

Shhh

acoustics at work[™]
FURNISHHH YOUR OFFICE

Sound management skills

Shhh, but do tell everyone.

The modern work place is now an open plan arena. The private office has been swept away, as more flexible working practices have emerged. Yet for all their advantages, most open plan offices still suffer from the distraction of noise.

Acoustics at Work exists to offer businesses the ability to manage sound levels with a high degree of accuracy, ensuring that productivity and privacy are maintained, whatever other barriers fall within the work place.

Nick Turner Managing Director



Yet for all their advantages, most open plan offices still suffer from the distraction of noise.

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Sound principles

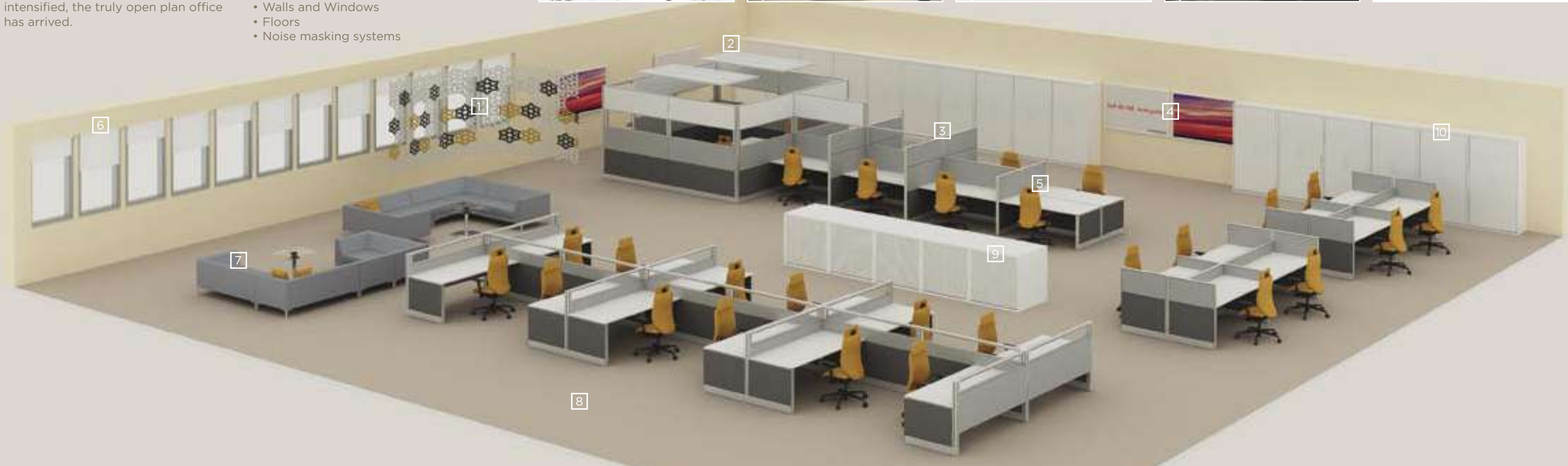
Evolution of the open plan office.

To understand the problem of noise in the work place, it is first useful to examine the reasons why the open plan office came into being.

Until perhaps 20 years ago, the private, cellular space was the ideal. The need to reduce the amount of expensive floorspace per worker led to the cubicle. And as technology has brought greater freedom from a single desk and as the need to control cost has intensified, the truly open plan office has arrived.

Yet as barriers have come down, ambient noise levels have risen; creating a tipping point, where the sound economics of densely populated open plan offices have begun to falter, as noise intrusion impacts on productivity. To alleviate this ever-growing problem, we must address 5 systems in the office:

- Furniture
- Ceilings
- Walls and Windows
- Floors
- Noise masking systems



Sound barriers

Cross-generational outlooks on ambient noise.

The challenge we face is not to soundproof the work place. Rather, it is to create acoustically private spaces that are suited to a variety of tasks and workers. Silence is not golden, in terms of productivity or privacy, as both require their own optimal level of ambient noise.

Generational issues also arise, as the old and young are proven to react very differently to noise. Traditionalists and Baby Boomers are likely to prefer a very low level of ambient noise, while Generation X workers and Millennials are far more likely to favour a louder aural backdrop, having been allowed to watch TV while homework is done, and even to work whilst listening to iPods.



For all the facts there's a White Paper

Workers born before 1945 are characterised by sociologists as Traditionalists. They will more than likely have begun their working life in a private office and will feel happier working in an almost silent environment.

People born between 1946 and 1964 are known as Baby Boomers and while more attuned to noise than Traditionalists, they can be ambivalent with regard to background noise.

Generation X is the term applied to those born between 1965 and 1977 and who have grown up to be more tolerant to noise in all its forms.

Millennials have all been born since 1978 and have not only grown up with the Internet, but also frequently prefer a high level of background noise while working.



Silence is not golden,
in terms of productivity
or privacy.



A unique and simple system that offers accurate acoustic 'scoring' of office environments.

Sound check

Analyse your acoustic environment.

The Acoustics at Work analysis system offers acoustic 'scoring' of office environments. It allows you to input specific information about an existing office which is then analysed by our Acoustics Specialist.

The acoustic properties of every surface and resulting Reverberation Time of the space are assessed and a report is produced rating your office according to our points system. Each product in our catalogue is worth a specific amount of acoustics points allowing you freedom of choice in the acoustic design of your office.

