



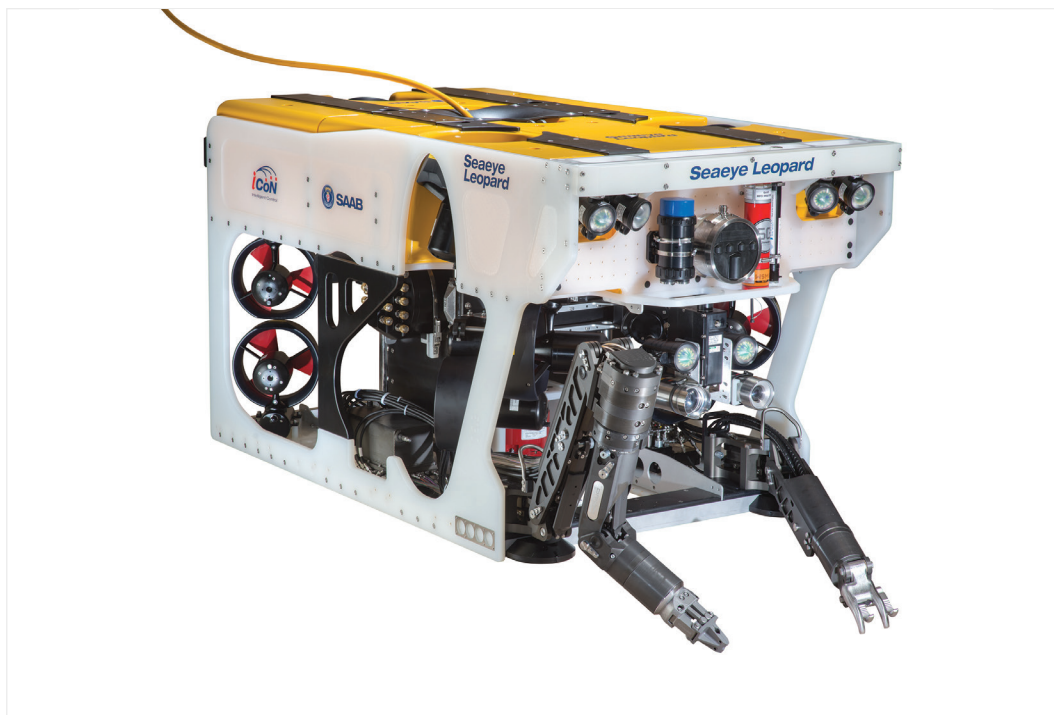
## WORK CLASS ROV

# SEAEYE LEOPARD 1706

The Seaeeye Leopard is designed to offer an exceptionally powerful electric work class ROV in a compact chassis. Developed from the highly successful Panther XT-Plus, the Seaeeye 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 Seaeeye's iCON intelligent control system, this 2,000 m 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.

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



## HIGHLIGHTS

- ▲ Operational depth of 2,000 m.
- ▲ Capable of working in currents up to 3 Knots.
- ▲ System includes LARS with caged type 8 TMS (tether length of 200 m).
- ▲ Pay load capacity of 205 kg (105 kg after both manipulators fitted).
- ▲ Single Mode fibre optic system (Gb Ethernet, 8 channel CWDM, 8 x composite video, 16 x RS232/485/422 data channels).
- ▲ iCON, SAAB's intelligent control and power distribution system.
- ▲ Station keeping, cruise, transit and standoff control.
- ▲ Full set of optional survey and tooling skids.
- ▲ Variety of tooling options.
- ▲ Small footprint, enabling operations to be conducted from small vessels of opportunity, fixed or floating platforms.

All specifications presented within this document are subject to change without notice.

## VEHICLE SPECIFICATIONS

Depth Rating:	2,000 m
Length:	2.150 m
Width:	1.160 m
Height:	1.174 m
Weight:	330 kg
Launch Weight:	< 1,200 kg
Forward Speed:	> 3 knots
Forward Thrust:	493 kgf
Lateral Thrust:	377 kgf
Vertical Thrust:	225 kgf
Payload:	205 kg

Propulsion:  
11 vectored SM9 500v brushless DC Thrusters

Auto-Functions:  
Heading Control  
Depth Control  
Pitch and roll Control  
Altitude Control  
The system also has station keeping, cruise, transit and standoff control.

Umbilical/Main Lift	
Umbilical Length:	2,000 m
Umbilical O/D:	29 mm
TMS (Seaeye Type 8)	
Length:	1.792 m
Width:	1.491 m
Height (to lift eye):	2.75 m
Weight (in air):	1.2 Tons
Depth Rating:	2,000 m
Tether Length:	200 m
Tether OD:	22 mm
Power Requirements:	380-440V, 3Φ, 50/60 Hz, 250 kVA

## SYSTEM DIMENSIONS AND WEIGHTS

LARS with Winch:	
Length:	8 m
Width:	2.75 m
Height: (to lift eye):	2.25 m
Weight:	25 Tons
A-Frame Outreach:	2.5 m

Control Cabin - DNV 2.7-1 offshore container, A60 rated:	
Length:	6.1 m
Width:	2.6 m
Height:	2.6 m
Weight:	7 Tons

Workshop/Stores Cabin - DNV 2.7-1 offshore container, A60 rated:	
Length:	6.1 m
Width:	2.6 m
Height:	2.6 m
Weight:	9 Tons

Power Cabin - DNV 2.7-1 offshore container, A60 rated:	
Length:	2.6 m
Width:	2.6 m
Height:	2.6 m
Weight:	5 Tons

## EQUIPMENT FITTED AS STANDARD

Control System:  
The Leopard operates on SAAB Seaeye's latest distributed intelligence control system, iCON. This allows each node (thruster, lights, camera, actuators, etc.) to be individually controlled, tested, isolated or

updated.

Man Machine Interface (MMI):

The Leopard 1706 MMI comprises 6 main elements:

- Surface Power Supply Remote Control Interface
- TMS Control Interface
- TMS Foot Switches
- Flight Screens
- Two Touch Screens
- Hand Controller

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.

Vehicle HPU:

1 x 4.5 kW brushless DC 'clean' HPU for manipulators  
3-phase 15kW (20HP) 'dirty pack' HPU providing 30 l/min @ 210 Bar, mounted on removable tray with dedicated compensator and filter.

Manipulators:

1 x Schilling Orion 7P with 3.8" Gripper.  
1 x Schilling Orion 4R with 7.8" Gripper.

Pan & Tilt:

1 x High torque, oil filled, pan & tilt platform. The unit can accept two cameras and lights.  
1 x +/-90 degree camera tilt platform which accepts one camera and light.

Camera:

1 x Seaeye Black and White Camera  
1 x Kongsberg Colour Zoom Camera.

Digital Video Recording System:

Digital video recording system (4 channel simultaneous recording), with video overlay for all channels.

Imaging Sonars:

1 x Tritech Super Seaking DST avoidance sonar

Depth Sensor:

1 x Electronic sensor accurate to +/- 0.1% FSD

Lighting:

The Leopard is fitted with six long-life LED lights (on four individually controlled channels).

Emergency Systems:

1 x Strobe Light

## OPTIONAL EQUIPMENT

Sensors/Equipment:

- Tritech Profilers
- 2D Real Time Sonar
- Doppler Velocity Log (DVL)
- Wire Rope Cutter
- Multibeam Echo Sounder
- CP / UT Probes
- Underwater Gyro Compass
- Soft Line Cutter

Optional Skids:

- Wheeled skid with boom arms (c/w cameras/lights)
- Water Jetting/ dredging skid