



SB-285P

UV STABILISED POLYETHYLENE SENTINEL® BUOY



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The SB-285P Sentinel® is Tideland Signal's large sea buoy companion to the very successful SB-138P Sentinel® buoy. This buoy meets Tideland's goal in developing high performance, low maintenance marine aids to navigation. Deployed in over 50 countries, this buoy utilises the latest in materials, manufacturing processes and technology, which provides a rugged, lightweight buoy with exceptional station keeping and long life, while reducing the long term maintenance expense of floating aids to navigation.

FEATURES

UV-STABILISED POLYETHYLENE - Rotationally moulded to form a tough, 12.7mm thick body. Prior to moulding, colour pigment is blended into polyethylene material eliminating the need for costly sandblasting and continued painting. Through a unique mould design and a controlled process, an increased thickness is formed at major stress points. This polyethylene material will also repel marine growth.

DIVIDED INTO THREE SECTIONS - A float section, middle superstructure section and top section form an abrasion resistant, shock absorbing buoy able to withstand knocks and/or collisions. In event of damage, individual sections can be easily replaced on the deck of a buoy tender, at sea.

MATCHING OR ALTERNATING SECTIONS - Bifurcation buoys can be easily made, either red or green as needed. Cardinal buoys can be assembled using the same method with yellow and black sections. Fairway or Safe Water buoys are produced using a process of moulded in colour graphics, resulting in red and white vertical striping.

2.5 METRE DIAMETER FLOAT SECTION - Utilises 316 stainless steel tube 'skeleton' to support (4) 1/4 float sections with 12.7mm thick walls. These unsinkable sections are filled with polystyrene beads. The float sections are then sealed and placed into a steam-chest to expand the foam beads to maximum size, fusing the beads together. This process results in one solid piece, completely filling all voids, preventing water ingress in the event of puncture, adding toughness to an already rugged floating aid.

POWER - Eight (8) AGM spill-proof batteries configured for 12 volts are housed in middle superstructure section. This section includes a hinged, tamper-proof, watertight service hatch.

NAVAID TOP SECTION - This section can support (4) 90 watt solar modules. Configurations of solar modules can vary depending on electrical load and average solar insolation for area of deployment. An internal high gain passive radar reflector (10m²) and hard-anodised aluminium lantern guard, if needed, are also included. All additional internal optional equipment is also fitted into this section.



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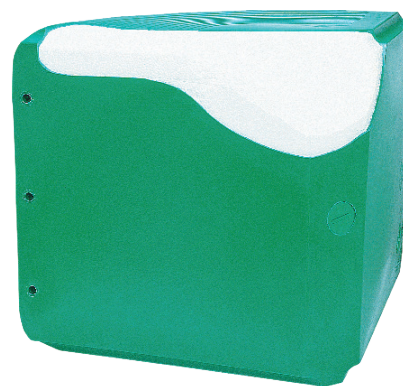
Technical Details

Construction	Rotationally moulded in low density UV-stabilised virgin polyethylene, covering a 316 marine grade stainless steel frame
Foam Filling	16kg/m ³ expanded
Air Weight	2400kg (5300lb)
Diameter	2500mm (8ft 2in)
Nominal Focal Plane Height	4100mm (13ft 6in)
Optional Extended Focal Plane	4800mm (15ft 9in)
Draft	1400mm (4ft 6in)
Freeboard	700mm (2ft 4in)
Submergence	51kg/cm (286lb/in)
Radar Reflector	10m ² (X-band)
Radar Range, nominal	4 to 5NM
Visual Area with daymark panels (can shape) with daymark panels (nun shape)	5.5m ² (61ft ²) 4.5m ² (40ft ²)
Colour	As Specified
Maximum Mooring Load	1575kg (3500lb)
Maximum Current	6 knots

NOTE: Specifications are subject to change.



REPAIR KIT (optional) - includes heat gun, UV polyethylene welding rods and spin-on patches for fast and easy minor repairs.



Cutaway of a float section shows it completely filled with expanded polystyrene foam that prevents water ingress in the event of damage.



NOTES:

1. Minimum recommended chain size 19mm (3/4in).
2. Recommended chain weight: minimum 320kg (700lb); maximum 1575kg (3500lb).
3. Mooring depth: minimum 6 m (20ft); typical maximum 61m (200ft), 4 knots. Depths over 61 m (200ft) on application. Combinations of chain, synthetic (rope) and chain may be suggested.
4. Depending on site conditions, shallow mooring may require heavier than noted chain size to provide needed stability.
5. Bridle weight: 136kg (300lb) approximate. Material size 38mm (1-1/2 in) minimum with 42mm (1-5/8in) end and swivel ring material.

