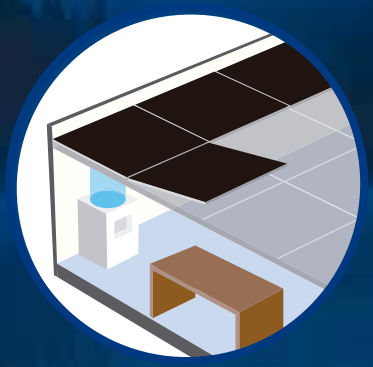
sound reduction systems for commercial, educational and industrial environments

Tel: +44 (0)1204 380074 · Fax: +44 (0)1204 380957
E-mail: info@soundreduction.co.uk · Web: www.soundreduction.co.uk

soundblocker

Acoustic Ceiling System



Introduction

Soundblockers provide the most comprehensive system available for reducing the breakout of sound through suspended ceilings. They are ideal for use where partitions are installed only to the underside of the suspended ceiling, and will reduce the problem commonly found within the office environment of room to room noise. Soundblockers will also reduce vertical sound transmission between floors, and from services within the ceiling void. Suitable for most ceiling systems, they are simply placed onto the back of the ceiling tile and can be installed with the ceiling or as a retrofit. Easily removed with the tile, they allow access to the ceiling void. When replaced, their special edge detail re-makes the acoustic seal. Four types are available to meet specific demands. Accessories provide treatment to modular light fittings, downlighters, perimeters, air diffusers and small apertures, providing a complete system for limiting sound through suspended ceilings.

The Benefits

- Reduces noise breakout through suspended ceilings.
- Reduces noise breakout from services within the ceiling void.
- Easily installed with new or existing ceilings.
- Easily removed for access.
- Allows complete flexibility with relocation of partitions.
- Clean and easily cut.
- Accessories for treating light fittings, air diffusers and gaps.
- Made for all types of suspended ceilings.

Alternative Solutions

Soundbar - page 14
Soundstop - page 10

Soundblocker

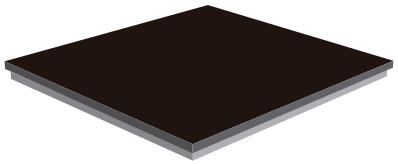
Soundblockers are formed from a rigid attenuating layer bonded to an acoustic foam. The foam absorbs reverberant sound within the ceiling void and makes an acoustic seal to the ceiling grid.

Four standard types are available to satisfy varying demands, from the normal office environment to locations where higher levels of sound need to be reduced, in music or industrial applications.

Types

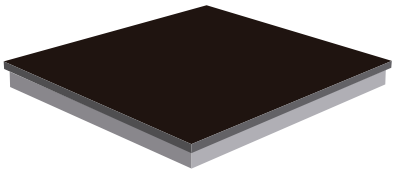
Soundblocker 16

Ideal for the standard office, Soundblocker 16 will reduce cross talk through the ceiling to an acceptable standard for non-private areas.



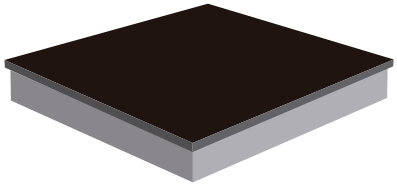
Soundblocker 19

Suitable for where slightly higher room to room sound insulation is required, or for reducing noise from services within the ceiling void.



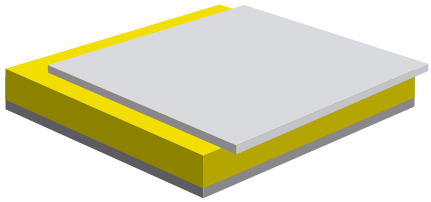
Soundblocker 25

For use in areas where high levels of room to room sound insulation is required, such as boardrooms. Soundblocker 25 can also be used in applications where high levels of noise break out need to be reduced, such as nightclubs and industrial environments.



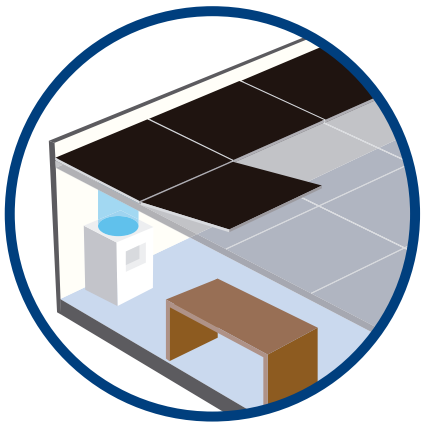
Soundblocker Plus

Provides the highest level of sound insulation. It is ideal for reducing high noise levels through floors and the breakout of environmental noise through roofs.



