TECHNICAL DATASHEET

V2.24

AbsorberLine®

Perforated metal acoustic panels

High-performance sound absorption. Engineered in metal.

50 / 65 / 100 mm

Standard and bespoke formats

ACUPHON LTD

Architectural acoustic systems

Your guide to AbsorberLine®

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Made for your space

Explore the range, compare the details and build a specification around your project.

Perforated metal acoustic panels made for your space.

Bring acoustic control into the architecture.

Create spaces that sound as considered as they look. AbsorberLine combines a precision-folded metal face with acoustic infill to control reverberation and give walls a distinctive, durable finish. From an understated architectural surface to a bold acoustic feature, the system offers the freedom to make performance part of the design.

Tested sound absorption.

Choose absorption to suit the room. Tested 65mm and 100mm configurations achieve Class A, αw 0.95, with strong low-mid response around 315–400Hz. The 50mm option delivers Class B, αw 0.85, and strong mid-to-high frequency absorption.

Bespoke sizes for your project.

Made-to-measure acoustic wall panels can follow your setting-out and architectural details. Ceiling panels are available in 500 × 1000mm and 500 × 2000mm formats, with direct-fixed or suspended support arrangements. Discuss bespoke requirements and the fixing specification with Acuphon.

Colour and visual character.

Coordinate RAL powder-coated colours with your interior palette, or create a feature finish that stands out. The preferred R3T5 perforation gives a fine, consistent texture. Aero, Graduation and Carriage designs offer further ways to shape the visual character.

Robust, durable construction.

Folded metal trays bring rigidity and a resilient surface to busy environments. Galvanised steel and a project-selected coating provide a durable basis for the system. Specialist Sports and Correctional variants address the needs of more demanding applications.

Walls, ceilings and more.

Specify perforated metal acoustic panels for education, commercial interiors, sports and leisure, transport and industrial spaces. Specialist secure systems and engineered external barrier constructions extend the range, with each arrangement selected around its environment and installation requirements.

Fire-conscious material selection.

AbsorberLine MF can be specified with materials achieving reaction-to-fire classifications ranging from Class B-s2,d0 up to Class A2-s1,d0 in accordance with BS EN 13501-1.*

*Classification depends on the selected facing, coating, insulation and other individual components. These ratings apply to the component materials, the complete assembled AbsorberLine MF system has not been independently tested or classified to BS EN 13501-1.

Ceiling panels use direct-fixed or rod-suspended support channels. Acoustic ratings apply to the tested constructions.

Engineered for demanding spaces.

Performance, durability and design freedom

AbsorberLine combines high acoustic absorption with the durability and precision of a fabricated metal panel system. Available in a choice of depths, module widths, finishes and fixing arrangements, the range can be configured around both the acoustic and architectural requirements of the project.

RANGE AT A GLANCE

- Class A performance from 65mm.
- Robust fabricated metal construction.
- Multiple fixing systems.
- Standard + bespoke perforations.
- Sports + Correctional variants.

ARCHITECTURAL ACOUSTICS WITHOUT THE FRAGILITY.

A durable, modular surface treatment designed to become part of the architecture.

System anatomy.

Simple construction. Engineered performance.

AbsorberLine is formed from one sheet of metal and supplied with acoustic infill. Standard trays have four folded edges. ChannelFix has folded long edges and open short ends, concealed by the retaining channels.

01 ONE-PIECE METAL TRAY

R3T5 perforated centre: Ø3mm holes on 5mm staggered pitch, approx. 33% open area. Narrow solid face border.

02 ACOUSTIC INFILL

Fire resistant Acoustic infill is fitted inside the tray and supplied with the panel as a complete assembly.

03 SOLID FOLDED EDGES

Solid, unperforated sides and returns are integral to the face. ChannelFix leaves the short ends open, with infill exposed until the channels conceal them.

Three depths. Preferred modular widths.

Standardised where it matters. Flexible where it helps.

50mm	65mm	100mm
Preferred widths 266 / 475mm	Preferred widths 230 / 440mm	Preferred widths 167 / 375mm

