SPS Acoustic Screens

Rooftop Screen SPS/V

Application
SPS is an easily erected and effective system for screening around exterior noise sources. Typical applications range from long runs at road or rail side, to rooftop screening around ventilation plant.

Description
SPS panels consist of a high density lamella acoustic core with a bonded surface of perforated and plain powdercoated steel. The perforated, sound absorbing side faces the noise source giving significantly better performance than a sound reflective barrier.

There are two versions of SPS panels:

SPS/H designed for horizontal installation.
SPS/H panels are available 50 or 80mm thick.
SPS/V designed for vertical installation.

Installation
SPS/H panels are manufactured with a tongue and groove edge detail for horizontal installation between posts. SPS/H panels are used primarily as road or rail barriers.

SPS/V panels are supplied with a clip joint or tongue and groove edge detail and are designed for vertical installation against horizontal steelwork – support arrangements vary.
Where mechanical fixing into structural elements is not possible, SPS/V screens can be provided with a free standing frame arrangement. The frames incorporate concrete paving ballast to suit site conditions, wind loadings etc.

Span Characteristics

SPS/H panels are specifically assessed under EN1794 for mechanical properties and stability as road and rail barrier systems. Standard lengths (2m @ 50mm thick; 3m @ 80mm thick) meet the requirements of EN1794-1 and EN1794-2. Longer panels with internal reinforce-ment also meet these requirements (2.6m @ 50mm; 3.6m @ 80mm).

SPS/V panels are attached to structural members which may take a variety of forms. Standard panels in exposed positions should be supported at base, head and centre positions.

Acoustic Performance
The acoustic performance of a screen is determined by the relative positions of source, screen and measurement point as well as the physical characteristics of the screen and the environment. Each case needs to be individually assessed to determine the likely performance. Guidance is provided by the following:

Sound Reduction: ISO 140/3
This measures the sound transmission characteristics of the panel system as a complete barrier (SPS/H & SPS/V)

Hertz:	125	250	500	1K	2K	
dB: 50mm	18	24	30	35	42	Rw34
dB: 80mm	20	26	33	38	42	Rw36

Sound Absorption: ISO 354
The test is for the sound absorption coefficient of the panel under laboratory conditions. (SPS/H & SPS/V)

Hertz:	125	250	500	1K	2K	
50mm	0.35	0.7	0.9	0.9	0.9	(Abs.Coeff)
80mm	0.6	0.75	0.95	0.95	0.9	(Abs.Coeff)

Noise Barriers
European Standard EN1793 provides a standardised method for assessing the performance of road and rail barriers. SPS/H road and rail barrier panels are in the highest categories under this Standard. Details on request.

Finish
SPS panels are manufactured from light grey polyester pre-coated steel with a plain finish to the exterior and perforated finish to the interior. Uprights are galvanised or powdercoated to match the panels. For corrosive conditions, panels can be manufactured in aluminium. Panels can also be powder-coated in standard RAL colours.

Fittings
SPS screens can be designed to incorporate doors, acoustic louvres and demountable sections to suit individual requirements.

Size and Weight

SPS/H:	2000 x 555 x 50	2000 x 1180 x 50
	3000 x 555 x 80	3000 x 1180 x 80
SPS/V:	2500 x 565 x 50	
	3000 x 565 x 50	

SPS 50: 19.1 kg/m2
SPS 80: 24.2 kg/m2
Extra long panels are manufactured to order.
All panels can be cut to length on site.

Road and Rail Barrier SPS/H

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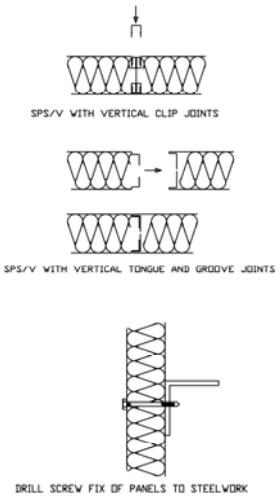
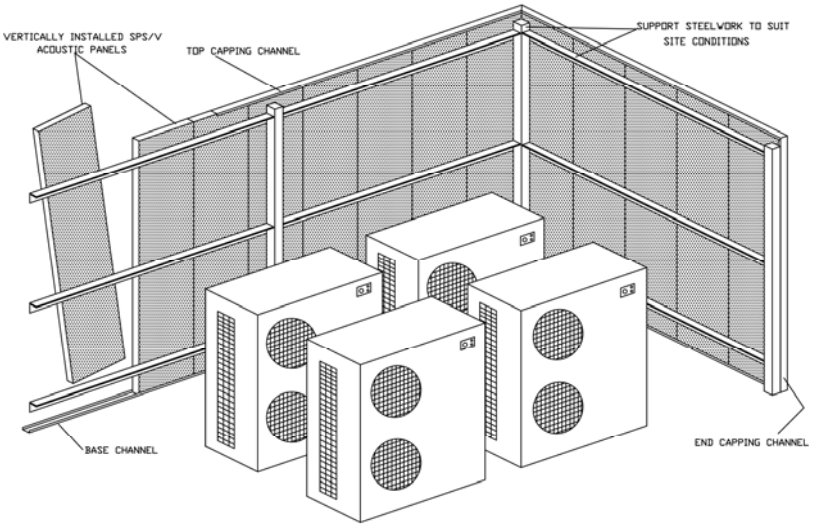
Typical Installation Details

Acoustic Screen with type SPS/V panels installed vertically





Acoustic screen with type SPS/H panels installed horizontally