



HGS (INDIA) LIMITED



HG-6 High Temperature Geophone Element



Based on the technology transfer for manufacturing the SM[®] range of geophones from Sensor[®] Nederland BV, HGS (India) Limited (erstwhile Geosource India Limited) offers the HG-6 geophone which is a long coil travel geophone based on the HG-4 design. High temperature version of the HG-6 geophone is capable of withstanding temperatures ranging from -40°C to 200°C. These geophones are manufactured for use in VSP tools and for use in industrial vibration monitoring where bearing temperatures may exceed the 100°C operational limit of standard geophones. HG-6 can be supplied for vertical and horizontal orientation.

Features:

- Operating temperature range of -40°C to 200°C
- Nickel plated case and special high temperature coils and end plates
- Suitable for use in VSP and downhole array applications and for industrial vibration monitoring
- Vertical and horizontal versions of most types for 3-component configurations

Specifi+A41:J66 High Temperature Geophones

Frequency	Value	Value	Value
Natural frequency	8 Hz	10 Hz	10 Hz
Tolerance	±6.3%	±5%	±5%
Damping			
Open circuit	0.407	0.398	0.326
Tolerance (O.C.)	±5%	±5%	±5%
Shunt for 0.60 damping	8200 Ω	2400 Ω	4300 Ω
Shunt for 0.7 damping	5100 Ω	1500 Ω	2700 Ω
Resistance			
Standard coil resistance	900 Ω	400 Ω	900 Ω
Tolerance	±5%	±5%	±5%
Sensitivity			
Open - circuit Sensitivity	42.8 V/m/s	24.4 V/m/s	42.8 V/m/s
Tolerance	±5%	±5%	±5%
$R_t B_c f_n$	13880 ΩHz	5500 ΩHz	13880 ΩHz
Moving mass	10.5 g	8.6 g	10.5 g
Max coil excursion p.p .	4 mm	4 mm	4 mm
Physical Characteristics			
Diameter	25.4 mm	25.4 mm	25.4 mm
Height	36 mm	36 mm	36 mm
Weight	90 g	90 g	90 g
Operating temperature range	-40°C to 200°C	-40°C to 200°C	-40°C to 200°C

