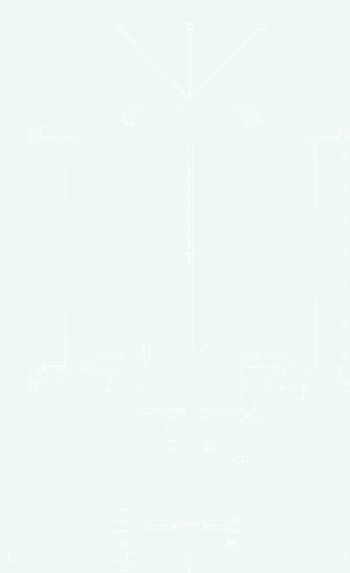


Vega *guides the way*



VRB-25-LED MARINE ROTATING BEACON

3, 6 OR 8 PANEL LED LIGHTHOUSE BEACON



VRB-25-LED

Up to 26NM depending on
configuration and flash character



ISO 9001

BUREAU VERITAS
Certification



VRB-25-LED MARINE ROTATING BEACON

The VRB-25 LED is a powerful, reliable and compact marine rotating beacon suitable for ranges from 15 to 26 nautical miles. The VRB-25-LED can be configured as a 3, 6 or 8 panel rotating beacon. The panels are equally spaced and can contain between 1 and 5 LED lenses depending on what effective intensity or range is required. Each panel generates a single pencil beam that rotates at a preset speed.

Powerful Optics

The heart of the VRB-25-LED is the high power lenses that derive from the Vega VRL-91 Range Light and modified to accommodate within the 3, 6 or 8 panel version. These lenses rotate on the VRB-25 turntable and are powered from the control electronics through slip rings.

Every beacon is individually tested for peak and effective intensities, the consistency of intensity between beams, and the rotational speed. Factory tests are performed in a computer-controlled zero-length photometric facility.

Reliable Mechanicals

The lens carousel is rotated by a direct-drive electronically-commutated brushless pancake motor of 280mm diameter, designed by Vega specially for the VRB-25. This motor provides plenty of torque while consuming only 1-2 watts of energy. Two large, heavy-duty, fully-sealed ball races (packed with low-temperature grease) are the only moving parts, and these can be expected to operate for at least 20 years without attention.

Intelligent Electronics

Rotation speed is handled by a versatile micro-processor based electronic controller housed in a metal capsule sealed with O'rings. One of the 248 speeds from 0.5-15.9 rpm can be selected by adjusting two hex switches. The speed will be maintained to within $\pm 2\%$.

The control of the LED intensity is provided by the light controller. This is programmable using a TVIR programmer. Programmable features include

- Intensity. Both day and night setting are available
- Night or day and night options
- Day/night transition levels with 9 different settings available

Control and Communication Options

Optional features are available depending on what control or monitoring functions are required

- Alarm/monitor output to indicate health or alarm
- On and off control
- External day/night control
- AIS outputs for message 21, beacon on, healthy.
- Light on output
- RS232 or 485 smart beacon output

Main and Standby Options

With the control inputs and outputs available it is possible to directly connect 2 beacons for main and standby operation.

Individual Panel and LED Control

Each panel of the VRB-25-LED can be individually controlled. This provides the options of

- Using different colours on each panel
- Switching panels on or off to generate variable characters or to provide a standby facility

The LEDs on each panel can be wired in a different circuit to provide a level of redundancy should as LED or circuit fail.

Monitoring Options

Monitoring options for the VRB-25-LED include

- 1) VegaWeb web based monitoring
- 2) VegaSMS text based monitoring
- 3) Vega ATON AIS using message 6
- 4) Using the alarm/monitor output
- 5) Using the RS232/422 smart beacon port

EASY ACCESS

The electronics controllers can be accessed from the base by sliding two latches. All external fasteners are captive.

To provide access to the LED assembly the entire Glazing Assembly lifts off.

Lenses and glazing are made of acrylic and have a rated life of 10-12 years.

Secure Latches

The VRB-25-LED Glazing is supplied with captive latches. These latches do not require special tools for their operation.





If secured access to the beacon is required, special forms of latches are available that will require special tools to operate. The use of these latches can be sufficient to discourage unauthorised personnel from opening the beacon.

Humidity

Rated for humidity 0-100%, driving rain at 45° from vertical

Wind
Cooling

Rated to withstand winds to 100kt
Natural radiation only, no cooling fan or ventilation required

SPECIFICATIONS

Optics

Lenses Six or eight, optical grade acrylic, 178.5mm focal length
Service Life Approximately 7 years

Motor Drive

Type 30-pole brushless three-phase direct drive
Current Drain 90mA continuous typical at 1 rpm Rotation
Speeds 248 user-selectable speeds in range 0.5 to 15.9 rpm
Speed Control PID Controller, optical feed-back with 1200 pulses/rotation
Speed Variation Less than 2% variation. Automatic torque compensation
Bearings Two deep groove sealed ball races, 62mm diameter

Electronics

Power Supply Nominal 12VDC, 11-30 VDC acceptable, reverse polarity protected
Speed Controller Vega CALC-20B (motor driver)
Current 125mA for rotation, 620mA per LED at full power
Photocell Can operate from internal sensor or external day/night control

