

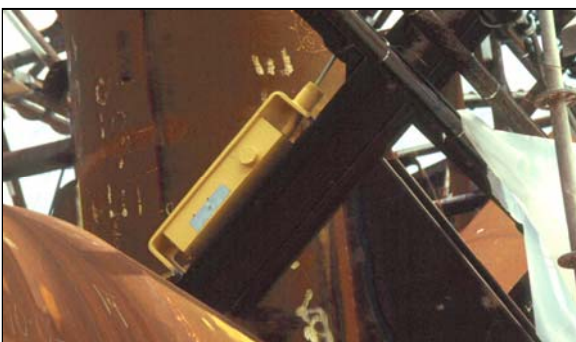
## DR-2™ Dual Reference Cell Polatrak® Cathodic Protection Monitoring



The DR-2 dual reference electrode is equipped with one Ag/AgCl and one Zn reference, for unparalleled accuracy.



DR-2's at Deepwater Hockway's fabrication facility



DR-2 mark 1 in situ, the casing has been replaced by black Delrin in the current version

### Product Overview

The Polatrak DR-2 is a rugged dual element reference electrode designed to provide CP status for 20 years. Hundreds of these electrodes are in reliable service all over the world.

The current DR-2 has an improved machined black Delrin body, which enhances the impact resistance of the assembled instrument.

The sintered Ag/AgCl reference electrode provides very accurate potential data to monitor polarization of the structure; the heavy-duty zinc electrode element provides a long term ultra reliable low resolution electrode.

Available remote control monitoring systems are standard on new structures; Polatrak systems give you the option to tie into communication lines, providing remote cathodic protection monitoring over existing infrastructure.

### Applications

- Offshore platform jackets & drill rigs
- Seawater ballast banks on SPAR, TLP, and FSU / FPSO structures
- SPAR center well areas
- Inshore structures, piers, jetties, wharves
- Subsea equipment wired to SunStation™ permanent readout
- As impressed current CP controller

### Main Benefits

- Structures with permanent CP monitoring systems can be inspected subsea much less frequently.
- The rugged design allows the system to be pre-installed or retrofitted.
- The double steel wire armored cable can be free routed on offshore structures thus saving cost of conduit or duct systems.
- The dual elements combine high accuracy +/- 0.005 V with proven longevity.
- Available with integrated current density monitor (product ID: DR-2-CD).

## Specifications

### Description:

A rugged dual element (Ag/AgCl sw / Zinc) reference electrode designed for weld-on, bolt-on or clamp-on attachment to an offshore structure. The dual element configuration provides high accuracy and calibration capability of Silver Chloride and the long term reliability of Zinc. Designed for permanent monitoring of cathodic protection systems, the electrode has a 20 year design life. Added to the back of the instrument is a 10 sq ft (1 sq m) current density monitoring array, such that polarization data may be logged directly from the instrument.

### Electrode Elements:

Material: Zinc (High Purity 99.5%)	Weight: 12 lb. (5,45 Kg.)
Dimensions: 6x5x11/2 in (15.2x12.7x3.8 cm)	Anti-passivation: embedded carbon steel rods
Accuracy: +/- 0.02 Volts	Material: Sintered Ag/AgCl w Silver Wire Core
Weight: 0.09 oz (2.5 gm)	Dimensions: 0.47" Dia x 0.20" (12 mm Dia x 5 mm)
Accuracy: +/- 0.005 Volts	

### Electrode Housing:

Material: Black Delrin	Dimensions: 18" x 5" x 4" (45.7 cm x 12.7 cm x 10.2 cm)
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### Cable Encapsulation:

Cold Mold Soft Polyurethane made inside embedded PVC conduit within electrode housing.

### Electrode Frame:

Material: ASTM A36 Carbon Steel	Coating: 0.015" Marine Epoxy
Conduit Interface: 2" (5.08 cm) Pipe Coupling or 2" (5.08 cm) 150# Blind Flange	

### Cable:

2 x #12 AWG PVC insulated, PU Bedded, DGSWA, HMWPE sheathed

OD		0.55 in (1.4 cm)
Bend Radius		9 in (22.9 cm)
Weight / Foot	Air	0.366 lb. (0.1665Kg.)
Weight / Foot	Water	0.260 lb. (0.12 Kg.)