HMS-620LF Bubble Gun™

Portable Low-Frequency Acoustic Seismic System

The HMS-620LF Bubble Gun™ uses Low-Frequency acoustic signals to provide superior signal penetration vertically through coarse sand, gravel tills, and other difficult-to-penetrate sediments.

Low power requirements and small sub-system component size make this a valuable tool for any survey platform.

HMS-620LF Low Frequency Bubble Gun™ Source Vehicle

APPLICATIONS

- Surveys that need high shot-to-shot wavelet correlation
- Shallow Gas Hazard Surveys
- Offshore Wind Turbine and Dam Site Surveys
- Cross River Surveys for Bridge Construction
- Bedrock Investigation
- Pipeline Construction Surveys
- Geotechnical Site Investigation
- Coastal Engineering

FEATURES/BENEFITS

- **Wide-band 20-1700Hz pulse** provides bottom penetration through many sediment types
- **Peak-to-Peak Amplitude of 1 bar-m**
- **Very stable and repeatable source pulse without the need for external timing controllers**
- Rugged transducer platform provides stable operation in adverse sea-state conditions
  - Electromagnetic Sound Source; **Contained Air Volume (no air compressor needed)**
- Flexible portable transceiver unit optimizes system for a wide range of sediments
  - Low-noise pre-amp with high/low pass filters and gain control
  - User-selectable trigger or external trigger
  - **Multiple Sources can be synchronized to a common trigger without need for external timing control**
  - **Repeatable Shot-to-Shot Phase and Amplitude Wavelet Correlation > 0.96**
- Minimal Electric Power Requirements
  - Selectable 110 or 220 VAC power source; Operates on 2 KWatt generator
- Oil-filled single channel hydrophone streamer cable
  - 7-meter multi-element active section
  - 35-meter deactivation switches on each hydrophone element enable exportation outside of USA
- Compatible with industry-standard data acquisition software & multi-channel streamers

SPECIFICATIONS

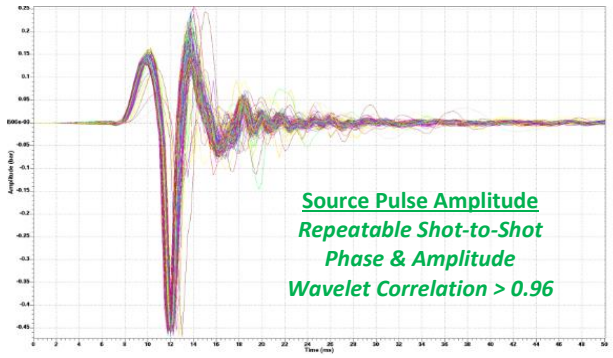
HMS-620LF Bubble Gun™ System Components

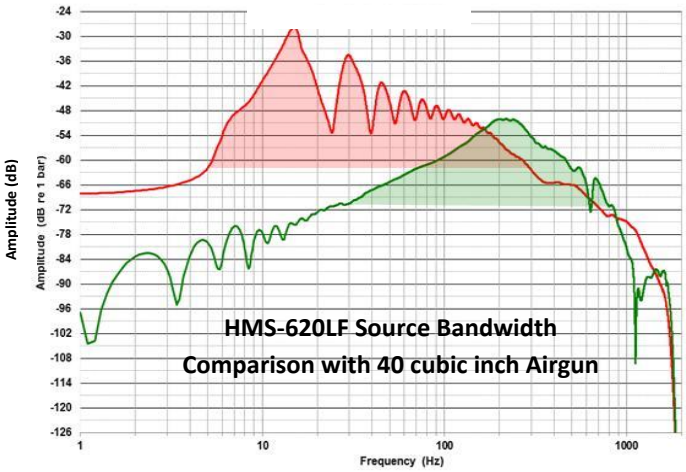
Source Vehicle and Electromechanical Tow Cable

Source Type:	Electromechanical / Contained Air Volume (no air compressor needed)
Frequency:	Wide band, 20-1700Hz pulse
Acoustic Source Level:	Approximately +220 dB ref 1µPa @ 1 meter
Peak-to-Peak Amplitude:	Approximately 1 bar-m
Normalized Shot-to-Shot Cross Correlation:	Repeatable Shot-to-Shot Phase and Amplitude Wavelet Correlation > 0.96
Tow Vehicle:	Stainless steel and plastic frame; buoyant surface-towed vehicle
Tow Cable:	50-meter abrasion resistant electro-mechanical cable
Approximate Dimensions:	168 cm x 122 cm x 114 cm deployed, or x 61 cm nested (66 in x 48 in x 45 in or 24 in)
Approximate Weight in Air:	Vehicle/Source – 204 kg (450 lbs); Tow Cable - 12.25 kg (27 lbs)

Seismic Transceiver

Signal Input:	Designed to operate with HMS-620LF System Hydrophone Streamer Cable; 7-pin Amphenol connector
Gain:	Adjustable in 3 dB steps 0 to 45 dB;
Filters:	Adjustable high- and low-pass active filters





Power Supply

Trigger Input:	External key or manual time-based selection
Repetition Rate:	1/4 second maximum
Transducer Connector:	7-pin Amphenol to mate with HMS-620LF Source Vehicle Tow cable
Packaging:	Portable splash-resistant case
Dimensions & Weight:	55.88 cm x 53.34 cm x 25.4 cm (22 in x 21 in x 10 in); 17.24 kg (38 lbs)

Hydrophone Streamer Cable

Length:	Active section - 7 meters; Single- channel, 24 elements; Leader – 50 meters
Preamplifier:	Integral preamp - 20 dB gain; Designed to operate with HMS-620LF Transceiver
Power Input:	Supplied by transceiver
Weight in Air:	13.6 kg (30 lbs)

Specifications Subject to Change without Notice: August 2020

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