WALL & FLOOR ASSEMBLY GUIDE

Insulation for Sound & Fire Rated Assemblies

THE QUIETZONE®
NOISE CONTROL SOLUTION

Think PINK™

NEW EcoTouch™ PureFiber™ Technology

OWENS CORNING®
INNOVATIONS FOR LIVING®

QUIETZONE® NOISE CONTROL SOLUTIONS

Today's lifestyle is a loud one. Our entertainment, modes of travel, time-saving conveniences and sophisticated machinery give off a tremendous amount of sound. Much of this is unwanted sound or, as it is more commonly known, noise.

Noise must be controlled to maintain a degree of comfort. This is especially true in living and working quarters, be it at home, apartment, motel, hotel or office. That means keeping the noise from traveling from one area through a barrier (walls, doors, ceilings) into another.

- Owens Corning's EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Insulation is manufactured in Canada and contains a minimum of 70 per cent* recycled content, the highest recycled content in the industry
- Owens Corning's EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Insulation has achieved EcoLogo certification, GREENGUARD Indoor Air Quality Certification and GREENGUARD Children & Schools Certification and is verified to be formaldehyde free

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CONTENTS

Construction Designs for Acoustical Control	3
WALL ASSEMBLIES	
Single Layer Wood Stud Wall with Resilient Channels	9
Unbalanced Wood Stud Wall with Resilient Channels	10
Double Layer Wood Stud Wall with Resilient Channels	11
Single Layer Wood Stud Wall	12
Unbalanced Wood Stud Wall	13
Double Layer Wood Stud Wall	14
Single Layer Double Wood Stud Wall	15
Unbalance Double Wood Stud Wall	16
Double Layer Double Wood Stud Wall	17
Single Layer Staggered Wood Stud Wall	18
Unbalanced Staggered Wood Stud Wall	19
Double Layer Staggered Wood Stud Wall	20
Single Layer Steel Stud Wall with Resilient Channels	21
Unbalanced Steel Stud Wall with Resilient Channels	22
Double Layer Steel Stud Wall with Resilient Channels	23
Single Layer Steel Stud Wall	24-26
Unbalanced Steel Stud Wall	27-29
Double Layer Steel Stud Wall	30-32
Single Layer Chase Wall	33
Double Layer Chase Wall	34
Single Layer Double Steel Stud Wall	35
Unbalanced Double Steel Stud Wall	36
Double Layer Double Steel Stud Wall	37
Faced Concrete Block Wall	38
FLOOR AND CEILING ASSEMBLIES	
Solid Wood Floor Joist Assemblies	39-41
Wood I-Joist Assemblies	42-44
Wood Truss Assemblies	45
Steel Joist Floors	46
SOUND ABSORPTION COEFFICIENTS	47-48
SOUND TRANSMISSION LOSS	
Exterior Walls	49
Exterior Doors and Windows	50
Appendix	52-55

Wall & Floor Assembly Guide

Construction Designs for Acoustical Control

The goal of all acoustically "efficient" systems is to create a living or working environment that is comfortable and free from distraction or unwanted external noise. While the "ideal" acoustical environment has yet to be created, several construction designs for commercial and residential installations do exist that promote an enhanced acoustical environment.

Improving the Effective Sound Transmission Loss of Wall Constructions

The sound transmission loss of wall constructions can be improved by increasing mass, breaking the sound vibration path and providing cavity absorption. In addition to these three methods, another alternative approach to reduce noise levels is to add sound absorbing materials to a room.

Increasing Mass

Heavier materials block sound better than light materials. For example, adding another layer of gypsum wallboard provides increased sound transmission loss. As a general rule, every doubling of the weight of the wall increases sound transmission loss by an additional 5-6dB. Heavier walls, however, are obviously not the most economical or most aesthetic solution to sound control requirements.

Breaking Vibration Path

Walls transmit sound most effectively when they can transmit vibrations from one face to another through structural elements such as metal or wood studs. Anything that can be done to interfere with the transmission of vibration between one wall surface and the other will help reduce sound transmission. One method of doing this is to stagger wood studs, reducing sound transmission through them. Metal studs are more resilient than wood studs and reduce the transmission of vibrations between one wall surface and the other. In wood stud constructions, resilient metal channels can be used between the gypsum wall board and the stud to break the vibration path.

Cavity Absorption

The sound transmission loss of a wall can also be increased by filling the wall cavity with sound absorbing materials such as Owens Corning EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Insulation batts. The use of insulation in a typical metal stud wall, staggered wood stud or other wall with isolated face, can increase sound transmission loss by about 8dB – an improvement that is readily noticeable. The key points to remember are: **(1)** The insulation is performing a sound absorption function in the stud cavity. It does not add significant mass to the partition in comparison with gypsum board and stud masses. Based on NRC Report IRC-IR-693, October 1995 "Summary Report for Consortium on Gypsum Board Walls: Sound Transmission Results". **(2)** On average, glass fibre batts have equivalent or better STC (Sound Transmission Coefficient) acoustical performance than nominal equivalent thickness, approximately 265% higher density mineral fibre (rock/slag wool) batts. **(3)** "The greater the fraction of the cavity filled with absorption, the higher the sound transmission loss." "With the cavity half-filled with absorptive material, the sound transmission loss was about 5dB less than obtained by filling the cavity completely."

Figure 1
The addition of gypsum board to one surface effectively increases wall mass.

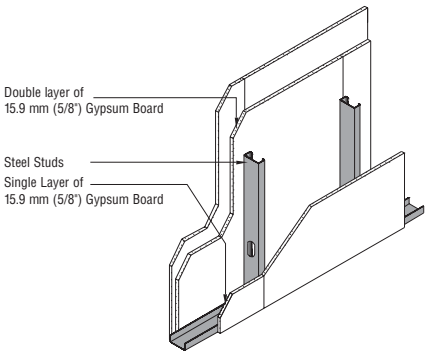


Figure 2
Resilient channels over wood studs break the vibration path, helping to increase sound transmission loss (STC).

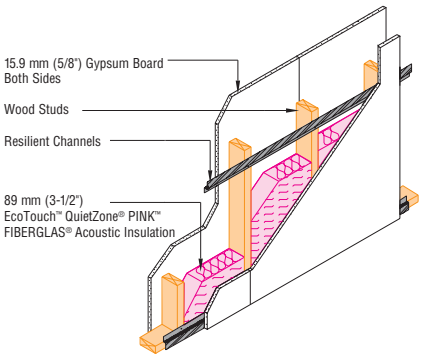
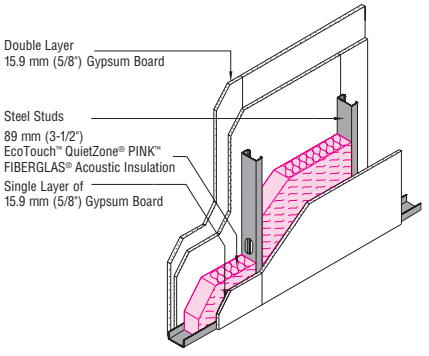


Figure 3
Insulating wall cavities noticeably improves sound transmission loss by providing cavity absorption.



Wall & Floor Assembly Guide

Construction Designs for Acoustical Control

Adding Sound Absorbing Materials To Source and Receive Areas

Another method of increasing the effective sound transmission loss between two rooms is to add sound absorbing materials to each room. By doing this, the overall noise level in each room is reduced, which results in a corresponding reduction of the sound level in any adjacent area. By adding sound absorbing materials to both the source and receive room, one can obtain a significant reduction of the noise level in the receive room. The net effect is a significant reduction in intruding noise, with no change to the separating partition.

Detail Design and Construction Considerations

The effective acoustical performance of walls can be greatly affected by a number of design and construction details. These details include sealing the perimeter of walls, construction details of wall intersections, size and placement of windows, the location and proper installation of doors, electrical outlets, ducts, and mechanical equipment.

Perimeter Sealing

An air seal should be used around the perimeter of the wall to effect a proper acoustical seal. A non-hardening, permanently resilient caulking such a butyl rubber-based compound is recommended for both sides of the partition at applicable locations, such as the bottom and top plates. Joint compound and tape will seal effectively in corners if multiple layers of wallboard are properly staggered. Figure 4 provides construction details for framing sound insulation walls at ceilings and floor attachments.

Doors

Where optimum noise control is desired, solid wood core doors should be used. Door tops and sides should be gasketed with a soft-type weather stripping. Use of threshold closures at the bottom of the door or air seals will reduce sound transmission. Sliding doors should be avoided where optimum noise control is desired. Doors opening upon hallways should not open across from one another.

Windows

Windows normally have lower transmission loss values than the surrounding wall. Therefore, it is advantageous to reduce window area for increased noise control. Additional measures to be taken are the reduction of windows facing noisy areas and the separation of windows to reduce crosstalk. Give consideration to the use of this or insulated glass (as well as double glazing) to help reduce sound transmission. Weather stripping windows will assure that they close tightly, and thus, reduce the transmission of outside sound sources.

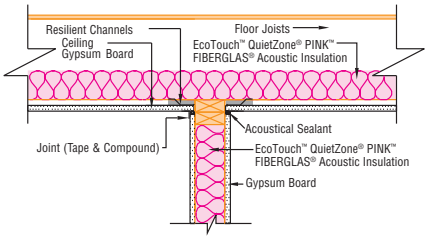
Electrical

Light switches and outlets should not be constructed back-to-back. Ceiling fixtures should be surface mounted and openings around boxes should be sealed airtight. Electrical distribution panels, as well as telephones, bells, intercoms or audio built-ins should be installed on well-insulated interior walls only, and never on party or corridor walls.

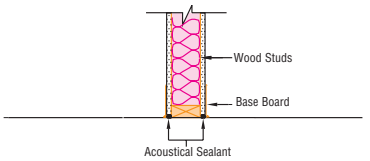
Figure 4
Sealing detail of sound insulating walls at ceiling and floor attachments.

Single Layer Wood Stud Wall (single layer gypsum board each side)

Ceiling Attachment

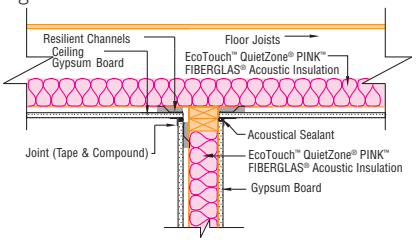


Floor Attachment

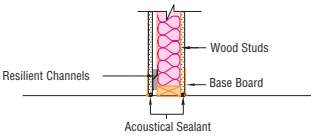


Single Layer Wood Stud Wall with Resilient Channels on One Side (single layer gypsum board each side)

Ceiling Attachment



Floor Attachment



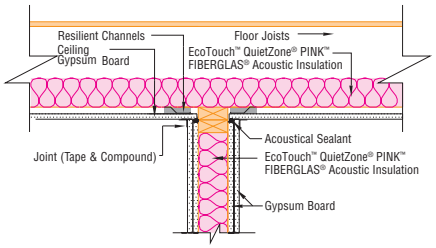
Wall & Floor Assembly Guide

Construction Designs for Acoustical Control

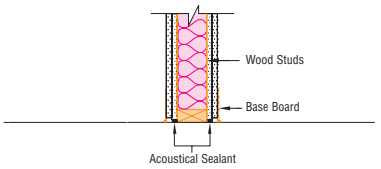
Figure 4 (continued)
Sealing detail of sound insulating walls at ceiling and floor attachments.

Single Layer Wood Stud Wall
(double layer gypsum board each side)

Ceiling Attachment

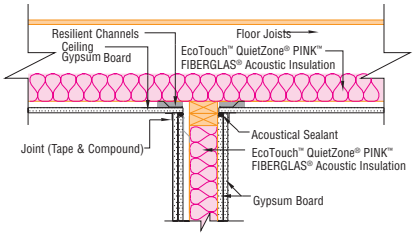


Floor Attachment

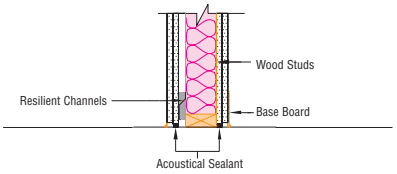


Single Layer Wood Stud Wall with Resilient Channels on One Side
(double layer gypsum board each side)

Ceiling Attachment

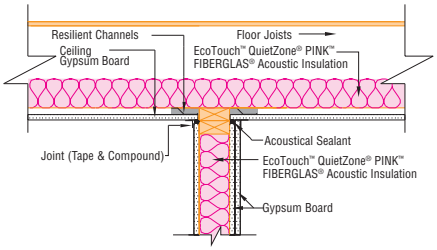


Floor Attachment

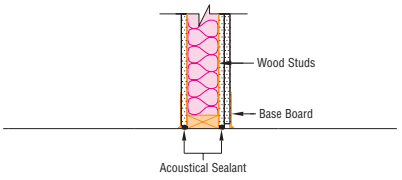


Single Layer Wood Stud Wall
(double layer gypsum board one side, single layer other side)

Ceiling Attachment

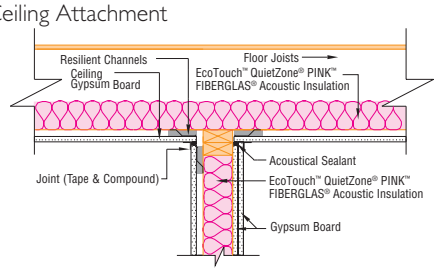


Floor Attachment

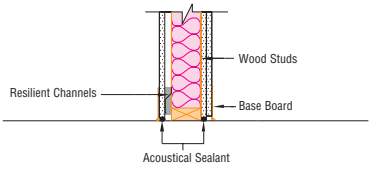


Single Layer Wood Stud Wall with Resilient Channels on One Side
(double layer gypsum board one side, single layer other side)

Ceiling Attachment



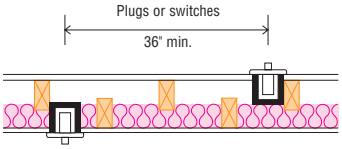
Floor Attachment

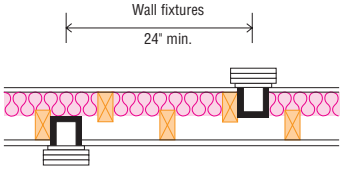


Wall & Floor Assembly Guide

Construction Designs for Acoustical Control

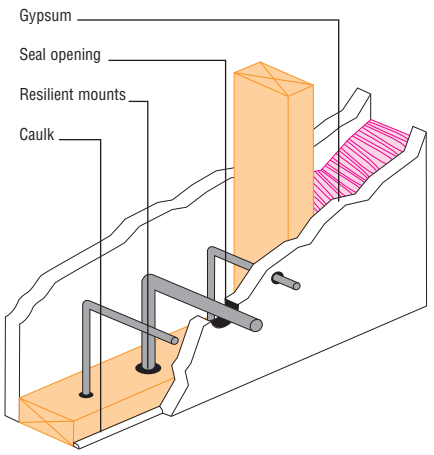
Sound can transmit between electrical outlets through wiring, separate wiring of each occupancy can minimize this problem. Vibrating equipment should be connected with flexible wiring.





Plumbing

Pipe runs should be designed with swing arms so expansion and contraction can occur without binding, thus eliminating any unwanted sound. Also, piping should be isolated from surrounding structures with resilient mounts. Air chambers should be provided at each outlet to eliminate water hammer due to the abrupt stopping of flowing water, and consideration should be given to oversized pipes and reduced water pressure. Installation of fixtures back-to-back should be avoided. In all cases, openings made in walls and floor surfaces should be caulked to ensure optimum acoustical integrity.



Ducts

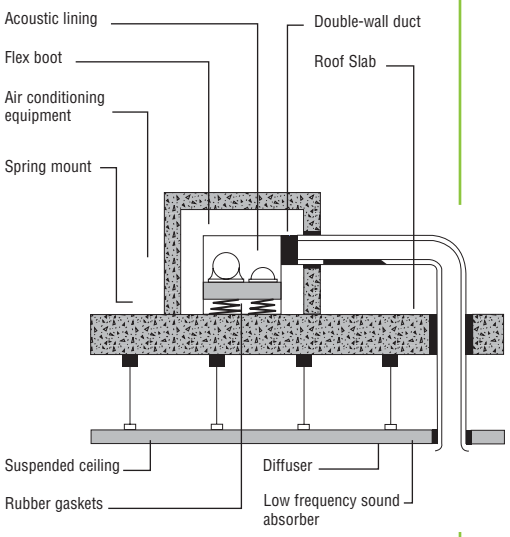
Duct design should be given special consideration when planning the layout of a new or retrofit construction, since ducts can easily transmit sound. Installation of sufficiently thick metal ducts, lined with sound-attenuating duct liner insulation, and the use of duct wrap materials will reduce sidewall transmission of unwanted sound, as well as reduce fan noise in the duct. The use of quality, quiet appliances, air conditioners and furnaces with well-balanced motors and fans is recommended to reduce duct carried noise and annoyance.

Wall & Floor Assembly Guide

Construction Designs for Acoustical Control

Equipment Noise

Before buying large equipment, be sure to inquire about equipment noise levels. Insist on quiet units. Whenever possible, isolate furnaces, air conditioners and HVAC units away from "quiet" areas. Also, when installing equipment likely to vibrate, use vibration isolators. Vertical ducts or ventilation risers mounted on the exterior of buildings frequently are the cause of noise complaints. Such devices often rattle in windy areas or snap, crackle and pop (owing to thermal expansion and contraction) with outdoor temperature variation. Further, the outdoor noise of aircraft, traffic, etc., are easily transmitted by the thin-wall duct and carried into the building interior. All exterior ductwork should be of double-wall construction with acoustical lining and silencers.



What Is Impact Sound?

Impact sound is caused by a floor or wall being set into vibration by direct mechanical contact. The sound is then radiated by the floor or wall surface. Floor vibrations may also be transmitted throughout the structure to walls and re-radiated as sound in adjoining spaces.

Increasing Impact Noise Isolation

In commercial constructions where a suspended ceiling is utilized, adding Fiberglas insulation to the ceiling plenum will greatly increase the impact noise isolation, as well as the airborne sound transmission loss. Resilient channels and EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Insulation are recommended to reduce both impact noise and airborne sound transmission. The effective impact noise isolation of the floor/ ceiling assembly can also be improved by adding sound absorptive materials to the receive room. However, the best method of improving the impact noise isolation provided by a floor/ceiling assembly is to install a carpet and pad on the floor. When a carpet and pad are placed on a floor, the impact hammers in the standard impact machine become isolated from the hard floor surface. Thus, very little impact noise is generated and transmitted to the lower or receive room. Although the IIC rating of the floor/ceiling assembly is greatly improved by adding a carpet and pad, the airborne STC values is changed very little because the carpet and pad do not add any significant weight to the floor/ceiling assembly.

Construction Designs for Acoustical Control

Improving Ceiling Sound Transmission Loss

The sound transmission loss of a ceiling can be improved by placing EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic insulation batts on the back of the ceiling panels. This has the same effect as putting insulation in the stud cavity of a wall; however, in this case the insulation absorbs sound in the plenum area. Depending on the type of ceiling panels used, the STC can be improved by 7 to 12 points. As in the case of partitions, the effective sound transmission loss of a ceiling can also be improved by adding sound absorptive materials to both the source and receive rooms. For example, sound absorptive wall treatments could be installed in both rooms, thereby reducing the overall noise level.

Fuzz Wall

In order to improve the two room STC value of a wall, consideration must also be given to the plenum above the dividing wall. A quick and easy way to address this is to install the "Fuzz wall" by stacking batts directly above the divider wall.

For further details contact your Owens Corning representative.

References for Fire Rating

ULC: Underwriters Laboratories of Canada,
List of Equipment & Materials, Volume III, Fire Resistance Ratings

UL: Underwriters Laboratories Inc., Fire Resistance Directory, Volume I

NBC: National Building Code of Canada, 2010,
Appendix A, Table A-9.10.3.1.A

GA: Gypsum Association,
Fire Resistance Design Manual,
GA-600-2009, 19th Edition

OSUT: The Ohio State University Engineering Experiment Station

References for Sound Transmission Coefficients (STC)

NBC: National Building Code of Canada, 2010,
Appendix A, Table A-9.10.3.1.A

NRC: National Research Council of Canada, Summary Report for Consortium on Gypsum Walls: Sound Transmission Results, Internal report IRC-IR-693

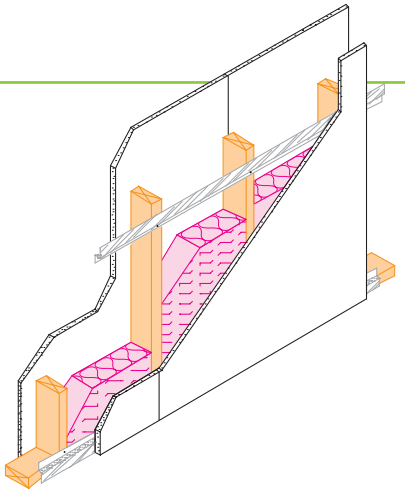
NRC: Gypsum Board Walls:
Transmission Loss Data
Halliwell, R.E.; Nightingale, T.R.T.;
Warnock, A.C.C.; Birta, J.A.
IRC-IR-761

RAL: Riverbank Acoustical Laboratories

W & OC: Owens Corning Science and Technology Center – OCARC, Granville, Ohio & Acculab Consultants in Acoustics, Columbus, Ohio

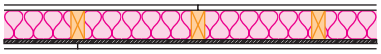
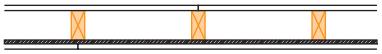
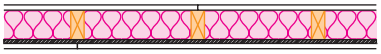
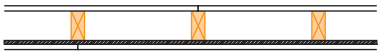
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

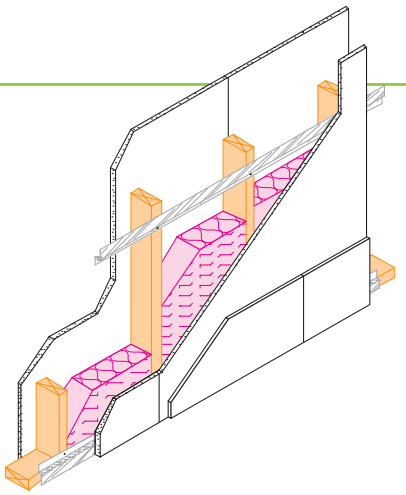
Single Layer Wood Stud Wall with Resilient Channels

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
NBC-W3a (16" o.c.) NBC-W3a (16" o.c.) NBC-W3b (24" o.c.) NBC-W3b (24" o.c.)	45 min, L.B. 1 h, N.L.B. 45 min, L.B. 1 h, N.L.B.	NBC-W3a (16" o.c.) NRC-TL-93-110 (16") NRC-TL-93-098 (24") NBC-W3b (24" o.c.)	**45** **46** **50** **48**	SLWSR057 	Single 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c.; resilient channels spaced 400 mm (16") or 600 mm (24") o.c.; single layer 15.9 mm (5/8") type “x” gypsum board each side; one thickness, 89 mm (3-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
N.A.	N.A.	NRC-TL-93-122 (16") NRC-TL-93-089 (24") OCF431 (16")	**40** **40** **40**	SLWSR067 	Single 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c.; resilient channels spaced 600 mm (24") o.c.; single layer 15.9 mm (5/8") type “x” gypsum board each side; no insulation.
NBC-W3c (16" o.c.) NBC-W3c (16" o.c.) NBC-W3c (24" o.c.) NBC-W3c (24" o.c.)	45 min. L.B. 45 min, N.L.B. 45 min. L.B. 45 min, N.L.B.	NBC-W3c (16" o.c.) NBC-W3c (24" o.c.) W0769 (16" o.c.)	**43** **N.A.** **46**	SLWSR077 	Single 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") o.c. or 600 mm (24") o.c.; resilient channels spaced 400 mm (16") o.c. or 600 mm (24") o.c.; single layer 12.7 mm (1/2") type “x” gypsum board each side; one thickness, 89 mm (3-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
N.A.	N.A.	NBC NRC W0969	**N.A.** **N.A.** **39**	SLWSR087 	Single 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") o.c.; resilient channels spaced 600 mm (24") o.c.; single layer 12.7 mm (1/2") type “x” gypsum board each side; no insulation.

