Technical Leaflet 5
Acoustics

Acoustics
Room to Room Attenuation BS2750 Part 9: 1987/ISO 140/9
The ability of an acoustic barrier to insulate a cavity between adjacent areas against unwanted horizontal room to room sound.

Various levels of sound insulation can be achieved using SAS ceiling systems with selected acoustic infill combinations. The following figures are extracted from the many tests undertaken and indicate the performance levels which can be expected from each system using a range of infill combinations.

Perforation Pattern

	2516	1522	Un-perforated
System 120	19-30dB	18-30dB	35-38dB
System 130	19-44dB	18-44dB	
System 150	19-40dB	17-40dB	35-40dB
System 300 Series	19-44dB	19-44dB	

SAS has also undertaken tests to BS5821. A number of tests have been conducted, which include, integrated luminaires, air terminals devices and cavity barriers. Details from the laboratory data are available on request from the technical department.

Sound Absorption
BS3638: 1987/ISO 354: 1985
The reduction of sound energy on reflection at a surface.

The following coefficients of absorption are examples of tests conducted to the above standard

2516 Perforation

Freq. Hz	**125**	**250**	**500**	**1k**	**2k**	**4k**	**NRC**
8mm Pad	0.69	0.74	0.82	0.86	1.00	1.04	0.86
16mm Pad	0.73	0.94	0.87	1.00	1.10	1.18	0.98

1522 Perforation

Freq.Hz	**125**	**250**	**500**	**1k**	**2k**	**4k**	**NRC**
8mm Pad	0.62	0.73	0.78	0.83	1.01	1.37	0.90
16mm Pad	0.66	0.84	0.80	0.94	1.10	1.37	0.96

A reduction of the above absorption performances can be expected if a non-porous overlay is included.

Sound Reduction (cavity to room - Single Pass)
BS2750 Part 3
The ability of an acoustic barrier to insulate sound pressure energy from one space to another.

SAS ceiling systems have been tested for their sound insulation properties and have been found to offer between 17 and 25dB reduction.

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Precision Engineered Metal Ceiling Systems

FM 23840 BS EN ISO 9002
The product is manufactured to a quality management system BS EN 9002 and is approved by BSI at SAS International Hirwaun and Bridgend.