

XLX EVOLUSION III ROV SPECIFICATION SUMMARY

ROV	
Power	200 shp (150 kW)
Depth Rating	4000 msw
Dimensions	Length Width Height 3,605 mm 1,870 mm 2,246 mm over buoyancy (4000 m) TBC
Weight (Dependent on Equipment Fit)	In-Air Payload in Seawater 5,300 kg 200 kg typ. based on max flotation density (4000 m) TBC

Summary	
Performance (Theoretical)	
Forward	4.0 knots
Lateral	3.2 knots
Vertical Lift	3.4 knots
Turning Rate	40° /s
Pitch Control	± 2°
Roll Control	± 2°
Bollard Pull (Empirical)	
Forward	1050 kgf
Aft	1050 kgf
Lateral	1050 kgf
Vertical Lift	940 kgf
Thrusters	
Type	Hydraulic, fixed pitch
RPM	2,200 (maximum)
Axial	4 x 380 mm high power (canted @ 45°)
Vertical	4 x 300 mm high power (canted @ 30° to vertical)

Lift Point Location Adjustable Safe Working Load (SWL) Design Load (DL)	5 positions in steps of 76.2mm 9,000 kg 27,000 kg
Frame Through Frame Lift (TFL) Material Auxiliary Lift Emergency Lift <i>Work Package Mountings</i> Base	3,000 kg Aluminium 6082-T6 with StSt hardware 2 x lift lugs provided with wire rope lift sling assembly 2 x lift lugs provided with soft slings 4 x sockets to accept 68 mm dia. Vertical pins Sockets include cross holes to accept 35 mm dia. Horizontal pins 795 mm longitudinal spacing 428 mm lateral spacing
Rear Sides Front	Centred on central lift point position 500 kg @ 500 mm COG offset 250 kg @ 250 mm COG offset 250 kg @ 250 mm COG offset
Buoyancy Type Arrangement	Syntactic Foam 4 main blocks, secured with spring loaded tie rods

Hydraulics	
Subsea HP Motor Type RPM Voltage Configuration Instrumentation	200 shp 4-pole induction 1800 nominal 3-phase, 4160 Vac, 60 Hz Dual ended Ground fault, oil temperature, water ingress
Pumps <i>Main Pump</i> Factory Set Pressure System Flow (@240 bar) <i>Auxiliary Pump (if fitted)</i> Factory Set Pressure Flow	Variable displacement 200 cc/rev Kawasaki 240 bar 320 L/min Variable displacement, open circuit 147 cc/rev Sauer Danfoss 240 bar 238 L/min
Valve Packs <i>Main</i> <i>Thruster</i>	10 x 0-12 L/min Proportional External metering, counter-balance valves, available on all stations See later text for allocation Control for 8 thrusters 2 x 0-160 L/min proportional pressure spares 1 Solenoid for isolatable manipulator supply See later text for allocation

<i>Auxiliary</i> <i>High Flow</i> <i>Instrumentation</i>	10 x 0-12 L/min Proportional External metering, counter-balance valves, available on all stations See later text for allocation and additional functions 2 or 4 station Proportional Pressure and Flow 0-25, 0-75 or 0-140 L/min See later text for allocation Main and auxiliary pressure (mechanical and electrical gauges) Filter back pressure (Main & Aux return & case drains) Reservoir levels (analogue) Water detectors in all valve packs Valve drive and power indicators (visual onboard and on GUI) Temperature sensors on HPU pump inlets
Reservoirs <i>Fill Volumes</i>	Main & Aux System 20 L compensation @ 0.5 bar pressure, 0.7 bar relief Main 45 L Aux 35 L
<i>Filtering</i> <i>Oil Tubing</i> <i>Fittings</i>	HP 6 Micron Absolute, No Bypass LP 25 Micron Absolute, 2.5 bar bypass, back pressure alarm Case Drain 25 Micron Absolute, 1.7 bar bypass, back pressure alarm Cardev filter Water Separation ISO rated, Shell Tellus (viscosity specified based on area of operation) Stainless steel seamless tubing Stainless steel Parker Seal-Lok & SAE Ports $\frac{1}{2}$ in Pressure Connection Quick disconnect $\frac{3}{4}$ in Vent Connection Quick disconnect

Power	
Power Requirements	
<i>Power Input (continuous)</i>	
	System: Pick option to suit system. ROV ROV & TMS 235 kVA ROV & Control Van 255 kVA ROV, TMS & Control Van 260 kVA 280 kVA
	Options: Spares Van* 25 kVA Workshop Van* Deck 25 kVA HPU* 35 kVA LARS* 250 kVA**
<i>Generator Sizing</i>	Subject to system configuration, ask FET for advice.
<i>Voltage</i>	380/480 Vac, 3-phase, 50/60 Hz
* If fitted	
** Typical value	

Electrical Compensation	
Pressure	0.5 bar with 0.7 bar relief
Oil	Shell Tellus (same viscosity as hydraulic fluid)
Total Capacity	95 L
Compensation Circuits	
Junction Boxes & Valve Packs	7.0 L
Electric Motor	3.5 L
Thruster Bearings & Speed Feedback	0.86 L
Instrumentation	Analogue level sensors, 4-20 mA
Auto Controls (Dependent on sensor choice)	
Heading (standard)	$\pm 2^\circ$
Heading (survey)	$\pm 1^\circ$
Depth	± 0.15 m
Altitude	± 0.15 m
Pitch and Roll	$\pm 5^\circ$
Station Keep	2 knots
Dynamic Positioning	Yes, waypoint and auto position
Environmental Conditions	
Air Temperature	-20 to 45 °C
Water Temperature	-2 to 32 °C
Storage Temperature	-20 to 60 °C
Humidity	Up to 100%
Saltwater	Designed for intermittent submersion
Vibration	0.5g peak, sine-sweep 5 Hz to 55 Hz
Load Frame Design Guidelines	
	Load Frame: TMS frame, vehicle frame, work package mount
Det Norske Veritas	2.22, <i>Lifting Appliances</i>
Det Norske Veritas	2.7-1, <i>Portable Offshore Units</i>
Lloyds Register	<i>Code for Lifting Appliances in a Marine Environment – Sea State 5/6</i>