SuperPhon®

CMSDANSKIN ACOUSTICS

Installation Guidelines

PRODUCT DESCRIPTION

The SuperPhon® Range provides an effective means of controlling reverberation and reflected sound in rooms. It provides an ideal solution for environments and workplaces where noise can be an issue.

BENEFITS

SuperPhon® is used widely in:

- Recording studios
- Sports halls
- Schools
- Call centres

CMS Danskin Acoustics can provide a range of fixing systems for all applications. Below is a general guide to the most popular fixings.

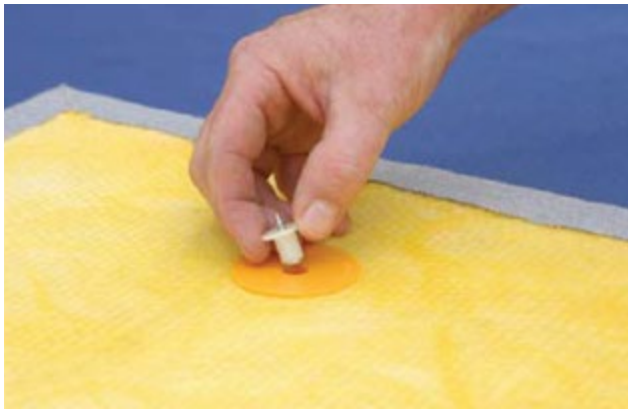
ROTOFAST SNAP-ON ANCHORS for WALL/CEILING PANELS

Suitable for High Impact and standard wall panels.

Rotofast Snap-On Anchors are a secure and fast solution for acoustic panel installation. For ceilings or walls, the Rotofast Snap-On Anchor is the answer. See page 4 for recommended panel fixing points.

Rotofast Snap-On parts
Everything you need to install a panel in 5 easy steps.

1 Screw Rotofast Snap-On Anchors into the back of the panel using the Rotofast driver tool.



2 Insert marking plugs into the Snap-On Anchors.

3 Push panel against wall to mark anchor locations.

4 Screw ratchets to wall at marked locations (#8 screws recommended). Flat end of ratchet goes against the wall, curved end faces out. Plugs in the wall are recommended if studs cannot be picked up.

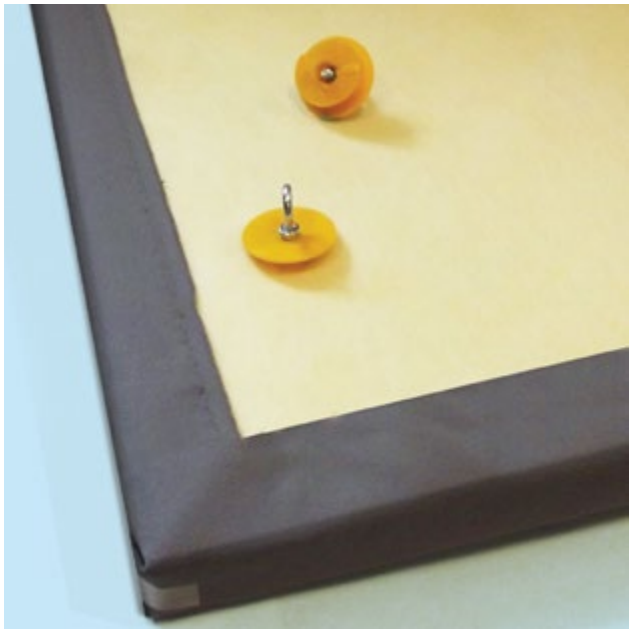
5 Firmly push panel onto ratchets to complete installation.

ROTOFAST CLOUD ANCHORS for CEILING PANELS

Installing panels in cloud applications is done easily on site. Simply screw Rotofast Cloud Anchors into the back of the panel for a strong and secure installation. See page 4 for recommended panel fixing points.