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

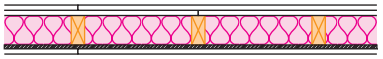
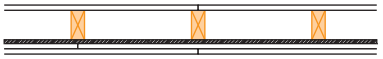
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

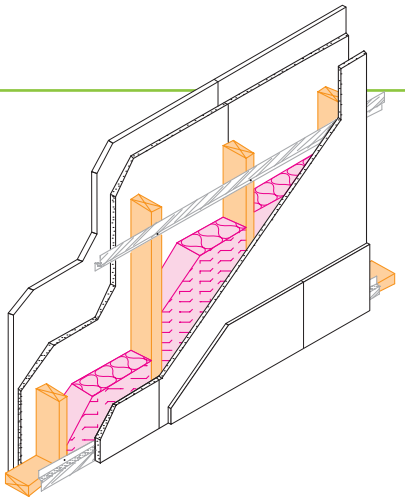
Unbalanced Wood Stud Wall with Resilient Channels

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
NBC-W5c (16" o.c.) NBC-W5c (16" o.c.) NBC-W5d (24" o.c.) NBC-W5d (24" o.c.)	45 min, L.B. 1 h, N.L.B. 45 min, L.B. 1 h, N.L.B.	NBC-W5c (16" o.c.) NBC-W5d (24" o.c.) *W0669 (16" o.c.)	**49** **53** **52**	UWSR037 	Single 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c.; resilient channels spaced 400 mm (16") or 600 mm (24") o.c.; single layer 12.7 mm (1/2") type “x” gypsum board one side; double layer other side, one thickness, 89 mm (3-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
N.A.	N.A.	W1469	**44**	UWSR047 	Single 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") o.c.; resilient channels spaced 600 mm (24") o.c.; single layer 12.7 mm (1/2") type “x” gypsum board one side; Double layer other side; no insulation.

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

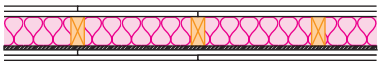
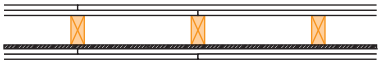
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

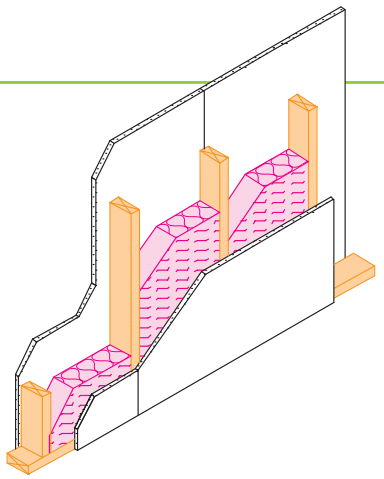
Double layer Wood Stud Wall with Resilient Channels

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
NBC-W6d NBC-W6d	1 h, L.B. 1.5h, N.L.B.	NBC-W6d NRC-TL-93-127 W0569	**55** **57** **56**	DLWSR017 	Single 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") o.c.; resilient channels spaced 600 mm (24") o.c.; double layer 12.7 mm (1/2") type “x” gypsum board each side; one thickness, 89 mm (3-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
NBC-W6j NBC-W6j	1 h, L.B. 1.5h, N.L.B.	NBC-W6j	**46**	DLWSR027 	Single 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c.; resilient channels spaced 400 mm (16") or 600 mm (24") o.c.; double layer 12.7 mm (1/2") type “x” gypsum board each side; no insulation.

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

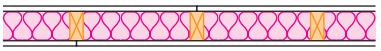
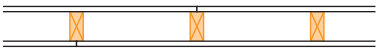
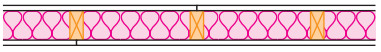
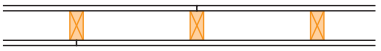
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

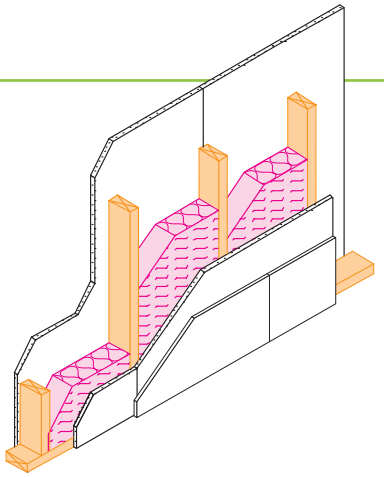
Single Layer Wood Stud Wall

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
NBC-W1b (16" o.c.) NBC-W1b (16" o.c.) NBC-W1b (24" o.c.) NBC-W1b (24" o.c.)	45 min, L.B. 45 min, N.L.B. 45 min, L.B. 45 min, N.L.B.	NBC-W1b (16" o.c.) NBC-W1b (24" o.c.) W2069 (16" o.c.)	**34** **34** **39**	SLWS127 	Single 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c.; single layer 12.7 mm (1/2") type "x" gypsum board each side; one thickness, 89 mm (3-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
NBC-W1e (16" o.c.) NBC-W1e (16" o.c.) NBC-W1e (24" o.c.) NBC-W1e (24" o.c.)	45 min, L.B. 45 min, N.L.B. 45 min, L.B. 45 min, N.L.B.	NBC-W1e (16" o.c.) NBC-W1e (24" o.c.) W2169 (16" o.c.)	**32** **32** **35**	SLWS137 	Single 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c.; single layer 12.7 mm (1/2") type "x" gypsum board each side; no insulation.
*UL-U305 & *UL-U309 NBC-W1a 16 & (24" o.c.) NBC-W1a 16 & (24" o.c.)	1 h, L.B. 1 h, L.B. 1 h, N.L.B.	NBC-W1a (16" o.c.) NBC-W1a (24" o.c.) *OCF423 (16" o.c.)	**36** **36** **36**	SLWS147 	Single 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c.; single layer 15.9 mm (5/8") type "x" gypsum board each side; one thickness, 89 mm (3-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*ULC-W301 (16" o.c.) NBC-W1d (16" o.c.) NBC-W1d (24" o.c.)	1 h, L.B. 1 h, L.B. 1 h, N.L.B.	NBC-W1d (16" o.c.) NBC-W1d (24" o.c.) *OCF424 (16" o.c.)	**32** **32** **34**	SLWS157 	Single 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c.; single layer 15.9 mm (5/8") type "x" gypsum board each side; no insulation.

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

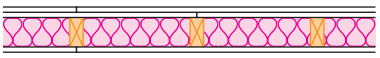
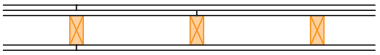
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

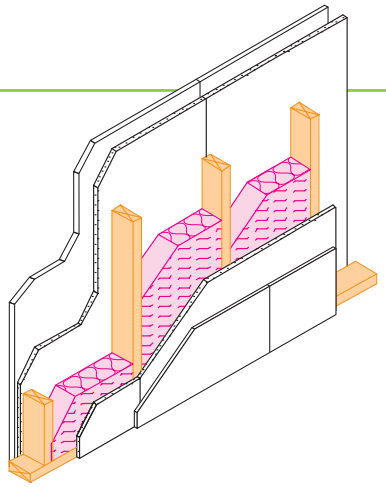
Unbalanced Wood Stud Wall

REFERENCE.	FIRE RATING	TEST NO.		STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
N.A.	N.A.	W2469	(16" o.c.)	**40**	UWS107 	Single 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c.; double layer 12.7 mm (1/2") type “x” gypsum board one side; single layer other side; one thickness, 89 mm (3-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
N.A.	N.A.	W2269	(16" o.c.)	**38**	UWS117 	Single 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c.; double layer 12.7 mm (1/2") type “x” gypsum board one side; single layer other side; No insulation.

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

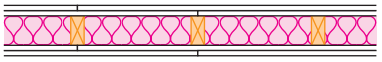
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

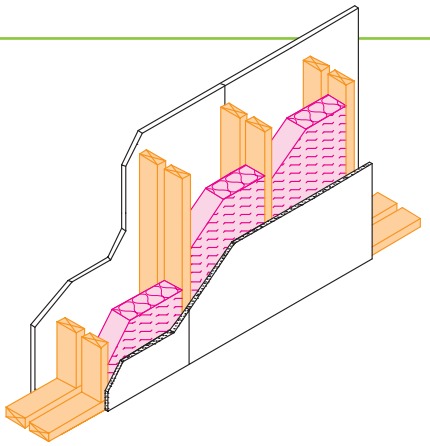
Double Layer Wood Stud Wall

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
NBC-W2b (16" o.c.) NBC-W2b (16" o.c.) NBC-W2b (24" o.c.) NBC-W2b (16" o.c.)	1 h, L.B. 1.5h N.L.B. 1 h, L.B. 1.5h N.L.B.	NBC-W2b (16" o.c.) NBC-W2b (24" o.c.) W2569 (16" o.c.)	**38** **38** **45**	DLWS097 	Single 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c.; double layer 12.7 mm (1/2") type “x” gypsum board each side; one thickness, 89 mm (3-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

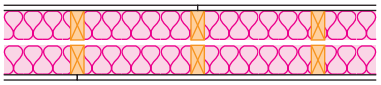
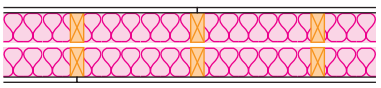
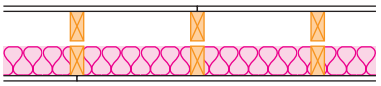
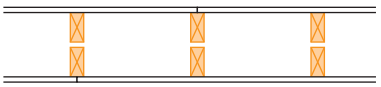
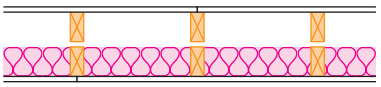
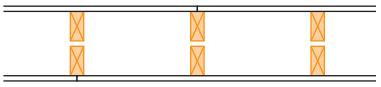
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

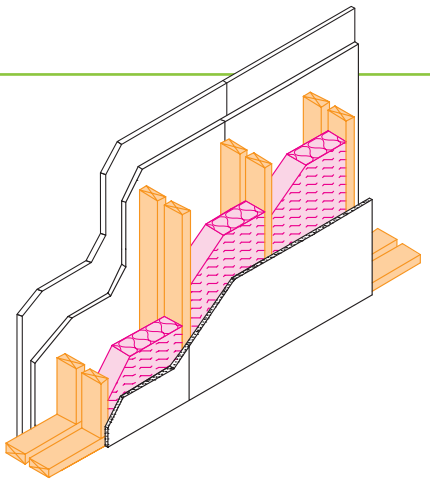
Single Layer Double Wood Stud Wall

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
NBC-W13a (16" o.c.) NBC-W13a (16" o.c.) NBC-W13a (24" o.c.) NBC-W13a (24" o.c.)	1 h, L.B. 1 h, N.L.B. 1 h, L.B. 1 h, N.L.B.	NBC-W13a (16" o.c.) NBC-W13a (24" o.c.) NRC-TL-93-266 (16" o.c.) W02985 (24" o.c.)	**57** **57** **56** **60**	SLDWS217 	Double 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c., on separate 38 mm x 89 mm (1-1/2" x 3-1/2") wood plates set 25 mm (1") apart; single layer 15.9 mm (5/8") type "x" gypsum board each side; two thicknesses, 89 mm (3-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
NBC-W13b (16" o.c.) NBC-W13b (16" o.c.) NBC-W13b (24" o.c.) NBC-W13b (24" o.c.)	45 min L.B. 45 min N.L.B. 45 min L.B. 45 min N.L.B.	NBC-W13b (16" o.c.) NBC-W13b (24" o.c.) NRC-TL-93-270 (16" o.c.) W02869* (16" o.c.)	**57** **57** **58** **59**	SLDWS227 	Double 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c., on separate 38 mm x 89 mm (1-1/2" x 3-1/2") wood plates set 25 mm (1") apart; single layer 12.7 mm (1/2") type "x" gypsum board each side; two thicknesses, 89 mm (3-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
NBC-W13d (16" o.c.) NBC-W13d (16" o.c.) NBC-W13d (24" o.c.) NBC-W13d (24" o.c.)	45 min L.B. 45 min N.L.B. 45 min L.B. 45 min N.L.B.	NBC-W13d (16" o.c.) NBC-W13d (24" o.c.) W02969 (16" o.c.)	**55** **53** **56**	SLDWS237 	Double 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c., on separate 38 mm x 89 mm (1-1/2" x 3-1/2") wood plates set 25 mm (1") apart; single layer 12.7 mm (1/2") type "x" gypsum board each side; one thicknesses, 89 mm (3-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
NBC-W13f (16" o.c.) NBC-W13f (16" o.c.) NBC-W13f (24" o.c.) NBC-W13f (24" o.c.)	45 min L.B. 45 min N.L.B. 45 min L.B. 45 min N.L.B.	NBC-W13f (16" o.c.) NBC-W13f (24" o.c.) W3469 (16" o.c.)	**45** **45** **47**	SLDWS247 	Double 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c., on separate 38 mm x 89 mm (1-1/2" x 3-1/2") wood plates set 25 mm (1") apart; single layer 12.7 mm (1/2") type "x" gypsum board each side; no insulation.
NBC-W13c (16" o.c.) NBC-W13c (16" o.c.) NBC-W13c (24" o.c.) NBC-W13c (24" o.c.)	1 h, L.B. 1 h, N.L.B . 1 h, L.B. 1 h, N L.B.	NBC-W13c (16" o.c.) NBC-W13c (24" o.c.) NRC-TL-93-265 (16" o.c.) OCF448 (16" o.c.)	**54** **54** **55** **56**	SLDWS257 	Double 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c., on separate 38 mm x 89 mm (1-1/2" x 3-1/2") wood plates set 25 mm (1") apart; single layer 15.9 mm (5/8") type "x" gypsum board each side; one thickness, 89 mm (3-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
NBC-W13e (16" o.c.) NBC-W13e (16" o.c.) NBC-W13e (24" o.c.) NBC-W13e (24" o.c.)	1 h, L.B. 1 h, N.L.B. 1 h, L.B. 1 h, N L.B.	NBC-W13e (16" o.c.) NBC-W13e (24" o.c.) NRC-TL-93-261 16"	**45** **45** **45**	SLDWS267 	Double 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c., on separate 38 mm x 89 mm (1-1/2" x 3-1/2") wood plates set 25 mm (1") apart; single layer 15.9 mm (5/8") type "x" gypsum board each side; no insulation.

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

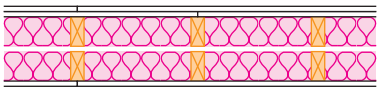
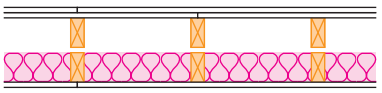
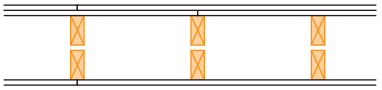
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

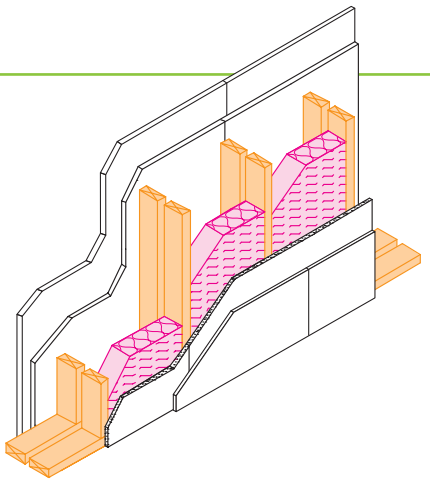
Unbalanced Double Wood Stud Wall

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
NBC-W14b (16" o.c.) NBC-W14b (16" o.c.) NBC-W14b (24" o.c.) NBC-W14b (24" o.c.)	45min, L.B. 1 h, N.L.B. 45min, L.B. 1 h, N.L.B.	NBC-W14b (16" o.c.) NBC-W14b (16" o.c.) NRC-TL-93-271 W01080 (16" o.c.)	**61** **61** **62** **60**	UDWS187 	Double 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c., on separate 38 mm x 89 mm (1-1/2" x 3-1/2") wood plates set 25 mm (1") apart; double layer 12.7 mm (1/2") type “x” gypsum board one side; single layer other side; two thicknesses, 89 mm (3-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
NBC-W14d (16" o.c.) NBC-W14d (16" o.c.) NBC-W14d (24" o.c.) NBC-W14d (24" o.c.)	45min, L.B. 1 h, N.L.B. 45min, L.B. 1 h, N.L.B.	NBC-W14d (16" o.c.) NBC-W14d (16" o.c.) W01180 (16" o.c.)	**57** **57** **57**	UDWS197 	Double 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c., on separate 38 mm x 89 mm (1-1/2" x 3-1/2") wood plates set 25 mm (1") apart; double layer 12.7 mm (1/2") type “x” gypsum board one side; single layer other side; one thickness, 89 mm (3-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
NBC-W14f (16" o.c.) NBC-W14f (16" o.c.) NBC-W14f (24" o.c.) NBC-W14f (24" o.c.)	45min, L.B. 1 h, N.L.B. 45min, L.B. 1 h, N.L.B.	NBC-W14f (16" o.c.) NBC-W14f (24" o.c.) W00980 (16" o.c.)	**51** **51** **48**	UDWS207 	Double 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c., on separate 38 mm x 89 mm (1-1/2" x 3-1/2") wood plates set 25 mm (1") apart; double layer 12.7 mm (1/2") type “x” gypsum board one side; single layer other side; no insulation.

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

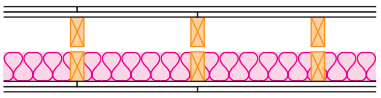
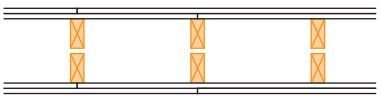
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

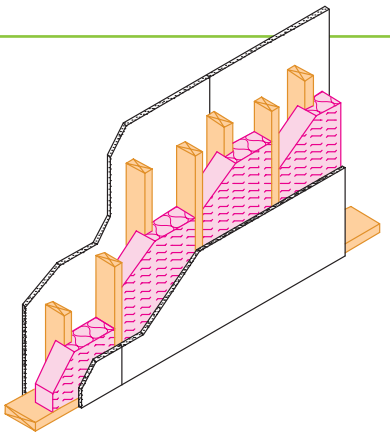
Double Layer Double Wood Stud Wall

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
NBC-W15e (16" o.c.) NBC-W15e (16" o.c.) NBC-W15e (24" o.c.) NBC-W15e (24" o.c.)	1 h, L.B 1.5h, N.L.B. 1 h, L.B. 1.5h, N.L.B.	NBC-W15e (16" o.c.) NBC-W15e (16" o.c.) W01480 (16" o.c.)	**60** **60** **64**	DLDWS167 	Double 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c., on separate 38 mm x 89 mm (1-1/2" x 3-1/2") wood plates set 25 mm (1") apart; double layer 12.7 mm (1/2") type “x” gypsum board each side; one thickness, 89 mm (3-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
NBC-W15h (16" o.c.) NBC-W15h (16" o.c.) NBC-W15h (24" o.c.) NBC-W15h (24" o.c.)	1 h, L.B. 1.5h, N.L.B. 1 h, L.B. 1.5h, N.L.B.	NBC-W15h (16" o.c.) NBC-W15h (24" o.c.) W01580 (16" o.c.)	**55** **55** **54**	DLDWS177 	Double 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c., on separate 38 mm x 89 mm (1-1/2" x 3-1/2") wood plates set 25 mm (1") apart; double layer 12.7 mm (1/2") type “x” gypsum board each side; no insulation.