Until now, assessing the acoustic qualities of any work place has been the job of an expert. It has required an understanding, not only of the acoustic properties of furniture, screens, floors and ceilings, but a thorough grounding in the properties and behaviour of sound.

Yet now, our expertise in acoustic management has allowed us to develop a unique and simple system that offers accurate acoustic 'scoring' of office environments, quickly and easily assessing the Reverberation Time of every space. A design solution is then produced that will allow the creation of acoustically efficient, and therefore, productive working spaces.



fig 1. Noise travels freely.



fig 2. Acoustic furniture to stop direct sound.



fig 3. Sound absorbing materials reduce reverberant noise.

Sound partnerships

Market leaders
working in concert.

The unique thing about the Acoustics at Work service is the combination of our acoustics analysis system with a range of carefully selected acoustic furnishings and materials.

That's why we also enjoy close working partnerships with some of the world's leading companies in acoustic materials and products. Each of these products has its own acoustic properties which form an integral part of our calculations. So you can be sure that, not only are these products superior in an aesthetic sense, they are also guaranteed to be a reliable part of the acoustic solution to your problem.

SCREENS
AT WORK

Screens at Work create a wide variety of screen systems which incorporate highly specified acoustic foam and fabrics for effective noise control.

Isu™

Isu design and manufacture bespoke contract furniture with the ability to create truly unique pieces for every style of office.

Ecophon®
ACOUSTIC CEILINGS

Ecophon are experts in wall and ceiling systems where aesthetics and sound absorption come together.

camira

iCast create wall art with acoustic absorption properties, ensuring that it now catches more than just the eye.

Milliken Contract

Milliken Carpets are world leading carpet manufacturers offering an extensive range of carpet tiles.

Woven Image®

Woven Image is a wholesale textile design company, specialising in sustainable textiles for commercial interiors.

PLEDGE

Pledge are one of the UK's major manufacturers of office seating, now offering its most popular operator chair with a patented acoustic solution.

REHAU
Universal Polymer Solutions

Rehau are world leaders in polymer technology, and designers of sound absorbing roller shutters for office cabinet use.

FERRARI
architecture

Ferrari are market leaders in the creation of acoustic blinds in a wide range of weaves, colours and finishes.

abstracta

Abstracta have extended both the acoustic and aesthetic properties of the divider, making them an invaluable part of any solution.

24Acoustics

24 Acoustics Ltd is an engineering consultancy specialising in acoustics, noise and vibration.

SIDERISE

Siderise Group has been providing innovative insulation solutions for Acoustic, Fire and Thermal applications within the UK for over 30 years.



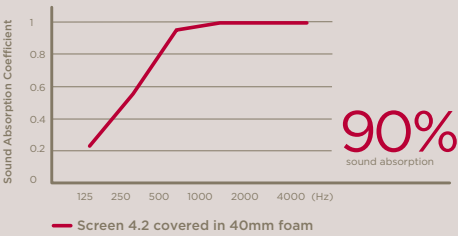
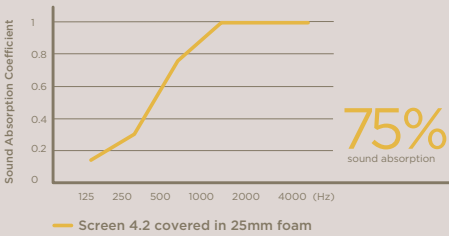
Furniture: Screens

Still linear, still open,
but workable.

It's a fact of life that noise pollution in the work place is getting worse. Laptops, PDAs, faxes and mobiles all make noise as do the constant meetings, briefings and breakouts that are the raison d'etre of the open plan work place. But open plan offices don't have to mean open season on concentration.

We can use modular screen systems to create a work place where acoustic privacy is achieved without walls, where quiet contemplation is made possible in the midst of mayhem and where the flow of ideas is facilitated rather than impeded by the need for partitions.