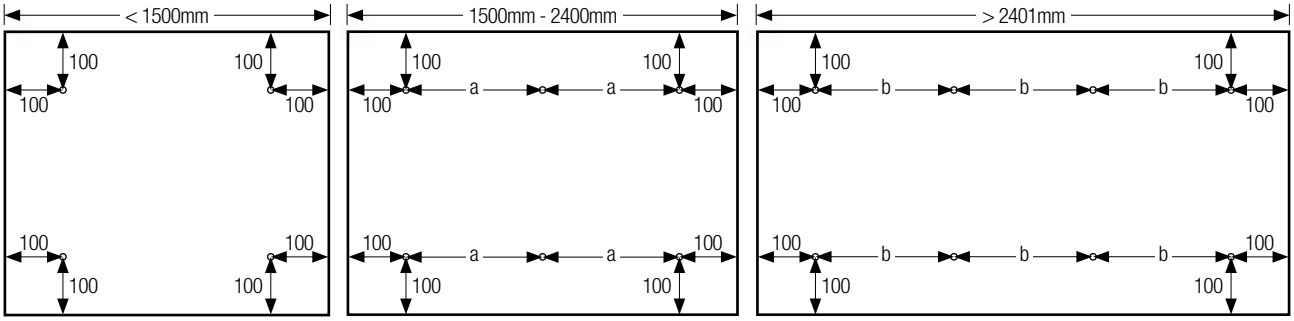
Rotofast Cloud Anchors have been tested to have a pull-out strength of approximately 17kg in 64kg/m^3 acoustic insulation. This testing was conducted using samples from all the major acoustic insulation manufacturers.

Site conditions or panel size could affect the number of fasteners required. Contact your local CMS Danskin Acoustics for further information.