Installation

Soundblockers are ideal for installation in both lay-in-grid and metal tray ceiling systems. They are installed with the tile in one quick economical operation, and allow easy removal of the tile for access.



Soundblockers being installed on the back of a ceiling.

Lay-in-Grid System

INSTALLED WITH A MINERAL FIBRE TILE

Soundblockers are placed onto the back of the ceiling tiles with the foam facing upwards.

The foam compresses against the grid forming an acoustic seal.

They are easily removed with the tile for access. When replaced, the acoustic seal is automatically reformed.

INSTALLED WITH A PERFORATED METAL TILE

Soundblockers are placed within the rebate of the tiles with the foam facing downwards.

Alternatively, if there is a mineral wool pad in the rebate the Soundblockers are placed on top of the pad, in the standard way with the foam facing upwards.

Ceiling Grid Specification

Main tees should be suspended down their length at 900mm centres.

For Soundblocker 25 and Plus, the main tees should be installed at 600mm centres. Where these are installed into an existing ceiling and the main tees are at 1200mm centres, they must be suspended down their length at a maximum of 900mm centres and all the 1200mm cross tees must be suspended individually.

Perforated Spring Tee Tile

When there is a mineral wool pad in the tile, the Soundblocker is placed on top of the pad with the foam facing upwards. When there is no pad in the tile, the Soundblocker is placed in the tile with the foam facing downwards. For non perforated tiles, the Soundblocker should be placed in the tiles with the foam facing upwards.

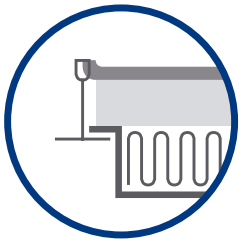
When ordering for all metal type tiles, it must be made clear which method of installation is required, as the size of the Soundblocker will vary. Most spring tee systems will support Soundblocker 16, however, should Soundblocker 19 or 25 be required it must be confirmed that the system will support the weight.

Lay-in-Grid System

INSTALLED WITH A MINERAL FIBRE TILE

Soundblockers are placed onto the back of the ceiling tiles with the foam facing upwards. The foam compresses against the grid forming an acoustic seal. They are easily removed with the tile for access and, when replaced, the acoustic seal is automatically reformed.

Soundblocker in a perforated metal tile with the foam facing downwards.



Lay in grid system with a metal tile, installed with a mineral wool pad. The Soundblocker is placed on top of the pad.

Soundblocker in a spring tee tile. Positioned on top of a Mineral Wool Pad, with the foam facing upwards.

Soundblocker in a perforated spring tee tile, with foam facing downwards.

Open Cell and Linear Plank Ceiling

When used with this type of ceiling Soundblockers can be reversed so the foam is on the underside or alternatively a black tissue can be applied to the plain side of the board and they are installed in the standard way. Either method, they are unseen when viewed through the ceiling.

Note: With certain types of these ceilings, care should be taken with the weight of the Soundblockers if they are resting directly onto or supported by the panels.

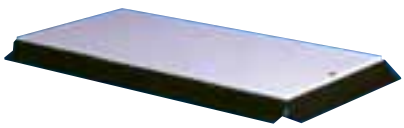
ACCESSORIES

Soundblocker Acoustic Lighting Kit

It is important to provide acoustic treatment to lights installed in the ceiling, otherwise sound leakage will occur and the overall performance will be impaired.

Modular Fittings

Modular side strips are fixed around all sides of the fitting. These are 1200 x 100mm in size and are self adhesive. They are positioned onto the side of the fitting and should return onto the back of the ceiling covering the tee and any gap between the fitting and the ceiling. Two are required for a 600mm x 600mm fitting and three for a 1200mm x 600mm fitting. 600mm x 200mm modular end caps are available for open ended modular fittings.



Soundblockers can normally be placed on top of the fitting when low brightness or louvre type diffusers are used. Air must be allowed to flow through the louvre, and circulate around the tubes and switch gear. They should not be placed on top if a plastic lens type diffuser is used.

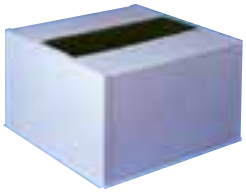
The side strips must cover any gap between the fitting and the ceiling. For open ended fittings, modular side strips are fitted down the side of the fitting, and modular endcaps on the open ends, returning onto the back of the ceiling and covering all gaps.

