

A SOUND REDUCTION SYSTEMS PRODUCT

## SOUNDSTOP: MULTIPURPOSE ACOUSTIC CURTAIN, SUITABLE FOR APPLICATIONS WHERE THE BREAKOUT OF SOUND IS A PROBLEM.

Soundstop is an extremely versatile sound insulation product and is ideal for use in a variety of applications. These include use as a vertical acoustic cavity barrier above a suspended ceiling, lining machinery/plant enclosures, and wrapping noisy ducts and services to prevent noise breakout. Soundstop contains no mineral fibre, is pleasant to handle and easy to work with using conventional tools and fixings. Soundstop is available in a number of different types and with a variety of surface finishes to meet any specification.

### KEY BENEFITS:

- Highly versatile multipurpose acoustic product
- Reduces room to room noise up to 46dB
- Sound Reduction Index of 28dB-31dB
- Easily workable, will form to any contour
- Available with lead or polymeric core sheet
- Used as a vertical cavity barrier, Soundstop avoids treating the whole suspended ceiling
- Ideal for lining plant and machinery enclosures
- Wipeable and self-adhesive coatings available



## INTRODUCTION

Soundstop is the ultimate multipurpose acoustic curtain. Manufactured using a range of acoustic core layers and available with a selection of surface finishes, there is a Soundstop solution for many of the acoustic problems found in commercial, educational, and industrial sectors.

**Polymeric Core:** Soundstop Polymeric is perfect for projects where high levels of flexibility in the product are not required. Soundstop Polymeric is our recommended product for use as an acoustic vertical cavity barrier within suspended ceiling voids. In this application Soundstop Polymeric is simply hung from the soffit down to the partition head to reduce sound transfer between rooms via the common ceiling void.

**Lead Core:** The lead core sheet within all other versions of Soundstop provides the required mass for sound insulation performance whilst also providing flexibility and malleability. This property is particularly advantageous when working around services/penetrations and in applications such as the wrapping of ductwork and cladding to any non-uniform surfaces.

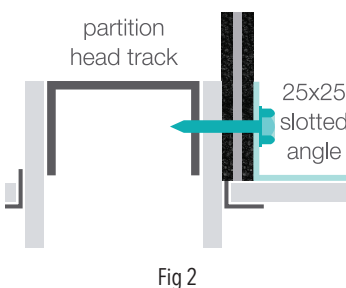
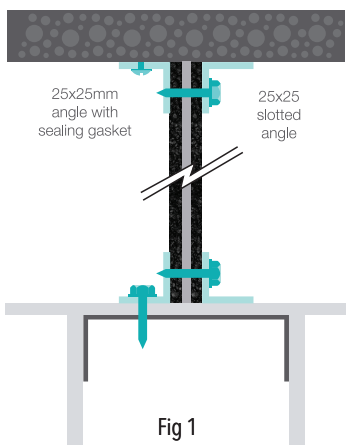
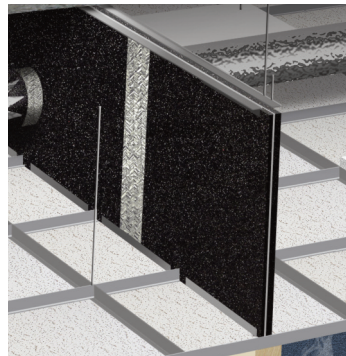
## INSTALLATION – VERTICAL CAVITY BARRIER – VOIDS OF 1200MM OR LESS

Soundstop sheets and Soundstop Cover Strips should be cut to the depth of the ceiling void using a long-bladed trimming knife. All Soundstop angles, with or without seal, can be cut to length with tinsnips.

The first stage of installation is to fix the Soundstop Angle with Seal securely to the soffit, with the seal fully compressed against the soffit, and the self-adhesive leg of angle facing downwards. The seal will ensure that any minor inconsistencies in the soffit do not present an acoustic weakness once installed.

Once the Soundstop Angle with Seal is installed, the carrier paper from the self-adhesive strip on the angles should be removed and Soundstop sheets offered up to the angle. The self-adhesive strip will temporarily hold the Soundstop sheets in place whilst Soundstop Clamping Angles are secured through the Soundstop and into the Soundstop Angle with Seal using SRS Hex Head Screws at 200mm centres. SRS angles are pre-drilled with holes at 200mm centres for ease of installation. There must be a fixing at a maximum of 50mm from the edge of each Soundstop sheet.

