

Smart Ideas. Better Insulation.

STEEL STUD CONSTRUCTIONS FOR SOUND CONTROL

Steel studs are typically found in commercial and institutional buildings in non-load-bearing walls. The floor plan is representative of either low- or high-rise structures. Illustrated are typical uses of Johns Manville sound control insulation to reduce sound transmission between adjacent rooms such as offices, conference rooms, service areas and the like.



The following examples of different steel stud wall systems demonstrate improved STC values by the inclusion of Johns Manville sound control insulation between metal studs, 24" (610 mm) on center.

15/8" (41 mm) Steel Studs



 5/s" (41 mm) steel studs: single layer 1/2" (13 mm) Type X gypsum board each side; one thickness 23/4" (70 mm)

 JM Formaldehyde-free thermal/acoustical fiber glass batts.



1 ⁵/₈" (41 mm) steel studs: double layer ¹/₂" (13 mm) Type X gypsum board each side; one thickness 2 ³/₄" (70 mm) JM Formaldehyde-free thermal/acoustical fiber glass batts.



 $1\,{}^5/{}_8$ " (41 mm) steel studs: single layer ${}^5/{}_8$ " (16 mm) Type X gypsum board each side; one thickness $2\,{}^3/{}_4$ " (70 mm) JM Formaldehyde-free thermal/acoustical fiber glass batts.



Double 1 $\frac{5}{6}$ " (41 mm) steel studs: double layer $\frac{1}{2}$ " (13 mm) Type X gypsum board each side; three thicknesses $3\frac{5}{6}$ " (92 mm) JM Formaldehyde-free thermal/acoustical fiber glass batts.

Steel Framing STC Values

Sound Control

JM Formaldehyde-free insulations help reduce noise that can impact a building's comfort and continuing value.

PERFORMANCE ADVANTAGES

- Formaldehyde-free will not off-gas formaldehyde in the indoor environment.
- Thermal Efficiency provides effective resistance to heat transfer with R-values up to R-38 (RSI-6.7).
- Noncorrosive does not accelerate corrosion of metal studs.
- Resilient bonded glass fibers will not pull apart during normal applications and resist settling, breakdown and sagging from vibration.
- Durable unaffected by moisture, oil, grease and most acids. It will not rot, mildew or otherwise deteriorate.
- Flexible forms readily around corners and curved surfaces.
- Installs easily pre-cut batts designed for friction-fit between steel studs.

For additional information on sound control, visit our website at www.jm.com/sound.

Steel Framing STC Values

21/2" (64 mm) Steel Studs



2 1/2" (64 mm) steel studs: single layer 1/2" (13 mm) Type X gypsum board each side; one thickness 2 3/4" (70 mm) JM Formaldehyde-free thermal/acoustical fiber glass batts.



 $2^{1/2^{\prime\prime}}$ (64 mm) steel studs: single layer $^{5/8^{\prime\prime\prime}}$ (16 mm) Type X gypsum board each side; one thickness $2^{3/4^{\prime\prime\prime}}$ (70 mm) JM Formaldehyde-free thermal/acoustical fiber glass batts.



 $2\,1/2"$ (64 mm) steel studs: double layer 1/2" (13 mm) Type X gypsum board one side, single layer other side; one thickness $2\,3/4"$ (70 mm) JM Formaldehyde-free thermal/acoustical fiber glass batts.



STC 52

 $2^{1/2}$ " (64 mm) steel studs: double layer 5/s" (16 mm) Type X gypsum board one side, single layer other side; one thickness $2^{3/4}$ " (70 mm) JM Formaldehyde-free thermal/acoustical fiber glass batts.



 $2^{1/2^{\prime\prime}}$ (64 mm) steel studs: double layer $^{1/2^{\prime\prime}}$ (13 mm) Type X gypsum board each side; one thickness $2^{3/4^{\prime\prime}}$ (70 mm) JM Formaldehyde-free thermal/acoustical fiber glass batts.



 $2^{1/2}$ " (64 mm) steel studs: double layer $5^{1/2}$ " (16 mm) Type X gypsum board each side; one thickness $2^{3/4}$ " (70 mm) JM Formaldehyde-free thermal/acoustical fiber glass batts.