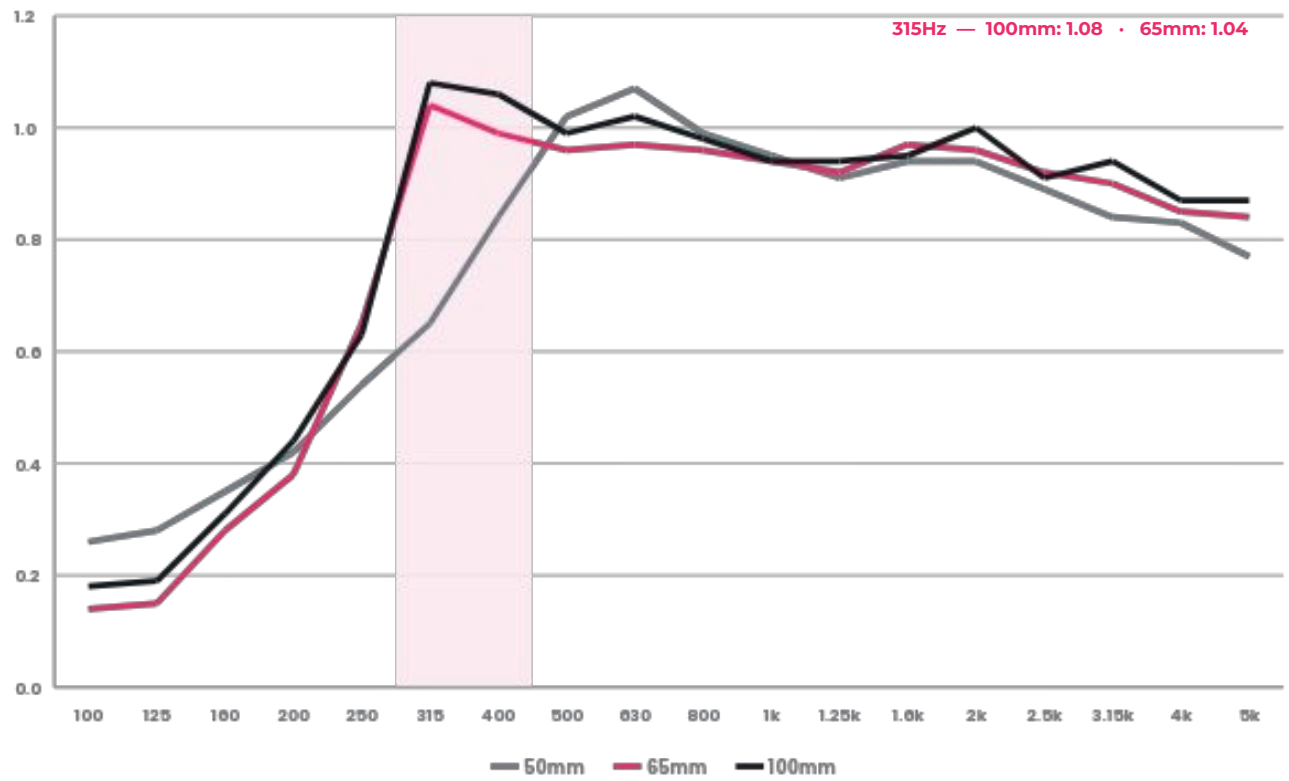
PANEL FORMAT

Typical panel lengths are 2500mm and 3000mm, with alternative lengths available to suit project layouts. Non-standard widths can also be considered; however, the preferred module widths provide the best balance of raw material efficiency, folded-edge construction, panel rigidity, handling and installation performance.

Wider bespoke panels are possible subject to review, but excessive width can increase the risk of flexing or creasing during handling and installation.

University of Salford tested

Full frequency response - not just a headline rating.



50mm

αw 0.85

CLASS B

Upper limit of Class B — one aw step below Class A.

65mm

αw 0.95

CLASS A

Class A performance from a comparatively shallow 65mm system.

100mm

αw 0.95

CLASS A

Strong low-mid performance with 1.08 at 315Hz.

Tested to BS EN ISO 354:2003. Weighted sound absorption coefficient and classification to BS EN ISO 11654:1997. NRC values calculated by Salford at the client's request are supplementary and are not a UKAS single-number rating.

SALFORD REPORTS 05991-5897 / 05991-5899 / 05991-5898

The performance behind the rating.

Depth changes the response - even when the classification stays the same.

WHAT THE CURVES SHOW

50mm Compact and highly effective. αw 0.85 sits at the very top of Class B; the full third-octave curve peaks at 1.07 around 630Hz.

65mm αw 0.95 / Class A with a clear 315Hz peak of 1.04 and strong performance through the mid and high bands.

