

DHA-7 Data Sheet

The 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.



DHA-7 with Geode Seismograph.

The Model DHA-7 is suited for use in cased and uncased, water-filled, narrow-diameter boreholes. The standard configurations include a group interval of 0.5 to 5 m and a total cable length of up to 400 m (1,312 ft). The cable is terminated topside with suitable connectors to mate with the seismograph and a 12VDC rechargeable power supply. Custom group intervals and multiborehole configurations are also available to tailor the system to meet your needs. The array is easily deployed by hand.

Applications

- Image faults and fractures, stratigraphy, voids, mineral deposits, underground structures; determine soil, rock and reservoir properties
- Ideal for shallow gas and mining investigations, earthquake engineering and foundation studies, teaching and research
- Suited for high-resolution uphole, VSP, and crosshole surveys

Features

- State-of-the-art polymer hydrophones provide superior, stable response
- Unique design isolates vibration and suppresses cable-related noise
- Small diameter and light weight make for easy deployment
- Reliably performs under the rigors of borehole applications

Product Dimensions

Physical	Dimensions (L x W x H)	Weight
(instrument only)	depends on hydrophone int x 41.3mm x 41.3mm	0.15kg/m

Technical Specifications

Hydrophone Sensor Type:	Proprietary Polymer
Channels:	12 or 24.
Hydrophone Interval:	1-5m
Sensors per Group:	One.
Frequency Response:	10 Hz to 10,000 Hz $\pm$ 1.0 dB.
Sensitivity:	-197 dB re 1 Volt per 1 μ 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
Power:	$\pm$ 12V DC Model DHA Battery Pack on surface.
Maximum total length:	400 m, lead plus active section.
Strength member:	Kevlar center stress core.
Bend Radius:	12.7 cm
Working Load:	273 kg
Breaking strength:	909 kg
Temperature Operating Range:	-10°C to +70°C

Gallery



DHA-7 with Geode, Image courteous of Geometrics Inc.



DHA-7 field Deployment