

SB10000HW v18 FEATURES

Technology Description:	Floating, solar powered, circulation equipment for wastewater treatment and freshwater applications. Day/night operation on solar only by utilizing a battery to store excess daytime energy for nighttime operation.
Flow Rates:	<i>Flow rates at full speed at 10 feet (3 meter) diameter.</i>
Direct Flow Rate - Day	3,000 gallons per minute, (12,000 Liters per minute).
Induced Flow Rate - Day	7,000 gallons per minute. (26,000 Liters per minute).
Combined Flow Rate - Day	10,000 gallons per minute. (38,000 Liters per minute).
Combined Flow Rate - Night	10,000 gallons per minute (38,000 Liters per minute).
Machine Size/Weight:	Assembled machine is 16 feet (5m) in diameter and weighs 850 pounds (380kg).
Materials of Construction:	316 stainless steel construction. Foam-filled high-density polyethylene (HDPE) floats. Thermoplastic rubber intake hose. Concrete mooring blocks are encapsulated in HDPE.
Drive System:	High torque, direct drive (no gearbox), low voltage brushless D.C. motor.
Power Supply/Control System:	<i>PV solar panels are protected from bird fouling with bird deterrent kit.</i>
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 digital controller. Impeller handles 4-inch (10cm) spherical solids. Oil-filled (food grade) teflon freeze sleeve with o-rings, shaft. Rotational indicator on shaft.
Flotation System:	Three floats in triangular pattern each with an adjustable float arm for proper vertical positioning, total float buoyancy of 1,450 pounds (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.
Fluid Intake Assembly:	<i>Hose system bolted to bottom of structural assembly.</i>
Hose System	10 to 100 feet (3 to 30.5 meters) available in 36 inch (91cm) diameter X 10, 15, or 20 feet (3, 4.5, 6 meter) sections.
Intake Type	Horizontal high wave plate valve with 12-inch (31cm) openings. Valve releases escaping water through bottom of hose during high wave events to minimize stress on machine.
Intake Depth Adjustment	15 feet (4.5 m) of field adjustment with three SS chains connected to hose coupling.
Anchoring:	Two mooring blocks tethered together with SS chain and attached to structural member on unit.
Ice Protection:	Freeze sleeve and positive pumping under distribution dish to maintain circulation.
Minimum Operating Depth:	48-inches (1.2 m) with optional leg extensions. No damage to machine or bottom of reservoir when run dry in shallow water.
Accessories Available:	(1) Marker Light Kit
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.