HOME of MAGNUM® BOARD

"The New Generation Building Material"

"Install It For Health-Install It For Life"

TECHNICAL BULLETIN No.:	030812-1023
Subject:	STC Ratings of MB and Insulation
Issue Date:	March 8, 2012
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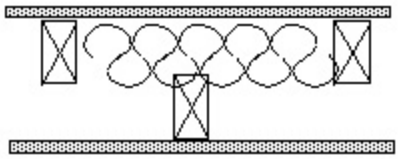
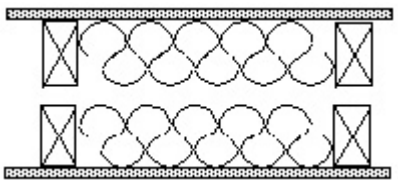
The following charts are representative of what a Magnum Board® wall assembly will provide in terms of STC values.

- ***Insulation will noticeably improve the STC rating of an assembly.***

Description	Estimated STC Rating	Wall Assembly
3 5/8" metal studs, 12mm magnum board®, one sheet each side and no insulation	38 - 40	
3 5/8" metal studs, 12mm magnum board ® one sheet each side and Batt insulation	43 - 44	

- ***Staggered or double stud walls are higher rated than single stud walls.***

Description	Estimated STC Rating	Wall Assembly
2x4 stud wall, 12mm magnum board®, one sheet each side and Batt insulation	34 - 39	
Staggered 2 X 4 studs, 12mm magnum board®, one sheet each side and Batt insulation	46 - 47	
Double 2x4 stud wall, 12mm magnum board®, one sheet each side and Batt insulation.	56 - 59	

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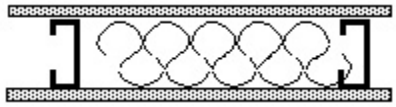
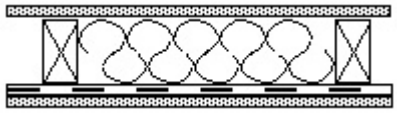
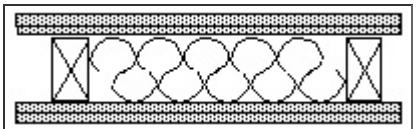
- ***Metal stud walls perform better than wood stud walls.***
  (NOTE: This only applies to single stud assemblies. For double stud assemblies, there is virtually no difference.)

Description	Estimated STC Rating	Wall Assembly
2x4 studs, 12mm magnum board®, one sheet each side and Batt insulation	34 - 39	
3 5/8" metal studs, 12mm magnum board® ,one sheet each side and Batt insulation	43 - 44	

- ***Resilient channel can improve the STC rating of an assembly.***
  (NOTE: These ratings are based on laboratory tests. Because of the special care required when installing resilient channels, actual results could be substantially lower.) See note below for definition of resilient channel.

Description	Estimated STC Rating	Wall Assembly
2x4 stud, 12mm magnum board®, one sheet each side and Batt insulation	34 - 39	
2x4 stud, 12mm magnum board®, one sheet each side with resilient Channel and Batt insulation	45 - 52	

- ***Adding additional layers of drywall can improve the STC rating of an assembly.***

Description	Estimated STC Rating	Wall Assembly
2x4 studs, 12mm magnum board®, one sheet each side and Batt insulation	34 - 39	
2x4 studs, 12mm magnum board®, three sheets total, one sheet on one side, two sheets on the opposite side and Batt insulation	39 - 40	
2x4 studs, 12mm magnum board®, four sheets total, two sheets on each side and Batt insulation	43 - 45	

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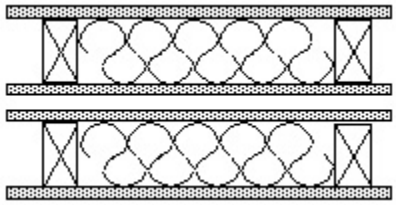
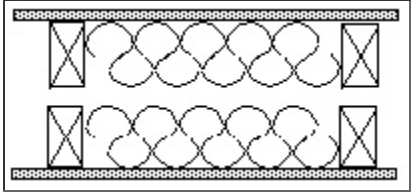
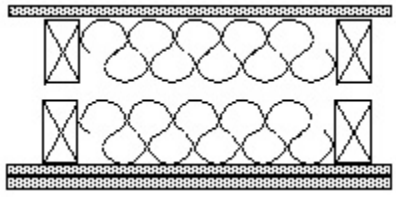
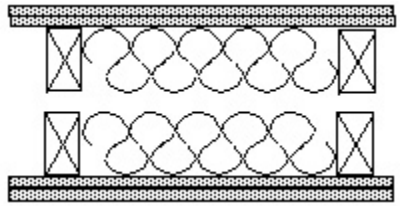
- ***Drywall between double studs can dramatically reduce the STC rating of an assembly.***

Description	Estimated STC Rating	Wall Assembly
2x4 studs, 12mm magnum board®, four sheets total, one on each side of each wall and Batt insulation	44 - 45	
Double 2x4 stud walls , 12mm magnum board®, one sheet each side and double Batt insulation	56 - 59	
Double 2x4 stud walls, 12mm magnum board®, three sheets total, one sheet on one side and two sheets on the opposite side and Batt insulation	59 - 60	
Double 2x4 stud wall, 12mm magnum board®, four sheets total, two sheets on each side and Batt insulation	58 - 63	

Questions and Answers:

Q: What insulation was used in the above testing?

A: Fiberglass

Q: Can rock wool insulation improve STC values?

A: Testing indicates rock wool insulation can indeed improve STC values in wall assemblies.

Q: What are resilient wall channels:

A: **R**esilient Channel is a specially-formed, sturdy metal device that, when used to hang drywall (instead of just attaching the drywall to the studs

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or joists), GREATLY improves the sound transmission characteristics of the wall or ceiling system. See representative picture below:

Q: What is the meaning of STC?

A: The Sound Transmission Class (STC) is a single-number rating of a material's or an assembly's ability to resist airborne sound transfer at the frequencies 125-4000 Hz. In general, a higher STC rating blocks more noise from transmitting through a partition.

Q: How do changes in STC values reflect Changes in Apparent Loudness:

A:

Changes in STC Rating	Changes in Apparent Loudness
+/- 1	Almost imperceptible
+/- 3	Just perceptible
+/- 5	Clearly noticeable
+/- 10	Twice (or half) as loud

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