Recessed Downlighters Acoustic Hoods

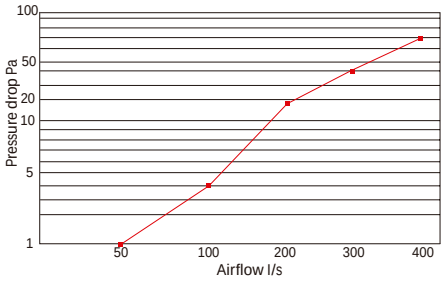
Soundblocker Downlighter Acoustic Hoods are placed over the fitting. They reduce sound breakout, whilst allowing air to flow through the fitting. There is one standard size which accommodates most fittings (check with the fitting manufacturer for clearance, as we can make special sizes).

A hole is cut in the Soundblocker to accommodate the down lighter and the hood is simply positioned over this. The foam of the Soundblocker must not touch the fitting. The hood is manufactured from a non combustible material with 'Class 0' internal absorbent lining.

Air Diffuser Acoustic Hoods

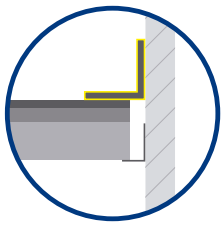


Soundblocker Air Diffuser Acoustic Hoods are for use where air is vented via the ceiling void through grilles within the ceiling. Unless acoustically treated, sound will travel through the void, reducing the acoustic performance of the ceiling. The hood is placed on top of the air grille within the ceiling grid. (The ceiling grid must be suspended in each corner to support the weight of the diffuser.)



Perimeters

At perimeters or around columns etc. Soundblocker self-adhesive perimeter strips should be used. These are positioned half onto the Soundblocker and half onto the wall forming a tight right angle joint.



Gaps And Small Openings

Soundseal can be used for sealing small gaps. These often occur at partition heads. Soundseal is an expanding foam strip supplied in rolls in varying widths and thicknesses. (See Soundseal on page 21 for details).

Specifications

Size (Nominal)	600 x 600mm and 1200 x 600mm Other sizes available to order.	
Thickness	Soundblocker 16	16mm
	Soundblocker 19	19mm
	Soundblocker 25	25mm
	Soundblocker Plus	75mm
Fire Rating	BS476 Part 6 Class 0 BS476 Part 7 Class 1	
Weight	Soundblocker 16	8.5 kgm^2
	Soundblocker 19	11.0 kgm^2
	Soundblocker 25	16.0 kgm^2
	Soundblocker Plus	25.0 kgm^2
Cutting	By trimming knife or saw.	

Modular Side Strips

Size	1200 x 100mm

Modular End Caps

Size	600 x 200mm

Perimeter Gasket

Size	15000 x 100mm

Down Lighter Acoustic Hoods

Size	Height 210mm (140mm internally) Width 220 x 210mm (180 x 155mm internally) Weight 2.5kg

Air Diffuser Acoustic Hood

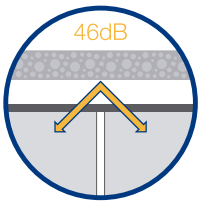
Size	Height	350mm
	Width	595mm x 595mm
	Weight	18.25kg

Acoustic Performance

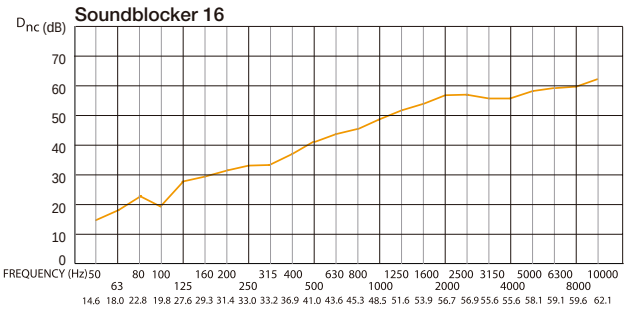
There is no Building Regulation requirement for sound insulation between offices or other rooms within a commercial environment. A room to room sound level difference of 42-45dB is normally considered adequate, whilst a level difference of 50dB or more represents a high degree of speech privacy. The overall performance is only as good as the weakest element and it is important to ensure that the insulation achieved by the partition is matched by the ceiling system.