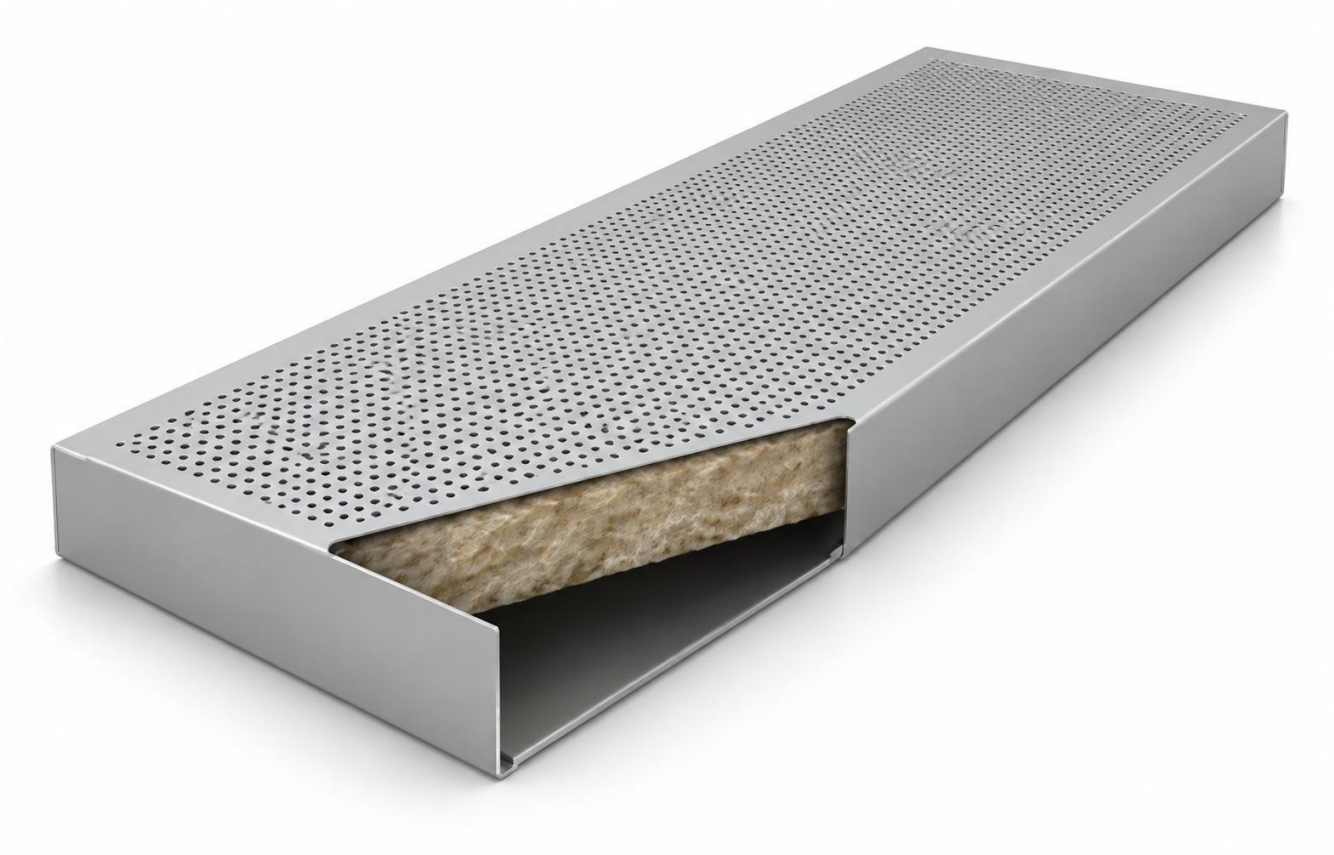
100mm αw 0.95 / Class A with the strongest overall low-mid response around 315–400Hz: 1.08 at 315Hz and 1.06 at 400Hz.

The additional depth changes how the absorber behaves across frequency, even where the same αw classification is achieved.

Inside the acoustic panel.

50mm mineral fibre infill. The remaining tray depth forms the rear airgap.

The infill sits directly behind the perforated face. A deeper tray creates an airgap behind the infill, within the metal sides.



CUTAWAY VIEW

Perforated face → 50mm mineral fibre → internal rear airgap.

Nominal tray depth.	Mineral fibre infill.	Internal rear airgap.
50mm	50mm	**None**
65mm	50mm	**15mm**
100mm	50mm	**50mm**

Illustrative cutaway: nominal build-ups are listed above. Acoustic results apply to the complete tested construction.

R3T5

Our preferred perforation.