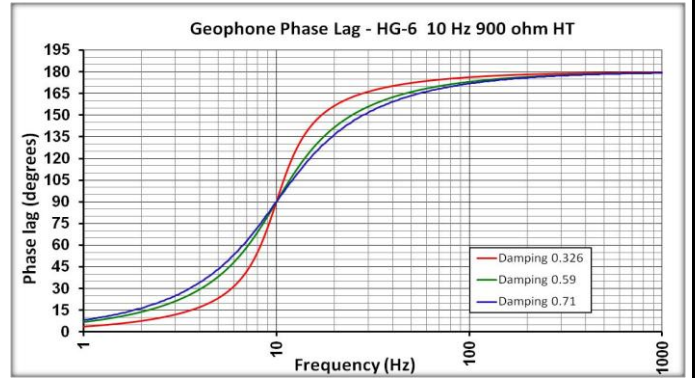
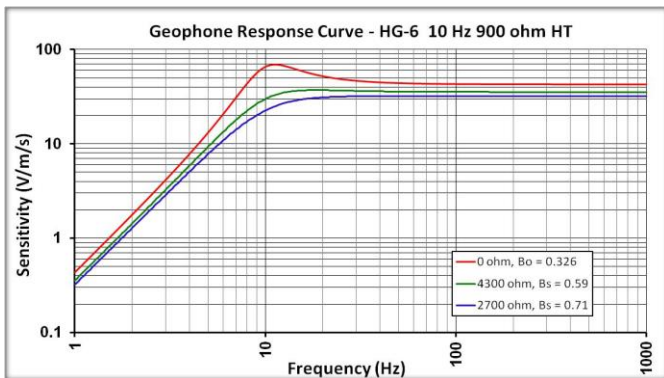
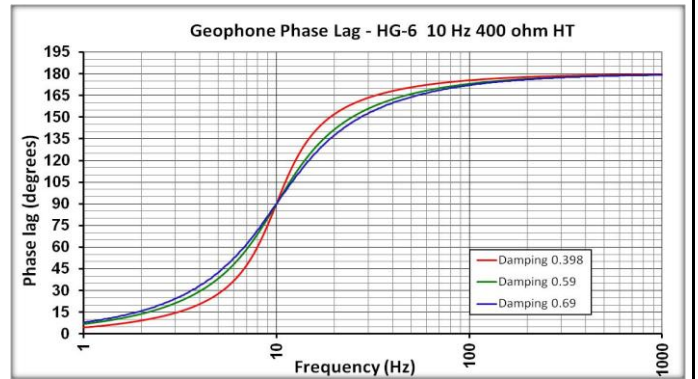
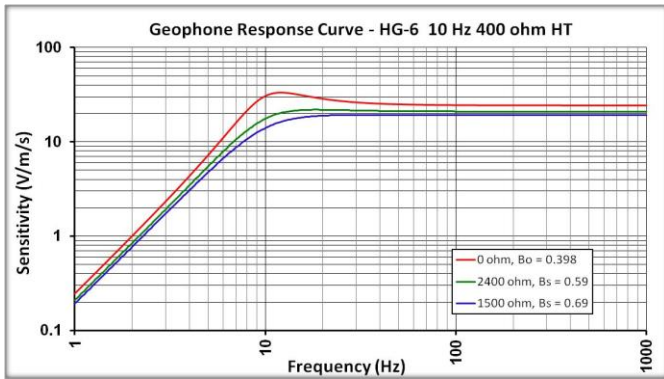
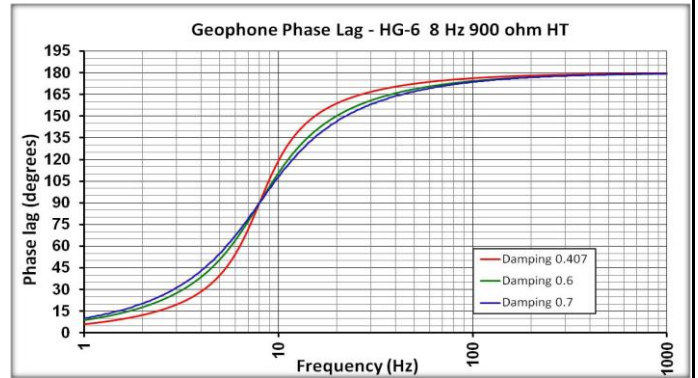
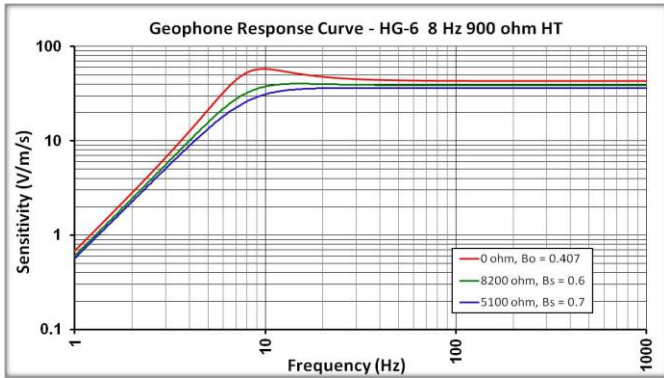
All parameters are specified at +20°C in the working position unless stated otherwise.

