



**THERMASTEEL™**  
ADVANCED PANEL SYSTEMS



**THE COMPOSITE  
DIFFERENCE**  
MEANS BUILDING FASTER,  
STRONGER, SAFER, AND  
SMARTER!



**70,000 PROJECTS  
28 COUNTRIES**  
INSULATED PANELS FOR  
COMMERCIAL, RESIDENTIAL,  
INDUSTRIAL BUILDINGS



#FL3859 CAGE 8D0Q6

# THE REVPANEL SYSTEM

## COMPOSITE STRUCTURAL INSULATED PANELS

by THERMASTEEL



Example shows typical window rough opening, beam pocket, and top and bottom track.

### PRODUCT OVERVIEW

Thermasteel is a panelized building system that is capable of providing a completely non-combustible load bearing building envelope. The system provides below grade, exterior and interior walls, as well as floor, roof, acoustical and retaining walls, where every panel is a load bearing shear wall. Applications include high rise, mid-rise, commercial industrial, single family, tiny house, coolers, and storage, for civilian or military use. The pre-engineered system meets all international building codes (IBC, ICC) including US and Canadian.

**Four-In-One System** - Each panel includes the required Structure (1), Insulation (2), Eliminates sheathing (3), Vapor Barrier and (4), providing a Four-to-One labor savings.

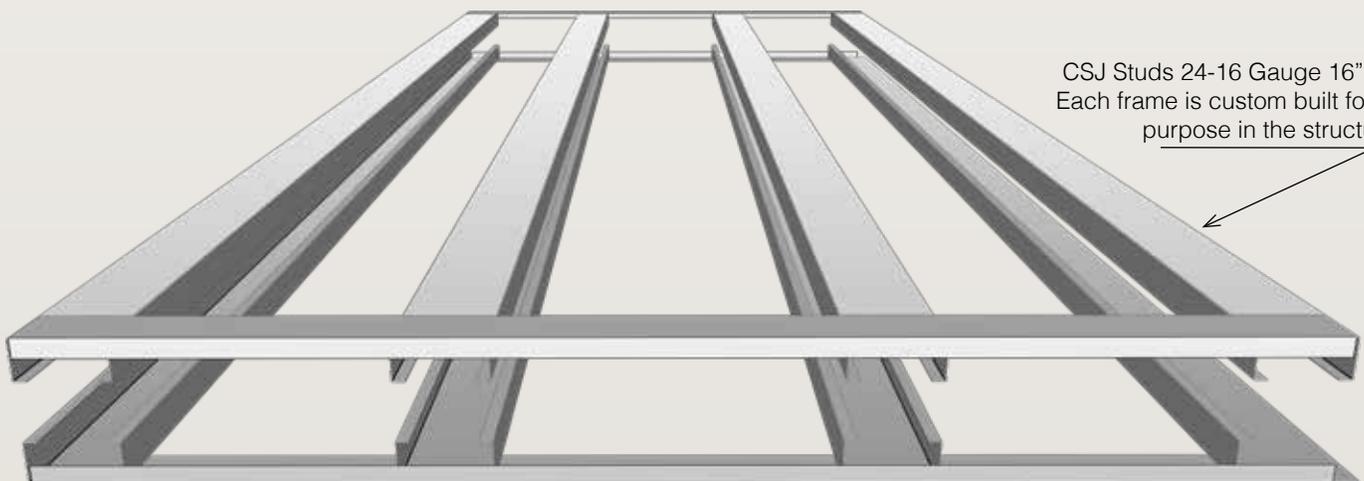
**No Cutting Necessary** - All rough openings are pre-fabricated into each panel, this means there is no cutting or reliance skilled framing labor to perform assembly, and no clean-up on the job-site.

- ▶ High Energy Efficiency, R-23 to R-50
- ▶ Completely stable, non-warping, low expansion/contraction
- ▶ Not a food source for termites and other insects
- ▶ Non bio degradable, moisture resistant, support mold or mildew
- ▶ Non-combustible assembly, lowest category for smoke and flame spread
- ▶ High wind and seismic resistance (Florida/Miami Dade Approval)
- ▶ No off-gassing, carcinogens, pathogens, or allergens
- ▶ 100% Recycled
- ▶ Use with any exterior cladding: stucco, siding, sheeting, brick, stone, etc.
- ▶ Low sound transfer
- ▶ Completely thermally broken

### APPLICATIONS

- ▶ Military housing
- ▶ Emergency Housing
- ▶ Disaster Recovery
- ▶ Affordable Housing
- ▶ Relocatable Modular
- ▶ Pre fabricated
- ▶ Multi-Family
- ▶ Off-Grid / Net Zero
- ▶ Residential / Commercial
- ▶ Airport Hangers
- ▶ Hospitals
- ▶ Student Housing
- ▶ Clinics
- ▶ Safe-Room
- ▶ Anti-Ballistic / Explosion Resistant
- ▶ Acoustic Walls
- ▶ Retaining Walls

CSJ Studs 24-16 Gauge 16" oc.  
Each frame is custom built for its  
purpose in the structure.