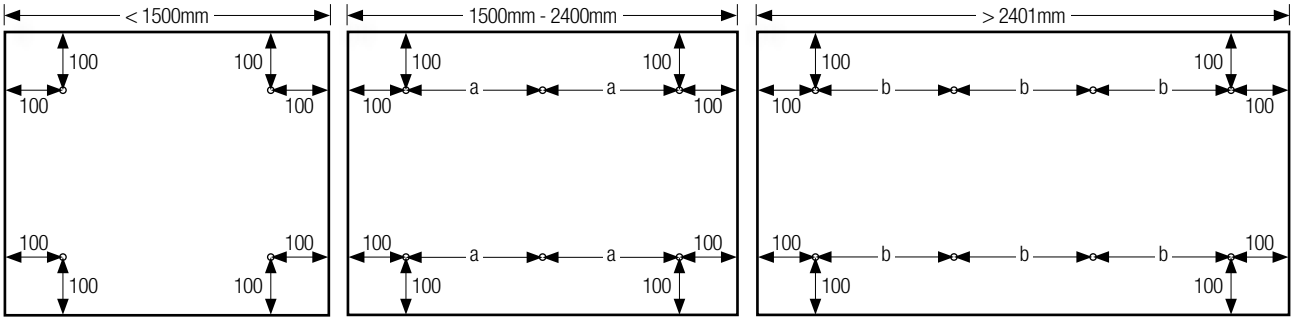


RECOMMENDED PANEL FIXING POINTS

Fixing locations - Wall mounted panels

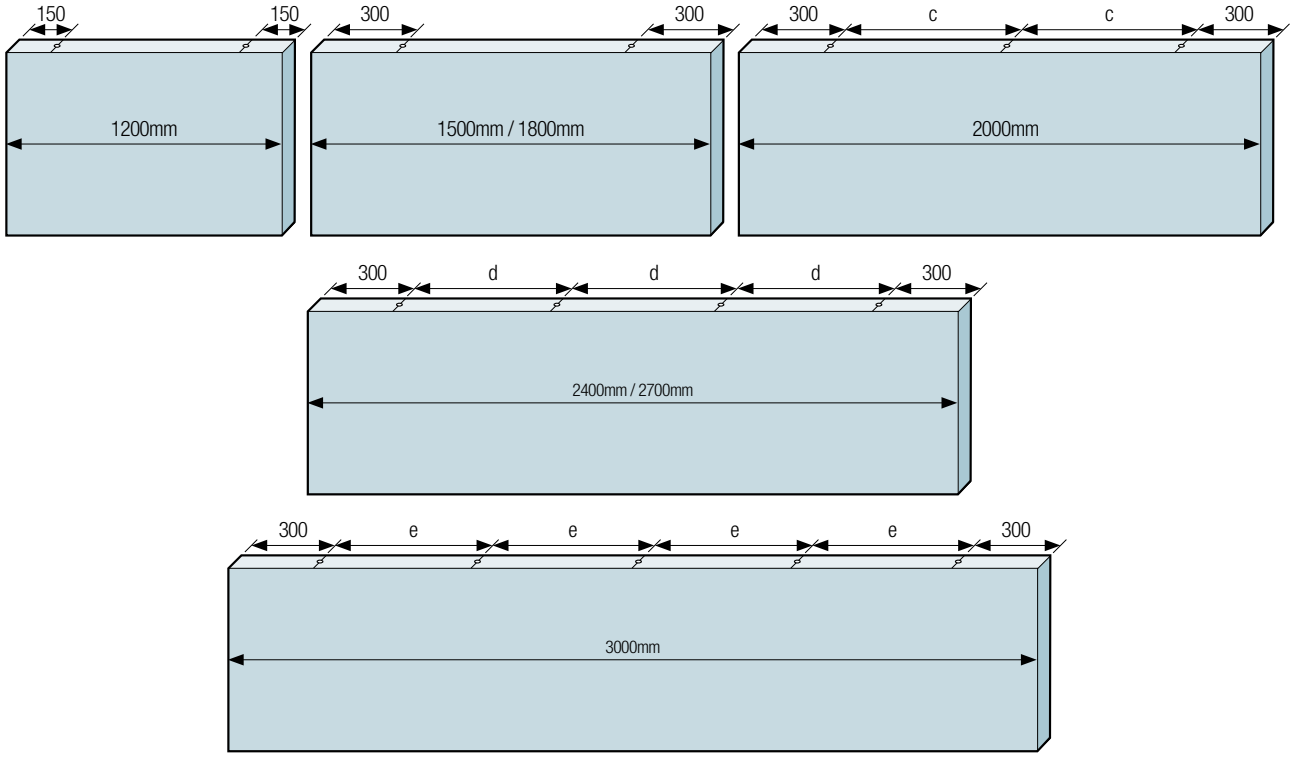


Fixing Locations - Cloud Anchors for Ceiling Panels



NOTE: Where the upper (non-visible) surface of the panel has been covered to reduce colour reflection from the absorbent core the fixing points should be marked. Then carefully, using a craft knife or similar, a circular piece, 50mm in diameter, should be cut around each fixing location and the covering lifted away to expose the core. This is important to ensure that when the fixing is screwed in to the panel it engages with the absorber and does not tent the covering.

Fixing Locations - Vertical Baffles

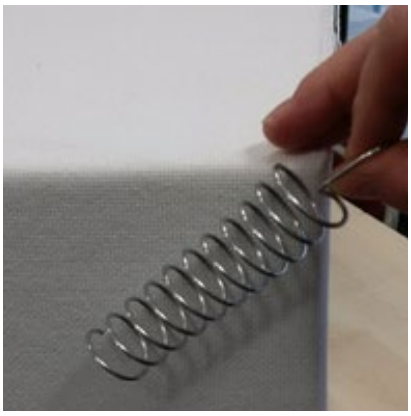


SUPERPHON® CUBES

SuperPhon® cubes are suspended from rail or rigging system supplied by others. The cube itself must have the correct spiral fixing hook attached (Part Number 10492784) which is 28mm diameter x 100mm long.

1 With clean hands or wearing clean cotton gloves place the cube on a clean flat surface.

2 Identify the corner that will ultimately be closest to the ceiling and place the spiral fixing hook so that it lies on a line which runs through and out of the opposite corner of the cube.



3 Holding the spiral fixing hooks alignment push the open end through the fabric and in to the insulant.

4 Turn the spiral fixing hook clockwise to wind it in to the cube until only the hook end is showing.

5 Loop zip wire cable through the spiral fixings visible metal loop and suspend.

FIXING BAFFLES DIRECT FROM CEILING

The channel is mechanically fixed directly into the soffit (appropriate fixings supplied by others) and the baffles inserted. A drill should then be pushed through the steel channel, the baffle and the other side of the steel channel. Insert the nylon bolt and apply the cap to the other end. Tighten the cap thus slightly compressing the steel channel to secure the panel.

- Often installers make up the channel Baffles on a work bench for ease of drilling and then separate the elements for actual installation

