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When Ideas Become Reality

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Acoustic Stretch Wall Treatment

Presenting...endless opportunities

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What is acoustic wall treatment?

Acoustic wall treatment is also known as:

- Acoustic softwall treatment
- Acoustic panelling
- Acoustic wall systems
- Acoustic stretch wall

What's the difference between soundproofing And acoustic treatment?

While soundproofing reduces the amount of sound that gets into or out of a room, it doesn't affect how sound travels around the space. Therefore it isn't enough on its own to create pure sound.

Acoustic wall treatments offer much more than soundproofing.

Why are acoustic treatments necessary?

Acoustic treatments address the sound quality of a room. So a film's sound-track will be much more accurate in a professionally treated auditorium than in one that's untreated.

Everything in a space, from the walls, windows and doors, to the floors and ceilings, has an effect on how sound behaves. And of course the size and shape of a room plays a huge part too.

With analogue, acoustic treatments were used mainly to deaden sound and to stop it travelling around. However digitisation has increased the need to control reverberation to a very high standard.

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Acoustic Wall Treatment

Split Croatia

Customer's initials V

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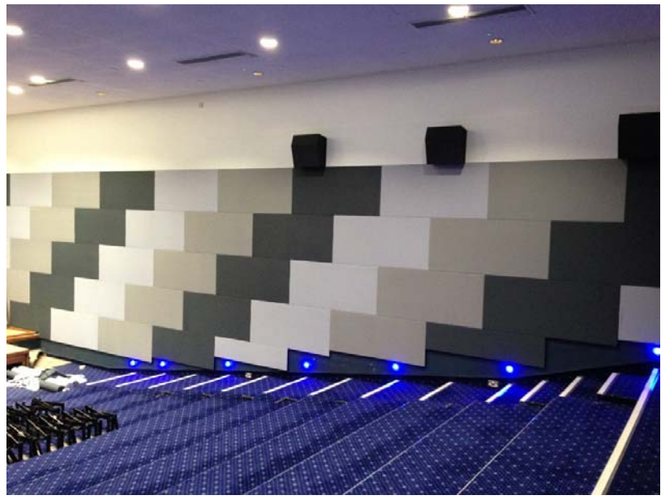
Acoustic Wall Treatment

US Embassy London

Stepping brick design



What it is and how it works

Acoustic wall treatment absorbs high levels of reflective noise within a space.

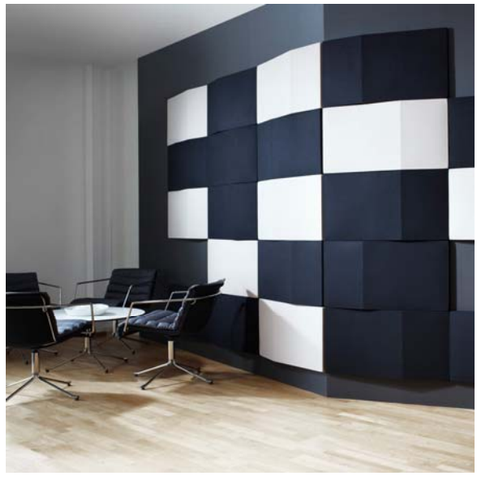
The system consists of a plastic frame, in-filled with sheets of foam and covered with stretch fabric.

The design is marked out directly onto the walls. The plastic is cut to the design and each individual piece is fitted to the wall to create panels or a continuous stretch. These are then infilled with foam. The final step is to cover the foam with cloth, fitting it into the frames.

Camtek is our own product and it forms the core of Camstage acoustic panels. It is a flexible, lightweight melamine-based acoustic foam. It provides a high sound absorbency, and has a Class 0 fire specification.

The foam sheets have a standard depth of 32mm, which can be increased to 50mm. The extra depth panels are usually installed on the back wall of a cinema to cut down the sound from the projection room.

Because cinema auditoriums come in all shapes and sizes, and not all walls are uniform - particularly in older buildings, the panels are built on site. Any stretch fabric can be used so



Lamaphon

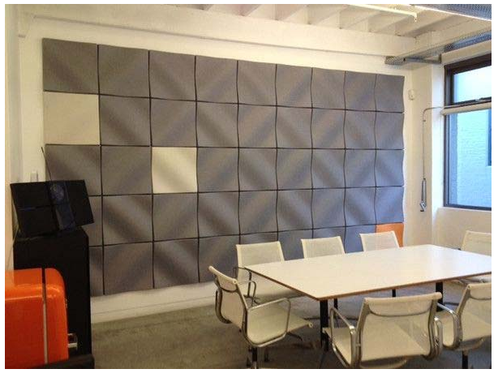
What it is and how it works

Lamaphon is another sound absorbent material that can be used in cinemas with, or without acoustic wall treatment.