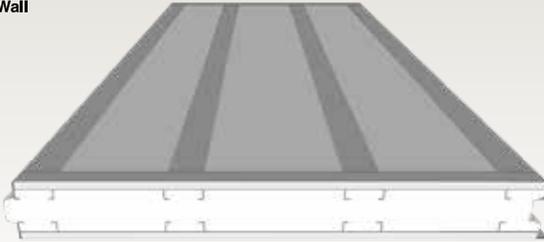
Thermally Broken, dual opposing frames (shown before EPS infusion).

Leading Edge, connects to next panel



# THE REVPANEL SYSTEM

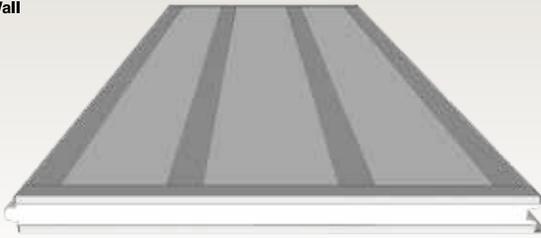
## **xPANEL** Exterior Wall



**xPanel** - 48" max width x 144" max height. Single and compound angles according to architectural details.

- 5.5" and 7.5" Thickness
- R-35 to R-50 (Effective)
- 4-in-1, Structure, Insulation, Sheathing, Vapor Barrier
- Load bearing
- Up to 8 stories with no additional structure
- Density 1.0-1.5pcf
- Arrives on site with door and window openings

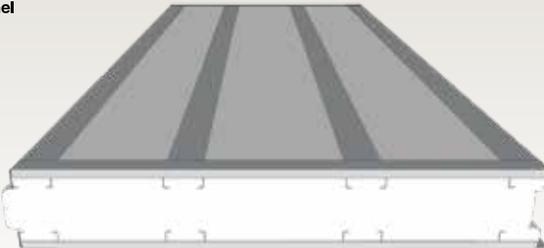
## **iPANEL** Interior Wall



**iPanel** - 48" max width x 144" max height. Single and compound angles according to architectural details.

- 3.5" Thickness
- Up to R-23
- Load Bearing
- Arrives on site with door and window openings
- Used as load bearing, demising walls

## **rPANEL** Roof Panel



**rPanel** - 48" max width x 144" max length. Single and compound angles according to architectural details. Reduces truss from spacing from 2' on center up to 10'.

- 5.5" and 7.5" Thickness
- R-35 to R-50 (Effective)
- Up to 220mph wind load
- EPS density 1.0-1.5psf

## **fPANEL** Floor Panel



**fPanel** - 48" Max width, 144" max length. Panels connect end-to-end and side-to-side for coverage. Rebar troughs to form grade beams, top with rebar mesh and 3-4" concrete. Panels connect end to end and side to side for coverage.

- Free spans up to 42ft.
- Reduces floor weight up to 40%



# ThermaSteel set out to REVAMP and REVOLUTIONIZE how walls are made. The result is the ThermaSteel REVPANEL Building System.



**Strength** - No other building system provides the strength and capability of REVPANEL. Build up to 8 stories without additional structure. Hurricane, fire, and seismic resistance.

**Faster Construction** - Reduces construction steps from 4 to 1, eliminating steps for framing, insulating, sheathing and vapor barrier. Panels are pre-engineered and manufactured in a quality-controlled environment to exact standards and delivered with door and window openings cut and ready for installation.

**Simple Installation** - Simple to install regardless of the labor skill level. Panels are delivered to job site numbered from the factory for a simple and fast install. Lightweight panels (as little as 45lbs) eliminate the need for lifting or cranes.

**Energy Efficient** - Designed for energy efficiency, delivery effective R-Value up to R-50 and reducing energy costs by up to 75%. Being non-bio-degradable material with shelf life of 350 years, with consistent thermal performance remains throughout the life of the product with no thermal drift.

