

SB-2200P Sentinel[®] Buoy



TIDELAND SIGNAL CORPORATION

SB-2200P Sentinel[®], a larger patented version of the extremely successful SB-98P, is Tideland Signal's newest generation of large sea buoys. This buoy's patented hull, lifting and mooring eye system, and its twin-keel design, bring together two decades of experience in providing worldwide, on-station alternatives to steel and GRP buoys. SB-2200P's modular design is ideal for use in open seas, exposed channels and harbours, and its twin keel provides superior performance in currents up to 6 knots. SB-2200P is a direct replacement for most steel ocean buoys.

FEATURES:

- **UV-STABILISED POLYETHYLENE** – Rotationally moulded for a tough 12 mm thick body with increased thickness for reinforcement at stress points. The polyethylene material is abrasion resistant, shock absorbing, impact resistant, and able to withstand collisions at sea. In addition, it repels marine growth. Colour pigment is impregnated throughout, eliminating the need for repeated, costly sandblasting and painting.
- **MODULAR CONSTRUCTION** – A float section, middle superstructure section and top navaid section form the SB-2200P buoy. In the event of damage, individual sections can be easily replaced on the deck of a buoy tender at sea.
- **MATCHING OR ALTERNATING COLOURS** – Bifurcation buoys easily can be 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 colour graphics, resulting in red and white vertical striping. Wreck marker buoys use the same process, resulting in blue and yellow vertical striping.



SB-2200P has a small footprint and stands erect on deck allowing a buoy tender's carriage of more buoys.

FEATURES (cont):

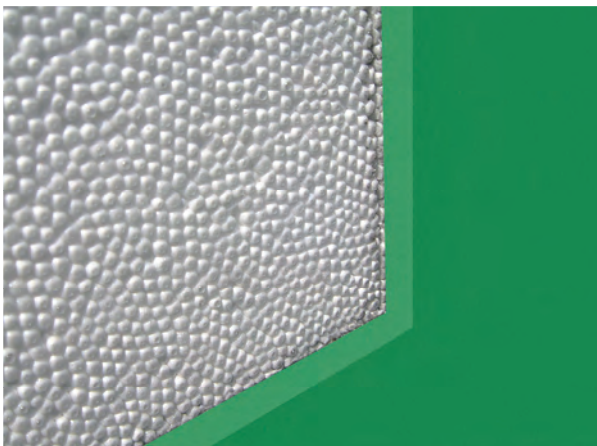
- **FLOAT SECTION OF 2.2 METRES DIAMETER** –

Utilises a patented high strength, internal structure, solidly linking a two-position mooring eye, two lifting eyes, deck and superstructure. The hull is filled with polystyrene beads, expanded and bonded through a steam process, filling voids and limiting water ingress in case of puncture. The one-piece polystyrene adds rigidity and support to the tough polyethylene outer hull. Twin keels provide stability in fast water and support the buoy standing erect on deck. The SB-2200P two-position mooring eye is provided for either fast or slow water conditions.