Fitted to the rear of the projection screen wall, it stops sound bouncing behind the back of the stage wall and screen surface. This pushes a crisper sound forward into

Acoustic wall qualities and criteria for professional cinemas

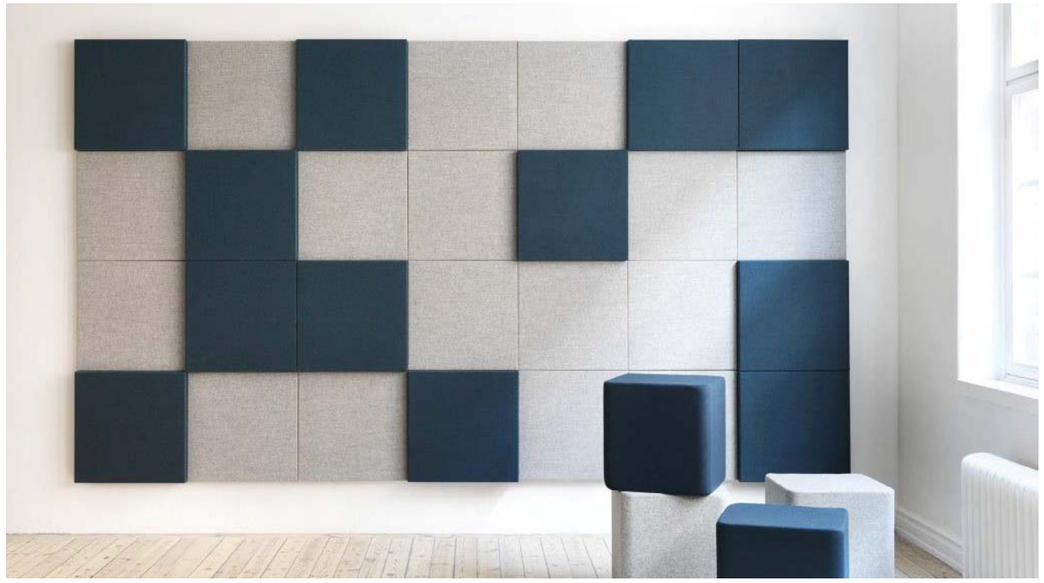
The term ‘acoustics’ is defined as: ‘the properties or qualities of a room or building that determine how sound is transmitted in it.’ And getting the acoustics right is vital for good audience experience in the cinema.



Multi-screen cinemas have two main issues to contend with: sound travelling in and out of each auditorium, and reverberation, which affects sound quality.

Reverberation is caused by sound bouncing from wall to wall, and floor to ceiling, and it has a negative impact on the quality of sound. Highly reflective surfaces, which could include doors and fire exits in some venues, will cause problems too. The latter can be addressed with curtains.

Acoustic wall treatments are designed to resolve these issues, and are specifically tailored to each space to allow for individual characteristics such as size, shape, and design themes. They can also be used to good effect in the refurbishment of old cinemas.



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camstage’s Recent Projects

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Acoustic Treatment

University of Warwick

“ A Work of Art ”

camstage

Acoustic Ceiling Treatment

Komedia Brighton

Split panel design

camtek – FOAM

Sound Absorption Coefficient

(tested in accordance with BS EN 20354)
Octave Bands (Hz)

Product Type

Thickness (mm)	125	250	500	1k	2k	4k	α_w	NRC	Building Regulations Absorber Classification When tested to BS EN ISO 11654-1997
12	0.07	0.09	0.23	0.34	0.42	0.63	0.30	0.27	D
25	0.12	0.23	0.41	0.70	0.87	0.87	0.45	0.55	D
50	0.22	0.46	0.95	1.00	1.00	1.00	0.75	0.85	C
100	0.60	1.00	1.00	1.00	1.00	1.00	1.00	1.00	A

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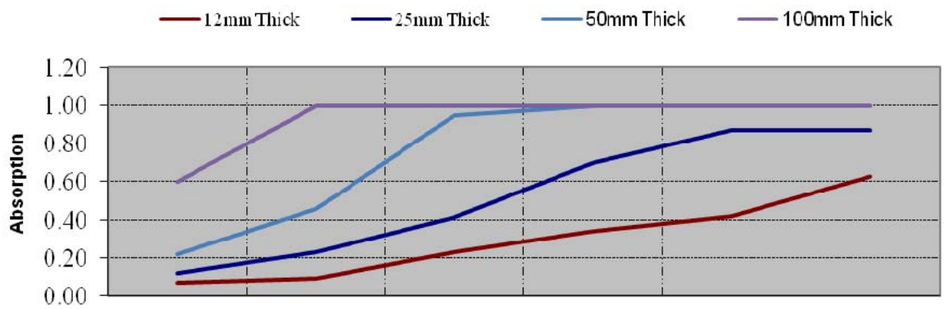

