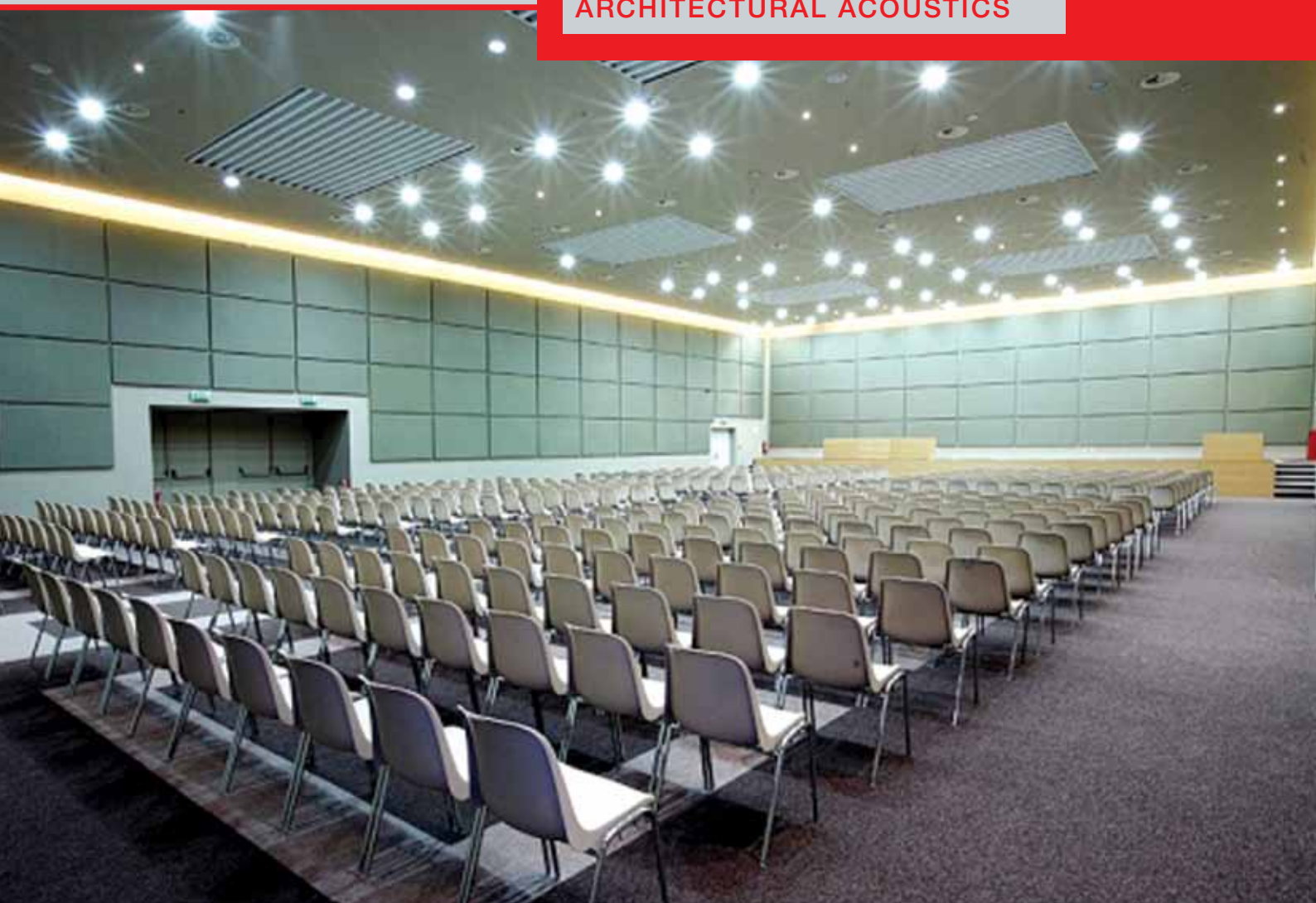


ALPHA*coustic*

ALPHA ACOUSTIKI Ltd

ARCHITECTURAL ACOUSTICS



Architectural Acoustics Applications



ALPHA Acoustiki combines technical experience and scientific knowledge of its Engineers which are specialized in the field of Room Acoustics, Noise and Vibration since 1980. We can offer solutions to complex Architectural Acoustic projects, such as theaters, multi-purpose halls, cinemas, education hall, religious places.