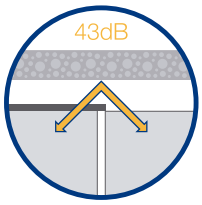
The Soundblocker System, designed by SRS, has been tried and tested over many years. It has been installed in many different types of contracts and offers a choice and performance to satisfy most demands.

Soundblocker is the only system with a range of fully tested accessories for the treatment of downlights, modular light fittings and air diffusers.

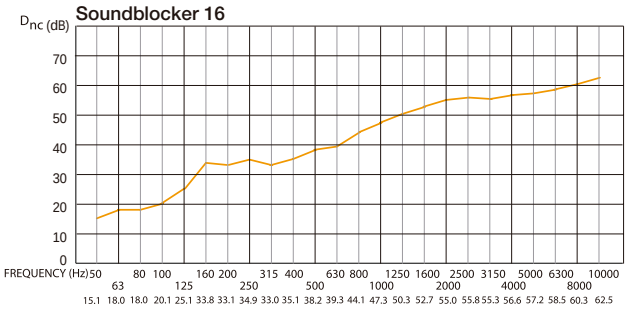


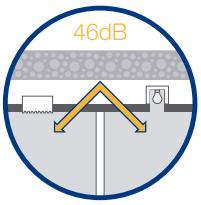
Room to room (D_{ncw})



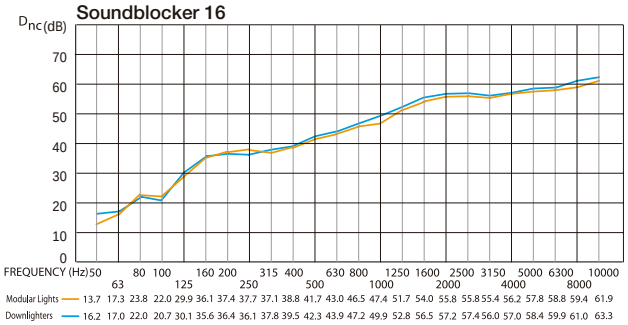


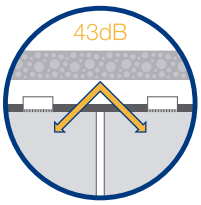
SoundBlocker installed in one room only (D_{ncw})



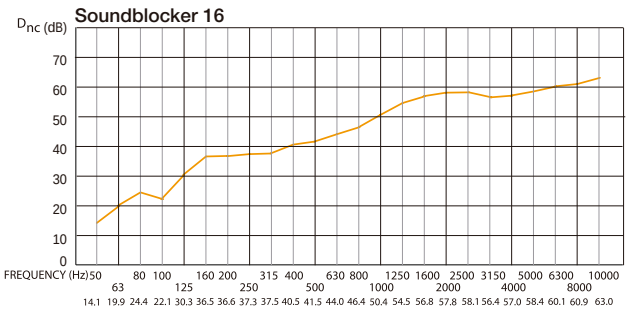


Ceiling with modular light fittings treated with SoundBlocker Lighting Kit. Downlighters treated with acoustic boxes (D_{ncw})

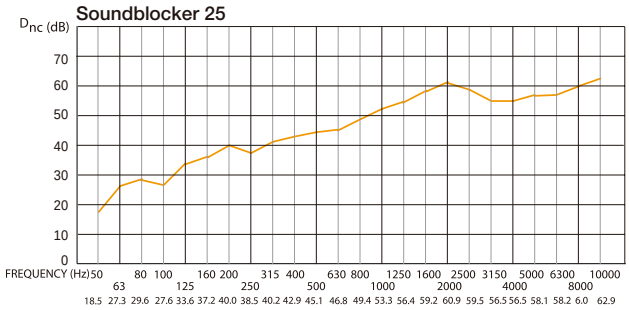


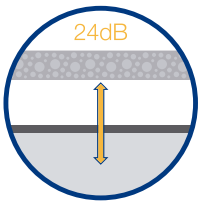


Ceiling with air-grilles treated with Acoustic Hoods (D_{ncw})

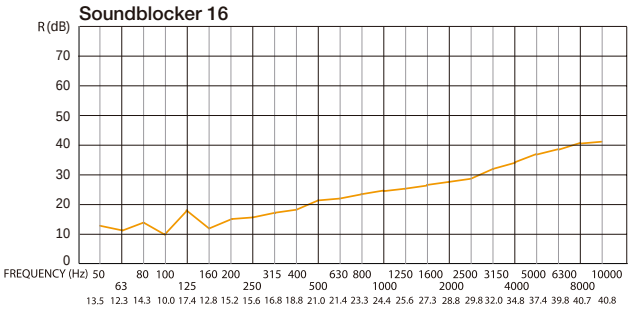


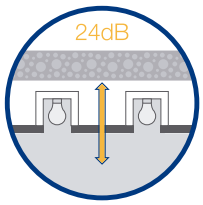
Room to room (D_{ncw})



