



CERTIFICATION



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Technical Evaluation Report

TER 1504-05

Rmax® ThermaBase-CI™

Rmax®

Product:

Rmax® ThermaBase-CI™

Issue Date:

August 24, 2016

Revision Date:

October 26, 2022

Subject to Renewal:

October 1, 2023



COMPANY
INFORMATION:

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DIVISION: 06 00 00 - WOOD, PLASTICS AND COMPOSITES

SECTION: 06 16 00 - Sheathing

SECTION: 06 16 13 - Insulated Sheathing

DIVISION: 07 00 00 - THERMAL AND MOISTURE PROTECTION

SECTION: 07 20 00 - Thermal Protection

SECTION: 07 21 00 - Thermal Insulation

SECTION: 07 27 00 - Air Barriers

1 Product Evaluated¹

1.1 Rmax® ThermaBase-CI™

2 Applicable Codes and Standards^{2,3}

2.1 Codes

2.1.1 *IBC—15, 18, 21: International Building Code®*

2.1.2 *IRC—15, 18, 21: International Residential Code®*

2.2 Standards and Referenced Documents

2.2.1 *AISI S100: North American Specification for the Design of Cold-formed Steel Structural Members*

2.2.2 *ANSI/AWC NDS: National Design Specification (NDS) for Wood Construction*

2.2.3 *ANSI/AWC SDPWS: Special Design Provisions for Wind and Seismic*

2.2.4 *ASTM C90: Standard Specification for Loadbearing Concrete Masonry Units*

2.2.5 *ASTM C1019: Standard Test Method for Sampling and Testing Grout for Masonry*

2.2.6 *ASTM C1289: Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board*

2.2.7 *ASTM E2178: Standard Test Method for Air Permeance of Building Materials*

¹ For more information, visit drjcertification.org or call us at 608-310-6748.

² Unless otherwise noted, all references in this TER are from the 2021 version of the codes and the standards referenced therein. This material, design, or method of construction also complies with the 2000-2018 versions of the referenced codes and the standards referenced therein.

³ All terms defined in the applicable building codes are italicized.

- 2.2.8 *ASTM E330: Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference*
- 2.2.9 *ASTM E564: Standard Practice for Static Load Test for Shear Resistance of Framed Walls for Buildings*
- 2.2.10 *ASTM E84: Standard Test Method for Surface Burning Characteristics of Building Materials*
- 2.2.11 *DOC PS 2: Performance Standard for Wood-based Structural-use Panels*
- 2.2.12 *UL 263: Standard for Fire Test of Building Construction and Materials*

3 Performance Evaluation

- 3.1 Rmax® ThermaBase-CI™ was evaluated to determine the following:
 - 3.1.1 Thermal resistance for use as insulating sheathing in accordance with [IECC Section R402.1](#) and [IRC Section N1102.1](#),
 - 3.1.2 Foam plastic insulation performance in accordance with [IRC Section R316](#),
 - 3.1.3 Connection to light-frame wood construction framing to support cladding weight in accordance with [IBC Section 1604.2](#) and [IRC Section R301.1.3](#),
 - 3.1.4 Connection to light-frame cold-formed steel framing to support cladding weight in accordance with [IBC Section 1604.2](#),
 - 3.1.5 Connection to concrete substrate to support cladding weight in accordance with [IBC Section 1901.3](#),
 - 3.1.6 Performance for use as an air barrier in accordance with [IECC Section C402](#),
 - 3.1.7 Structural performance under lateral load conditions for use as an alternative to [SDPWS Section 4.3 Wood-Frame Shear Walls](#),
 - 3.1.8 Resistance to transverse loads for wall assemblies used in light-frame wood construction in accordance with [IRC Section R301.2.1](#) and [IBC Section 1609.1.1](#), and
 - 3.1.9 Performance for use in a fire resistance rated assembly in accordance with [IBC Section 2603.5.1](#).
- 3.2 Design of cladding fastening to ThermaBase-CI™ is outside the scope of this TER.
- 3.3 Seismic design is outside the scope of this TER.
- 3.4 Any code compliance issues not specifically addressed in this section are outside the scope of this TER.
- 3.5 Any engineering evaluation conducted for this TER was performed within DrJ's ANAB [accredited ICS code scope](#) and/or the defined professional engineering scope of work on the dates provided herein.

4 Product Description and Materials

- 4.1 ThermaBase-CI™, as shown in Figure 1, is a composite product that consists of an Rmax® rigid, closed-cell polyisocyanurate (Polyiso) foamed plastic insulation board bonded to either oriented strand board (OSB) or CDX Plywood with liquid adhesive up to 5" in total thickness.



Figure 1. ThermaBase-CI™



- 4.1.1 Rmax® Polyiso foam insulation conforms to *ASTM C1289*.
- 4.1.2 The OSB is manufactured in accordance with *DOC PS 2* for compliance with *IRC Section R604.1*.
- 4.1.3 The CDX Plywood is manufactured in accordance with *DOC PS 2* for compliance with *IRC Section R604.1*.
- 4.1.4 ThermaBase-CI™ is manufactured with Rmax® Thermasheath or Rmax® Durasheath® as the rigid insulation portion of the product.
- 4.1.5 The rigid insulation portion is available in the following nominal thicknesses: 0.5" (12.7 mm) through 4.5" (114 mm).
- 4.1.6 The OSB portion is standard at 7/16" (11 mm) thickness. Other OSB or CDX Plywood thicknesses are available upon request.
- 4.1.7 Standard product width: 48" (1,219 mm).
- 4.1.8 Standard product length: 96" (2,438 mm).

5 Applications

5.1 General

- 5.1.1 ThermaBase-CI™ is a composite insulation panel for use in the following applications:
 - 5.1.1.1 Continuous insulation on buildings constructed in accordance with the IBC and IRC for light-frame wood construction,
 - 5.1.1.2 Continuous insulation providing a nail base for cladding materials used in light-frame wood construction,
 - 5.1.1.3 Continuous insulation on buildings constructed in accordance with the IBC for light-frame cold-formed steel construction or metal buildings,
 - 5.1.1.4 Continuous insulation providing a nail base for cladding materials used in light-frame cold-formed steel construction or metal buildings,
 - 5.1.1.5 Continuous insulation on buildings constructed in accordance with the IBC for concrete masonry buildings or concrete buildings, and
 - 5.1.1.6 Continuous insulation providing a nail base for cladding materials used in concrete masonry buildings or concrete buildings.
- 5.1.2 Environmental Product Declarations (EPD) for ThermaBase-CI™ are available at polyiso.org.

5.2 Thermal Insulation

- 5.2.1 ThermaBase-CI™ is intended to be used as exterior continuous insulation under any type of permitted cladding.

5.3 Air Barrier

- 5.3.1 ThermaBase-CI™ meets the requirements of *IECC Section C402.5* and *IECC Section R402.4* for use as a component of the air barrier, when installed in accordance with the manufacturer installation instructions and this TER with all seams, including the top and bottom edges, treated.
- 5.3.2 Air barrier properties for ThermaBase-CI™ are shown in Table 1.

Table 1. ThermaBase-CI™ Air Barrier Properties

Test Method	Property
ASTM E2178	< 0.02 L/(s·m²) ¹
1. Liter per second per square meter	



5.3.3 The air permeance of an air barrier material is defined in IECC Section C402.5.1.3⁴ and IECC Section R303.1.5 as being no greater than 0.02 liter per second per square meter (L/(s·m²)) at 75 Pa (0.004 cfm/ft² at 1.57 psf) pressure difference when tested in accordance with ASTM E2178.

5.4 Fire Safety

5.4.1 Surface Burn Characteristics:

5.4.1.1 Flame spread and smoke developed indexes for ThermaBase-CI™ are shown in Table 2.

Table 2. Surface Burn Characteristics

Product	Thickness (in)	Flame Spread	Smoke Developed
ThermaBase-CI™ Core ¹	< 1	< 40	< 250
	≥ 1	< 25	< 160

SI: 1 in = 25.4 mm

1. Foam plastic portion of ThermaBase-CI™ tested in accordance with *ASTM E84*. Flame spread and smoke developed numbers are shown for comparison purposes only and are not intended to represent the performance of ThermaBase-CI™ and related components under actual fire conditions.

5.4.2 Thermal Barrier:

5.4.2.1 Except as noted in Section 5.4.2.2, ThermaBase-CI™ panels, with the rigid insulation layer at a maximum thickness of up to 4.5" (114 mm) may be installed within the building envelope (including, but not limited to, attics, crawlspaces and wall assemblies) of all building types when separated from the interior with a thermal barrier. The thermal barrier shall consist of a minimum ½" gypsum wallboard or an approved equivalent in accordance with IBC Section 2603.4 and IRC Section R316.4⁵.

5.4.2.2 The thermal barrier required by Section 5.4.2.1 is not required in the following applications:

5.4.2.2.1 ThermaBase-CI™ is covered by a minimum 1" thickness of concrete or masonry separating the interior of the building from the sheathing, in accordance with IBC Section 2603.4.1 or IRC Section R316.5.1, and

5.4.2.2.2 Walk-in coolers in accordance with IBC Section 2603.4.1.3.

5.4.2.3 Where an ignition barrier is permitted in lieu of a thermal barrier, such as attic, crawlspace or other uninhabitable space applications, ThermaBase-CI™ panels with the rigid insulation layer at a maximum thickness of up to 2" may be installed on walls only, without a thermal barrier or ignition barrier in accordance with IBC Section 2603.4.1.6 and IRC Section R316.5.3 and Section R316.5.4.

5.4.2.3.1 For panels with the rigid insulation layer at a thickness greater than 2", an ignition barrier is required.

⁴ 2018 IECC Section C402.5.1.2.1

⁵ 2015 IRC also allows for 23/32" wood structural panel



5.4.3 Fire Resistance Ratings:

5.4.3.1 ThermaBase-CI™ has been tested and meets the requirements of UL 263 in accordance with IBC Section 2603.5.1 for use in the following assembly designs when installed in accordance with the manufacturer installation instructions and this TER:

5.4.3.1.1 45 minutes: U424, U425, V321, V499, W456

5.4.3.1.2 1 hour: U026, U326, U330, U354, U355, U364, U424, U425, U460, V302, V303, V454, V499, W307, W417, W456

5.4.3.1.3 1.5 hours: U424, U425, V499, W456

5.4.3.1.4 2 hours: U349, U424, U425, U905, U906, V332, V499, W456

5.4.3.1.5 3 hours: U904, U907

5.4.3.1.6 4 hours: U902, U907

5.5 Wind Pressure Resistance

5.5.1 ThermaBase-CI™ is permitted to be used where the Maximum Nominal Design Wind Speed is as set forth in Table 3.

Table 3. Transverse Load Performance of ThermaBase-CI™ Structural Sheathing¹

Minimum Nail		Max. Wall Stud Spacing (in)	Max. Panel Nail Spacing		Maximum Nominal Design Wind Speed, V_{ult}/V_{asd} (mph)		
Size	Penetration (in)		Edge (in o.c.)	Field (in o.c.)	Wind Exposure Category		
					B	C	D
8d common (0.131 diameter)	1.25	24	4	12	220/170	220/170	220/170
			6	12	220/170	200/155	190/147
			8	12	200/155	180/139	170/132
			12	12	180/139	150/116	140/108
			16	16	160/124	130/101	120/93
			24	24	120/93	-	-
12d common (0.148 diameter)	1.25	24	4	12	220/170	220/170	220/170
			6	12	220/170	200/155	200/155
			8	12	220/170	190/147	170/132
			12	12	190/147	160/124	150/116
			16	16	160/124	140/108	130/101
			24	24	130/101	110/85	-
Rmax® Nail Board Fastener SIPTP, FastenMaster® HeadLOK®, TRUFAST® SIPTP	1.25	24	24	24	220/170	220/170	220/170
Simpson Strong-Drive® SDWS22	1.25	24	16	16	220/170	220/170	220/170
			24	24	220/170	220/170	200/155

SI: 1 in = 25.4 mm, 1 mph = 1.61 km/h

1. Wind speeds are based on an enclosed building with a mean roof height of 30', Zone 5 and a 10 ft area.



5.6 Resistance to Lateral Loads

5.6.1 ThermaBase-CI™ has been tested in accordance with ASTM E564 for lateral resistance and has the shear capacity as shown in Table 4 and Table 5.

Table 4. Allowable Stress Design (ASD) Capacity – Wind^{1,4} (Foam Against Studs)

Product	Fastener Type & Size ^{5,6} (Spaced 4":12")	Maximum Stud Spacing (in)	Max. Distance from Face of Framing to Underside of Fastener Head (in)	Allowable Unit Shear Capacity (plf) ²
ThermaBase-CI™ ½" Polyiso + 7/16" OSB	8d (0.131" x 2½")	24 o.c.	0.938	470
		16 o.c.		495
ThermaBase-CI™ 1" Polyiso + 7/16" OSB	8d (0.131" x 3¼")	24 o.c.	1.438	385
		16 o.c.		425
ThermaBase-CI™ 1½" Polyiso + 7/16" OSB	0.131" x 3¼" Smooth Shank Nail	24 o.c.	1.938	330
		16 o.c.		375
ThermaBase-CI™ 2" Polyiso + 7/16" OSB	0.131" x 3¼" Smooth Shank Nail ³	24 o.c.	2.438	310
		16 o.c.		360
ThermaBase-CI™ 2" Polyiso + 7/16" OSB	Rmax® Nail Board Fastener SIPTP, FastenMaster® HeadLOK®, TRUFAST® SIPTP, Simpson Strong-Drive® SDWS22	24 o.c.	2.438	310
		16 o.c.		360

SI: 1 in = 25.4 mm, 1 lb/ft = 0.0146 kN/m

- ThermaBase-CI™ attached with a minimum 0.131" diameter smooth shank nail, lengths as listed above. Fasteners are to be spaced a maximum of 4" o.c. at the edges and 12" o.c. in the field with a minimum edge distance of ¾". Minimum fastener penetration of 1-¼" required, excepted as noted below.
- No additional capacity may be added for GWB installed on the interior side of the wall.
- Fastener penetration of only 13/16" (0.813").
- For thicker continuous insulation applications, design is required in accordance with accepted engineering practice.
- Fasteners of equal or greater diameter, length and head size and material properties may be substituted for the fasteners above including all fasteners shown in Table 6 and Table 7.
- Fastener head shall be flush with the OSB. The total distance from the face of the stud, to the underside of the fastener head shall not be more than that listed above.