ROUND HOLES

Ø3mm

TRIANGULAR STAGGERED PITCH

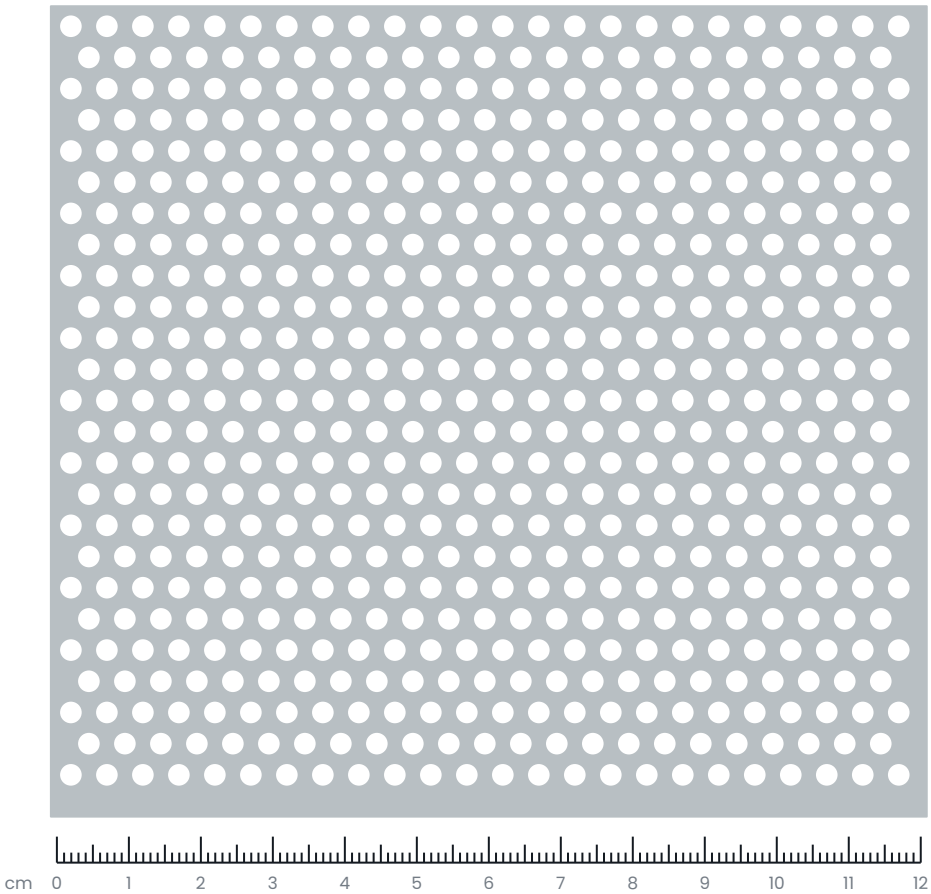
5mm

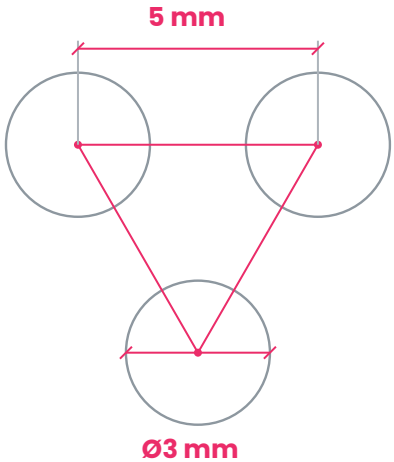
OPEN AREA

32.6%

Open area of the perforated field, excluding solid panel borders.

R3T5 PATTERN DETAIL (ENLARGED)





60° staggered arrangement.

Alternate rows offset by half the pitch to form a triangular pattern. The 5 mm pitch is measured centre to centre between adjacent holes.

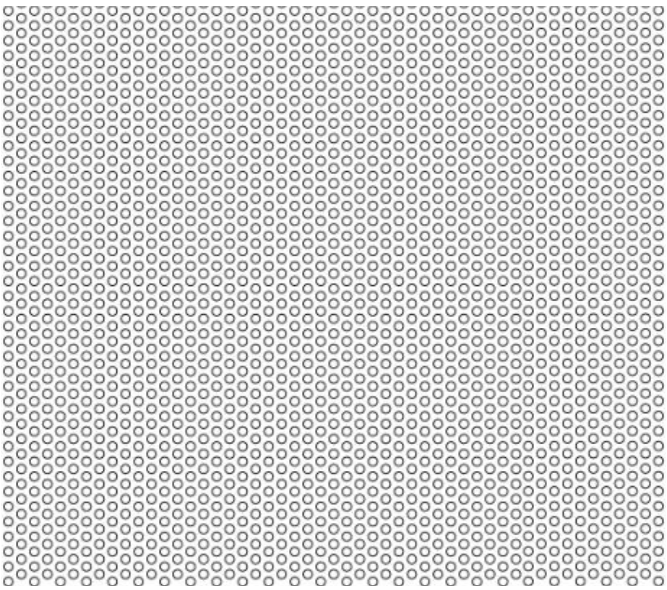
Other perforations available.

Alternative patterns can suit the design and technical requirements of your project.

Review alternative hole geometries and open areas against the required acoustic performance and manufacturing constraints.

Perforation with character.

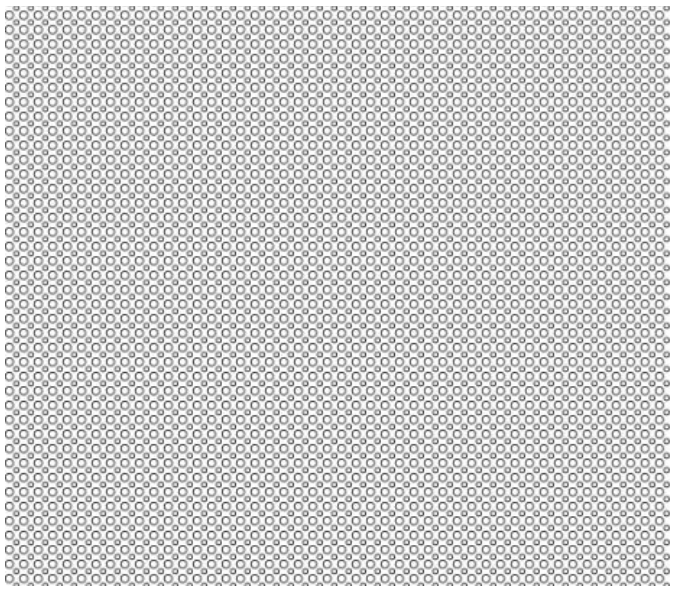
The preferred staggered format, with alternatives for a different visual texture.



PREFERRED PATTERN

Staggered Pitch.

A regular staggered round-hole layout for a clean, consistent architectural surface. R3T5 is the preferred specification: 3mm round holes on 5mm triangular pitch, with 32.6% open area.



ALTERNATIVE PATTERN

Aero.

A denser round-hole arrangement for a finer visual texture. Consider Aero where the perforation pattern forms part of the architectural design, with hole geometry and open area agreed for the project.

