

FIREFLY



FIREFLY - Nuclear Inspection Vehicle

Sized to inspect through and below the top guide and core plate

- A small portable system designed specifically for the inspection of BWR reactors' core plate via stub tube or removed fuel bundle.
- Torque balanced thrusters provide a high degree of control and maneuverability in the confined environments of a reactor.
- No electronics in the sub unit ensures reliability in areas of high radiation
- Hardwired for fast and easy integration with accessories
- All system fuses located in the surface control console for fast access.



THE DEEP OCEAN ADVANTAGE

The Deep Ocean Engineering brand is well established with over 32 years of experience supplying the robotics industry. Nearly 600 ROV systems have been delivered to a broad international customer base with clients in over 30 countries. Our internationally acclaimed system designs are strong, resilient, and rugged with the ability to integrate tooling and sensor packages. Our dedicated customer service, support, and technical training is unparalleled.

Applications of all DOE ROVs Include:

- Nuclear and hydro-electric plant inspections
- Offshore oil & gas
- Military, customs & police evidence, search/ID & recovery
- Scientific research
- Underwater filming

Product Specifications

- Maximum working depth: 53.3m (175 ft)
- Vehicle Length: 221mm (8.7 in)
- Vehicle Width: 147mm (5.8 in)
- Vehicle Height: 361mm (14.2 in)
- Vehicle Weight: 6.35kg (14 lbs)



Chassis

Hard Anodized Black lower unit
Houses camera and lights
Foam Buoyancy houses 4 thrusters
Protected by hard anodized black bumpers
Safety wired stainless hardware
Non-corroding
Energy Absorbing – suitable for PWR and BWR reactors

Thrusters

Brushed 120vdc
Shaft driven
Individually controlled
Mineral oil filled compensator on shaft seal

Camera

DOE 10:1 Color zoom
Depth Rating: 200 ft
Resolution: 260 lines of TV
Sensitivity: Minimum 1.5 lux
Viewing Angle: 7 Degrees – 58 Degrees
Length: 5.18 in
Diameter: 3.2 in
Weight in water: 0.2 lb
Air weight: 1.4 lb

Camera Tilt Platform

Operational arc: +30 Degrees / -150 Degrees from horizontal
9 Degrees per second

Umbilical Cable

10.2mm (0.4 in)
Min. Dynamic Bend Radius: 245mm (10 in)
Weight in Air: 7.0 kg (15.5 lb)
Weight in Water: 3.2kg (7 lb)

Lighting

4 x 20 watt camera mounted lamps
Variable light control

Options

Radiation hardened Video Cameras
Umbilical length
Spares kits
Technical training