Our company can assist in resolving a wide range of acoustic problems which includes acoustics consultancy, design and production of high technology acoustics products.

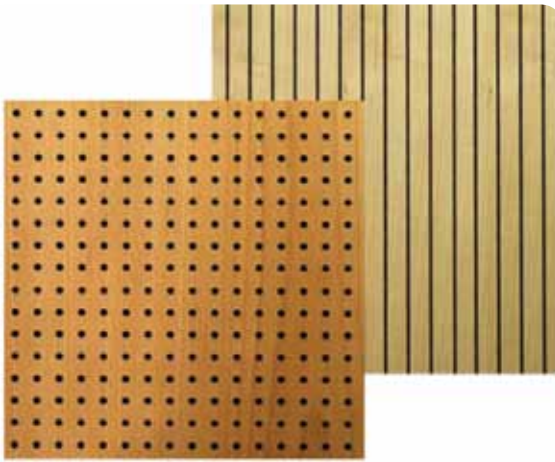
We can undertake turn-key acoustic constructions and realizing a complete recording studio, home cinema, radio or TV studios etc.

Bellow some of our Architectual Accoustic projects are presented. For more thorough technical information please visit our website www.alphacoustic.com or contact our technical department at tech@alphacoustic.com



ALPHA^{coustic} - WP

WOODEN ACOUSTIC PANELS



ALPHA^{coustic} - WP are Wooden Sound Absorption Panels that are available in a variety of designs and perforation styles. They are specially designed to offer acoustic improvement and a fine aesthetic result.

Typical Applications: Conference centers, theaters, music halls, offices etc.

Standard dimensions of the Acoustic Wooden Panels are 60 x 60 cm and 120 x 60 cm, but can be customized upon request.

The finishing material can be made of wood Veneer, HPL Melamine or painted in any RAL Color. The Core of the panel can be made from Medium Density Fiberboard (MDF) and can be produced with fire retardant certified materials according to fire classification standard EN 13501-1.

Can be manufactured in the following types:

- **ALPHA^{coustic} - WP.PR** : Wooden Acoustic Panels with round perforation
- **ALPHA^{coustic} - WP.SL**: Wooden Acoustic Panels with slotted perforation design.
- **ALPHA^{coustic} - WP.LN** : Wooden Acoustic Panels with grooved pattern at the front and perforation on the back side of the panel.
- **ALPHA^{coustic} - WP.SD**: Wooden Acoustic Panels with Special designs.



They can be installed on walls or ceilings using an innovative hanging method with either visible or hidden suspension system.

The back side of the panels is covered by a special sound-transparent acoustic cloth.

For better acoustic results sound absorbing material at the back of the panels is suggested (e.g. IZIfon or mineral -wool).



Sound diffusers **ALPHA***coustic* offer uniform sound diffusion in all directions primarly at the first reflections of the sound in a closed space.

Absorbers and diffusers are two of the main acoustic design tools for altering the acoustic conditions of a room. In small rooms it is often preferred uniform reflections of the acoustic energy using diffusion instead of absorption. Sound diffusers are designed to create sence of speciousness reducing standing waves and echoes and creating a better acoustic environment.

ALPHA*coustic* are very light, easy to install - even in false ceilings. Additionally, they have relative low sound absorption properties and do not influence significantly the Reverberation time of the room.

They are manufactured from a high density expanded Polystyrene (EPS) with flame-retardant additives and can be painted in different colors.

The standard size is 59 x 59 cm and the max height is 16 cm.

The main two types of Sound Diffusers are:

ALPHA*coustic*-CITY and **ALPHA***coustic*-DIFUSO.



CITY



DIFUSO



Frequency (Hz)	125	250	500	1K	2K	4K
Sound Absorption (α_s)	0.02	0.30	0.22	0.25	0.17	0.10
Diffusion Coeffacient	0.65	0.69	0.70	0.65	0.73	0.71

ALPHA^{acoustic} - AM SELF-STANDING ACOUSTIC PANELS

The self-standing movable sound absorptive acoustic panels **ALPHA^{acoustic} - AM** are made of rigid internal frame and can be covered on both sides with sound-transparent fabric which is available in different colors. Internally they consist of appropriate high sound absorptive materials. At the bottom they are based on two rotating metal stands, which can be folded to engage minimum space.

They offer sound absorption but also offer a relative sound reduction, since they can act as a noise barrier.