Environmental

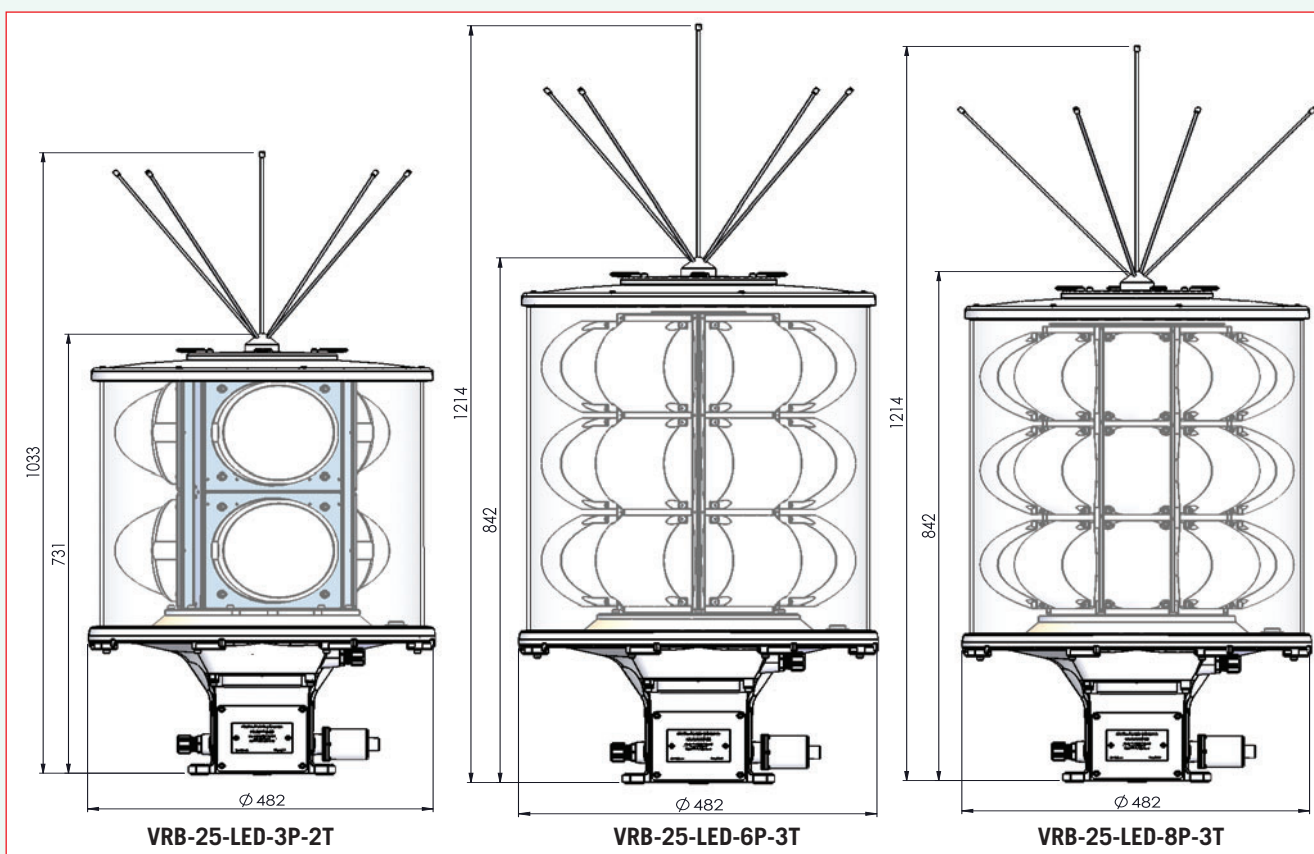
Temperature Rated for continuous operation -35°C to +60°C ambient
Salt Rated for continuous exposure to salt air and sea water spray

Materials

Base DT 5008 grade Aluminium, anodised to 25 microns
Glazing/Lenses Optical grade acrylic
Glazing life Approximately 10-12 years
Paint Finish Epoxy primer, 2-pot polyurethane gloss paint on exterior metal surfaces



DIMENSIONS & WEIGHTS



Weights

Weight (KG)	3 PANELS	6 PANELS	8 PANELS
3 T	N/A	65	70
2 T	45	52	58
1 T	35	39	46

PARTS FOR ORDERING

DESCRIPTION

VRB-25-LED

VRB-25-LED 6 Panel

VRB-25-LED 8 Panel

Secure Clamps, **Add**

Specify colour of lenses, flash character and range required

Where X is number of lenses per panel

TVIR Programmer

CODE

VRB-25-LED-3P-XL

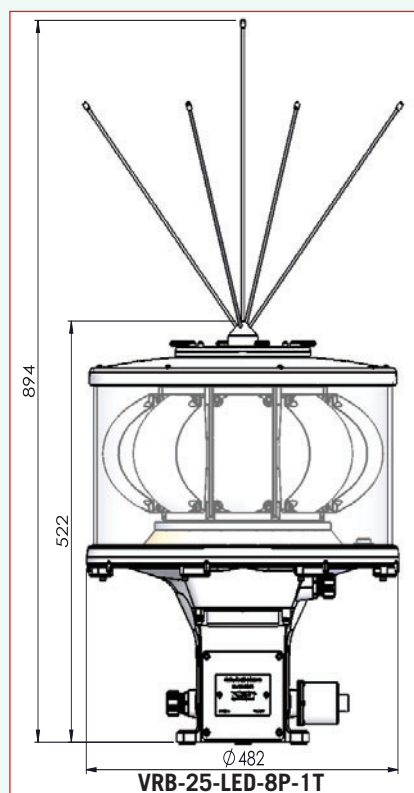
VRB-25-LED-6P-XL

VRB-25-LED-8P-XL

Add “-SEC” to code

Add note to order

Remote-02



DISTRIBUTOR

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