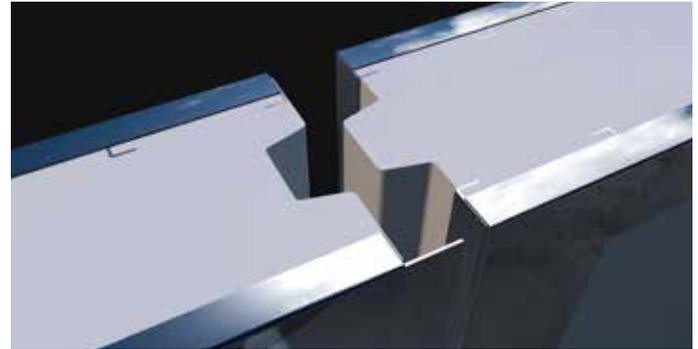
**Flexible Cladding** - Allows for virtually any type cladding directly to the panels structural studs every 16" on center, reducing sheathing. Flexible cladding including, but not limited to brick, siding, metal or stucco. Interior walls can be finished with dry wall, plaster or any other type of finish.

**Fire Safety** - Non-combustible assembly meets one, two, and three hour requirements. Tests have also proven that REVPANELS give off fewer toxins. Low smoke and flame spread.

**Exceeds Wind Safety Codes** - Designed for up to 250 mph wind loads. Meets or exceeds Dade County Hurricane Standards, and exceeds traditional building methods against flying debris.

**No Mold** - Closed cell expanded polystyrene does not allow mold or mildew to develop.

**Environmentally Friendly** - 100% recycled plant and environmentally friendly materials. Does not "off gas". EPS (Expanded Polystyrene), CFC and HCFC free. No carcinogens, allergens, or pathogens.



**Insect Deterrent** - Uses steel and expanded polystyrene - neither of which are of nutritional value to wood-boring insects such as termites.

**Sound Attenuation** - Assemblies up to 60 STC, improves sound attenuation, reducing sound conduction throughout the structure. Often used in multi-family, hotel and dormitory projects where sound reduction is a key objective.

**Closed Cell** - Closed cell technology eliminates moisture absorption, increases structural strength, reduces air circulation and reduces sound transfer compared to open cell.



# The Composite Difference

What is a composite? A “composite” is two or more different materials bonded together to create a superior, often lighter and stronger material.

Thermasteel patented STEEL and EPS bonding technology results in the highest strength to weight ratio of any structural insulated panel, creating new efficiencies and possibilities in construction.

Reduce wall construction time and labor by up to 50%.

Up to 75% more energy efficient.



STRUCTURE



INSULATION



VAPOR BARRIER



SHEATHING

**FOUR  
IN ONE**

## COMPOSITE AEROSPACE

### BOEING 787 DREAMLINER

Lighter and stronger means safer and more efficient to operate.



## COMPOSITE AUTOMOBILES

### KOENIGSEGG REGARA

Light, fast and safe. Stops in record short distance.



## COMPOSITE BUILDINGS

### THERMASTEEL REVPANELS

Faster to build, up to 75% more energy efficient, seismic, fire, and hurricane rated.



Heather - 123lbs  
R-35 RevPanel - 45lbs  
Framing, sheathing, insulation  
and vapor barrier all in one.



**XPANEL**  
Exterior Wall

# PERFECTING THE ENVELOPE

**THERMAL BRIDGING** occurs in walls when energy (heat/cold) travels through through the interior to the exterior side of the wall, or vice versa, creating heat loss and condensation. Studs allow heat or cold to move through the wall system three times faster than the surrounding insulation. The advertised R-value of 6 inch batt fiberglass insulation is R-19, the effective R-value of a typical wall assembly's is roughly R-4 to R-5 lower due to thermal bridging. Over time, the R value reduces to less than half. ThermaSteel REVPANELS remove the thermal bridge resulting in higher effective R-value.

**AIR INFILTRATION** is caused by air leaks, holes, and gaps in the building envelope where insulation sags or pulls away from the top and sides of framing, electrical outlets, and pipes. Air Infiltration can reduce thermal efficiency by up to 30%. ThermaSteel is 58% more air tight.

**Thermal Bridging** and **Air Infiltration** can turn walls into energy exchangers as high pressure air flows through pockets and gaps in the building envelope. With wire chases formed into panels and recesses for electrical and plumbing cut onsite with a \*hot-knife, the integrity of the envelope is maintained, eliminating thermal bridging and air infiltration.



Example below shows walls with interior gypsum and ready for exterior cladding to be installed directly to structural members with self-drilling screws as OSB and vapor barrier are not needed. Steel stud members placed at 16" on center. Expanded Polystyrene (EPS) bonded to steel studs forming a composite bond.

Effective Thermal Conductivity Rating

**R-35**



Tabbed connection to next panel with self-drilling screws.