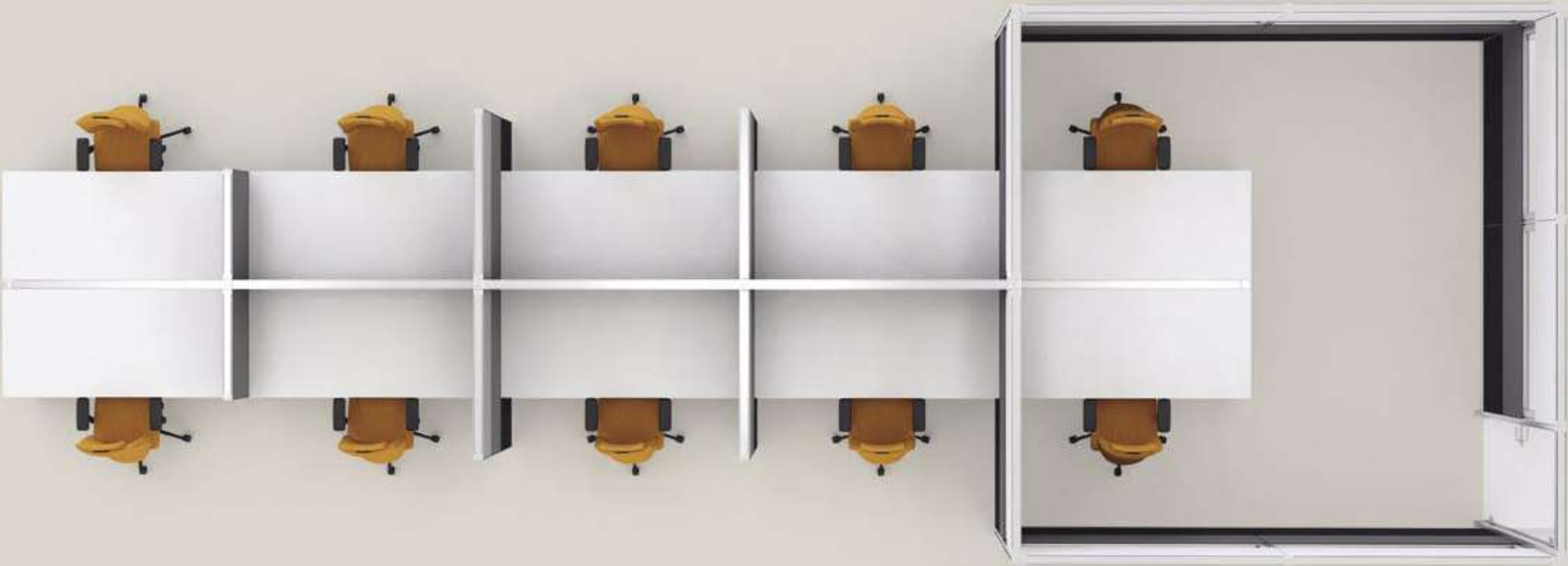
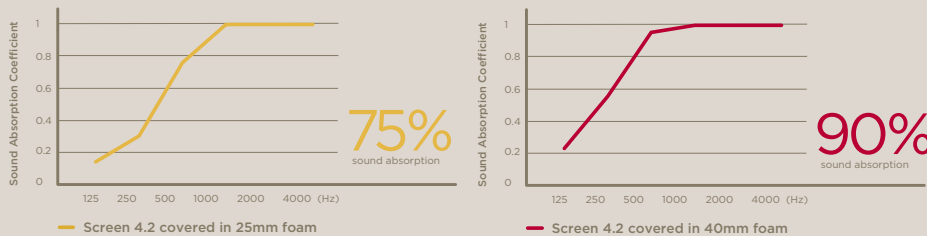
Above all else, flexibility is the key, and designs can be created that seamlessly cater for every activity, from private meetings to group briefings.



Furniture: Screens

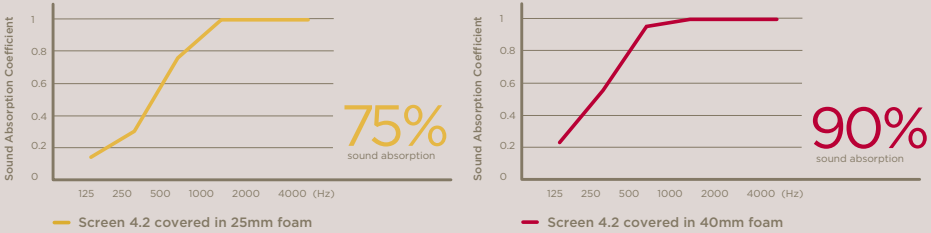
Still linear, still open,
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Screens 5.2 and 4.2 combine to provide the vast majority of popular layouts found in the modern open plan office. The screens accommodate a variety of acoustic treatments from 40 mm and 25 mm thick acoustic Lamapro foam to 12 mm EchoPanel® from Woven Image.



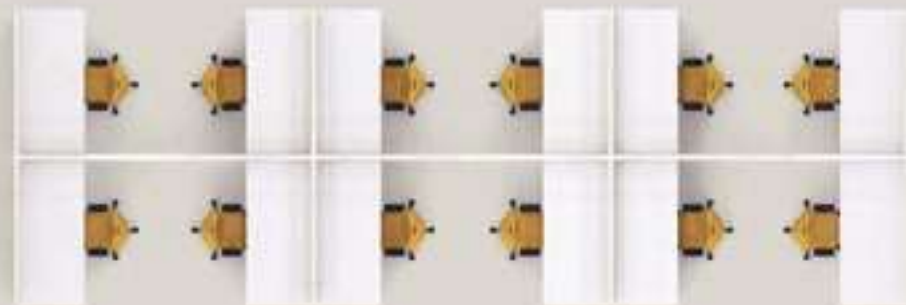
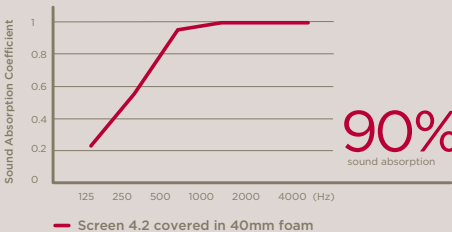
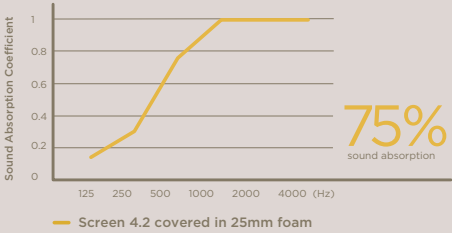
Furniture: Screens

Still linear, still open,
but workable.