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

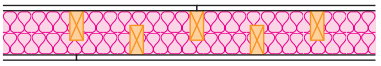
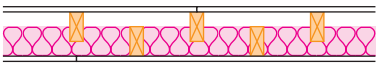
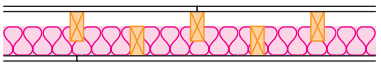
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

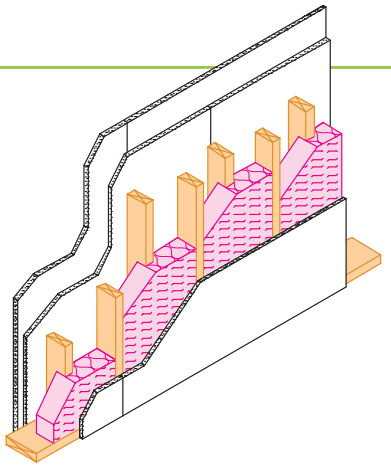
Single Layer Staggered Wood Stud Wall

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
N.A.	N.A.	*OC5FC (16" o.c.)	**51**	SLSWS317 	Staggered 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 200 mm (8") o.c., on common 38 mm x 140 mm (1-1/2" x 5-1/2") wood plate; single layer 12.7 mm (1/2") type “x” gypsum board each side; cavity filled with EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
NBC-W7b (16" o.c.) NBC-W7b (16" o.c.) NBC-W7b (24" o.c.) NBC-W7b (24" o.c.)	45 min, L.B. 45 min, N.L.B. 45 min, L.B. 45 min, N.L.B.	NBC-W7b NRC-TL-93-247 (16") W01486 (16" o.c.)	**45** **47** **51**	SLSWS327 	Staggered 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c., on common 38 mm x 140 mm (1-1/2" x 5-1/2") wood plate; single layer 12.7 mm (1/2") type “x” gypsum board each side; one thickness, 89 mm (3-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*UL-U340 (16" o.c.) *UL-U340 (24" o.c.) NBC-W7a (16" o.c.) NBC-W7a (16" o.c.) NBC-W7a (24" o.c.) NBC-W7a (24" o.c.)	1 h, L.B. 1 h, L.B. 1 h, L.B 1 h, N.L.B. 1 h, L.B 1 h, N.L.B	NBC-W7a (16" o.c.) NBC-W7a (24" o.c.) NRC-TL-93-248 W5769* (16" o.c.)	**47** **47** **49** **46**	SLSWS337 	Staggered 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c., on common 38 mm x 140 mm (1-1/2" x 5-1/2") wood plate; single layer 15.9 mm (5/8") type “x” gypsum board each side; one thickness, 89 mm (3-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

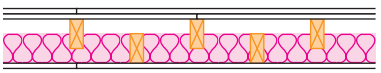
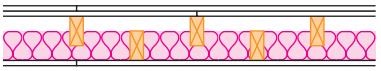
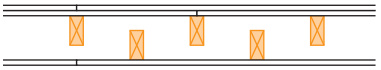
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

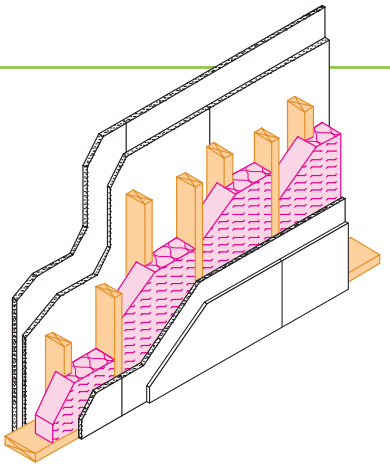
Unbalanced Staggered Wood Stud Wall

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
NBC-W8b (16" o.c.) NBC-W8b (16" o.c.) NBC-W8b (24" o.c.) NBC-W8b (24" o.c.)	45 min, L.B. 1.h, N.L.B. 45 min, L.B. 1.h, N.L.B.	NBC-W8b (16" o.c.) NBC-W8b (24" o.c.) NRC-TL-93-209 (16") W4769 (24")	**50** **50** **50** **53**	USWS297 	Staggered 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c., on common 38 mm x 140 mm (1-1/2" x 5-1/2") wood plate; double layer 12.7 mm (1/2") type "x" gypsum board one side; single layer on the other; one thickness, 89 mm (3-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
NBC-W8a (16" o.c.) NBC-W8a (16" o.c.) NBC-W8a (24" o.c.) NBC-W8a (24" o.c.)	1.h, L.B. 1.5.h, N.L.B. 1.h, L.B. 1.5.h, N.L.B.	NBC-W8a (16" o.c.) NBC-W8a (24" o.c.)	**52** **52**	USWS302 	Staggered 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c., on common 38 mm x 140 mm (1-1/2" x 5-1/2") wood plate; double layer 15.9 mm (5/8") type "x" gypsum board one side; single layer on the other; one thickness, 89 mm (3-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
N.A.	N.A.	W4569 (24" o.c.)	**47**	USWS307 	Staggered 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c., on common 38 mm x 140 mm (1-1/2" x 5-1/2") wood plate; double layer 12.7 mm (1/2") type "x" gypsum board one side; Single layer other side; no insulation.

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

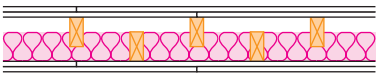
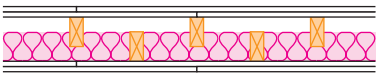
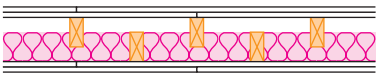
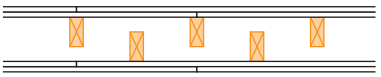
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

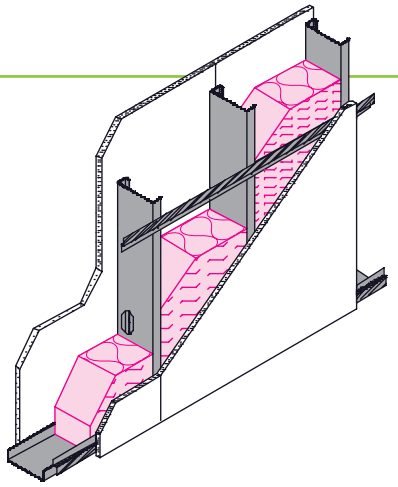
Double Layer Staggered Wood Stud Wall

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
NBC-W9b (16" o.c.) NBC-W9b (16" o.c.) NBC-W9b (24" o.c.) NBC-W9b (24" o.c.)	1 h, L.B. 1.5 h, N.L.B 1 h, L.B. 1.5 h, N.L.B	NBC-W9b (16" o.c.) NBC-W9b (24" o.c.) NRC-TL-93-210 (16)" W4869	**55** **55** **55** **55**	DLSWS277 	Staggered 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c., on common 38 mm x 140 mm (1-1/2" x 5-1/2") wood plate; double layer 12.7 mm (1/2") type “x” gypsum board each side; one thickness, 89 mm (3-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
NBC-W9c (16" o.c.) NBC-W9c (16" o.c.) NBC-W9c (24" o.c.) NBC-W9c (24" o.c.)	45 min, L.B. 1.h, N.L.B 45 min, L.B. 1.h, N.L.B	NBC-W9c (16" o.c.) NBC-W9c (24" o.c.) NRC-TL-93-436 (16")	**53** **53** **53**	DLSWS277A 	Staggered 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c., on common 38 mm x 140 mm (1-1/2" x 5-1/2") wood plate; double layer 12.7 mm (1/2") regular gypsum board each side; one thickness, 89 mm (3-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
NBC-W9a (16" o.c.) NBC-W9a (16" o.c.) NBC-W9a (24" o.c.) NBC-W9a (24" o.c.)	1.5 h, L.B. 2.0 h, N.L.B. 1.5 h, L.B. 2.0 h, N.L.B.	NBC-W9b (16" o.c.) NBC-W9b (24" o.c.)	**56** **56**	DLSWS277B 	Staggered 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 400 mm (16") or 600 mm (24") o.c., on common 38 mm x 140 mm (1-1/2" x 5-1/2") wood plate; double layer 15.9 mm (5/8") type “x” gypsum board one side; single layer on the other; one thickness, 89 mm (3-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
N.A.	N.A.	W4669	**52**	DLSWS287 	Staggered 38 mm x 89 mm (1-1/2" x 3-1/2") wood studs spaced 600 mm (24") o.c., on common 38 mm x 140 mm (1-1/2" x 5-1/2") wood plate; double layer 12.7 mm (1/2") type “x” gypsum board each side; no insulation.

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

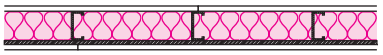
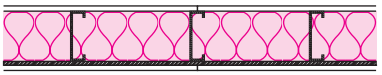
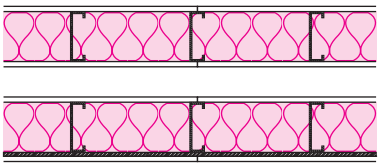
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

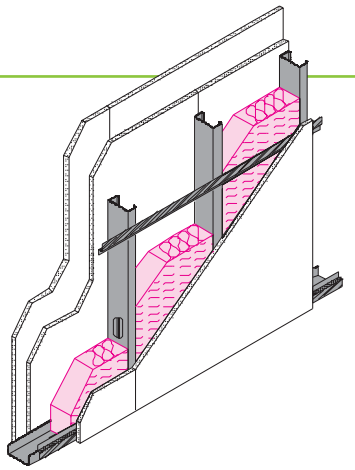
Single Layer Steel Stud Wall with Resilient Channels

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
*ULC-U423 (16" o.c.) *ULC-U423 (24" o.c.) *ULC-W453 (16" o.c.) *ULC-W453 (24" o.c.)	1 h, L.B. 1 h, L.B. 1 h, N.L.B. 1 h, N.L.B.	NBC-S11a (16" o.c.) NBC-S11a (24" o.c.) NRC-TL-93-354 (16" o.c., rc 24" o.c.);	**50** **50** **50**	SLSSR357 	Single layer wall, 92 mm (3-5/8") load-bearing steel studs spaced 400 mm (16") o.c. or 600 mm (24") o.c.; resilient channels spaced 400 mm (16") o.c. or 600 mm (24") single layer 15.9 mm (5/8") type "x" gypsum board each side; one thickness, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
		[RAL-TL90-344 (24" o.c. N.L.B.)	**54]**		[Similar assembly with 92 mm (3-5/8") non-loadbearing steel studs spaced 600 mm (24") o.c. and other listed components.]
*ULC-W453 (16" o.c.) *ULC-W453 (24" o.c.)	1 h, N.L.B. 1 h, N.L.B.	RAL-TL89-293 (24")	**55**	SLSSR347 	Single wall, 152 mm (6") non-loadbearing steel studs spaced 400 mm (16") or 600 mm (24") o.c.; resilient channels spaced 600 mm (24") o.c.; single layer 15.9 mm (5/8") type "x" gypsum board each side; one thickness, 152 mm (6") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
		[NRC-TL-92-353 (16")	**50]**		[Similar assembly with 152 mm (6") 18 Gauge load-bearing steel studs and one thickness of 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation (not shown).]
*ULC-U423 (16" o.c.) *ULC-U423 (24" o.c.)	1 h, L.B. 1 h, L.B.	***NBC-S11a (16" o.c.) [resilient channels (24" o.c.)] ***NBC-S11a (24" o.c.) [resilient channels 24" o.c]	**50** **50**	SLSSR351 	Single layer wall, 152 mm (6") -20 gauge loadbearing steel studs spaced 400 mm (16") or 600 mm (24") o.c.; resilient channels spaced 400 mm (16") or 600 mm (24") o.c.; single layer 15.9 mm (5/8") type "x" gypsum board each side; one thickness, 152 mm (6") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation. ***[STC 50 to be achieved with resilient channels 600 mm o.c. only]*

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

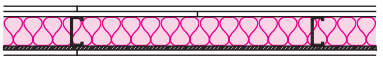
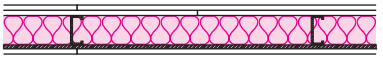
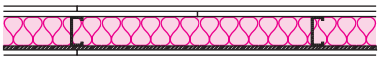
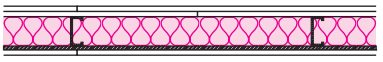
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

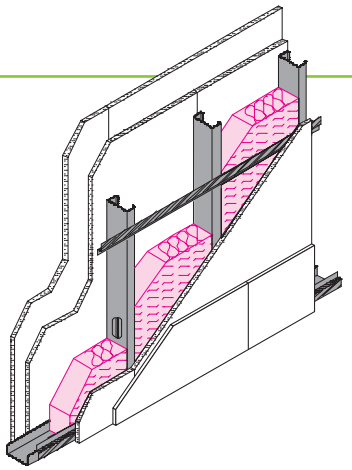
Unbalanced Steel Stud Wall with Resilient Channels

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
*ULC-U423 (16" o.c.) *ULC-U423 (24" o.c.)	1 h, L.B. 1 h, L.B.	NBC-S12a resilient channels (24" o.c.) NBC S12c resilient channels (16" o.c.)	**54** **52**	USSR611 	Unbalanced wall, 92 mm (3-5/8")-20 gauge loadbearing steel studs spaced 400 mm (16") or 600 mm (24") o.c. resilient channels spaced 400 mm (16") or 600 mm (24") o.c. double layer 15.9 mm (5/8") type "x" gypsum board one side, single layer on the other side; one thickness, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*ULC-W453	1 h, N.L.B.	RAL-TL90-345	**58**	USSR617 	Unbalanced wall, 92 mm (3-5/8") non-loadbearing 25 gauge steel studs spaced 600 mm (24") o.c.; double layer 15.9 mm (5/8") type "x" gypsum board one side; single layer other side mounted on resilient channels spaced 600 mm (24") o.c.; one thickness 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*UL-U423 NBC-S13a	1 h, L.B. 1 h, L.B.	[NRC-TL-94-019 {NRC-TL-94-016	**54**] **53**}	USSR617A 	Unbalanced wall, 92 mm (3-5/8") loadbearing 18 or 20 gauge steel studs spaced 400 mm (16") o.c.; double layer 15.9 mm (5/8") type "x" gypsum board one side; single layer other side mounted on resilient channels spaced 600 mm (24") o.c.; one thickness 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation [Similar L.B. assembly design using 12.7 mm (1/2") type "x" gypsum board with 20 gauge steel studs]; {Similar L.B. assembly design using 12.7 mm (1/2") type "x" gypsum board with 16 gauge steel studs}
*UL-U423	1 h, L.B.	NRC-TLA-00-091/092 Resilient channels (24" o.c.) [NRC-TLA-00-069/070 Resilient channels (16" o.c.) {NRC-TL94-018 Resilient Channels (24" o.c.)	**54** **51**] **53**}	USSR617B 	Unbalanced wall, 92 mm (3-5/8") loadbearing 20 gauge steel studs spaced 400 mm (16") o.c.; double layer 15.9 mm (5/8") type "x" gypsum board mounted on resilient channels spaced 600 mm (24") o.c. one side; single layer other side; one thickness 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation; [Similar 20 gauge steel stud design with resilient channels spaced 400 mm (16") o.c.] {Similar 20 gauge steel stud design with 12.7 mm (1/2") type "x" gypsum board and 600 mm (24") spaced resilient channels.

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

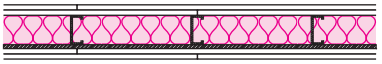
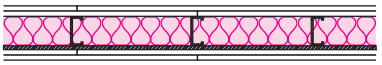
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

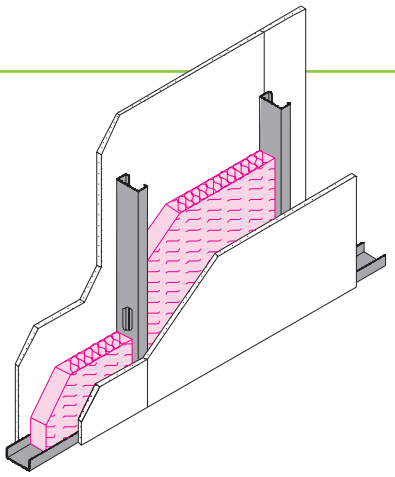
Double Layer Steel Stud Wall with Resilient Channels

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
*ULC-U423 (16" o.c.) *ULC-U423 (24" o.c.)	1.5 h, L.B. 1.5h, L.B.	NBC-S14b NBC-S14j	**57** **55**	DLSSR532 	Single layer wall, 92 mm (3-5/8") 20 gauge load-bearing steel studs spaced 400 mm (16") o.c. or 600 mm (24") o.c.; resilient channels spaced 400 mm (16") o.c. or 600 mm (24") Double layer 13 mm (1/2") type "x" gypsum board each side; one thickness, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*ULC-U423 (16" o.c.) *ULC-U423 (24" o.c.)	2 h, L.B. 2 h, L.B.	NBC-S14a resilient channels (24" o.c.) NBC-S14h resilient channels (24" o.c.)	**60** **58**	DLSSR534 	Single layer wall, 92 mm (3-5/8") 20 gauge load-bearing steel studs spaced 400 mm (16") o.c. or 600 mm (24") o.c.; resilient channels spaced 400 mm (16") o.c. or 600 mm (24") Double layer 15.9 mm (5/8") type "x" gypsum board each side; one thickness, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

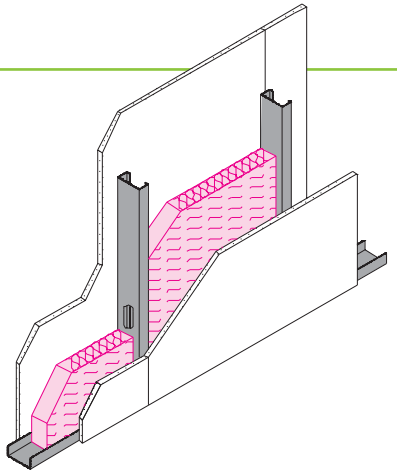
Single Layer Steel Stud Wall

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
*ULC-W409 UL-U494 NBC-S1b	1 h, N.L.B. 1 h, N.L.B. 45 min, N.L.B.	NBC-S1b NRC-TL-93-058	**39** **39**	SLSS437	Single layer wall, 64 mm (2-1/2") steel studs spaced 400 mm (16") o.c.; single layer 15.9 mm (5/8") type "x" gypsum board each side; one thickness, 65 mm (2-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
ULC-W409 UL-U494 NBC-S1a	1 h, N.L.B. 1 h, N.L.B. 45 min, N.L.B.	NBC-S1a NRC-TL-93-033 W05182	**43** **44** **47**	SLSS437A	Single layer wall, 64 mm (2-1/2") steel studs spaced 600 mm (24") o.c.; single layer 15.9 mm (5/8") type "x" gypsum board each side; one thickness, 65 mm (2-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
ULC-W409 (16" o.c.) ULC-W409 (24" o.c.)	1 h, N.L.B. 1 h, N.L.B.	NRC-TL-93-058 (16") NRC-TL-93-033 (24")	**39** **44**	SLSS440	Single layer wall, 64 mm (2-1/2") steel studs spaced 400 mm (16") o.c. or 600 mm (24") o.c.; single layer 15.9 mm (5/8") type "x" gypsum board each side; one thickness, 65 mm (2-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
NBC-S1c	45 min, N.L.B.	NBC-S1c NRC-TL-93-057 (16") W05482 (24")	**35** **35** **40**	SLSS447	Single layer wall, 64 mm (2-1/2") steel studs spaced 400 mm (16") or 600 mm (24") o.c.; single layer 15.9 mm (5/8") type "x" gypsum board each side; no insulation.
*ULC-W413	45 min, N.L.B.	NRC-TL-93-038 RAL-TL91-309	**45** **44**	SLSS457	Single layer wall, 64 mm (2-1/2") steel studs spaced 600 mm (24") o.c.; single layer 12.7 mm (1/2") type "x" gypsum board each side; one thickness, 65 mm (2-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*ULC-W413 (16" o.c.) *ULC-W413 (24" o.c.)	45 min, N.L.B. 45 min, N.L.B.	NRC-Socrates (16" o.c.) RAL-TL93-038 (24")	**38** **45**	SLSS460	Single layer wall, 64 mm (2-1/2") steel studs spaced 400 mm (16") or 600 mm (24") o.c.; single layer 12.7 mm (1/2") type "x" gypsum board each side; one thickness, 65 mm (2-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
N.A.	N.A.	W04382	**34**	SLSS467	Single layer wall, 64 mm (2-1/2") steel studs spaced 600 mm (24") o.c.; single layer 12.7 mm (1/2") type "x" gypsum board each side; no insulation.
*ULC-W453 (16" o.c.) *ULC-W453 (24" o.c.)	1 h, N.L.B. 1 h, N.L.B.	RAL TL-89-157 (16" o.c.)	**50**	SLSS360	Single layer wall, 92 mm (3-5/8") Non load-bearing steel studs spaced 400 mm (16") o.c. or 600 mm (24") o.c., single layer 15.9 mm (5/8") type "x" gypsum board each side; one thickness, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation. *[Resilient channels optional for fire resistance at maximum 600 mm (24") o.c.]*

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

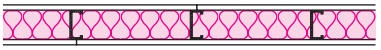
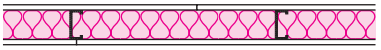
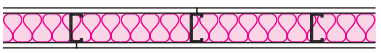
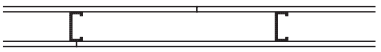
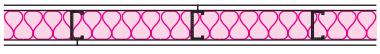
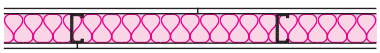
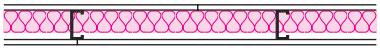
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

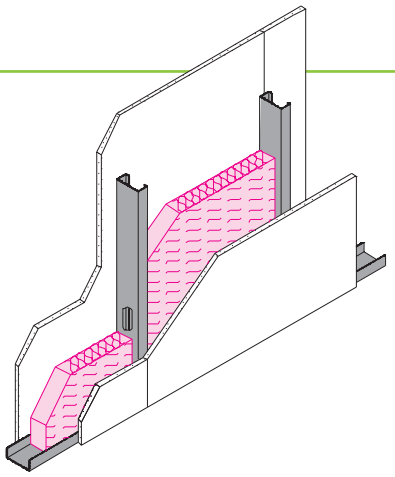
Single Layer Steel Stud Wall

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
*ULC-W453 *ULC-W407 UL-U423 NBC-S4b	1 h, N.L.B. 1 h, N.L.B. 1 h, L.B. 45 min, N.L.B.	NBC-S4b NRC-TL-93-325 B3458.4	**47** **49** **47**	SLSS377 	Single layer wall, 92 mm (3-5/8") steel studs spaced 400 mm (16") o.c.; single layer 15.9 mm (5/8") type "x" gypsum board each side; one thickness, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
ULC-W453 *ULC-W407 *UL-U423 NBC-S4a	1 h, N.L.B. 1 h, N.L.B. 1 h, L.B. 45 min, N.L.B.	NBC-S4a NRC-TL-93-324 RAL-TL89-157 *W03582	**48** **50** **50** **48**	SLSS377A 	Single layer wall, 92 mm (3-5/8") steel studs spaced 600 mm (24") o.c.; single layer 15.9 mm (5/8") type "x" gypsum board each side; one thickness, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*ULC-W407 (16" o.c.) *ULC-W407 (24" o.c.)	1 h, N.L.B. 1 h, N.L.B.	NRC-TL-93-325 (16") RAL-TL89-157 (24")	**50** **49**	SLSS3780 	Single layer wall, 92 mm (3-5/8") steel studs spaced 400 mm (16") o.c. or 600 mm (24") o.c.; single layer 15.9 mm (5/8") type "x" gypsum board each side; one thickness, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*ULC-W407 *ULC-W453 *UL-U423 NBC-S4d	1 h, N.L.B. 1 h, N.L.B. 1 h, L.B. 45 min, N.L.B.	NBC-S4d NRC-TL-92-418	**38** **38**	SLSS397 	Single layer wall, 92 mm (3-5/8") steel studs spaced 400 mm (16") o.c.; single layer 15.9 mm (5/8") type "x" gypsum board each side; no insulation.
*ULC-W407 *ULC-W453 *UL-U423 NBC-S4c	1 h, N.L.B. 1 h, N.L.B. 1 h, L.B. 45 min, N.L.B.	NBC-S4c NRC-TL-92-418 W03182	**38** **38** **43**	SLSS397A 	Single layer wall, 92 mm (3-5/8") steel studs spaced 600 mm (24") o.c.; single layer 15.9 mm (5/8") type "x" gypsum board each side; no insulation.
*ULC-W413	45 min, N.L.B.	NRC-TL-93-344	**46**	SLSS407 	Single layer wall, 92 mm (3-5/8") steel studs spaced 400 mm (16") o.c.; single layer 12.7 mm (1/2") type "x" gypsum board each side; one thickness, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*ULC-W413	45 min, N.L.B.	NRC-TL-92-410 RAL-TL87-392	**48** **47**	SLSS407A 	Single layer wall, 92 mm (3-5/8") steel studs spaced 600 mm (24") o.c.; single layer 12.7 mm (1/2") type "x" gypsum board each side; one thickness, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*ULC-W413	45 min, N.L.B.	W03682	**44**	SLSS417A 	Single layer wall, 92 mm (3-5/8") steel studs spaced 600 mm (24") o.c.; single layer 12.7 mm (1/2") type "x" gypsum board each side; one thickness, 65 mm (2-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

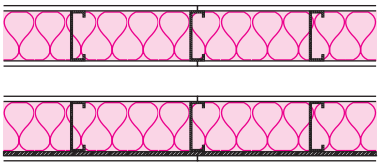
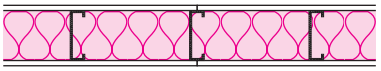
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

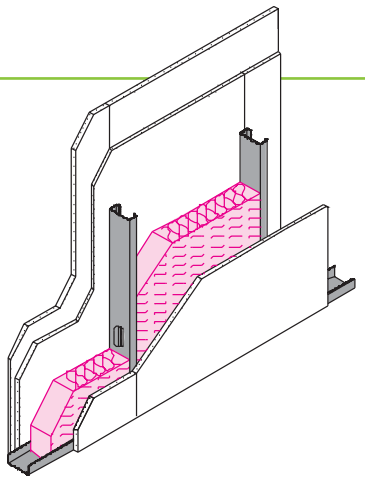
Single Layer Steel Stud Wall

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
N.A.	N.A.	W00582	**36**	SLSS427 	Single layer wall, 92 mm (3-5/8") steel studs spaced 600 mm (24") o.c.; single layer 12.7 mm (1/2") type "x" gypsum board each side; no insulation.
*ULC-W453 (16" o.c.) *ULC-W453 (24" o.c.)	1 h, N.L.B. 1 h, N.L.B.	NBC S7a (16" o.c.) NBC S7a (24" o.c.)	**51** **51**	SLSS350 	Single layer wall, 152 mm (6") non-loadbearing steel studs spaced 400 mm (16") or 600 mm (24") o.c.; single layer 15.9 mm (5/8") CGC FCX gypsum board each side; one thickness, 152 mm (6") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation. *[Resilient channels optional for fire resistance at maximum 600 mm (24") o.c.]*
*ULC-W453 *UL-U465 NBC-S7a	1 h, N.L.B. 1 h, N.L.B. 45 min, N.L.B.	NBC-S7a NRC-TL-93-298 (24") ***RAL-TL89-288 (24")	**51** **51** **51**	SLSS367 	Single layer wall, 152 mm (6") steel studs spaced 400 mm (16") or 600 mm (24") o.c.; single layer 15.9 mm (5/8") type "x" gypsum board each side; one thickness, 152 mm (6") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation. ***Gypsum board to be used is of Type C.