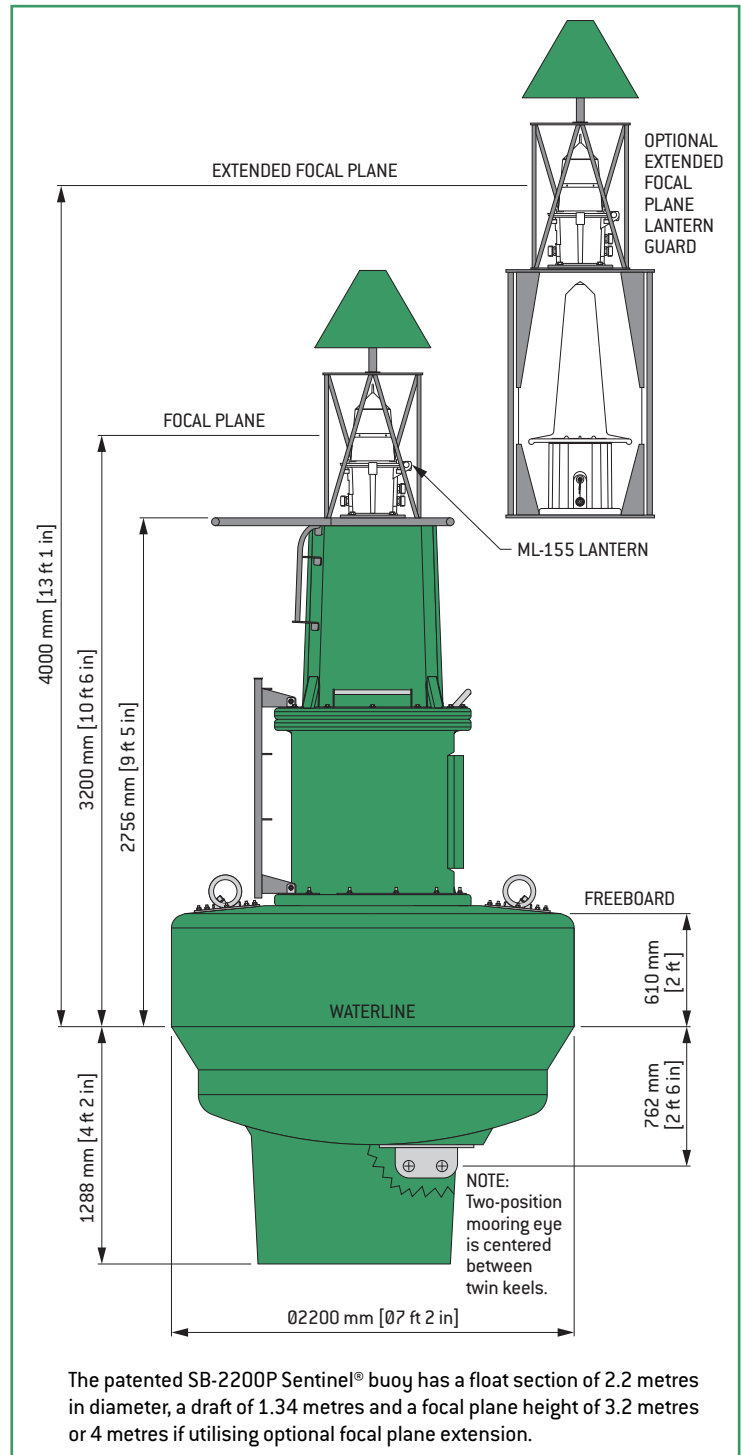
- **SUPERSTRUCTURE SECTION** – A maximum of four (4) 12-volt, 100 Ah lead-acid batteries can be located within this section above the waterline. This section includes a hinged, tamperproof, watertight service hatch.

- **NAVAID TOP SECTION** – This section supports up to four (4) optional 40-watt solar modules. Configurations can vary depending on electrical load and average solar insolation for the deployment site. An internal, high gain, passive radar reflector (10m²) can be included. All additional internal optional equipment is housed in this section.

- **CRATING/SHIPPING** – The design of the SB-2200P allows transport of four (4) buoys in a standard 40 foot container, minimising shipping costs.



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



The standard SB-2200P is suitable for use with a self-contained lantern.

OPTIONAL EQUIPMENT AVAILABLE:

- Moorings
- Ladder
- Focal Height Extensions
- Solar Modules
- Racon
- Battery Hatch & Battery Fixture
- Daymarks and Topmarks
- Manguard
- Lantern Guards
- Lanterns
- Remote Monitoring
- AIS AtoN

STANDARD AND OPTIONAL EQUIPMENT FOR THE SB-2200P SENTINEL® BUOY

TOPMARKS
Rotationally moulded polyethylene in shapes and colours recommended by IALA

LANTERN GUARD
Marine grade, hard-anodised aluminium. Extended focal plane version is available.

