

# DHA-7

## Downhole Hydrophone Array



**GEOMETRICS**  
Simplify your search



The Model DHA-7 downhole hydrophone array is designed for high-resolution seismic borehole imaging. Unique, proprietary polymer hydrophones (no ceramics) are in-line molded to a fully integrated, triple-sealed multi-conductor cable. Non-shattering polymer material provides superior performance and durability under the rigors of borehole applications and a stable signal response up to 10 kHz. The Model DHA-7 is suited for use in cased and uncased, water-filled, narrow-diameter boreholes. Custom hydrophone group intervals and multi-borehole configurations are available to tailor the system to meet your needs. The array is easily deployed by hand or with a small winch.

The Model DHA-7 is backed by Geometrics, now in its 48th year of knowledgeable and prompt customer support.

### FEATURES & BENEFITS

- **Only 41 mm (1.6 in) diameter** - Fits in any borehole.
- **Small bend radius** - Fits on small winch.
- **State-of-the-art hydrophones instead of geophones** - Coupling problems are eliminated in water-filled holes.
- **Small hydrophone spacings** - Image exceedingly small features, ideal for high-resolution tomography.
- **Light weight** - Easy transport and deployment.



Individually isolated hydrophone and preamp.



**GOLDEN TAURUS  
INGENIERÍA,S.L.**

## ELECTRICAL

### HYDROPHONE

**Sensor type:** Proprietary Polymer.

**Sensors per group:** One.

**Frequency response:** 10 Hz to 10,000 Hz  $\pm$  1.0 dB.

**Capacitance:** 5 nF at 22°C.

**Sensitivity:** -197 dB re 1 Volt per 1  $\mu$ Pa.

**Sensitivity with depth:** < 1.0 dB over 400 m depth.

**Sensitivity with acceleration:** < -70 dB re 1 Volt per g.

### PREAMPLIFIER

**Type:** Ultra-low noise differential.

**Gain:** 6 dB.

**Current:** 10 mA per channel.

**Power:**  $\pm$ 12V DC Model DHA Battery Pack on surface.

## PHYSICAL

### CABLE

**Type:** Multi-conductor with polyurethane jacket.

#### Termination

**Topside:** Y-type with one 61-socket connector (or 27-socket connector) and one 4-pin connector.

**Tail:** 1 m (3.28ft) long with stainless steel swivel and 6 kg (13.2 lb) weight.

**Maximum total length:** 400 m (1,300 ft) (lead plus active section).

**Strength member:** Zylon center core.

**Outside diameter:** 13.5 mm (0.53 in).

#### Weight

12 channels: 0.12 kg/m (0.08 lb/ft).

24 channels: 0.15 kg/m (0.10 lb/ft).

**Bend radius:** 12.7 cm (5 in).

**Working load:** 273 kg (600 lb).

**Breaking strength:** 1,364 kg (3,000 lb).

## ACTIVE SECTION

**Channels:** 12 or 24 standard; other counts available\*.

**Group Interval:** 1 to 5 m (3 to 15 ft) standard; other intervals available with a minimum of 0.5 m (18 in)\*.

**Outside diameter (hydrophone):** 41.3 mm (1.63 in).

**Length (hydrophone):** 30.5 cm (12 in).

**Weight (hydrophone):** 0.16 kg (0.35 lb).

**Bend radius:** 22.9 cm (9 in).

## ENVIRONMENTAL

### DEPTH

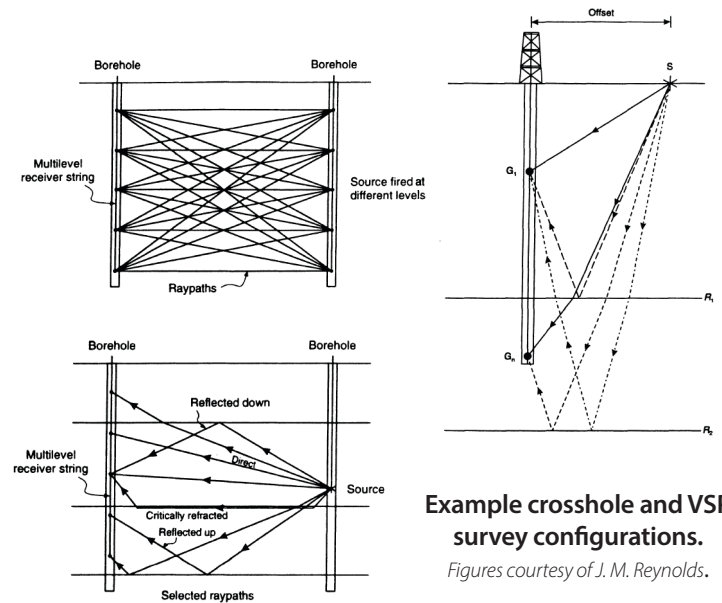
**Operating maximum:** 400 m (1,300 ft).

### TEMPERATURE

**Operating range:** -10°C to +70°C (+14°F to +158°F).

**Storage range:** -40°C to +70°C (-40°F to +158°F).

\*Please contact the factory to discuss your requirements.



**Example crosshole and VSP survey configurations.**

*Figures courtesy of J. M. Reynolds.*

Specifications subject to change without notice. DHA-7\_v1 (0723)



**GOLDEN TAURUS  
INGENIERÍA,S.L.**