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 2000/3000m 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.

Capable of accommodating Schilling Orion or Hydro-Lek heavy duty manipulators, as well as a wide range of work class 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.

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 is delivered by 7 or 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.
SEAEYE LEOPARD

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.

ELECTRONICS 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/resetable '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)

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
- 4.5 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 Seaeye'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 (optional)
- Software interfaces for additional 3rd party sensors to augment vehicle navigation and control
- Adaptive autonomous vehicle mission software, using real-world data triggers

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
SEA+EYE LEOPARD SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth rating</td>
<td>2000/3000 msw (deeper options available)</td>
</tr>
<tr>
<td>Length</td>
<td>2150 mm</td>
</tr>
<tr>
<td>Height</td>
<td>1174 mm</td>
</tr>
<tr>
<td>Width</td>
<td>1160 mm</td>
</tr>
<tr>
<td>Launch weight</td>
<td>&lt; 1200 kg</td>
</tr>
<tr>
<td>Forward speed</td>
<td>&gt; 3.5 knots</td>
</tr>
<tr>
<td>Thrust forward</td>
<td>493 kgf</td>
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<tr>
<td>Thrust lateral</td>
<td>377 kgf</td>
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<tr>
<td>Thrust vertical</td>
<td>225 kgf</td>
</tr>
<tr>
<td>Payload</td>
<td>200 kg (105 kg after manipulators fitted)</td>
</tr>
</tbody>
</table>

OPTIONS, TOOLS AND ACCESSORIES

- 4.5 KW MANIPULATOR HPU
- 15 KW TOOLING HPU
- HYDRO-LEK MANIPULATORS
- ROTARY DISC CUTTER
- ANVIL CABLE CUTTER
- SCHILLING ORION MANIPULATORS
- ZIP JET PUMP
- MULTIBEAM SONARS
- HOT STABS
- STANLEY GRINDER
- WATER JET
- TORQUE TOOLS
- PIPELINE SURVEY WHEELED SKID WITH BOOM ARMS
- OTHER CUSTOM TOOL SKIDS AVAILABLE

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SEA+EYE LEOPARD REV 1

SPECIFICATIONS MAY CHANGE WITHOUT PRIOR NOTICE