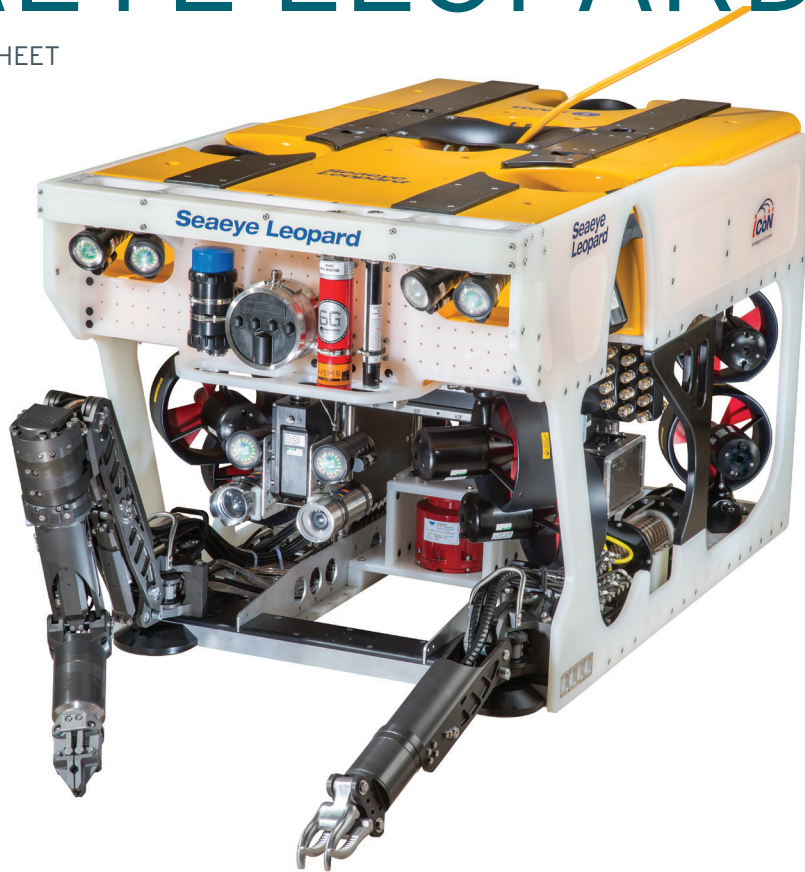


SEAEYE LEOPARD

SPECIFICATION SHEET



WORK CLASS ROV

The Seaeye Leopard is designed to offer operators an exceptionally powerful electric work class ROV in a compact chassis. Developed from the highly successful Panther XT-Plus, the Seaeye Leopard produces an impressive half tonne of forward thrust, with fifty percent more payload, three times the tooling power and double the depth rating, whilst maintaining the same deck footprint.

Equipped with Seaeye's iCON intelligent control system, this 3000m work ROV benefits from an enhanced user interface, simple network architecture, exceptional handling and power with advanced autopilots including pitch and roll stabilisation, built in diagnostics, redundancy and remote internet access for upgrades and technical support.

Installed with Schilling Orion heavy duty manipulators, as well as a wide range of survey sensors and interchangeable tooling equipment, the Seaeye Leopard is ideally suited to work tasks including drill support, pipeline survey, exploration, salvage, cleaning and deep water IRM.

KEY FEATURES

- 4.5 KW MANIPULATOR HPU
- 15 KW TOOLING HPU
- SCHILLING ORION MANIPULATORS
- MULTIBEAM SONARS
- WATER JET
- PIPELINE SURVEY WHEELED SKID WITH PIPE TRACKER AND BOOM ARMS
- OTHER CUSTOM TOOLS AVAILABLE
- INBUILT ROV INS NAVIGATIONAL SYSTEM

The Leopard is fitted with six long-life LED lights (on four individually controlled channels). They provide excellent illumination with very low power consumption and are very robust.

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CHASSIS

The extremely rugged polypropylene and stainless steel chassis has been designed to maximise free water flow through the ROV. Materials and design are balanced to create an incredibly lightweight chassis, maximising strength and stiffness to support a 1Te through frame lift capability for tooling skids and rigid mountings for manipulators, TDUs, tools and sensors.

BUOYANCY

Buoyancy is derived from syntactic foam blocks finished with a tough polyurethane skin. The buoyancy modules contain apertures for vertical thrusters and the main system lift point.