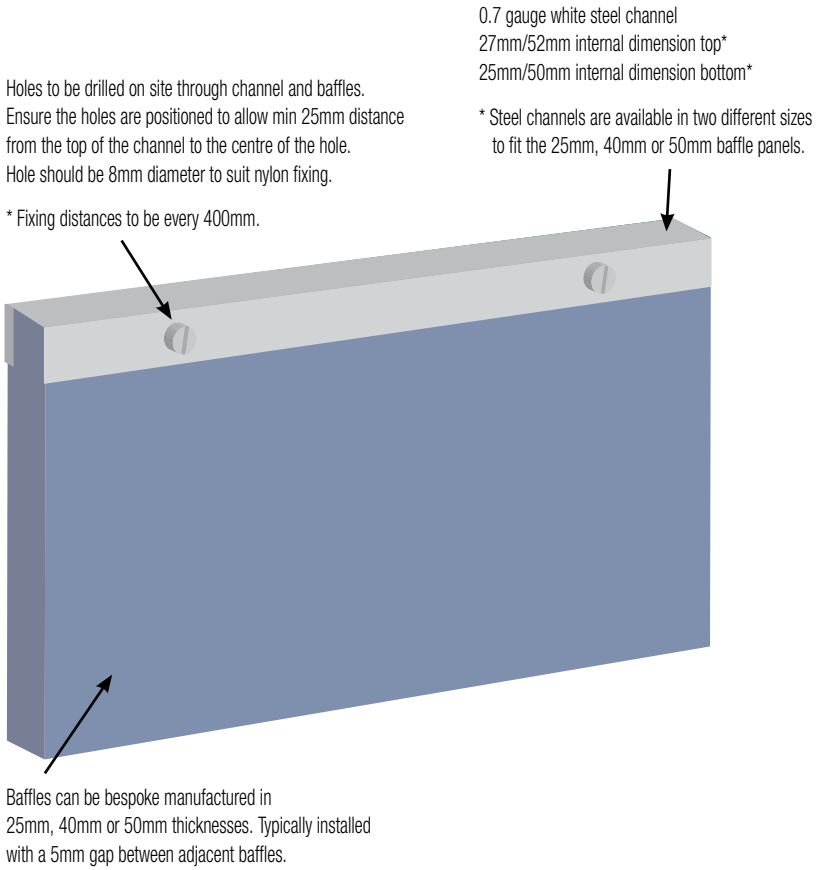
Installation of Baffles on Spiral Anchors

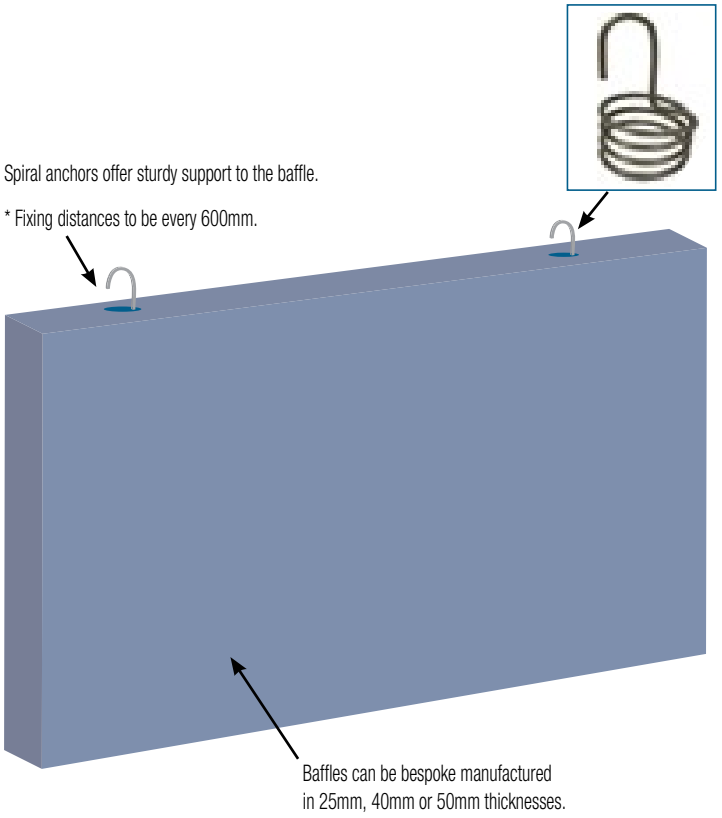
Standard baffle sizes should have two spiral anchors that should be inserted into the edge of the baffle allowing an equal distance from either edge of the baffle. Larger non standard baffles may require three or four fixing points. See Page 4 for recommended panel fixing points.

Baffles will either be completely frameless or will have one edge where a frame is omitted to allow the spiral anchors to be wound in.

Wind the spiral anchor in so that the full extent of the spiral is embedded into the baffle thus the only part of the fixing exposed is the loop for attaching the ceiling suspension wire.

- Ceiling wire should be 2mm diameter standard suspended ceiling suspension wire allowing height adjustment and attached to the soffit with suitable fixings. Wire and soffit fixings supplied by others
- Spiral anchors are available in two different sizes to fit the 25mm, 40mm or 50mm baffle panels





Diagrams shown are for illustrative purposes only.

FABRICS

Our fabrics can be applied to almost all SuperPhon® flat or shaped panels, are suitable for use with a number of different edge profiles and can be attractively tailored at the corners. Fabrics are bonded over the face and edges of the panel, and are returned to the reverse of the panel by a minimum of 25mm.

During installation, panels should only be handled whilst wearing clean, white, lightweight gloves.

FEATURES AND BENEFITS

Acoustic Transparency

Provided the fabric is unbacked, it allows sound to pass through it and into the absorptive material of the SuperPhon® panel itself.