Tongue and groove, air infiltration block, sound baffle

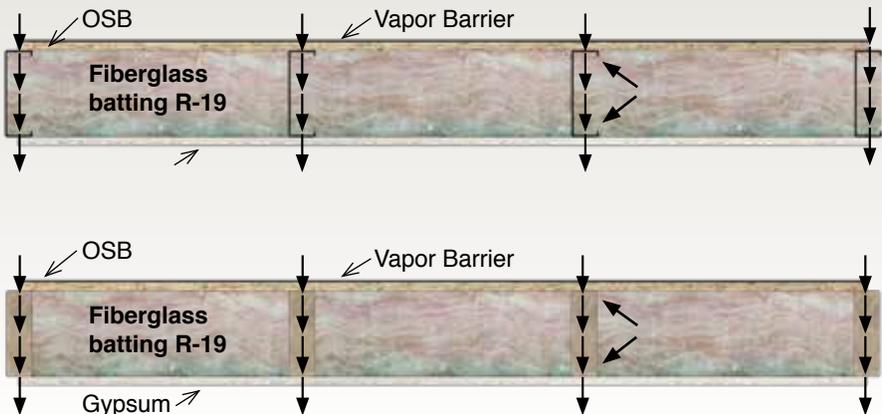
**VS**

## Traditional 5.5" Steel and Wood Framing

Example shown with interior gypsum, OSB sheathing, and vapor barrier required for exterior cladding.

Effective Thermal Conductivity Rating

**R-15**



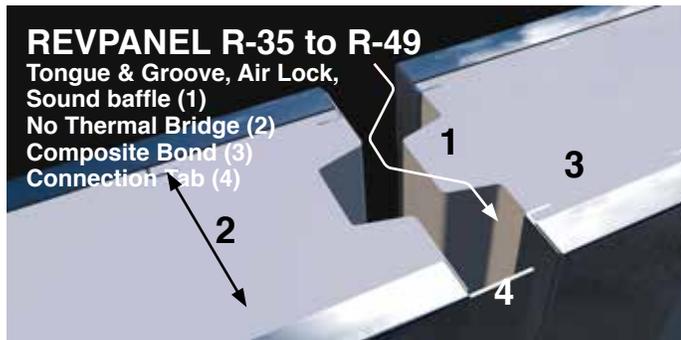
Steel and wood studs oriented through wall transfer thermal energy causing heat gain in summer and heat loss in winter.

Air infiltration is caused by gaps that allow passage of air through and around insulation and is a major cause of high energy costs.

# TECHNICAL

## 1. PRODUCT DESCRIPTION

The ThermaSteel Building System is composed of insulated ThermaSteel REVPANELS® using a composite technology for bonding steel to expanded polystyrene (EPS). The product uses partially recycled steel and the plant itself is 100 percent recycled. REVPANELS are utilized below and above grade for exterior walls, floors, basements, and interior walls, as well as roofs and ceilings. ThermaSteel REVPANELS are used in residential, commercial and industrial applications.



### Basic Use

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

ThermaSteel REVPANELS are made using a patented process to bond light gauge dual opposing structural steel frames to modified grade fire resistant EPS. The result is a light weight composite panel of unequalled strength and versatility, that provides structure, insulation, sheathing, and vapor barrier in one unit.

ThermaSteel REVPANEL installation begins with the installation of the bottom track along the perimeter of the floor. The panels are then placed in the track, screwed in place and then screwed together along the leading edge steel. Once the panels are in place, a connecting

track is installed along the top of the panels. This quick assembly process creates an extremely strong yet light weight building system. Because the studs are oriented to the face of the panel and the tongue-in-groove joints are used at the edges, the system provides a complete thermal break, with 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 REVPANEL Building System supports loads of multi-story structure. The Hurricane panel (H) is Southern Florida Hurricane Test Certified. It has also undergone third-party testing for energy code approval, including Uniform Code Approval **IAPMO-ES 0128**.

**Table 1 - Panel Dimensions and Weights**

Thickness	Dimensions	Weight*
3 1/2" (89mm)	4 x 8' (1219 x 2438mm)	45-50lbs (20-22 kg)
	4 x 10' (1219 x 3048mm)	
	4 x 12' (1219 x 3658mm)	
5 1/2" (140mm)	4 x 8' (1219 x 2438mm)	50-55lbs (21-23 kg)
	4 x 10' (1219 x 3048mm)	
	4 x 12' (1219 x 3658mm)	
7 1/2" (190mm)	4 x 8' (1219 x 2438mm)	55-60lbs (23-27 kg)
	4 x 10' (1219 x 3048mm)	
	4 x 12' (1219 x 3658mm)	
<b>*Weight depends on the gauge of steel studs</b>		

## Composition and Materials

### Panels

ThermaSteel REVPANELS are available in 3.5", 4", 5.5" and 7.5" thicknesses.

