

VECTOR T4

- Compact Size
- Easy Maintenance
- Operator Friendly
- Rugged & Reliable



Vector T4 is a rapid deployment high performance ROV system, combining superior power, telemetry and payload with ease of use, ruggedness and reliability—providing a powerful overall performance envelope and versatility compared to other vehicles of its class. It has four high performance brushless thrusters — two horizontal, one lateral and one vertical.

The newly redesigned **T4** is the newest member of the **Vector** family of Remotely Operated Vehicles that have already achieved worldwide success with the M5 and L4 which were introduced to the underwater market in 2007. The Triggerfish, first introduced in 2003, now incorporates the same industry-leading features of the Vector ROVs.

- The power and control system is networked for simplicity and ease of use, with multiple micro-processors providing redundancy and expanded capabilities. The design incorporates intuitive, computer-aided, always active diagnostics facilitating maintenance of the system in the harshest environments by technicians with a minimum of training.
- Specially designed high performance brushless thrusters, only available on Deep Ocean Engineering ROVs provide the highest power to weight ratio and reliability vs. other vehicles in this class.
- The graphical user interface (GUI), with multiple menu screens, provides intuitive feedback and active user control for ease of vehicle handling, navigation, collection and display of sensor data, as well as setting and storing custom system configurations.
- Constructed from polypropylene, the chassis is resilient, non-corroding and maintenance free. Ancillary equipment is fabricated using modern marine grade aluminum and composite materials and is easy to mount and integrate.



**Continuous Diagnostics =
Unmatched Reliability**

Vector T4



Standard working depth:	300 m 1000 ft
Vehicle Dry Weight	28 kg 61 lb
Vehicle Length:	902 mm 35.5 in
Vehicle Width:	450 mm 17.75 in
Vehicle Height:	350 mm 13.75 in
Thrust Forward	20 kg 48 lb
Thrust Lateral	10 Kg 22.5 lb
Thrust Vertical	10 kg 22.5 lb
Standard Payload:	3.6 kg 8 lb
Optional Payload:	6 kg 13 lb

Chassis: A modular chassis manufactured from polypropylene. This extremely rugged material is maintenance free, self-supporting in water and non-corroding — providing the vehicle with an energy absorbing protective framework.

Command Computer: The command computer is a portable rugged Intel Dual-Core based computer which supports real-time control and monitoring of the vehicle and sensors. It also supports additional external monitors for the concurrent display of Sonar, video and tracking information.

Propulsion: Fully pressure compensated high performance DC brushless thrusters. The high torque, gearless thruster design is highly robust and quiet. A hydrodynamic nozzle provides symmetric thrust with a compact form factor. The thruster is a proprietary product that will only be found on ROVs manufactured by DOE.

Vehicle Electronics/Telemetry: Continuous full control and diagnostics of onboard vehicle functions through a digital communications link. Standard configuration includes up to three continuous video channels over TSP (Twisted Shielded Pair), and expandable digital telemetry over copper including RS232, RS485 and, Ethernet (optional fiber-optic).

Main Camera unit: DOE 18:1 color zoom camera unit. Depth rating: 1,000m (3,300 ft) Resolution: 470 lines of TV Sensitivity: 1 Lux @ f1.4 Viewing angle: 7°-58° Length: 241 mm (9.5 in) Diameter: 89 mm (3.5 in)

Camera tilt platform: DOE electrically driven tilt actuator providing a smooth tilt speed. Operational arc: $\pm 90^\circ$ from horizontal, with adjustable stops.

Lighting: 2 x 850 lumen LED lamp units. The control is On/Low/Medium/Full. These new units are designed to last up to 50,000 hours and will consume far less power than quartz halogen lamps.

User Interfaces: The Graphical User Interface (GUI) provides intuitive feedback and active graphics for easily controlling vehicle handling, navigation and sensor data collection. The GUI includes several menu screens with readily accessible information to guide connectivity, setup, pre-dive checklist, navigation, inspection, post-dive checklist, diagnostics and an on-line searchable technical manual.

On Screen Display: This is a continuously updated video display, which provides the operator with intuitive compass rose heading, depth, turns count, elapsed time, water leak alarm and much more information, allowing the vehicle to be operated safely. It may also be used to display sensor data such as temperature on the screen.

Navigation: Rate gyro stabilized, solid-state magnetic compass unit: resolution $\pm 0.1^\circ$, accuracy $\pm 0.5^\circ$, update rate 50 mS. Electronic depth sensor: accuracy 0.25% of fsd.

Auto-pilot: Selectable automatic pilot for auto-heading, auto-depth and optional auto-altitude.

Power requirements: Input 115/230VAC, 50/60 Hz, 2 kVA, single-phase. Also available -on-board user power for instrumentation 24 VDC.

Umbilical cable: A supple, rugged cable, designed for harsh ocean environment with a 455 kg/1,000 lbs. working load: diameter: 0.50 in. (12.7 mm).

Options:

- Sonar systems
- LYYN™ Video Enhancement
- Tracking systems (SBL & USBL)
- Specialized cameras
- LED Lights
- Cable reels (manual or powered)
- Various manipulators, additional tools and sensors
- Spares kits
- Technical training



1248 Route 28A, Suite 2
Cataumet, MA 02534, USA
(1) 510-562-9300
www.deepocean.com