Table 5. Allowable Stress Design (ASD) Capacity – Wind^{1,3,4}

Product	Fastener Type & Size (Spaced 4":12")	Maximum Stud Spacing (in)	Max. Distance from Face of Framing to Underside of Fastener Head (in)	Allowable Unit Shear Capacity (plf) ^{2,6}
ThermaBase-CI™ 1 ³ / ₁₆ " Polyiso + 7 ¹ / ₁₆ " OSB (OSB installed against the studs) ⁵	0.113" x 2 ³ / ₈ " Smooth Shank Nail	24 o.c.	0.438	490
		16 o.c.		535
<p style="text-align: right;">SI: 1 in = 25.4 mm, 1 lb/ft = 0.0146 kN/m</p> <ol style="list-style-type: none"> ThermaBase-CI™ attached with a minimum 0.131" diameter smooth shank nail, lengths as listed above. Fasteners are to be spaced a maximum of 4" o.c. at the edges and 12" o.c. in the field with a minimum edge distance of 3/8". Minimum fastener penetration of 1-1/4" required, excepted as noted below. Where GWB is installed on the interior side of the wall, capacity of the gypsum may be added to the allowable unit shear capacity in accordance with SDPWS, Table 4.3C. For thicker continuous insulation applications, design is required in accordance with accepted engineering practice. Fastener head shall be flush with the OSB. The total distance from the face of the stud, to the underside of the fastener head shall not be more than that listed above. Requires installation using Senco® SCN63LDXP Structural Foam Insulation Nailer. 1-3/16" Maximum ThermaBase-CI™ foam thickness. For framing species other than Douglas-Fir-Larch or Southern Pine, reduced capacities shall be determined by multiplying the unit shear capacity by a framing lumber specific gravity adjustment factor= [1-(0.5-G)] where G = the specific gravity of the framing lumber per NDS Table 11.3.2A. The adjustment factor shall not be greater than 1. 				

5.7 Fastener Attachments to Wood and Steel Framing for ThermaBase-CI™ to Support Cladding Weight

- 5.7.1 To develop the loads listed in Table 4 and Table 5, the fasteners attaching the ThermaBase-CI™ sheathing to the wall framing shall have a minimum size and maximum spacing as shown in Table 4 and Table 5 and all panel edges shall be supported by framing or blocking.
- 5.7.2 Fasteners are required to attach the ThermaBase-CI™ sheathing to the wall framing to carry the cladding weight.
 - 5.7.2.1 See Table 6 through Table 11 for allowable cladding loads for various fastener types and sheathing thicknesses for wood stud framing.
 - 5.7.2.2 See Table 12 through Table 17 for allowable cladding loads for various fastener types and sheathing thicknesses for light-frame cold-formed steel construction.
- 5.7.3 Minimum penetration into wood wall framing is 1 1/4" unless specifically noted in this TER.
- 5.7.4 Minimum allowable penetration into steel wall framing is the steel thickness plus three threads plus the tip.
- 5.7.5 For attaching to wood studs, fasteners with equal or greater design properties shall be permitted:
 - 5.7.5.1 Rmax® Nail Board Fastener SIPTP: 0.189" shank diameter, 0.635" head diameter,
 - 5.7.5.2 8d nail (0.131" x 2.5"): 0.281" head diameter,
 - 5.7.5.3 12d nail (0.148" x 3.25"): 0.312" head diameter,
 - 5.7.5.4 Simpson Strong-Drive® SDWS22: 0.22" shank diameter, 0.435" head diameter,
 - 5.7.5.5 FastenMaster® HeadLOK®: 0.191" shank diameter, 0.625" head diameter, and
 - 5.7.5.6 TRUFAST® SIPTP: 0.189" shank diameter, 0.635" head diameter.
- 5.7.6 For attaching to cold-form steel studs, fasteners with equal or greater design properties shall be permitted:
 - 5.7.6.1 Rmax® Nail Board Fastener SIPLD: 0.189" shank diameter, 0.635" head diameter,
 - 5.7.6.2 Rmax® Nail Board Fastener SIP HD: 0.189" shank diameter, 0.635" head diameter,
 - 5.7.6.3 #8 screw: 0.164" shank diameter, 0.3125" head diameter,
 - 5.7.6.4 #10 screw: 0.190" shank diameter, 0.3400" head diameter,
 - 5.7.6.5 #12 screw: 0.216" shank diameter, 0.3400" head diameter,



- 5.7.6.6 TRUFAST® SIPLD: 0.189" shank diameter, 0.635" head diameter,
- 5.7.6.7 TRUFAST® SIPHD: 0.189" shank diameter, 0.635" head diameter,
- 5.7.6.8 FastenMaster® HeadLOK®: 0.191" shank diameter, 0.625" head diameter, and
- 5.7.6.9 SFS intec Dekfast™: 0.191" shank diameter, 0.625" head diameter.

Table 6. Maximum Fastener Spacing for ThermaBase-CI™ Utilizing 7/16" & 1/2" OSB with Vertical Wood Studs Spaced 16" o.c.^{1,3,4,5,6}

Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
		Specified Cladding Weight ² (psf)					
		5	10	15	20	25	30
Rmax® Nail Board Fastener SIPTP	1/2	24	24	24	24	16	16
	3/4	24	24	24	16	12	12
	1	24	24	20	12	12	8
	1 1/2	24	16	12	8	8	8
	2	20	12	8	8	6	6
	2 1/2	16	8	8	6	4	4
	3	12	8	6	4	4	4
	3 1/2	8	6	4	4	4	-
	4	8	6	4	4	-	-
8d (0.131" x 2.5")	1/2	24	16	12	8	8	6
	3/4	24	12	8	8	6	4
12d (0.148" x 3.25")	1/2	24	20	16	12	8	8
	3/4	24	16	12	8	8	6
	1	20	12	8	8	6	4
	1 1/2	12	8	6	4	4	4
TRUFAST® SIPTP	1/2	24	24	24	24	16	16
	3/4	24	24	24	16	12	12
	1	24	24	20	12	12	8
	1 1/2	24	16	12	8	8	8
	2	20	12	8	8	6	6
	2 1/2	16	8	8	6	4	4
	3	12	8	6	4	4	4
	3 1/2	8	6	4	4	4	-
	4	8	6	4	4	-	-
1/2	1/2	24	24	24	24	20	16
	3/4	24	24	24	20	16	12



Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
		Specified Cladding Weight ² (psf)					
		5	10	15	20	25	30
FastenMaster® HeadLOK®	1	24	24	20	16	12	12
	1 ½	24	20	16	12	8	8
	2	24	16	12	8	8	6
	2 ½	20	12	8	8	6	4
	3	12	8	8	6	4	4
	3 ½	12	8	6	4	4	4
	4	8	6	6	4	4	-
	4 ½	8	6	4	4	-	-
Simpson Strong-Drive® SDWS22	½	24	24	24	24	24	20
	¾	24	24	24	24	20	16
	1	24	24	24	20	16	16
	1 ½	24	24	20	16	12	8
	2	24	20	16	12	8	8
	2 ½	24	16	12	8	8	6
	3	20	12	8	8	6	6
	3 ½	16	12	8	6	6	4
	4	12	8	8	6	4	4
	4 ½	12	8	6	4	4	4

SI: 1 in = 25.4 mm, 1 psf = 0.0479 kN/m²

1. Minimum fastener penetration into stud is 1¼".
2. The weight of ThermaBase-CI™ and sheathing is included in the fastener spacing calculations. The specified cladding weight shall include all other supported materials besides the ThermaBase-CI™ and sheathing.
3. ThermaBase-CI™ is installed directly to the studs with the OSB or plywood to the exterior of the structure.
4. Wood studs shall be a minimum of 2x4 and have a minimum specific gravity of 0.42.
5. Nail and screw values determined using NDS Yield Limit Equations and TR-12 for evaluating the foam as a gap.
6. Nail fasteners shall comply with ASTM F1667, except nail length shall be permitted to exceed ASTM F1667 standard lengths. Minimum bending yield strength for nails with a diameter up to 0.148", 0.162", and 0.225" shall be 90,000 psi, 90,000 psi, and 80,000 psi respectively. Proprietary fastener properties are per published data or testing.



Table 7. Maximum Fastener Spacing for ThermaBase-CI™ Utilizing 7/16" & 1/2" OSB with Vertical Wood Studs Spaced 24" o.c.^{1,3,4,5,6}

Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
		Specified Cladding Weight ² (psf)					
		5	10	15	20	25	30
Rmax® Nail Board Fastener SIPTP	1/2	24	24	20	16	12	8
	3/4	24	20	16	12	8	8
	1	24	16	12	8	8	6
	1 1/2	20	12	8	6	6	4
	2	12	8	6	4	4	4
	2 1/2	8	6	4	4	-	-
	3	8	6	4	-	-	-
	3 1/2	6	4	-	-	-	-
	4	6	4	-	-	-	-
	4 1/2	4	-	-	-	-	-
8d (0.131" x 2.5")	1/2	20	12	8	6	4	4
	3/4	16	8	6	4	4	-
12d (0.148" x 3.25")	1/2	24	12	8	8	6	4
	3/4	20	12	8	6	4	4
	1	12	8	6	4	4	-
	1 1/2	8	6	4	-	-	-
TRUFAST® SIPTP	1/2	24	24	20	16	12	8
	3/4	24	20	16	12	8	8
	1	24	16	12	8	8	6
	1 1/2	20	12	8	6	6	4
	2	12	8	6	4	4	4
	2 1/2	8	6	4	4	-	-
	3	8	6	4	-	-	-
	3 1/2	6	4	-	-	-	-
	4	6	4	-	-	-	-
	4 1/2	4	-	-	-	-	-
FastenMaster® HeadLOK®	1/2	24	24	20	16	12	12
	3/4	24	24	16	12	12	8
	1	24	20	12	12	8	8
	1 1/2	24	12	8	8	6	6
	2	16	8	8	6	4	4
	2 1/2	12	8	6	4	4	-



Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
		Specified Cladding Weight ² (psf)					
		5	10	15	20	25	30
FastenMaster® HeadLOK®	3	8	6	4	4	-	-
	3½	8	6	4	-	-	-
	4	6	4	4	-	-	-
	4½	4	4	-	-	-	-
Simpson Strong-Drive® SDWS22	½	24	24	24	20	16	12
	¾	24	24	24	16	12	12
	1	24	24	16	12	12	8
	1½	24	16	12	8	8	6
	2	20	12	8	8	6	6
	2½	16	8	8	6	4	4
	3	12	8	6	4	4	4
	3½	8	8	6	4	4	-
	4	8	6	4	4	-	-
4½	8	6	4	-	-	-	

SI: 1 in = 25.4 mm, 1 psf = 0.0479 kN/m²

1. Minimum fastener penetration into stud is 1¼".
2. The weight of ThermaBase-CI™ and sheathing is included in the fastener spacing calculations. The specified cladding weight shall include all other supported materials besides the ThermaBase-CI™ and sheathing.
3. ThermaBase-CI™ is installed directly to the studs with the OSB or plywood to the exterior of the structure.
4. Wood studs shall be a minimum of 2x4 and have a minimum specific gravity of 0.42.
5. Nail and screw values determined using NDS Yield Limit Equations and TR-12 for evaluating the foam as a gap.
6. Nail fasteners shall comply with ASTM F1667, except nail length shall be permitted to exceed ASTM F1667 standard lengths. Minimum bending yield strength for nails with a diameter up to 0.148", 0.162", and 0.225" shall be 90,000 psi, 90,000 psi, and 80,000 psi respectively. Proprietary fastener properties are per published data or testing.