**Note:** A standard 4' x 8' x 3.5" (1219 x 2438 x 89mm) panel weighs only 45 pounds (20 kg).

### Studs

Studs are 24-12 gauge with standard G-60 or G-90 galvanized steel positioned on 16 inch (406mm) centers

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 cladded with any type of approved siding.

### Facings and Foam - EPS Densities

- ▶ 3.50" (89mm) panels = 1.5 lb/ft<sup>3</sup> (24 kgf/m<sup>3</sup>)
- ▶ 5.50" (140mm) panels = 1 lb/ft<sup>3</sup> (16 kgf/m<sup>3</sup>)
- ▶ 7.50" (191mm) panels = 1 lb/ft<sup>3</sup> (16 kgf/m<sup>3</sup>)

Interior walls must be covered with a minimum of .5" 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-drilling tech screws. The preferred method is to use metal track for the top and bottom plate. Plates are attached to the panel with 3" x 5" inch (76 x 127mm) galvanized shear plates at each stud. Tongue and Groove joints and sheet metal screws allow quick and easy panel connection.

### Wiring

Horizontal wire chases are molded in at factory as a standard feature.

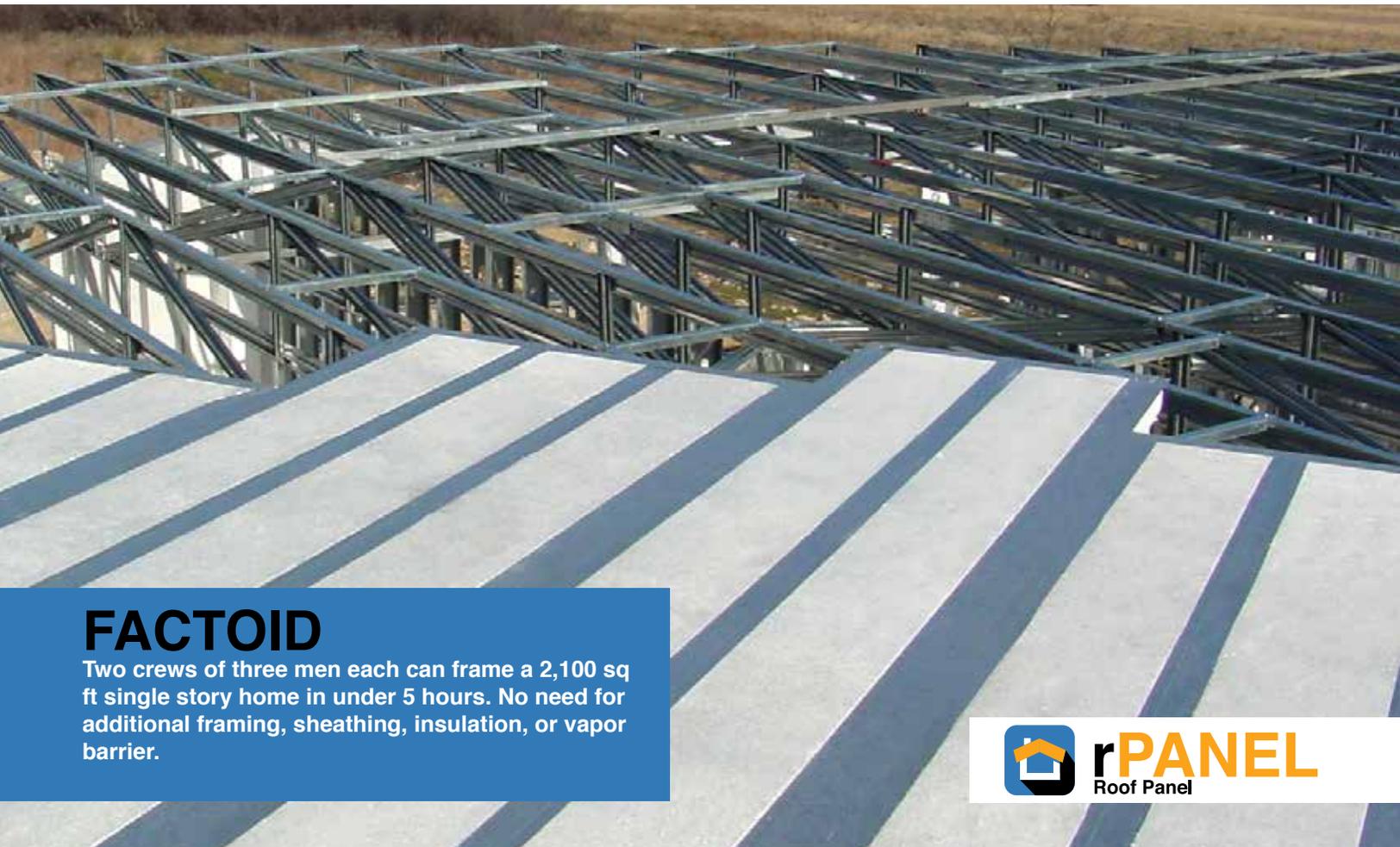
## Colors, Finishes, and Coverings

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

- ▶ 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 time, which equates to lower construction loan interest and security costs

## Benefits

- ▶ 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 loadbearing, sound reduction, thermal insulation and vapor barrier characteristics.
- ▶ Flexibility with both gauge of steel and thickness of



## FACTOID

Two crews of three men each can frame a 2,100 sq ft single story home in under 5 hours. No need for additional framing, sheathing, insulation, or vapor barrier.



the panel will meet the needs for your projects.