At the base, a Soundstop Clamping Angle is fixed through to the partition head. Soundstop can then be secured to this using another Soundstop Clamping Angle, fixing through as before with SRS Hex Head Screws at 200mm centres (see Fig 1). Alternatively, if the partition head is proud of the ceiling then it may be possible to secure the Soundstop sheets to the side of the partition head, simply by using a Soundstop Clamping Angle and SRS Hex Head Screws at 200mm centres (see Fig 2).



All vertical Soundstop joints are butted together and covered with a self-adhesive Soundstop Cover Strip on one side of the barrier.

Where the Soundstop meets a perimeter wall it is necessary to ensure appropriate accessories are used to maintain the acoustic integrity of the system. In most cases, where the Soundstop sheets are butted up tightly to the perimeter wall, a bead of SRS Acoustic Sealant will be adequate.

## INSTALLATION – VOIDS OF GREATER THAN 1200MM IN DEPTH

Where the ceiling void is greater in depth than 1200mm it is necessary to provide additional support for the Soundstop system.

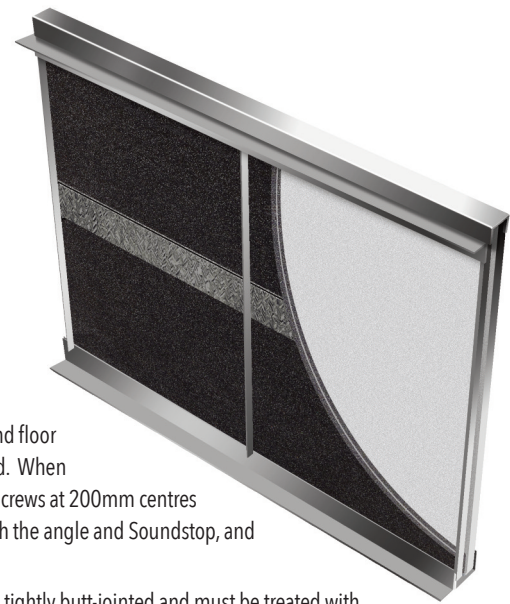
The most practical method is to install metal head track, floor track, and vertical metal C studs at 585mm centres and apply double-sided tape. The carrier paper from the double-sided tape can then be removed and the Soundstop sheets offered up to the studs.

The double-sided tape will hold the Soundstop sheets in place whilst Soundstop Clamping Angles and SRS Hex Head Screws are used to firmly secure the Soundstop in place.

Soundstop sheets should be installed in a brick-bond, staggered panel layout. Where the Soundstop sheets meet at a vertical stud, which should be every other stud, they should be overlapped by 30mm.

Soundstop Clamping Angles should be used at the head and floor track, and at every vertical stud. When clamping the SRS Hex Head Screws at 200mm centres should be used, fixing through the angle and Soundstop, and into the stud or track.

All horizontal joints should be tightly butt-jointed and must be treated with SRS Soundstop Cover Strips to ensure air tightness.



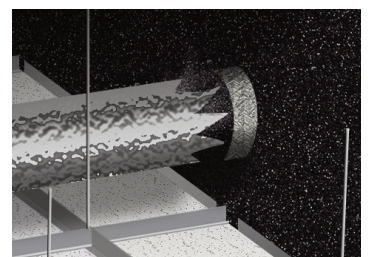
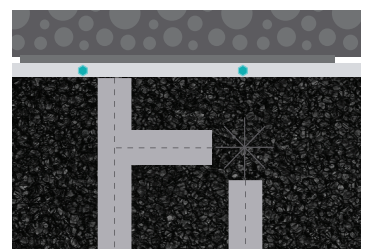
## PENETRATIONS

We suggest various methods to accommodate penetrations, but site conditions will determine the best approach to adopt. In all situations, holes and gaps must be fully covered and all cut pieces should be securely fixed.

Soundstop should be cut as close as possible to the penetrating section and any holes or gaps may be sealed with Soundstop Cover Strips, which are easy cut and shaped as appropriate.

Where a single pipe or duct passes through the curtain a star cut can be made to the same diameter as the section. A further cut is made from this to the curtain edge or base.

**Continued on next page**





## PENETRATIONS CONTINUED

Soundstop is then formed around the section, and a cover strip is fixed over the cut, the cut being secured at the edge. Soundstop Cover Strips cut and overlapped to form around a penetration. A collar can be formed out of Soundstop Cover Strips to make a seal. They are cut to 25mm wide and coiled around the penetrating section to fill any gap between the hole and the section.