Table 8. Maximum Fastener Spacing for ThermaBase-CI™ Utilizing ½" or ⅝" Plywood with Vertical Wood Studs Spaced 16" o.c.^{1,3,4,5,6}

Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
		Specified Cladding Weight ² (psf)					
		5	10	15	20	25	30
Rmax® Nail Board Fastener SIPTP	½	24	24	24	20	16	12
	¾	24	24	20	16	12	12
	1	24	24	16	12	12	8
	1½	24	16	12	8	8	6
	2	20	12	8	8	6	4
	2½	12	8	8	6	4	4
	3	12	8	6	4	4	-
	3½	8	6	4	4	-	-
	4	8	6	4	-	-	-
	4½	6	4	4	-	-	-
8d (0.131" x 2.5")	½	24	16	12	8	6	6
	¾	20	12	8	6	6	4
12d (0.148" x 3.25")	½	24	20	12	8	8	8
	¾	24	16	8	8	6	6
	1	20	12	8	6	6	4
	1½	12	8	6	4	4	-
TRUFast® SIPTP	½	24	24	24	20	16	12
	¾	24	24	20	16	12	12
	1	24	24	16	12	12	8
	1½	24	16	12	8	8	6
	2	20	12	8	8	6	4
	2½	12	8	8	6	4	4
	3	12	8	6	4	4	-
	3½	8	6	4	4	-	-
	4	8	6	4	-	-	-
	4½	6	4	4	-	-	-
FastenMaster® HeadLOK®	½	24	24	24	24	20	16
	¾	24	24	24	20	16	12
	1	24	24	20	16	12	12
	1½	24	20	16	12	8	8
	2	24	16	12	8	8	6
	2½	16	12	8	6	6	4



Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
		Specified Cladding Weight ² (psf)					
		5	10	15	20	25	30
FastenMaster® HeadLOK®	3	12	8	6	6	4	4
	3½	12	8	6	4	4	4
	4	8	6	4	4	4	-
	4½	8	6	4	4	-	-
Simpson Strong-Drive® SDWS22	½	24	24	24	24	24	20
	¾	24	24	24	24	20	16
	1	24	24	24	20	16	12
	1½	24	24	20	16	12	8
	2	24	20	12	12	8	8
	2½	20	16	12	8	8	6
	3	16	12	8	8	6	6
	3½	16	8	8	6	6	4
	4	12	8	6	6	4	4
4½	8	8	6	4	4	4	

SI: 1 in = 25.4 mm, 1 psf = 0.0479 kN/m²

1. Minimum fastener penetration into stud is 1¼".
2. The weight of ThermaBase-CI™ and sheathing is included in the fastener spacing calculations. The specified cladding weight shall include all other supported materials besides the ThermaBase-CI™ and sheathing.
3. ThermaBase-CI™ is installed directly to the studs with the OSB or plywood to the exterior of the structure.
4. Wood studs shall be a minimum of 2x4 and have a minimum specific gravity of 0.42.
5. Nail and screw values determined using NDS Yield Limit Equations and TR-12 for evaluating the foam as a gap.
6. Nail fasteners shall comply with ASTM F1667, except nail length shall be permitted to exceed ASTM F1667 standard lengths. Minimum bending yield strength for nails with a diameter up to 0.148", 0.162", and 0.225" shall be 90,000 psi, 90,000 psi, and 80,000 psi respectively. Proprietary fastener properties are per published data or testing.



Table 9. Maximum Fastener Spacing for ThermaBase-CI™ Utilizing ½" or ⅝" Plywood with Vertical Wood Studs Spaced 24" o.c.^{1,3,4,5,6}

Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
		Specified Cladding Weight ² (psf)					
		5	10	15	20	25	30
Rmax® Nail Board Fastener SIPTP	½	24	24	16	12	12	8
	¾	24	20	12	8	8	8
	1	24	16	12	8	8	6
	1½	16	12	8	6	4	4
	2	12	8	6	4	4	-
	2½	8	6	4	4	-	-
	3	8	4	4	-	-	-
	3½	6	4	-	-	-	-
	4	4	4	-	-	-	-
	4½	4	-	-	-	-	-
8d (0.131" x 2.5")	½	16	8	8	6	4	4
	¾	12	8	6	4	4	-
12d (0.148" x 3.25")	½	20	12	8	6	6	4
	¾	16	8	6	6	4	4
	1	12	8	6	4	4	-
	1½	8	4	4	-	-	-
TRUFast® SIPTP	½	24	24	16	12	12	8
	¾	24	20	12	8	8	8
	1	24	16	12	8	8	6
	1½	16	12	8	6	4	4
	2	12	8	6	4	4	-
	2½	8	6	4	4	-	-
	3	8	4	4	-	-	-
	3½	6	4	-	-	-	-
	4	4	4	-	-	-	-
	4½	4	-	-	-	-	-
FastenMaster® HeadLOK®	½	24	24	20	16	12	8
	¾	24	24	16	12	8	8
	1	24	20	12	8	8	8
	1½	20	12	8	8	6	4
	2	16	8	8	6	4	4
	2½	12	8	6	4	4	-



Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
		Specified Cladding Weight ² (psf)					
		5	10	15	20	25	30
FastenMaster® HeadLOK®	3	8	6	4	4	-	-
	3½	8	4	4	-	-	-
	4	6	4	-	-	-	-
	4½	4	4	-	-	-	-
Simpson Strong-Drive® SDWS22	½	24	24	24	20	16	12
	¾	24	24	20	16	12	12
	1	24	24	16	12	12	8
	1½	24	16	12	8	8	6
	2	20	12	8	8	6	4
	2½	12	8	8	6	4	4
	3	12	8	6	4	4	4
	3½	8	6	6	4	4	-
	4	8	6	4	4	-	-
4½	6	4	4	-	-	-	

SI: 1 in = 25.4 mm, 1 psf = 0.0479 kN/m²

1. Minimum fastener penetration into stud is 1¼".
2. The weight of ThermaBase-CI™ and sheathing is included in the fastener spacing calculations. The specified cladding weight shall include all other supported materials besides the ThermaBase-CI™ and sheathing.
3. ThermaBase-CI™ is installed directly to the studs with the OSB or plywood to the exterior of the structure.
4. Wood studs shall be a minimum of 2x4 and have a minimum specific gravity of 0.42.
5. Nail and screw values determined using NDS Yield Limit Equations and TR-12 for evaluating the foam as a gap.
6. Nail fasteners shall comply with ASTM F1667, except nail length shall be permitted to exceed ASTM F1667 standard lengths. Minimum bending yield strength for nails with a diameter up to 0.148", 0.162", and 0.225" shall be 90,000 psi, 90,000 psi, and 80,000 psi respectively. Proprietary fastener properties are per published data or testing.



Table 10. Maximum Fastener Spacing for ThermaBase-CI™ Utilizing 5/8" OSB, 3/4" OSB, or 3/4" Plywood with Vertical Wood Studs Spaced 16" o.c.^{1,3,4,5,6}

Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
		Specified Cladding Weight ² (psf)					
		5	10	15	20	25	30
Rmax® Nail Board Fastener SIPTP	1/2	24	24	24	20	16	16
	3/4	24	24	24	16	12	12
	1	24	24	20	16	12	8
	1 1/2	24	20	12	12	8	8
	2	20	12	8	8	6	6
	2 1/2	16	12	8	6	6	4
	3	12	8	6	6	4	4
	3 1/2	8	8	6	4	4	-
	4	8	6	4	4	-	-
	4 1/2	8	6	4	4	-	-
8d (0.131" x 2.5")	1/2	24	20	12	8	8	8
	3/4	24	16	12	8	6	6
12d (0.148" x 3.25")	1/2	24	24	16	12	8	8
	3/4	24	16	12	8	8	8
	1	24	16	12	8	6	6
	1 1/2	16	8	8	6	4	4
TRUFast® SIPTP	1/2	24	24	24	20	16	16
	3/4	24	24	24	16	12	12
	1	24	24	20	16	12	8
	1 1/2	24	20	12	12	8	8
	2	20	12	8	8	6	6
	2 1/2	16	12	8	6	6	4
	3	12	8	6	6	4	4
	3 1/2	8	8	6	4	4	-
	4	8	6	4	4	-	-
	4 1/2	8	6	4	4	-	-
FastenMaster® HeadLOK®	1/2	24	24	24	24	20	16
	3/4	24	24	24	20	16	12
	1	24	24	20	16	12	12
	1 1/2	24	20	16	12	8	8
	2	24	16	12	8	8	6
	2 1/2	20	12	8	8	6	6



Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
		Specified Cladding Weight ² (psf)					
		5	10	15	20	25	30
FastenMaster® HeadLOK®	3	16	8	8	6	6	4
	3½	12	8	6	6	4	4
	4	8	8	6	4	4	-
	4½	8	6	4	4	4	-
Simpson Strong-Drive® SDWS22	½	24	24	24	24	24	20
	¾	24	24	24	24	20	16
	1	24	24	24	20	16	16
	1½	24	24	20	16	12	12
	2	24	20	16	12	8	8
	2½	24	16	12	8	8	8
	3	20	12	8	8	6	6
	3½	16	12	8	8	6	6
	4	12	8	8	6	6	4
4½	12	8	6	6	4	4	

SI: 1 in = 25.4 mm, 1 psf = 0.0479 kN/m²

1. Minimum fastener penetration into stud is 1¼".
2. The weight of ThermaBase-CI™ and sheathing is included in the fastener spacing calculations. The specified cladding weight shall include all other supported materials besides the ThermaBase-CI™ and sheathing.
3. ThermaBase-CI™ is installed directly to the studs with the OSB or plywood to the exterior of the structure.
4. Wood studs shall be a minimum of 2x4 and have a minimum specific gravity of 0.42.
5. Nail and screw values determined using NDS Yield Limit Equations and TR-12 for evaluating the foam as a gap.
6. Nail fasteners shall comply with ASTM F1667, except nail length shall be permitted to exceed ASTM F1667 standard lengths. Minimum bending yield strength for nails with a diameter up to 0.148", 0.162", and 0.225" shall be 90,000 psi, 90,000 psi, and 80,000 psi respectively. Proprietary fastener properties are per published data or testing.



Table 11. Maximum Fastener Spacing for ThermaBase-CI™ Utilizing 5/8" OSB, 3/4" OSB, or 3/4" Plywood with Vertical Wood Studs Spaced 24" o.c.^{1,3,4,5,6}

Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
		Specified Cladding Weight ² (psf)					
		5	10	15	20	25	30
Rmax® Nail Board Fastener SIPTP	1/2	24	24	16	12	12	8
	3/4	24	20	16	12	8	8
	1	24	16	12	8	8	6
	1 1/2	20	12	8	8	6	4
	2	12	8	6	6	4	4
	2 1/2	8	8	6	4	4	-
	3	8	6	4	4	-	-
	3 1/2	6	4	4	-	-	-
	4	6	4	-	-	-	-
	4 1/2	4	4	-	-	-	-
8d (0.131" x 2.5")	1/2	20	12	8	6	6	4
	3/4	16	8	8	6	4	4
12d (0.148" x 3.25")	1/2	24	16	12	8	6	6
	3/4	20	12	8	6	6	4
	1	16	8	8	6	4	4
	1 1/2	8	6	4	4	-	-
TRUFast® SIPTP	1/2	24	24	16	12	12	8
	3/4	24	20	16	12	8	8
	1	24	16	12	8	8	6
	1 1/2	20	12	8	8	6	4
	2	12	8	6	6	4	4
	2 1/2	8	8	6	4	4	-
	3	8	6	4	4	-	-
	3 1/2	6	4	4	-	-	-
	4	6	4	-	-	-	-
	4 1/2	4	4	-	-	-	-
FastenMaster® HeadLOK®	1/2	24	24	20	16	12	12
	3/4	24	24	16	12	12	8
	1	24	20	12	12	8	8
	1 1/2	20	12	8	8	6	6
	2	16	8	8	6	6	4
	2 1/2	12	8	6	4	4	4



Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
		Specified Cladding Weight ² (psf)					
		5	10	15	20	25	30
FastenMaster® HeadLOK®	3	8	6	6	4	4	-
	3½	8	6	4	4	-	-
	4	6	4	4	-	-	-
	4½	6	4	-	-	-	-
Simpson Strong-Drive® SDWS22	½	24	24	24	20	16	12
	¾	24	24	20	16	12	12
	1	24	24	16	12	12	8
	1½	24	16	12	8	8	8
	2	20	12	8	8	6	6
	2½	16	8	8	6	6	4
	3	12	8	6	6	4	4
	3½	8	8	6	4	4	4
	4	8	6	4	4	4	-
4½	8	6	4	4	-	-	

SI: 1 in = 25.4 mm, 1 psf = 0.0479 kN/m²

1. Minimum fastener penetration into stud is 1¼".
2. The weight of ThermaBase-CI™ and sheathing is included in the fastener spacing calculations. The specified cladding weight shall include all other supported materials besides the ThermaBase-CI™ and sheathing.
3. ThermaBase-CI™ is installed directly to the studs with the OSB or plywood to the exterior of the structure.
4. Wood studs shall be a minimum of 2x4 and have a minimum specific gravity of 0.42.
5. Nail and screw values determined using NDS Yield Limit Equations and TR-12 for evaluating the foam as a gap.
6. Nail fasteners shall comply with ASTM F1667, except nail length shall be permitted to exceed ASTM F1667 standard lengths. Minimum bending yield strength for nails with a diameter up to 0.148", 0.162", and 0.225" shall be 90,000 psi, 90,000 psi, and 80,000 psi respectively. Proprietary fastener properties are per published data or testing.