- ▶ Thermally broken
- ▶ Reduced framing time
- ▶ Eliminates labor and materials for insulation, sheathing, and vapor barrier.

## Product Limitations

The panels should not be used in areas where solvents such as gasoline or other hydrocarbons, including acetone, are present.



## 2. TECHNICAL DATA

### Applicable Standards

American National Standards Institute (ANSI)

- ▶ **ANSI/UL263** Standard for Safety for Fire Tests of Building; One-hour Load Bearing Fire Endurance

American Society for Testing and Materials (ASTM)

- ▶ **ASTM C518** Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Heat Flow
- ▶ **ASTM E90** Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements

### Technical Reports

- ▶ American Society for Testing and Materials (ASTM)

Test Report D-1118 Thermastructure Panel

- ▶ Hurricane Test Laboratory (HTL) Structural Test Report #98072
- ▶ Uniform Code approval IAMPO Report ES-128
- ▶ South Florida Code Compliance #HTL 98072
- ▶ Underwriters Laboratory (UL) BRYX.R4775 Foamed Plastic
- ▶ U.S. Department of Housing and Urban Development (HUD) Structural Engineering Bulletin 1072, Rev. 2

### Testing

Laboratory test results are available for compressive, transverse and racking shear using the standard ASTM E72 to determine the strength of the system. Fire and sound test data are also available. A modified “H” panel has passed the Florida Hurricane Test Lab requirements for Dade and Broward Counties. Test results for large impact, cyclic load, air and water infiltration are also available.

### Environmental Considerations

ThermaSteel REVPANELS are made with “ENERGY STAR” compliant material. The panels have undergone third-party testing for energy code approval.

ThermaSteel REVPANELS provide not only structural integrity, but excellent insulation properties as well. The EPS component of the panel is solid and free of voids that could allow air movement through the walls. ThermaSteel REVPANELS are molded with steel studs and EPS bonded together. ThermaSteel structural members contains a minimum of 24 percent recycled steel and is 100 percent recyclable.

ThermaSteel REVPANELS are used not only in commercial and industrial projects, but also in residential projects and as such, can qualify for credits based upon the LEED® 2009 for New Construction and Major Renovations rating system.



**Table 2 - LEED Points**

Objectives		Max LEED Points	
		Res	Com
EA 1:	Optimize energy performance	34	19
EA 2.1:	Insulation	2	-
EA 3:	Air filtration	3	-
MR 1.4:	Framing efficiencies	3	-
MR 1.5:	Off-site fabrication	4	-
MR 2:	Construction waste management	2	2
MR 2.2:	Environmentally preferable materials	3	-
MR 3.2:	Construction waste reduction	-	-
MR 4:	Recycled content	-	2
MR 5:	Regional materials	-	2
RP 1:	Regional Priority	-	4
ID 1:	Innovative in Design	-	1

## Material Safety Data Sheet

MSDS documentation is available from ThermaSteel and can be downloaded at [www.thermasteelinc.com](http://www.thermasteelinc.com).

## Flamespread and Smoke Development

### Closed Cell Expanded Polystyrene (EPS)

Expanded polystyrene (EPS) meets the flame-spread and smoke performance characteristics shown in Table 3.

**Table 3 - EPS Flame-spread and Smoke Performance**

Thickness (max)	1" 25mm	2" 51mm	5" 127mm	6" 152mm
Flamespread	5+	5++	5+++	5+++
Smoke Developed	50-90+	50-90++	50-175+++	50-175+++

### Fire Rated Wall

ThermaSteel REVPANELS meet a one hour load-bearing fire endurance and hose stream tests in accordance with the Standard, Fire Tests of Building Construction and Materials, ANSI/UL 263, (ASTM E119, NFPA No. 251) and satisfies non-load bearing fire requirements in accordance with other tested assemblies per NFPA 285.

