

TECHNICAL SPECIFICATION

Seaeye Falcon 12104

INSPECTION CLASS ROV



SEA EYE FALCON 12104

INCLUDING SELF-CONTAINED DEPLOYMENT SYSTEM

The following document details the technical specification of the Seaeye Falcon 12104 Observation Class Remotely Operated Vehicle (ROV), and its self-contained deployment system.

ROV GENERAL

The Falcon is the world's most successful underwater electric robotic system of its class. Powered by a single-phase 110/230 VAC supply, Falcon is lightweight and portable for easy deployment, and comes rated to a depth of 300m.

The Seaeye Falcon is the choice of many leading operators for capability, versatility and the ability to get the job done.

The Seaeye Falcon is typically preferred for offshore platform inspections, reservoir/dam inspections, IRM support, diver support, survey, intervention, salvage support, deep tunnel and dam inspections, search and rescue operations, decommissioning, aquaculture, etc.



**50 KGF
FWD
THRUST**



**1 FUNCTION
MANIPULATOR
(OPTION AVAILABLE)**



**14KG
PAYLOAD**

OBSERVATION CLASS ROV

MODEL - Seaeye Falcon 12104
MANUFACTURER - Saab

The Seaeye Tiger system is an Observation Class ROV system, designed to ensure maximum flexibility for configuration to perform work from simple surveying, to demanding platform inspections. The Seaeye Falcon system is designed for performance and reliability.

The optional single function manipulator can easily be mounted to the ROV to give it an added versatility to carry out a wider scope of work.

KEY STANDARD FEATURES

- Electric ROV
- Electric, Brushless DC Thrusters
- Powered by a single-phase 110/230 VAC supply

POWER REQUIREMENTS

- | | | | |
|----------------------|--------|---------|-------|
| • ROV Control Van | 230vac | 50/60Hz | 25Amp |
| • ROV Crane Controls | 440vac | 50/60Hz | 60Amp |



ROV SPECIFICATION

DESCRIPTION	METRIC
ROV Weight in Air	55kg
Depth Rating	300msw
Payload	32kg
Thrust	Forward: 50kgf Lateral: 28kgf Vertical: 13kgf
Propulsion	4nos Horizontal, 1nos Vertical Brushless DC Thrusters (MCT01)

PAYLOAD

The Seaeye Falcon has a payload capability of 14kg in current configuration. This enables a reasonable variety of tooling to be integrated to the ROV without having to add buoyancy. It is able to accommodate a range of lightweight sensors to perform a variety of tasks such as performing Cathodic Protection (CP) readings.

SELF-CONTAINED

The ROV is housed within a 14'FT Container control container, along with its own in-built telescoping Palfinger deployment crane. No additional crane facility is required to launch the ROV into the water. The surface control unit and pilot joystick is also housed within the same container, making this a small footprint ROV. Considering the lightweight design of the ROV, the container can be placed on platforms without the need for any container seafastening.

FITTED EQUIPMENT

CAMERAS

- 1x Wide angle, low light, colour inspection camera supplied as standard

OPTIONS

- Electric, 3-jaw single-function grabber arm with softrope cutter blade in-built
- Cathodic Protection (CP) Probe
- Others as per Client specification

STANDARD INSTRUMENTS

- 180° tilt platform
- 3250 Lumens low voltage LED floodlights with variable intensity control for precise scene illumination.

SENSOR INTERFACES

- Depth, Compass (compass sensor is in an external pod)
- Autopilots- Depth and heading as standard.
- CP Probe (Contact and Proximity Modes Supported)
- Sonar, 24VDC, Twisted Pair comms
- 1x Aux, 24VDC, RS485
- Telemetry- Twisted Pair comms

Surface Equipment

- Standard Surface Control Equipment

PDU with:

- Built in proprietary Overlay
- Control PCBs for ROV
- Hand Controller, Keyboard
- 3x Monitors

DEPLOYMENT SYSTEM

The rear door of the 14'FT container houses a Palfinger PC2300 telescopic crane of 500kg SWL, the umbilical winch as well as the ROV itself. The crane is compactly designed but with great outreach.

PC 2300 Compact		
Technical Data (EN 12999)		
Max. lifting moment	2.3 mt/23.0 kNm	16920 lbs
Max. lifting capacity	1820 kg	4010 lbs
Max. lifting capacity CE	990 kg	2180 lbs
Max. hydraulic outreach	4.1 m	13' 5"
Slewing angle	340°	
Max. operating pressure	185 bar	2683 psi
Recommended	6 l/min	1.3 imp.gal./min
pump capacity		1.6 US gal./min
Dead weight	230 kg	510 lbs

The crane is used in combination with our latching tool to help pick up the ROV and deploy it into the water. The operator manipulates the latching tool to release the ROV into the water. Once the ROV has completed its mission, it finds its way back and latches itself to the latching tool. The crane is then used to hoist the ROV back to the container.



MANIPULATOR SPECIFICATION (OPTIONAL)

Material: 316 Stainless Steel

The Seaeye Falcon can be fitted with an optional single-function gripstick manipulator system for grasping objects. It includes a cutter capable of cutting a 15 mm diameter rope.

This manipulator was specifically designed for the Seaeye Falcon system and is powered directly by the ROV.



CONTROL VAN CONTAINER

This small footprint, high capability ROV has a unique 14’Ft container, incorporating both a Control space as well as a storage space for spares and documents within the same enclosure.

The container is provided with an air-conditioning system allowing accurate control of the internal temperature whilst ensuring noise levels are reduced to a minimum.

The control container is an area where the pilots work comfortably during the ROV operations. There is an area for administrative tasks with a desk mounted admin PC, wall mounted cupboard, and floor mounted drawer unit. The control container also houses the Power Distribution Unit (PDU) which is located inside a removable end panel of the van improving access for major component replacement if required. The PDU is powered and isolated via the control van Power Distribution Panel (PDP) enabling complete Isolation of the PDU locally if required.

There is an external recessed area containing all electrical and air connection points and the external part of the air-conditioning system.

PACKING LIST

No.	Description	Dimension	Weight (KG)	Quantity
1	Seaeye Falcon Container (14'FT Offshore Container)	L: 4,270mm W: 2,438mm H: 2,590mm	8,000	01