

Equipment Data Sheet:



Description: Falcon 1233 & 1245 ROV Systems

THE SEAEYE FALCON is a portable and lightweight observation and inspection ROV for operations to depths of 300 metres in the offshore oil and gas industry. Its power to weight ratio of 1:1 is unrivalled, giving it excellent performance, handling and manoeuvrability. Mermaid Offshore Services own and operates two Falcon systems; 1233 and 1245, both built and delivered in 2004.

- **300 metre depth rating, 16 kilo payload**
- **Magnetically coupled brushless DC thrusters with velocity feedback loop**
- **4 Vectored and 1 vertical thruster**
- **50 kgf thrust with 1:1 power to weight ratio**
- **Distributed intelligence control system**
- **Seaking imaging onboard sonar**
- **High resolution colour camera on 180° tilt platform**
- **Variable intensity 150 watts of lighting**
- **Three leg 'grab' incorporating rope cutter**
- **Auto heading, depth, compass and rate gyro**
- **Portable surface control system with video overlay**
- **Low drag umbilical**
- **Single phase A/C power input - universal 100-270 VAC at 2.5 kw**



A Seaeeye Falcon can be operated free swimming with up to 450 metres of umbilical and launched either by hand or from a simple davit arrangement.



The Falcon is the first ROV to enter production with a distributed intelligence control system. This is a multi-drop network which allows up to 128 devices to be connected together on a single RS485 serial network. Each device connected to the network, be it a thruster, light, compass or a future option, contains a microprocessor and interface electronics and is called a 'node'.

These 'nodes' are controlled by a master processor in the Surface Unit and are fully isolated to maximise system reliability. Each node is connected to the Network's Star Point at the ROV junction box. The Star Point is a printed circuit board that provides each node with its own fused power supply and telemetry.

Propulsion

Seaeeye Falcon is powered by 5 Seaeeye Magnetically Coupled Thruster units (MCT1) each capable of achieving 13 kgf thrust at 320W or a combined forward thrust (bollard pull) of 50 kgf. For an ROV weighing only 50 kilos this represents an impressive 1:1 power to weight ratio.

Chassis

The 100% modular chassis is manufactured in polypropylene. This extremely rugged material is totally maintenance free, non corroding and self supporting in seawater. Additional equipment can be bolted directly to chassis members.

Control System & Video Overlay

A video Overlay system is incorporated as standard providing the following information to the pilot:

- Compass heading
- Depth
- Camera tilt position
- Auto pilot function status
- Tether turns counter