

## PHANTOM® P-150

## POWERFUL • EXPANDABLE • RUGGED

- Designed for video stability in confined/inaccessible spaces
- Access through 20" dia. manholes and into PWR recirculating piping
- Open-frame design allows easy integration of additional sensors; 2 functions manipulator for FME retrieval, UT gauge, LED lighting schemes, HD camera
- Unmatched video stability in Ultra-Compact ROVs
- Two horizontal and two "vertrans" thrusters, with additional thrusters/configurations available
- No electronics in the sub-unit ensures reliability in areas of high radiation
- Hardwired for fast and easy integration with accessories and easy fault detection
- Designed for nuclear industry with stable materials / FME concerns as a priority



## NUCLEAR PWR APPLICATIONS OF THE PHANTOM® P-150

- Upper and lower internals, lifts and visual examination
- RWST visuals
- Small object identification and retrieval
- Recirculating piping
- Support of tri-nuke vacuuming operations, both flange and vessel floor
- Vessel inlet and outlet visual exams
- Vessel flange pre/post cleaning visual examination

## CONVENTIONAL APPLICATIONS OF THE PHANTOM® P-150

- Potable Water Tank
- Wastewater Treatment
- Elevated/in-ground holding tanks

## THE DEEP OCEAN ENGINEERING ADVANTAGE

Deep Ocean Engineering, Inc. is a USA based manufacturer of powerful, expandable, rugged underwater and surface drone vehicles, headquartered in the technology capital of the world, Silicon Valley, California. Its legendary Phantom® lines of ROVs and USVs, many of which have been in use around the world for decades, are integrated with the latest digital technology and the highest quality components available in the market today, including thrusters, sonar, cameras, lighting, navigation software (GPS) and power.

## VEHICLE SPECIFICATIONS\*

|                       |                     |
|-----------------------|---------------------|
| Maximum working depth | 53.3m (175 ft)      |
| Length                | 64.25cm (25.30 in)  |
| Width                 | 35.24cm (13.875 in) |
| Height                | 29.21cm (11.5 in)   |
| Weight                | 18kg (40 lbs)       |

## TOPSIDE

|           |  |
|-----------|--|
| Console   | NIS-301 Nuclear Inspection System. Software run by rack mounted computer. Includes rack mount Power Supply and 1 space, pull-out flip-up monitor |
| Pilot Box | 2 Joysticks Pilot Box on 15' deck cable<br>Auto depth, camera focus / zoom   |

## CHASSIS

|  |
|--|
| Hard anodized aluminum, non-corroding, and shock resistant |
| Foam buoyancy with replaceable skid cover plate            |
| Safety wired stainless hardware                            |
| FME requirements met for PWR environments                  |

## THRUSTERS

|  |
|--|
| 4 Shaft driven 48VDC brushed motors          |
| Individually controlled                      |
| Mineral oil filled compensator on shaft seal |

## OPTIONS

- Radiation tolerant cameras
- Rear facing camera (Color, B/W, Low Light) and light combination
- Depth pressure transducer
- S-Video functionality on Sony HD camera
- Video Overlay System with options to display customer tooling
- UT thickness gauge
- 2 function manipulator
- Spot Cleaning Brush
- Technical Training
- Optional 500ft Umbilical

## UMBILICAL

|                             |   |
|-----------------------------|---|
| Diameter                    | 13.9mm (0.55in)                                   |
| Minimum dynamic bend radius | 245mm (9.6in)                                     |
| Weight in Air               | 7.0kg (15.4lb)                                    |
| Weight in Water             | 3.2kg (7.0lb)                                     |
| Length                      | 53m (175ft) with optional 114m (375ft) deck cable |

## CAMERA

|   |
|---|
| Sony HD Camera (1080p)                                      |
| Horizontal field of view: 65°                               |
| 30x optical zoom; 12x digital zoom with image stabilization |
| Depth Rating: 300m (984ft)                                  |
| Front mounted on mechanical pan/tilt unit (+/- 90°)         |
| 1.4 Lux with white balance and image adjustments            |

## LIGHTING

|   |
|---|
| LED Sealite LSL-1000 (10,000 Lumens)                  |
| 5,600 Lux @ 1m; 75° Beam angle<br>4,000m Depth rating |
| 90-140 VAC 50/60 Hz                                   |

\* Specifications subject to change  
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