

Seaeeye Tiger Inspection Class ROV



Inspection Class Remotely Operated Vehicle

With over 55 *Seaeeye Tiger* systems in operation, the *Seaeeye Tiger* has built up a strong reputation for performance, flexibility and reliability and is well established as the *industry standard* underwater inspection ROV.

This small, but powerful vehicle, has been designed to undertake a wide range of inspection tasks and the combination of 32kg payload, auxiliary power and communications channels allows the vehicle to carry a wide range of additional inspection systems. The highly manoeuvrable design features four vectored horizontal thrusters that provides an excellent power/size ratio making it the system of choice in strong tidal currents.

The Fugro group operates a fleet of over 20 *Seaeeye Tiger* systems in 600msw or 1000msw depth ratings and continues to invest in this model as a result of growing market demand.

The *Fugro-Rovtech* fleet of *Tiger* systems are all equipped with TMS and the majority are designed for platform-based operations supplied as Zone 2 systems with a gravity-base Launch & Recovery system that obviates the need for welding.

System Features:

- Vehicle rated to 1,000m
- SM4M Brushless DC thrusters. 4 vectored units in horizontal plane plus 1 vertical unit
- Bollard pull of 62kg (fwd) and 43kg (lateral)
- 2 Simultaneous Cameras plus 1 switchable
- fibre-optic video transmission system (deep water systems only)
- 32kg payload
- Hydraulic Manipulator/Tooling Skid (optional)
- Side entry TMS (Tether Management System with 150m or 250 m tether capacity)
- Dedicated crane or A-frame based deployment system rated for Sea State 6. Gravity base and Zone 2, where specified.
- Dedicated A60 Control Container (Zone 2, where specified)

Key Tasks:

- Platform Inspection
- Diver Observation
- Drill Support
- Construction Support

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Vehicle		Tether		Launch System	
Dimensions	Length 1.03m Height 0.59m Width 0.70m	Type	Thermoplastic Polyester (TP)	The Tiger is deployed from a single skid consisting of an integral Winch, Crane and power pack.	
Weight	150kg	Diameter	17 mm	The skid is gravity based and designed to be launched and recovered from a fixed structure without the need for welding or other attachment. It can also be welded to the deck of a vessel.	
Depth Rating	600m or 1000m	Length	Up to 150m, Optional Up to 250m (See TMS specifications below)	Optionally, the Tiger can also be A-frame deployed.	
Payload	32kg	Breaking strain	2000 kg	General skid particulars (typical)	
Thrusters	5 x Brushless DC motors 4 x Vectored horizontal and 1 x vertical, all Seaeye SM4 type	Weight in water	Neutral	Dimensions	3.8m (L) x 2.6m (W) x 2.5m (H)
Chassis type	Open frame manufactured from polypropylene with aluminium electronic pod	Weight in air	310 kg per km	Weight	8.5 tonnes
Buoyancy	Syntactic PVC foam	Tether Management System (TMS)		Weather Limits	Gravity Based - Seastate 6 Welded to deck - Seastate 7
Connectors	Metal shell connectors generally used throughout	Seaeye Marine garage Type 2 bale-arm TMS (with up to 150m excursion) or Seaeye Marine Type 5 winch and slip ring TMS (up to 250m excursion).		Classification	Full zone 2 rating, where specified.
Performance		The pilot operates the TMS systems from the ROV hand controller. The length of the tether spooled out is displayed onto the video overlay.		Main Lift Winch	
Thrust	Fore/aft 62 kg Lateral 45 kg Vertical 25 kg	TMS Type	<u>Type 2</u> <u>Type 5</u>	Drive	Hydraulic Motor
Speed	Fore/aft 3.0 knots Lateral 2.0 knots	Dimensions	Length 1.20m 1.70m Width 1.20m 1.03m Height 1.90m 1.60m	Capacity	650m of 31mm diameter armoured umbilical (optional 1050m)
Power	110-480Vac 50/60hz, 11 KVA	Weight (inc. ROV)	610kg 650kg	Line-pull	2600kg at bare drum
Standard Equipment		Control Shack		Spooling	Level wind gear
Video Channels	Up to 2 simultaneous Video Channels plus 1 switched	Dimensions (Typical)	Length 4.6m Width 2.4m Height 2.6m	Crane	
Cameras	1 x Colour CCD camera 1 x Black & White, Low Light CCD Camera.	Weight	8.4 tonnes	Type	HIAB articulated
Tilt Unit	Electrical Tilt unit ± 90 degrees Max two cameras, position feedback displayed on video	Classification	A60 EXD Zone 2, where specified	Lift	1.5 tonnes @ 5.0 m radius
Lighting	2 x 150w each quartz-halogen on tilt unit	Equipment Fit		Power Pack	Electric Power 380-480vAC, 50/60Hz, 30kW
Sonar	Sonavision 2000 or similar	Transformers	1 x isolation for ROV 1 x domestic supplies	Docking Device/Sheave	Sheave wheel with fail to safe latching mechanism
Compass	Flux-gate with solid-state rate stabilisation sensor Accuracy ±1°, Resolution 0.35°	ROV Control Unit	Rack mounted control system with ROV Hand Controller	Optional Equipment	
Depth gauge	Electronic pressure sensor Accuracy ± 0.1%	Sonar Processor	Rack mounted PC-based	<ul style="list-style-type: none"> Flooded Member Detection (FMD) Cathodic Protection Inspection (Direct Contact, Proximity, Continuous Remote incl Field Gradient) Wall thickness measurement (UT) Bathymetric Surveys Cleaning (powered wire brush) Digital Stills Camera Zoom camera Dye detection equipment 1-3 function manipulator 	
Auto Pilot	Auto Depth and Auto Heading	Video system	3 x Monitors 2 x Super VHS VCRs (optional Digital video suite) 1 x Video Grabber (optional)		
Other options	SIT Camera, Stills Camera, CP Probe, FMD, minibeacon	Video Overlay	Date, time, heading, depth, tilt angle, auto-functions, turns counter, CP		



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