GEOSPACE® Technologies

# Navigator Bird

## STREAMER DEPTH CONTROL SYSTEM


The Navigator Bird streamer depth control system enhances offshore marine aquisition survey operations through design efficiency unique to the industry. The Navigator Bird features very high lift force at low speeds, extremely low power consumption, and robust, modular mechanics for high reliability.

The Navigator Bird comes equipped with a deep-service depth transducer, a fluxgate magnetometer, and a wing angle sensor. Continuous servo action, coupled with sophisticated algorithms to predict and respond to varying conditions of towed arrays, provides unprecedented streamer depth control.

A high-torque servo motor enables the Navigator Brd to utilize a high aspect ratio wing for lifting up to 75 lbs. at 5 knots, giving operators a 60% increase in streamer control at low speeds over existing devices. Control is noticably quicker and smoother even during low-speed deployment and retrieval. By combining time-proven mechanical advantages with advanced microprocessor control features, the Navigator Bird provides reliable depth control for a minimum of 7000 hours of uninterrupted operation.

The Navigator Bird System is easily interfaced to the primary navigation system via a network-interface using standard data format. User access can be as simple as using a standard web browser. By incorporating heading, wing angle, and temperature measurements the opperator has an aquisition platform to derive critical ballast and 3D processing information.

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### FEATURES

- By utilizing hydrostatic water pressure, trim is continuous and instantaneous
- Battery is not regularly consumed for trimming
- Minimum 10 months of battery life
- 75 lbs. of lift at 5 knots
- Measures Earth's magnetic field in addition to magnetic heading
- Detection, reporting, and recording of magnetic anomalies possible

### TECHNICAL SPECIFICATIONS

| | |
|---|---|
| Maximum Operating Depth | 35 m (114.863 ft.) (50.5 psig) |
| Maximum Depth | 250 m (830 ft.) (365 psig) |
| Depth Accuracy | ±0.15 m at 0–30 m; ±0.3 m at 30–60 m |
| Depth Control Stability | ±0.2 m (3 to 7 knots, ±2.25 kg buoyancy)<br>±0.5 m (1.5 to 7 knots, ±2.25 kg buoyancy) |
| Depth Servo Adjustment Rate | Continuous |
| Action After Battery Exhaustion | Maintains servo action to last depth setting |
| Heading Error | ±0.5° World Wide |
| Pitch and Roll Range | ±45° |
| Approximate Battery Life | 7000 hours |
| Operating Temperature Range | –5° to +50° C (23° to 122° F) |
| Temperature Accuracy | ±3° C |
| Weight in Water | 2.3 kg (5 lbs.) |
| Overall Length | 107 cm (42 in.) |
| Wingspan | 77 cm (30.4 in.) |


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592-03480-01 Rev. C