Specifications - HG-6 High Temperature Geophones

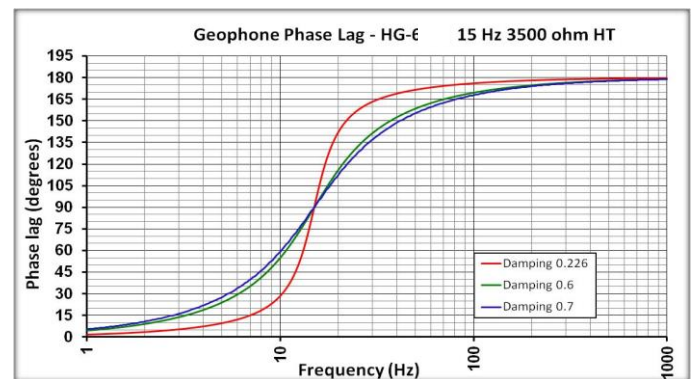
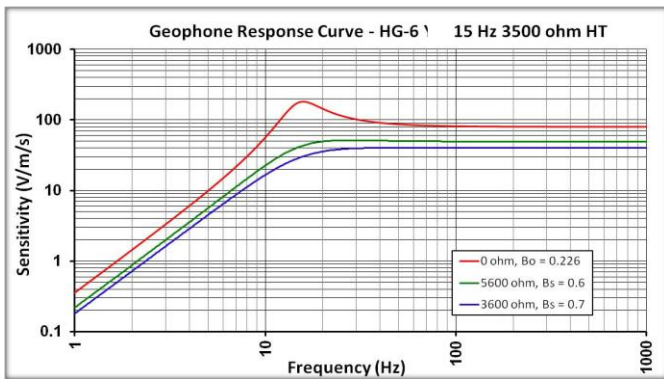
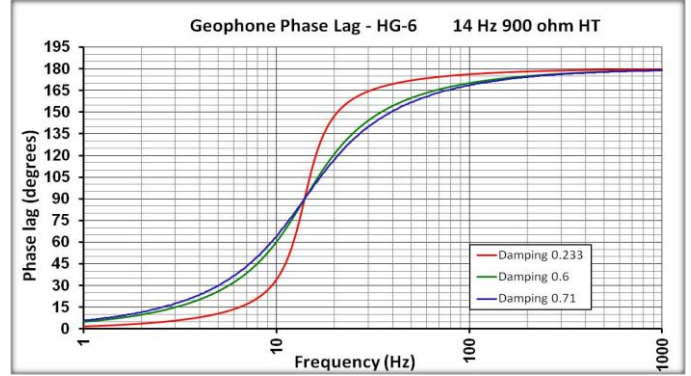
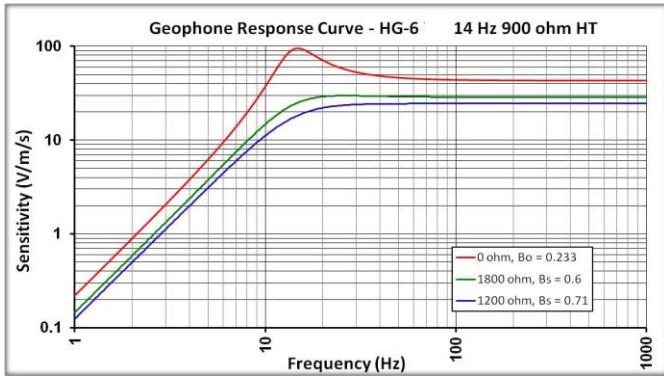
Frequency	Value	Value
Natural frequency	14 Hz	15 Hz
Tolerance	±5%	±5%
Damping		
Open circuit	0.233	0.226
Tolerance (O.C.)	±5%	±5%
Shunt for 0.60 damping	1800 Ω	5600 Ω
Shunt for 0.7 damping	1200 Ω	3600 Ω
Resistance		
Standard coil resistance	900 Ω	3500 Ω
Tolerance	±5%	±5%
Sensitivity		
Open - circuit Sensitivity	42.8 V/m/s	80 V/m/s
Tolerance	±5%	±5%
$R_t B_c f_n$	13880 ΩHz	50400 ΩHz
Moving mass	10.5 g	10.1 g
Max coil excursion p.p .	4 mm	4 mm
Physical Characteristics		
Diameter	25.4 mm	25.4 mm
Height	36 mm	36 mm
Weight	90 g	90 g
Operating temperature range	-40°C to 200°C	-40°C to 200°C

All parameters are specified at +20°C in the working position unless stated otherwise.

Geophone Response Curve and Phase Lag



Geophone Response Curve and Phase Lag



Ordering information

Description

HG-6 UB 8 Hz 900 ohm HT
 HG-6 HB 8 Hz 900 ohm HT
 HG-6 UB 10 Hz 400 ohm HT
 HG-6 HB 10 Hz 400 ohm HT
 HG-6 UB 10 Hz 900 ohm HT
 HG-6 HB 10 Hz 900 ohm HT
 HG-6 YB 14 Hz 900 ohm HT
 HG-6 YB 15 Hz 3500 ohm HT

Part No.

SG000163
 SG000164
 SG000196
 SG000198
 SG000161
 SG000162
 SG000199
 SG000166

Working position

Upright
 Horizontal
 Upright
 Horizontal
 Upright
 Horizontal
 Upright/Horizontal
 Upright/Horizontal

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