Thickness (mm)	Length (mm)	Width (mm)	Nominal Weight of Absorber (Kg)
12	2500	1250	0.35
25	2500	1250	0.70
50	2500	1250	1.41
100	2500	1250	2.81

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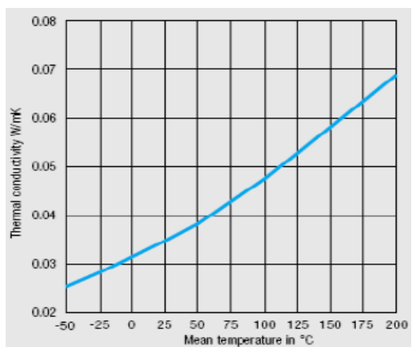
Physical Properties

Fig1:
Thermal conductivity

According to DIN 52612



Controlling film set, editing suite and sound studio acoustics

On a film set, or in a sound studio, acoustics are a vital element in the quality of the results. So you need to control sound, eliminating reverberation and preventing noise travelling in or out. Our acoustic wall systems will help you improve audio quality.

There may be times when you need to change the acoustics in a studio, or on a TV or film set, perhaps because you have a live audience for instance. Or you may need to change to cyclorama or chromakey backdrops for different lighting, or to achieve a particular effect in filming, while keeping the space acoustically balanced. A neat and cost - effective way to do this is by using curtains and a perimeter track. Not only will this balance the room acoustically, it's also aesthetically pleasing.

Acoustics are one of our specialist areas. Drawing on our vast experience in film and sound studio acoustics, we'll work with you to design what you need to ensure the success of your production.

Acoustic Soft Wall Systems

Acoustic wall systems are our speciality and we use two methods. Our decorative sound absorbing panels are used by a wide variety of clients to control sound in many different environments from multiplex cinemas and professional theatres to TV, film and sound studios. While our pleating systems are used mainly in cinemas, they are also used in clubs, and traditional theatres.

In fact our acoustic wall systems are used wherever it's necessary to control sound or to improve audio quality.

Acoustic soft wall treatment

On a film set, or in a sound studio, you need to stop noise coming in and travelling out. The same is true for cinemas or any auditorium used to screen films: including the home and office. Acoustic wall systems or acoustic soft wall treatments, as they are also known, help to create pure sound without reverberation.

In fact acoustic wall systems can be used to control reverberation in many environments including multi-use spaces such as community and school halls, and conference suites.

We are experts in acoustic wall systems and will work with your specifications to design what you need.

We've installed sound absorbing panels in schools and community halls, conference suites, office buildings, and crematoriums.

We use only the highest specification materials in the sound absorbing panels for our acoustic wall systems.

The core is made from Camtek – our own melamine-based acoustic foam. Lightweight and flexible, Camtek provides a high sound absorbency and has a Class 0 fire specification.

Our sound absorbing panels look good too and are a cost-effective way of restoring or transforming a space. Cables and wires are instantly covered without the need for electricians and plasterers.

Camtek- FOAM

Description

Camtek is a lightweight open cell foam made from melamine resin, it is designed for use in thermal and acoustic insulation applications.

It is flexible, easy to handle cut and install. It can be supplied in sheet form, or it can also be supplied pre-cut or profiled to size and shape.

The natural colour of the foam is grey, although it is also available in a range of functional or decorative facings and fabrics and can be sprayed with flexible PVC coating to any RAL colour.

Properties

Camtek has a broad range of attractive properties. Its outstanding features include:

- High sound absorption
- Good thermal insulation properties
- Flame resistance
- Heat resistance
- Low weight

Applications

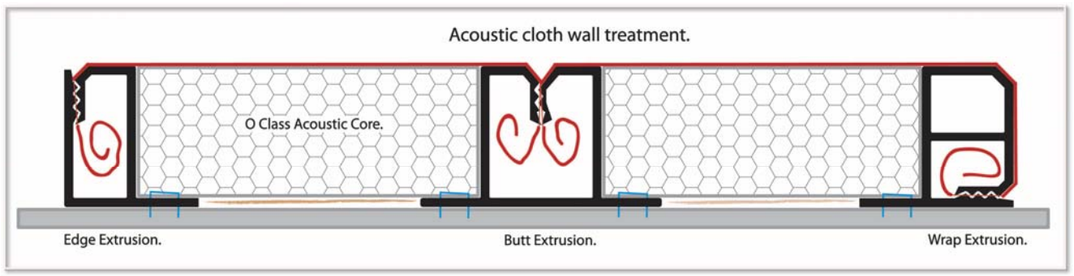
Camtek is used extensively in the following applications:

