



# SB-2200P

*Sentinel® Buoy*

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.

The SB-2200P 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.

SB-2200P

## FEATURES

- **UV-STABILISED POLYETHYLENE** – Rotationally moulded for a tough 12mm 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.



## FEATURES (cont.)

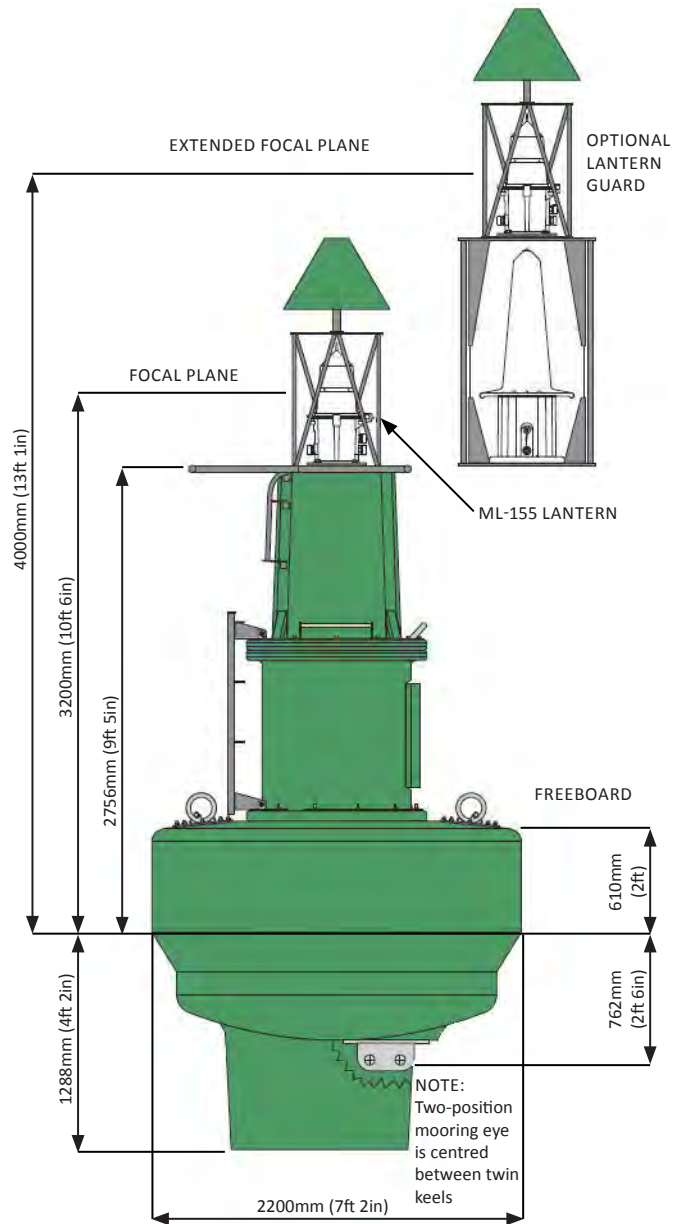
### • FLOAT SECTION OF 2.2 METRES DIAMETER

– 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, 105 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 (10m<sup>2</sup>) 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.

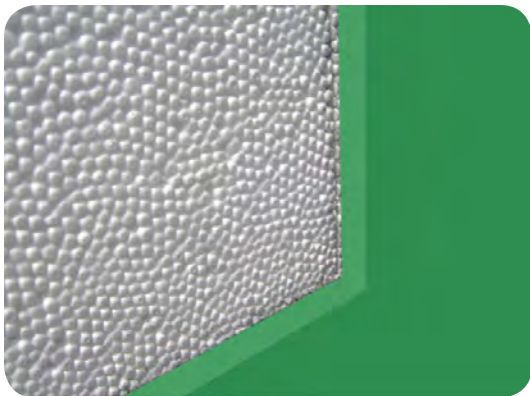


The patented SB-2200P Sentinel® buoy has a float section of 2.2 metres in diameter, a draft of 1.34 metres and a focal plane height of 3.2 metres or 4 metres if utilising optional focal plane extension

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



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

## FEATURES (cont.)

# 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 response.

### INTERNAL RADAR REFLECTOR

High gain (10m<sup>2</sup>) maintenance-free, passive radar reflector.

