

## Geometrics Geoeel Silicone Gel Streamer

*The GEOEEL series of digital towed hydrophone streamers are the first small diameter arrays with the performance of larger systems. With a diameter of only 41mm, the GEOEEL is easy to deploy, easy to transport and largely immune from the noise, leakage and ground loops that plague the installation of analog streamers in a marine environment. The GEOEEL is filled with inert silicon Gel which makes it environmentally safe. Thick 1/8" abrasion resistant polyurethane keeps the streamer extremely rugged but still flexible enough to deploy by hand or mount on small winches. Available in a range of channel group intervals from 12.5m group interval down to smaller UHR streamers at 1m or 1.56m group interval.*



### Active Section

**Number of Channels:** 8 per section  
**Group Interval:** 1.56m, 3.125m, 6.25m, 12.5m,  
**Section Length:** 12.5, 25, 50, and 100 m  
**Hydrophones per Group:** 1mGI = 4, 1.56mGI = 4, 3.125mGI = 4  
 6.25mGI = 8, 12.5mGI = 16  
**Hydrophone Type:** GeoPoint / T1.  
**Group Sensitivity:** Depends on group interval and hydrophone model;  
**Jacket Material:** Clear polyurethane, 70 Duro, 3.18 mm (1/8 inch) wall thickness  
**Diameter:** 41 mm (1.6 inches)  
**Ballast Fluid:** Inert, high-flashpoint, non-polluting silicone Gel, 100 cSt to 3 cSt, depending on desired buoyancy  
**Weight:** ~1.35 kg (3 lbs) / m  
**Strain Member:** Vectran  
**Break Strength:** Over 2,200 Kg (5000 lbs)  
**Maximum Tow Speed:** ~8 knots recording, ~10 knots steaming, depending on configuration and sea state  
**Typical Towing Noise:** <5 uBar @ 4.5 knots, 8hz low-cut filter, Beaufort 5/6 seas  
**Minimum bend radius:** 750mm (30 inches)  
**Compass/Bird Coil:** I/O model 587 (one per section)  
**Depth Transducer:** One per section (Optional)



### Digitiser Modules





# Equipment Specifications

For further information: Email: [tsoffice@aol.com](mailto:tsoffice@aol.com)  
[www.ttsurveys.com](http://www.ttsurveys.com)

**Channels per Module:** 8 Sample Rates: 1/16 msec, 1/8 msec, 1/4 msec, 1/2 msec, 1 msec, 2 msec, 4 msec  
**Programmable Gains:** 0 dB, 8 dB, 18 dB, 30 dB  
**Record Length:** Up to 16,000 samples/trace  
**Water-Column Delay:** Up to 255 samples  
**I/O Communications:** 100Base TX Fast Ethernet, IEEE 802.3 compliant  
**Dead Time Between Shots:** 100 msec  
**Anti-alias Filter:** -3 dB @ 81% of Nyquist, down 135 dB at stop band  
**Input Impedance:** 126.8 KOhms, paralleled by 2.4 nF  
**Continuous Recording Mode:** Available with GPS synchronization  
**Test Oscillator:** 10 Hz to 2 KHz, 1 $\mu$ V to 100 mV AC rms  
**QC Tests:** Noise, DC offset, total harmonic distortion, gain accuracy, gain similarity, phase similarity  
**Bandwidth:** DC to 8 KHz  
**Resolution:** 24 bits including sign  
**Maximum Input Range:** +2.25V  
**Dynamic Range:** 120 dB typical @ 1 msec, 70 dB typical @ 1/16 msec  
**Common-mode Rejection:** 90 dB @ 1/4 msec, 190 Hz  
**Gain Accuracy:** +6.25% @ 1/4 msec, 30 dB, 100 Hz; +6.0% @ 2 msec, 30 dB, 25 Hz  
**Gain Similarity:** +3% @ 1/4 msec, 30 dB, 100 Hz; +3.0% @ 2 msec, 30 dB, 25 Hz  
**Phase Similarity:** +0.1o @ 1/4 msec, 30 dB, 100 Hz; +0.1o @ 2 msec, 30 dB, 25 Hz  
**THD:** 0.007% @ 1/4 msec, 30 dB, 100 Hz; 0.003% @ 2 msec, 30 dB, 25 Hz  
**Crosstalk:** -105 dB @ 30 dB, 1/4 msec, 190 Hz  
**Noise Floor:** 1.4  $\mu$ V rms @ 30 dB, 1/4 ms; 0.2  $\mu$ V rms @ 30 dB, 2 msec  
**Power Consumption:** Approximately 100 mA at 48VDC (12.5 mA/channel)  
**Dimensions:** 44 mm diameter x 330 mm long (1.75" by 11")  
**Weight in air:** 900 grams (2.0 lbs)  
**Weight in water:** 520 grams (1.1 lbs)  
**Packaging:** Titanium body  
**Connectors:** Waterproof, high-density stainless, 41-pin

## Tow Cable

**Electrical Conductors:** 7 twisted 24GA pairs and 10 16GA conductors  
**Strain Member:** Vectran Break Strength: Over 2,200 Kg (5000 lbs)  
**Length:** Up to 100m  
**Diameter:** 18.6 mm  
**Weight:** ~21 Kg (46 lbs) for 50 meters  
**Termination:** Flex-tow and non, plus double wet Braided Steel Armor: Optic  
**Bend Diameter:** 12 inches