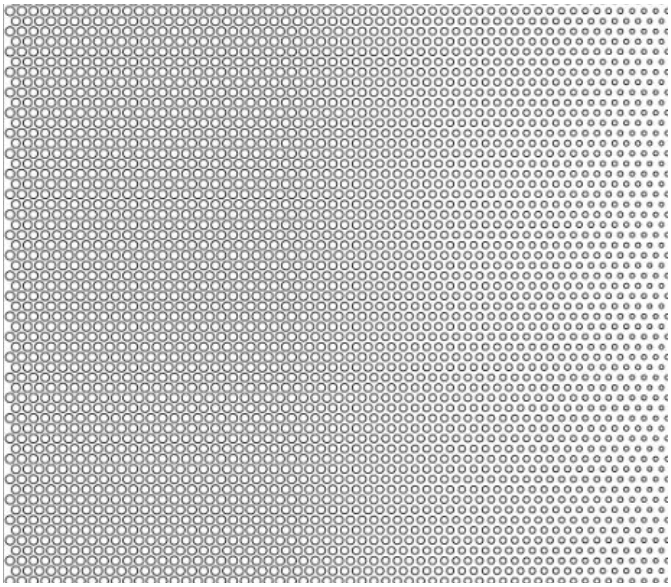
Made to measure.

50mm, 65mm and 100mm panel depths. Typical lengths are 2500mm and 3000mm, with bespoke dimensions available subject to panel rigidity, fabrication and fixing requirements.

Pattern illustrations show visual options, not a tested specification. Changes to hole geometry and open area may affect acoustic performance. Confirm the complete construction and finish for the project.

More ways to shape the surface.

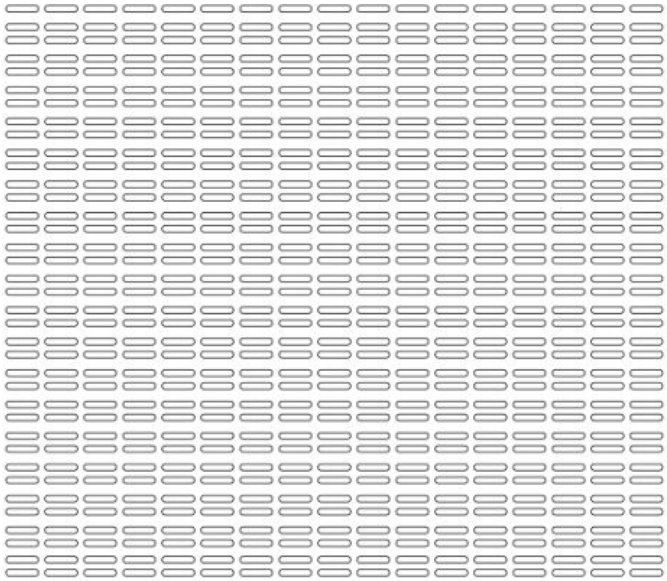
Graduated holes and directional slots for distinctive acoustic surfaces.



ALTERNATIVE PATTERN

Graduation.

A progression in hole size gives the panel a changing visual density. Use Graduation to introduce movement across a feature wall or a coordinated sequence of panels.



ALTERNATIVE PATTERN

Carriage.

Repeated elongated slots create a directional surface pattern. Carriage offers a different architectural rhythm from round perforations, with slot dimensions and orientation selected for the design.

Made to measure.

50mm, 65mm and 100mm panel depths. Typical lengths are 2500mm and 3000mm, with bespoke dimensions available subject to panel rigidity, fabrication and fixing requirements.

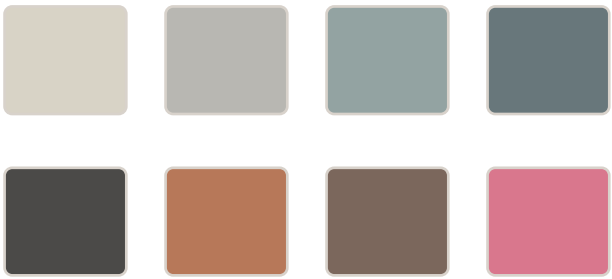
Pattern illustrations show visual options, not a tested specification. Changes to hole geometry and open area can affect acoustic performance. Confirm the complete construction and finish for the project.

Metal with architectural freedom.

Powder-coated colour, texture and durability.

AbsorberLine is typically fabricated from galvanised steel and finished with a project-selected powder coat. The exposed face can therefore be coordinated with surrounding architecture - from quiet neutral finishes to strong feature colours.

FINISH PALETTE - ILLUSTRATIVE



MATERIAL NOTES

Galvanised steel is used as standard for the fabricated panel shell and channel components shown in the current production drawings. Alternative metals or coating specifications can be considered where required by the project environment.

*Reaction-to-fire classifications apply to the individual component materials and should not be interpreted as a classification of the complete AbsorberLine MF assembly.