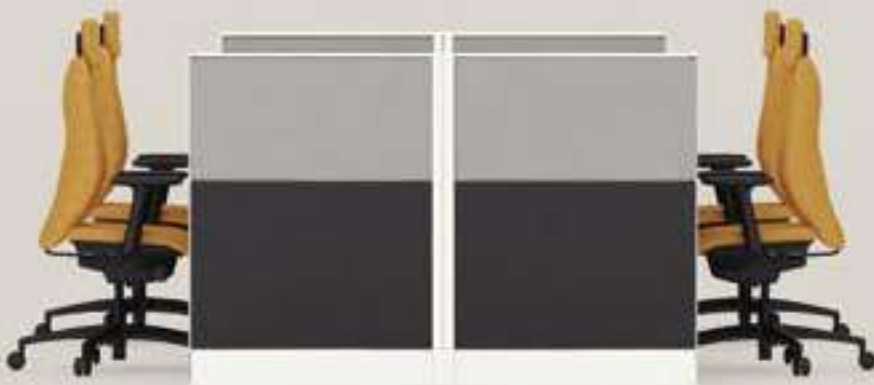
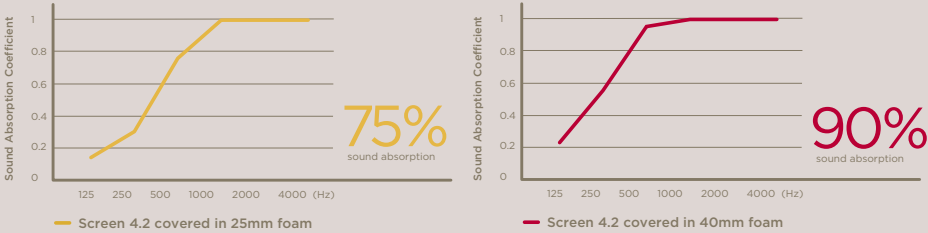
Furniture: Screens

Still linear, still open,
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Furniture: Screens

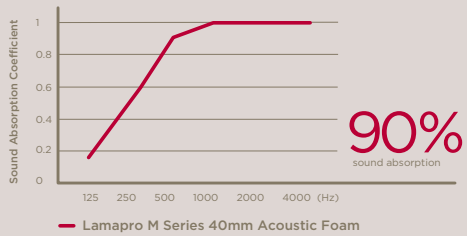
Still linear, still open,
but workable.



Furniture: Screens

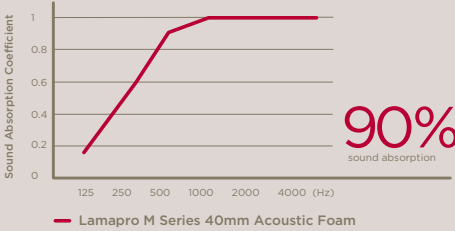
Still linear, still open,
but workable.

Screen 3.2 enables users to achieve high levels of privacy both visually and acoustically. Its unique design consists of a slim 25mm aluminium frame which houses a single sheet of 40mm sound absorbing Lamapro acoustic foam.



Furniture: Screens

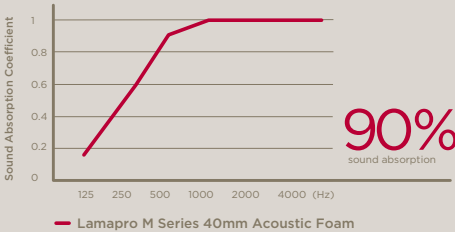
Still linear, still open,
but workable.



Furniture: Moveable screens

Privacy on the move.

