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Advanced Acoustics – SoundSense Isolation System – Ceiling Version

Overview

The Advanced Acoustics SoundSense Isolation System is a simple, effective, fool-proof and strong high performing sound reduction system designed to isolate ceilings. The system is simple to install and so installation costs are kept low. It is an effective system as it offers increased performance on traditional resilient bar systems. It is fool-proof because the system comprises of two parts as opposed to multi-part systems making installation even simpler. It is a strong system as it offers superior load bearing capabilities as opposed to some other resilient bar systems.

Description

SoundSense is an acoustic isolation system for ceilings that completely de-couples the ceiling lining and so effectively giving a 'room within a room' concept that is often referred to by acoustic consultants. It dramatically reduces both airborne and impact noise transfer between adjacent rooms.

The system has been designed to be flexible, simple and easy to install. It is a 2 part system as opposed to some of the more complex multi-part systems often used where acoustic isolation/de-coupling is required. Designers wanting low-cost, space saving ceilings that provide superior nose control employ the Advanced Acoustics SoundSense Isolation System.

The SoundSense Isolation System is appropriate for all building types from residential properties to large commercial developments and is equally suited for both new build and refurbishment. It is also suitable for fitting onto timber and metal studs, concrete soffits and timber joists for ceilings.

The two part system consists of SoundSense Isolation Clip and SoundSense Isolation Bar. The damping clips ensure total isolation but also as they are fixed from both sides they ensure a much better load bearing capacity than most standard systems.

Traditional resilient bar systems provide acoustic isolation for plasterboard walls and ceilings by use of a vibration absorbing steel channel which is fixed onto timber studs and onto timber ceiling joists. Typically these systems are fixed along one edge allowing the other free edge to flex and so absorb sound or vibrations. Resilient bars attempt to create

an acoustic break between floor joist and the plasterboard ceiling or the timber wall studding and the plasterboard. In order to operate correctly these steel channels need to be highly flexible; if they are rigid they will not dampen the vibrations caused by sound. This requirement for flexibility has a direct effect on their load bearing capabilities. Furthermore by being fixed on one side they are not completely isolated from the studwork or joists.

In comparison the SoundSense Isolation Clip is a rubber clip meaning the SoundSense Isolation Bar is not physically attached to the timber studwork, ceiling joists or masonry. This means that isolation is vastly improved. Also because the clip is fixed at the top and the bottom the system can withstand greater loads providing peace of mind for developers and dwellers.

Installation

The SoundSense Isolation system should be fixed at 90^0 to the ceiling joists using the SoundSense Isolation Clips. The spacing between channels shall be a maximum of 600mm. The spacing of the clips on the SoundSense Isolation Bar shall be a maximum of 900mm. The required number of clips can be simply slid onto the bar and moved into the required position. The SoundSense Isolation Bars can be cut to length using tin snips or a hacksaw.

The clips should be within 300mm of the ceiling perimeter at the end of the channel run. The first row of channel at the ceiling perimeter should be a maximum of 150mm from the wall. If you are fixing the bar and clips to wood use 60mm coarse thread screws. If you are fixing to steel studs use 42mm self-tapping screws. If you are fixing direct to masonry use 60mm anchors.

Once the isolation bars and clips are securely fixed the next step is to install the first layer of acoustic plasterboard. The first layer of acoustic plasterboard should be 19mm thick and shall align seams between sheets on the centerline of the horizontal channels. Ensure a gap is left around the linings to decouple the layer. Use the minimum number of drywall screws to fix the first layer of plasterboard to the bar so as to help avoid hitting screw heads when fixing the second plasterboard layer. Make sure that no fixings connect the plasterboard lining to the joists, studding or masonry. For the first layer we recommend using 32mm self-drilling drywall screws.

To improve the acoustic integrity of the system a double layer of acoustic plasterboard is required. Before fixing a second layer of plasterboard we would also recommend installing one of two layers of Advanced Acoustics 2mm Soundproofing Mat. Simply glue the Soundproofing Mat to the plasterboard using our contact adhesive ensuring there are not gaps.

The second layer of plasterboard should be 12.5mm acoustic plasterboard fixed in a brick bond fashion avoiding overlapping joints with the first layer. This board should be fixed at 150mm centers at the board end and 250mm centers in the field. Again the correct length of self-tapping drywall screws should be used to avoid contact with the

studwork, joists, concrete or masonry. If you incorporate 1 or 2 layers of Soundproofing Mat you will need to use 42mm screws.

For the second layer of plasterboard ensure there is a gap left around the linings so the system is completely floating. The perimeter gap can be filled with our flexible acoustic sealant. All potential sound leaks such as gaps around outlets, pipe penetrations and the like are sealed with a flexible, non-hardening acoustic sealant.

NOTE: The SoundSense Isolation Bar and SoundSense Isolation must only be used in conjunction with each other and must not be mixed with another isolation system.

Specification

SoundSense Isolation Clips

Length – 98mm
Width – 25mm
Depth – 28mm
Weight – 59g each

SoundSense Isolation Bar

Length – 2400mm
Width – 65mm
Depth – 22mm
Weight – 380g / Linear Meter
Gauge – 0.5mm

Total System thickness (excluding studding or masonry)

With no Soundproofing Mat – 67mm

With 1 layer of 2mm Soundproofing Mat – 69mm

With 2 layer of 2mm Soundproofing Mat – 71mm