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

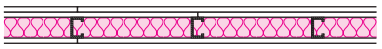
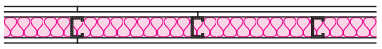
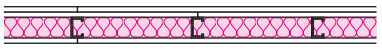
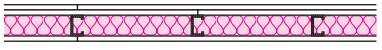
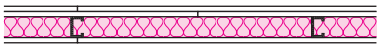
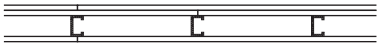
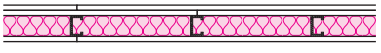
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

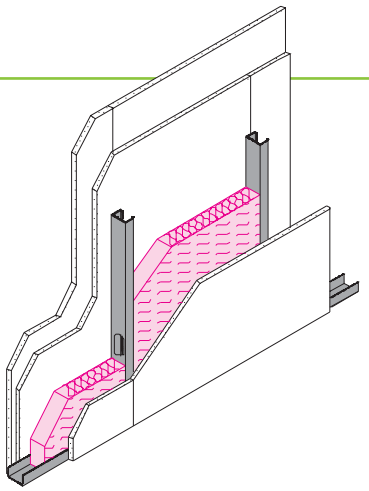
Unbalanced Steel Stud Wall

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
*ULC-W484 (16" o.c.) *ULC-W484 (24" o.c.)	1 h, N.L.B. 1 h, N.L.B.	NBC S2d NRC-B3481.3 (24")	**42** **50**	USS620 	Single layer wall, 64 mm (2-1/2") steel studs spaced 400 mm (16") or 600 mm (24") o.c.; double layer 12.7 mm (1/2") type "x" gypsum board on one side, single layer on the other side; one thickness, 65 mm (2-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
ULC-W409 (16" o.c.) ULC-W409 (24" o.c.)	1 h, N.L.B. 1 h, N.L.B.	NBC S2b NRC-TL-93-036 (24")	**44** **51**	USS621 	Single layer wall, 64 mm (2-1/2") steel studs spaced 400 mm (16") or 600 mm (24") o.c.; double layer 15.9 mm (5/8") type "x" gypsum board on one side, single layer on the other side; one thickness, 65 mm (2-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*ULC-W484 (16" o.c.) *ULC-W484 (24" o.c.)	1 h, N.L.B. 1 h, N.L.B.	NRC-B3481.2 (24")	**52**	USS622 	Single layer wall, 64 mm (2-1/2") steel studs spaced 400 mm (16") or 600 mm (24") o.c.; double layer 19 mm (3/4") CGC-UC gypsum board one side, single layer other side; OR double layer 13 mm (1/2") type "x" gypsum board one side, single layer other side; one thickness 64 mm (2-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*ULC-W409 NBC-S2b	1 h, N.L.B. 1 h, N.L.B.	NBC-S2b	**44**	USS667 	Unbalanced wall, 64 mm (2-1/2") steel studs spaced 400 mm (16") o.c.; double layer 15.9 mm (5/8") type "x" gypsum Board one side, single layer other side; one thickness, 65 mm (2-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*ULC-W409 NBC-S2a	1 h, N.L.B. 1 h, N.L.B.	NBC-S2a NRC-TL-93-036 W02884	**50** **51** **52**	USS667A 	Unbalanced wall, 64 mm (2-1/2") steel studs spaced 600 mm (24") o.c.; double layer 15.9 mm (5/8") type "x" gypsum board one side, single layer other side; one thickness, 65 mm (2-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*ULC-W409 NBC-S2f	1 h, N.L.B. 1 h, N.L.B.	NBC-S2f	**37**	USS677 	Unbalanced wall, 64 mm (2-1/2") steel studs spaced 400 mm (16") o.c.; double layer 15.9 mm (5/8") type "x" gypsum board one side, single layer other side; no insulation.
*ULC-W484 (16" o.c.) *ULC-W484 (24" o.c.)	1 h, N.L.B. 1 h, N.L.B	NRC -B3481.2 (24" o.c.) W05382	**41** **44**	USS677A 	Unbalanced wall, 64 mm (2-1/2") steel studs spaced 600 mm (24") o.c.; double layer 15.9 mm (5/8") type "x" gypsum board one side, single layer other side; no insulation
*ULC-W409 NBC-S2d	1 h, N.L.B. 1 h, N.L.B.	NBC-S2d	**42**	USS687 	Unbalanced wall, 64 mm (2-1/2") steel studs spaced 400 mm (16") o.c.; double layer 12.7 mm (1/2") type "x" gypsum board one side, single layer other side; One thickness, 65 mm (2-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

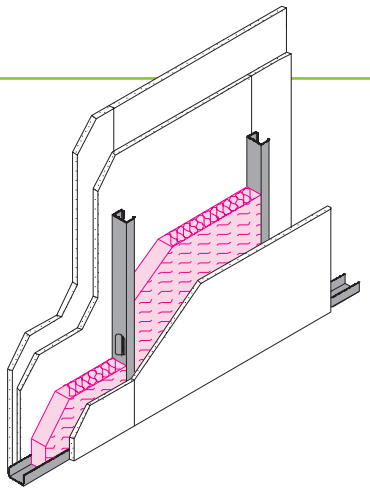
Unbalanced Steel Stud Wall

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
*ULC-W409 NBC-S2c	1 h, N.L.B. 1 h, N.L.B.	NBC-S2c NRC-TL-93-039 W02984	**50** **51** **50**	USS687A	Unbalanced wall, 64 mm (2-1/2") steel studs spaced 600 mm (24") o.c.; double layer 12.7 mm (1/2") type "x" gypsum board one side, single layer other side; One thickness, 65 mm (2-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*GA-WP-1021 NBC-S2h	1 h, N.L.B. 1 h, N.L.B.	NBC-S2h	**35**	USS707	Unbalanced wall, 64 mm (2-1/2") steel studs spaced 400 mm (16") o.c.; double layer 12.7 mm (1/2") type "x" gypsum board one side, single layer other side; no insulation.
*GA-WP-1021 NBC-S2g	1 h, N.L.B. 1 h, N.L.B.	NBC-S2g W04482	**40** **39**	USS707A	Unbalanced wall, 64 mm (2-1/2") steel studs spaced 600 mm (24") o.c.; double layer 12.7 mm (1/2") type "x" gypsum board one side, single layer other side; no insulation.
*ULC-W453 (16" o.c.) *ULC-W453 (24" o.c.)	1 h, N.L.B. 1 h, N.L.B.	NRC-TL-92-420 (24" o.c.) NRC-TL-92-368 (16" o.c.)	**52** **54**	USS610	Unbalanced wall, 92 mm (3-5/8") Non load-bearing steel studs spaced 400 mm (16") o.c. or 600 mm (24") o.c., double layer 15.9 mm (5/8") type "x" gypsum board one side, single layer on the other side; one thickness, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation. *[Resilient channels optional for fire resistance at maximum 600 mm (24") o.c.]*
*ULC-W453 *ULC-W407 NBC-S5b	1 h, N.L.B. 1 h, N.L.B. 1 h, N.L.B.	NBC-S5b NRC-TL-92-420	**52** **52**	USS627	Unbalanced wall, 92 mm (3-5/8") steel studs spaced 400 mm (16") o.c.; double layer 15.9 mm (5/8") type "x" gypsum board one side, single layer other side; One thickness, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*ULC-W453 *ULC-W407 NBC-S5a	1 h, N.L.B. 1 h, N.L.B. 1 h, N.L.B.	NBC-S5a NRC-TL-92-368 GA-WP-1052 W02484	**53** **54** **50-54** **55**	USS627A	Unbalanced wall, 92 mm (3-5/8") steel studs spaced 600 mm (24") o.c.; double layer 15.9 mm (5/8") type "x" gypsum board one side, single layer other side; one thickness, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*ULC-W453 *ULC-W407 NBC-S5f	1 h, N.L.B. 1 h, N.L.B. 1 h, N.L.B.	NBC-S5f	**52**	USS637	Unbalanced wall, 92 mm (3-5/8") steel studs spaced 400 mm (16") o.c.; double layer 15.9 mm (5/8") type "x" gypsum board one side, single layer other side; no insulation.
*ULC-W453 *ULC-W407 NBC-S5e	1 h, N.L.B. 1 h, N.L.B. 1 h, N.L.B.	NBC-S5e	**42**	USS637A	Unbalanced wall, 92 mm (3-5/8") steel studs spaced 600 mm (24") o.c.; double layer 15.9 mm (5/8") type "x" gypsum board one side, single layer other side; no insulation.

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

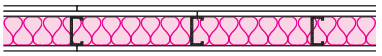
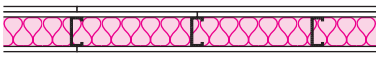
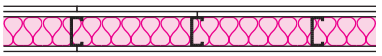
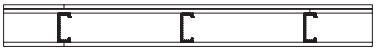
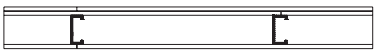
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

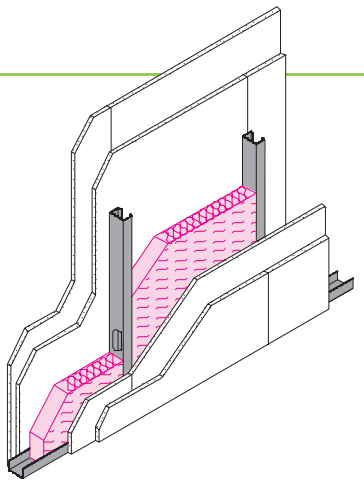
Unbalanced Steel Stud Wall

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
*ULC-W484 (16" o.c.) *ULC-W484 (24" o.c.)	1 h, N.L.B. 1 h, N.L.B.	NRC -B3481.2 (24" o.c.) NBC S5b (16" o.c.) NBC S5a (24" o.c.)	***52 52 53	USS640 	Unbalanced wall, 92 mm (3-5/8") steel studs spaced 400 mm (16") o.c. or 600 mm (24") o.c.; double layer 19 mm (3/4") type "x" gypsum board one side, single layer other side; OR double layer 13 mm (1/2") CGC-FCC gypsum board one side, single layer other side; one thickness 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation. ***Minimum value based on tested assembly with thinner studs and batt insulation.
*GA-WP-1022 NBC-S5d	1 h, N.L.B. 1 h, N.L.B.	NBC-S5d NRC-TL-93-345 *GA-WP-1022	50 51 50-54	USS647 	Unbalanced wall, 92 mm (3-5/8") steel studs spaced 400 mm (16") o.c.; double layer 12.7 mm (1/2") type "x" gypsum board one side, single layer other side; one thickness, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
NBC-S5C *ULC-W413	1 h, N.L.B. 45 min, N.L.B.	NBC-S5c NRC-TL-92-411 W02284	51 52 52	USS647A 	Unbalanced wall, 92 mm (3-5/8") steel studs spaced 600 mm (24") o.c.; double layer 12.7 mm (1/2") type "x" gypsum board one side, single layer other side; one thickness, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*GA-WP-1022 NBC-S5h	1 h, N.L.B. 1 h, N.L.B.	NBC-S5h	40	USS657 	Unbalanced wall, 92 mm (3-5/8") steel studs spaced 400 mm (16") o.c.; double layer 12.7 mm (1/2") type "x" gypsum board one side, single layer other side; no insulation.
*GA-WP-1022 NBC-S5g	1 h, N.L.B. 1 h, N.L.B.	NBC-S5g [W00682	41 41]	USS657A 	Unbalanced wall, 92 mm (3-5/8") steel studs spaced 600 mm (24") o.c.; double layer 12.7 mm (1/2") type "x" gypsum board one side, single layer other side; no insulation. [Similar assembly using 12.7 mm (1/2") regular gypsum board.]

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

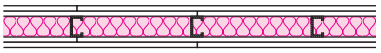
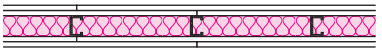
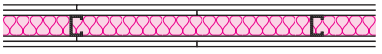
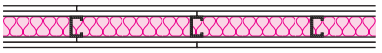
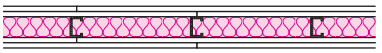
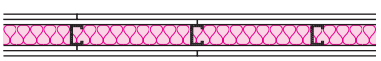
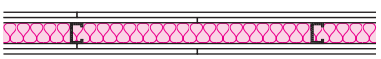
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

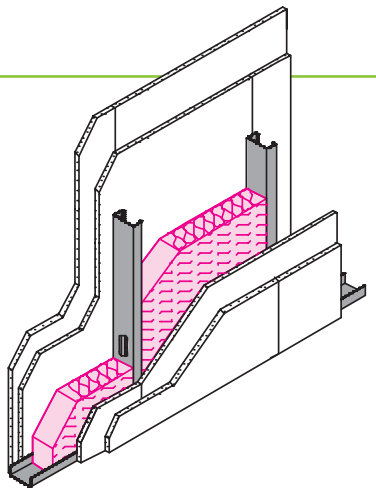
Double Layer Steel Stud Wall

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
*ULC-W453	2 h, N.L.B.	GA-WP-5910	**51-54**	DLSS597C 	Double layer wall, 41 mm (1-5/8") steel studs spaced 600 mm (24") o.c.; double layer 12.7 mm (1/2") type "x" gypsum board each side; one thickness 65 mm (2.5") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*UL-U411 *ULC-W414 & *W453 NBC-S3b	2 h, N.L.B. 2 h, N.L.B. 2 h, N.L.B.	NBC-S3b	**51**	DLSS577 	Double layer wall, 64 mm (2-1/2") steel studs spaced 400 mm (16") o.c.; double layer 15.9 mm (5/8") type "x" gypsum board each side; one thickness, 65 mm (2-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*UL-U411 *ULC-W414 & *W453 NBC-S3a	2 h, N.L.B. 2 h, N.L.B. 2 h, N.L.B.	NBC-S3a NRC-TL-93-037 W02784	**54** **55** **57**	DLSS577A 	Double layer wall, 64 mm (2-1/2") steel studs spaced 600 mm (24") o.c.; double layer 15.9 mm (5/8") type "x" gypsum board each side; one thickness, 65 mm (2-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*ULC-W453 (16" o.c.) *ULC-W453 (24" o.c.)	2 h, N.L.B. 2 h, N.L.B.	NBC-S3b (16" o.c.) NRC TL-93-040 (24")	**51** **55**	DLSS580 	Double layer wall, 64 mm (2-1/2") steel studs spaced 400 mm (16") or 600 mm (24") o.c.; double layer 15.9 mm (5/8") type "x" gypsum board each side; one thickness, 65 mm (2-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation. *[Resilient channels optional for fire resistance at maximum 600 mm (24") o.c.]*
*ULC-W453 (16" o.c.) *ULC-W453 (24" o.c.)	2 h, N.L.B. 2 h, N.L.B.	NBC-S3d (16" o.c.) NRC TL-93-040 (24")	**47** **55**	DLSS581 	Double layer wall, 64 mm (2-1/2") steel studs spaced 400 mm (16") or 600 mm (24") o.c.; double layer 12.7 mm (1/2") type "x" gypsum board each side; one thickness, 65 mm (2-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation. *[Resilient channels optional for fire resistance at maximum 600 mm (24") o.c.]*
*ULC-W414 *ULC-W453 NBC-S3d	2 h, N.L.B. 2 h, N.L.B. 1.5 h, N.L.B.	NBC-S3d	**47**	DLSS587 	Double layer wall, 64 mm (2-1/2") steel studs spaced 400 mm (16") o.c.; double layer 12.7 mm (1/2") type "x" gypsum board each side; one thickness, 65 mm (2-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*ULC-W414 *ULC-W453 NBC-S3c	2 h, N.L.B. 2 h, N.L.B. 1.5 h, N.L.B.	NBC-S3c NRC-TL-93-040 W03084	**53** **55** **54**	DLSS587A 	Double layer wall, 64 mm (2-1/2") steel studs spaced 600 mm (24") o.c.; double layer 12.7 mm (1/2") type "x" gypsum board each side; one thickness, 65 mm (2-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

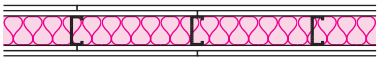
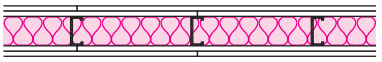
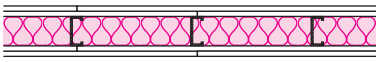
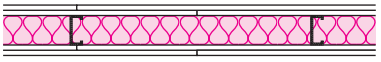
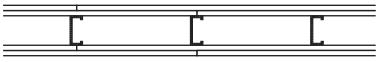
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

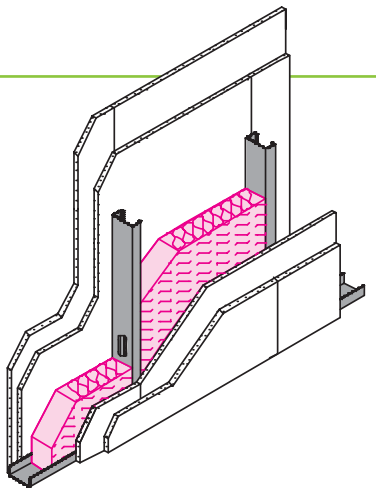
Double Layer Steel Stud Wall

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
*ULC-W414 *ULC-W453 NBC-S3j	2 h, N.L.B. 2 h, N.L.B. 1.5 h, N.L.B.	NBC-S3j	**39**	DLSS597 	Double layer wall, 64 mm (2-1/2") steel studs spaced 400 mm (16") o.c.; double layer 12.7 mm (1/2") type "x" gypsum board each side; no insulation
*ULC-W414 *ULC-W453 NBC-S3i	2 h, N.L.B. 2 h, N.L.B. 1.5 h, N.L.B.	NBC-S3i GA-WP-1615	**44** **45-49**	DLSS597A 	Double layer wall, 64 mm (2-1/2") steel studs spaced 600 mm (24") o.c.; double layer 12.7 mm (1/2") type "x" gypsum board each side; no insulation
*ULC-W453 (16" o.c.) *ULC-W453 (24" o.c.)	2 h, N.L.B. 2 h, N.L.B.	NRC TL-92-424 (16" o.c.) NRC TL-92-412 (24" o.c.)	**55** **55**	DLSS531 	Single layer wall, 92 mm (3-5/8") non-loadbearing steel studs spaced 400 mm (16") or 600 mm (24") o.c.; Double layer 13 mm (1/2") type "x" gypsum board each side; one thickness, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation. *[Resilient channels optional for fire resistance at maximum 600 mm (24") o.c.]*
*ULC-W453 (16" o.c.) *ULC-W453 (24" o.c.)	2 h, N.L.B. 2 h, N.L.B.	NRC TL-93-351 (16" o.c.) NRC TL-92-369 (24" o.c.)	**56** **57**	DLSS533 	Single layer wall, 92 mm (3-5/8") non-loadbearing steel studs spaced 400 mm (16") or 600 mm (24") o.c.; resilient channels spaced 400 mm (16") o.c.; Double layer 15.9 mm (5/8") type "x" gypsum board each side; one thickness, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation. *[Resilient channels optional for fire resistance at maximum 600 mm (24") o.c.]*
*ULC-W414 *ULC-W453 NBC-S6b	2 h, N.L.B. 2 h, N.L.B. 2 h, N.L.B.	NBC-S6b NRC-TL-93-351	**55** **56**	DLSS537 	Double layer wall, 92 mm (3-5/8") steel studs spaced 400 mm (16") o.c.; double layer 15.9 mm (5/8") type "x" gypsum board each side; one thickness, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*ULC-W414 *ULC-W453 NBC-S6a	2 h, N.L.B. 2 h, N.L.B. 2 h, N.L.B.	NBC-S6a NRC-TL-92-369 W02584	**56** **58** **58**	DLSS537A 	Double layer wall, 92 mm (3-5/8") steel studs spaced 600 mm (24") o.c.; double layer 15.9 mm (5/8") type "x" gypsum board each side; one thickness, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*ULC-W414 *ULC-W453 NBC-S6h	2 h, N.L.B. 2 h, N.L.B. 2 h, N.L.B.	NBC-S6h	**45**	DLSS547 	Double layer wall, 92 mm (3-5/8") steel studs spaced 400 mm (16") o.c.; double layer 15.9 mm (5/8") type "x" gypsum board each side; no insulation.
*ULC-W414 *ULC-W453 NBC-S6g	2 h, N.L.B. 2 h, N.L.B. 2 h, N.L.B.	NBC-S6g	**47**	DLSS547A 	Double layer wall, 92 mm (3-5/8") steel studs spaced 600 mm (24") o.c.; double layer 15.9 mm (5/8") type "x" gypsum board each side; no insulation.

