

RC-2 Resilient Sound Channel (Two-Legged)

Applicable Standards and References

- ASTM C754 Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products
- ASTM C840 Standard Specification for Application and Finishing of Gypsum Board
- Gypsum Association GA-216

Job Compliance Considerations

- Framing and furring members shall be installed as required to meet design or building code loading requirements.
- Where a rated system is specified for the project, the rated system must be followed.

Ceiling Installation

General Guidelines

RC-2 resilient Channel should be installed at right angles to the joists or trusses 16" (406 mm) center on center when the joists or trusses are 24" (610 mm) on center. When the joists or trusses are 16" (406 mm) on center the resilient channel can be installed up to 24" (610 mm) center on center. The fastening should be at every stud alternating flanges. See Table 1 on Page 2 from Gypsum Association GA-216-2007 for Maximum Framing Spacing For Single-Layer Gypsum Panel Product.

Start applying the resilient channel with the center a maximum of 6" (150 mm) from the wall. On ending at the other side stop the last course of resilient channel a maximum of 6" (150 mm) from the wall. This may require the spacing between the last two rows to be less than 16" (406 mm) or 24" (610 mm) whichever is being used. Stop the resilient channel at least 1" (25 mm) from the adjacent wall.

Fastening Guidelines

To fasten the resilient channel to wood studs use 1-1/4" (32 mm) Type W or 1-1/4" (32 mm) Type S screws. For steel joists or trusses 3/8" (9.5 mm) Type S pan head screws should be used. Nails are not recommended. Fasten to each joist alternating flanges. To fasten the drywall board to the resilient channel use 1" (25 mm) Type S Buglehead screws every 12" (305 mm). Screws should not come in contact with the stud, joist or truss. A maximum of two 5/8" (15.9 mm) boards should ever be fastened to resilient channel.

Splicing Guidelines

When channel ends fall between joists overlap approximately 1-1/2" (38 mm) and screw-attach through both legs into a wood block held above the channels, or over lap 6" and fasten both channels near ends with 3/8" (3.5 mm) Type S pan head screws.

Wall Installation

General Guidelines

RC-2 resilient channel should be installed at right angles to the studs spaced no more than 24" (610 mm) center to center. The fastening should be at every stud alternating flanges. A layer of gypsum board 1/2" (12.7 mm) x 3" (76 mm) can be installed instead of the RC-2 at the bottom of the wall. The row of resilient channel closest to the ceiling should be no further than 6" (150 mm) away from the ceiling. All of the resilient channel needs to be 1" (25 mm) away from the adjoining wall. See Table 1 on Page 2 from Gypsum Association GA-216-2007 for Maximum Framing Spacing For Single-Layer Gypsum Panel Product.

See Page 2 for Fastening and Splicing Guidelines.

RC-2 Resilient Sound Channel (Two-Legged)

Wall Installation (continued)

Fastening Guidelines

To fasten the resilient channel to wood studs use 1-1/4" (32 mm) Type W or 1-1/4" (32 mm) Type S screws. For steel joists or trusses 3/8" (9.5 mm) Type S pan head screws should be used. Nails are not recommended. Fasten to each joist alternating flanges. To fasten the drywall board to the resilient channel use 1" (25 mm) Type S Buglehead screws every 12" (305 mm). Screws should not come in contact with the stud, joist or truss. A maximum of two 5/8" (15.9 mm) boards should ever be fastened to resilient channel.

Splicing Guidelines

When channel ends fall between joists overlap approximately 1-1/2" (38 mm) and screw-attach through both legs into a wood block held above the channels, or over lap 6" and fasten both channels near ends with 3/8" (3.5 mm) Type S pan head screws.

Table 1 Maximum Framing Spacing For Single-Layer Gypsum Panel Product		
Gypsum Panel Product Thickness in. (mm)	Gypsum Panel Product Orientation to Framing	Maximum Framing Spacing in. (mm) o.c.
Ceilings:		
3/8 (9.5) ^A	Perpendicular ^B	16 (406)
1/2 (12.7)	Parallel ^B	16 (406)
1/2 (12.7)	Perpendicular ^B	24 (610)
5/8 (15.9)	Parallel	16 (406)
5/8 (15.9)	Perpendicular	24 (610)
Walls:		
3/8 (9.5)	Perpendicular or Parallel	16 (406)
1/2 (12.7)	Perpendicular or Parallel	24 (610)
5/8 (15.9)	Perpendicular or Parallel	24 (610)
^A Shall not support thermal insulation. ^B On ceilings to receive hand or spray-applied water-based texture material either i) 1/2 in. (12.7 mm) gypsum ceiling board (ASTM C 1396/C 1396M shall be applied perpendicular to framing; or ii) other gypsum panel products shall be applied perpendicular to framing and board thickness shall be increased from 3/8 in. (9.5 mm) to 1/2 in. (12.7 mm) for 16 in. (406 mm) o.c. framing and from 1/2 in. (12.7 mm) to 5/8 in. (15.9 mm) for 24 in. (610 mm) o.c. framing. See Appendix A.2.		

Table Source: Gypsum Association. GA-216-2007 *Application and Finishing of Gypsum Panel Products*. Retrieved 2/20/09 from <<http://www.gypsum.org/pdf/GA-216-07.pdf>>.

The information and recommendations contained herein are, to the best of Phillips Manufacturing Company's knowledge and belief, accurate and reliable as of the date issued. Phillips Manufacturing Company has no control over the conditions of handling and use, and makes no warranty regarding the results obtained from the use of this data. The information and recommendations are offered for the user's consideration and examination, and it is the user's responsibility to determine that they are suitable and complete for its particular use. Phillips reserves the right to make alterations and amendments to the detailed specifications at its discretion. Phillips disclaims responsibility for all actions, proceedings, liabilities, claims, damages, cost, losses, and expenses in relation to, or arising out of, incorrect utilization of this information.