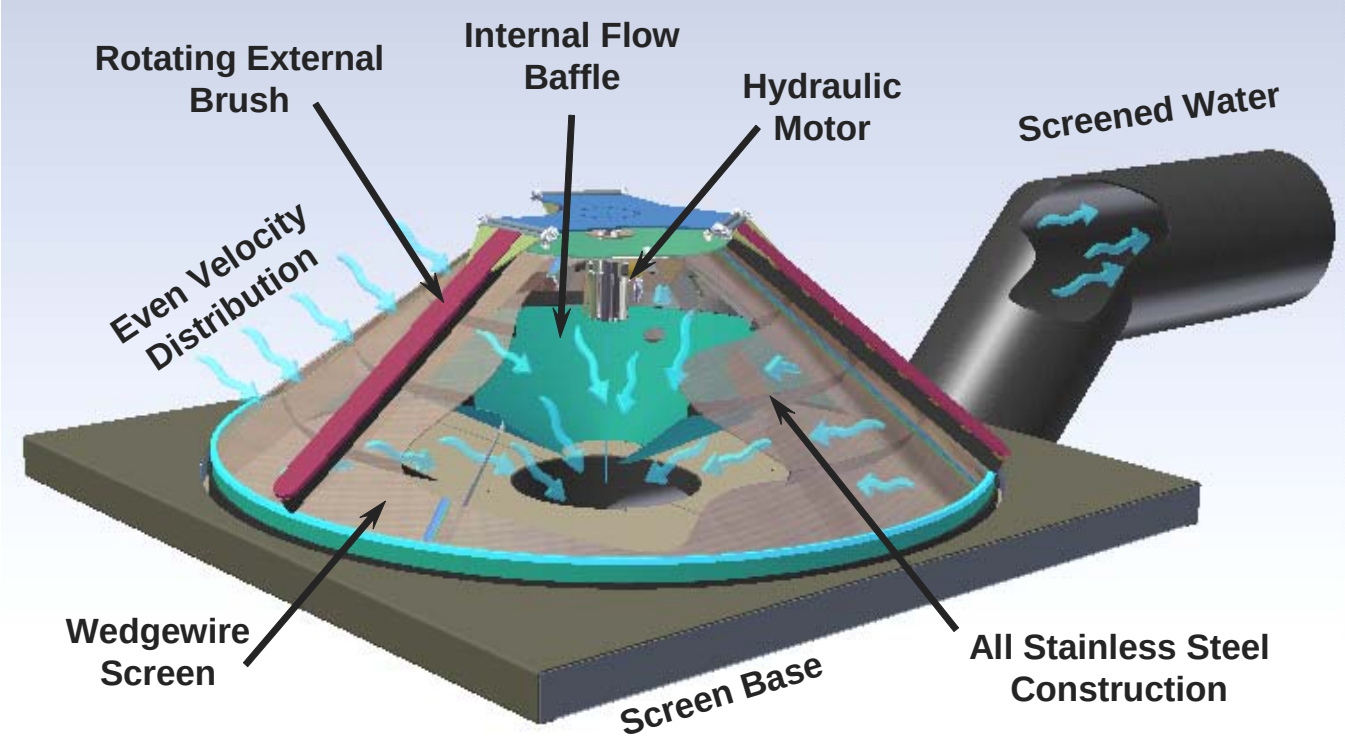
Since 1996

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:

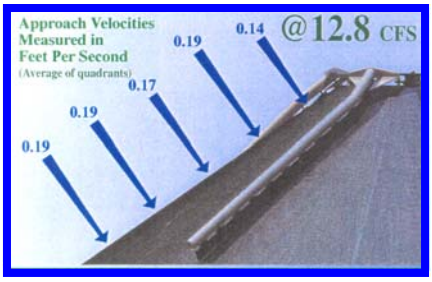
- **Powerful brushing action and brush rake prevents biofouling and debris plugging**
- **Wedgewire screen designed for fish protection, filtration, and hydraulic loads**
- **Cone provides large screen area in shallow water applications (small footprint)**
- **Internal baffle distributes flow evenly 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.

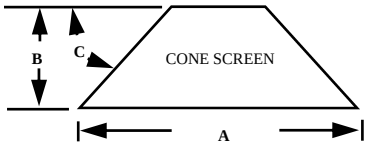
Above: Screen installed at shallow impoundment behind inflatable dam.

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 ft²** (2.49 m²)	**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 ft²** (3.58 m²)	**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 ft²** (5.09 m²)	**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 ft²** (8.26 m²)	**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 ft²** (12.25 m²)	**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.

ISI Intake Screens, Inc.

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