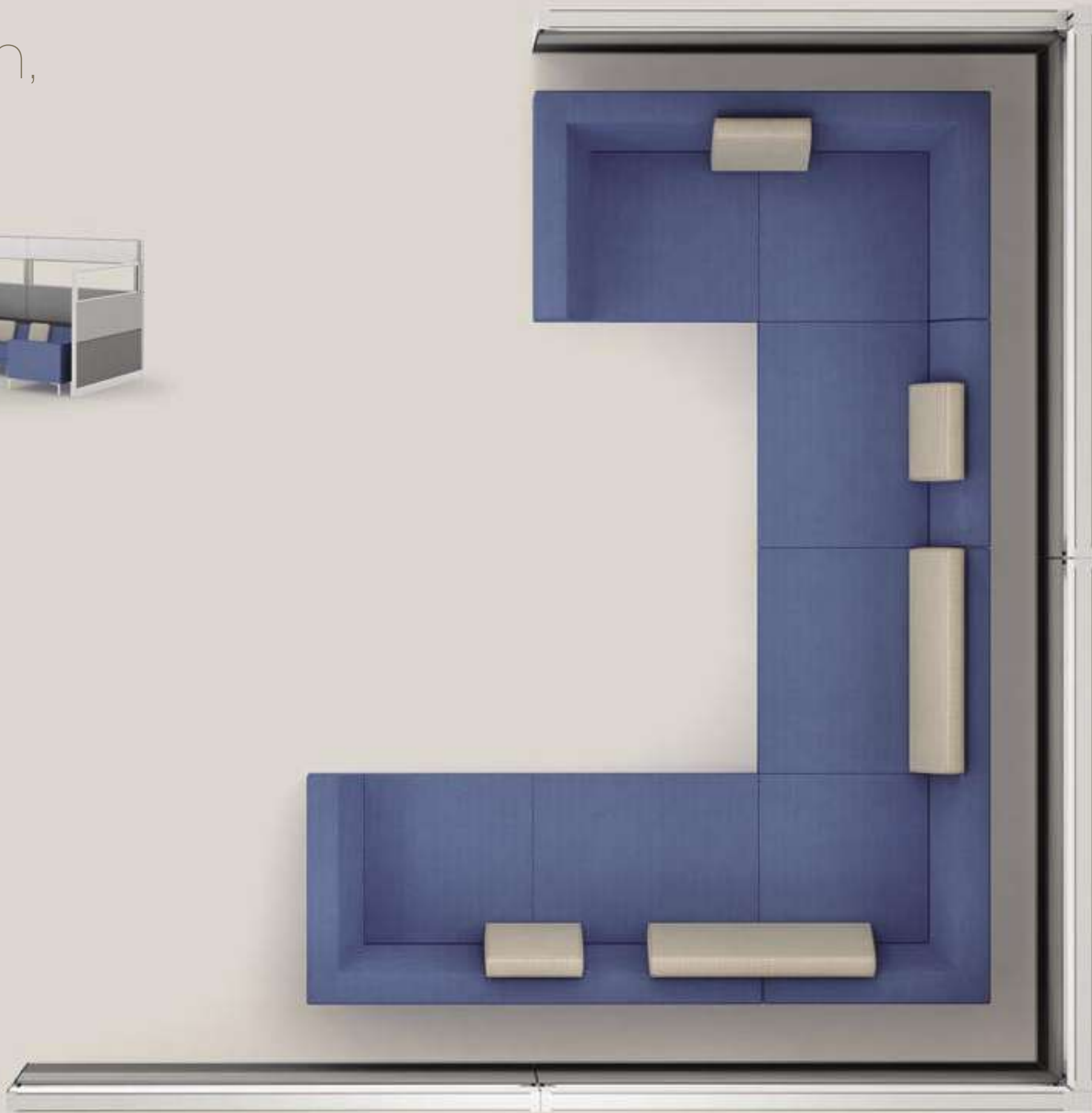
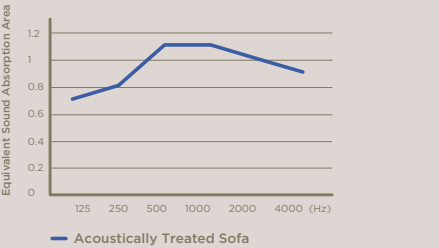
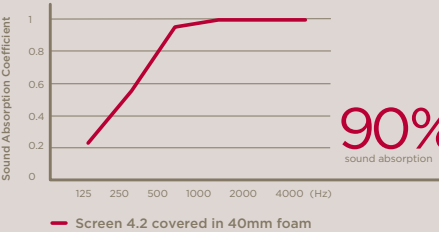
Now our 3.2 screen is available as an easily moveable screen which can rest along either its length or width. This flexible system therefore enables you to place sound absorption wherever you need it.



Furniture: Screens

Still linear, still open,
but workable.

When combined with our line of acoustically treated furniture, our screens can be used to optimize sound absorption in breakout areas.



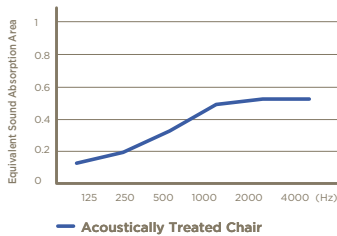
Furniture: Seating

Sit down and listen.

Ethos Chair

The Ethos Posture Operator chair from Pledge is much more than just a design classic. Its Patent Pending design includes acoustic foam lining for maximum sound absorption. Add to the design features the extended headrest area, and for the first time, there is an office chair that is as acoustically effective as it is aesthetically pleasing.

The Ethos Posture Chair can be adjusted in many ways to support and allow movement to reduce the onset of discomfort. The headrest has been increased in size to maximise acoustic comfort.



Furniture: Seating

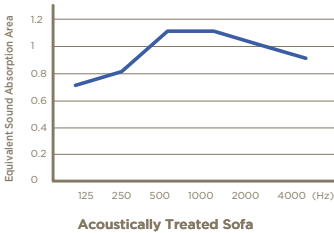
Sit down and listen.

Octo Modular Units

This range of modular seating is designed for concourse, breakout, reception, lounge and front of house interiors. The range comprises two-three-and four-seater sofas, straight, corner and chaise modular units, ottomans and tables.

The specification has been raised by substituting standard contract foam for a highly absorbent acoustic foam on the outer surfaces to increase office comfort levels even when you're not sitting down.

It's just another example of the way in which our acoustic engineers work closely with our partners to ensure that every piece of furniture forms an integral part of the acoustic solution, without compromising the clean edges.



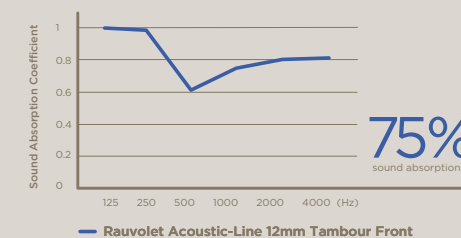
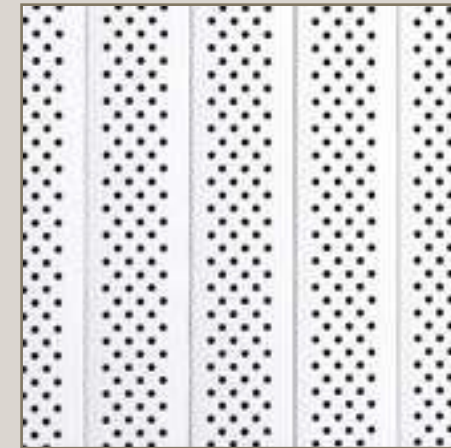


Furniture: Storage

Containing sound.

