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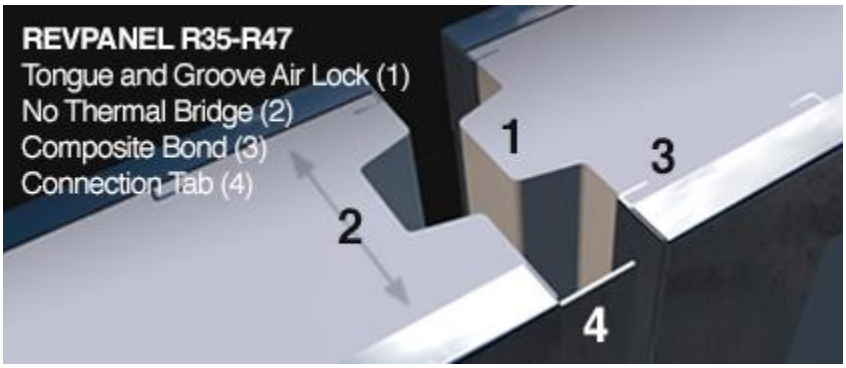
THERMASTEEL™ ADVANCED PANEL SYSTEMS

ThermaSteel Composite, Structural Insulated Panels



Composite, structural insulated panel standard configurations for DIY applications

Thickness	Dimensions	Weight	R-Value
3 ½" (89mm)	4 x 8‘ (1219 x 2438mm) 4 x 10‘ (1219 x 3048mm) 4 x 12‘ (1219 x 3658mm)	45-50lbs (20-22 kg)	R-23
4" (102mm)	4 x 8‘ (1219 x 2438mm) 4 x 10‘ (1219 x 3048mm) 4 x 12‘ (1219 x 3658mm)	45-50lbs (20 -22 kg)	R-25 R-26 *HD
5 ½" (140mm)	4 x 8‘ (1219 x 2438mm) 4 x 10‘ (1219 x 3048mm) 4 x 12‘ (1219 x 3658mm)	50-55lbs (21-23 kg)	R-35 R-36 *HD
7 ½" (190mm)	4 x 8‘ (1219 x 2438mm) 4 x 10‘ (1219 x 3048mm) 4 x 12‘ (1219 x 3658mm)	55-60lbs (23-27 kg)	R-47 R-49 *HD

Thickness	Dimensions	Weight	R-Value

Weight depends on the gauge of steel studs
*HD - High Density EPS
Effective R value is based on a calculation of 4.00 x per inch EPS thickness x 1.58 (inertia coefficient)
1.5 HD is 4.17 x per inch EPS thickness x 1.58.

How ThermaSteel panels are used

The ThermaSteel Building System is used for commercial construction projects, single and multi-family as well as industrial and institutional applications.

ThermaSteel REVPANELS feature a patented process using composite technology consisting of structural grade double steel frames with rigid, fire retarding EPS bonded to the steel frame. This process produces a lightweight composite panel that provides structural framing, insulation and vapor barrier in one unit.

ThermaSteel REVPANEL installation begins wih the installation of the bottom track along the perimeter of the floor. The panels are then placed in the track and screwed in place and together along the leading edge steel. Once the panels are in place a connecting track is installed along the top of the panels. This forms a quick assembling building system that is lightweight and extremely strong. Because the studs are oriented to the face of the panel and the tongue-in-groove joints are used at the edges, the system has a complete thermal break, providing superior thermal performance. Rough openings for doors and windows are formed during the manufacturing process. Horizontal wire chases are molded into each panel to accommodate electrical wiring. Additional chases for electrical and plumbing are easily cut in the field with a hot knife.

The ThermaSteel Building System can support multi-story loads. They can also be used in high-rise buildings as infill or curtain wall applications. The "H", or Hurricane panel has passed the Southern Florida Hurricane Test. It has also undergone third-party testing for energy code approval, including Uniform code approval IAPMO-ES 0128

Panel composition and materials

Panels - ThermaSteel REVPANELS consist of EPS bonded to steel stud frames and are available in 3, 4, 5½ and 7½ inch thicknesses. Note: Standard 4 x 8 feet x 3½ inches (1219 x 2438 x 89mm) panel weighs only 45 pounds (20 kg).

