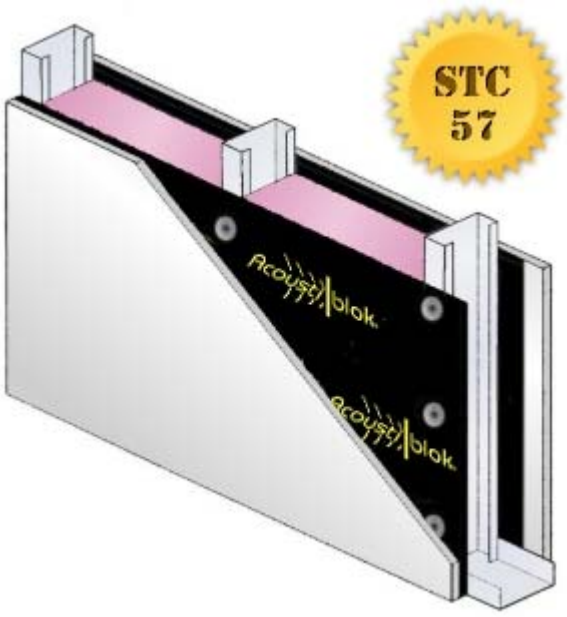
Steel Stud Gypsum Board Wall with Two Layers of Acoustiblok®



This very high performance sound blocking interior wall using two layers of 16 oz Acoustiblok adds only 1/4" of thickness and 2 lbs/ft^2 to a conventional steel stud and gypsum board partition. This is an example of the economy available using Acoustiblok material instead of older construction techniques: In the past, an STC 57 spec would have mandated a thicker wall and massive materials.

Riverbank Acoustical Laboratory rated this partition at STC 57, a noise reduction to human hearing of over 95% (test report RAL-TL05-150).

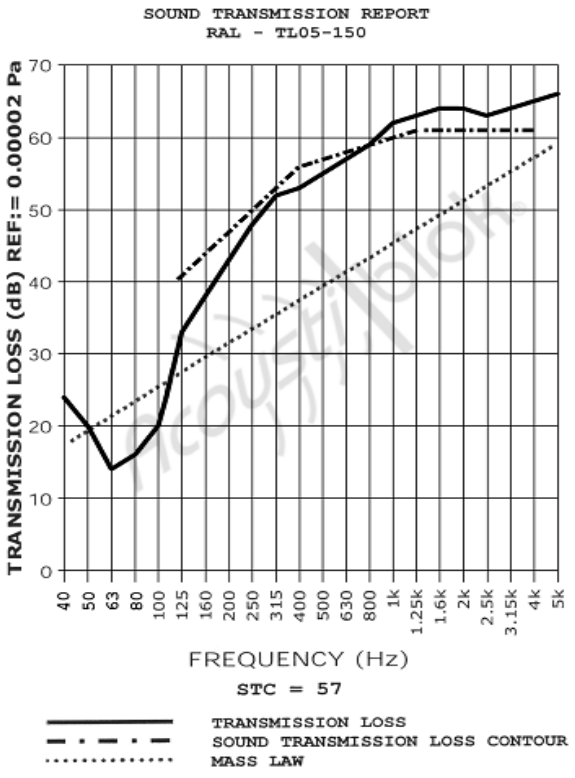
Construction details: 20 ga 3-5/8" steel studs 24" o/c, R-13 fiberglass insulation, 16 oz Acoustiblok attached to the studs with screws and tin caps 24" o/c, and 5/8" type X gypsum board drywall. Partition is 5-1/8" thick. Joints taped and caulked as appropriate to create a uniformly airtight seal.

SOUND TRANSMISSION CLASS is a single number that represents the sound blocking capacity of a partition such as a wall or ceiling.

STC numbers are often called out in architectural specifications, to assure that partitions will reduce noise levels. For performance similar to laboratory test numbers, it is necessary to adhere closely to the construction materials and techniques used in the tested partition.

STC is calculated by comparing the actual sound loss measured when 18 test frequencies pass through a partition, with fixed values for each STC level. The highest STC curve that the measured sound loss numbers fit under, determines the STC rating of the tested partition.

STC calculations emphasize sound frequencies that match the human voice. A high STC partition will block the sound of human speech, and block noise that interferes with human speech. A high STC number may not indicate a partition that is effective in blocking very low or very high pitched sound. STC measures sound blocking for airborne noise source only; it does not indicate how well a partition can block impact noise (objects striking the far side of the wall), or directly transmitted noise such as machinery mounted on the far side of the wall.



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