Every surface within the office environment is capable of increasing the reverberation time and hence the overall noise level. Storage units are some of the worst offenders, providing opportunities for sound waves to be not just reflected but in some cases amplified.

Rauvolet acoustic-line from Rehau has a special profile geometry with punched holes along the length of the profile and an effective system inside the hollow section. The acoustic nonwoven fabric inside acts as an absorption material, soaking up the sound energy when it enters the profile and at the same time preventing it from re-emerging.

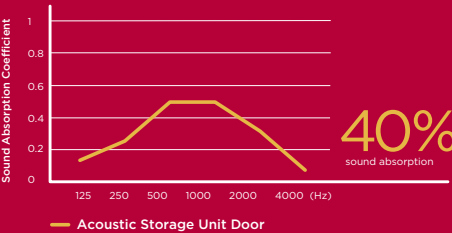


Storage units are actually some of the worst offenders.

Furniture: Storage

Containing sound.

We offer replacement doors for storage wall units that offer a high degree of acoustic absorption. These wall storage doors are made from sheet steel with specially designed perforations, filled with fabric covered lamapro acoustic foam to ensure maximum absorption over the frequencies that really matter.



Ceilings: Acoustic tiles

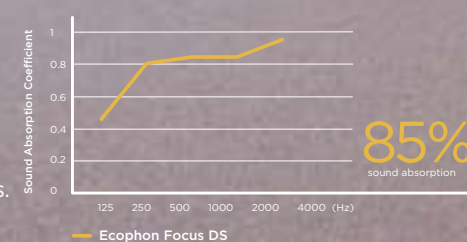
Absorbing overheads.



Ceiling systems provide an excellent opportunity for reducing reverberation in an office environment, as sound that travels over screened areas is most commonly reflected off ceilings.

We partner with Ecophon for ceiling products, as their specially engineered materials not only offer superior sound absorption properties, but also come in a range of attractive finishes.

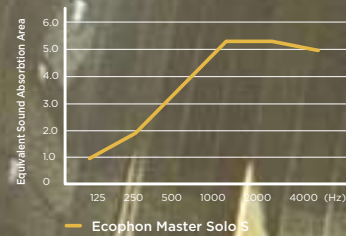
The Ecophon Focus range of ceiling is installed in a suspended grid system, creating a ceiling with a smooth appearance. With a high absorption coefficient, and stylish understated design, these tiles offer an acoustically effective alternative to regular ceiling tiles.



Ceilings: Baffles

Absorbing overheads.

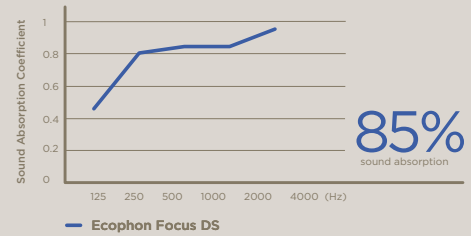
Ecophon Master Solo S is a horizontal element with painted edges which gives this effective sound absorber a very clean, minimalist appearance.



Ceilings: Suspended panels

Absorbing overheads.

Where wall-to-wall ceiling is not possible or desired, but sound absorption is a must, Ecophon's Edge 500 free-hanging acoustic ceiling units are an excellent option.



Wall Panels

Walls have ears.





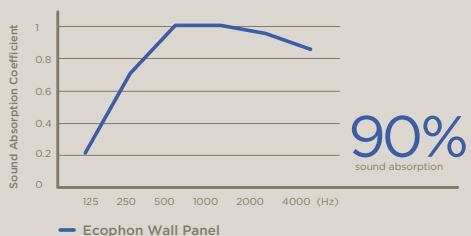
Walls and windows: Wall mounted panels

Walls have ears.

Sound absorbing wall panels are an excellent option, particularly when combined with absorptive ceiling systems.

They have a lower absorption rating than ceiling panels. Nevertheless, they provide an excellent way of reducing reverberation, particularly in areas where other options such as screens, dividers and wall art would be inappropriate.

Reducing the reverberation time is not the only bonus to using these panels. They may also prevent the formation of annoying flutter echoes which often occur between parallel reflective walls. Again, we have chosen to partner with Ecophon in this area, allowing you to offer your clients the option of complementary wall and ceiling panel systems.

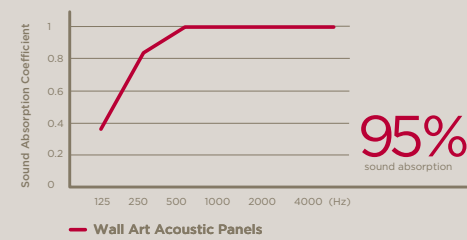


Walls and windows: Wall mounted panels

The art of noise.

