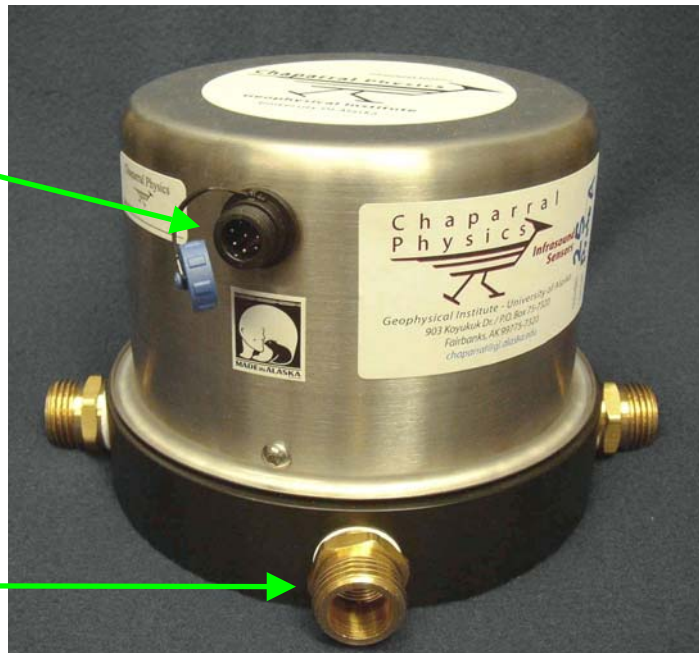


## Chaparral Physics Model 25, Infrasound Sensor, 0.1Hz to 200 Hz

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Electrical Connector  
with cap

Acoustic Inlets



*Figure 1, Shown is a Chaparral Physics, Model 25 infrasound sensor, with 4 inlet ports, and external electrical connections.*



*Figure 2, Left to right, some other Chaparral Physics Models, 2.5, 5.1, 2.2 no-legs, 2.2.*

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**CHAPARRAL PHYSICS  
MODEL 25  
INFRASOUND SENSOR SPECIFICATIONS**

A division of the Geophysical Institute  
of the University of Alaska  
PO Box 757320, Fairbanks, Alaska 99775  
907-474-7107

**Nominal Sensitivity:** Externally controlled, gain switching (via electrical connector)

High	2.0 volts/Pascal @ 1Hz, 0-20 Pa full scale range *
Low	0.4 volts/Pa @ 1 Hz, from 0-20 Pa *
Low	0.4 volts/Pa @ 1 Hz, 0-100 Pa range, linearity not warranted above 20 Pascal *

\* Individual sensor's calibrated value is +/-5%, from the sensor's calibration sheet value. Calibration value is traceable to the LANL calibration chamber.

**Output:**

Maximum	36 volts peak-to-peak, differential (signal+ to signal-) ±9 volt max signal to ground, (18 v p-p)
Frequency Response	Flat to within +0, -3 dB from 0.08 Hz to 200 Hz Flat to within +0, - 0.5 dB from 0.2 Hz to 50 Hz
Self noise	Less than 0.63 $\mu$ Pa <sup>2</sup> /Hz @ 1 Hz (-62dB Pa <sup>2</sup> /Hz, rel to 1 Pa) Less than 3 mPa RMS, 0.1 to 200 Hz Less than 0.8mPa RMS, 0.5 to 2 Hz
Dynamic range	100dB, Low Gain, (@ 0.8mPa RMS self noise)
Output Impedance	150 $\Omega$ non-reactive, (recommended load > 10 k $\Omega$ ) (Recommend less than 10,000pf capacitive loading)
Short circuit protected	Signal+ to Signal-, and either to Signal Common
Output type	True Differential output
Seismic sensitivity	Minimum detectable quake Mw=5.5 at epicentral distances of 1°

**Power Requirements:**

DC Source	12 volts, (9-18 volts) DC, Reverse voltage protected.
Current Drain	Less than typically 40 ma @ 12 v

**Physical:**

Operating Temperature	-40° C to +65° C
Humidity	95% (non-condensing)
Dimensions	14 cm maximum overall height with manifold and cal port 23 cm maximum diameter, with 4 inlet ports
Weight	2.4 Kg, for 4-port version
Acoustic inlet(s):	Standard: 4 inlet ports (maximum 12), male, Garden-Hose-Thread.

We reserve the right to modify and evolve sensor's performance. Chaparral sensors have a very low seismic sensitivity compared to other infrasound sensors. The extremely low mass of the capacitive element and patented capacitive measurement technique ensure wide bandwidth and precise low noise measurements.

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