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

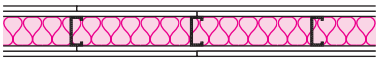
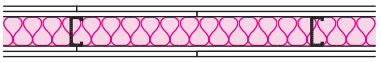
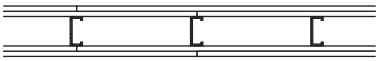
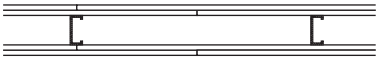
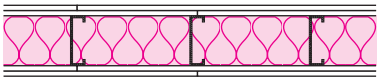
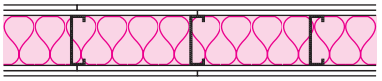
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

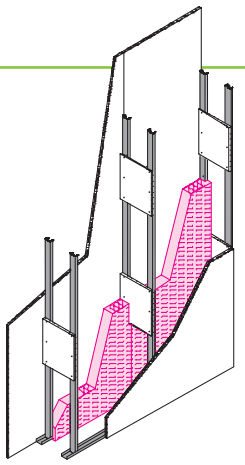
Double Layer Steel Stud Wall

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
*ULC-W414 *ULC-W453 NBC-S6d	2 h, N.L.B. 2 h, N.L.B. 1.5 h, N.L.B.	NBC-S6d NRC-TL-92-424	**54** **55**	DLSS557 	Double layer wall, 92 mm (3-5/8") steel studs spaced 400 mm (16") o.c.; double layer 12.7 mm (1/2") type "x" gypsum board each side; one thickness, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*ULC-W414 *ULC-W453 NBC-S6c	2 h, N.L.B. 2 h, N.L.B. 1.5 h, N.L.B.	NBC-S6c NRC-TL-92-412 W02184	**55** **55** **56**	DLSS557A 	Double layer wall, 92 mm (3-5/8") steel studs spaced 600 mm (24") o.c.; double layer 12.7 mm (1/2") type "x" gypsum board each side; one thickness, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*ULC-W414 *ULC-W453 NBC-S6j	2 h, N.L.B. 2 h, N.L.B. 1.5 h, N.L.B.	NBC-S6j	**44**	DLSS567 	Double layer wall, 92 mm (3-5/8") steel studs spaced 400 mm (16") o.c.; double layer 12.7 mm (1/2") type "x" gypsum board each side; no insulation.
*ULC-W414 *ULC-W453 NBC-S6i	2 h, N.L.B. 2 h N.L.B. 1.5 h, N.L.B.	NBC-S6i	**45**	DLSS567A 	Double layer wall, 92 mm (3-5/8") steel studs spaced 600 mm (24") o.c.; double layer 12.7 mm (1/2") type "x" gypsum board each side; no insulation.
*ULC-W453 (16" o.c.) *ULC-W453 (24" o.c.)	2 h, N.L.B. 2 h, N.L.B.	NBC-S9b (16" o.c.) NBC-S9b (24" o.c.)	**57** **57**	DLSS530 	Single layer wall, 152 mm (6") non-loadbearing steel studs spaced 400 mm (16") or 600 mm (24") o.c.; Double layer 13 mm (1/2") type "x" gypsum board each side; one thickness, 152 mm (6") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation. *[Resilient channels optional for fire resistance at maximum 600 mm (24") o.c.]*
*ULC-W453 (16" o.c.) *ULC-W453 (24" o.c.)	2 h, N.L.B. 2 h, N.L.B.	NBC-S9a (16" o.c.) NBC-S9a (24" o.c.)	**59** **59**	DLSS530-A 	Single layer wall, 152 mm (6") non-loadbearing steel studs spaced 400 mm (16") or 600 mm (24") o.c.; Double layer 15.9 mm (5/8") type "x" gypsum board each side; one thickness, 152 mm (6") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation. *[Resilient channels optional for fire resistance at at maximum 600 mm (24") o.c.]*

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

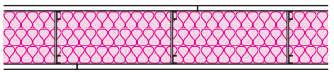
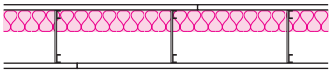
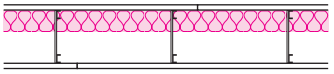
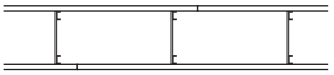
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

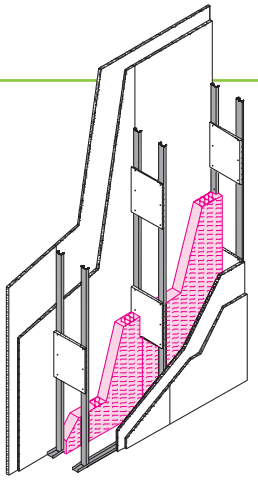
Single Layer Chase Wall

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
N.A.	N.A.	W1068	**55**	SLCWSS497 	Chase wall, 41 mm (1-5/8") steel studs spaced 600 mm (24") o.c.; bridging by 1/2" gypsum board gussets; single layer 12.7 mm (1/2") type “x” gypsum board each side; three layers, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*UL-U420	1 h, N.L.B.	RAL-TL-90-349	**53**	SLCWSS507 	Chase wall, 41 mm (1-5/8") steel studs spaced 600 mm (24") o.c.; bridging by 1/2" gypsum board gussets; single layer 15.9 mm (5/8") type “x” gypsum board each side; one thickness, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
N.A.	N.A.	W468	**52**	SLCWSS517 	Chase wall, 41 mm (1-5/8") steel studs spaced 600 mm0 (24") o.c.; bridging by 1/2" gypsum board gussets; single layer 12.7 mm (1/2") type “x” gypsum board each side; one thickness, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
N.A.	N.A.	W368	**42**	SLCWSS527 	Chase wall, 41 mm (1-5/8") steel studs spaced 600 mm (24") o.c.; bridging by 1/2" gypsum board gussets; single layer 12.7 mm (1/2") type “x” gypsum board each side; no insulation.

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

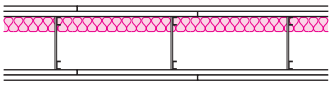
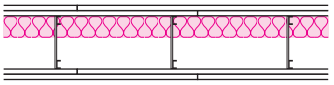
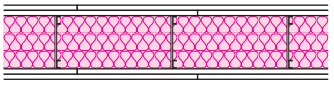
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

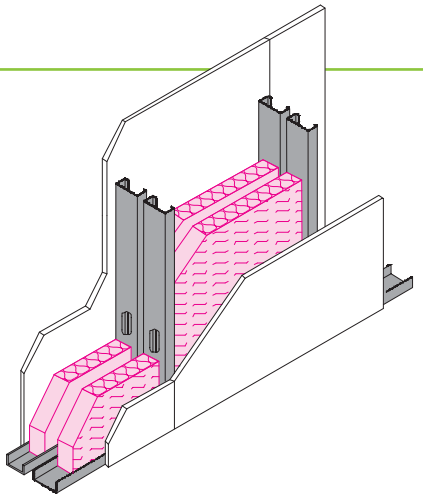
Double Layer Chase Wall

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
*UL-U420	2 h, N.L.B.	RAL-TL90-350	**57**	DLCWSS477 	Chase wall, 41 mm (1-5/8") steel studs spaced 600 mm (24") o.c.; bridging by 1/2" gypsum board gussets; double layer 15.9 mm (5/8") type “x” gypsum board each side; one thickness, 65 mm (2-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
*UL-U420	1 h, N.L.B.	GA-WP5105	**55-59**	DLCWSS487 	Chase wall, 41 mm (1-5/8") steel studs spaced 600 mm (24") o.c.; bridging by 1/2" gypsum board gussets; double layer 15.9 mm (5/8") type “x” gypsum board each side; one thickness, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
N.A.	N.A.	W1268	**60**	DLCWSS497A 	Chase wall, 41 mm (1-5/8") steel studs spaced 600 mm (24") o.c.; bridging by 1/2" gypsum board gussets; double layer 12.7 mm (1/2") type “x” gypsum board each side; three layers, 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

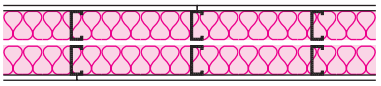
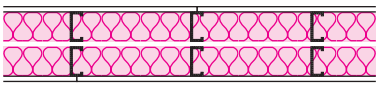
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies

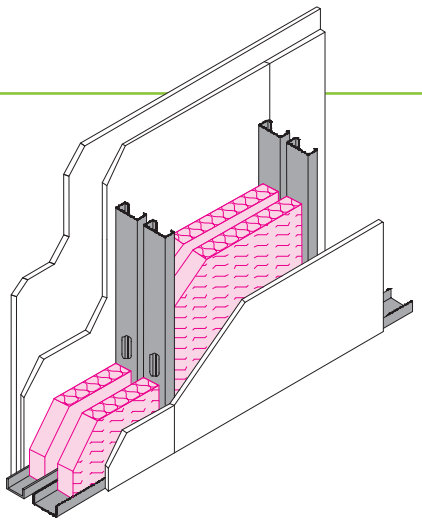


Wall Assemblies

Single Layer Double Steel Stud Wall

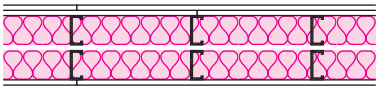
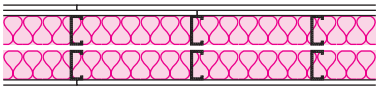
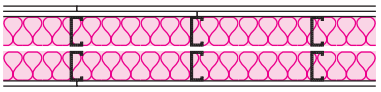
REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
ULC-W454 (16" o.c.) UL-U493 (24" o.c.)	1 h, N.L.B. 1 h, N.L.B.	NRC Socrates (16") NRC - B3481.3 (24")	**55** **59**	SLDSS710 	Balanced wall, double row of 64 mm (2-1/2") steel studs spaced min. 25 mm (1") between rows; 400 mm (16") or 600 mm (24") o.c. within rows; single layer 15.9 mm (5/8") type "x" gypsum board each side; 64 mm (2-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation layer in each row.
ULC-W454 (16" o.c.) UL-U493 (24" o.c.)	1 h, N.L.B. 1 h, N.L.B.	NRC Socrates (16") NRC Socrates (24")	**59** **59**	SLDSS713 	Balanced wall, double row of 92 mm (3-5/8") steel studs spaced min. 25 mm (1") between rows; 400 mm (16") or 600 mm (24") o.c. within rows; single layer 15.9 mm (5/8") type "x" gypsum board each side; 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation layer in each row.

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.



Wall Assemblies

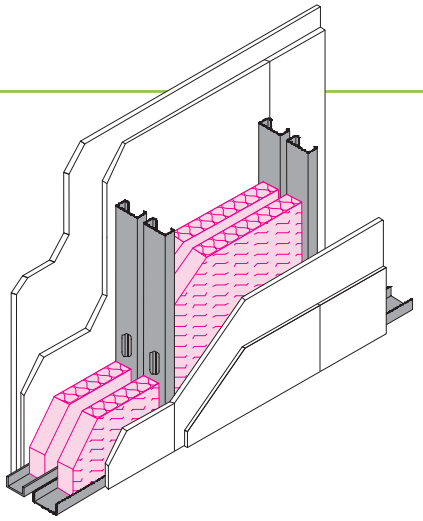
Unbalanced Double Steel Stud Wall

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
ULC-W454 (16" o.c.) UL-U493 (24" o.c.)	1 h, N.L.B. 1 h, N.L.B.	NRC Socrates (16") NRC TL93-301 (24")	**60** ****61**	UBDSS757 	Unbalanced wall, double row of 64 mm (2-1/2") steel studs spaced min. 25 mm (1") between rows; 400 mm (16") or 600 mm (24") o.c. within rows; double layer 15.9 mm (5/8") type "x" gypsum board one side, single layer on the other side; 64 mm (2-1/2") thick EcoTouch™ QuietZone® Acoustic PINK™ FIBERGLAS® Batt Insulation layer in each row. **Walls separated by a minimum 5/8" (16 mm) air space.
ULC-W454 (16" o.c.) UL-U493 (24" o.c.)	1 h, N.L.B. 1 h, N.L.B.	NRC Socrates (16") NRC Socrates (24")	**63** **64**	UBDSS767 	Unbalanced wall, double row of 92 mm (3-5/8") steel studs spaced min. 25 mm (1") between rows; 400 mm (16") or 600 mm (24") o.c. within rows; double layer 15.9 mm (5/8") type "x" gypsum board one side, single layer on the other side; 92 mm (3-5/8") thick EcoTouch™ QuietZone® Acoustic PINK™ FIBERGLAS® Batt Insulation layer in each row.
ULC –W449 (16" o.c.) ULC –W449 (16" o.c.)	1 h, L.B. (80%) 1 h, L.B. (80%)	N.A.	**N.A.**	UBDSS777 	Unbalanced wall, double row of 92 mm (3-5/8") 20 gauge load bearing steel studs spaced min. 25 mm (1") between rows; 400 mm (16") or 600 mm (24") o.c. within rows; double layer 15.9 mm (5/8") type "x" gypsum board one side, single layer on the other side; 92 mm (3-5/8") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation layer in each row.

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.

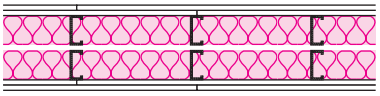
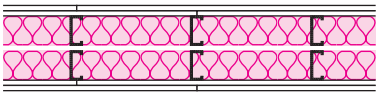
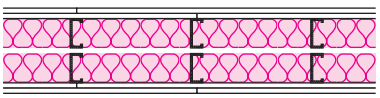
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

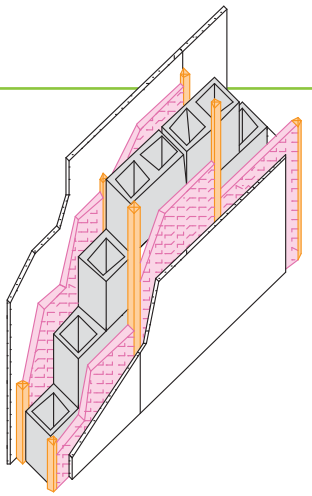
Double Layer Double Steel Stud Wall

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
UL-U493 (16" o.c.) UL-U493 (24" o.c.)	2 h, N.L.B. 2 h, N.L.B.	NRC Socrates (16") NRC - B3481.8 (24")	**65** **68**	DLDSS712 	Balanced wall, double row of 64 mm (2-1/2") steel studs spaced min. 25 mm (1") between rows; 400 mm (16") or 600 mm (24") o.c. within rows; double layer 15.9 mm (5/8") type “x” gypsum board each side; 64 mm (2-1/2") thick EcoTouch™ QuietZone® Acoustic PINK™ FIBERGLAS® Batt Insulation layer in each row.
ULC-W454 (16" o.c.) UL-U493 (24" o.c.)	2 h, N.L.B. 2 h, N.L.B.	NRC Socrates (16") NRC Socrates (24")	**67** **68**	DLDSS715 	Balanced wall, double row of 92 mm (3-5/8") steel studs spaced min. 25 mm (1") between rows; 400 mm (16") or 600 mm (24") o.c. within rows; Double layer 15.9 mm (5/8") type “x” gypsum board each side; 92 mm (3-5/8") thick EcoTouch™ QuietZone® Acoustic PINK™ FIBERGLAS® Batt Insulation layer in each row.
ULC –W449 (16" o.c.) ULC –W449 (24" o.c.)	2 h, L.B. (100%) 2 h, L.B. (100%)		**N.A.**	DLDSS716 	Balanced wall, double row of 92 mm (3-5/8") 20 gauge load bearing steel studs spaced min. 25 mm (1") between rows; 400 mm (16") or 600 mm (24") o.c. within rows; double layer 15.9 mm (5/8") type “x” gypsum board each side; 92 mm (3-5/8") thick EcoTouch™ QuietZone® Acoustic PINK™ FIBERGLAS® Batt Insulation layer in each row.

Note: See references for assembly details regarding joist & drywall types, spacing of joists, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
** NRC FL Ratings reflect FSTC and FIIC testing at National Research Council of Canada flanking test facility. See NRC Report IRC-RR-218 for assembly design details.

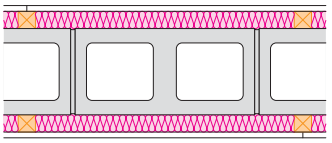
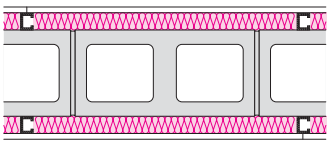
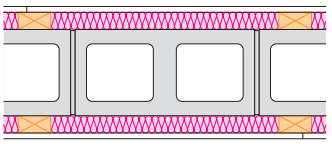
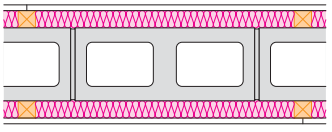
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Wall Assemblies

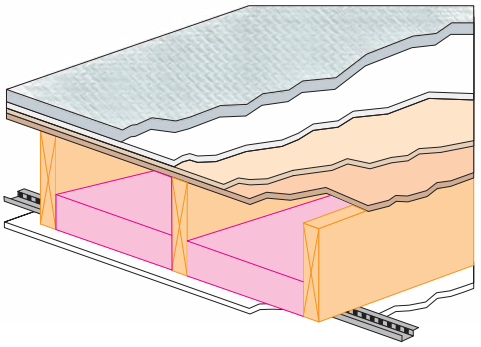
Faced Concrete Block Wall

REFERENCE.	FIRE RATING	TEST NO.	STC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
					Balanced Wall, 190 mm (8" nominal) normal weight concrete block, 38 mm x 38 mm (1-1/2" x 1-1/2") wood strapping at 600 mm (24") o.c. each side; one thickness 38 mm (1-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation cavities each side; single layer gypsum board each side, thickness as specified below:
NBC-B6c	3 h, L.B. & N.L.B.	NBC-B6c	**60**	FCB757	15.9 mm (5/8") type “x” gypsum board
NBC-B6d	2.5 h, L.B. & N.L.B.	NBC-B6d	**59**		12.7 mm (1/2") type “x” gypsum board
NBC-B6e	2 h, L.B. & N.L.B.	NBC-B6e	**57**		12.7 mm (1/2") regular gypsum board
					Balanced Wall, 190 mm (8" nominal) normal weight concrete block, 65 mm (2-1/2") steel studs at 600 mm (24") o.c. both sides; one thickness 65 mm (2-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation cavities both sides; single layer gypsum board both sides thickness as specified below:
NBC-B7a	3 h, L.B. & N.L.B.	NBC-B7a	**71**	FCB767	15.9 mm (5/8") type “x” gypsum board
NBC-B7b	2.5 h, L.B. & N.L.B.	NBC-B7b	**70**		12.7 mm (1/2") type “x” gypsum board
NBC-B7c	2 h, L.B. & N.L.B.	NBC-B7c	**69**		12.7 mm (1/2") regular gypsum board
					Balanced Wall, 190 mm (8" nominal) normal weight concrete block, 38 mm x 64 mm (1-1/2" x 2-1/2") wood studs at 600 mm (24") o.c. both sides; one thickness 65 mm (2-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation cavities both sides; single layer gypsum board both sides thickness as specified below:
NBC-B8a	3 h, L.B. & N.L.B.	NBC-B8a	**71**	FCB777	15.9 mm (5/8") type “x” gypsum board
NBC-B8b	2.5 h, L.B. & N.L.B.	NBC-B8b	**70**		12.7 mm (1/2") type “x” gypsum board
NBC-B8c	2 h, L.B. & N.L.B.	NBC-B8c	**69**		12.7 mm (1/2") regular gypsum board
					Balanced Wall, 140 mm (6" nominal) normal weight concrete block, 38 mm x 38 mm (1-1/2" x 1-1/2") wood strapping at 600 mm (24") o.c. each side; one thickness 38 mm (1-1/2") thick EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation cavities each side; single layer gypsum board each side, thickness as specified below:
NBC-B6a	2 h, L.B. & N.L.B.	NBC-B6a	**57**	FCB787	15.9 mm (5/8") type “x” gypsum board
NBC-B6a	2 h, L.B. & N.L.B.	NBC-B6a	**57**		12.7 mm (1/2") type “x” gypsum board
NBC-B6b	1.5 h, L.B. & N.L.B.	NBC-B6b	**56**		12.7 mm (1/2") regular gypsum board

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.

