

ATEX Zone 1 Flameproof

RACONS are important all-weather aids to navigation, which provide radar range and bearing information for safe and efficient navigation 24 hours a day. Many RACONS are located in explosion rated areas and are being used to identify large offshore oil production facilities to passing shipping.

Pharos Marine has taken the Phalcon-2000 RACON and adapted it to a flameproof Ex "d" enclosure making the Phalcon-2000 EXD the only **Zone 1 RACON** on the market that **does not require an active purging system** to maintain its Zone 1 rating. Eliminating purging greatly extends maintenance intervals and improves reliability.

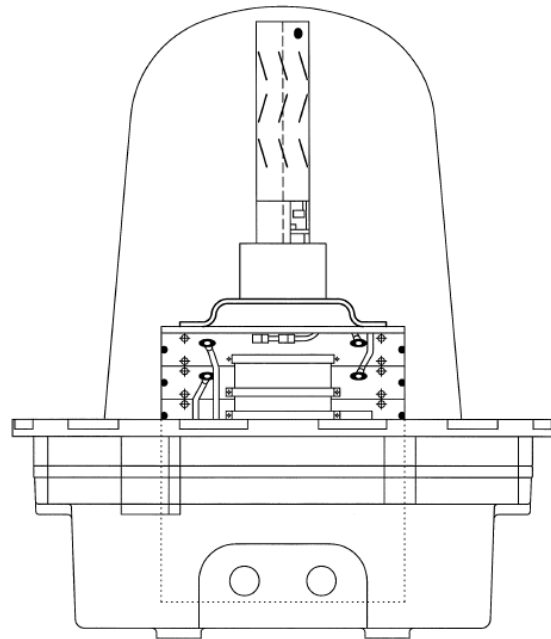
Available as a X-band only unit, S-band only unit or a duplex unit providing X-band and S-band service, the X-band or S-band electronics and antenna are housed in cast aluminum base with tempered glass radome that is transparent to microwave energy. The unit is ATEX certified EEx 'd' IIB T5.

The Phalcon-2000EXD is fourth generation racon that complies with all IALA/IMO recommendations. It provides frequency agile operation in either X or S Marine Radar bands. Dual **dual-token sidelobe suppression** and proportional scaling are standard features.

The Phalcon-2000EXD's duty cycle, sensitivity, and response code can be programmed in the workshop or on site, using an external RS-232 serial interface (connected to a laptop computer or other

ASCII compatible terminal). It is not necessary to open the racon to gain access to internal switches to set these functions. The unit may be programmed to show any Morse Code letter.

An automatic self-test feature monitors the performance of the racon. Every 60 minutes, the program checks the operation and frequency accuracy of the racon. If all is not well, **an audible signal as well as a digital alarm** is generated which can be fed to a monitoring system.



PHALCON[®]-2000EXD X-BAND RACON
ATEX Certified EExd Zone 1 Flameproof
Model 332

SPECIFICATIONS

- **Input Voltage:** 9-36 volts DC.
- **Quiescent Power Consumption:** less than 0.05 Watts (average).
- **Operational Power Consumption:**
(33% Duty Cycle 10 Radars Present) 1.4 Watts (average).
(33% Duty Cycle 100% Interrogation) 1.5 Watts (average).
- **Pulsed Output Power:**
X-Band 1.0 Watt minimum.
S-Band 0.5 Watt minimum.
- **Response Code:** Programmable – All 26 Morse Code Letters.
- **Frequency:**
X-Band (9300-9500 MHZ).
S-Band (2900-3100 MHZ)
- **Frequency Accuracy:**
± 2 MHZ (<200ns radar pulse X-band and S-band),
± 1 MHZ (>200ns radar pulse X-band and S-band).
- **Communications:** RS-232/RS485 Serial Interface for programming, external diagnostics and alarm outputs.
- **Failure Alarm:** Audible Alarm and Digital Alarm.
- **Response Delay:** 0.667µs (X and S-band).
- **Receiver Sensitivity:**
-40 dBm (X-band), -40 dBm (S-band).
- **Polarization:** Horizontal (X-band),

Horizontal/Vertical (S-band).

- **Azimuth Response:** 360° (± 1 dB (X and S-band)).
- **Vertical Response:** ± 10° (-3 dB (X and S-band)).
- **Sidelobe Suppression:** Dual token SLS (X and S-band).
- **Temperature Range:** -40°C to + 70°C.
- **Ingress Protection:** IP 66 (inert gas pressurization not required)
- **Shock and Vibration Tests:** Certification to MIL STD 810D.
- **Dimensions:** Height: 705mm, Diameter: 350mm; Weight: 20 Kg.
- **Mounting:** 3 each M12 bosses on 200mm PCD.
- **Standard Accessories:**
2m power/communications cable.
- **Optional Accessory:** Handheld programmer unit.

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Pharos Marine – England
Steyning Way, Green Lane
Hounslow, Middlesex, TW4 6DL,
England
Phone: 44-20-8538-1100
Fax: 44-20-8577-4170
sales@pharosmarine.com

**AUTOMATIC POWER – HOUSTON
MAIN OFFICE & FACTORY**
213 Hutcheson St.
Houston, TX USA 77003
P.O Box 230738
Phone: 713-228-5208
Fax: 713-228-3717
sales@automaticpower.com

Pharos Marine – Singapore
35 Tannery Road
05-05 Tannery Block, Singapore
347740
Phone: 65-6747-9325
Fax: 65-6746-0478
abpharos@singnet.com.sg

Automatic Power – West Coast USA
26 Pizarro Ave
Novato, CA USA 94949
Phone: 415-382-6296
Fax: 415-382-6299
dolantp@aol.com

Automatic Power – Gulf Coast USA
1340 Westbank Expressway
Westwego, LA USA 70094
Phone: 504-347-2384
Fax: 504-348-2306
dcummskey@automaticpower.com

Automatic Power – East Coast USA
204 Parkway Drive
Williamsburg, VA USA 23183
Phone: 757-253-2817
Fax: 757-220-8166
APIatlantic@aol.com