

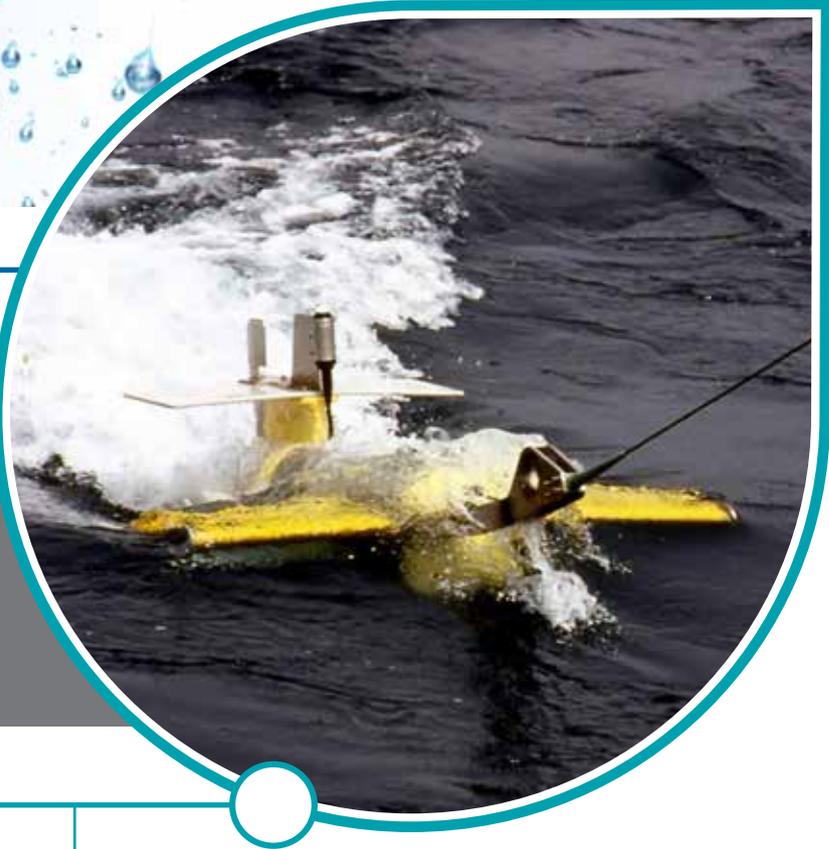
SeaSoar II

Oceanographic data gathering vehicle



www.chelsea.co.uk

Robust, high performance towed data acquisition vehicle for dedicated research vessels



Applications

- Real-time collection of oceanographic data
- Ecosystem health monitoring
- Fisheries research
- Military oceanography
- Upper ocean dynamics
- EEZ monitoring

Features

- Large payload capacity with excellent accessibility to instrumentation
- Versatile choice of instrumentation
- Wide tow speed range (9 to 12 knots)
- Undulation depth range from 0 to 500m
- Windows based operating system
- Custom configurations
- Generates its own power for vehicle control
- Real-time vehicle control with manual override
- Bottom information system available



What can the SeaSoar II do for you?

Introduction

SeaSoar is a versatile towed undulating vehicle used to deploy a wide range of oceanographic monitoring equipment. Developed by CTG from an original design by the National Oceanography Centre, Southampton, UK it has a proven record of reliability over many thousands of miles of operation.

How does it work?

The **SeaSoar** is controlled by an hydraulic unit, control valve and depth sensor. The hydraulic unit is powered by an impellor, and is linked to a pair of externally mounted wings. The undulation required is set by the operator at the surface using a PC based control system.

Configurations

The **SeaSoar II** offers a large area into which oceanographic sensors can be fitted, which can typically include CTD, Fluorometer, Transmissometer, Nephelometer, Bioluminescence, Irradiance meter, Nitrate/ Nitrate sensor, Plankton Sampler, and Satellite truthing bands sensors.

The **MiniPack CTD-F** is offered as the sensor 'hub' onto which the majority of the auxiliary sensors are connected to, and which sends the main oceanographic data set to surface. Other third party CTD's can be used for this purpose.



Specification

The standard system comprises the underwater vehicle, hydraulic unit, towing bridle, deck control unit and PC based 'CFlightWin' SeaSoar Flight Control Software. The sensor payload can be designed to meet individual customer's requirements.

SeaSoar body

Dimensions	2m (L) x 1.60m (W) x 0.98m (H)
Weight in air	150kg (incl. hydraulic unit, excl. sensors)

Operating profile

Control	Profile input at deck unit for automatic control of wings or manual over-ride
Depth Range	0 to 500m faired cable (0 to 100m unfaired)
Towing speed	9 to 12 knots
Maximum rate of change of depth	+/- 3m/s (faired cable) +/- 1m/s (unfaired cable) Payload dependent

Engineering details

Flight programme	CFlightWin
Wing servo	Moog valve analogue control with depth sensor feedback loop
Materials	Strengthened glass fibre reinforced body; Stainless steel frame & towing yoke

Support systems

Winch	Dedicated winch & cable system is required
Cable	Rochester 7-H-314AXX (high strength armour) or equivalent
Fairing	Flexnose(R) type fairing is recommended

Note: Maximum depth achieved is dependent on system configuration.

Contact us today to see how we can help you