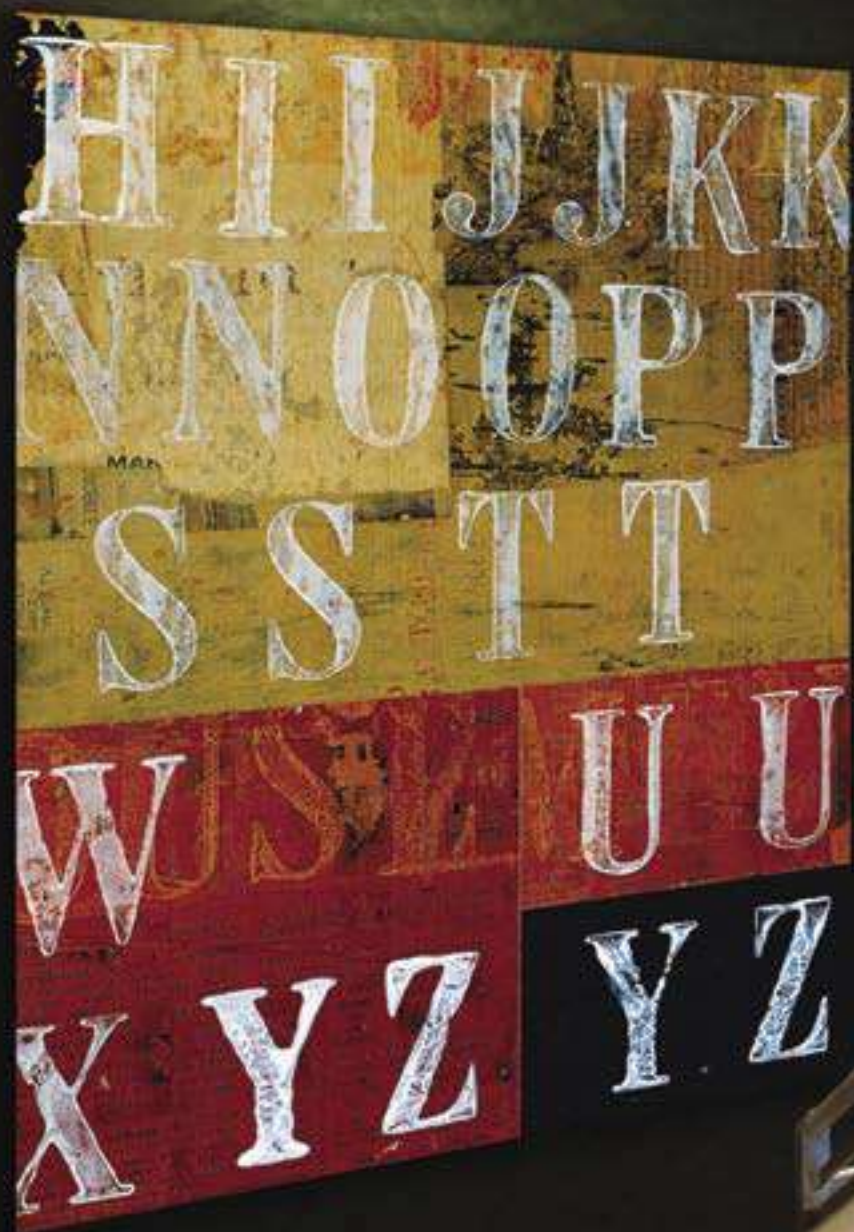
Creating balanced acoustic environments needn't just be a matter of adding absorptive properties to necessary objects like furnishings and ceiling tiles. Sometimes the solution to minimizing the reverberation of an office space is also an elegant one. That's when acoustic wall art is specified from our iCast range.

These attractive panels not only offer you the ability to put a sound absorbent surface precisely where it is needed, they also allow you to add beauty to any space, as they feature a choice of over 1000 beautiful images. Where your client has their own ideas about imagery however, any design, picture or corporate colour can be digitally printed onto Camira fabric that encases the acoustic foam inner core.



Walls and windows: Wall mounted panels

The art of noise.



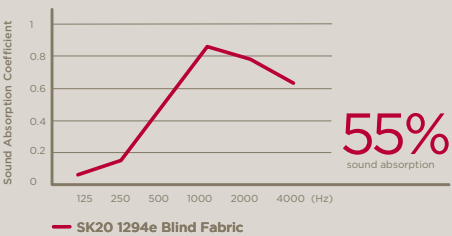
Walls and windows: blinds

Not just a window dressing.

Windows, like all hard surfaces, reflect sound. So while they are often overlooked as causes of high reverberation in office environments, the more glass that features in an office, the greater the problem will be.

That's why we partner with both Ferrari and Global Blinds to create a complete solution for all glazed areas. Ferrari create low emission blind fabric which acts as an effective sound absorbing material and so reduces internal noise levels.

When specified together with Global's high performance blind systems, Ferrari's SK20 blind fabric creates an acoustic solution which is as aesthetically pleasing as it is acoustically effective.



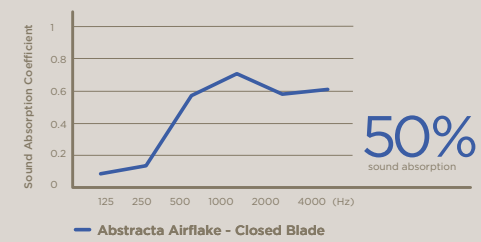
Walls and windows: Room dividers

The silent screen.

Dividers are no longer just barriers between workers. Thanks to our partners at Abstracta, room dividers are an artistic experience in their own right.

Featuring a wide range of shapes and finishes, room dividers have never looked so good. Choose from a range of hexagonal patterns created by some of Sweden's most respected designers.

And the beauty is far from being skin deep. Not only are the materials sound absorbent, the hanging structure and configuration of the shapes provides sound absorption through mechanical means, adding to the reverberation control that belies the apparent openness and artistic merits of the product.