V-TRACK™ V-03 INFORMER™
Transmits real-time buoy, light, and other navaid status information to AIS-equipped vessels. GPS (with built-in antenna) reads position and sends alert if buoy goes off station.

PHOTOVOLTAIC SYSTEM (not shown)
Up to four (4) each 40-watt solar modules

LIGHTNING PROTECTION MODULES
For robust lightning protection of the antenna

DAYMARKS (not shown)
In shapes and colours recommended by IALA

SUPERSTRUCTURE SECTION

FLOAT SECTION

EXTENDED HEIGHT (not shown)
Pedestal for raising lantern focal plane

RECOMMENDED SIGNAL LANTERNS
MaxLED-200, SolaMAX SERIES (shown), MLED SERIES or MLED-120SC

SEABEACON® 2 SYSTEM 6 RACON (not shown)
A frequency agile radar beacon, providing dependable service to pulsed marine radars. SeaBeacon 2 is unequalled in power efficiency, frequency matching and constant pulse-by-pulse responses.

INTERNAL RADAR REFLECTOR
High gain (10m²) maintenance-free, passive radar reflector.

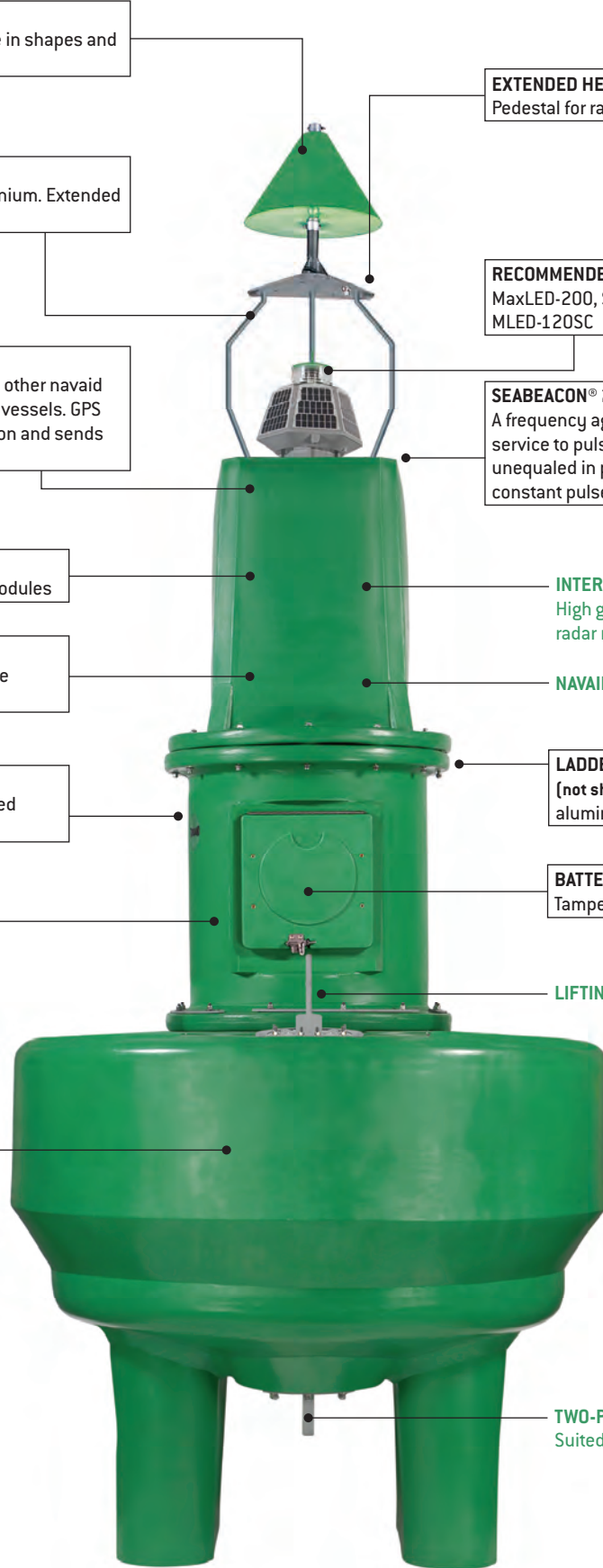
NAVAID SECTION

LADDER, MAN-GUARD AND FOOT/HANDHOLDS (not shown)
Hard-anodised, marine grade aluminium, permanently affixed