- HVAC : fan coil units, plenum and duct linings
- Building services : wall & ceiling panels for office & conference suites etc
- Industrial : enclosure linings, suspended absorbers
- Automotive : cab trim, engine & under bonnet panels
- Marine : engine room & accommodation areas
- Recording studios: wall panels, ceiling tiles, anechoic wedges.
- Sport & leisure : theatre & cinema auditoria, swimming & ice arenas, lecture halls

Specification

Colour	Grey
Size	2500x1250mm
Thickness	6mm to 250mm
Density	10.5kg/m3 +/- 1.5kg/m3
Tensile strength	>120kPa
Hardness	40% deformation: 7 - 20kPa
Compression set	50% @ 70°C for 22hrs: 10%-20%
Cell count	130 - 200ppi approx
Thermal conductivity	0.035W/mK @ 10°C
Service temperature range	-60 to +150°C (Short term to +250°
Fire performance	C)Class 0: BS476 parts 6 & 7
Continuous service temp	150°C
Toxicity	Din 4102 Class A2

Advice on Acoustic Design



Whether you're designing a home or commercial multiplex cinema, or creating new offices for a corporate client, we'll help to make your ideas reality.

We'll advise you on the products you need to achieve what your client wants. Acoustic design is a vital element and it's one of our specialist areas.

You can get support for your ideas and designs also.

Simply register for our professional support by visiting our technical support area **www.camstage.com** to download pre-drawn design elements for our acoustic wall systems and other products, then use them in your AutoCad designs.

You'll get a much better understanding of our products and how they fit together, as well as the reassurance of knowing they have the right fire certification. This will make it much easier for you to use the correct products in your designs.

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Pleated Wall Drapes

Pleating is another way to improve acoustics in a room.

In theatres, bingo halls, cinemas, and studios, pleating is used to improve the acoustics.

Timber frames are fixed to the walls and fabric is stapled on the top and bottom timbers. The pleating is done in situ and the acoustic treatment is placed behind. Either Camtek foam, Rockwool or Lamaphon slabs can be used behind the pleating.

Both acoustic wall treatments and pleating can also be used for aesthetic purposes, and they are very cost-effective ways to cover up cracks and hide wiring.

Pleating is used for cosmetic purposes in a variety of venue types including night clubs and casinos - particularly if an opulent, sumptuous look is needed. It can also be used to hide cracks and imperfections in walls in older buildings.

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With over 25 years of experience, **cam**stage has established a global reputation as a specialist provider of a full range of services for cinema and theatre industry.

We supplies all the required elements to achieve the acoustic stretch wall system you have been looking for. We use our patented 32mm and 52mm stretch wall panel elements. They are normally constructed on site by one of our installation teams, using the required extrusion, and Camtek™ O Class rated foam.

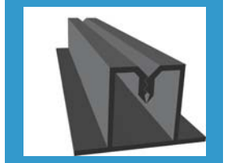
The outer edges of the panels are made up from the edge extrusion which is fixed directly to the wall. The panel widths are governed by the covering material width and orientation. The joints between panels are made from the butt extrusion so there are no gaps between the individual panel sections.

The covering material is then stretched into the plastic extrusion and the panels would normally be cut around fixed features in the walls. The installation, the speaker's exit sign etc. are mounted onto the pattresses to give a flush professional finish to your design.

For our Supervisor day rate, one of our specialist soft wall treatment engineers will help or even train your staff to create the perfect panel system for your own or your clients' projects. We also offer a site visit service to check any, or all the details. Prices available on request. Please call us if you have any questions.

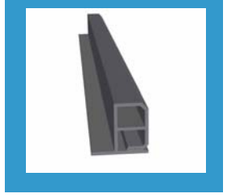
camstage exclusive fabrics requires a gentle wipe down with a clean damp cloth which will keep them in excellent condition for years to come.

Acoustic Stretch Wall System



© **Butt Extrusion** is manufactured from a high impact pvc which can be stapled or bonded to a wall. Used for a complete cloth wall, it can be used in conjunction with Wrap or Edge Extrusion to give a superior finish. Use with an acoustic core for the best quality sound.

© **Edge Extrusion** is manufactured from a high impact pvc which can be stapled or bonded to a wall. Used for a cloth panel wall of almost any shape with a black edge finish, it can be used in conjunction with Wrap or Butt Extrusion. Use with an acoustic core for the best quality sound.



© **Wrap Extrusion** is manufactured from a high impact pvc which can be stapled or bonded to a wall. Used for a panel wall of almost any shape with a cloth edge finish, can be used in conjunction with Edge or Butt Extrusion. Use with an acoustic core for the best quality sound.

camstage Acoustic Stretch Wall Systems add ambience, provide a high sound absorbency, and are extremely durable, and fire rated.

Whether you're designing a home or commercial multiplex cinema or creating a new office for a corporate client, we'll help to make your ideas reality.