DrJ CERTIFICATION

#1131
ISO/IEC 17065
Product Certification Body

Approved. Sealed. Code Compliant.

Technical Evaluation Report

TER 1504-05

Rmax THERMABASEci™

Rmax

Product:

Rmax THERMABASEci™

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Subject to Renewal:

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ICC MEMBER

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 EVALUATED[1]

1.1 Rmax THERMABASEci™

2 APPLICABLE CODES AND STANDARDS[2,3]

2.1 *Codes*

2.1.1 *IBC—12, 15, 18: International Building Code®*

2.1.2 *IRC—12, 15, 18: 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*

[1] Building codes require data from valid *research reports* be obtained from *approved sources*. An *approved agency*, which is an *approved source*, is defined as "an established and recognized agency that is regularly engaged in…furnishing product certification where such agency has been approved…" Being *approved*, defined as "acceptable to the *building official*," is accomplished via accreditation using ISO/IEC 17065 evaluation procedures meeting code requirements of independence, adequate equipment, and experienced personnel. DrJ is an ISO/IEC 17065 ANSI-Accredited Product Certification Body – Accreditation #1131.

Through ANSI accreditation, DrJ certification can be used to obtain product approval in any country that is an IAF MLA Signatory and covered by an IAF MLA Evaluation per the Purpose of the MLA – "certified once, accepted everywhere." Manufacturers can go to *jurisdictions* in any IAF MLA Signatory Country and have their products readily approved by authorities having jurisdiction using DrJ's ANSI accreditation.

For more information on any of these topics or our mission, product evaluation policies, product approval process, and engineering law, see drjcertification.org.

[2] Unless otherwise noted, all references in this TER are from the 2018 version of the codes and the standards referenced therein (e.g., *ASCE 7, NDS, ASTM*). This material, design, or method of construction also complies with the 2000-2015 versions of the referenced codes and the standards referenced therein. As required by code, where this TER is not approved, the *building official* shall respond in writing stating the reasons this TER was not *approved*. For any variations in state and local codes, see Section 8.

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

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

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

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

2.2.6 *ASTM E330: Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference*

2.2.7 *ASTM E564: Standard Practice for Static Load Test for Shear Resistance of Framed Walls for Buildings*

2.2.8 *ASTM E84: Standard Test Method for Surface Burning Characteristics of Building Materials*

2.2.9 *DOC PS 2: Performance Standard for Wood-based Structural-use Panels*

3 Performance Evaluation

3.1 Rmax THERMABASEci™ 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 Performance for use as an air barrier in accordance with *IECC* Section C402.

3.1.6 Structural performance under lateral load conditions for use as an alternative to *SDPWS* Section 4.3 Wood-Frame Shear Walls.

3.1.7 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.

3.2 Design of cladding fastening to THERMABASEci™ 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 on the dates provided in this TER and within DrJ's professional scope of work.

4 Product Description and Materials

4.1 THERMABASEci™, 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.

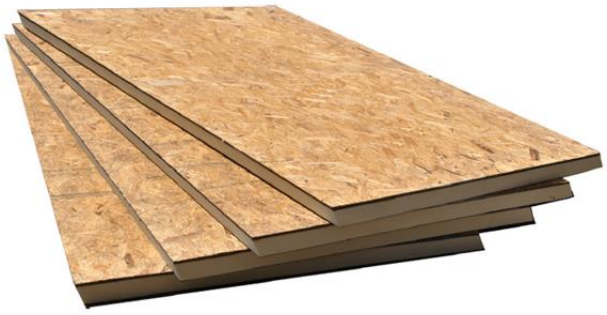

FIGURE 1. THERMABASECI™

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 THERMABASEci™ 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" (1219 mm)

4.1.8 Standard product length: 96" (2438 mm)

5 APPLICATIONS

5.1 *General*

5.1.1 THERMABASEci™ 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

5.2 *Thermal Insulation*

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

5.3 *Air Barrier*

5.3.1 THERMABASEci™ meets the requirements of *IECC* Section R402 for use as a component of the air barrier, when installed in accordance with the manufacturer's installation instructions and this TER with all seams, including the top and bottom edges, treated.