Table 12. Maximum Fastener Spacing for ThermoBase-CI™ Utilizing 1/2" or 5/8" Plywood with Vertical Cold-Form Steel Studs Spaced 16" o.c.^{1,3,4,5}

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermoBase-CI™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight ² (psf)					
			5	10	15	20	25	30
20 ga structural (33 mil)	Rmax® Nailboard Fastener SIPLD	1/2	16	8	8	6	4	4
		3/4	16	8	6	4	4	4
		1	12	8	6	4	4	-
		1 1/2	12	6	4	4	-	-
		2	8	6	4	-	-	-
		2 1/2	6	4	-	-	-	-
		3	4	-	-	-	-	-
	#8 Screw	1/2	8	4	4	-	-	-
		3/4	8	4	-	-	-	-
		1	6	4	-	-	-	-
		1 1/2	4	-	-	-	-	-
		2	4	-	-	-	-	-
	#10 Screw	1/2	8	6	4	-	-	-
		3/4	8	4	4	-	-	-
		1	8	4	-	-	-	-
		1 1/2	6	4	-	-	-	-
		2	4	-	-	-	-	-
	#12 Screw	1/2	8	6	4	-	-	-
		3/4	8	4	4	-	-	-
		1	8	4	-	-	-	-
		1 1/2	6	4	-	-	-	-
		2	4	-	-	-	-	-
		2 1/2	4	-	-	-	-	-
	TRUFast® SIPLD	1/2	16	8	8	6	4	4
		3/4	16	8	6	4	4	4
		1	12	8	6	4	4	-
		1 1/2	12	6	4	4	-	-
		2	8	6	4	-	-	-
		2 1/2	6	4	-	-	-	-
		3	4	-	-	-	-	-
FastenMaster® HeadLOK®	1/2	16	8	8	6	4	4	
	3/4	16	8	6	4	4	4	



Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight ² (psf)					
			5	10	15	20	25	30
20 ga structural (33 mil)	FastenMaster® HeadLOK®	1	12	8	6	4	4	-
		1½	12	6	4	4	-	-
		2	8	6	4	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
	SFS intec Dekfast™	½	16	8	8	6	4	4
		¾	16	8	6	4	4	4
		1	12	8	6	4	4	-
		1½	12	6	4	4	-	-
		2	8	6	4	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
18 ga structural (43 mil)	Rmax® Nailboard Fastener SIPLD	½	16	8	8	6	4	4
		¾	16	8	6	4	4	4
		1	12	8	6	4	4	-
		1½	12	6	4	4	-	-
		2	8	6	4	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
	#8 Screw	½	8	4	4	-	-	-
		¾	8	4	-	-	-	-
		1	6	4	-	-	-	-
		1½	4	-	-	-	-	-
		2	4	-	-	-	-	-
	#10 Screw	½	8	6	4	-	-	-
		¾	8	4	4	-	-	-
		1	8	4	-	-	-	-
		1½	6	4	-	-	-	-
		2	4	-	-	-	-	-
	#12 Screw	½	8	6	4	-	-	-
		¾	8	4	4	-	-	-
		1	8	4	-	-	-	-
		1½	6	4	-	-	-	-



Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight ² (psf)					
			5	10	15	20	25	30
18 ga structural (43 mil)		2	4	-	-	-	-	-
		2½	4	-	-	-	-	-
	TRUFAST® SIPLD	½	16	8	8	6	4	4
		¾	16	8	6	4	4	4
		1	12	8	6	4	4	-
		1½	12	6	4	4	-	-
		2	8	6	4	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
	FastenMaster® HeadLOK®	½	16	8	8	6	4	4
		¾	16	8	6	4	4	4
		1	12	8	6	4	4	-
		1½	12	6	4	4	-	-
		2	8	6	4	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
	SFS intec Dekfast™	½	16	8	8	6	4	4
		¾	16	8	6	4	4	4
		1	12	8	6	4	4	-
		1½	12	6	4	4	-	-
		2	8	6	4	-	-	-
2½		6	4	-	-	-	-	
3		4	-	-	-	-	-	
16 ga structural (53 mil)	Rmax® Nailboard Fastener SIP HD	½	16	8	8	6	4	4
		¾	16	8	6	4	4	4
		1	12	8	6	4	4	-
		1½	12	6	4	4	-	-
		2	8	6	4	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
	#8 Screw	½	8	4	4	-	-	-
		¾	8	4	-	-	-	-
		1	6	4	-	-	-	-



Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight ² (psf)					
			5	10	15	20	25	30
16 ga structural (53 mil)		1½	4	-	-	-	-	-
		2	4	-	-	-	-	-
	#10 Screw	½	8	6	4	-	-	-
		¾	8	4	4	-	-	-
		1	8	4	-	-	-	-
		1½	6	4	-	-	-	-
		2	4	-	-	-	-	-
		2½	4	-	-	-	-	-
	#12 Screw	½	8	6	4	-	-	-
		¾	8	4	4	-	-	-
		1	8	4	-	-	-	-
		1½	6	4	-	-	-	-
		2	4	-	-	-	-	-
		2½	4	-	-	-	-	-
	TRUFAST® SIPHD	½	16	8	8	6	4	4
		¾	16	8	6	4	4	4
		1	12	8	6	4	4	-
		1½	12	6	4	4	-	-
		2	8	6	4	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
	FastenMaster® HeadLOK®	½	16	8	8	6	4	4
		¾	16	8	6	4	4	4
		1	12	8	6	4	4	-
		1½	12	6	4	4	-	-
		2	8	6	4	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
	SFS intec Dekfast™	½	16	8	8	6	4	4
		¾	16	8	6	4	4	4
1		12	8	6	4	4	-	
1½		12	6	4	4	-	-	
2		8	6	4	-	-	-	
2½		6	4	-	-	-	-	

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight ² (psf)					
			5	10	15	20	25	30
		3	4	-	-	-	-	-

SI: 1 in = 25.4 mm, 1 psf = 0.0479 kN/m²

1. Minimum fastener penetration into stud is the steel thickness plus three threads and the tip of the fastener.
2. The weight of ThermaBase-CI™ and sheathing is included in the fastener spacing calculations. The specified cladding weight shall include all other supported materials besides the ThermaBase-CI™ and sheathing.
3. ThermaBase-CI™ is installed directly to the studs with the OSB or plywood to the exterior of the structure.
4. Nail and screw values determined using NDS Yield Limit Equations and TR-12 for evaluating the foam as a gap.
5. Nail fasteners shall comply with ASTM F1667, except nail length shall be permitted to exceed ASTM F1667 standard lengths. Minimum bending yield strength for nails with a diameter up to 0.148", 0.162", and 0.225" shall be 90,000 psi, 90,000 psi, and 80,000 psi respectively. Proprietary fastener properties are per published data or testing.

Table 13. Maximum Fastener Spacing for ThermaBase-CI™ Utilizing ½" or ⅝" Plywood with Vertical Cold-Form Steel Studs Spaced 24" o.c.^{1,3,4,5}

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight ² (psf)					
			5	10	15	20	25	30
20 ga structural (33 mil)	Rmax® Nailboard Fastener SIPLD	½	12	6	4	4	-	-
		¾	8	6	4	-	-	-
		1	8	6	4	-	-	-
		1½	8	4	-	-	-	-
		2	6	4	-	-	-	-
		2½	4	-	-	-	-	-
	#8 Screw	½	6	-	-	-	-	-
		¾	4	-	-	-	-	-
		1	4	-	-	-	-	-
	#10 Screw	½	6	4	-	-	-	-
		¾	6	-	-	-	-	-
		1	4	-	-	-	-	-
		1½	4	-	-	-	-	-
	#12 Screw	½	6	4	-	-	-	-
		¾	6	-	-	-	-	-
		1	4	-	-	-	-	-
		1½	4	-	-	-	-	-
	TRUFast® SIPLD	½	12	6	4	4	-	-
		¾	8	6	4	-	-	-
		1	8	6	4	-	-	-
		1½	8	4	-	-	-	-
		2	6	4	-	-	-	-



Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight ² (psf)					
			5	10	15	20	25	30
20 ga structural (33 mil)		2½	4	-	-	-	-	-
	FastenMaster® HeadLOK®	½	12	6	4	4	-	-
		¾	8	6	4	-	-	-
		1	8	6	4	-	-	-
		1½	8	4	-	-	-	-
		2	6	4	-	-	-	-
		2½	4	-	-	-	-	-
	SFS intec Dekfast™	½	12	6	4	4	-	-
		¾	8	6	4	-	-	-
		1	8	6	4	-	-	-
		1½	8	4	-	-	-	-
		2	6	4	-	-	-	-
2½		4	-	-	-	-	-	
18 ga structural (43 mil)	Rmax® Nailboard Fastener SIPLD	½	12	6	4	4	-	-
		¾	8	6	4	-	-	-
		1	8	6	4	-	-	-
		1½	8	4	-	-	-	-
		2	6	4	-	-	-	-
		2½	4	-	-	-	-	-
	#8 Screw	½	6	-	-	-	-	-
		¾	4	-	-	-	-	-
		1	4	-	-	-	-	-
	#10 Screw	½	6	4	-	-	-	-
		¾	6	-	-	-	-	-
		1	4	-	-	-	-	-
		1½	4	-	-	-	-	-
	#12 Screw	½	6	4	-	-	-	-
		¾	6	-	-	-	-	-
		1	4	-	-	-	-	-
		1½	4	-	-	-	-	-
	TRUFAST® SIPLD	½	12	6	4	4	-	-
		¾	8	6	4	-	-	-
		1	8	6	4	-	-	-



Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)						
			Specified Cladding Weight ² (psf)						
			5	10	15	20	25	30	
18 ga structural (43 mil)		1½	8	4	-	-	-	-	
		2	6	4	-	-	-	-	
		2½	4	-	-	-	-	-	
	FastenMaster® HeadLOK®	½	12	6	4	4	-	-	
		¾	8	6	4	-	-	-	
		1	8	6	4	-	-	-	
		1½	8	4	-	-	-	-	
		2	6	4	-	-	-	-	
		2½	4	-	-	-	-	-	
	SFS intec Dekfast™	½	12	6	4	4	-	-	
		¾	8	6	4	-	-	-	
		1	8	6	4	-	-	-	
		1½	8	4	-	-	-	-	
		2	6	4	-	-	-	-	
		2½	4	-	-	-	-	-	
	16 ga structural (53 mil)	Rmax® Nailboard Fastener SIP HD	½	12	6	4	4	-	-
			¾	8	6	4	-	-	-
			1	8	6	4	-	-	-
1½			8	4	-	-	-	-	
2			6	4	-	-	-	-	
2½			4	-	-	-	-	-	
#8 Screw		½	6	-	-	-	-	-	
		¾	4	-	-	-	-	-	
		1	4	-	-	-	-	-	
#10 Screw		½	6	4	-	-	-	-	
		¾	6	-	-	-	-	-	
		1	4	-	-	-	-	-	
		1½	4	-	-	-	-	-	
#12 Screw		½	6	4	-	-	-	-	
		¾	6	-	-	-	-	-	
		1	4	-	-	-	-	-	
		1½	4	-	-	-	-	-	
TRUFAST® SIPHD		½	12	6	4	4	-	-	



Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight ² (psf)					
			5	10	15	20	25	30
16 ga structural (53 mil)		¾	8	6	4	-	-	-
		1	8	6	4	-	-	-
		1½	8	4	-	-	-	-
		2	6	4	-	-	-	-
		2½	4	-	-	-	-	-
	FastenMaster® HeadLOK®	½	12	6	4	4	-	-
		¾	8	6	4	-	-	-
		1	8	6	4	-	-	-
		1½	8	4	-	-	-	-
		2	6	4	-	-	-	-
		2½	4	-	-	-	-	-
	SFS intec Dekfast™	½	12	6	4	4	-	-
		¾	8	6	4	-	-	-
		1	8	6	4	-	-	-
		1½	8	4	-	-	-	-
		2	6	4	-	-	-	-
		2½	4	-	-	-	-	-

SI: 1 in = 25.4 mm, 1 psf = 0.0479 kN/m²

1. Minimum fastener penetration into stud is the steel thickness plus three threads and the tip of the fastener.
2. The weight of ThermaBase-CI™ and sheathing is included in the fastener spacing calculations. The specified cladding weight shall include all other supported materials besides the ThermaBase-CI™ and sheathing.
3. ThermaBase-CI™ is installed directly to the studs with the OSB or plywood to the exterior of the structure.
4. Nail and screw values determined using NDS Yield Limit Equations and TR-12 for evaluating the foam as a gap.
5. Nail fasteners shall comply with ASTM F1667, except nail length shall be permitted to exceed ASTM F1667 standard lengths. Minimum bending yield strength for nails with a diameter up to 0.148", 0.162", and 0.225" shall be 90,000 psi, 90,000 psi, and 80,000 psi respectively. Proprietary fastener properties are per published data or testing.



