

# Falcon



World leader in electric underwater robotics

# Falcon



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 or 1000m for the DR version.

Five powerful thrusters provide precise control and maintain a stable platform in strong currents and turbulent waters. An open frame construction and distributed intelligence enable easy attachment of a range of sophisticated sensors, sonars, tooling and accessories.

Using touchscreen and joystick technology, the user-friendly configuration is combined with intelligent control software to provide improved vehicle control and diagnostic data as well as the ability to customise the pilot display and enable features such as station keeping.

Saab Seaeye offer both in-house and on-site training, every customer is designated an account coordinator offering a rapid response for spares, repairs and servicing and a vital contact point for import / export and shipping issues. Our emergency technical support team is available 24 hours a day with engineers who have an extensive technical knowledge of our systems combined with practical industry knowhow.

Many organisations choose Falcon because of:

- Portability
- Single-phase 110/230 VAC supply
- Versatility
- Powerful / stable platform
- Open frame construction
- Easy addition of sensors and tooling
- Advanced surface control equipment
- Training
- Aftersales and 24 hour technical support
- Rental income opportunities
- High resale value
- Many Falcon trained pilots.

# About Us

Saab Seaeye is the world's largest manufacturer of electric underwater robotic systems. With over 35 years of providing ROV solutions to a wide variety of subsea industries, Saab Seaeye continues to inspire pioneering developments that lead the industry with innovative solutions trusted to perform complex tasks in some of the most hostile environments on the planet.

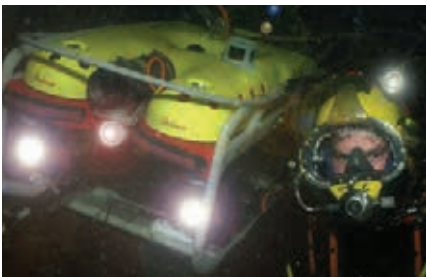
A wholly owned subsidiary of Saab, we have facilities in the UK and Sweden along with substantial water tank and lake test facilities. Over 80% of our systems are exported to markets that span the globe.

Saab Seaeye is certified by DNV.GL to ISO 9001, ISO 14001 and OHSAS 18001.

# Market Sector Applications

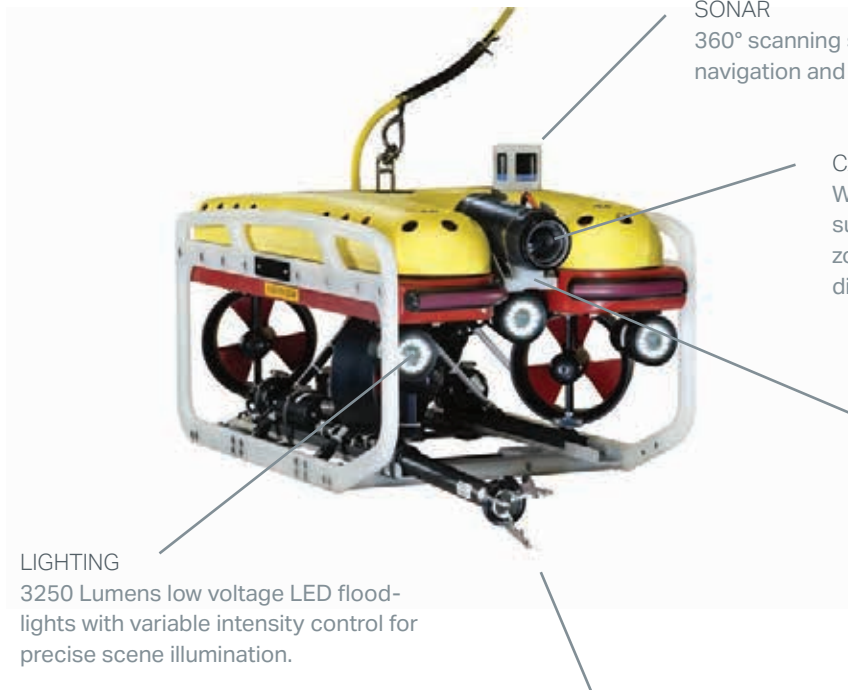
Many different market sectors deploy our Falcon systems in a vast array of demanding situations where they work tirelessly for extended periods in the most challenging conditions. Tasks include observation, inspection, repair and maintenance, diver support, survey, intervention, salvage support, deep tunnel and dam inspection, security, search and rescue operations, UXO clearance, decommissioning, marine science, archaeology, aquaculture and environmental monitoring.

Key to the success of the company is the reliability and capability of our systems and the renowned support and service we offer our customers in helping find solutions to their special requirements - and afterwards being available for every moment of every day throughout the life of their vehicle, wherever it is in the world.



# Falcon

## Falcon 300 msw



**SONAR**  
360° scanning sonars for navigation and target location.

**CAMERAS**  
Wide angle, low light, colour inspection camera supplied as standard. Choice of additional colour zoom, low light B&W navigation, colour HD or digital stills cameras.

