

Ultra-rugged, High-Power, Low-Frequency

The HMS-ATTR-4.5K is a very rugged, high power, underwater transducer specifically designed for marine sub-bottom profilers and echo-sounders in the 2 to 7 kHz frequency range. The transducer is designed for operation in a variety of array configurations to support shallow water surveys to deep water hull mounted arrays capable of operation in survey depths up to 10Km. Vessel installations will vary based on the survey requirements and vessel configuration so please contact Falmouth Scientific with your specific needs. Single transducers can support a 600W power level at a 30% duty cycle or 200W continuous while when configured as arrays the power levels for the array can be several Kilowatts though this will be cavitation limited depending on the installation.

The HMS-ATTR-4.5K transducer is a tonpizl piston source approximately 1/2 wavelength in diameter at the center of its operating frequency range and is designed with an industry standard mounting hole pattern through 4-corner integral mounts which allows support for both new and existing vessel array configurations. The transducers can be arranged in a multi-element array to support a wide variety of beam patterns and source level to suite most survey applications. Array configurations and preamp control module specification can be seen on next page.



CHARACTERISTICS

Power Rating	600 Watts 30% duty cycle, 200 Watts CW
Transmitting Response per Volt	152 dB re 1uPa/1V@1m
Receiving Response per Volt	-165 dB re 1uPa/1V@1m
Nominal Impedance	250 ohms @ 3.5KHz
Directivity	80 0 conical at -3 dB
Maximum Operating Depth	1000m
Weight (approximate)	25 lbs



HMS-ATT45K transducers shown in a 4x8 sub-bottom profiler array

SPECIFICATIONS



Typical System Specifications

Low Frequency Channel

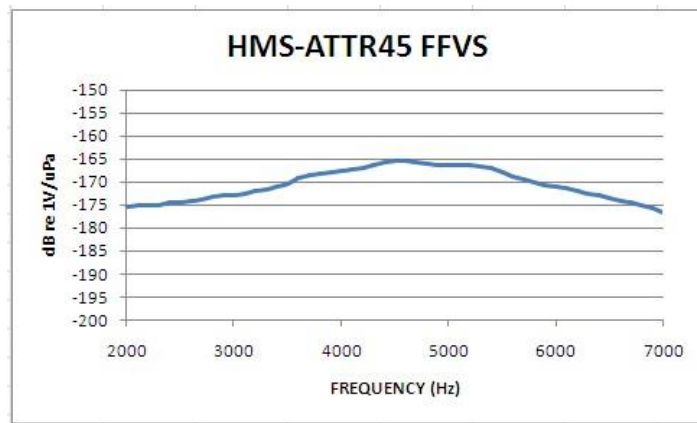
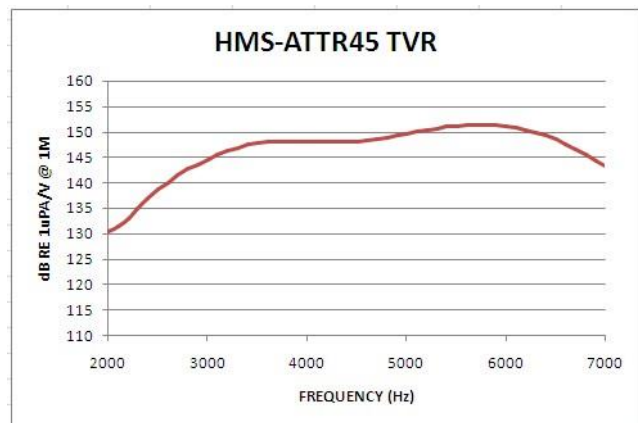
Transmitter transducer:	Options for array sizes from 1 to 35 transducers
Power output:	2.3 kw, 15% duty cycle at 3.5 kHz for 220 dB re 1 μ Pa @ 1 m nominal, 4 kw maximum at reduced duty cycle
Frequency range:	Sweeps in the 2 kHz to 7 kHz band
Transducer radiation:	12° fore/aft, 16.5° athwart (4x8 array)

High Frequency Channel

Transmitter transducer:	One 7-element high frequency transducer
Power output:	1 kw, 15% duty cycle at 15 kHz for 214 dB re 1 μ Pa @ 1 m nominal, 4 kw maximum at reduced duty cycle
Frequency range:	Sweeps in the 10 kHz to 20 kHz band
Transducer radiation:	27° conical

Software Controlled Preamp Module

Control:	Software control through a serial port
Preamplifier gain:	42 dB in 3 dB increments
Preamplifier attenuation:	42 dB in 3 dB increments



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Specification Subject to Change Without Notice

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