KINETICS Noise Control

ARCHITECTURAL SOUND ISOLATION

Kinetics Model IsoMax clip sound control walls

Performance/Cost comparison to typical “sound control” stud wall systems

The Architectural Noise Control Group at Kinetics Noise Control is pleased to provide information on our latest product for reducing airborne and impact generated noise in buildings. A primary application for the product is in multi-family residential dwellings where the floor/ceiling and wall construction controls acoustical privacy between units.

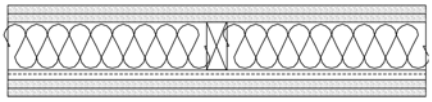
The Model “IsoMax” (patent pending) resilient sound isolation clip provides a new method for creating a wall or ceiling isolation break where traditional metal resilient channels have been used. The neoprene element has a maximum natural frequency of 15 Hz under typical design loads. In a comparison of two stud wall assemblies, one with single layer drywall and the other double layer drywall, the clip outperforms standard metal resilient channels by +7 and +6 STC points respectively. In addition, the product avoids many of the inherent problems with metal resilient channels, including improper installation that reduces documented acoustical laboratory performance and sourcing resilient channels equal to the originally designed products.

The “IsoMax” resilient clip creates a 1- 3/8 inch air gap when used with standard 7/8 inch metal furring channel. The resilient assembly installs easily without acoustical short circuits.

In a recent installation time study with an interiors contractor, the “IsoMax” clips and metal channels were installed on an 8 ft by 20 ft steel stud partition. The one-man installation of 30 resilient clips and 100 linear ft of metal channels took 25 minutes. The “IsoMax” clips are located on the studs or joists in a 2 ft. x 4 ft. array. To estimate clip usage on a typical project, the layout of clips and channel will yield 5 to 6 sq ft of wall or ceiling area per clip.

The following chart compares cost and STC performance of the “IsoMax” system and other common “sound wall” assemblies. The cost comparison should be used solely as a good indicator of the relative cost of each system. Actual construction costs for each type of wall will vary based on project size, labor rates, and material cost discounts for higher volumes.

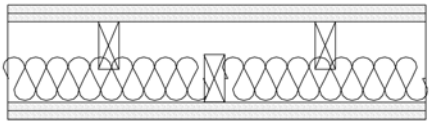
STC/Cost
58/$8.75 psf



USG 810219

Description
2 x 4 studs, 16" o.c.
USG RC-1 Resilient Channel spaced 24" o.c. on one side
2 layers 5/8" gypsum board on each side
2" Thermafiber Insulation

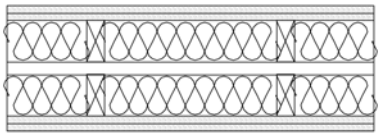
STC/Cost
53/$8.95 psf



NGC 2376, National Gypsum Co.

Description
2 x 4 studs, 16" o.c. and staggered 8" o.c. on 2" x 6" plates
2 layers 5/8" gypsum board on each side
3-1/2" Insulation

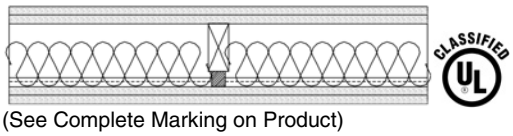
STC/Cost
63/$9.35 psf



TL 75-82 Riverbank Labs

Description
Double row of 2 x 4 studs, 16" o.c.
2 layers 5/8" gypsum board on each side
3-1/2" Insulation both sides

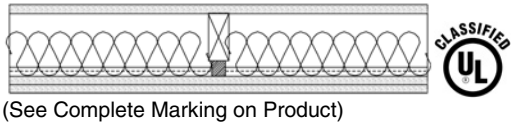
STC/Cost
64/$9.20 psf



(See Complete Marking on Product)
TL 02-40 Riverbank Labs

Description
2 x 4 studs, 16" o.c.
IsoMax clips with 7/8" furring channel spaced 24" o.c. on one side
R19 Insulation
2 layers 5/8" gypsum board on each side

STC/Cost
61/$8.00 psf



(See Complete Marking on Product)
TL 02-35 Riverbank Labs

Description
2 x 4 studs, 16" o.c.
IsoMax clips with 7/8" furring channel spaced 24" o.c. on one side
R19 Insulation
2 layers 5/8" gypsum board on the IsoMax Clip Side
1 layer of gypsum board on opposite side