

## ANECHOIC CHAMBER WEDGES

Eckel Anechoic Chamber linings represent the most advanced technical thinking in design and construction. Currently we offer fiberglass, foam, and perforated metallic EMW types of sound absorbing wedges, as well as new E-Element concept and SuperSoft panels to accommodate the widest range of testing requirements.

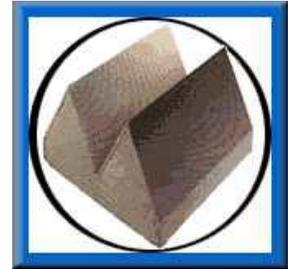
### **EW Standard Anechoic Wedge**

The EW Standard Wedge is the classic design based on the original geometry established by Beranek and Sleeper at Harvard during W.W.II. Current E.W. Wedges incorporate the latest materials and design modifications for a wedge treatment with maximum broadband performance.



### **EMW Perforated Metal Anechoic Wedge**

The Eckoustic Metallic Wedge represents the execution of the classic design with a perforated metal cover versus the original wire hardware cloth. Utilizing high transparency 22 ga. perforated steel or aluminum, the metal cover is virtually acoustically transparent.



### **E-Element Anechoic Absorbing Wedge**

Utilizing a unique geometry the E-Element offers a new dimension in anechoic chamber construction differing from the conventional wedge design. The E-Element is constructed of multiple parallel surfaces with tapered leading edges that alternate 90 degrees out of phase with one another. This creates a sound absorbing array which achieves cut-off with less depth of treatment than conventional "wedge" designs. [ Patent Pending, Under Development. ]



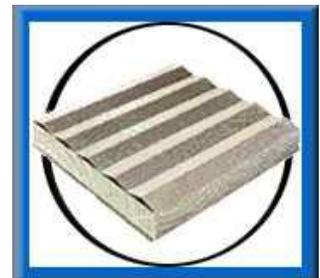
### **Acoustic Foam Anechoic Wedge**

Acoustic Foams, (polyurethane and melamine) offer acceptable acoustical characteristics in many applications and may be more economical than traditional treatments. Polyurethane foam chambers must incorporate a sprinkler system because they are hazardous if combusted. Properly designed foam chambers work well in many applications.



### **SuperSoft Panel Lining / Wedge**

SuperSoft panel lining for acoustic test facilities was developed to fill "a niche" when a full anechoic chamber was not needed. An existing or new structure could be lined with an extremely high performance acoustic panel to yield a test environment satisfactory for general product testing and noise emission,



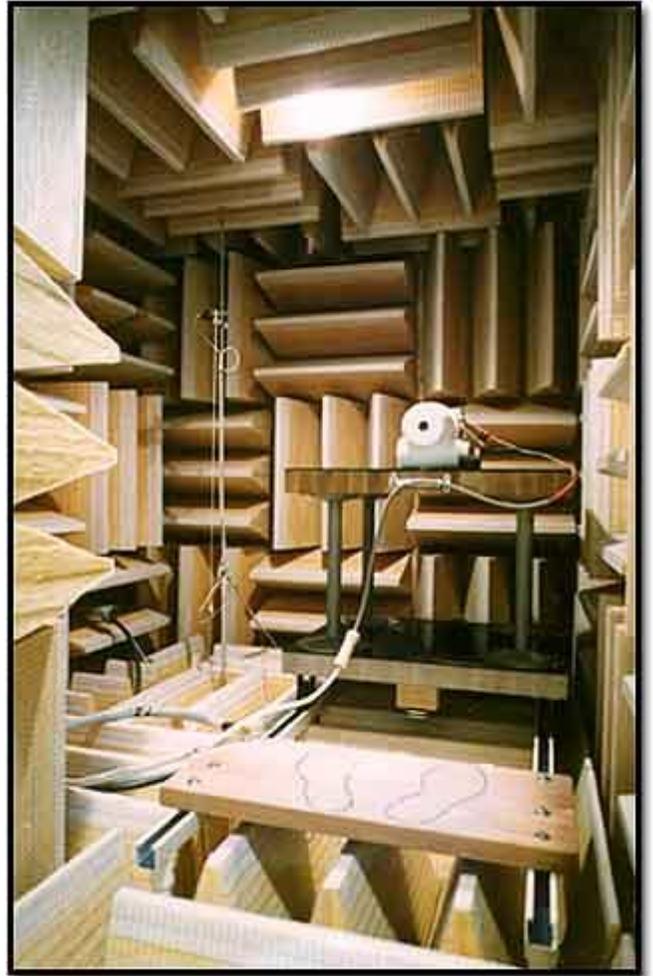
## Portable Anechoic Chambers

Portable Anechoic Chambers provide the necessary environment for conducting a wide variety of acoustic studies for improving product performance, for quality control of components and systems, and for developing products with lower noise output.

Applications of these chambers include:

- \* **Noise studies of small electronic, electrical, and mechanical equipment**
- \* **Calibration of microphones**
- \* **Free field response testing of loudspeakers**
- \* **Determination of hearing aid characteristics**
- \* **Behavior studies of small animals**

These high performance chambers are available in a range of sizes, with low frequency cutoffs from 150 Hz. A line of standard models is offered, with various optional equipment available.



## Features

### Outstanding Acoustic Performance

The sound attenuating enclosure is lined with pretested anechoic wedges, as is the access door. In addition the floor system is non-reflective. This makes for an easily maintainable sound absorption level of between 99% and 100% inside the chamber

### Economical

The chambers are engineered for long term operation. Acoustic and structural integrity is kept over the years.

### Easy Installation

Standard Models are prefabricated in sections that are lined and fitted with accessories. These sections pass through an average door, and require only bolting for final assembly and use. Units can be quickly and safely moved to any area where they are needed.

### Flexibility

Provision for external electrical connections is standard.

## Wedge Performance

*Maximum Allowable Variations from Inverse Square Law*

Type of Test Room	One-Third Octave Band Control (Hz)	Allowable +/- dB
Anechoic	< 630	1.5
	800 to 5000	1.0
	> 6300	1.5
Hemi Anechoic	< 630	2.5
	800 to 5000	2.0
	> 6300	3.0

## Single Wall Panel Room

*Measured Noise Reduction Through a 4" Eckoustic Panel Anechoic Chamber*

Frequency (Hz)	62.5	125	250	500	1000	2000	4000	8000
<b>Noise Reduction (dB)</b>	25	38	58	59	60	62	64	55

## Double Wall Panel Room

*Measured Noise Reduction Through a 4" Eckoustic Panel & 8" Masonry Wall*

Frequency (Hz)	62.5	125	250	500	1000	2000	4000	8000
<b>Noise Reduction (dB)</b>	45	59	80	90	92	95	90	90