**TILT PLATFORM**  
180° tilt platform for up to two cameras, light or 2D multibeam imaging sonar.

**LIGHTING**  
3250 Lumens low voltage LED flood-lights with variable intensity control for precise scene illumination.

**MANIPULATOR**  
Electric three jaw manipulator with soft rope cutter blade.

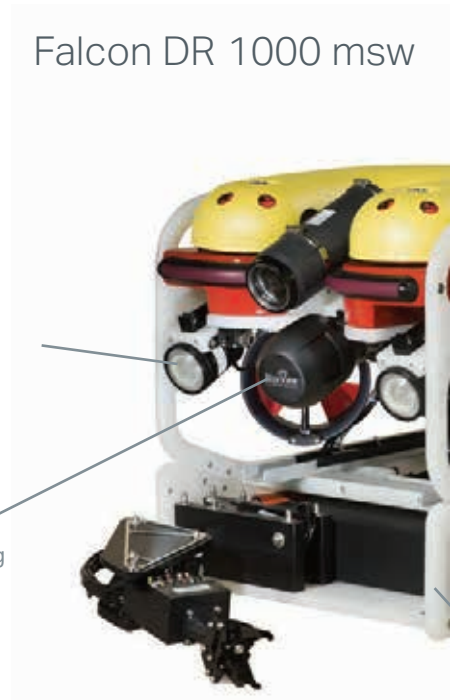
**FIBRE OPTIC UPGRADE**  
Available for Falcon 300 msw, providing increased camera and sensor capability or up to 1100m of tether.

**AUTOPILOTS**  
Depth and heading as standard. Altitude and station keeping as an option.

## Falcon DR 1000 msw

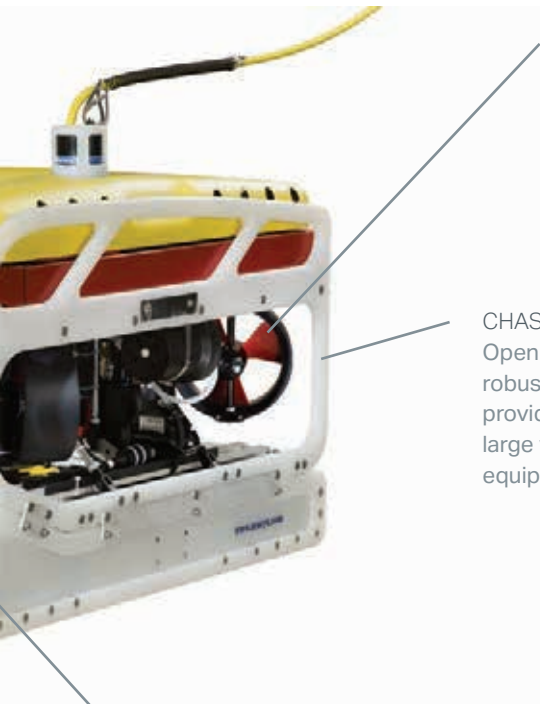
**TILTING LIGHTS**

**MULTIBEAM SONARS**  
Range of multibeam imaging sonars can be fitted.



## Customisation

The system can be easily customised due to the flexibility of the distributed control system and modular vehicle design.



### THRUSTERS

Four vectored and one vertical high efficiency thrusters with magnetically coupled propellers for low maintenance and integral drive for precise vehicle control.

### CHASSIS

Open frame design is extremely robust and lightweight while providing free water flow and a large volume for fitting further equipment.

### TOOLING SKIDS

Task specific underslung skids available to carry manipulators, cutters, custom tooling, survey and environmental sensors. Tooling and sensors are fully integrated into vehicle telemetry system.

### MAINTENANCE

The protective cover can be easily removed to provide easy access to the system for maintenance and the addition of system options.



## Falcon Surface Equipment



The Falcon surface unit includes a 22" detachable daylight viewable touchscreen, fully customisable screen layouts and data displays - with storage for multiple layouts.

It has digital graphics and an analogue video overlay, four video outputs for remote screens / recorders, live vehicle diagnostics and system configuration windows.

### AUTOPILOTS

Auto heading & depth (latch and track modes)

Auto altitude option

Station keeping with fine position control

Relative waypoint control and auto speed



The Falcon surface unit also features 20 hrs of integrated video recording (.ASF H.264 encoded format), .jpg stills capture to an integral hard disk or USB drive for playback on any windows machine, serial data import / export, a USB hand controller and an on-screen virtual controller.

Accessories



Cleaning brush



Wire rope cutter



Multibeam sonar



CP probe / UT gauge



Pipe tracker

Deployment Options



Lock latch



Case winch



Hand winch



MK8 electric winch



# SAAB

## Specifications



|                                  | Falcon   | Falcon DR |
|----------------------------------|----------|-----------|
| Depth rating (m)                 | 300      | 1000      |
| Length (mm)                      | 1000     | 1055      |
| Height (mm)                      | 500      | 555       |
| Width (mm)                       | 600      | 600       |
| Weight in air (kg)               | 60       | 100       |
| Payload (kg)                     | 14       | 15        |
| Forward thrust (kgf)             | 42       | 42        |
| Lateral thrust (kgf)             | 25       | 25        |
| Vertical thrust (kgf)            | 13       | 13        |
| Speed (knots)                    | >3       | >3        |
| Thruster type                    | S1-MCT01 | S1-MCT01  |
| Horizontal thrusters             | 4        | 4         |
| Vertical thrusters               | 1        | 1         |
| Auto-depth                       | ✓        | ✓         |
| Auto-heading                     | ✓        | ✓         |
| Auto-altitude                    | option   | option    |
| Auto pitch / roll                | -        | -         |
| Station keeping                  | option   | option    |
| Video channels                   | 1        | 2         |
| Video transmission               | STP/FO   | FO        |
| LED lights (standard quantity)   | 2        | 2         |
| Tilt platform                    | ✓        | ✓         |
| Pan and tilt platform            | -        | -         |
| iCON                             | ✓        | ✓         |
| Typical manipulator function (f) | 1f or 5f | 1f or 5f  |
| Tooling 3PH power outlet         | no       | no        |
| Power input phases               | single   | single    |
| Voltage (Vac)                    | 110/230  | 110/230   |
| Option                           | -        | -         |
| Frequency (Hz)                   | 50/60    | 50/60     |
| Battery capacity (kWh)           | n/a      | n/a       |
| Endurance (hours)                | n/a      | n/a       |



### Saab Seaeye Ltd

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