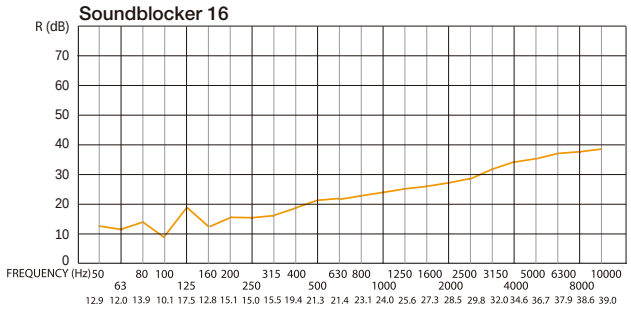


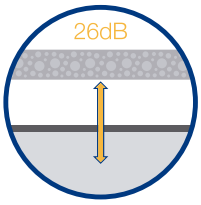
Sound reduction through ceiling (R_w)



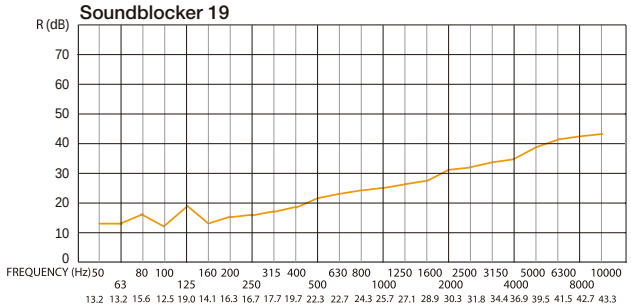


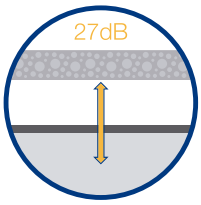
Ceiling with downlighters treated with Acoustic Hoods (R_w)



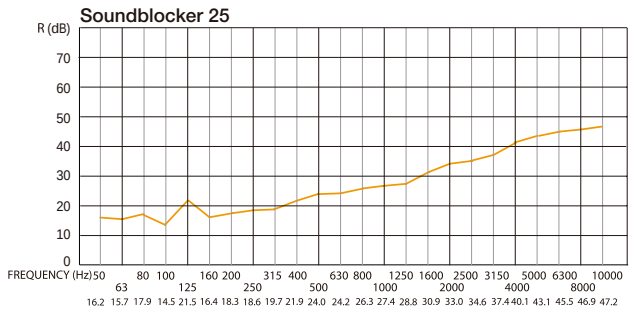


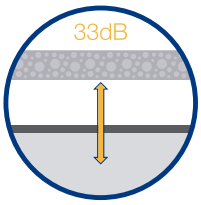
Sound reduction through ceiling (R_w)



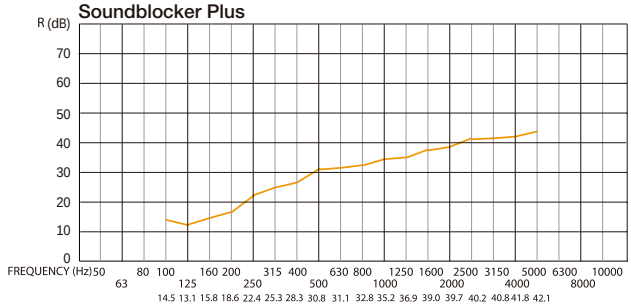


Sound reduction through ceiling (R_w)





Sound reduction through ceiling (R_w)



Soundblockers

Soundblockers have been tested in accordance with ISO140.9 (rated according to ISO717.1). Room to room normalised weighted, sound level difference (D_{ncw}) ranges from 46-50dB.

ISO140.3 : 1995 (rated to ISO717.1) Sound Reduction Index (R_w) ranges from 24- 33dB.

Tests carried out at Sound Research Laboratories Ltd, Holbrook House, Sudbury, Suffolk.

Date of Tests 4.11.98. Test no. C/98/5L/7479/1

Please note that these are laboratory tests and show insulation figures achieved in ideal conditions. SRS cannot accept responsibility for the performance of any system of which SoundBlockers are only one part.