V-Track Informer™ is a trademark and MaxLumina, MicroPower OMNIBUS, SeaBeacon, Sentinel and VIVA are registered trademarks of Tideland Signal Corporation.

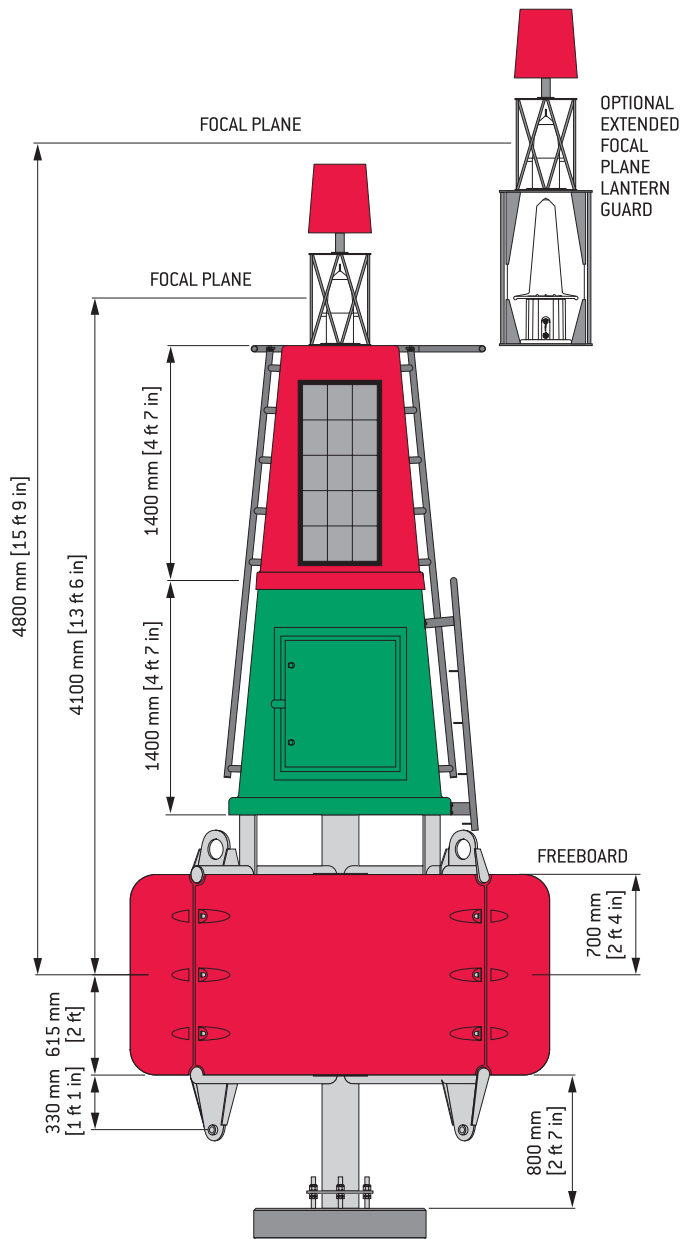
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RECOMMENDED MOORINGS

CURRENT LESS THAN 2 KNOTS			
Water Depth(ft)	Chain Length(shot)	Chain Size	SinkerAir Wt.(lb)
35	45ft (½)	1½ in	6000 steel 8000 concrt
35-50	90ft (1)	1½ in	6000 steel 8000 concrt
50-80	135ft (1½)	1 in	6000 steel 8000 concrt
80-120	135-180ft (1½-2)	1in	16000 steel 8000 concrt
120-200	180-270ft (2-3)	¾-7/8 in+	6000 steel 8000 concrt

CURRENT 2 - 4 KNOTS			
Water Depth(ft)	Chain Length(shot)	Chain Size	SinkerAir Wt.(lb)
35	45ft (½)	1½ in	6000 steel 8000 concrt
35-50	90ft (1)	1½ in	6000 steel 8000 concrt
50-80	180ft (1½)	1 in	6000 steel 8000 concrt
80-120	135-180ft (1½-2)	1in	16000 steel 8000 concrt
120-200	180-270ft (2-3)	¾-7/8 in+	6000 steel 8000 concrt

CURRENT 4 - 6 KNOTS			
Water Depth(ft)	Chain Length(shot)	Chain Size	SinkerAir Wt.(lb)
35	90ft (1)	1½ in	6000 steel 8000 concrt
35-50	135ft (1½)	1½ in	6000 steel 8000 concrt
50-80	180ft (2)	1 in	6000 steel 8000 concrt
80-120	180-225ft (2-2½)	1in	6000 steel 8000 concrt



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