



SVP LAGRANGIAN DRIFTER

The Surface Velocity Program (SVP) drifter is a Lagrangian current following drifter designed to track mean currents at a fixed depth (5m to 100m) beneath the ocean surface. The key elements of the drifter include the drogue, the surface float and the connecting tether (see diagram). The drogue is a drag element locking the drifter to a parcel of water. The surface float contains the telemetry system, antenna, batteries, and sensors. Drifter position are calculated with an installed GPS receiver, or inherently with the Argos or Iridium telemetry systems. These positions provide the information necessary to calculate mean water currents. Positions and sensor data collected through the Iridium or Globalstar system are transmitted to the Pacific Gyre data server and available at www.pacificgyre.com. SVP drifters are designed to survive in the open ocean for more than one year.

SPECIFICATIONS

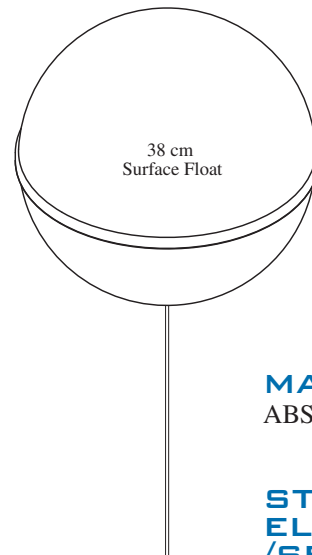
TELEMETRY OPTIONS	<ul style="list-style-type: none">- Argos satellite system for global coverage (No GPS required for longer open ocean deployments).- Mobitex terrestrial data packet network for coverage around North American metropolitan areas.- Globalstar satellite system for coverage in 120 countries and most surrounding bodies of water.- Iridium satellite for two-way global coverage.
ARGOS DATA FORMAT	The standard data telemetry format for the Argos system is the Global Drifter Program O3 format. Other Drifting Buoy Cooperation Panel (DBCP) standard formats as well as customer specific Argos data formats are available.
TRACKING/LOCATIONS	A GPS receiver installed in the surface float calculates drifter positions. The Argos and Iridium satellite systems can calculate positions inherently, which may be sufficient in some applications.
DROGUE	The drogue is a holeysock configuration constructed of fray resistant fabric. It consists of 4 cylindrical sections each 120 cm (2 ft.) long. The standard drogue depth is centered at 15 m below the sea surface. Other custom depths are available with a corresponding change in drogue size to maintain a drag area ratio of greater than 40. An available drogue-on sensor indicates whether the drogue has detached at sea.
LIFE-SPAN	The surface float and drogue are designed to survive for more than one year at sea. Battery life ranges from 1 week to 3 months and longer depending on the telemetry system, sampling rates, sensor load and battery type.
SENSORS	<p>Sea Surface Temperature: The temperature probe is positioned just below the water surface when the drifter is deployed, and is accurate to ± 0.1 degree Celcius.</p> <p>Submergence/Deployed: SVP drifters include either a drogue-on or deployed flag sensor. The drogue-on flag indicates if the drogue is still attached to the surface float and thus the current measurements are valid. The deployed flag sensor indicates whether the drifter is deployed in salt water. The drogue-on sensor is installed for long deployments and the deployed sensor for shorter deployments.</p> <p>Air Pressure (Optional): Sampled through a port installed on the top of the surface float. The port is designed to withstand submergence to 3 meters with no degradation of sensor performance and connects to a pressure sensor mounted inside the surface float. Sensor accuracy 1mB.</p> <p>Salinity (Optional): Sampled with a Seabird SBE 37SI. This sensor is typically mounted just below the surface float. Initial sensor accuracies, conductivity 0.0003 S/m, temperature 0.002 deg. Celcius.</p> <p>Wind Speed/Direction (Optional): Measured with a Gill WindSonic anemometer installed above the surface float. Sensor accuracies, wind speed 2% at wind speeds of 12 m/s, wind direction 3% at wind</p>
DEPLOYMENT	The SVP drifter can be packaged for several methods of deployment by ship or airplane. Contact Pacific Gyre for more information on drifter packaging and deployment.



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SEA SURFACE ➤

SURFACE FLOAT



MATERIAL:
ABS Plastic

STANDARD ELECTRONICS /SENSORS:

Data Telemetry
Argos, Iridium or Globalstar
Sea Surface Temperature
Drogue-on or Deployed
Battery Voltage
Air pressure (Optional)
Wind Speed (Optional)
Wind Direction (Optional)
Salinity (Optional)

DROGUE

TYPE:

Collapsible Fabric Holeysock

DEPTH:

Drogue shown is sized for centering at 15m below the surface. A shorter drogue would be used for shallower deployments and a longer drogue for deeper deployments.

15 M ➤