### NAVAID SECTION

### LADDER, MAN GUARD AND FOOT/HAND HOLDS

High gain (10m<sup>2</sup>) maintenance-free, passive radar reflector.

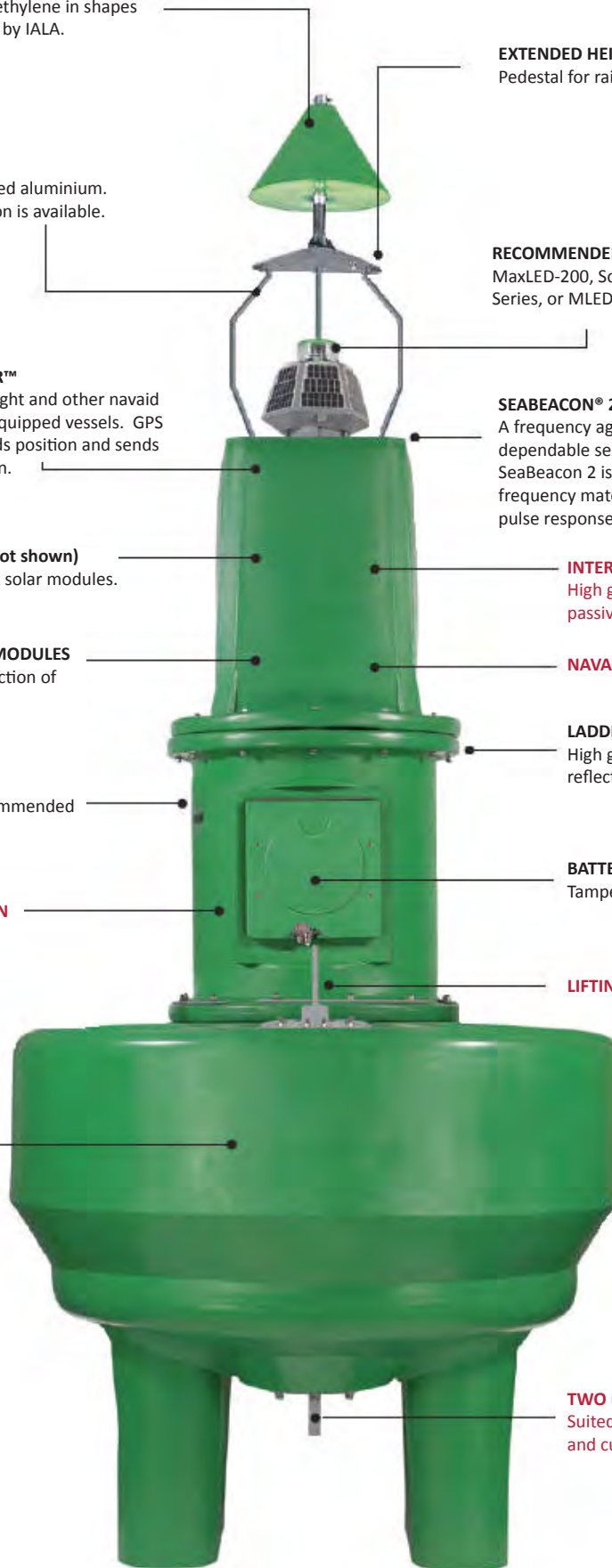
### BATTERY HATCH

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	16kg/m <sup>3</sup> expanded polystyrene foam
Air Weight	1750kg (3858lb)
Diameter	2200mm (7ft 2 in)
Nominal Focal Plane Height	3200mm (10ft 6in)
Optional Extended Focal Plane	4000mm (13ft 1in)
Nominal Draft	1288mm (4ft 2in)
Nominal Freeboard	610mm (2ft)
Submergence	38kg/cm (215lb/in)
Radar Reflector	10m <sup>2</sup> (X-band)
Radar Range, Nominal	3 to 4NM
<b>Visual Area</b>	
with daymark panels (can shape)	3.7m <sup>2</sup> (40ft <sup>2</sup> )
with daymark panels (nun shape)	3.3m <sup>2</sup> (36ft <sup>2</sup> )
Colour	As specified
Maximum Mooring Load	1175kg (2590lb)
Maximum Current	6 knots

NOTE: Specifications are subject to change.

## RECOMMENDED MOORINGS

### Currents of Less than 2 Knots

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

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

### Currents of 2-4 Knots

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

### Currents of 4-6 Knots

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

## NOTES

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