Table 14. Maximum Fastener Spacing for ThermaBase-CI™ Utilizing 7/16" OSB, 1/2" OSB, or 3/4" Plywood with Vertical Cold-Form Steel Studs Spaced 16" o.c.^{1,3,4,5}

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight ² (psf)					
			5	10	15	20	25	30
20 ga structural (33 mil)	Rmax® Nailboard Fastener SIPLD	1/2	24	12	8	8	6	4
		3/4	20	12	8	8	6	4
		1	20	12	8	6	6	4
		1 1/2	16	8	6	6	4	4
		2	12	8	6	4	4	-
		2 1/2	8	6	4	-	-	-
		3	6	4	-	-	-	-
		3 1/2	4	-	-	-	-	-
	#8 Screw	1/2	12	6	4	4	-	-
		3/4	8	6	4	-	-	-
		1	8	6	4	-	-	-
		1 1/2	6	4	-	-	-	-
		2	4	-	-	-	-	-
	#10 Screw	1/2	12	8	6	4	-	-
		3/4	12	6	4	4	-	-
		1	8	6	4	4	-	-
		1 1/2	8	4	4	-	-	-
		2	6	4	-	-	-	-
		2 1/2	4	-	-	-	-	-
	#12 Screw	1/2	12	8	6	4	-	-
		3/4	12	8	4	4	-	-
		1	8	6	4	4	-	-
		1 1/2	8	6	4	-	-	-
		2	6	4	-	-	-	-
		2 1/2	6	4	-	-	-	-
		3	4	-	-	-	-	-
	TRUFAST® SIPLD	1/2	24	12	8	8	6	4
		3/4	20	12	8	8	6	4
		1	20	12	8	6	6	4
		1 1/2	16	8	6	6	4	4
2		12	8	6	4	4	-	
2 1/2		8	6	4	-	-	-	



Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)						
			Specified Cladding Weight ² (psf)						
			5	10	15	20	25	30	
20 ga structural (33 mil)	TRUFast® SIPLD	3	6	4	-	-	-	-	
		3½	4	-	-	-	-	-	
	FastenMaster® HeadLOK®	½	24	12	8	8	6	4	
		¾	20	12	8	8	6	4	
		1	20	12	8	6	6	4	
		1½	16	8	6	6	4	4	
		2	12	8	6	4	4	-	
		2½	8	6	4	4	-	-	
		3	6	4	-	-	-	-	
		3½	4	-	-	-	-	-	
	SFS intec Dekfast™	½	24	12	8	8	6	4	
		¾	20	12	8	6	6	4	
		1	20	12	8	6	6	4	
		1½	16	8	6	6	4	4	
		2	12	8	6	4	4	-	
		2½	8	6	4	-	-	-	
		3	6	4	-	-	-	-	
		3½	4	-	-	-	-	-	
	18 ga structural (43 mil)	Rmax® Nailboard Fastener SIPLD	½	24	12	8	8	6	4
			¾	20	12	8	8	6	4
1			20	12	8	6	6	4	
1½			16	8	6	6	4	4	
2			12	8	6	4	4	-	
2½			8	6	4	-	-	-	
3			6	4	-	-	-	-	
3½			4	-	-	-	-	-	
#8 Screw		½	12	6	4	4	-	-	
		¾	8	6	4	-	-	-	
		1	8	6	4	-	-	-	
		1½	6	4	-	-	-	-	
		2	4	-	-	-	-	-	
#10 Screw		½	12	8	6	4	-	-	
		¾	12	6	4	4	-	-	



Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight ² (psf)					
			5	10	15	20	25	30
18 ga structural (43 mil)		1	8	6	4	4	-	-
		1½	8	4	4	-	-	-
		2	6	4	-	-	-	-
		2½	4	-	-	-	-	-
	#12 Screw	½	12	8	6	4	-	-
		¾	12	8	4	4	-	-
		1	8	6	4	4	-	-
		1½	8	6	4	-	-	-
		2	6	4	-	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
	TRUFAST® SIPLD	½	24	12	8	8	6	4
		¾	20	12	8	8	6	4
		1	20	12	8	6	6	4
		1½	16	8	6	6	4	4
		2	12	8	6	4	4	-
		2½	8	6	4	-	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-
	FastenMaster® HeadLOK®	½	24	12	8	8	6	4
		¾	20	12	8	8	6	4
		1	20	12	8	6	6	4
		1½	16	8	6	6	4	4
		2	12	8	6	4	4	-
		2½	8	6	4	4	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-
	SFS intec Dekfast™	½	24	12	8	8	6	4
		¾	20	12	8	6	6	4
		1	20	12	8	6	6	4
		1½	16	8	6	6	4	4
		2	12	8	6	4	4	-
2½		8	6	4	-	-	-	



Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight ² (psf)					
			5	10	15	20	25	30
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-
16 ga structural (53 mil)	Rmax® Nailboard Fastener SIP HD	½	24	12	8	8	6	4
		¾	20	12	8	8	6	4
		1	20	12	8	6	6	4
		1½	16	8	6	6	4	4
		2	12	8	6	4	4	-
		2½	8	6	4	-	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-
	#8 Screw	½	12	6	4	4	-	-
		¾	8	6	4	-	-	-
		1	8	6	4	-	-	-
		1½	6	4	-	-	-	-
		2	4	-	-	-	-	-
	#10 Screw	½	12	8	6	4	-	-
		¾	12	6	4	4	-	-
		1	8	6	4	4	-	-
		1½	8	4	4	-	-	-
		2	6	4	-	-	-	-
		2½	4	-	-	-	-	-
	#12 Screw	½	12	8	6	4	-	-
		¾	12	8	4	4	-	-
		1	8	6	4	4	-	-
		1½	8	6	4	-	-	-
		2	6	4	-	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
	TRUFAST® SIPHD	½	24	12	8	8	6	4
		¾	20	12	8	8	6	4
1		20	12	8	6	6	4	
1½		16	8	6	6	4	4	
2		12	8	6	4	4	-	



Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight ² (psf)					
			5	10	15	20	25	30
16 ga structural (53 mil)		2½	8	6	4	-	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-
	FastenMaster® HeadLOK®	½	24	12	8	8	6	4
		¾	20	12	8	8	6	4
		1	20	12	8	6	6	4
		1½	16	8	6	6	4	4
		2	12	8	6	4	4	-
		2½	8	6	4	4	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-
	SFS intec Dekfast™	½	24	12	8	8	6	4
		¾	20	12	8	6	6	4
		1	20	12	8	6	6	4
		1½	16	8	6	6	4	4
		2	12	8	6	4	4	-
		2½	8	6	4	-	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-

SI: 1 in = 25.4 mm, 1 psf = 0.0479 kN/m²

1. Minimum fastener penetration into stud is the steel thickness plus three threads and the tip of the fastener.
2. The weight of ThermaBase-CI™ and sheathing is included in the fastener spacing calculations. The specified cladding weight shall include all other supported materials besides the ThermaBase-CI™ and sheathing.
3. ThermaBase-CI™ is installed directly to the studs with the OSB or plywood to the exterior of the structure.
4. Nail and screw values determined using NDS Yield Limit Equations and TR-12 for evaluating the foam as a gap.
5. Nail fasteners shall comply with ASTM F1667, except nail length shall be permitted to exceed ASTM F1667 standard lengths. Minimum bending yield strength for nails with a diameter up to 0.148", 0.162", and 0.225" shall be 90,000 psi, 90,000 psi, and 80,000 psi respectively. Proprietary fastener properties are per published data or testing.



Table 15. Maximum Fastener Spacing for ThermaBase-CI™ Utilizing 7/16" OSB, 1/2" OSB, or 3/4" Plywood with Vertical Cold-Form Steel Studs Spaced 24" o.c.^{1,3,4,5}

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight ² (psf)					
			5	10	15	20	25	30
20 ga structural (33 mil)	Rmax® Nailboard Fastener SIPLD	1/2	16	8	6	4	4	-
		3/4	12	8	6	4	4	-
		1	12	8	6	4	4	-
		1 1/2	8	6	4	4	-	-
		2	8	4	4	-	-	-
		2 1/2	6	4	-	-	-	-
		3	4	-	-	-	-	-
	#8 Screw	1/2	8	4	-	-	-	-
		3/4	6	4	-	-	-	-
		1	6	4	-	-	-	-
		1 1/2	4	-	-	-	-	-
	#10 Screw	1/2	8	4	4	-	-	-
		3/4	8	4	-	-	-	-
		1	6	4	-	-	-	-
		1 1/2	6	-	-	-	-	-
		2	4	-	-	-	-	-
	#12 Screw	1/2	8	4	4	-	-	-
		3/4	8	4	-	-	-	-
		1	6	4	-	-	-	-
		1 1/2	6	4	-	-	-	-
		2	4	-	-	-	-	-
		2 1/2	4	-	-	-	-	-
	TRUFAST® SIPLD	1/2	16	8	6	4	4	-
		3/4	12	8	6	4	4	-
		1	12	8	6	4	4	-
		1 1/2	8	6	4	4	-	-
		2	8	4	4	-	-	-
		2 1/2	6	4	-	-	-	-
		3	4	-	-	-	-	-
		1/2	16	8	6	4	4	-
		3/4	12	8	6	4	4	-
		1	12	8	6	4	4	-



Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)						
			Specified Cladding Weight ² (psf)						
			5	10	15	20	25	30	
20 ga structural (33 mil)	FastenMaster® HeadLOK®	1½	8	6	4	4	-	-	
		2	8	4	4	-	-	-	
		2½	6	4	-	-	-	-	
		3	4	-	-	-	-	-	
	SFS intec Dekfast™	½	16	8	6	4	4	-	
		¾	12	8	6	4	4	-	
		1	12	8	6	4	4	-	
		1½	8	6	4	4	-	-	
		2	8	4	4	-	-	-	
		2½	6	4	-	-	-	-	
		3	4	-	-	-	-	-	
	18 ga structural (43 mil)	Rmax® Nailboard Fastener SIPLD	½	16	8	6	4	4	-
			¾	12	8	6	4	4	-
1			12	8	6	4	4	-	
1½			8	6	4	4	-	-	
2			8	4	4	-	-	-	
2½			6	4	-	-	-	-	
3			4	-	-	-	-	-	
#8 Screw		½	8	4	-	-	-	-	
		¾	6	4	-	-	-	-	
		1	6	4	-	-	-	-	
		1½	4	-	-	-	-	-	
#10 Screw		½	8	4	4	-	-	-	
		¾	8	4	-	-	-	-	
		1	6	4	-	-	-	-	
		1½	6	-	-	-	-	-	
		2	4	-	-	-	-	-	
#12 Screw		½	8	4	4	-	-	-	
		¾	8	4	-	-	-	-	
		1	6	4	-	-	-	-	
		1½	6	4	-	-	-	-	
		2	4	-	-	-	-	-	
		2½	4	-	-	-	-	-	



Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)						
			Specified Cladding Weight ² (psf)						
			5	10	15	20	25	30	
18 ga structural (43 mil)	TRUFAST® SIPLD	1/2	16	8	6	4	4	-	
		3/4	12	8	6	4	4	-	
		1	12	8	6	4	4	-	
		1 1/2	8	6	4	4	-	-	
		2	8	4	4	-	-	-	
		2 1/2	6	4	-	-	-	-	
		3	4	-	-	-	-	-	
	FastenMaster® HeadLOK®	1/2	16	8	6	4	4	-	
		3/4	12	8	6	4	4	-	
		1	12	8	6	4	4	-	
		1 1/2	8	6	4	4	-	-	
		2	8	4	4	-	-	-	
		2 1/2	6	4	-	-	-	-	
		3	4	-	-	-	-	-	
	SFS intec Dekfast™	1/2	16	8	6	4	4	-	
		3/4	12	8	6	4	4	-	
		1	12	8	6	4	4	-	
		1 1/2	8	6	4	4	-	-	
		2	8	4	4	-	-	-	
		2 1/2	6	4	-	-	-	-	
		3	4	-	-	-	-	-	
16 ga structural (53 mil)	Rmax® Nailboard Fastener SIP HD	1/2	16	8	6	4	4	-	
		3/4	12	8	6	4	4	-	
		1	12	8	6	4	4	-	
		1 1/2	8	6	4	4	-	-	
		2	8	4	4	-	-	-	
		2 1/2	6	4	-	-	-	-	
		3	4	-	-	-	-	-	
	#8 Screw	1/2	8	4	-	-	-	-	
		3/4	6	4	-	-	-	-	
		1	6	4	-	-	-	-	
		1 1/2	4	-	-	-	-	-	
			1/2	8	4	4	-	-	-



Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight ² (psf)					
			5	10	15	20	25	30
16 ga structural (53 mil)	#10 Screw	¾	8	4	-	-	-	-
		1	6	4	-	-	-	-
		1½	6	-	-	-	-	-
		2	4	-	-	-	-	-
	#12 Screw	½	8	4	4	-	-	-
		¾	8	4	-	-	-	-
		1	6	4	-	-	-	-
		1½	6	4	-	-	-	-
		2	4	-	-	-	-	-
		2½	4	-	-	-	-	-
	TRUFAST® SIPHD	½	16	8	6	4	4	-
		¾	12	8	6	4	4	-
		1	12	8	6	4	4	-
		1½	8	6	4	4	-	-
		2	8	4	4	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
	FastenMaster® HeadLOK®	½	16	8	6	4	4	-
		¾	12	8	6	4	4	-
		1	12	8	6	4	4	-
		1½	8	6	4	4	-	-
		2	8	4	4	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
	SFS intec Dekfast™	½	16	8	6	4	4	-
		¾	12	8	6	4	4	-
		1	12	8	6	4	4	-
		1½	8	6	4	4	-	-
		2	8	4	4	-	-	-
		2½	6	4	-	-	-	-
3		4	-	-	-	-	-	

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight ² (psf)					
			5	10	15	20	25	30
SI: 1 in = 25.4 mm, 1 psf = 0.0479 kN/m ²								
<ol style="list-style-type: none"> Minimum fastener penetration into stud is the steel thickness plus three threads and the tip of the fastener. The weight of ThermaBase-CI™ and sheathing is included in the fastener spacing calculations. The specified cladding weight shall include all other supported materials besides the ThermaBase-CI™ and sheathing. ThermaBase-CI™ is installed directly to the studs with the OSB or plywood to the exterior of the structure. Nail and screw values determined using NDS Yield Limit Equations and TR-12 for evaluating the foam as a gap. Nail fasteners shall comply with ASTM F1667, except nail length shall be permitted to exceed ASTM F1667 standard lengths. Minimum bending yield strength for nails with a diameter up to 0.148", 0.162", and 0.225" shall be 90,000 psi, 90,000 psi, and 80,000 psi respectively. Proprietary fastener properties are per published data or testing. 								