3 5/8" (92 mm) Steel Studs



STC 49

 $3\,{}^5/{}_8$ (92 mm) steel studs: single layer ${}^1/{}_2$ (13 mm) Type X gypsum board each side; one thickness $3\,{}^5/{}_8$ (92 mm) JM Formaldehyde-free thermal/acoustical fiber glass batts.



 $3\,5/\epsilon^{"}$ (92 mm) steel studs: single layer $5/\epsilon^{"}$ (16 mm) Type X gypsum board each side; one thickness $3\,5/\epsilon^{"}$ (92 mm) JM Formaldehyde-free thermal/acoustical fiber glass batts.



 $3\,{}^{\rm 5}/{}^{\rm s}$ (92 mm) steel studs: double layer ${}^{\rm 1}/{}^{\rm z}$ (13 mm) Type X gypsum board one side, single layer other side; one thickness $3\,{}^{\rm 5}/{}^{\rm s}$ (92 mm) JM Formaldehyde-free thermal/acoustical fiber glass batts.

Steel Framing STC Values

3⁵/8" (92 mm) Steel Studs



 $3\,{}^{\scriptscriptstyle 5}\!/{}_{\!\!8}"$ (92 mm) steel studs: double layer ${}^{\scriptscriptstyle 5}\!/{}_{\!\!8}"$ (16 mm) Type X gypsum board one side, single layer other side; one thickness 3 5/8" (92 mm) JM Formaldehyde-free thermal/acoustical fiber glass batts.



STC 56

35/8" (92 mm) steel studs: double layer 1/2" (13 mm) Type X gypsum board each side; one thickness 3 5/8" (92 mm) JM Formaldehyde-free thermal/acoustical fiber glass batts.



 $3\,{}^{5}\!/_{8}"$ (92 mm) steel studs: double layer ${}^{5}\!/_{8}"$ (16 mm) Type X gypsum board each side; one thickness 3 5/8" (92 mm) JM Formaldehyde-free thermal/acoustical fiber glass batts.

6" (152 mm) Steel Studs



STC 51

6" (152 mm) 25 gauge steel studs: single layer 5/8" (16 mm) Type X gypsum board each side; one thickness 6 1/2" (165 mm) JM Formaldehyde-free thermal/acoustical fiber glass batts.



STC 58

6" (152 mm) 25 gauge steel studs: double layer 5/8" (16 mm) Type X gypsum board each side; one thickness 6 1/2" (165 mm) JM Formaldehyde-free thermal/acoustical fiber glass batts.



6" (152 mm) 25 gauge steel studs: double layer 5/8" (16 mm) Type X gypsum board one side, single layer other side; one thickness 61/2" (165 mm) JM Formaldehyde-free thermal/acoustical fiber glass batts.



6" (152 mm) 25 gauge steel studs, resilient channels: double layer 5/8" (16 mm) Type X gypsum board one side, single layer other side; one thickness 61/2" (165 mm) JM Formaldehyde-free thermal/acoustical fiber glass batts.



6" (152 mm) 20 gauge steel studs, resilient channels: single layer 5/8" (16 mm) Type X gypsum board each side; one thickness 61/2" (165 mm) JM Formaldehyde-free thermal/acoustical fiber glass batts.



6" (152 mm) 20 gauge steel studs, resilient channels: three layers 5/8" (16 mm) Type X gypsum board one side, double layer 5/8" (16 mm) Type X gypsum board other side; one thickness 61/2" (165 mm) JM Formaldehyde-free thermal/acoustical fiber glass batts.

Steel Framing STC Values

Sound Control



Properly insulating a structure using Johns Manville building insulation helps preserve our environment by reducing energy consumption for heating and cooling, reducing the pollution resulting from fuel burning, reducing the emission of hazardous air pollutants during manufacturing and reducing waste through the utilization of recycled materials. Look for the cross and globe emblem on Johns Manville building insulation which indicates independent certification by Scientific Certification Systems, Inc. of 25% or more recycled glass content.

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Technical specifications as shown in this literature are intended to be used as general guidelines only. The physical and chemical properties of Johns Manville thermal and acoustical fiber glass insulation listed herein represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Any references to numerical flame spread or smoke developed ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions. Check with the sales office nearest you for current information. All Johns Manville products are sold subject to Johns Manville's Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville Limited Warranty and Limitation of Remedy or address listed below.



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