

COHERENT ACOUSTIC MODULATABLE PROJECTOR

CHAMP System

Marine Vibrator Joint Industry Project "MVJIP"



CHAMP System comprises an array of electro-acoustic projectors

Towed, controlled, and powered from survey vessel

Employs a variety of floatation concepts that make it adaptable for shallow- and deep-water surveys, as well as surveys in the Arctic

Design studies and proof-of-concept tests show CHAMP System will meet or exceed goals mandated by MVJIP

Contracting Agent



Corporate Sponsors

CHAMP System is the subject of numerous international patent applications and has worldwide export license from the U.S. Department of Commerce



ExxonMobil



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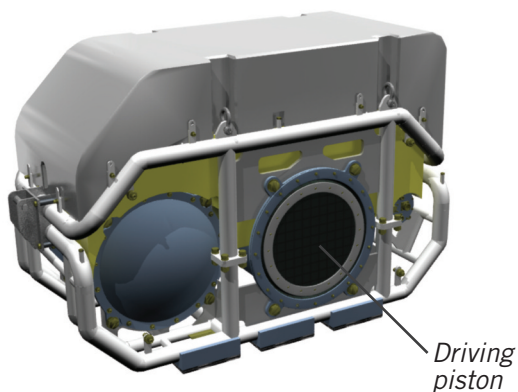
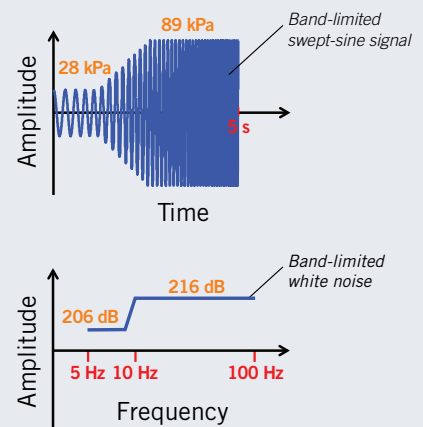
Marine vibrators can tailor the acoustic signal to meet seismic survey goals with little impact to marine environment.

Marine Vibrator Source Level Specification

Minimum Source Level Specification for 5 Second Waveform

206 dB re 1 μ Pa at 1 m (5 – 10 Hz)

216 dB re 1 μ Pa at 1 m (10 – 100 Hz)



Integrated Projector Node

Marine vibrator attributes:

- Non-impulsive (coherent) sound source
- Better seismic signature than air guns
- Tailored acoustic waveforms
- Can be used in environmentally sensitive areas
- Can be used in shallow water (i.e., transition zone)