ALPHA^{acoustic}-AM offers a flexible solution in several problems in room acoustics, improving the sound diffusion and preventing standing waves generation. They are used to eliminate direct sound transmission between different working positions in an office or for separating musical instruments in a studio or concert hall.

ALPHA^{acoustic}-AM can be easily installed and relocated in any position of the room to match the architectural and acoustic requirements at each time.

The Standard panel dimensions are: 120 x 180 cm (width x height) and thickness of 50mm, but can be customized upon request. (Max. width 120 cm.)

ALPHA^{acoustic}-AM can be specially designed to be adapted on office desks with special fixing system.

Frequency (Hz)	125	250	500	1K	2K	4K
Sound Absorption (α_s)	0.08	0.34	0.73	1.02	1.15	1.15

Their sound absorption capabilities have been measured according to ISO 354.2003, taking into consideration the sound absorption coefficient of only one of the two sides of the panel.





ALPHA^{acoustic} - AB are sound absorptive baffles, that can be hanged in lines perpendicularly from the ceiling.

They consist of a perimetric hidden metal profile, which encases the sound absorptive material. The internal sound absorption material consists of fiber slabs with appropriate specific load and air flow resistivity. The sound absorption material is UV resistant and does not contribute to the spread of fire according to EN 13501-1.

The sound absorptive material can be either covered with perforated metal sheet in different colors or with a self extinguishing sound transparent textile.

ALPHA^{acoustic}-AB standard dimensions are 120 x 60 cm. But, also different sizes can be fabricated upon request. Regular thicknesses: 50 – 80 – 100 mm.

Acoustic Baffles ALPHA^{acoustic}-AB offer high sound absorption, due to the two highly absorptive sides of the panel. They can be easily installed vertically and in lines permitting the passage of illumination and air ventilation ducts.

ALPHA^{acoustic}-AB have been tested at the Acoustic Laboratory of the University of Athens. Their sound absorption coefficient (according to ISO 354.2003) for panel with dimensions 1200 x 600 x 80 mm with 600 mm spacing is illustrated in the following table. (where α_N is the equivalent sound absorption surface per object).

Frequency (Hz)	125	250	500	1K	2K	4K
Sound Absorption coefficient (α_N)	0.15	0.43	0.98	1.4	1.4	1.3

An acoustic study is recommended in order to determine the required quantity and configuration of acoustic baffles.

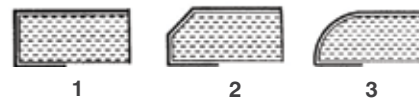




ALPHA^{acoustic}-AP are Acoustic Panels wrapped with a sound transparent fabric.

They are available in a wide range of colors in order to meet different aesthetic needs. The materials used can have little contribution to the spread of fire, according to standard EN 13501 - 1.

ENDS TYPES



TYPICAL SOUND ABSORPTION INDEX (α_s)

Frequency (Hz)	125	250	500	1K	2K	4K
Thickness 50mm	0.17	0.76	1.07	1.18	1.16	1.23
Thickness 100mm	0.45	0.93	1.05	1.16	1.20	1.20

The sound absorption index (α_s) was determined according to International Standard ISO 354.

ALPHA^{acoustic}-AP is specifically designed in order to achieve maximum sound absorption at each acoustic frequency band (Low – Medium – High). Depending on the requirements of each case their sound absorption material can be altered and thus achieve high absorption on a wide specific range of frequencies. In this way a uniform aesthetic result is maintained while offering different sound absorption capabilities in different frequency range.

They can be easily installed on the wall or ceiling with its advanced hanging system at the back side of the panel.

Standard Dimensions: 120 x 60 cm. Different dimensions can be fabricated upon request. Different thicknesses are available depending from the acoustic characteristics required.



Alpha Acoustiki Ltd, is specialized and leading company in the following fields:


NOISE CONTROL

- Environmental and Industrial Noise Control Consultancy
- Products *ALPHAfon* (noise barriers, acoustic louvers & Attenuators, Generator sound covers and acoustic doors)
- Sound Level Measurements (environmental and occupational noise)

ARCHITECTURAL ACOUSTICS

- Room Acoustic Consultancy
- Design and Manufacture of Acoustic Products (acoustic panels with fabric, wooden acoustic panels, sounds diffusers and acoustic baffles) *ALPHAacoustic*
- Turn key acoustic solutions (studio construction)
- Room Acoustic Measurements

VIBRATION CONTROL

- Vibration Control Consultancy
- Vibration Control Products, 



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