## R-Values

**Note:** Meets or exceeds 2012 and 2013 energy code for both commercial and residential buildings.

**Table 4 - R-Values**

Thickness	R-Value	Effective R-Value
3 1/2" (89 mm)	R-14	R-24
5 1/2" (140 mm)	R-22	R-35, *R-36 (HD)
7 1/2" (190 mm)	R-30	R-47, *R-49 (HD)

\*HD - High Density EPS

## Thermal Conductivity

Unlike other insulations, the thermal conductivity of closed cell EPS used with ThermaSteel REVPANELS decreases at a lower average mean temperature per ASTM C518.

## Sound Performance

The panels have been tested in accordance with ASTM E90 and E413 as a wall system for basements, walls, roofs and ceilings. Visit [www.thermasteelinc.com](http://www.thermasteelinc.com) for more information.

## 3. INSTALLATION

Contact ThermaSteel for design and assembly documentation.

### Preparation

1. Study the appropriate drawings before beginning construction and assembly.
2. Unload the flatbed trailer at the job site.
3. Stack the panels for each floor so that they are in the necessary sequence for erection.

**Note:** Panels are usually set starting at one corner of the building and proceeding in a counter-clockwise fashion.

4. Verify that the dimensions of the slab or subfloor are in accordance with contract documents and coordinate with shop drawings.

**Note:** Dimensions should be within the tolerances stipulated by the design professional and/or by good construction practices.

5. Locate conduit stub-ups (if any) and drill holes in base plate.

### Methods

A level work area is recommended. This area should be cleared of debris and a baseline marked at the bottom and left hand side of the assembly area.

### Preparation of the Foundation

1. Attach panels to the foundation using wood plates or steel channel track per drawing. Steel track is often provided by ThermaSteel.

2. Start at any corner. Once corner is established, looking from outside, work from left to right.

3. Set steel tracks in a waterproof inhibitor such as roofing felt, foam tape, etc.

**Note:** Size and spacing of anchors shall be determined by a design professional based on building code requirements.

4. Caulk and set baseplates or track to building dimensions and secure to the slab or subfloor using anchors as per the design drawings.

**Note:** Verify that plates are leveled and the corners are square. If the foundation is not level, shim and grout with cement to obtain a level baseplate (track). Do not try to obtain a level wall by shimming the panels.

5. Once the bottom track is set and leveled, verify each panel dimension along the baseplate.

6. Fasten panels into track with two screw at each stud on inside and outside, and at the bottom and top of each panel.

7. On panels 8' and higher, locate attachment plates inside placed mid-height where panels join together.

### Wall Assembly

The usual method of assembly is to pre-assemble wall sections and set them in place. Sections are usually pre-assembled in 12–16 feet (3658–4877 mm) sections.

1. Once the assembly area is cleared and marked, consult the floor plan and determine which sections are to be assembled and in what sequence.

2. Using the panel numbers as reference, obtain the necessary panels and lay them out with the interior face down.

3. If specified, caulk joints and push the tongue and groove joints together.

**Note:** Each tongue and groove joint can be gapped open up to 1/2" inch (6.4 mm) as needed to adjust for discrepancies in wall length.

4. Check the section for overall dimensions and for squareness.

5. Once satisfied with the alignment, screw the panels together through the leading overlap edge metal as shown by the applicable engineering drawing or by attaching shear plates as indicated in the IAPMO ES 128 report.

6. Locate conduit stub-ups on panel, if any, and drill up from panel bottom.

**Note:** Mark the location of the conduit stub-ups on subfloor.

### Top Track

1. Follow the applicable guidelines and procedures in the assembly and installation of wall plates.

2. Tie panels together with steel track top track per the specification drawings.

3. Cut the top plate or track onsite to allow overlap to the center of the next panel section steel stud at 16 or 24 inches (406 or 610 mm).

4. Drill the top plate or track to match conduit or wiring chase locations, if any, in the assembled section before attaching the track to the panels.

5. Attach the track to the panels by placing screws in the track at each stud on both inside and outside.

**Note:** This connection is temporary and is used only to keep the track in place during erection of the walls. The top plate is permanently secured to the wall sections after the floor or roof system has been set, which loads the wall.

### Setting the Wall

1. Caulk the top of the track and raise the assembled wall section into place.

2. Connect the track per the engineering drawings and installation guide.

3. Attach the overlapping tracks to each other per the engineering drawings and installation guide.

4. Temporarily brace the top of the wall to the ground or

# CASE STUDIES

## Two Thermasteel Homes

1. 1,900 Sqft. Asheville, NC. Winter 2010 thru 2011  
Dec and Jan heating cost average 35/mo.  
**Avg six month heating season cost. \$18/mo.**

2. 1,800 Sqft. Mebane, NC. 11/2012 thru 10/2013  
Heat Pump HVAC  
Highest Monthly Cost: \$24.64  
**Average heating and cooling cost - \$10.50/mo.**



# TECHNICAL CONT'D

floor so it stands true and plumb.

