

Scorpion Oceanics Limited



HTI-99-DHLA SERIES -

MECHANICAL DESIGN

Ceramic elements are at the center, shock mounted to the tubular strength member which is directly connected to the head and tail electromechanical connectors.

Surrounding the strength member is a rubber boot that is oil filled and sealed from the environment. The compliant rubber boot allows for expansion of oil.

Around the rubber boot is a small oil reservoir contained by a rigid stainless steel tube. This tube is fastened and sealed at each end of the hydrophone unit. Pressure is compensated via a unique integral compensating system.

IMPROVEMENTS

- Increased compressive and tensile strength
- Increased operating temperature
- Double boot seal - stainless steel outer boot with inner rubber boot; outer boot may be removed or compromised while inner seal remains functional
- Maximum number of channels increased from 6 to 8
- Increased ease of field repairs for all components, reducing downtime
- Standardized English and Metric models

SPECIFICATIONS

SENSITIVITY:

Element

- -183 dB re: 1V/ μ Pa
- 70 V/Bar

Optional preamplifier gain

- 0 dB to 48 dB



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FREQUENCY RESPONSE: Customer specified - low cut in preamplifier: 1 Hz to 5 KHz

EQUIVALENT INPUT SELF NOISE (with preamp):
RMS from 1 Hz to 1000 Hz

- 58 dB re: 1 μ Pa
- 0.008 μ Bar

Spectral

- 49 dB re: 1 μ Pa/sq.root Hz @ 10 Hz
- 30 dB re: 1 μ Pa/sq.root Hz @ 100 Hz
- 21 dB re: 1 μ Pa/sq.root Hz @ 1000 Hz

PREAMPLIFIER TYPE

- Two-wire transconductance type
- Power: 8 mA constant, 12 VDC to 30 VDC

CAPACITANCE: 1.6 Nf

MAXIMUM TEMPERATURE: 200 deg. C

MAXIMUM PRESSURE: 20,000 psi

TENSILE STRENGTH: 10,000 lb (4536 kg)

COMPRESSIVE STRENGTH: 10,000 lb (4536 kg)

SENSORS PER CHANNEL: 9

CHANNELS PER HYDROPHONE: 2

English version -

- Length = 60 inches
- Diameter = 1.7 inches
- Sensor separation = 1.84 inches

Metric version -

- Length = 2.0 m
- Diameter = 4.32 cm
- Sensor separation = 6.26 cm



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