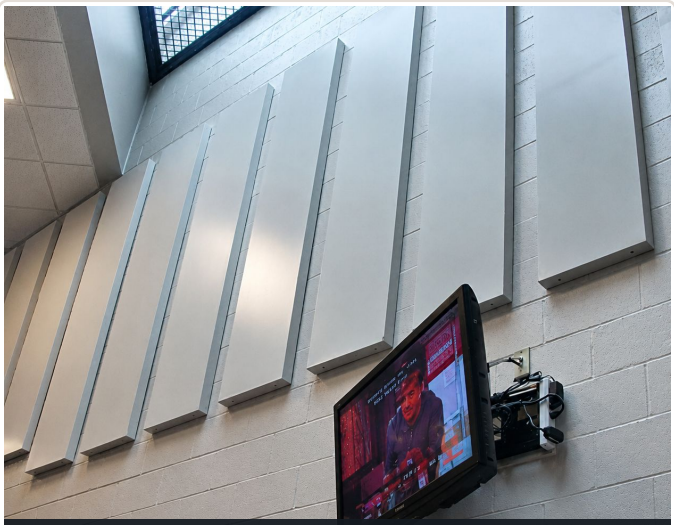
One system: very different environments.

Where acoustic control needs durability and architectural discipline.

COMMERCIAL

EDUCATION

INDUSTRIAL



CORRECTIONAL

Typical applications include education, sports and leisure, commercial interiors, transport, industrial environments, correctional and secure facilities, and external acoustic barriers.

AbsorberLine Sports Panel.

High-level acoustic performance. Built for the perimeter.

Image for illustration purposes only

AbsorberLine **Sports Panel** is a robust wall-mounted acoustic solution developed specifically for sports halls, gymnasia and leisure environments. Designed for continuous high-level banks around the hall perimeter, the system combines high-performance sound absorption with the durability and clean architectural rhythm of fabricated metal panels.

2300 × 475mm MODULE | **CONTINUOUS PERIMETER BANKS** | **50mm DEPTH CONCEPT**

The proposed standard module enables efficient setting-out by linear meterage and creates a consistent appearance across long uninterrupted wall runs.

Designed to repeat.

A simple module for long, high-level acoustic runs.

SPORTS PANEL DESIGN INTENT.

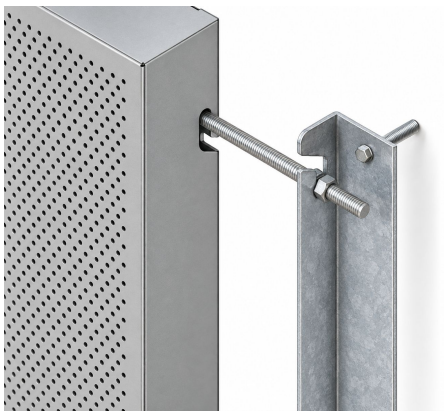
- 2300mm high × 475mm wide repeatable module.
- High-level wall installation around the sports hall perimeter.
- Positive wall retention for long uninterrupted banks and demanding use.
- Fixing arrangement to be finalised specifically for the Sports Panel application.
- Ball-impact resistance.

Choose the installation method.

Different project conditions call for different fixing logic.

ChannelFix

Open-ended filled panels retained by continuous top and bottom channels.



SlotFix

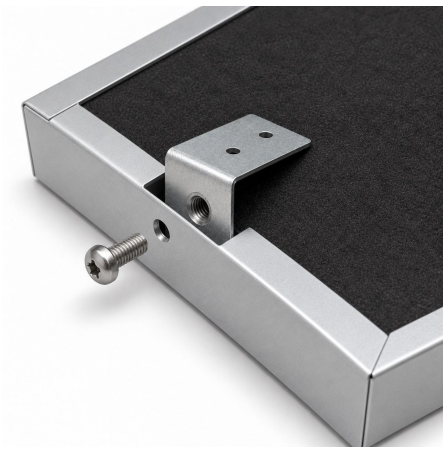
Laser-cut side hooks locate over horizontal M12 threaded rails supported by wall angles.

Z-Fix

Panel and wall-mounted Z sections interlock behind the face.

KeyholeFix

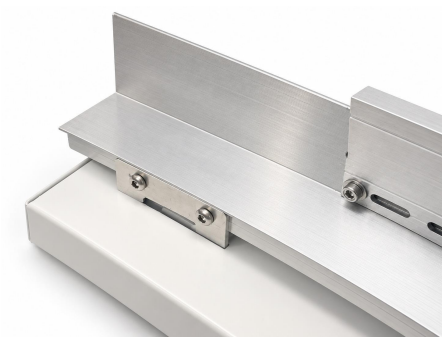
Keyhole slots in the rear returns locate over projecting wall fixings.



SecureFix

Four-sided folded tray slides over wall brackets; edge security screws retain the panel.

OPTIONAL STAND-OFF SYSTEM



HookFix

Rear panel attachment and carrier assembly for the NVELOPE NV7 HookFix system.

Illustrative fixing views. Select the system to suit the substrate, panel format, access strategy and design loads. Refer to the project-specific fixing drawings for installation.

ChannelFix System.

Concealed top and bottom channel retention for wall-mounted AbsorberLine panels.

Folded long edges form the solid sides and returns. The short top and bottom ends stay open during manufacture; the channels conceal the exposed infill after installation.

