

SB1000DM v18 DUAL MIX FEATURES

Technology Description:	Floating, solar powered, circulation equipment. Two mixing flows for maximum nutrient (N and P) reduction, in addition to BOD/TSS reduction in partial mix and facultative wastewater treatment systems. Day/night operation on solar only by utilizing a battery to store excess daytime power 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).
Lower Mixed Zone Flow Rates:	<i>Flow rates at full speed at center of machine.</i>
Direct Flow Rate - Day	150 gallons per minute. (600 Liters per minute).
Direct Flow Rate - Night	150 gallons per minute (600 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, stainless steel reinforced 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 photo voltaic solar panels orientated in triangular pattern. On-board battery storage for 24-hour 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).
Upper Mixed Zone Fluid Intake Assembly:	<i>Bolted to bottom of structural assembly.</i>
Intake Type	Fixed horizontal plate with 12-inch (31 cm) openings.
Intake Depth Adjustment	No adjustment necessary. Horizontal inflow from 25in (64cm) below distribution dish.
Lower Mixed Zone Fluid Intake Assembly:	<i>Bolted to bottom of structural assembly.</i>
Hose System	12-inch (31 cm) diameter X 20 feet (6 meter).
Intake Type	Inverted bell shape strainer with 3-inch holes (7.6 cm).
Intake Depth Adjustment	There is no adjustment necessary for fluctuations in water level. Weight and flotation of the 'J' bend of hose keeps intake above sludge at all operating depths. Strainer can be chained up higher if desired.
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:	36 inches (0.9 m). 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 labor warranty. Limited 25 year photovoltaic module manufacturer performance warranty and 10 year motor warranty.