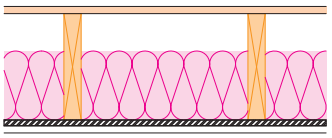
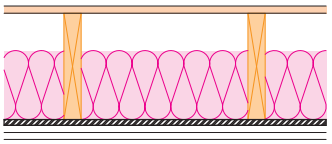
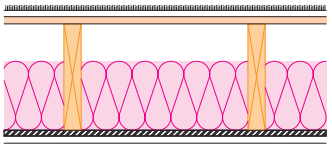
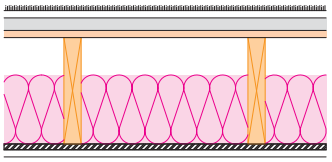
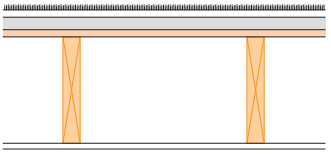
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Floor and Ceiling Assemblies

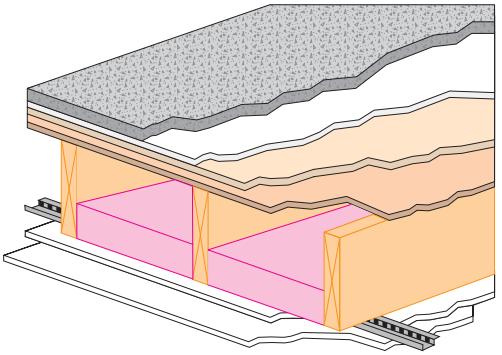
Solid Wood Floor Joist Assemblies

REFERENCE.	FIRE RATING	TEST NO.	STC	TEST NO.	IIC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
							Solid wood joist floor, 38 mm x 235 mm (1-1/2" x 9-1/4") joists, spaced 406 mm (16") o.c., 15.5 mm (5/8") OSB subfloor, resilient channels 610 mm (24") o.c., single layer 15.9 mm (5/8") gypsum board ceiling finish; EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation thickness as specified below:
NBC-F8d	30 min	TLF-95-085a	**51**	IIF-95-030	45	SWJFS797	89 mm (3-1/2")
		TLF-95-215a	**52**	IIF-95-075	46	SWJFS797	152 mm (6")
		TLF-96-057a	**53**	IIF-96-016	67	SWJFS797	152 mm (6") + carpet & 9 mm (3/8") foam underpad
		TLF-95-061a	**53**	IIF-95-018	46	SWJFS797	217 mm (8-1/2")
		No test		IIF-96-031	45	SWJFS797	152 mm (6") + 1.2 mm, vinyl, medium priced
							Solid wood joist floor, 38 mm x 235 mm (1-1/2" x 9-1/4") joists, spaced 406 mm (16") o.c., 15.5 mm (5/8") OSB subfloor, resilient channels spacing specified below; single 152 mm (6") thickness EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation; double layer type "x" gypsum board thickness specified below:
							Gypsum board Thickness: / Resilient channel Spacing o.c.
NBC-F9d	1 h	TLF-95-107a	**55**	IIF-95-039	49	SWJFS807	15.9 mm (5/8") / 610 mm (24")
NBC-F9h	45 min	TLF-95-115a	**56**	IIF-95-041	50	SWJFS807	12.7 mm (1/2") / 610 mm (24")
NBC-F9g	1 h	NBC-F9g	**51**	NBC-F9g	44	SWJFS807	12.7 mm (1/2") / 406 mm (16")
							Carpet and pad on 9.5 mm (3/8") particle board surface on 16 mm (5/8") plywood subfloor on solid wood joist floor; 38 mm x 235 mm (1-1/2" x 9-1/4") joists, spaced 406 mm (16") o.c., single 89 mm (3-1/2") thickness EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation thickness; resilient channels assumed to be 610 mm (24") o.c., single layer 12.7 mm (1/2") type "x" gypsum board.
Not tested	N.A.	**OC-3MT	**53**	**OC-3MT	73	SWJFS817	
							Carpet and pad on 38 mm (1-1/2") lightweight concrete topping on 16 mm (5/8") plywood subfloor on solid wood joist floor system, 38 mm x 235 mm (1-1/2" x 9-1/4") joists, spaced 406 mm (16") o.c., single 89 mm (3-1/2") thickness EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation thickness; resilient channels assumed to be 610 mm (24") o.c., single layer 12.7 mm (1/2") type "x" gypsum board.
Not tested	N.A.	**OC-2MT	**58**	**OC-2MT	74	SWJFS827	
							Carpet and pad on 38 mm (1-1/2") lightweight concrete topping on 16 mm (5/8") plywood subfloor on solid wood joist floor system, 38 mm x 235 mm (1-1/2 x 9-1/4") joists, spaced 406 mm (16") o.c., no insulation, direct fastened single layer 12.7 mm (1/2") type "x" gypsum board.
Not tested	N.A.	**OC-1MT	**58**	**OC-1MT	74	SWJFS837	

Note: See references for assembly details regarding stud & drywall type, spacing of studs, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
** Acoustical Tests at Geiger & Hamme Inc. See full test reports for assembly design details.

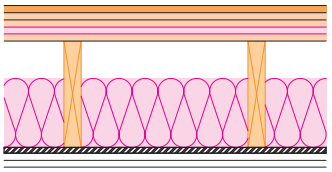
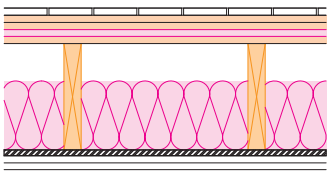
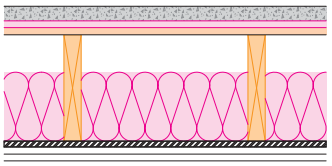
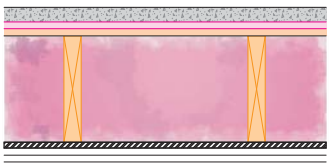
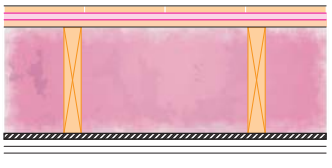
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Floor and Ceiling Assemblies

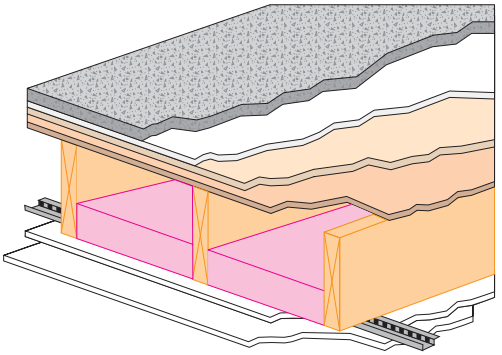
Solid Wood Floor Joist Assemblies

REFERENCE.	FIRE RATING	TEST NO.	STC	TEST NO.	IIC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
							Wood parquet flooring on two layers 9.5 mm (3/8") A/C exterior grade plywood, 9.5 mm (3/8") QuietZone® Acoustic Floor Mat on 16 mm (5/8") plywood subfloor on solid wood joist floor system, 38 mm x 235 mm (1-1/2" x 9-1/4") joists, spaced 406 mm (16") o.c., single 152 mm (6") thickness EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation; resilient channels 610 mm (24") o.c., two layers 15.9 mm (5/8") type "x" gypsum board.
NBC-F9d	1 h	**B3155.1	**63**	**B3155.1	55	SWJFS847	
							Ceramic tile flooring on two layers 9.5 mm (3/8") A/C exterior grade plywood, 9.5 mm (3/8") QuietZone® Acoustic Floor Mat on 16 mm (5/8") plywood subfloor on solid wood joist floor system, 38 mm x 235 mm (1-1/2" x 9-1/4") joists, spaced 406 mm (16") o.c., single 152 mm (6") thickness EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation; resilient channels 610 mm (24") o.c., two layers 15.9 mm (5/8") type "x" gypsum board.
NBC-F9d	1 h	**B3155.3	**73**	**B3155.3	63	SWJFS857	
							25 mm (1") gypcrete, 9.5 mm (3/8") QuietZone® Acoustic Floor Mat on 16 mm (5/8") plywood subfloor on solid wood joist floor system, 38 mm x 235 mm (1-1/2" x 9-1/4") joists, spaced 406 mm (16") o.c., one layer 152 mm (6") thickness and one layer of 90 mm (3-1/2") thickness EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation; resilient channels 610 mm (24") o.c., two layers 15.9 mm (5/8") type "x" gypsum board.
		**B3485.3	**66**	**B3485.3	52	SWJFS858	
							25 mm (1") gypcrete, 9.5 mm (3/8") QuietZone® Acoustic Floor Mat on 16 mm (5/8") plywood subfloor on solid wood joist floor system, 38 mm x 235 mm (1-1/2" x 9-1/4") joists, spaced 406 mm (16") o.c., 248 mm (9-3/4") thickness ProPink® Loose Fill Insulation; resilient channels 610 mm (24") o.c., two layers 15.9 mm (5/8") type "x" gypsum board.
		**B3485.2	**65**	**B3485.2	52	SWJFS859	
							20 mm (3/4") FERMACELL BOARD, 9.5 mm (3/8") QuietZone® Acoustic Floor Mat on 16 mm (5/8") plywood subfloor on solid wood joist floor system, 38 mm x 235 mm (1-1/2" x 9-1/4") joists, spaced 406 mm (16") o.c., 248 mm (9-3/4") thickness ProPink® Loose Fill Insulation; resilient channels 610 mm (24") o.c., two layers 15.9 mm (5/8") type "x" gypsum board.
		**B3485.1	**59**	**B3485.1	52	SWJFS860	

Note: See references for assembly details regarding joist & drywall types, spacing of joists, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
** Reference for NRC Canada Floor System STC & IIC Acoustical Test Report

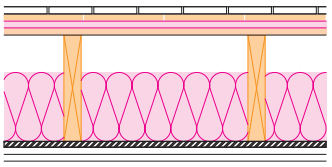
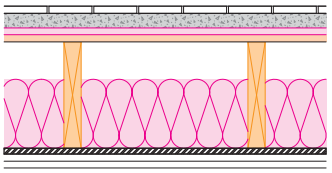
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Floor and Ceiling Assemblies

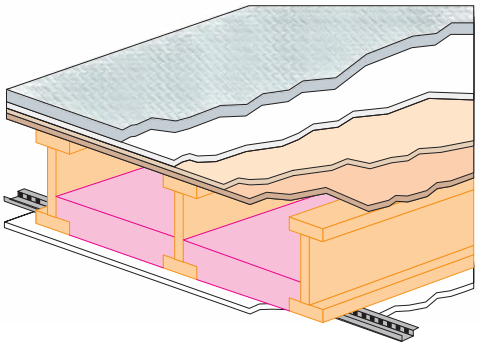
Solid Wood Floor Joist Assemblies

REFERENCE.	FIRE RATING TEST NO.	STC	TEST NO.	IIC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
						7 mm (3/16") ceramic tile with crack suspension membrane, 20 mm (3/4") FERMACELL BOARD, 9.5 mm (3/8") QuietZone® Acoustic Floor Mat on 16 mm (5/8") plywood subfloor on solid wood joist floor system, 38 mm x 235 mm (1-1/2" x 9-1/4") joists, spaced 406 mm (16") o.c., one thickness 152 mm (6") EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation; resilient channels 610 mm (24") o.c., two layers 15.9 mm (5/8") type "x" gypsum board.
	**B3465.3	**68**	**B3465.3	55	SWJFS861	
						7 mm (3/16") ceramic tile with crack suspension membrane, 25 mm (1") LEVELROCK gypcrete, 9.5 mm (3/8") QuietZone® Acoustic Floor Mat on 16 mm (5/8") plywood subfloor on solid wood joist floor system, 38 mm x 235 mm (1-1/2" x 9-1/4") joists, spaced 406 mm (16") o.c., one thickness 152 mm (6") EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation; resilient channels 610 mm (24") o.c., two layers 15.9 mm (5/8") type "x" gypsum board.
	**B3465.2	**70**	**B3465.2	60	SWJFS862	

Note: See references for assembly details regarding joist & drywall types, spacing of joists, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
* Fire rating based on referenced assembly. See Appendix for explanatory footnotes.
** Reference for NRC Canada Floor System STC & IIC Acoustical Test Report

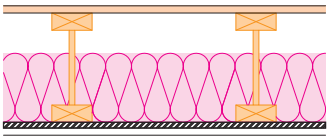
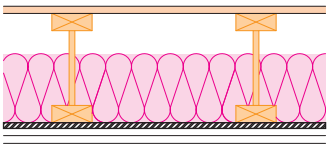
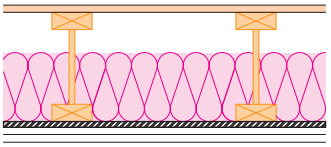
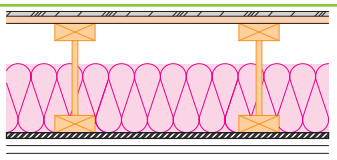
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Floor and Ceiling Assemblies

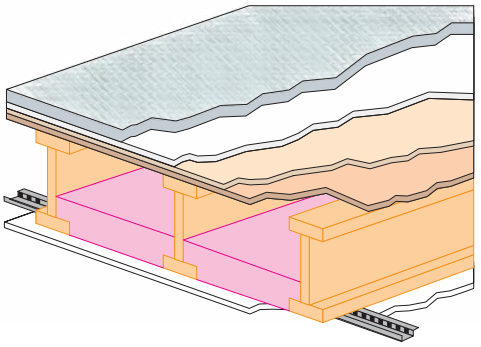
Wood I-Joist Assemblies

REFERENCE.	FIRE RATING	TEST NO.	STC	TEST NO.	IIC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
							Wood I-Joist floor, wood I-joists with 38 mm x 89 mm (1-1/2" x 3-1/2") flanges, spaced 406 mm (16") o.c., depth specified below, 15.5 mm (5/8") OSB subfloor, resilient channels 610 mm (24") o.c., single layer 15.9 mm (5/8") type "x" gypsum board ceiling finish; EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation thickness as specified below:
							Insulation Thickness: / Wood I-Joist Depth:
NBC-F8d	30 min	TLF-96-073a	**52**	IIF-96-024	45	WJ867	152 mm (6") / 241 mm (9-1/2")
NBC-F8d	30 min	TLF-96-075a	**53**	IIF-96-028	45	WJ867	152 mm (6") / 355 mm (14")
NBC-F8d	30 min	TLF-96-101a	**53**	IIF-96-044	47	WJ867	152 mm (6") / 457 mm (18")
		TLF-96-105a	**52**	IIF-96-046	46	WJ867	90 mm (3-1/2") / 457 mm (18")
		TLF-96-109a	**54**	IIF-96-048	47	WJ867	180 mm (2 x 3-1/2") / 457 mm (18")
		TLF-96-113a	**55**	IIF-96-050	48	WJ867	292 mm (11-1/2") / 457 mm (18")
							Wood I-Joist floor, wood I-joists with 38 mm x 89 mm (1-1/2" x 3-1/2") flanges, spaced ≤600 mm (24") o.c. (re. fire rating) and 300 mm (12") to 500 mm (19.5") o.c. (re. sound ratings), depth min. 241 mm (9.5"), 15.5 mm (5/8") OSB subfloor, resilient channels spacing specified below, double layer type "x" gypsum board ceiling finish, thickness specified below; EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation, thickness as specified below:
							Insulation Thickness: / Gypsum Board Thickness: / Resilient Channel Spacing o.c.
NBC-F9d	1 h	*NBC-F9d	**54**	*NBC-F9d	48	WJ877	152 mm (6") / 15.9 mm (5/8") / 600 mm (24")
NBC-F9c	1 h	*NBC-F9c	**52**	*NBC-F9c	46	WJ877	152 mm (6") / 15.9 mm (5/8") / 400 mm (16")
*NBC-F9h	45 min	*NBC-F9h	**53**	*NBC-F9h	47	WJ877	152 mm (6") / 12.7 mm (1/2") / 600 mm (24")
NBC-F9g	1 h	*NBC-F9g	**51**	*NBC-F9g	44	WJ877	152 mm (6") / 12.7 mm (1/2") / 400 mm (16")
							16 mm (5/8") OSB floor/subfloor on engineered wood I-joist floor assembly, 38 mm (1-1/2") square flange 302 mm (11-7/8") deep I-joists, spaced 406 mm (16") o.c., single 152 mm (6") thickness EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation; resilient channels 610 mm (24") o.c., double layer 15.9 mm (5/8") type "x" gypsum board.
Not tested	N.A.	**NRC FL	FSTC 54	**NRC FL FIIC Appendix B, Case 6A, Pages B38/39	47	WJ887	
							Vinyl sheet covering on 16 mm (5/8") OSB /subfloor on engineered wood I-joist floor assembly, 38 mm (1-1/2") square flange 302 mm (11-7/8") deep I-joists, spaced 406 mm (16") o.c., single 152 mm (6") thickness EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation; resilient channels 610 mm (24") o.c., double layer 15.9 mm (5/8") type "x" gypsum board.
Not tested	N.A.	**NRC FL	FSTC 54	**NRC FL FIIC Appendix B, Case 6A, Pages B38/39	49	WJ897	

Note: See references for assembly details regarding joist & drywall type, spacing of joists, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
** NRC FL Ratings reflect FSTC and FIIC testing at National Research Council of Canada flanking test facility. See NRC Report IRC-RR-218 for assembly design details.

Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies

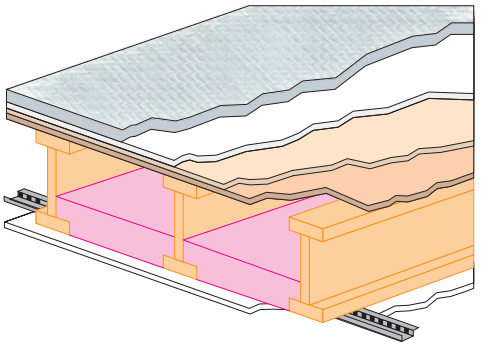


Floor and Ceiling Assemblies

Wood I-Joist Assemblies

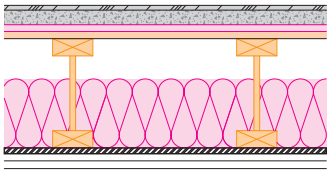
REFERENCE.	FIRE RATING TEST NO.	STC	TEST NO.	IIC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
Not tested	N.A. **NRC FL	FSTC 65	**NRC FL Appendix B, Case 1F, Pages B-28/29	FIIC 39	WIJ907	38 mm (1-1/2") concrete topping on 16 mm (5/8") OSB subfloor on engineered wood I-joist floor assembly, 38 mm (1-1/2") square flange 302 mm (11-7/8") deep I-joists, spaced 406 mm (16") o.c., single 152 mm (6") thickness EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation; resilient channels 610 mm (24") o.c., double layer 15.9 mm (5/8") type "x" gypsum board.
Not tested	N.A. **NRC FL	FSTC 65	**NRC FL Appendix B, Case 1F, Pages B-28/29	FIIC 49	WIJ917	Vinyl sheet covering on 38 mm (1-1/2") concrete topping on 16 mm (5/8") OSB subfloor on engineered wood I-joist floor assembly, 38 mm (1-1/2") square flange 302 mm (11-7/8") deep I-joists, spaced 406 mm (16") o.c., single 152 mm (6") thickness EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation; resilient channels 610 mm (24") o.c., double layer 15.9 mm (5/8") type "x" gypsum board.
Not tested	N.A. **NRC FL	FSTC 67	**NRC FL Appendix B, Case 1E, Pages B-26/27	FIIC 41	WIJ927	38 mm (1-1/2") concrete topping on one layer tarpaper on 16 mm (5/8") OSB subfloor on engineered wood I-joist floor assembly, 38 mm (1-1/2") square flange 302 mm (11-7/8") deep I-joists, spaced 406 mm (16") o.c., single 152 mm (6") thickness EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation; resilient channels 610 mm (24") o.c., double layer 15.9 mm (5/8") type "x" gypsum board.
Not tested	N.A. **NRC FL	FSTC 67	**NRC FL Appendix B, Case 1E, Pages B-26/27	FIIC 49	WIJ937	Vinyl sheet covering on 38 mm (1-1/2") concrete topping on one layer tarpaper on 16 mm (5/8") OSB subfloor on engineered wood I-joist floor assembly, 38 mm (1-1/2") square flange 302 mm (11-7/8") deep I-joists, spaced 406 mm (16") o.c., single 152 mm (6") thickness EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation; resilient channels 610 mm (24") o.c., double layer 15.9 mm (5/8") type "x" gypsum board.
Not tested	N.A. **NRC FL	FSTC 69	**NRC FL Appendix B, Case 1K, Pages B-36/37	FIIC 56	WIJ947	38 mm (1-1/2") concrete topping on one layer of QuietZone® Acoustic Floor Mat on 16 mm (5/8") OSB subfloor on engineered wood I-joist floor assembly, 38 mm (1-1/2") square flange 302 mm (11-7/8") deep I-joists, spaced 406 mm (16") o.c., single 152 mm (6") thickness EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation; resilient channels 610 mm (24") o.c., double layer 15.9 mm (5/8") type "x" gypsum board.

Note: See references for assembly details regarding joist & drywall types, spacing of joists, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
** NRC FL Ratings reflect FSTC and FIIC testing at National Research Council of Canada flanking test facility. See NRC Report IRC-RR-218 for assembly design details.



Floor and Ceiling Assemblies

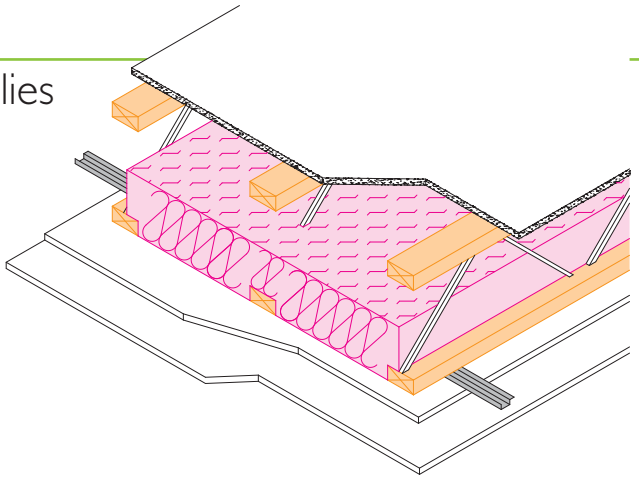
Wood I-Joist Assemblies

REFERENCE.	FIRE RATING TEST NO.		STC	TEST NO.	IIC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
							
Not tested	N.A.	**NRC FL	FSTC 69	**NRC FL Appendix B, Case 1K, Pages B-36/37	FIIC 58	WIJ957	Vinyl sheet covering on 38 mm (1-1/2") concrete topping on one layer of QuietZone® Acoustic Floor Mat on 16 mm (5/8") OSB subfloor on engineered wood I-joist floor assembly, 38 mm (1-1/2") square flange 302 mm (11-7/8") deep I-joists, spaced 406 mm (16") o.c., single 152 mm (6") thickness EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation; resilient channels 610 mm (24") o.c., double layer 15.9 mm (5/8") type "x" gypsum board.

Note: See references for assembly details regarding joist & drywall types, spacing of joists, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
** NRC FL Ratings reflect FSTC and FIIC testing at National Research Council of Canada flanking test facility. See NRC Report IRC-RR-218 for assembly design details.