TOP CHANNEL

Deep rear fixing leg.
Short front retaining lip.
Open at both ends.

OPEN-ENDED PANEL

Exposed acoustic infill.
Solid folded long sides.
Narrow solid face borders.

BOTTOM CHANNEL

Supports the panel and conceals the lower open end.

01 LIFT

Lift the upper end into the top channel.

02 ENGAGE

Bring the lower end in over the bottom channel.

03 LOWER

Lower into the bottom channel to seat the panel.

Illustrative exploded view. Channel profiles, anchor details and installation clearances follow the approved project drawings.

SlotFix + Z-Fix.

Two concealed alternatives for demountable wall installations.

SlotFix

Four-sided, 100mm folded tray with laser-cut side hooks. The panel lowers onto horizontal M12 threaded rails carried by wall-mounted angles.

M12 lock nuts secure the rails at the mounting angles. Allow lifting clearance for panel removal.

Z-Fix

Rear view of the filled panel, with horizontal Z bars riveted to its returns. Matching wall bars fix to the wall-mounted battens.

Lower the panel so the downward panel lips engage behind the upward wall lips. Allow lifting clearance for removal.

SlotFix follows the concealed assembly Iss B and SK-0007 Iss A. Wall angles and anchors are installer-supplied. Z-Fix follows its separate project drawings. Confirm rail spacing, fixings and installation clearances for the project.

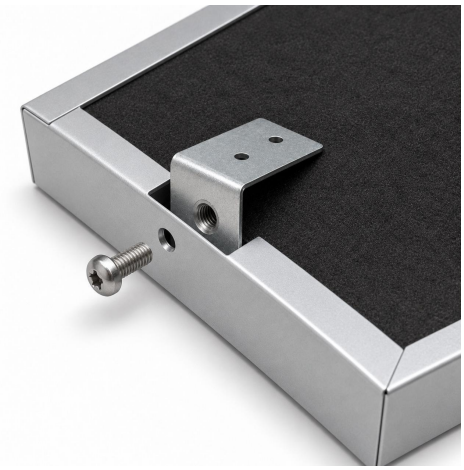
KeyholeFix, SecureFix + HookFix.

Three options for different access, security and maintenance strategies.

KeyholeFix

Four keyhole slots are formed in the integral rear side returns. Locate them over the fixing heads, then lower into the narrow slots.

Lift to release, subject to the project restraint detail.



SecureFix

Four-sided folded tray: rear connection shown.

Fix the brackets to the wall first. Slide the panel over them and align the panel-edge holes with the bracket holes. Insert and tighten the security screws.

The brackets are concealed once installed. Release the screws before removal.

Optional wall stand-off system.

HookFix using NVELOPE NV7 can hold AbsorberLine panels away from the wall substrate where the project requires a rear void.

117 - 152 mm

Example NV7 bracket range, measured from substrate to rear face of panel. Deeper profiles can increase the void. Panel depth is additional.

KeyholeFix and SecureFix details are illustrative. Specify NV7 bracket depth, fixings and retention to suit the project. Confirm the complete installation against the applicable project drawings.

AcuSorb® AbsorberLine Correctional.

High-impact acoustic treatment for secure and correctional environments.

SYSTEM AT A GLANCE

Developed for prisons, custodial facilities and other high-risk environments. The system combines high-impact perforated steel construction with concealed security fixings and anti-ligature sized perforations.

STANDARD PANEL SIZES

1200 × 400 × 50mm

WALL

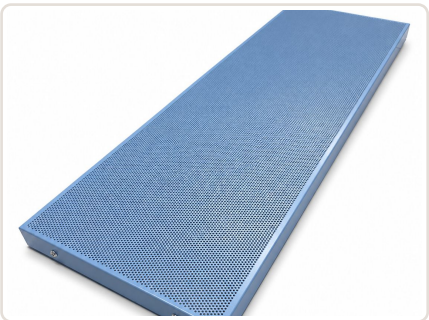
800 × 400 × 50mm

CEILING

Other sizes available upon request.

KEY FEATURES

- Concealed "L" bracket fixing.
- Security socket button-head screws.
- Demountable wall + ceiling system.
- R3T5 fine perforation as standard.
- RAL 5024 Blue / RAL 9010 White.



Previously supplied to organisations including Sodexo and installed across a number of HMP establishments throughout the UK. Public literature shows the fixing principle only, fabrication dimensions are issued separately for live projects.

Acoustic absorption beyond the building envelope.

Project-specific structures using AbsorberLine panel technology.

