

# SB7500HW

**Technology Description-** Floating, solar powered, circulation equipment for wastewater treatment and fresh-water applications. Day/night operation on solar only by utilizing a battery to store excess daytime power for nighttime operation.

**Materials of Construction** - T316 stainless steel constructions. Foam-filled high-density polyethylene (HDPE) floats. Thermoplastic rubber intake hose. HDPE Strainer.

**Flow Rates -**

*Flow rates at full speed at 10 feet (3.0 meter) diameter*

Direct Flow Rate: 1,500 gpm (5,700 lpm)

Induced Flow Rate: 6,000 gpm (22,700 lpm)

Combined flow Rate: 7,500 gpm (28,400 lpm)

**Drive System** - High torque, direct drive (no gearbox), low voltage brushless D.C. motor.

**Minimum Operating Depth** - 60 inches (1.0m) with 24" diameter hose.

**Flotation System** - Three floats in triangular pattern each with an adjustable float arm for proper vertical positioning, total float buoyancy of 1,450 lbs (660kg).

**Floats** - Each float have independence to move freely about a central pivot point on the bottom side of the float which allows the forces due to waves be applied to the floats which does not transfer to other machine components.

**Float Arms-** 316 stainless steel heavy walled tubing provides a robust connection of the machine to the bottom pivot point of the high wave float.

**Power Supply/Control System** - *PV solar panels are protected from bird fouling with bird deterrent kit.*

**PV Solar Panels:** 3 x 80-watt photovoltaic solar panels orientated in triangular pattern. On-board battery storage for day/night operation.

**Electronic Controller:** Digital solid-state controller, mounted in weather-tight (NEMA 4X) enclosure with externally fused disconnect. SCADA output through RS-232 serial communication (Modbus RTU), DB9 male connection point inside enclosure. Wireless options available, not included.

**Wiring:** Corrosion-resistant industrial cord with molded watertight connectors that are indexed to prevent improper wiring.

**Rotating Assembly** - Removable assembly with easy access to motor and power box. Impeller handles 4-inch (10cm) spherical solids. Oil-filled (food grade) teflon freeze sleeve with o-rings, shaft. Rotational indicator on shaft.

**Fluid Intake Assembly** - *Hose system bolted to bottom of structural assembly.*

**Intake Type :** Inverted bell shape strainer with 3-inch (7.6cm) holes.

**Intake Depth Adjustment:** Can vary from 0 to 60 feet (0-80m). No depth adjustment necessary for fluctuations in water level. Weight and flotation of the 'J' bend of hose keeps intake above sludge or bottom of pond at all operating depths. Strainer can be chained up higher if desired.

**Ice Protection** - Freeze sleeve and positive pumping under distribution dish to maintain circulation.

**Shipping Size / Weight**

- **Crate** - 87in x 87in x 65in (2.2m x 2.2m x 1.7m) / 1500lbs (680kg) *Exact weight and dimensions varies dependent on machine configuration.*

**Life / Maintenance / Warranty** - Expect 25-year life, minimal maintenance. Limited 2-year parts and labor warranty. Limited 25-year photovoltaic module manufacturer performance warranty and 10-year motor warranty.

Patent Pending

Subject to change without notice.

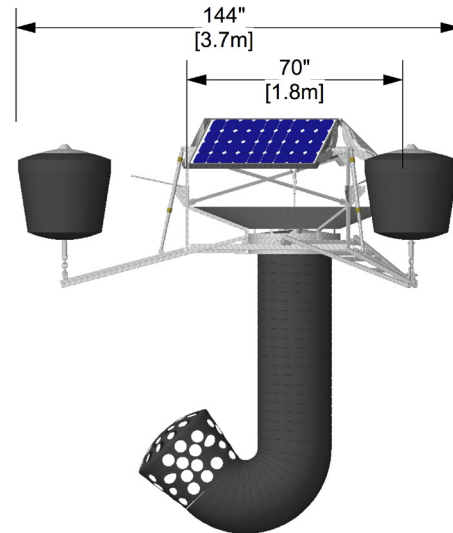


Figure 1: SB7500HW