

PHANTOM® T5 DEFENDER

POWERFUL • EXPANDABLE • RUGGED

The Phantom® T5 Defender is one of the next generation of proven, reliable underwater robotics pioneered by Deep Ocean Engineering in its manufacture of remotely operated vehicles (ROV), built in the USA for nearly four decades.

The advanced technology of the Phantom® T-Series ROV platform provides powerful maneuverability, incorporates an open architecture, integrates with a wide variety of sensors and is hand-built on a rugged, resilient, non-corroding polypropylene chassis that can accommodate heavier payloads. The design of its four vectored horizontal and one vertical Tecnadyme® thrusters provides significant control and propulsion in current to maneuver efficiently in all directions.

The Phantom® T5 Defender is equipped with high-performance, magnetically coupled thrusters, HD camera, LED lighting, control console and power unit, and a 300m fiber umbilical. In addition, the Phantom® T5 Defender package is engineered to include navigation software, an Inertial Navigation System (INS), Doppler Velocity Log (DVL), GPS, imaging sonar, a single-function manipulator, and our patent-pending underwater breach for explosive ordinance disposal. The Phantom® T5 includes a one-year manufacturer's warranty.



APPLICATIONS OF THE PHANTOM® T5 DEFENDER ROV

The Phantom® T5 Defender is an observation class underwater remotely operated vehicle enhanced with technology to meet the specific requirements of law enforcement and military applications. The design was influenced through first-hand input from local, state and federal law enforcement agencies and military organizations. The applications include homeland security, search and recovery operations, port security and explosive ordinance disposal (for details, please visit our website at www.deepocean.com).

PHANTOM® T5 DEFENDER FEATURES

The Phantom T5 Defender is engineered with numerous navigation features, including

- Position tracking
- Station-keeping
- Position history
- Mission planning
- Waypoint navigation
- Electrically-initiated breach for EOD operations
- Mission recording
- Map overlay

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, cables, sonar, cameras, lighting, navigation software and power.

PHANTOM® T5 DEFENDER

Depth rating	300 meters (1000 ft.); 500 meters optional
Length	889 mm (35 in)
Width	559 mm (22 in)
Height	406 mm (16 in)
Weight in air	65.8 kg (145lbs.)

CAMERA/LIGHTING

Camera	Sony HD camera standard (1920x1080) Rear/auxiliary camera optional 30x optical zoom; 12x digital zoom with image stabilization Horizontal field of view: 65° Lux: 1.4 Capable of white balance and advanced image adjustments
Camera Tilt	Front mounted on mechanical tilt unit (+/-90°)
Lighting	Front facing LED lights (18,000 lumens)

STANDARD

Vessel Buoyancy	Neutrally buoyant in water - configurable floatation and ballast weights
Frame	Open frame design to easily add auxiliary sensors
Auto Functions	Heading, depth, trim (speed)
Heading Accuracy	+/-0.03° RMS, 20 Hz
Depth Accuracy	+/-0.25% FSS

OPEN ARCHITECTURE

Integration	Open architecture allows integration of wide variety of sensors
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THRUSTERS/PERFORMANCE

Configuration	4 vectored horizontal, 1 vertical
Thrust	Forward thrust- 63.0kgf (139 lbs) Lateral thrust- 14.0kgf (30 lbs) Vertical thrust - 17.0kgf (37 lbs)
Speed at Surface	4.0 knots
Thrusters	Magnetically-coupled brushless

UMBILICAL

Umbilical	300m standard length (upgradeable upon request)
Copper (Standard)	0.75" diameter 179 lbs. /1,000 ft. Neutrally buoyant in freshwater, slightly buoyant in saltwater Breaking strength: 5,000 lbs. Minimum bend radius: 9"
Fiber (Upgrade)	0.5" diameter 115 lbs. / 1000ft. 2 single-mode fibers Neutrally buoyant in freshwater, slightly buoyant in saltwater Breaking strength: 2100 lbs. Minimum bend radius: 4.5"

POWER

Max power output	3.3kW
Universal input	90-250 VAC, single phase

DEFENDER UPGRADES

Navigation	Greensea Systems
Tool-Skid	Nortek DVL Greensea Systems INS Gemini Imaging Sonar Disruptor (patent-pending) Single-function manipulator

*Values based on full power data
20170330 - Specifications subject to change