



SWALE OCEANOGRAPHIC

Buoys and Flotation

For Subsurface Oceanographic Moorings

Syntactic subsurface buoyancy for ADCP buoy applications with integral stainless steel instrument mounting frames, or with single strength members for use as primary or back-up mooring flotation.

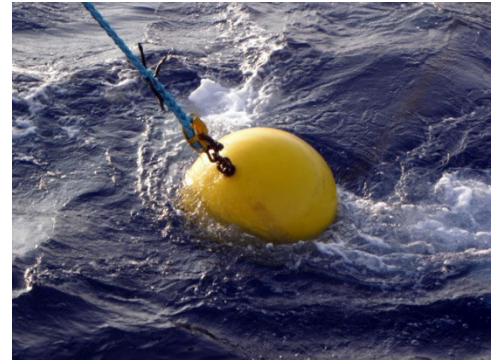
ADCP transducers and other sensors can be better directed to the surface when mounted inside the well of syntactic buoys and internally mounted instruments greatly reduce current drag and improve mooring performance.

Ellipsoid shaped subsurface buoys are also available and provide a lower drag coefficient than traditional spherical buoys which improves mooring performance by reducing lay down caused by water currents. Ellipsoid shapes are also more predictable and have lower risk than other non-spherical buoyancy modules.

During mooring recovery operations, ellipsoid buoys provide excellent vertical position of beacons unlike spherical buoys with unbalanced instrument payloads that roll in ocean waves.

Using a fewer number of floats by increasing the diameter of the float will also greatly reduce horizontal drag. The cross sectional area affected by ocean currents is smaller when using fewer larger floats with equal buoyancy to that of many small floats.

For example: 35" diameter float rated for 1000m and buoyancy of 250 kg is equal in buoyancy to 8x 17" diameter floats. Clearly, 1x 35" float will have far less drag than 8x 17" floats.



Features:

- Syntactic Composite Buoyancy Material
- Standard & Custom Instrument Frame Designs
- Unobstructed Transducer Beams (Doppler Profilers)
- Corrosion Resistant with Isolation Bushings & Anodes
- Integral Pressure Case Clamping Bands
- Frame Construction in 316 Stainless Steel
- Electro-Polished Stainless
- Single Strength Members in Stainless or Galvanized Steel
- High Strength - 2300 kg & 4500 kg

Steel Subsurface Floats, Spheres, & Mooring Buoys

Steel spheres have been in use for over 30 years and continue to provide benefits to oceanographers and marine engineers for long term deployment of instrumentation and sample collection apparatus.

Steel floats can be made larger in volume than alternative plastic and glass floats, providing greater buoyancy per float. This advantage translates to better mooring performance as fewer floats for the same given buoyancy will result in lower drag



Plastic Subsurface Floats & Mooring Buoyancy

Plastic fishing floats have a variety of instrument mooring applications. Configurations include; subsurface mooring flotation, instrument frame buoyancy, and pop-up recovery buoys for bottom mounts.

The basic configuration of placing floats in series on a single strength member provides an inexpensive buoyancy alternative in relatively shallow water applications. Galvanized steel strength members and shackle eyes with neoprene washers are used to build single, double or triple assemblies.

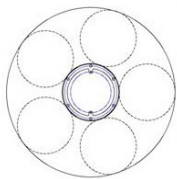


Spherical Buoys

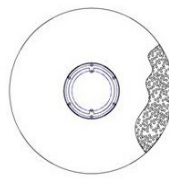
	Syntactic Foam for ADCPs			Standard Spherical Syntactic Foam			
Model	SB-35	SB-47	SB-65	SF-30	SF-35	SF-47	SF-65
Diameter	35" (90 cm)	47" (120 cm)	65" (165 cm)	30" (76 cm)	35" (90 cm)	47" (120 cm)	65" (165 cm)
Instrument well dia'	11" (28 cm)	11" (28 cm)	11" (28 cm)	-	-	-	-
Buoyancy (300m)	204 kg	453 kg	1496 kg	158 kg	272 kg	522 kg	1542 kg
Buoyancy (1000m)	159 kg	408 kg	1270 kg	122 kg	204 kg	476 kg	1315 kg
Buoyancy (2000m)	125 kg	363 kg	998 kg	113 kg	154 kg	408 kg	1043 kg
Buoyancy (3000m)	-	-	-	97 kg	136 kg	351 kg	784 kg

Ellipsoidal Buoys for low drag

	Syntactic	Plastic	Syntactic with frame	Plastic with frame
Model	EB-S-33	EB-S-P6	EB-F-33	EB-F-P5
Diameter	33" (84 cm)	33" (84 cm)	33" (84 cm)	33" (84 cm)
Height'	16" (41 cm)	16" (41 cm)	16" (41 cm)	16" (41 cm)
Buoyancy (300m)	108 kg	50 kg	104 kg	36 kg
Buoyancy (1000m)	88 kg	-	69 kg	-
Buoyancy (2000m)	68 kg	-	50 kg	-
Buoyancy (3000m)	56 kg	-	41 kg	-



Plastic Floats 300m Depth

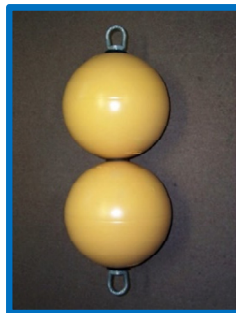


Syntactic Foam to 3km Depth



Other Spherical buoys

	Steel		Plastic	
Model	SSF-30	SSF-37	SPF-11	SPF-14
Size	30" (76 cm)	37" (94 cm)	11" (28 cm)	14" (36 cm)
Buoyancy	168 kg	317 kg	8.8 kg	17.6 kg
Depth Rating	380 m	380 m	400 m	800 m
Weight (Air)	75 kg	137 kg	2.4 kg	7.1 kg



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