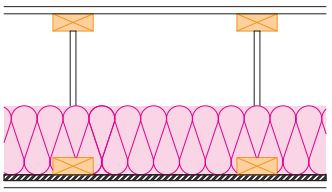
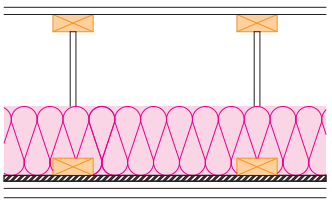
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies



Floor and Ceiling Assemblies

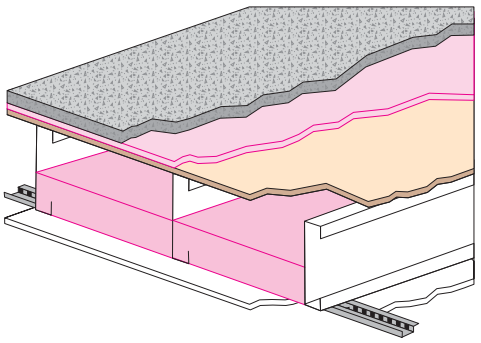
Wood Truss Assemblies

REFERENCE.	FIRE RATING	TEST NO.	STC	TEST NO.	IIC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION
							Wood truss floor, trusses utilizing framing members not less than 38 mm x 89 mm (1-1/2" x 3-1/2"), spacing and depth as specified below, 15.5 mm (5/8") OSB subfloor, resilient channels spacing specified below, single layer 15.9 mm (5/8") type "x" gypsum board ceiling finish; 152 mm (6") thickness EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
							Truss depth: / Truss spacing: / Resilient Channel Spacing:
		TLF-97-033a	54	IIF-97-017	42	WTFS967	356 mm (14") / 406 mm (16") / 610 mm (24")
		TLF-97-039a	52	IIF-97-019	41	WTFS967	356 mm (14") / 488 mm (19.2") / 610 mm (24")
		TLF-97-045a	54	IIF-97-022	42	WTFS967	356 mm (14") / 610 mm (24") / 610 mm (24")
NBC-F27c	30 min	NBC-F27c	48	NBC-F27c	41	WTFS967	min 356 mm (14") / ≤600 mm (24")** / 406 mm (16")
		TLF-97-041a	55	IIF-97-020	44	WTFS967	457 mm (18") / 610 mm (24") / 610 mm (24")
		TLF-97-043a	53	IIF-97-021	42	WTFS967	457 mm (18") / 488 mm (19.2") / 610 mm (24")
							Wood truss floor, trusses utilizing framing members not less than 38 mm x 89 mm (1-1/2" x 3-1/2"), truss depth min 356 mm (14") and spacing ≤600 mm (24")**, 15.5 mm (5/8") OSB subfloor, resilient channels spacing specified below, double layer type "x" gypsum board ceiling finish, thickness listed below; 152 mm (6") thickness EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.
							Gypsum board Thickness: / Resilient Channel Spacing:
NBC-F28d	45 min	NBC-F28d	55	NBC-F28d	48	WTFS977	15.9 mm (5/8") / 600 mm (24")
NBC-F28c	1 h	NBC-F28c	54	NBC-F28c	46	WTFS977	15.9 mm (5/8") / 400 mm (16")
NBC-F28h	45 min	NBC-F28h	53	NBC-F28h	47	WTFS977	12.7 mm (1/2") / 600 mm (24")
NBC-F28g	1 h	NBC-F28g	51	NBC-F28g	44	WTFS977	12.7 mm (1/2") / 400 mm (16")

Note: See references for assembly details regarding truss/joist & drywall type, spacing of tuss/joists, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
** spaced ≤600 mm (24") o.c. (re. fire rating) and 300 mm (12") to 500 mm (19.5") o.c. (re. sound ratings)

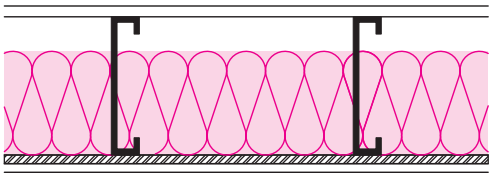
Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies

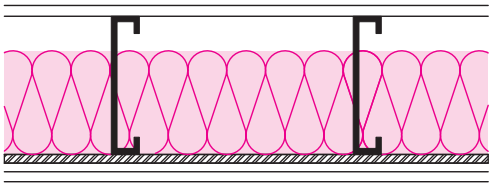


Floor and Ceiling Assemblies

Steel Joist Floors



REFERENCE.	FIRE RATING TEST NO.	STC	TEST NO.	IIC	OC ASSEMBLY NO.	CONSTRUCTION DESCRIPTION		
						Cold formed steel floor joists, minimum 41 mm x 203 mm (1-5/8" x 8") (minimum depth) x 1.22 mm (0.05"), spacing specified below, 15.5 mm (5/8") OSB subfloor, resilient Channel spacing specified below, single layer type "x" gypsum board ceiling finish, thickness specified below; 152 mm (6") thickness EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.		
						Joist spacing:	Resilient Channel Spacing:	Gypsum board Thickness:
NBC-F44d	30 min	NBC-F44d	50	NBC-F44d	44	SJF987	≤600 mm (24")**	600 mm (24")	15.9 mm (5/8")
NBC-F44c	30 min	NBC-F44c	47	NBC-F44c	41	SJF987	≤600 mm (24")**	400 mm (16")	15.9 mm (5/8")
NBC-F44h	30 min	NBC-F44h	48	NBC-F44h	43	SJF987	≤600 mm (24")**	600 mm (24")	12.7 mm (1/2")
NBC-F44g	30 min	NBC-F44g	46	NBC-F44g	40	SJF987	≤600 mm (24")**	400 mm (16")	12.7 mm (1/2")



							Cold formed steel floor joists, minimum 41 mm x 203 mm (1-5/8" x 8") (minimum depth) x 1.22 mm (0.05"), spacing specified below, 15.5 mm (5/8") OSB subfloor, resilient Channel spacing specified below, double layer type "x" gypsum board ceiling finish, thickness specified below; 152 mm (6") thickness EcoTouch™ QuietZone® PINK™ FIBERGLAS® Acoustic Batt Insulation.		
							Joist spacing:	Resilient Channel Spacing:	Gypsum board Thickness:
NBC-F45e	45 min	NBC-F45e	55	NBC-F45e	48	SJF997	400 mm (16")	600 mm (24")	15.9 mm (5/8")
NBC-F45d	1 h	NBC-F45d	52	NBC-F45d	46	SJF997	≤600 mm (24")**	400 mm (16")	15.9 mm (5/8")
NBC-F45f	45 min	NBC-F45f	56	NBC-F45f	48	SJF997	600 mm (24")	600 mm (24")	15.9 mm (5/8")
NBC-F45k	45 min	NBC-F45k	53	NBC-F45k	47	SJF997	400 mm (16")	600 mm (24")	12.7 mm (1/2")
NBC-F45j	1 h	NBC-F45j	51	NBC-F45j	44	SJF997	≤600 mm (24")**	400 mm (16")	12.7 mm (1/2")
NBC-F45l	45 min	NBC-F45l	54	NBC-F45l	47	SJF997	600 mm (24")	600 mm (24")	12.7 mm (1/2")

Note: See references for assembly details regarding truss/joist & drywall type, spacing of tuss/joists, fasteners and/or resilient channels, required to meet the listed STC rating for that assembly.
** spaced ≤600 mm (24") o.c. (re. fire rating) and 300 mm (12") to 500 mm (19.5") o.c. (re. sound ratings)

Sound Absorption Coefficients Of General Building Materials

		Octave band centre frequencies (Hz)						
Material	***Finish***	***125***	***250***	***500***	***1000***	***2000***	***4000***	***NRC***
Brick	Unglazed	.03	.03	.03	.04	.05	.07	.05
	Unglazed, painted	.01	.01	.02	.02	.02	.03	.00
Carpet	1/8" Pile height	.05	.05	.10	.20	.30	.40	.15
	1 /4" Pile height	.05	.10	.15	.30	.50	.55	.25
	3/16" Combined pile and foam	.05	.10	.10	.30	.40	.50	.25
	5/16" Combined pile and foam	.05	.15	.30	.40	.50	.60	.35
Ceiling	5/8" Mineral board ceiling	.31	.29	.51	.70	.71	.71	.55
	5/8" Film faced glass fibre ceiling	.66	.76	.60	.80	.89	.80	.75
	1-1/2" Glass cloth faced glass fibre ceiling	.80	.96	.88	1.04	1.05	1.06	1.00
Concrete block	Unpainted	36	.44	.31	.29	.29	.25	.25
	Painted	.10	.05	.06	.07	.09	.08	.05
Fabrics	Light Velour, 10 oz. Per sq.yd.	.03	.04	.11	.17	.24	.35	.15
	hung straight in contect with wall							
	Medium velour, 14 oz. per sq.yd.	.07	.31	.49	.75	.70	.60	.55
	draped to half area							
	Heavy velour, 18 oz. per sq.yd.	.14	.35	.55	.72	.70	.65	.60
	draped to half area							
Floors	Concrete or terrazzo	.01	.01	.01	.02	.02	.02	.00
	Linoleum, asphalt, rubber or	.02	.03	.03	.03	.03	.02	.05
	cork tile on concrete							
	Wood	.15	.11	.10	.07	.06	.07	.10
	Wood parquet in asphalt on concrete	.04	.04	.07	.06	.06	.07	.05
Glass	1 /4" sealed, large panes	.05	.03	.02	.02	.03	.02	.05
	24 oz., operable window	.10	.05	.04	.03	.03	.03	.05
	(in closed condition)							
Gypsum Board	1 /2" nailed to 2x4's, (16" o.c.), painted	.10	.08	.05	.03	.03	.03	.05
Marble or glazed tile		.01	.01	.01	.01	.02	.02	.00
Plaster, gypsum, lime								
	Rough finish on lath	.02	.03	.04	.05	.04	.03	.05
	Smooth finish	.02	.02	.03	.04	.04	.03	.05
	Hardwood plywood paneling							
	1 /4" thick, wood frame	.58	.22	.07	.04	.03	.07	.10
Wall Panels	Fiberglass wall panels	.05	.30	.80	1.00	1.02	.95	.80
Water surface	As in swimming pool	.01	.01	.01	.01	.02	.03	.00
Wood roof decking								
	Tongue-and-groove cedar	.24	.19	.14	.08	.13	.10	.15

Table from "Acoustical Ceilings – Use and Practice." Ceilings and Interior Systems Contractors Association (1978), p.18
* Information received in imperial units only

Sound Absorption Coefficients, Fiberglas 700 Series Insulations, EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic Insulation

Product Type & Thickness	*Mounting*	*125*	*250*	*500*	*1000*	*2000*	*4000*	*NRC*
QUIETZONE, 2.5" (64 mm) thick	A	.21	.62	.93	.92	.91	1.03	.85
QUIETZONE, 3.5" (89 mm) thick	A	.48	1.00	1.12	1.03	.97	.96	1.05
QUIETZONE, 6" (152 mm) thick	A	.67	1.22	1.04	1.08	1.05	1.05	1.10
701, plain, 1" (25 mm) thick	A	.17	.33	.64	.83	.90	.92	.70
701, plain, 2" (51 mm) thick	A	.22	.67	.98	1.02	.98	1.00	.90
703, plain, 1" (25 mm) thick	A	.11	.28	.68	.90	.93	.96	.70
703, plain, 2" (51 mm) thick	A	.17	.86	1.14	1.07	1.02	.98	1.00
705, plain, 1" (25 mm) thick	A	.02	.27	.63	.85	.93	.95	.65
705, plain, 2" (51 mm) thick	A	.16	.71	1.02	1.01	.99	.99	.95
703, FRK faced, 1" (25 mm) thick	A	.18	.75	.58	.72	.62	.35	.65
703, FRK faced, 2" (51 mm) thick	A	.63	.56	.95	.79	.60	.35	.75
705, FRK faced, 1" (25 mm) thick	A	.27	.66	.33	.66	.51	.41	.55
705, FRK faced, 2" (51 mm) thick	A	.60	.50	.63	.82	.45	.34	.60
703, ASJ faced, 1" (25 mm) thick	A	.17	.71	.59	.68	.54	.30	.65
703, ASJ faced, 2" (51 mm) thick	A	.47	.62	1.01	.81	.51	.32	.75
705, ASJ faced, 1" (25 mm) thick	A	.20	.64	.33	.56	.54	.33	.50
705, ASJ faced, 2" (51 mm) thick	A	.58	.49	.73	.76	.55	.35	.65

Mounting: * A (formerly no. 4) – Material placed against a solid backing such as a block wall
Facings: * FRK-foil faced laminate with glass fiber reinforcing and kraft backing
• ASJ (All-Service-Jacket) – An embossed laminate of white kraft facing with glass fiber reinforcing and a foil backing

Procedures:
All tests were conducted according to ASTM C 423, Standard Test Method for Sound Absorption Coefficients by the Reverberation Room Method. Sound Absorption coefficients for each sample were measured over one-third octave bands and are reported at the preferred octave band center frequencies. In some cases, the measured sound absorption coefficients are greater than 1.00. As recommended by the test method, these values are reported as measured and not adjusted. The corresponding NRC for a material may also be greater than 1.00 according to the ASTM test method. The sound absorption coefficients of these materials are not significantly affected by coverings such as expanded sheet metal, metal lath, hardware cloth, screening or glass cloth. When other coverings having less open surfaces are required, consult an Owens Corning sales representative.

Sound Transmission Loss of Exterior Walls

Exterior finish	*Cavity Insulation*	*Resilient channel*	*STC*
Wood siding (1)	None	No	**37**
	3-1/2" PINK™ FIBERGLAS® Batt Insulation	No	**39**
	None	Yes	**43**
	3-1/2" PINK™ FIBERGLAS® Batt Insulation	Yes	**47**
Stucco (2)	3-1/2" PINK™ FIBERGLAS® Batt Insulation	No	**46**
	None	Yes	**49**
	3-1/2" PINK™ FIBERGLAS® Batt Insulation	Yes	**57**
Brick veneer (3)	3-1/2" PINK™ FIBERGLAS® Batt Insulation	No	**56**
	None	Yes	**54**
	3-1/2" PINK™ FIBERGLAS® Batt Insulation	Yes	**58**
Concrete block	None	No	**45**

Wall construction details

Wood siding (1)	Framing	2"x4" wood studs, (16" o.c.)
	Sheathing	1/2" wood fiberboard insulation nailed to studs
	Siding	5/8"x10" redwood nailed through sheathing into studs
	Interior	1/2" gypsum board screwed to studs or to metal resilient channels which were attached to the studs
Stucco (2)	Framing	2"x4" woods studs, (16" o.c.)
	Sheathing	None
	Stucco	No. 15 felt building and 1" wire mesh nailed to studs. Stucco Applied in 3 coats to 7/8" total thickness. Dry weight of Stucco 7.9 lb/sq ft
	Interior	1/2" gypsum board screwed to studs or resilient channel
Brick veneer (3)	Framing	2"x4" wood studs, (16" o.c.)
	Sheathing	3/4" wood fiberboard insulation
	Brick	standard face brick 3-1/2" wide, spaced 1/2" out from sheathing with metal ties nailed through sheathing into studs. Dry weight of brick and mortar 41 lb/sq ft .
	Interior	1/2" gypsum board screwed to studs or resilient channel

Taken from the U.S. Department of Commerce National Bureau of Standards Building Science Series 77.
* Information received in imperial units only

Wall & Floor Assembly Guide

Insulation for Sound & Fire Rated Asemblies

Sound Transmission Loss of Exterior Doors and Windows

Door	*Weather Strip*	*Normally closed STC*
Wood, flush solid core(1)	Brass	**27**
Wood, flush solid core(1)	Plastic	**27**
Steel, flush(2)	Magnetic	**28**

Door Construction Detail

(1)Flush solid core wood door	Width	1-3/4"
	Weight	78lb, 3.9 lb/sq ft
(2)Flush steel door	Width	1-3/4"
	Faces	0.028" steel, separated by plastic perimeter strip
	Core	Rigid polyurethane, 2 2-1/2" lb/cu.ft, foamed in place
	Weight	64lb, 3.2 lb/sq ft

Sound Transmission Loss of Windows

Material	*Type*	*Size*	*Glazing*[1]	*Sealed STC*	*Locked STC*	*Unlocked STC*
Wood	Double hung	3'x5'	ss	**29**		**23**
			ss-d	**29**		
			ds	**29**		
			ds-d	**30**		
			In-7/16"	**28**	**26**	**22**
	Fixed picture	6'x5'	ss-d	**28**		
			ds	**29**		
			in-1"	**34**	**STC**	**STC**
Wood-plastic	Double hung		ss	**29**	**26**	**26**
			in-3/8"	**26**	**26**	**25**
	Storm sash		ds	**30**	**27**	
			in-3/8"	**28**	**24**	
	Fixed casement		ds	**31**		
	Operable casement		ds		**30**	**22**
	Sliding glass door		lam-3/16"	**31**	**26**	**26**
Aluminum	Sliding		ss	**28**	**24**	
	Operable casement		ds	**31**	**21**	**17**
	Single hung		in-7/16"	**30**	**27**	**25**
Single pane 1/4" laminated glass						**34**

[1]ss	=	single strength
ds	=	double strength
d	=	divided lights
in	=	insulating glass of indicated overall thickness
lam	=	laminated safety glass of indicated overall thickness

Taken from the U.S. Department of Commerce National Bureau of Standards Building Science Series 77.
* Information received in imperial units only

Appendix

***GA File No. WP-1021**, non load-bearing steel stud wall assemby, design in the Gypsum Association Fire Resistance Design Manual GA-600-2009, documents a **1 hour** fire rating using 64 mm (2-1/2") steel studs, 0.46 mm (25 Gauge), spaced 600 mm (24") o.c. with a single layer of 12.7 mm (1/2") type "x" gypsum wallboard on one side, double layer other side, and no insulation. Item 10 under the General Explanatory Notes section of this manual, page 8, states that "When not specified as a component of a fire tested wall or partition system, mineral or glass fibre insulation of a thickness not exceeding that of the stud dept shall be permitted to be added within the stud cavity." Item 15 (page 9) states that "Greater stud sizes (depths) shall be permitted to be used in metal- or wood- stud systems. Metal studs of heavier gauge than those tested shall be permitted. The assigned rating of an load-bearing system shall also apply to the same system when used as a non load-bearing system. Indicated stud spacings are maximums." Item 21 (page 9) states that "Additional layers of the type "x" or regular gypsum board shall be permitted to be added to any system."

***GA File No. WP-1022**, non load-bearing steel stud wall assemby, design in the Gypsum Association Fire Resistance Design Manual GA-600-2009, documents a **1 hour** fire rating (based on Unavailable FM WP-733, 12-3-84 fire test) and **50 to 54 STC** sound rating with 76 mm (3") glass fibre insulation(based on unavailable RAL TL88-55, 2-18-88 sound test) using 64 mm (2-1/2") steel studs, 0.46 mm (25 Gauge), spaced 600 mm (24") o.c. with a single layer of 12.7 mm (1/2") proprietary (National Gypsum Company Fire-Shield C) gypsum wallboard on one side, double layer other side, and no insulation (for fire test). Item 10 under the General Explanatory Notes section of this manual, page 8, states that "When not specified as a component of a fire tested wall or partition system, mineral or glass fibre insulation of a thickness not exceeding that of the stud dept shall be permitted to be added within the stud cavity." Item 15 (page 9) states that "Greater stud sizes (depths) shall be permitted to be used in metal- or wood- stud systems. Metal studs of heavier gauge than those tested shall be permitted. Indicated stud spacings are maximums." Item 21 (page 9) states that "Additional layers of the type "x" or regular gypsum board shall be permitted to be added to any system."

***GA File No. WP-1052**, non loadbearing steel stud wall assembly, design in Gypsum Association Fire Resistance Design Manual GA-600-2009, documents a **50 to 54 STC** sound rating (based on unavailable sound test NRCC 817-NV, 2-3-81), with 92 mm (3-5/8") glass fibre insulation, using 92 mm (3-5/8") steel studs, (25 gauge), spaced 610 mm (24") o.c. with two layers of 15.9 mm (5/8") Type X gypsum board on one side and a single layer on the opposite side of the wall.

***GA File No. WP-1615** non load-bearing steel stud wall assemby, design in the Gypsum Association Fire Resistance Design Manual GA-600-2009, documents **45 to 49 STC** sound rating (based on unavailable sound test NGC 2250, 1-3-68) with no insulation, using 65 mm (2-1/2") steel studs, (25 Gauge), spaced 600 mm (24") o.c., with two layers of 12.7 mm (1/2") Type "x" gypsum wallboard on each face.

***GA File No. WP-5105**, non load-bearing chase wall assemby, design in the Gypsum Association Fire Resistance Design Manual GA-600-2006, documents a **55 to 59 STC** sound rating (based on unavailable RAL TL76-156) using double row of 41 mm (1-5/8") steel studs, 0.46 mm (25 Gauge), spaced 600 mm (24") o.c. with two layers of 15.9 mm (5/8") type "x" gypsum board on exposed sides of double wall system and single layer of 92 mm (3-5/8") glass fibre batt insulation.

***GA File No. WP-5910**, non load-bearing chase wall assemby, design in the Gypsum Association Fire Resistance Design Manual GA-600-2009, documents a **50 to 54 STC** sound rating (based on unavailable BGL471, 5-16-79 sound test) using 41 mm (1-5/8") steel studs, 0.5 mm (25 Gauge), spaced 600 mm (24") o.c. with a single layer of 9.5 mm (3/8") gypsum backer board on each side and a 12.7 mm (1/2") type "x" gypsum board (Certainteed Gypsum Canada Inc.) second layer on each side, sound tested with compressed 2-3/4" glass fibre insulation in stud space.

***ULC-W407** non load-bearing wall design in ULC List of Equipment & Materials, Fire Resistance, documents a **1 hour** assembly fire rating using 92 mm (3-5/8") steel studs, 0.5 mm (25 Gauge), spaced 600 mm (24") o.c. with a single layer of 15.9 mm (5/8") type "x" gypsum board (CGC) on each side and no insulation. In ULC's LIST OF EQUIPMENT AND MATERIALS FIRE RESISTANCE RATINGS DIRECTORY, under Walls and Partitions (at beginning of directory or in On-line Directory under BXUVC.Guide Info – Fire Resistance Ratings), it is stated "With the exception of support (i.e. studs) and fastener (i.e. nails, screws) spacings, the dimensions given in the following designs are to be construed as the minimum allowable for each rated assembly. Support and fastener spacings stated are the maximum allowable. Listed and labelled mineral fibre building insulation that is processed from… **glass** only may be used in ULC non-load-bearing wall assembly designs consisting of wallboard and steel or wood studs with a fire resistance rating not exceeding 2-hours when illustrated without insulation, without detracting from the fire rating assigned to the assembly. Note: This applies to ULC non-load-bearing wall assemblies which utilize proprietary (Listed) gypsum wallboards as specified in the individual designs." [Using ULC-W407 section 4 Batts and Blankets listed and labeled Owens Corning glass fibre insulation (e.g. Owens Corning EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation) may be installed as option in this non-load bearing assembly without detracting from its fire rating.]

***ULC-W409** non load-bearing wall design in ULC List of Equipment & Materials, Fire Resistance, documents a **1 hour** assembly fire rating using 63 mm (2-1/2") steel studs, 0.6 mm (25 Gauge), spaced 600 mm (24") o.c. with a single layer of 15.9 mm (5/8") type "x" gypsum board (Georgia-Pacific/BPB Canada) on each side and no insulation. In ULC's LIST OF EQUIPMENT AND MATERIALS FIRE RESISTANCE RATINGS DIRECTORY, under Walls and Partitions (at beginning of directory or in On-line Directory under BXUVC.Guide Info – Fire Resistance Ratings), it is stated "With the exception of support (i.e. studs) and fastener (i.e. nails, screws) spacings, the dimensions given in the following designs are to be construed as the minimum allowable for each rated assembly. Support and fastener spacings stated are the maximum allowable." [Using ULC-W409 section 3a listed and labelled Owens Corning (EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation) glass fibre batts are permitted components in this ULC non-load-bearing wall assembly design.] "Note: This applies to ULC non-load-bearing wall assemblies which utilize proprietary (Listed) gypsum wallboards as specified in the individual designs."