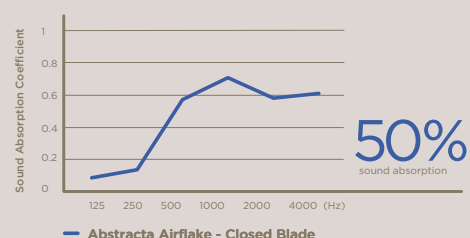
Walls and windows: Room dividers

The silent screen.

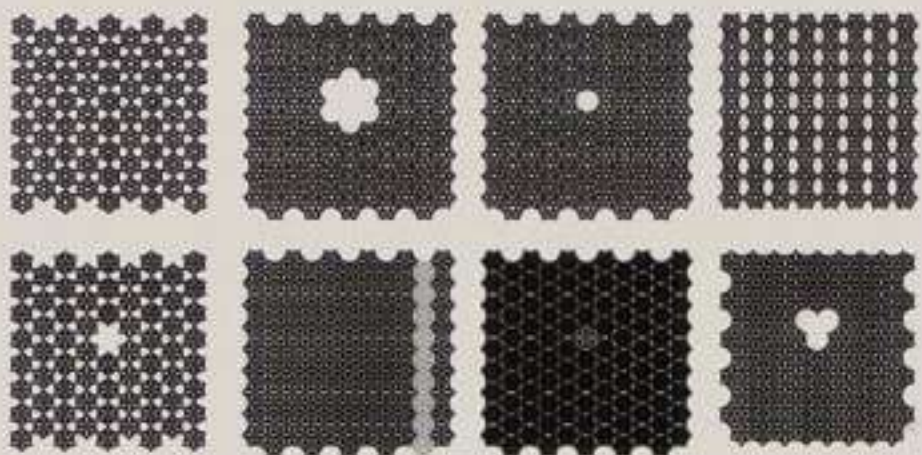
Airflake

This modular system is made from moulded fibre felt and comes in a variety of designs and colours, which can be freely combined to create the divider.

Available in five colours and four patterns, it can be fitted to aluminium rails for mounting on walls or ceilings, or fixed to the wall directly for decorative sound absorption.



Below: The choice of colours and shapes make infinite combinations.



Floors: Carpets

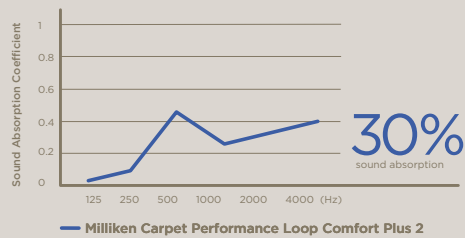
Underlying principles.

As one of the largest continuous surfaces in any office, the floor makes a significant contribution to any room's Reverberation Time. Clearly, a degree of floor level acoustic absorption is necessary, yet not just any tile or carpet surface will do.

The acoustic efficiency of any carpet is determined by its construction, and our partners at Milliken have perfected the art of creating carpet surfaces with narrow, deep pores that effectively absorb sound, allowing acoustic energy to enter the pile of the carpet before being reduced through the effects of friction.

Milliken Contract's Comfort Plus is the world's first high performance renewable modular carpet with recycled cushion backing which absorbs sound to a far greater degree than any hardback carpet or hard flooring alternative.

The ability of Comfort Plus² to absorb sound helps to reduce interfloor noise and makes raised access floors sound more solid.



Creating carpet surfaces with narrow, deep pores that absorb sound.





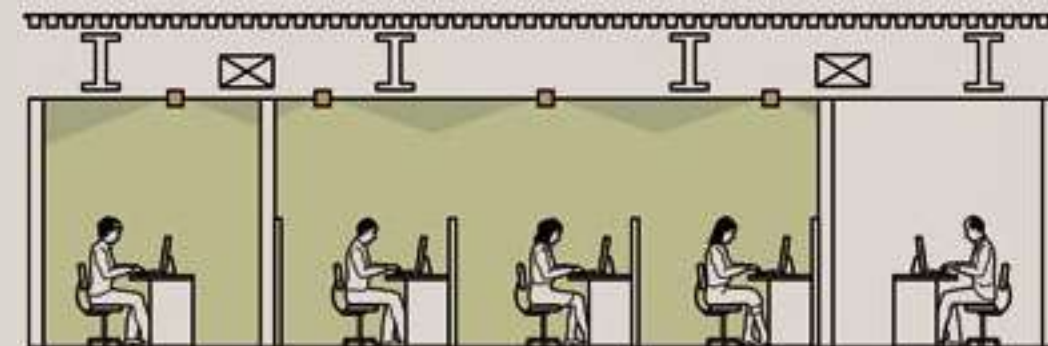
Noise Masking Systems

Increasing the ambient noise level.

In situations where excessive noise in an office or work place environment causes disturbance or where the ambient noise environment is low and speech privacy is of concern and where other measures (such as the installation of acoustically absorbent materials and products) is not viable, a suitable solution may be an office noise masking system from 24 Acoustics Ltd.



The system artificially introduces a low level of broadband noise which is played by speakers within the ceiling void. This unobtrusively increases the ambient noise level inside a noise-sensitive room, acting to mask noise from other sources. It is also a particularly useful tool in office environments with very low ambient noise levels where confidential conversations (for example in meeting rooms or cellular office spaces) may be overheard and hence improves speech privacy without the need for an increase in sound insulation between noise-sensitive spaces.



■ Noise Emitters ■ Optimal Sound Masking Level

The system artificially introduces a low level of broadband noise.

whiteleys

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