Fire Resistance

Most of our fabrics are 'Class 1' for the Surface Spread of Flame in accordance with BS 476-7. Class 'O' Fabrics are also available upon request.

Panel Tolerances

Standard panel tolerances (i.e. width and length +/-2mm).

Bespoke Design

CMS Danskin Acoustics SuperPhon® can support bespoke design requirements, such as corporate identity, commercial or decorative designs and murals. Designs can be worked across multiple, adjoined panels.

Easy Maintenance

See our 'Treatment Guide' for a detailed breakdown of how to maintain and clean our fabric finishes.

TESTING

Only fabrics that have been tested with SuperPhon® can be considered suitable. CMS Danskin Acoustics test fabrics for the following characteristics:

- Acoustical transparency
- Dimensional stability
- Adhesion to core
- Adhesive wetting and bleeding
- Adhesive compatibility
- Telegraphing
- Elasticity
- Residual memory
- Core show-through

TREATMENT GUIDE

Blood	AC
Chewing Gum	IBDC
Chocolate	BDC
Cooking Oils	BDC
Crayon/Colour Markers	BDC
Drinks (Cola, Juices, Beer)	AC
Dust/Dirt	Vacuum, then J or C
Excrement	BC
Grass	C
Grease	BDC
Ink - Ballpoint	DE
Ink - Fountain	AC
Lipstick	BECD
Mildew	C
Milk	AE
Mud	BC
Nail Polish	AG
Oil	BDC
Paint - water based	AFC
Paint - oil based	AHDC
Sauces	BCD
Shoe Polish	BCD
Urine	AC
Vomit	ACD
Wine	A, add salt, C

A Mop up excess as soon as possible.

B Remove surplus with a knife edge or appropriate instrument.

C Sponge with a solution of carpet shampoo working from well outside the stain in a circular motion towards the centre [this avoids spreading the stain]. Sponge afterwards with clean warm water and mop up excess moisture with a clean dry cloth or sponge. Allow to dry then brush gently with a soft cloth. If any stain remains, sponge with a solution of 1 part household bleach to 6 parts water. Rinse thoroughly after treatment.

D Lightly sponge with household dry cleaning fluid and blot. Apply sparingly, as the substance may have an adverse effect on the adhesive.

E Sponge with methylated spirits and blot dry.

F Lubricate stain with glycerine or petroleum jelly.

G Apply nail polish remover. The nail polish remover should not include lanolin or be of a greasy nature.

H Sponge with turpentine or a substitute.

I Freeze with ice cubes and scrape away when cold.

FREQUENTLY ASKED QUESTIONS

What is acoustical transparency?

By adding fabric, particularly with a backing, to an acoustic panel, it is possible to reduce its ability to absorb sound waves. A fabric with good acoustical transparency allows sound to pass through and into the panel core. As a rule, if air can pass through the fabric without difficulty, it is likely to have good acoustical transparency.

What are pull lines?

Even when a fabric is flat, certain types of lighting reflecting from different tensioned fibres can create the impression of unevenness at the edges of bond applied fabrics. This can manifest itself as wavelike lines across the panel which appear and disappear depending upon the angle from which the panel is viewed and the lighting conditions. Research into this phenomenon is still on-going, with no conclusions having yet been reached. However, crepe-type weaves and fabrics containing extruded and unspun fibres appear to be vulnerable to pull lines, and the phenomenon is more apparent with black and grey/blue fabrics.

What is blooming?

Saline-based fire retardant treatments can become soluble when exposed to a Relative Humidity of 80% or more. When the Relative Humidity subsequently reduces to 60% or less (normal levels, in other words), the retardant treatment is drawn to the surface, where it evaporates, leaving behind a 'bloom' of white residue. This residue can discolour the fabric and is quite difficult to treat. This is a rare occurrence with the standard range of CMS Danskin Acoustics SuperPhon® fabrics, which have been selected for their stability.

Which fabrics offer dimensional stability?

According to SuperPhon® test data, the most dimensionally stable fabrics use the following fibres: polypropylene, olefin, polyolefin, modacrylic and polyester. Although we will test any fabric for dimensional stability, it is worth noting that fabrics containing certain fibres are more prone to instability, particularly silk, nylon and rayon. It is worth noting that the application of a latex or acrylic backing will not stabilise a fabric which is considered dimensionally unstable.

Does piercing fabrics improve their acoustic performance?

No, as most fabrics tend to 'heal' over a relatively short period of time so that any openings which are made naturally close. This practice was formerly employed to prevent the occurrence of mildew.

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Issue 7 - 08/2019 JW