

AURORA TOWFISH



Aurora is an actively stabilized towfish that can accommodate a variety of wet and dry payloads.

Development of Aurora Towfish commenced in February 1997. The vehicle design is modular, allowing the hull to accommodate wet and dry payloads of varying sizes. As a towfish, Aurora has been designed with a large, actively controlled main wing to control depth. The large downforce created by the wing reduces the cable scope and layback, particularly with unfaired cables, enhancing the positional accuracy of the towfish. Active tail planes control towfish attitude and stability. A mounting rail for sonar arrays is fitted to the bottom of the towfish making it possible to accommodate a broad number of sonars. The Aurora Towfish is designed to operate at speeds of up to 12 knots.

PRINCIPAL CHARACTERISTICS

Length:	3.3 m (4 pressure hull sections and a wet payload/sensor bay) Configurable with additional modular wet and dry hull sections
Diameter:	39.6 cm
Overall Height:	71.3 cm (tow point attachment to lower mounting rails)
Wing Span:	2.53 m (wings easily removed for on-deck maintenance and storage)
Displacement:	465 kg nominal
Speed:	10 -12 knot towing
Depth:	460 m working depth
Propulsion:	Surface tow
Power:	380 VDC or 460 VAC single phase supplied from the surface PDU down the tow cable
Supervisory Control:	Surface console is a PC running ISER's standard AUV user interface software Communications link is an RS-422 data stream down the tow cable
Onboard Control:	CompacPCI microprocessor running a real time proprietary control system
Sensors:	iXSEA PHINS Inertial Navigation Unit Paroscientific quartz depth sensor RDI 300 kHz WN Doppler log for altitude and speed
Minehunting:	Klein Associates 5500 multibeam side scan sonar
Payload Capacity:	Currently, one hull section, 0.05 m ³ , is designated for dry payload space. The flooded payload bay provides 0.025 m ³ of wet payload space. Rails on the bottom of the pressure hull provide additional wet payload capacity. 55 kg of combined wet and dry payload weight depending on the vehicle trim. Payload capacity is configurable with the addition of modular hull sections.



INTERNATIONAL SUBMARINE ENGINEERING LTD.

1734 Broadway Street, Port Coquitlam, B.C. Canada, V3C 2M8

Telephone 604.942.5223 Fax 604.942.7577

info@ise.bc.ca www.ise.bc.ca