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# ISE DORADO Semi-Submersible Minehunting Vehicle



The growing threat from new-generation mines more difficult to detect has stimulated the demand for new mine-hunting systems that offer improved safety and efficiency. The Dorado vehicle, in operational service with the Canadian Department of National Defence, was developed to meet this need. The Dorado vehicle is capable of towing a sonar Towfish at speeds up to 12 knots and depths to 200 m. It is powered by a 315 kW marine diesel engine. Air is drawn through the mast and exhausted through the stabilizer above the contra-rotating propeller. The engine also provides power for the hydraulically operated control planes and the keel-mounted winch for the sonar Towfish. The Towfish was developed to follow the seabed at low altitudes and is fitted with a multibeam sidescan sonar.

## DORADO Specifications

Dimensions	Length: 8.23 m Width: 2.28 m Hull Diameter: 1.17 m
Dry Weight (with fuel)	5900 kg
Fuel Capacity	725 kg
Dry Payload Capacity	0.60 cu.m
Dry Payload Weight	210 kg
Speed	18 knots with no tow. Between 10 & 15 knots with tow
Endurance	12 hrs at 200 depth with tow. 28 hrs without tow
Sea State	Sea State 4 for operations, Sea State 5 for transit
Propulsion	Caterpillar 3126 - 315 kW, 6 cylinder, after-cooled, turbo- charged, marine diesel engine
Transmission	ZF Marine 2.7:1 gear-reduction with hydraulic shifting - forward, neutral and reverse
Propeller	Contra rotating gearbox and propulsor
Control	Real-time, multi-tasking software
Ballast	3000 psi air ballast system. 900 kg drop weight
Sonar Winch	Hydraulically operated winch capable of spooling 500 meters of 1 cm dia. Electro-mechanical or electro-optical-mechanical cable
Guidance & Nav	iXSEA Octans FOG providing 50 Hz closed loop hydroplane control of depth, pitch, roll and heading
Command & Ctrl	Manual, autopilot, or autonomous DGPS based line-following between geo-graphic way-points. 400-465 mHz 9600 bps full duplex communication radio
Payload	ISE Aurora Towfish, MB side scan sonar. Other options are available