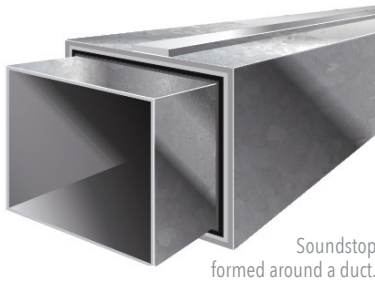
Where a number of services pass through close together, a square hole can be cut, covering the combined area of the penetrations. A cut is made from this to the bottom edge and the curtain is formed around the penetrations.

Soundstop Cover Strips are cut to cover the hole, these are applied by building up and overlapping to form a good seal.

## MECHANICAL SERVICES, DUCTING AND PIPES

Soundstop 5 and 10 are ideally suited for reducing noise breakout from ducting and services. For this application it is best to use Soundstop 5 or 10 AF (Aluminium Foil), installed tightly around the duct with the aluminium foil facing outwards.

The lead core sheet of the Soundstop has memory and can be easily be formed around rectangular and circular services. At all joints it is recommended to have a 50mm overlap and seal with a 50mm wide aluminium tape. For a secure fix SRS recommend that bands of aluminium tape are placed around the Soundstop along the duct/pipe at 600mm centres, and at all ends.



Soundstop formed around a duct.

## MACHINERY AND PLANT

Soundstop can be used as an internal lining to a housing or cover around machinery and plant. For this application SRS recommend Soundstop 520 as this both boosts the sound insulation performance of the enclosure and provides acoustic absorption within the enclosure, aiding the decay of sound within. For applications where there is oil or dirt which would deposit onto the Soundstop, SRS recommend the use of Soundstop 520 PU. This has a polyurethane coating on one surface which stops the ingress of oil and can easily be wiped clean.



Soundstop forming the internal lining of an acoustic hood.

## TYPES

### SOUNDSTOP POLYMERIC

Where the memory of a lead core sheet is not required, such as in vertical cavity barrier applications, SRS recommend the use of Soundstop Polymeric. Soundstop Polymeric is manufactured from a 7.5kg/m<sup>2</sup> polymeric core barrier bonded between two layers of 6mm SRS Coustifoam.



### SOUNDSTOP 5

Suitable for most applications, it has 5kg/m<sup>2</sup> lead core barrier bonded between two 6mm layers of SRS Coustifoam.



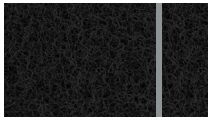
### SOUNDSTOP 10

Where higher attenuation is required, it has 10kg/m<sup>2</sup> lead core barrier bonded between two 6mm layers of SRS Coustifoam.



### SOUNDSTOP 520

Where higher absorption is required, it has 5kg/m<sup>2</sup> lead core barrier bonded between one 6mm and one 20mm layer of SRS Coustifoam.



### SOUNDSTOP 1020

Where a higher attenuation and absorption are required, it has 10kg/m<sup>2</sup> lead core barrier bonded between one 6mm and one 20mm layer of SRS Coustifoam.



## PHYSICAL PROPERTIES AND ACCESSORIES

| TYPE                | ROLL SIZE   | THICKNESS | WEIGHT                |
|---------------------|-------------|-----------|-----------------------|
| Soundstop 5         | 2000x1200mm | 13mm      | 6.0kg/m <sup>2</sup>  |
| Soundstop 10        | 2000x1200mm | 13mm      | 11.0kg/m <sup>2</sup> |
| Soundstop Polymeric | 1200x1200mm | 15mm      | 8.5/m <sup>2</sup>    |
| Soundstop 520       | 2000x1200mm | 27mm      | 7.2kg/m <sup>2</sup>  |
| Soundstop 1020      | 2000x1200mm | 27mm      | 12.2kg/m <sup>2</sup> |

## FINISHES

**PU:** Has a polyurethane film applied to one surface of the SRS Coustifoam. It is ideal where there may be ingress of oil or dirt and can easily be wiped clean. The coating does not significantly affect the absorption coefficient.

**AF:** Has a reinforced aluminium foil to one surface. It is ideal where regular contact is made with the surface or where it is required to be kept clean.

**SA (Self-adhesive):** Has an adhesive coating to one face. This makes for quick and easy fixing when applying to a surface.