***ULC-W413** non load-bearing wall design in ULC List of Equipment & Materials, Fire Resistance, documents a **45 minute** assembly fire rating using 64 mm (2-1/2") steel studs, 0.5 mm (25 Gauge), spaced 600 mm (24") o.c. with a single layer of 12.7 mm (1/2") type "x" gypsum board (Georgia-Pacific) on each side and no insulation. In ULC's LIST OF EQUIPMENT AND MATERIALS FIRE RESISTANCE RATINGS DIRECTORY, under Walls and Partitions (at beginning of directory or in On-line Directory under BXUVC.Guide Info – Fire Resistance Ratings), it is stated "With the exception of support (i.e. studs) and fastener (i.e. nails, screws) spacings, the dimensions given in the following designs are to be construed as the minimum allowable for each rated assembly. Support and fastener spacings stated are the maximum allowable." Using ULC-W413 section 3a listed and labelled Owens Corning minimum 65 mm (2-1/2") thick (EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation) glass fibre batts are permitted components in this ULC non-load-bearing wall assembly design. "Note: This applies to ULC non-load-bearing wall assemblies which utilize proprietary (Listed) gypsum wallboards as specified in the individual designs."

***ULC-W414** non load-bearing wall design in ULC List of Equipment & Materials, Fire Resistance, documents a **2 hour** assembly fire rating using 63 mm (2-1/2") steel studs, 0.6 mm (25 Gauge), spaced 600 mm (24") o.c. with two layers of 12.7 mm (1/2") type "x" gypsum board (Georgia-Pacific/Lafarge/BPB Canada or of 15.9 mm (5/8") type "x" gypsum board (BPB Canada) on each side and no insulation. In ULC's LIST OF EQUIPMENT AND MATERIALS FIRE RESISTANCE RATINGS DIRECTORY, under Walls and Partitions (at beginning of directory or in On-line Directory under BXUVC.Guide Info – Fire Resistance Ratings), it is stated "With the exception of support (i.e. studs) and fastener (i.e. nails, screws) spacings, the dimensions given in the following designs are to be construed as the minimum allowable for each rated assembly. Support and fastener spacings stated are the maximum allowable. Listed and labelled mineral fibre building insulation that is processed from… and **glass** only may be used in ULC non-load-bearing wall assembly designs consisting of wallboard and steel or wood studs with a fire resistance rating not exceeding 2-hours when illustrated without insulation, without detracting from the fire rating assigned to the assembly. Note: This applies to ULC non-load-bearing wall assemblies which utilize proprietary (Listed) gypsum wallboards as specified in the individual designs." [Listed and labelled glass mineral fibre insulation (e.g. Owens Corning EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation) may be installed in this non-load bearing assembly without detracting from its fire rating.]

***ULC-W449** load-bearing double wall design in www.ulc.ca, ULC ONLINE DIRECTORIES, Fire Resistance Assemblies, Fire Resistance Assemblies, Fire Resistance Assembly W449, BXUVC.W449, documents a **1 hour** assembly fire rating using minimum 92 mm (3-5/8") steel studs, 0.5 mm (25 Gauge), spaced 600 mm (24") o.c. in each wall spaced 25 mm (1") apart with a single layer of 15.9 mm (5/8") type "x" gypsum board each side or a **2 hour rating** with two layers of 15.9 mm (5/8") type "x" gypsum board (CGC, G-P) on each side and 92 mm (3-5/8") EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation batts having a minimum density of 8 kg/cu.m in each wall assembly. In ULC's LIST OF EQUIPMENT AND MATERIALS FIRE RESISTANCE RATINGS DIRECTORY, under Walls and Partitions (at beginning of directory or in On-line Directory under BXUVC.Guide Info – Fire Resistance Ratings), it is stated "With the exception of support (i.e. studs) and fastener (i.e. nails, screws) spacings, the dimensions given in the following designs are to be construed as the minimum allowable for each rated assembly. Support and fastener spacings stated are the maximum allowable." Using ULC-W449 section 6a listed and labelled Owens Corning (EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation) glass fibre batts (having a minimum density of 8 kg/cu.m) are permitted components in this ULC load-bearing wall assembly design. "Note: This applies to ULC non-load-bearing and load-bearing wall assemblies which utilize proprietary (Listed) gypsum wallboards as specified in the individual designs."

***ULC-W453** non load-bearing wall design in www.ulc.ca, ULC ONLINE DIRECTORIES, Fire Resistance Assemblies, Fire Resistance Assemblies, Fire Resistance Assembly W453, BXUVC.W453, documents a **1 hour** assembly fire rating using minimum 41 mm (1-5/8"), 64 mm (2-1/2") or 92 mm (3-5/8") steel studs, 0.5 mm (25 Gauge), spaced 600 mm (24") o.c. with a single layer of 15.9 mm (5/8") type "x" gypsum board or two layers of 12.7 mm (1/2") or 15.9 mm (5/8") type "x" gypsum board (CGC) on each side and optional insulation. Optional, not shown, for single or double layer systems resilient furring channels fabricated from 0.46 mm base metal thickness (25 Gauge), corrosion-protected steel may be applied perpendicular to studs spaced a maximum of 610 mm (24") o.c. In ULC's LIST OF EQUIPMENT AND MATERIALS FIRE RESISTANCE RATINGS DIRECTORY, under Walls and Partitions (at beginning of directory or in On-line Directory under BXUVC.Guide Info – Fire Resistance Ratings), it is stated "With the exception of support (i.e. studs) and fastener (i.e. nails, screws) spacings, the dimensions given in the following designs are to be construed as the minimum allowable for each rated assembly. Support and fastener spacings stated are the maximum allowable." Using ULC-W453 section 3b option listed and labelled Owens Corning (EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation) glass fibre batts are permitted components in this ULC non-load-bearing wall assembly design. "Note: This applies to ULC non-load-bearing wall assemblies which utilize proprietary (Listed) gypsum wallboards as specified in the individual designs."

Appendix

***ULC-W454** non load-bearing wall design in www.ulc.ca, ULC ONLINE DIRECTORIES, Fire Resistance Assemblies, Fire Resistance Assemblies, Fire Resistance Assembly W454, BXUVC.W454, documents a **1 hour** assembly fire rating using minimum 64 mm (2-1/2") steel studs, 0.84 mm (20 Gauge), spaced a maximum of 400 mm (16") o.c. with a single layer of 15.9 mm (5/8") type "x" gypsum board on each side and a **2 hour fire** rating using minimum 92 mm (3-5/8") steel studs, 1.09 mm (19 Gauge), spaced a maximum of 400 mm (16") o.c., with two layers of 15.9 mm (5/8") type "x" gypsum board (CGC) on each side and using section 4a, Owens Corning 92 mm (3-5/8") EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation on one side of wall assembly. Optional, not shown,for single or double layers of gypsum board each side, resilient furring channels fabricated from 0.46 mm base metal thickness (25 Gauge), corrosion-protected steel may be applied perpendicular to studs spaced a maximum of 610 mm (24") o.c. In ULC's LIST OF EQUIPMENT AND MATERIALS FIRE RESISTANCE RATINGS DIRECTORY, under Walls and Partitions (at beginning of directory or in On-line Directory under BXUVC.Guide Info – Fire Resistance Ratings), it is stated "With the exception of support (i.e. studs) and fastener (i.e. nails, screws) spacing's, the dimensions given in the following designs are to be construed as the minimum allowable for each rated assembly. Support and fastener spacing's stated are the maximum allowable."

***ULC-W484** non load-bearing wall design in www.ulc.ca, ULC ONLINE DIRECTORIES, Fire Resistance Assemblies, Fire Resistance Assemblies, Fire Resistance Assembly W484, BXUVC.W484, documents a **1 hour** assembly fire rating using minimum 64 mm (2-1/2") steel studs, 0.51 mm (25 Gauge), spaced a maximum of 600 mm (24") o.c. with a single layer of 13 mm (1/2") Sheetrock Firecode Type "C" gypsum board on one side and a double layer of 13 mm (1/2") Sheetrock Firecode Type "C" gypsum board on other side and using section 3 Owens Corning 64 mm (2-1/2") EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation in the cavity. Can substitute the single layer 13 mm (1/2") Type "C" gypsum board on one side with 19 mm (3/4") Sheetrock Ultracode gypsum board. In ULC's LIST OF EQUIPMENT AND MATERIALS FIRE RESISTANCE RATINGS DIRECTORY, under Walls and Partitions (at beginning of directory or in On-line Directory under BXUVC.Guide Info – Fire Resistance Ratings), it is stated "With the exception of support (i.e. studs) and fastener (i.e. nails, screws) spacing's, the dimensions given in the following designs are to be construed as the minimum allowable for each rated assembly. Support and fastener spacing's stated are the maximum allowable."

***UL-U305** load-bearing (Load restricted for Canadian Applications – See Guide BXUV7) wall design in www.ul.com, UL ONLINE CERTIFICATIONS DIRECTORIES, Fire Resistance Assemblies and Systems, Fire Resistive Design U305, BXUV.U305, documents a **1 hour fire** rating using 38 mm x 89 mm (2"x4") wood studs (fire stopped) spaced 400 mm (16") oc with a single layer of 15.9 mm (5/8") type "x" on each side (see design description for list allowable companies and products) with optional glass fiber (EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation) or mineral wool insulation fully or partially filling stud cavities. Optional, not shown, resilient furring channels fabricated from 0.5 mm (25 Gauge) thickness, galvanized steel may be applied vertically to studs spaced a maximum of 610 mm (24") o.c. on one side of the wall. Glass fibre insulation batts nominal 89 mm (3-1/2") thick filling the stud cavity may be installed in wall cavities with stapling to sides of studs being required in specific design configurations. In www.ul.com UL ONLINE CERTIFICATIONS DIRECTORIES, Fire Resistance Assemblies and Systems, Guide Information for Fire Resistance Ratings, Design Information Section, VI Wall and Partition Assemblies, "The hourly rating of a load-bearing assembly also applies to the same assembly when it is used as a non-load bearing assembly. The size of studs are minimum unless otherwise stated in a design. The spacing of studs is a maximum unless otherwise stated in a design." The use of glass fibre insulation is optional but required with resilient channels. The batts enhance the acoustical performance of the assembly without affecting the listed fire rating. See Owens Corning Batts and Blankets listings under File Numbers R3576, under BZJZC and BKNVC (EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation).

***UL-U309** load-bearing (Load restricted for Canadian Applications – See Guide BXUV7) wall design in www.ul.com, UL ONLINE CERTIFICATIONS DIRECTORIES, Fire Resistance Assemblies and Systems, Fire Resistive Design U309, BXUV.U309, documents a **1 hour fire** rating using 38 mm x 89 mm (2"x4") wood studs (fire stopped) spaced 600 mm (24") oc with a single layer of 15.9 mm (5/8") type "x" on each side (see design description for list allowable companies and products) with optional glass fiber (EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation) or mineral wool insulation fully or partially filling stud cavities. Optional, not shown, resilient furring channels fabricated from 0.5 mm (25 Gauge) thickness, galvanized steel may be applied vertically to studs spaced a maximum of 610 mm (24") o.c. on one side of the wall. Glass fibre insulation batts nominal 89 mm (3-1/2") thick filling the stud cavity may be installed in wall cavities with stapling to sides of studs being required in specific design configurations. In www.ul.com UL ONLINE CERTIFICATIONS DIRECTORIES, Fire Resistance Assemblies and Systems, Guide Information for Fire Resistance Ratings, Design Information Section, VI Wall and Partition Assemblies, "The hourly rating of a load-bearing assembly also applies to the same assembly when it is used as a non-load bearing assembly. The size of studs are minimum unless otherwise stated in a design. The spacing of studs is a maximum unless otherwise stated in a design." The use of glass fibre insulation is optional but required with resilient channels. The batts enhance the acoustical performance of the assembly without affecting the listed fire rating. See Owens Corning Batts and Blankets listings under File Numbers R3576, under BZJZC and BKNVC (EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation).

Appendix

***UL-U340** load-bearing (Load restricted for Canadian Applications – See Guide BXUV7) staggered wood stud wall design in www.ul.com, UL ONLINE CERTIFICATIONS DIRECTORIES, Fire Resistance Assemblies and Systems, Fire Resistive Design U340, BXUV.U340, documents a **1 hour** fire rating using 38 mm x 89 mm (2"x4") wood studs alternating on opposite sides of nominal 38 mm x 140 mm (2"x 6") spaced 600 mm (24") oc on each side of wood plates, staggered 300 mm (12") o.c. on opposite sides with a single layer of 15.9 mm (5/8") type "x" on each side (see design description for list allowable companies and products). Item 4 lists optional single layer of glass fiber (EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation) or mineral wool insulation 89 mm (3-1/2") thick maximum stapled to studs. In www.ul.com UL ONLINE CERTIFICATIONS DIRECTORIES, Fire Resistance Assemblies and Systems, Guide Information for Fire Resistance Ratings, Design Information Section, VI Wall and Partition Assemblies, "The hourly rating of a load-bearing assembly also applies to the same assembly when it is used as a non-load bearing assembly. The size of studs are minimum unless otherwise stated in a design. The spacing of studs is a maximum unless otherwise stated in a design." The use of glass fibre insulation is optional. The batts enhance the acoustical performance of the assembly without affecting the listed fire rating. In www.ul.com UL ONLINE CERTIFICATIONS DIRECTORIES, UL File Number, see Owens Corning Batts and Blankets listings under File Numbers R3576, under BZJZC and BKNVC (EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation).

***UL-U411** non-load-bearing steel stud wall design in www.ul.com, UL ONLINE CERTIFICATIONS DIRECTORIES, Fire Resistance Assemblies and Systems, Fire Resistive Design U411, BXUV.U411, documents a **2 hour** fire rating using 64 mm (2-1/2") steel studs spaced 600 mm (24") o.c. with two layers of 15.9 mm (5/8") type "x" on each side (see design description for list allowable companies and products). Item 3 lists optional glass fiber (EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation) or mineral wool insulation fully or partially filling stud cavities. Glass fibre or mineral wool insulation batts filling the stud cavity may be installed in wall cavities with specified stapling. In www.ul.com UL ONLINE CERTIFICATIONS DIRECTORIES, Fire Resistance Assemblies and Systems, Guide Information for Fire Resistance Ratings, Design Information Section, VI Wall and Partition Assemblies, "The size of studs are minimum unless otherwise stated in a design. The spacing of studs is a maximum unless otherwise stated in a design." The use of optional glass fibre insulation batts enhance the acoustical performance of the assembly without affecting the listed fire rating. See Owens Corning Batts and Blankets listings under File Numbers R3576, under BZJZC and BKNVC (EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation).

***UL-U420** non-load-bearing steel stud chase wall design in www.ul.com, UL ONLINE CERTIFICATIONS DIRECTORIES, Fire Resistance Assemblies and Systems, Fire Resistive Design U420, BXUV.U420, documents a **1 hour fire** rating using 64 mm (2-1/2") steel studs spaced 600 mm (24") o.c. with a single layer of 15.9 mm (5/8") type "x" on each side and a **2 hour fire** rating with two layers of 15.9 mm (5/8") type "x" on each side (see design description for list allowable companies and products). Optional Item 6 glass fiber (EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation) or mineral wool insulation fully or partially filling stud cavities. Optional glass fibre or mineral wool insulation batts filling the stud cavity installed in wall cavities shall have specified stapling. In www.ul.com UL ONLINE CERTIFICATIONS DIRECTORIES, Fire Resistance Assemblies and Systems, Guide Information for Fire Resistance Ratings, Design Information Section, VI Wall and Partition Assemblies, "The size of studs are minimum unless otherwise stated in a design. The spacing of studs is a maximum unless otherwise stated in a design." The use of optional glass fibre insulation batts enhance the acoustical performance of the assembly without affecting the listed fire rating. See Owens Corning Batts and Blankets listings under File Numbers R3576, under BZJZC and BKNVC (EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation).

***UL-U423** load-bearing (Load restricted for Canadian Applications – See Guide BXUV7) steel stud wall design in www.ul.com, UL ONLINE CERTIFICATIONS DIRECTORIES, Fire Resistance Assemblies and Systems, Fire Resistive Design U423, BXUV.U423, using min 90 mm (3-5/8") (20 Gauge) steel studs spaced 600 mm (24") o.c., documents 45 min fire rating with single layer each side of 12.7 mm (1/2") Type "x", 1 h fire rating with single layer each side of 15.9 mm (5/8") or 1.5 h with two layers of 12.7 mm (1/2") type "x", 2 hours with two layers of 15.9 mm (5/8") type "x" on each side gypsum wallboard (CGC), optional, for single or double layer systems resilient furring channels fabricated from 0.46 mm base metal thickness (25 Gauge), corrosion-protected steel may be applied perpendicular to studs spaced a maximum of 610 mm (24") o.c. on one or both sides, optional Item 7B (EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation) or Item 7A Owens Corning glass fiber or mineral wool insulation fully or partially filling stud cavities. In www.ul.com UL ONLINE CERTIFICATIONS DIRECTORIES, Fire Resistance Assemblies and Systems, Guide Information for Fire Resistance Ratings, Design Information Section, VI Wall and Partition Assemblies, "The hourly rating of a load-bearing assembly also applies to the same assembly when it is used as a non-load bearing assembly. The size of studs are minimum unless otherwise stated in a design. The spacing of studs is a maximum unless otherwise stated in a design." The use of optional glass fibre insulation batts enhances the acoustical performance of the assembly without affecting the listed fire rating. See Owens Corning Batts and Blankets listings under File Numbers R3576, under BZJZC and BKNVC (EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation).

Appendix

***UL-U465** non-load-bearing steel stud wall design in www.ul.com, UL ONLINE CERTIFICATIONS DIRECTORIES, Fire Resistance Assemblies and Systems, Fire Resistive Design U465, BXUV.U465, using min 90 mm (3-5/8") (25 Gauge) steel studs spaced 600 mm (24") o.c., documents **1 hour fire** rating with single layer each side of 15.9 mm (5/8") gypsum wallboard (see design description for list allowable companies and products), optional, resilient furring channels fabricated from 25 Gauge, galvanized steel may be applied perpendicular to studs spaced a maximum of 610 mm (24") o.c. on one side, optional Item 3 glass fiber (EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation) or mineral wool insulation fully or partially filling stud cavities. In www.ul.com UL ONLINE CERTIFICATIONS DIRECTORIES, Fire Resistance Assemblies and Systems, Guide Information for Fire Resistance Ratings, Design Information Section, VI Wall and Partition Assemblies, "The size of studs are minimum unless otherwise stated in a design. The spacing of studs is a maximum unless otherwise stated in a design." The use of optional glass fibre insulation batts enhances the acoustical performance of the assembly without affecting the listed fire rating. See Owens Corning Batts and Blankets listings under File Numbers R3576, under BZJZC and BKNVC (EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation).

***UL-U493** non load-bearing wall design in www.ul.ca, UL ONLINE DIRECTORIES, Fire Resistance Assemblies, Fire Resistance Assemblies, Fire Resistance Assembly U493, BXUV.U493, documents a **1 hour** assembly fire rating using minimum 64 mm (2-1/2") steel studs, 0.51 mm (25 Gauge), spaced a maximum of 600 mm (24") o.c. with a single layer of 15.9 mm (5/8") type "x" gypsum board on each side and a **2 hour** fire rating using minimum 64 mm (2-1/2") steel studs, 0.51 mm (25 Gauge), spaced a maximum of 600 mm (24") o.c., with two layers of 15.9 mm (5/8") type "x" gypsum board on each side. Item 4 lists optional 92 mm (3-5/8") EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation on one or both sides of wall assembly. Optional, not shown, for single or double layers of gypsum board each side, resilient furring channels fabricated from 0.46 mm base metal thickness (25 Gauge), corrosion-protected steel may be applied perpendicular to studs spaced a maximum of 610 mm (24") o.c. In ULC's LIST OF EQUIPMENT AND MATERIALS FIRE RESISTANCE DIRECTORY, under Walls and Partitions (at beginning of directory), it is stated "With the exception of support (i.e. studs) and fastener (i.e. nails, screws) spacing's, the dimensions given in the following designs are to be construed as the minimum allowable for each rated assembly. Support and fastener spacing's stated are the maximum allowable."

***UL-U494** non-load-bearing steel stud wall design in www.ul.com, UL ONLINE CERTIFICATIONS DIRECTORIES, Fire Resistance Assemblies and Systems, Fire Resistive Design U494, BXUV.U494, using min 64 mm (2-1/2") (25 Gauge) steel studs spaced 600 mm (24") o.c., documents **1 hour** fire rating with single layer each side of 15.9 mm (5/8") gypsum wallboard (see Gypsum Board (CKNX) for list allowable manufacturers). Item 3 lists optional glass fiber batt insulation (EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation) friction fitted and filling stud cavities. In www.ul.com UL ONLINE CERTIFICATIONS DIRECTORIES, Fire Resistance Assemblies and Systems, Guide Information for Fire Resistance Ratings, Design Information Section, VI Wall and Partition Assemblies, "The size of studs are minimum unless otherwise stated in a design. The spacing of studs is a maximum unless otherwise stated in a design." The use of optional glass fibre insulation batts enhances the acoustical performance of the assembly without affecting the listed fire rating. See Owens Corning Batts and Blankets listings under File Numbers R3576, under BZJZC and BKNVC (EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation).

***UL-V446** load-bearing (Load restricted for Canadian Applications – See Guide BXUV7) steel stud wall design in www.ul.com, UL ONLINE CERTIFICATIONS DIRECTORIES, Fire Resistance Assemblies and Systems, Fire Resistive Design U446, BXUV.U446, using min 90 mm (3-5/8") (0.86 mm (0.034")) thick galvanized steel studs spaced 600 mm (24") o.c., documents **1 hour** fire rating with single layer each side of 15.9 mm (5/8") Type "x", **2 hour** rating with two layers of 15.9 mm (5/8") type "x" on each side gypsum wallboard (CGC/USG), listed glass fiber insulation, minimum 8.0 kg/m^3 (0.5 pcf) (e.g. C-UL-US listed and labelled EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation) in stud cavities. In www.ul.com UL ONLINE CERTIFICATIONS DIRECTORIES, Fire Resistance Assemblies and Systems, Guide Information for Fire Resistance Ratings, Design Information Section, VI Wall and Partition Assemblies, "The hourly rating of a load-bearing assembly also applies to the same assembly when it is used as a non-load bearing assembly. The size of studs are minimum unless otherwise stated in a design. The spacing of studs is a maximum unless otherwise stated in a design." See Owens Corning Batts and Blankets listings under File Numbers R3576, under BZJZC and BKNVC (EcoTouch™ QUIETZONE® PINK™ FIBERGLAS® Acoustic insulation).

Notes

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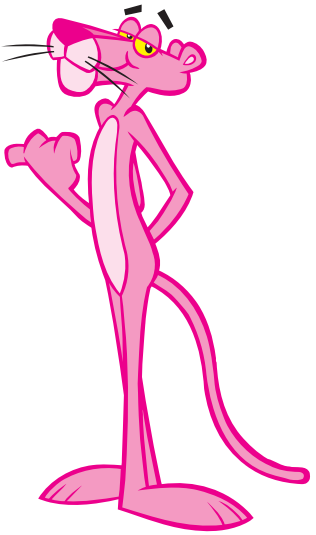

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