**“C” or composite openings for doors, windows, etc.** Some panel openings are assemblies consisting of two or more components. These are shipped disassembled and must be assembled on site. Refer to the data sheets provided and assemble these sections before setting them in place. As in all assemblies, carefully check the unit for overall dimensions and squareness before setting it into wall section.

## Assembly of Panels

All bottom track must be level before the panels are set.

**Note:** If shimming is necessary to obtain level bottom track, place shim under the track and not between the panel and track.

Before making the final connections to the erected wall the walls must be plumb.

Once the panels are in place for one floor the overall dimensions and squareness of the building should be checked before proceeding with the assembly of any upper floor deck or roof system.

## Precautions

Protect panels from high winds and sharp impact.

## Inspection of Panels

Panels have been checked for density and fusion quality and for dimensions before shipment, but should be checked for damage and spot-checked for dimensions as they are unloaded and stacked.

As a general rule, any defect in the polystyrene core of the panel, such as small cuts or nicks will not affect the integrity of the panel. Damage to the metal will affect the panel's strength and integrity and can result in a rejected panel.

## On Site Changes

In general, any changes deemed necessary onsite must be cleared with the manufacturer before the changes are made.

## Electrical Boxes

Use a hot knife or other acceptable cutting tool. Do not exceed the box dimensions and where possible, locate the box beside a vertical steel channel for screw attachment. Boxes should have recessed ears or brackets behind the wall cladding.

## Wiring or Conduit Chases

If chases provided are not used, vertical chases may be cut into the polystyrene with a hot knife or other acceptable cutting tool. Vertical chases shall be cut a minimum of two inches (51 mm) from any vertical steel channel. Do not exceed half the panel thickness in depth or one inch (25 mm) in width when making these cuts. Horizontal chase cuts may be extended behind the vertical metal by drilling with a one inch (25 mm) bit near mid-depth of the panel.

## Safety Considerations

The panels may be handled by one or two workers. The following rules should be followed:

- ▶ Gloves should be worn at all times when moving panels. The metal edges must be handled carefully to avoid cuts.
- ▶ Do not remove panels in high wind conditions. The surface of the panel will catch the wind and can create a potentially hazardous condition.
- ▶ If high winds are possible, panels must be sheltered, weighted or otherwise protected from moving.

## 4. AVAILABILITY AND COST

### Availability

Products are shipped both nationally and internationally. Contact manufacturer for further details.

### Cost

Prices are calculated per square foot of wall, floor and roof panels. Since project applications and structural load requirements often dictate the size and type of panels needed, the manufacturer's standard policy is to provide quotations from architectural drawings. The price per square foot of wall may vary between different types of panels.

In most cases ThermaSteel will adapt the customer's plans to its system and can provide an estimate base on detailed dimensioned drawings.

No maintenance is required.

## 7. TECHNICAL SERVICES

ThermaSteel support is available to review technical details and plans if needed. Additional support personnel can be hired on a per diem basis. ThermaSteel offers detailed shop drawings and an assembly manual.

**PLEASE NOTE:** Certain designs and regions require a seal or letter of recommendation from a licensed structural engineer. Check your local building codes requirements. For an additional fee, ThermaSteel can provide engineering design services, stamping, domestic and internationally and value engineering on a case-by-case basis.

## 5. WARRANTY

ThermaSteel offers a limited warranty on its products. Contact ThermaSteel for details and limitations.

## 6. MAINTENANCE



## TESTIMONIAL

"To my surprise the utility bill for my first two month was \$32. That's 84% less than I used to pay for the same size house."

- Don Bowles - Thermasteel homeowner

# COMMERCIAL



## IS IT THERMASTEEL?

A ThermaSteel structure looks exactly as it would if it was built with traditional materials. It's just better. Customers do tell us that their homes are exceptionally quiet and the walls are very flat and straight. Builders say that ThermaSteel projects assemble quickly and there are never any call backs for drywall cracks or nail pops.



# RESIDENTIAL



Visit [thermasteelinc.com](http://thermasteelinc.com) to learn more

A few notable clients...



## TESTIMONIAL

“On September 5th the island of Anguilla took a direct hit from Hurricane “Luis”. We had 175mph winds and higher pounding us for nearly 10 hours. The windows in the nearby airport designed to withstand 200 mph winds were blown completely out. The only damage we sustained was from a 40 foot container that was picked up and thrown into the side of our building. Even so, there was little damage and no affect to the structural integrity of the building.”

- Gary L. Hunter



ThermaSteel, Inc 609 West Rock Road Radford, VA. 24141 Ph: 540.633.5000 Fx: 540.633.5001

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