BATTERY HATCH
Tamperproof

LIFTING EYES

TWO-POSITION MOORING EYE
Suited to local conditions of depth and current



SPECIFICATIONS

Construction	Rotationally moulded in low density UV-stabilised virgin polyethylene
Foam Filling	16 kg/m ³ expanded polystyrene foam
Air Weight	1550 kg (3400 lb)
Diameter	2200 mm (7 ft 2 in)
Nominal Focal Plane Height	3200 mm (10 ft 6 in)
Optional Extended Focal Plane	4000 mm (13 ft 1 in)
Nominal Draft	1288 mm (4 ft 2 in)
Nominal Freeboard	610 mm (2 ft)
Submergence	38 kg/cm (215 lb/in)
Radar Reflector	10 m ² (X-band)
Radar Range, nominal	3 to 4 NM
Visual Area	
with daymark panels (can shape)	3.7 m ² (40 ft ²)
with daymark panels (nun shape)	3.3 m ² (36 ft ²)
Colour	As Specified
Maximum Mooring Load	1175 kg (2590 lb)
Maximum Current	6 knots

NOTE: Specifications are subject to change.



RECOMMENDED MOORINGS

CURRENT LESS THAN 2 KNOTS

Water Depth	Chain Length	Chain Size	Sinker Air Weight
< 10 m	21 m	32 mm	800 kg*
10–15 m	27 m	32 mm	800 kg*
15–25 m	41 m	28 mm	800 kg*
25–35 m	56 m	25 mm	900 kg*
35–60 m	90 m	22 mm	900 kg*

*Recommendation is to use a 1000 kg sinker for all above conditions.

CURRENT 2–4 KNOTS

Water Depth	Chain Length	Chain Size	Sinker Air Weight
< 10 m	24 m	38 mm	1750 kg
10–15 m	30 m	38 mm	1750 kg
15–25 m	53 m	28 mm	2000 kg
25–35 m	72 m	25 mm	2000 kg
35–60 m	114 m	22 mm	2500 kg

CURRENT 4–6 KNOTS

Water Depth	Chain Length	Chain Size	Sinker Air Weight
< 10 m	31 m	38 mm	3000 kg
10–15 m	47 m	32 mm	3500 kg
15–25 m	63 m	28 mm	4000 kg
25–35 m	94 m	25 mm	4000 kg

NOTES:

- Minimum recommended chain size 19 mm (3/4 in).
- Recommended chain weight: minimum 220 kg (500 lb); maximum 1175 kg (2590 lb).
- Air weight of typical bridle configuration, 2 x 38 mm (1.5 in) x 6 m (236.2 in), is 136 kg (300 lb).
- Mooring depth: minimum 6 m (20 ft); typical maximum 60 m (200 ft). Greater depths can be accommodated with a combination of chain and synthetic material (consult Tideland Signal).
- Depending upon site conditions, shallow moorings may require heavier chain.
- Sinkers in poor holding ground (rock or coral) may require up to 30% more weight.

FOR DEPTHS GREATER THAN 60 METRES, CONSULT FACTORY FOR CORRECT MOORING EVALUATION.

WHEN ORDERING MOORINGS, SPECIFY SITE CONDITIONS.

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Tideland Signal Corporation maintains ISO 9001:2000 accreditation. It is company policy to provide products and services that meet the highest standards of quality in the industry.

Membership Organisations

