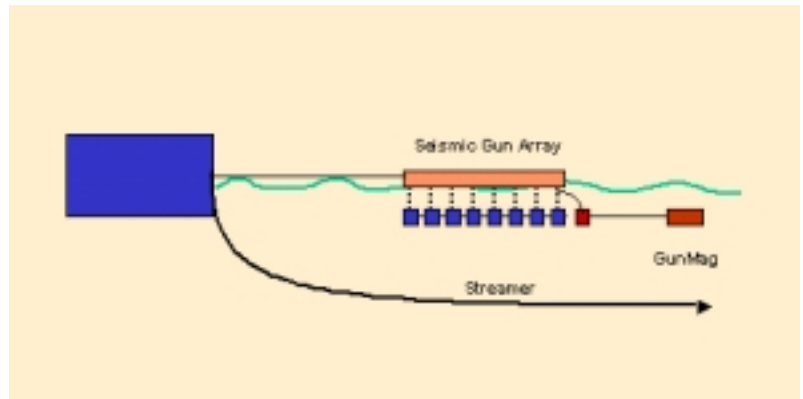


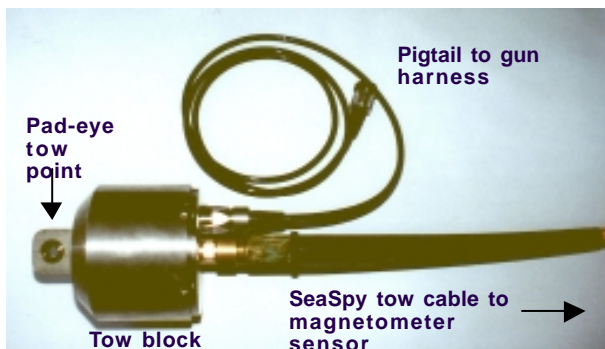
GunMag™ Marine Magnetometer System

Fugro-LCT developed the GunMag Marine Magnetometer System to facilitate the interface of the SeaSPY™ system to the seismic gun array when acquiring magnetometer data. The GunMag tow block is a rugged stainless steel housing with a pad eye tow point on one end and two cable connectors on the other end. This tow block attaches to the gun array using a stainless steel chain.

The aft end of the tow block has a SeaSPY compatible cable termination from which to tow the magnetometer cable and sensor. The second connector on the bulkhead joins the magnetometer tow block to the gun harness.



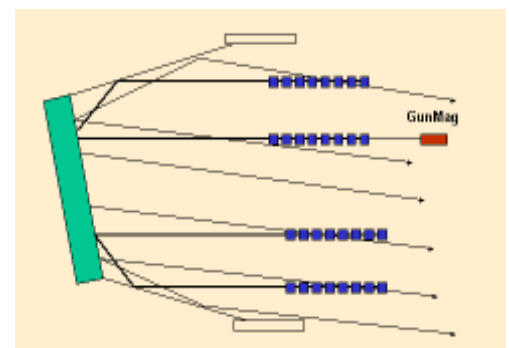
Typical Seismic Towing Configuration using GunMag.



The GunMag tow assembly.

Fugro-LCT uses a 4-pin connector, though only two connectors are necessary for the magnetometer signal. The active connector can be selected in the field.

GunMag comes with several tow cable options. Three 50m cable segments may be connected in series to allow the magnetometer sensor to be deployed 50, 100, or 150 meters astern of the gun array. Alternatively, Fugro-LCT provides a complete 300m tow cable to deploy the magnetometer from the stern of the vessel, should complications in boat operations prevent use of GunMag.



GunMag reduces entanglement in complex seismic tow arrays.

Features:

- Sampling:**
 - Improved positioning
 - Increased sampling (1 Hz)
- Diagnostics:**
 - Improved sensitivity and accuracy by nearly an order of magnitude
- Reliability:**
 - No dedicated winch required
 - Decreased shipping size and weight
 - Separated from seismic equipment

Technical Specifications

Performance:

Resolution:	0.001 nT
Sensitivity:	0.015 nT
Dead Zone:	NONE
Heading Error:	NONE
Temperature Drift:	NONE
Timebase Stability:	1ppm
Absolute Accuracy:	0.2 nT
Range:	18,000 to 120,000 nT
Gradient Tolerance:	Over 10,000 nT/m
Sampling Rates:	0.1Hz to 4Hz
External Trigger:	by RS-232
Communications:	RS-232, 9600bps

Operating Parameters:

Power Consumption:	1W stdby. 3W max
Operating Temp:	-45°C to +60°C
Power Supply:	15VDC - 35VDC or 100 - 240VAC

Fish Dimensions:

Fish Size:	4.1 ft. x 5" dia. (125 cm x 12.7 cm)
Fish Weight:	16kg
Weight in Seawater:	2kg

Tow Cable Dimensions:

Cable Size:	0.75 in OD
Strength Member:	Vectran braid
Breaking Strength:	6000 lbf
Standard Length:	300m of 50m increments

Other Sensors

Pressure Sensor:	300m max, 0.1m step
Temp Sensor:	-45°C to 60°C, 0.1°C step
Depth Sounder	500m max, 0.25m step

Specifications provided by Marine Magnetics Corp. and are subject to change without notice.

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