

SB10000 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 (385kg).
Shipping Size/Weight:	Machine can be crated and shipped in a 87 inch (2.2 m) wide X 87 inch (2.2 m) long X 65 inch (1.7 m) high crate, estimated shipping weight is 1500 pounds (680 kg). Hose lengths greater than 40 ft (6 m) may require additional crating.
Materials of Construction:	316 stainless steel construction. Foam-filled high-density polyethylene (HDPE) floats. Thermoplastic rubber intake hose. HDPE strainer. 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 (10 cm) 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 1,350 pounds (612kg).
Fluid Intake Assembly - Option 1:	<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 (91 cm) diameter X 10, 15, or 20 feet (3, 4.5, 6 meter) sections.
Intake Type	Horizontal plate with 12-inch (31 cm) openings.
Intake Depth Adjustment	15 feet (4.5 m) of field adjustment with three SS chains connected to hose coupling.
Fluid Intake Assembly - Option 2:	Fixed horizontal plate bolted to bottom of structural assembly.
Intake Type	Fixed horizontal plate with 12-inch (31 cm) openings.
Intake Depth Adjustment	No adjustment necessary. Horizontal inflow from 25 in (64 cm) below distribution dish.
Fluid Intake Assembly - Option 3:	<i>See SB10000DM v18 Dual Mix Features Sheet.</i>
Anchoring:	(1) Two mooring blocks tethered together with SS chain and attached to structural member on unit or (2) Tethered to shore with SS cable.
Ice Protection:	Freeze sleeve and positive pumping under distribution dish to maintain circulation.
Minimum Operating Depth:	31 inches (0.8 m) with fixed horizontal plate. No damage to machine or bottom of reservoir when run dry in shallow water.
Accessories Available:	(1) Supplemental Shore Power Kit, (2) Chemical Injection Kit, (3) Marker Light Kit
Life/Maintenance/Warranty:	Expect 25-year life, minimal maintenance. Limited 2-year parts and conditional labor warranty. Limited 25 year photovoltaic module manufacturer performance warranty and 10 year motor warranty.