PROPULSION

Propulsion is delivered by 11 vectored SM9 500v brushless DC thrusters providing 6-axis control. This provides for active vehicle stability allowing much greater thrust to be introduced into the chassis. The thrust vectoring algorithm can also accommodate multiple damaged thrusters whilst retaining normal flying characteristics.

PAN & TILT PLATFORM

The robust high-torque pan & tilt unit can accept two cameras and lights. The pan & tilt angles are displayed graphically. An additional tilt platform can be added if required.

LIGHTING

The Leopard is fitted with six long-life LED lights (on four individually controlled channels). They provide excellent illumination with very low power consumption and are very robust.

ELECTRONIC POD

The vehicle's watertight electronics pod is manufactured from machined 6082 marine grade aluminium. The pod is fitted with leak, humidity and temperature alarms.

For ease of access the pod is designed to slide out of the vehicle chassis using a rack assembly fitted to the vehicle side.

One end of the pod houses the power switches and control hub for the core ROV functions, while the other is a configurable power and data hub for client use. 24V, 110V and 220V supplies are available via multiple switched channels each having a software configurable/resettable 'fuse'.

EQUIPMENT INTERFACES

A wide range of standard or custom interfaces are available, in particular for:

- Cameras
- Manipulators, boom arms, cutters
- CP probe
- Sonar systems (obstacle avoidance, side-scan, multibeam, profiling)
- Scientific equipment (bathy, CTD, etc)
- Emergency strobe
- Tracking system
- Tooling motor
- Auxiliary connections (RS485/RS232/ Ethernet)

MAINTENANCE MANAGEMENT SYSTEM

- Maintenance planning, scheduling and reporting
- Built-in graphical maintenance instructions with parts, tools, safety and skill requirements
- System, spares, tools and consumables inventory
- Web based remote access option

FIBRE OPTIC SYSTEM

- GigE - fibre mux for ROV control and data
 - 8 channel CWDM for 100% redundancy and 4 spare wavelengths
 - Standard client fibre mux provides up to:
 - 8 x composite video
 - 16 x RS232/485/422 data channels
 - 50 Mbs Ethernet
 - Additional client fibre mux options available e.g. Gig-E, HD video
- Custom interfaces and configurations can be provided.

TOOLING

- 45 kW Brushless DC 'clean' HPU for manipulators
 - 4.5 kW Brushless DC water jet, or tooling brush motor option
 - 3-phase 15 kW (20 HP) 'dirty pack' HPU providing 30 l/min @210 Bar, mounted on removable tray with dedicated compensator and filter for other tooling options
 - Schilling 7 and 4 function manipulators (2 x 7 function option), or Hydrolek HD manipulators
 - Vehicle can lift and remain level lifting 50 kg in 7 function arm at full reach (1.5m)
- At the heart of the Leopard is iCON™, Saab Seaeeye's revolutionary intelligent control and power distribution system.

ROV / AUV CONTROL

- Advanced six degrees of freedom control system maximising vehicle performance
- Flexible PC based human machine interface using touchscreens, joysticks and switch panels
- Simple power and serial data connectivity to all system devices
- Flexible/upgradeable system architecture
- Detailed diagnostics and logging of data from within system devices
- Fault tolerant, automatically adapting in the event of device damage or failure

POWER DISTRIBUTION

- Remote controlled surface and subsea power supplies with power and isolation monitoring
- Fully switchable power outputs with programmable overcurrent, voltage and earth leakage

NAVIGATION

- Advanced vehicle autopilots for heading, depth, pitch/roll and altitude
- Station keeping, cruise, transit and standoff control options
- Software interfaces for additional 3rd party sensors to augment vehicle navigation and control
- Adaptive autonomous vehicle mission software, using real-world data triggers

SPECIFICATIONS

DEPTH RATING	3000 msw (deeper options available)
LENGTH	2150 mm
HEIGHT	1174 mm
WIDTH	1160 mm
LAUNCH WEIGHT	< 1200 kg
FORWARD SPEED	> 3.5 knots
THRUST FORWARD	493 kgf
THRUST LATERAL	377 kgf
THRUST VERTICAL	225 kgf
PAYLOAD	205 kg (105 kg after mainipulators fitted)

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SPECIFICATION SUBJECT TO CHANGE WITHOUT NOTICE.

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