Table 16. Maximum Fastener Spacing for ThermaBase-CI™ Utilizing 5/8" or 3/4" OSB with Vertical Cold-Form Steel Studs Spaced 16" o.c.^{1,3,4,5}

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight ² (psf)					
			5	10	15	20	25	30
20 ga structural (33 mil)	Rmax® Nailboard Fastener SIPLD	1/2	24	16	12	8	8	6
		3/4	24	12	8	8	6	6
		1	20	12	8	8	6	4
		1 1/2	16	8	8	6	4	4
		2	12	8	6	4	4	4
		2 1/2	8	6	4	4	-	-
		3	6	4	4	-	-	-
		3 1/2	4	-	-	-	-	-
	#8 Screw	1/2	16	8	6	4	4	4
		3/4	12	8	6	4	4	-
		1	12	8	6	4	4	-
		1 1/2	8	6	4	-	-	-
		2	6	4	-	-	-	-
		2 1/2	4	-	-	-	-	-
	#10 Screw	1/2	16	8	8	6	4	4
		3/4	16	8	6	6	4	4
		1	12	8	6	4	4	-
		1 1/2	12	6	4	4	-	-
		2	8	6	4	-	-	-
		2 1/2	6	4	-	-	-	-
	#12 Screw	1/2	16	8	8	6	4	4
3/4		16	8	6	6	4	4	
1		12	8	6	4	4	4	



Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermoBase-CI™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight ² (psf)					
			5	10	15	20	25	30
20 ga structural (33 mil)		1½	12	8	6	4	4	-
		2	8	6	4	4	-	-
		2½	8	4	4	-	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-
	TRUFast® SIPLD	½	24	16	12	8	8	6
		¾	24	12	8	8	6	6
		1	20	12	8	8	6	4
		1½	16	8	8	6	4	4
		2	12	8	6	4	4	4
		2½	8	6	4	4	-	-
		3	6	4	4	-	-	-
	FastenMaster® HeadLOK®	½	24	16	12	8	8	6
		¾	24	12	8	8	6	6
		1	20	12	8	8	6	4
		1½	16	8	8	6	4	4
		2	12	8	6	4	4	4
		2½	8	6	4	4	-	-
		3	6	4	4	-	-	-
	SFS intec Dekfast™	½	24	16	12	8	8	6
		¾	24	12	8	8	6	6
		1	20	12	8	8	6	4
		1½	16	8	8	6	4	4
		2	12	8	6	4	4	4
		2½	8	6	4	4	-	-
		3	6	4	4	-	-	-
	Rmax® Nailboard Fastener SIPLD	½	24	20	12	12	8	8
		¾	24	16	12	8	8	6
1		24	16	12	8	8	6	
1½		20	12	8	8	6	6	



Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)						
			Specified Cladding Weight ² (psf)						
			5	10	15	20	25	30	
18 ga structural (43 mil)		2	16	8	8	6	4	4	
		2½	12	8	6	4	4	-	
		3	8	6	4	4	-	-	
		3½	6	4	-	-	-	-	
	#8 Screw	½	16	8	6	4	4	4	
		¾	12	8	6	4	4	-	
		1	12	8	6	4	4	-	
		1½	8	6	4	-	-	-	
		2	6	4	-	-	-	-	
		2½	4	-	-	-	-	-	
	#10 Screw	½	16	8	8	6	4	4	
		¾	16	8	6	6	4	4	
		1	12	8	6	4	4	-	
		1½	12	6	4	4	-	-	
		2	8	6	4	-	-	-	
		2½	6	4	-	-	-	-	
	18 ga structural (43 mil)	#12 Screw	½	16	8	8	6	4	4
			¾	16	8	6	6	4	4
1			12	8	6	4	4	4	
1½			12	8	6	4	4	-	
2			8	6	4	4	-	-	
2½			8	4	4	-	-	-	
3			6	4	-	-	-	-	
3½			4	-	-	-	-	-	
18 ga structural (43 mil)	TRUFAST® SIPLD	½	24	20	12	12	8	8	
		¾	24	16	12	8	8	6	
		1	24	16	12	8	8	6	
		1½	20	12	8	8	6	6	
		2	16	8	8	6	4	4	
		2½	12	8	6	4	4	-	
		3	8	6	4	4	-	-	
		3½	6	4	-	-	-	-	
	½	24	20	12	12	8	8		



Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight ² (psf)					
			5	10	15	20	25	30
18 ga structural (43 mil)	FastenMaster® HeadLOK®	¾	24	16	12	8	8	6
		1	24	16	12	8	8	6
		1½	20	12	8	8	6	6
		2	16	8	8	6	4	4
		2½	12	8	6	4	4	4
		3	8	6	4	4	-	-
		3½	6	4	-	-	-	-
	SFS intec Dekfast™	½	24	20	12	8	8	8
		¾	24	16	12	8	8	6
		1	24	16	12	8	8	6
		1½	20	12	8	8	6	6
		2	16	8	8	6	4	4
		2½	12	8	6	4	4	-
		3	8	6	4	4	-	-
16 ga structural (53 mil)	Rmax® Nailboard Fastener SIP HD	½	24	20	12	12	8	8
		¾	24	16	12	8	8	6
		1	24	16	12	8	8	6
		1½	20	12	8	8	6	6
		2	16	8	8	6	4	4
		2½	12	8	6	4	4	-
		3	8	6	4	4	-	-
		3½	6	4	-	-	-	-
	#8 Screw	½	16	8	6	4	4	4
		¾	12	8	6	4	4	-
		1	12	8	6	4	4	-
		1½	8	6	4	-	-	-
		2	6	4	-	-	-	-
		2½	4	-	-	-	-	-
	#10 Screw	½	16	8	8	6	4	4
		¾	16	8	6	6	4	4
		1	12	8	6	4	4	-
		1½	12	6	4	4	-	-



Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight ² (psf)					
			5	10	15	20	25	30
16 ga structural (53 mil)		2	8	6	4	-	-	-
		2½	6	4	-	-	-	-
	#12 Screw	½	16	8	8	6	4	4
		¾	16	8	6	6	4	4
		1	12	8	6	4	4	4
		1½	12	8	6	4	4	-
		2	8	6	4	4	-	-
		2½	8	4	4	-	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-
	TRUFAST® SIPHD	½	24	20	12	12	8	8
		¾	24	16	12	8	8	6
		1	24	16	12	8	8	6
		1½	20	12	8	8	6	6
		2	16	8	8	6	4	4
		2½	12	8	6	4	4	-
		3	8	6	4	4	-	-
		3½	6	4	-	-	-	-
	FastenMaster® HeadLOK®	½	24	20	12	12	8	8
		¾	24	16	12	8	8	6
		1	24	16	12	8	8	6
		1½	20	12	8	8	6	6
		2	16	8	8	6	4	4
		2½	12	8	6	4	4	4
		3	8	6	4	4	-	-
		3½	6	4	-	-	-	-
	SFS intec Dekfast™	½	24	20	12	8	8	8
		¾	24	16	12	8	8	6
		1	24	16	12	8	8	6
		1½	20	12	8	8	6	6
2		16	8	8	6	4	4	
2½		12	8	6	4	4	-	
3		8	6	4	4	-	-	

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight ² (psf)					
			5	10	15	20	25	30
		3½	6	4	-	-	-	-

SI: 1 in = 25.4 mm, 1 psf = 0.0479 kN/m²

1. Minimum fastener penetration into stud is the steel thickness plus three threads and the tip of the fastener.
2. The weight of ThermaBase-CI™ and sheathing is included in the fastener spacing calculations. The specified cladding weight shall include all other supported materials besides the ThermaBase-CI™ and sheathing.
3. ThermaBase-CI™ is installed directly to the studs with the OSB or plywood to the exterior of the structure.
4. Nail and screw values determined using NDS Yield Limit Equations and TR-12 for evaluating the foam as a gap.
5. Nail fasteners shall comply with ASTM F1667, except nail length shall be permitted to exceed ASTM F1667 standard lengths. Minimum bending yield strength for nails with a diameter up to 0.148", 0.162", and 0.225" shall be 90,000 psi, 90,000 psi, and 80,000 psi respectively. Proprietary fastener properties are per published data or testing.

Table 17. Maximum Fastener Spacing for ThermaBase-CI™ Utilizing 5/8" or 3/4" OSB with Vertical Cold-Form Steel Studs Spaced 24" o.c.^{1,3,4,5}

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight ² (psf)					
			5	10	15	20	25	30
20 ga structural (33 mil)	Rmax® Nailboard Fastener SIPLD	½	16	8	8	6	4	4
		¾	16	8	6	6	4	4
		1	12	8	6	4	4	-
		1½	8	6	4	4	-	-
		2	8	6	4	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
	#8 Screw	½	8	6	4	-	-	-
		¾	8	6	4	-	-	-
		1	8	4	4	-	-	-
		1½	6	4	-	-	-	-
		2	4	-	-	-	-	-
	#10 Screw	½	12	6	4	4	-	-
		¾	8	6	4	4	-	-
		1	8	6	4	-	-	-
		1½	8	4	-	-	-	-
		2	6	4	-	-	-	-
		2½	4	-	-	-	-	-
	#12 Screw	½	12	6	4	4	-	-
		¾	8	6	4	4	-	-
		1	8	6	4	-	-	-



Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight ² (psf)					
			5	10	15	20	25	30
20 ga structural (33 mil)		1½	8	4	4	-	-	-
		2	6	4	-	-	-	-
		2½	4	-	-	-	-	-
		3	4	-	-	-	-	-
	TRUFAST® SIPLD	½	16	8	8	6	4	4
		¾	16	8	6	6	4	4
		1	12	8	6	4	4	-
		1½	8	6	4	4	-	-
		2	8	6	4	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
	FastenMaster® HeadLOK®	½	16	8	8	6	4	4
		¾	16	8	6	6	4	4
		1	12	8	6	4	4	-
		1½	8	6	4	4	-	-
		2	8	6	4	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
	SFS intec Dekfast™	½	16	8	8	6	4	4
		¾	16	8	6	6	4	4
		1	12	8	6	4	4	-
		1½	8	6	4	4	-	-
		2	8	6	4	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
	Rmax® Nailboard Fastener SIPLD	½	20	12	8	8	6	4
		¾	20	12	8	6	6	4
		1	16	8	8	6	4	4
1½		12	8	6	4	4	4	
2		8	6	4	4	-	-	
2½		8	4	4	-	-	-	
3		6	4	-	-	-	-	
3½		4	-	-	-	-	-	



Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)						
			Specified Cladding Weight ² (psf)						
			5	10	15	20	25	30	
18 ga structural (43 mil)	#8 Screw	½	8	6	4	-	-	-	
		¾	8	6	4	-	-	-	
		1	8	4	4	-	-	-	
		1½	6	4	-	-	-	-	
		2	4	-	-	-	-	-	
	#10 Screw	½	12	6	4	4	-	-	
		¾	8	6	4	4	-	-	
		1	8	6	4	-	-	-	
		1½	8	4	-	-	-	-	
		2	6	4	-	-	-	-	
		2½	4	-	-	-	-	-	
	#12 Screw	½	12	6	4	4	-	-	
		¾	8	6	4	4	-	-	
		1	8	6	4	-	-	-	
		1½	8	4	4	-	-	-	
		2	6	4	-	-	-	-	
		2½	4	-	-	-	-	-	
		3	4	-	-	-	-	-	
	18 ga structural (43 mil)	TRUFAST® SIPLD	½	20	12	8	8	6	4
			¾	20	12	8	6	6	4
			1	16	8	8	6	4	4
1½			12	8	6	4	4	4	
2			8	6	4	4	-	-	
2½			8	4	4	-	-	-	
3			6	4	-	-	-	-	
3½			4	-	-	-	-	-	
FastenMaster® HeadLOK®		½	20	12	8	8	6	4	
		¾	20	12	8	6	6	4	
		1	16	8	8	6	4	4	
		1½	12	8	6	4	4	4	
		2	8	6	4	4	-	-	
		2½	8	6	4	-	-	-	
3	6	4	-	-	-	-			



Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight ² (psf)					
			5	10	15	20	25	30
	SFS intec Dekfast™	3½	4	-	-	-	-	-
		½	20	12	8	6	6	4
		¾	20	12	8	6	6	4
		1	16	8	8	6	4	4
		1½	12	8	6	4	4	4
		2	8	6	4	4	-	-
		2½	8	4	4	-	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-
16 ga structural (53 mil)	Rmax® Nailboard Fastener SIP HD	½	20	12	8	8	6	4
		¾	20	12	8	6	6	4
		1	16	8	8	6	4	4
		1½	12	8	6	4	4	4
		2	8	6	4	4	-	-
		2½	8	4	4	-	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-
	#8 Screw	½	8	6	4	-	-	-
		¾	8	6	4	-	-	-
		1	8	4	4	-	-	-
		1½	6	4	-	-	-	-
		2	4	-	-	-	-	-
	#10 Screw	½	12	6	4	4	-	-
		¾	8	6	4	4	-	-
		1	8	6	4	-	-	-
		1½	8	4	-	-	-	-
		2	6	4	-	-	-	-
		2½	4	-	-	-	-	-
	#12 Screw	½	12	6	4	4	-	-
		¾	8	6	4	4	-	-
		1	8	6	4	-	-	-
		1½	8	4	4	-	-	-
		2	6	4	-	-	-	-



Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight ² (psf)					
			5	10	15	20	25	30
16 ga structural (53 mil)		2½	4	-	-	-	-	-
		3	4	-	-	-	-	-
	TRUFAST® SIPHD	½	20	12	8	8	6	4
		¾	20	12	8	6	6	4
		1	16	8	8	6	4	4
		1½	12	8	6	4	4	4
		2	8	6	4	4	-	-
		2½	8	4	4	-	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-
		FastenMaster® HeadLOK®	½	20	12	8	8	6
	¾		20	12	8	6	6	4
	1		16	8	8	6	4	4
	1½		12	8	6	4	4	4
	2		8	6	4	4	-	-
	2½		8	6	4	-	-	-
	3		6	4	-	-	-	-
	3½		4	-	-	-	-	-
	SFS intec Dekfast™	½	20	12	8	6	6	4
		¾	20	12	8	6	6	4
		1	16	8	8	6	4	4
		1½	12	8	6	4	4	4
		2	8	6	4	4	-	-
		2½	8	4	4	-	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-

SI: 1 in = 25.4 mm, 1 psf = 0.0479 kN/m²

1. Minimum fastener penetration into stud is the steel thickness plus three threads and the tip of the fastener.
2. The weight of ThermaBase-CI™ and sheathing is included in the fastener spacing calculations. The specified cladding weight shall include all other supported materials besides the ThermaBase-CI™ and sheathing.
3. ThermaBase-CI™ is installed directly to the studs with the OSB or plywood to the exterior of the structure.
4. Nail and screw values determined using NDS Yield Limit Equations and TR-12 for evaluating the foam as a gap.
5. Nail fasteners shall comply with ASTM F1667, except nail length shall be permitted to exceed ASTM F1667 standard lengths. Minimum bending yield strength for nails with a diameter up to 0.148", 0.162", and 0.225" shall be 90,000 psi, 90,000 psi, and 80,000 psi respectively. Proprietary fastener properties are per published data or testing.