ACOUSTIC DATA

| SOUNDSTOP 5 SINGLE CURTAIN  |                        |
|-----------------------------|------------------------|
| R <sub>w</sub> (dB)         | D <sub>nc,w</sub> (dB) |
| 28                          | 46                     |
| SOUNDSTOP 10 SINGLE CURTAIN |                        |
| R <sub>w</sub> (dB)         | D <sub>nc,w</sub> (dB) |
| 31                          | 47                     |

Tested in accordance with BS 2750 (part 3) 1980 (BS EN ISO 140-3). Weighted sound reduction index (R<sub>w</sub>) ranges from 31-34dB. Rated according to BS 5821 (Part 1) 1984 (BS EN ISO717-1). Test carried out at University of Salford Department of Applied Acoustics. Date of Test 20/11/89 Test ref no: 89/11/17

Tests carried out at The Building Test Centre, East Leake. Date of test 13.9.95 Test reference No. BTC 2869A. Tested in accordance with BS EN 140-9 1994. Room to room normalised weighted sound level difference (D<sub>ncw</sub>) ranges from 46-47dB.

Rated according to BS 5821 (Part 1) 1984 (BS EN ISO717-1)

| FLAMMABILITY PROPERTIES              |                                 |
|--------------------------------------|---------------------------------|
| FMVSS 302                            | Self extinguishing/no burn rate |
| BS 4735                              | Char length 4-5mm               |
| ASTM 1692: 1974                      | Resists Ignition                |
| BS 476 Parts 6 & 7 Class 1 & Class 0 | 0                               |
| UL94 Class                           | 94V-0                           |
| Oxygen Index                         | 41                              |
| CAAB/FAA                             | PASS                            |
| Smoke, max, obscuration % to BS5111  | 55                              |
| Wicking                              | None                            |
| Dripping                             | None                            |

CUTTING:

With Stanley knife, large scissors or tin snips.

GLUING:

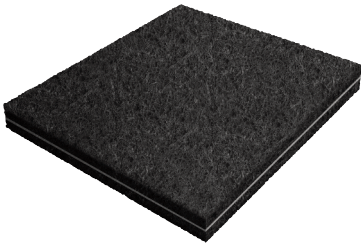
Soundstop can be glued to most surfaces using a standard contact adhesive.

HANDLING/STORAGE:

Must be laid flat. Must be kept dry.



SOUNDSTOP & ACCESSORIES



Soundstop acoustic barrier

| SOUNDSTOP | ROLL SIZE   | THICKNESS | WEIGHT |
|-----------|-------------|-----------|--------|
|           | 1150x1150mm | 15mm      | 9kg/m² |



Soundstop Angle with Seal

| FIXING ANGLE | SIZE      | THICKNESS |
|--------------|-----------|-----------|
|              | 3000x25mm | 25mm      |



Pre-drilled Clamping Angle

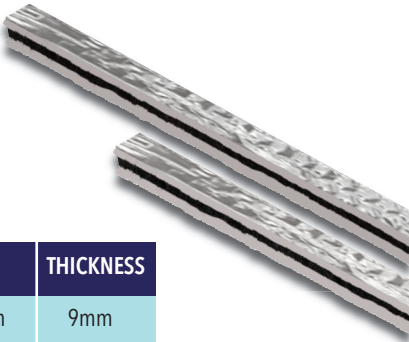
| SLOTTED CLAMPING ANGLE | SIZE      | THICKNESS |
|------------------------|-----------|-----------|
|                        | 3000x25mm | 25mm      |

SRS Angles are 0.7mm gauge steel, pre drilled at 200mm centres.



Hex head tec screw

| HEX HEAD TEC SCREW | SIZE     |
|--------------------|----------|
|                    | 25x5.5mm |



Self-Adhesive Soundstop Cover Strips  
for sealing joints and gaps

| SOUNDSTOP COVER STRIPS | ROLL SIZE | THICKNESS |
|------------------------|-----------|-----------|
|                        | 1150x50mm | 9mm       |

In the case of noise transfer between offices and classrooms via the suspended ceiling void, if it's not possible to install an acoustic vertical cavity barrier due to large amounts of services or the plenum is being used for air movement, SRS recommend the use of the Soundblocker system. Please contact the SRS technical department or see the separate datasheet at [www.soundreduction.co.uk](http://www.soundreduction.co.uk) for further information.



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Site conditions and installation standards vary. SRS cannot take responsibility for the performance of any installed system of which SRS products are only a part, or that have been installed incorrectly. Prior to installation, it is necessary to identify and eliminate possible flanking paths that may compromise the acoustic performance of any SRS product.