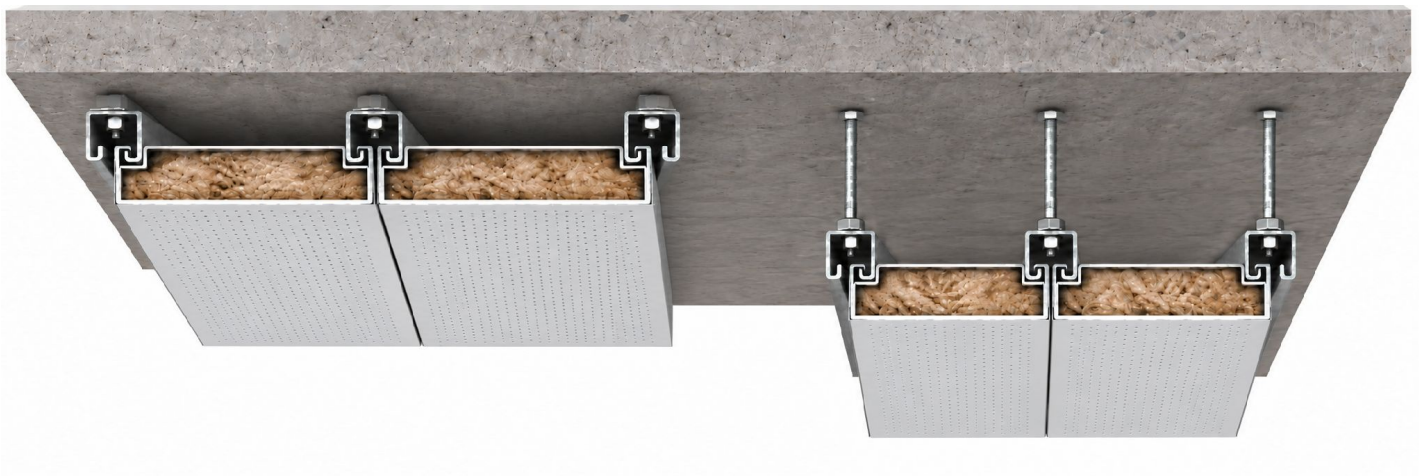
PROJECT-SPECIFIC ENGINEERING

AbsorberLine panel technology can form part of external acoustic barrier constructions. Supporting steelwork, foundations, fixings and restraint systems must be structurally designed for the relevant panel weight, dead load, wind load and any project-specific imposed or dynamic loads.

STRUCTURAL DESIGN REQUIRED

Acoustic ceiling panel systems.

Direct-fixed or suspended installation, developed for overhead use.



Illustrative cutaway: supports at outer edges and shared joints. Suspended panels shown at a lower level.

Direct-fixed

41 × 41mm Unistrut bolted directly to the soffit. Approx. 35–40mm rear air gap.*

Suspended

41 × 41mm Unistrut on M10 rods. Drop, supports and bracing to suit the project.

500 × 1000mm / 500 × 2000mm

50mm panel depth. Powder-coated 1.2mm pre-galvanised steel. R3T5 perforation.

*Provisional clearance: confirm against the assembly drawing. **Installer supplies channels, rods, nuts and anchors.** Support centres and fixings to project design.

Designed around the module.

Protect the finish. Respect the panel geometry.

INSTALLATION + HANDLING NOTES

- Use the preferred standard module widths wherever possible to optimise panel stiffness, raw material efficiency and handling.
- Wider bespoke panels may be manufactured subject to review, but increasing width can increase the risk of flexing or creasing during handling and installation.
- Panel lengths are generally more flexible and can be adapted to suit project layouts.
- Protect powder-coated faces and folded edges during transport, storage and installation.
- Fixings and anchors must be selected to suit the substrate, panel configuration and design loads.
- Follow the relevant AbsorberLine fixing drawing for the system being installed.

SPECIFIER NOTE – Dimensions, fixings and acoustic performance should be checked against the project-specific construction. Detailed fabrication and installation drawings are issued separately where required.

Let's shape your project.

Choose your options. We'll help refine the specification and prepare your quotation.

01 Project & contact

Project / site

Company / contact

Email / telephone

Site postcode / required delivery date

02 Application & performance brief

☐ Wall panels ☐ Ceiling panels ☐ Both ☐ Please advise

Room use / noise issue / acoustic target or report reference

Required fire classification / exposure / impact or cleaning requirements

03 Fixing method

☐ Wall: SlotFix ☐ Wall: channel fixing ☐ Wall: NV7 stand-off

☐ Ceiling: direct-fixed ☐ Ceiling: suspended ☐ Please advise / other

Wall / soffit substrate

Rear air gap / ceiling drop (mm)

04 Perforation & finish

☐ R3T5 preferred ☐ Alternative pattern: _____ ☐ Please advise

R3T5: 3mm round holes, 5mm triangular pitch, 32.6% open area.

☐ Plain galvanised ☐ RAL powder-coated ☐ Please advise

RAL code / colour / sheen / sample reference

05 Panel schedule

Use a separate line or copy of this sheet for each specification. All dimensions in mm.

Ref / room	Fixing / finish ref	Width	Height / length	Qty	Depth

☐ Drawings attached ☐ Panel schedule attached ☐ Samples required

Selections are an enquiry brief, subject to technical review. Bespoke sizes and alternative finishes can be discussed. Return with marked-up drawings and access / delivery constraints.

CONTACT US

Let's talk.

Bring us your plans. We'll help you shape the right acoustic panel system for your space.

From panel dimensions and finishes to fixing arrangements, samples and project-specific acoustic support, our team can help turn your requirements into a considered specification.

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ACUPHON LTD

Technical datasheet V2.24
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Specification and performance depend on the complete construction. Refer to the latest Acuphon technical information for your project.