5.8 Fastener Attachments to Concrete and Masonry Substrates for ThermaBase-CI™ to Support Cladding Weight

- 5.8.1 Fasteners are required to attach the ThermaBase-CI™ sheathing to the substrate to carry the cladding weight listed in the tables below. The cladding weight shall include the weight of the ThermaBase-CI™ sheathing as well as any additional cladding attached to the sheathing. The tables below only consider the gravity (dead) loads corresponding to the tabulated cladding weights.
 - 5.8.1.1 See Table 18, Table 19, and Table 20 for allowable cladding loads for various fastener types and sheathing thicknesses for connection to minimum 2,500 psi concrete (at 28 days).
 - 5.8.1.2 See Table 21, Table 22, and Table 23 for allowable cladding loads for various fastener types and sheathing thicknesses for connection to concrete masonry unit (CMU) block.
- 5.8.2 All fasteners shall be installed into the face of CMU block.
- 5.8.3 For attaching to concrete substrate, fasteners with equal or greater design properties shall be permitted:
 - 5.8.3.1 ITW Buildex Tapcon® Hex: 3/16" nominal diameter,
 - 5.8.3.2 Hilti KH-EZ C: 1/4" nominal diameter, and
 - 5.8.3.3 Simpson Strong-Tie® Titen HD®: 1/4" nominal diameter.
- 5.8.4 For attaching to CMU block, fasteners with equal or greater design properties shall be permitted:
 - 5.8.4.1 ITW Buildex Tapcon® Hex: 3/16" nominal diameter,
 - 5.8.4.2 Hilti KH-EZ C: 1/4" nominal diameter,
 - 5.8.4.3 Simpson Strong-Tie® Titen HD®: 1/4" nominal diameter, and
 - 5.8.4.4 TRUFAST® SIPLD: 0.189" shank diameter.



Table 18. Maximum Vertical Fastener Spacing for ThermoBase-CI™ Attached to Concrete (Horizontally Spaced at 16" o.c.)

Substrate Material	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermoBase-CI™ (in)	Maximum Vertical Fastener Spacing (in)					
			Specified Cladding Weight ⁴ (psf)					
			5	10	15	20	25	30
Concrete (f _c ' = 2,500 psi)	3/16" ITW Buildex Tapcon® Hex ¹	1/2	24	24	24	16	12	12
		3/4	24	24	24	16	12	12
		1	24	24	20	16	12	8
		1 1/2	24	24	20	12	12	8
		2	24	24	16	12	8	8
		2 1/2	24	20	12	8	8	6
		3	24	16	8	8	6	4
		3 1/2	24	12	8	6	4	4
		4	16	8	4	4	-	-
		4 1/2	8	4	-	-	-	-
	1/4" Hilti KH-EZ C ²	1/2	24	24	24	20	16	12
		3/4	24	24	24	20	16	12
		1	24	24	24	16	12	12
		1 1/2	24	24	20	16	12	8
		2	24	24	20	12	12	8
		2 1/2	24	24	16	12	8	8
		3	24	20	12	8	8	6
		3 1/2	24	20	12	8	8	6
		4	24	16	8	8	6	4
		4 1/2	24	12	8	6	4	4
	1/4" Simpson Strong-Tie® Titen HD® ³	1/2	24	24	16	12	8	8
		3/4	24	24	16	12	8	8
		1	24	24	16	12	8	8
		1 1/2	24	20	12	8	8	6
		2	24	20	12	8	8	6
		2 1/2	24	16	12	8	6	6
		3	24	16	8	8	6	4
		3 1/2	24	12	8	6	4	4
		4	20	8	6	4	4	-
		4 1/2	16	8	4	4	-	-



Substrate Material	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Maximum Vertical Fastener Spacing (in)					
			Specified Cladding Weight ⁴ (psf)					
			5	10	15	20	25	30

SI: 1 in = 25.4 mm, 1 lb = 4.45 N, 1 psf = 47.88 N/m²

1. Minimum nominal embedment depth of 2" and minimum edge distance of 2".
2. Minimum nominal embedment depth of 1⁵/₈" and minimum edge distance of 1.5".
3. Minimum nominal embedment depth of 1⁵/₈" and minimum edge distance of 1.5".
4. The cladding weight shall include the weight of the ThermaBase-CI™ sheathing as well as any additional cladding attached to the sheathing.

Table 19. Maximum Vertical Fastener Spacing for ThermaBase-CI™ Attached to Concrete (Horizontally Spaced at 24" o.c.)

Substrate Material	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Maximum Vertical Fastener Spacing (in)					
			Specified Cladding Weight ⁴ (psf)					
			5	10	15	20	25	30
Concrete (f _c ' = 2,500 psi)	3/16" ITW Buildex Tapcon® Hex ¹	1/2	24	24	16	12	8	8
		3/4	24	24	16	12	8	8
		1	24	20	12	8	8	6
		1 1/2	24	20	12	8	8	6
		2	24	16	8	8	6	4
		2 1/2	24	12	8	6	4	4
		3	20	8	6	4	4	-
		3 1/2	16	8	4	4	-	-
		4	8	4	-	-	-	-
		4 1/2	4	-	-	-	-	-
	1/4" Hilti KH-EZ C ²	1/2	24	24	16	12	8	8
		3/4	24	24	16	12	8	8
		1	24	24	16	12	8	8
		1 1/2	24	20	12	8	8	6
		2	24	20	12	8	8	6
		2 1/2	24	16	12	8	6	6
		3	24	12	8	6	6	4
		3 1/2	24	12	8	6	4	4
		4	20	8	6	4	4	-
		4 1/2	16	8	4	4	-	-
	1/4" Simpson Strong-Tie® Titen HD® ³	1/2	24	16	12	8	6	6
		3/4	24	16	12	8	6	6
		1	24	16	8	8	6	4
		1 1/2	24	12	8	6	6	4

Substrate Material	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Maximum Vertical Fastener Spacing (in)					
			Specified Cladding Weight ⁴ (psf)					
			5	10	15	20	25	30
		2	24	12	8	6	4	4
		2½	24	12	8	6	4	4
		3	20	8	6	4	4	-
		3½	16	8	6	4	-	-
		4	12	6	4	-	-	-
		4½	8	4	-	-	-	-

SI: 1 in = 25.4 mm, 1 lb = 4.45 N, 1 psf = 47.88 N/m²

1. Minimum nominal embedment depth of 2" and minimum edge distance of 2".
2. Minimum nominal embedment depth of 1½" and minimum edge distance of 1.5".
3. Minimum nominal embedment depth of 1⅝" and minimum edge distance of 1.5".
4. The cladding weight shall include the weight of the ThermaBase-CI™ sheathing as well as any additional cladding attached to the sheathing.

Table 20. Maximum Vertical Fastener Spacing for ThermaBase-CI™ Attached to Concrete (Horizontally Spaced at 48" o.c.)

Substrate Material	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Maximum Vertical Fastener Spacing (in)					
			Specified Cladding Weight ⁴ (psf)					
			5	10	15	20	25	30
Concrete (f _c ' = 2,500 psi)	3/16" ITW Buildex Tapcon® Hex ¹	½	24	12	8	6	4	4
		¾	24	12	8	6	4	4
		1	20	8	6	4	4	-
		1½	20	8	6	4	4	-
		2	16	8	4	4	-	-
		2½	12	6	4	-	-	-
		3	8	4	-	-	-	-
		3½	8	4	-	-	-	-
	4	4	-	-	-	-	-	
	¼" Hilti KH-EZ C ²	½	24	12	8	6	4	4
		¾	24	12	8	6	4	4
		1	24	12	8	6	4	4
		1½	20	8	6	4	4	-
		2	20	8	6	4	4	-
		2½	16	8	6	4	-	-
		3	12	6	4	-	-	-
3½		12	6	4	-	-	-	
4	8	4	-	-	-	-		

Substrate Material	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermoBase-CI™ (in)	Maximum Vertical Fastener Spacing (in)					
			Specified Cladding Weight ⁴ (psf)					
			5	10	15	20	25	30
	¼" Simpson Strong-Tie® Titen HD® ³	4½	8	4	-	-	-	-
		½	16	8	6	4	-	-
		¾	16	8	6	4	-	-
		1	16	8	4	4	-	-
		1½	12	6	4	-	-	-
		2	12	6	4	-	-	-
		2½	12	6	4	-	-	-
		3	8	4	-	-	-	-
		3½	8	4	-	-	-	-
		4	6	-	-	-	-	-
		4½	4	-	-	-	-	

SI: 1 in = 25.4 mm, 1 lb = 4.45 N, 1 psf = 47.88 N/m²

1. Minimum nominal embedment depth of 2" and minimum edge distance of 2".
2. Minimum nominal embedment depth of 1⅝" and minimum edge distance of 1.5".
3. Minimum nominal embedment depth of 1⅝" and minimum edge distance of 1.5".
4. The cladding weight shall include the weight of the ThermoBase-CI™ sheathing as well as any additional cladding attached to the sheathing.

Table 21. Maximum Vertical Fastener Spacing for ThermoBase-CI™ Attached to CMU Block (Horizontally Spaced at 16" o.c.)

Substrate Material	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermoBase-CI™ (in)	Maximum Vertical Fastener Spacing (in)					
			Specified Cladding Weight ⁵ (psf)					
			5	10	15	20	25	30
CMU Block	⅜" ITW Buildex Tapcon® Hex ¹	½	24	16	8	8	6	4
		¾	24	12	8	6	6	4
		1	24	12	8	6	4	4
		1½	24	12	8	6	4	4
		2	20	8	6	4	4	-
		2½	16	8	4	4	-	-
		3	12	6	4	-	-	-
		3½	8	4	-	-	-	-
		4	4	-	-	-	-	-
	¼" Hilti KH-EZ C ²	½	24	24	24	24	24	20
		¾	24	24	24	24	24	20
		1	24	24	24	24	24	20
		1½	24	24	24	24	20	16



Substrate Material	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermoBase-CI™ (in)	Maximum Vertical Fastener Spacing (in)					
			Specified Cladding Weight ⁵ (psf)					
			5	10	15	20	25	30
		2	24	24	24	24	16	16
		2½	24	24	24	20	16	12
		3	24	24	20	16	12	8
		3½	24	24	16	12	8	8
		4	24	20	12	8	8	6
		4½	24	12	8	6	4	4
	¼" Simpson Strong-Tie® Titen HD® ³	½	24	24	24	24	24	20
		¾	24	24	24	24	24	20
		1	24	24	24	24	24	20
		1½	24	24	24	24	20	16
		2	24	24	24	24	16	16
		2½	24	24	24	20	16	12
		3	24	24	24	16	12	12
		3½	24	24	20	12	12	8
		4	24	24	16	12	8	8
		4½	24	20	12	8	8	6
	TRUFAST® SIPLD ⁴	½	24	24	24	20	16	12
		¾	24	24	24	20	16	12
		1	24	24	24	20	16	12
		1½	24	24	20	16	12	8
		2	24	24	16	12	8	8
		2½	24	20	12	8	8	6
		3	24	16	12	8	6	6
		3½	24	16	8	8	6	4
		4	24	12	8	6	4	4
		4½	24	12	8	6	4	4

SI: 1 in = 25.4 mm, 1 lb = 4.45 N, 1 psf = 47.88 N/m²

1. Allowable connection design strength is based on attachment to minimum Grade N, Type II, medium- or normal-weight CMU (conforming to ASTM C1019) and a minimum embedment of 1", edge distance of 4", and spacing of 3".
2. Allowable connection design strength is based on attachment to minimum Grade N, Type II, lightweight CMU (conforming to ASTM C90) filled with 2,000 psi grout (conforming to ASTM C1019) and a minimum embedment of 1⅝" edge distance of 4", and spacing of 4". At 28 days, the compressive strength of masonry, f_m , shall be a minimum of 1,500 psi.
3. Allowable connection design strength is based on attachment to minimum Grade N, Type II, lightweight CMU (conforming to ASTM C90) filled with 2,000 psi grout (conforming to ASTM C1019) and a minimum embedment of 2½", edge distance of 4", and spacing of 4". At 28 days, the compressive strength of masonry, f_m , shall be a minimum of 1,500 psi.
4. Tabulated values do not consider the masonry strength in holding the fastener as a post-installed embedment. Minimum nominal embedment depth shall be determined in accordance with accepted practice.
5. The cladding weight shall include the weight of the ThermoBase-CI™ sheathing as well as any additional cladding attached to the sheathing.



Table 22. Maximum Vertical Fastener Spacing for ThermaBase-CI™
Attached to CMU Block (Horizontally Spaced at 24" o.c.)