Studs - 24-12 gauge with standard G-60 or G-90 galvanized steel. They are positioned at either 16 inches (406mm) or 24 inches (609 mm) on center on both sides of the panel.

Cladding - Facings are not required until after panels are in place on site. Assemblies are also available with one-hour or two-hour rating. Exteriors may be clad with any type of approved siding.

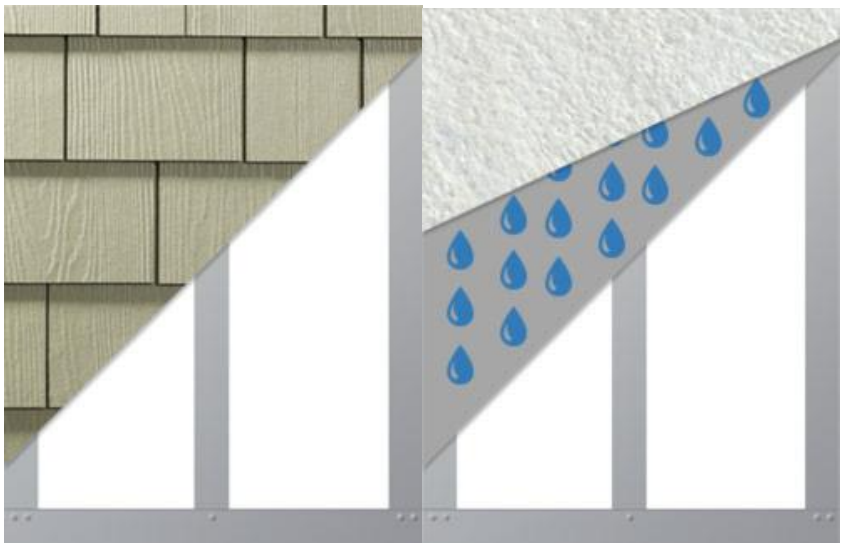
Facings and Foam - EPS Densities 3½" (89mm) panels = 1.5 lb/ft3 (24 kgf/m3) 4.0" (102mm) = 1.5 lb/ft3 (24 kgf/m3) 5.50" (140mm) panels = 1 lb/ft3 (16 kgf/m3) 7½" (191mm) panels = 1 lb/ft3 (16 kgf/m3) Interior walls must be covered with a minimum of ½" inch (13mm) drywall or plaster for a minimum 15 minute fire rating. Assemblies are also available with a one-hour or two-hour rating. Exteriors may be clad with any type of siding, no sheathing required.

Panel Connection System - Panels interlock with tongue-in-groove joints and self-tapping tech screws. The preferred method is to use metal track for the top and bottom plate. If wood plates are used, only single plates top and bottom are required. Plates are attached to the panel with 3.0 x 5.0 inches (76 x 127 mm) galvanized shear plates at each stud. Shiplap joints and sheet metal screws allow quick and easy panel connection.

Wiring - Vertical or horizontal chases can be pre-molded in the panels for an additional fee. Pre-molded electrical chases are optional.

Colors, finishes and coverings

All ThermaSteel REVPANELS can be clad in the field with synthetic stucco, vinyl, Hardie Board, brick, rainscreens or virtually any other cladding materials



Benefits and limitations

- Eliminates labor costs associated with insulating, sheathing, installing vapor barriers, blocking, let-ins, ladder bracing and thermal barrier
- Waste and cleanup costs are minimized
- Minimizes installation / framing time, which equates to lower construction loan interest and security costs
- Meets energy code requirements without adding extra material while remaining structurally sound
- No food value for insects
- Suitable for multi-story, high-rise applications as well as infill or curtain wall applications
- Offers load-bearing, sound reduction, thermal insulation and vapor barrier characteristics
- Flexibility with both gauge of steel and thickness of the panel will meet the needs for your projects
- Thermally broken

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Western United States Representative Contact: Hue Byles 909 496 0997