Substrate Material	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Maximum Vertical Fastener Spacing (in)					
			Specified Cladding Weight ⁵ (psf)					
			5	10	15	20	25	30
CMU Block	3/16" ITW Buildex Tapcon® Hex ¹	1/2	20	8	6	4	4	-
		3/4	20	8	6	4	4	-
		1	16	8	6	4	-	-
		1 1/2	16	8	4	4	-	-
		2	12	6	4	-	-	-
		2 1/2	8	4	-	-	-	-
		3	8	4	-	-	-	-
		3 1/2	6	-	-	-	-	-
	1/4" Hilti KH-EZ C ²	1/2	24	24	24	20	16	12
		3/4	24	24	24	20	16	12
		1	24	24	24	20	16	12
		1 1/2	24	24	24	16	12	12
		2	24	24	20	16	12	8
		2 1/2	24	24	16	12	8	8
		3	24	20	12	8	8	6
		3 1/2	24	16	12	8	6	6
		4	24	12	8	6	4	4
		4 1/2	16	8	4	4	-	-
	1/4" Simpson Strong-Tie® Titen HD® ³	1/2	24	24	24	20	16	12
		3/4	24	24	24	20	16	12
		1	24	24	24	20	16	12
		1 1/2	24	24	24	16	12	12
		2	24	24	20	16	12	8
		2 1/2	24	24	16	12	8	8
		3	24	24	16	12	8	8
		3 1/2	24	20	12	8	8	6
		4	24	16	8	8	6	4
		4 1/2	24	12	8	6	4	4
	TRUFAST® SIPLD ⁴	1/2	24	24	20	12	12	8
		3/4	24	24	20	12	12	8
1		24	24	20	12	12	8	
1 1/2		24	20	12	8	8	6	

Substrate Material	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Maximum Vertical Fastener Spacing (in)					
			Specified Cladding Weight ⁵ (psf)					
			5	10	15	20	25	30
	TRUFAST® SIPLD ⁴	2	24	16	12	8	6	6
		2½	24	12	8	6	6	4
		3	24	12	8	6	4	4
		3½	20	8	6	4	4	-
		4	16	8	6	4	-	-
		4½	16	8	4	4	-	-

SI: 1 in = 25.4 mm, 1 lb = 4.45 N, 1 psf = 47.88 N/m²

1. Allowable connection design strength is based on attachment to minimum Grade N, Type II, medium- or normal-weight CMU (conforming to *ASTM C90*) filled with 2,000 psi grout (conforming to *ASTM C1019*) and a minimum embedment of 1", edge distance of 4", and spacing of 3".
2. Allowable connection design strength is based on attachment to minimum Grade N, Type II, lightweight CMU (conforming to *ASTM C90*) filled with 2,000 psi grout (conforming to *ASTM C1019*) and a minimum embedment of 1½" edge distance of 4", and spacing of 4". At 28 days, the compressive strength of masonry, *f_m*, shall be a minimum of 1,500 psi.
3. Allowable connection design strength is based on attachment to minimum Grade N, Type II, lightweight CMU (conforming to *ASTM C90*) filled with 2,000 psi grout (conforming to *ASTM C1019*) and a minimum embedment of 2½", edge distance of 4", and spacing of 4". At 28 days, the compressive strength of masonry, *f_m*, shall be a minimum of 1,500 psi.
4. Tabulated values do not consider the masonry strength in holding the fastener as a post-installed embedment. Minimum nominal embedment depth shall be determined in accordance with accepted practice.
5. The cladding weight shall include the weight of the ThermaBase-CI™ sheathing as well as any additional cladding attached to the sheathing.

Table 23. Maximum Vertical Fastener Spacing for ThermaBase-CI™ Attached to CMU Block (Horizontally Spaced at 48" o.c.)

Substrate Material	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Maximum Vertical Fastener Spacing (in)					
			Specified Cladding Weight ⁵ (psf)					
			5	10	15	20	25	30
CMU Block	¾" ITW Buildex Tapcon® Hex ¹	½	8	4	-	-	-	-
		¾	8	4	-	-	-	-
		1	8	4	-	-	-	-
		1½	8	4	-	-	-	-
		2	6	-	-	-	-	-
		2½	4	-	-	-	-	-
		3	4	-	-	-	-	-
	¼" Hilti KH-EZ C ²	½	24	20	12	8	8	6
		¾	24	20	12	8	8	6
		1	24	20	12	8	8	6
		1½	24	16	12	8	6	6
		2	24	16	8	8	6	4
		2½	24	12	8	6	4	4
		3	20	8	6	4	4	-
		3½	16	8	6	4	-	-
4	12	6	4	-	-	-		



Substrate Material	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of ThermaBase-CI™ (in)	Maximum Vertical Fastener Spacing (in)					
			Specified Cladding Weight ⁵ (psf)					
			5	10	15	20	25	30
		4½	8	4	-	-	-	-
	¼" Simpson Strong-Tie® Titen HD® ³	½	24	20	12	8	8	6
		¾	24	20	12	8	8	6
		1	24	20	12	8	8	6
		1½	24	16	12	8	6	6
		2	24	16	8	8	6	4
		2½	24	12	8	6	4	4
		3	24	12	8	6	4	4
		3½	20	8	6	4	4	-
		4	16	8	4	4	-	-
		4½	12	6	4	-	-	-
	TRUFAST® SIPLD ⁴	½	24	12	8	6	6	4
		¾	24	12	8	6	6	4
		1	24	12	8	6	6	4
		1½	20	8	6	4	4	-
		2	16	8	6	4	-	-
		2½	12	6	4	-	-	-
		3	12	6	4	-	-	-
		3½	8	4	-	-	-	-
		4	8	4	-	-	-	-
4½		8	4	-	-	-	-	

SI: 1 in = 25.4 mm, 1 lb = 4.45 N, 1 psf = 47.88 N/m²

1. Allowable connection design strength is based on attachment to minimum Grade N, Type II, medium- or normal-weight CMU (conforming to ASTM C90) filled with 2,000 psi grout (conforming to ASTM C1019) and a minimum embedment of 1", edge distance of 4", and spacing of 3".
2. Allowable connection design strength is based on attachment to minimum Grade N, Type II, lightweight CMU (conforming to ASTM C90) filled with 2,000 psi grout (conforming to ASTM C1019) and a minimum embedment of 1½" edge distance of 4", and spacing of 4". At 28 days, the compressive strength of masonry, f_m , shall be a minimum of 1,500 psi.
3. Allowable connection design strength is based on attachment to minimum Grade N, Type II, lightweight CMU (conforming to ASTM C90) filled with 2,000 psi grout (conforming to ASTM C1019) and a minimum embedment of 2½", edge distance of 4", and spacing of 4". At 28 days, the compressive strength of masonry, f_m , shall be a minimum of 1,500 psi.
4. Tabulated values do not consider the masonry strength in holding the fastener as a post-installed embedment. Minimum nominal embedment depth shall be determined in accordance with accepted practice.
5. The cladding weight shall include the weight of the ThermaBase-CI™ sheathing as well as any additional cladding attached to the sheathing.

5.9 Where the application exceeds the limitations set forth herein, design shall be permitted in accordance with accepted engineering procedures, experience, and technical judgment.



6 Installation

- 6.1 Installation shall comply with the manufacturer installation instructions, this TER, the approved construction documents, and the applicable building code.
- 6.2 In the event of a conflict between the manufacturer installation instructions and this TER, the more restrictive shall govern.
- 6.3 *Installation Procedure*
 - 6.3.1 *Orientation:*
 - 6.3.1.1 ThermaBase-CI™ shall be installed vertically with framing that has a nominal thickness of not less than 2" (1.5" actual, 38.1 mm) and spaced a maximum of 24" (610 mm) o.c.
 - 6.3.1.2 ThermaBase-CI™ shall be installed vertically over concrete or CMU block in accordance with Table 18, Table 19, Table 20, Table 21, Table 22, and Table 23.
 - 6.3.1.3 ThermaBase-CI™ shear wall aspect ratio must not exceed 3.5:1.
 - 6.3.2 *Attachment:*
 - 6.3.2.1 Fasteners shall be installed with a minimum edge distance of $\frac{3}{8}$ " (9.5 mm), unless noted otherwise.
 - 6.3.2.2 Bending yield strength of commodity fasteners shall be as shown in *NDS*, Table 12N, footnote 2. Bending yield of proprietary fasteners are as published by the fastener manufacturer.
 - 6.3.2.3 Fasteners shall be installed with the maximum on-center spacing as indicated in Table 4 through Table 23.
 - 6.3.2.4 See footnotes of Table 18 through Table 23 for more installation information into concrete and masonry substrates.
 - 6.3.2.4.1 All fasteners installed in masonry shall be in the face of CMU block.

7 Substantiating Data

- 7.1 Testing has been performed under the supervision of a professional engineer and/or under the requirements of ISO/IEC 17025 as follows:
 - 7.1.1 Flame spread and smoke developed ratings testing in accordance with *ASTM E84*
 - 7.1.2 Air permeance testing in accordance with *ASTM E2178*
- 7.2 Information contained herein is the result of testing and/or data analysis by sources which conform to *IBC Section 1703* and/or professional engineering regulations. DrJ relies upon accurate data to perform its ISO/IEC 17065 evaluations.
- 7.3 Where appropriate, DrJ's analysis is based on provisions that have been codified into law through state or local adoption of codes and standards. The providers of the codes and standards are legally responsible for their content. DrJ analysis may use code-adopted provisions as a control sample. A control sample versus a test sample establishes a product as being equivalent to that prescribed in this code in quality, strength, effectiveness, fire resistance, durability, and safety. Where the accuracy of the provisions provided herein is reliant upon the published properties of materials, DrJ relies upon the grade mark, grade stamp, mill certificate, and/or test data provided by material suppliers to be minimum properties. DrJ analysis relies upon these properties to be accurate.



8 Findings

- 8.1 When used and installed in accordance with this TER and the manufacturer installation instructions, the product listed in Section 1.1 is approved for the following:
- 8.1.1 Use as a nail base for support of cladding materials when installed in accordance with the manufacturer installation instructions and this TER,
 - 8.1.2 Thermal resistance for use as insulating sheathing in accordance with IECC Section R402.1 and IRC Section N1102.1,
 - 8.1.3 Foam plastic insulation performance in accordance with IRC Section R316,
 - 8.1.4 Performance for use as an air barrier in accordance with IECC Section C402,
 - 8.1.5 Wind pressure resistance in accordance with IBC Section 1609.1.1 and IRC Section R301.2.1, and
 - 8.1.6 Performance for use in a fire resistance rated assembly in accordance with IBC Section 2603.5.1.
- 8.2 Building codes require data from valid research reports be obtained from approved sources (i.e., licensed registered design professionals [RDPs]).
- 8.2.1 Building official approval of a licensed RDP is performed by verifying the RDP and/or their business entity is listed by the licensing board of the relevant jurisdiction.
- 8.3 Agencies who are accredited through ISO/IEC 17065 have met the code requirements for approval by the building official. DrJ is an ISO/IEC 17065 ANAB-Accredited Product Certification Body – Accreditation #1131 and employs RDPs.
- 8.4 Through ANAB accreditation and the IAF MLA, DrJ certification can be used to obtain product approval in any jurisdiction or country that has IAF MLA Members & Signatories to meet the Purpose of the MLA – “certified once, accepted everywhere.”
- 8.5 IBC Section 104.11 (IRC Section R104.11 and IFC Section 104.10⁶ are similar) states:

104.11 Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code...Where the alternative material, design or method of construction is not *approved*, the *building official* shall respond in writing, stating the reasons the alternative was not *approved*.

9 Conditions of Use

- 9.1 ThermaBase-CI™ may be used as a nail base for cladding. Fastener size and spacing for attaching ThermaBase-CI™ to the wall framing shall be in accordance with Table 4 through Table 17.
- 9.2 Cladding attachments shall be in accordance with the cladding manufacturer installation instructions or an approved engineered design.
- 9.3 Design properties shall not exceed those described in Section 5.
- 9.4 As listed in Section 1.1, product(s) shall not be used:
- 9.4.1 To resist horizontal loads from concrete and masonry walls.
- 9.5 When required by legal stipulation and enforced by the building official, also known as the authority having jurisdiction (AHJ) in which the project is to be constructed:
- 9.5.1 This TER and the installation instructions shall be submitted at the time of permit application.
 - 9.5.2 Any calculations, required to show compliance with this TER, incorporated as part of the construction documents that are to be examined for conformance to the requirements of the pertinent laws shall conform to accepted engineering practice, and be approved when requirements of the pertinent laws are met.

⁶ 2018 IFC Section 104.9



- 9.6 This product has an internal quality control program and a third-party quality assurance program in accordance with IBC Section 104.4 and Section 110.4 and IRC Section R104.4 and Section R109.2.
- 9.7 Design loads shall be determined in accordance with the building code adopted by the jurisdiction in which the project is to be constructed and/or by the building designer (e.g., owner or RDP).
- 9.8 At a minimum, this product shall be installed per Section 6 of this TER.
- 9.9 The actual design, suitability, and use of this TER, for any particular building, is the responsibility of the owner or the owner's authorized agent.
- 9.10 This TER shall be reviewed for code compliance by the AHJ in concert with IBC Section 104.
- 9.11 The implementation of this TER for this product is dependent on the design, quality control, third-party quality assurance, proper implementation of installation instructions, inspections required by IBC Section 110.3, and any other code or regulatory requirements that may apply.

10 Identification

- 10.1 The product(s) listed in Section 1.1 are identified by a label on the board or packaging material bearing the manufacturer name, product name, TER number, and other information to confirm code compliance.
- 10.2 Additional technical information can be found at rmax.com.

11 Review Schedule

- 11.1 This TER is subject to periodic review and revision. For the most recent version, visit drjcertification.org.
- 11.2 For information on the current status of this TER, contact DrJ Certification.