5.3.2 Air barrier properties for THERMABASEci™ are shown in Table 1.

TABLE 1. THERMABASECI™ AIR BARRIER PROPERTIES

Test Method	Property
ASTM E2178	< 0.02 L(s.m^2)[1]
1. Liter per second per square meter	

5.3.3 The air permeance of an air barrier material is defined by the *IECC* and the Air Barrier Association of America (ABAA) as being no greater than 0.02 liter per second per square meter (L/(s·m^2)) at 75 Pa (0.004 cfm/ft^2 @ 1.57 psf) pressure difference when tested in accordance with *ASTM E2178*: *Standard Test Method for Air Permeance of Building Materials*.

5.4 *Fire Safety*

5.4.1 Surface Burn Characteristics

5.4.1.1 Flame spread and smoke developed indexes for THERMABASEci™ are shown in Table 2.

TABLE 2. SURFACE BURN CHARACTERISTICS

Product	Thickness (in)	Flame Spread	Smoke Developed
THERMABASEci™ Core[1]	< 1	< 40	< 250
	≥ 1	< 25	< 160

SI: 1 in = 25.4 mm

1. Foam plastic portion of THERMABASEci™ 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 THERMABASEci™ and related components under actual fire conditions.

5.5 *Thermal Barrier*

5.5.1 Except as noted in Section 5.5.2, THERMABASEci™ 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 R316.4[4].

5.5.2 The thermal barrier required by Section 5.5.1 is not required in the following applications:

5.5.2.1 THERMABASEci™ is covered by a minimum 1" thickness of concrete or masonry on each face of the sheathing in accordance with *IBC* Section 2603.4.1 or *IRC* Section 316.5.1.

5.5.2.2 Walk-in coolers in accordance with *IBC* Section 2603.4.1.3.

5.5.3 Where an ignition barrier is permitted in lieu of a thermal barrier, such as attic, crawlspace or other uninhabitable space applications, THERMABASEci™ 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

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

5.6 *Wind Pressure Resistance*

5.6.1 THERMABASEci™ is permitted to be used where the Maximum Nominal Design Wind Speed is as set forth in Table 3.

[4] 2015 *IRC* also allows for 23/32" wood structural panel

TABLE 3. TRANSVERSE LOAD PERFORMANCE OF THERMABASECI™ STRUCTURAL SHEATHING

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	220/8170	200/155

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

5.7 *Resistance to Lateral Loads*

5.7.1 THERMABASEci™ 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]
THERMABASEci™ ½" Polyiso + 7/16" OSB	8d (0.131" x 2½")	24 o.c.	0.938	470
		16 o.c.		495
THERMABASEci™ 1" Polyiso + 7/16" OSB	8d (0.131" x 3¼")	24 o.c.	1.438	385
		16 o.c.		425
THERMABASEci™ 1½" Polyiso + 7/16" OSB	0.131" x 3¼" Smooth Shank Nail	24 o.c.	1.938	330
		16 o.c.		375
THERMABASEci™ 2" Polyiso + 7/16" OSB	0.131" x 3¼" Smooth Shank Nail[3]	24 o.c.	2.438	310
		16 o.c.		360
THERMABASEci™ 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

1. THERMABASEci™ 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 ⅜". Minimum fastener penetration of 1-¼" required, excepted as noted below.
2. No additional capacity may be added for GWB installed on the interior side of the wall.
3. Fastener penetration of only 13/16" (0.813").
4. For thicker continuous insulation applications, design is required in accordance with accepted engineering practice.
5. 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.
6. 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. NOMINAL UNIT SHEAR CAPACITY (NUSC) & ALLOWABLE STRENGTH DESIGN (ASD) CAPACITY – WIND[1,3,4,5]

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]
THERMABASEci™ 1 3/16" Polyiso + 7/16" OSB (OSB installed against the studs)[5]	0.113" x 2⅜" Smooth Shank Nail	24 o.c.	0.438	490
		16 o.c.		535

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

1. THERMABASEci™ 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 ⅜". Minimum fastener penetration of 1-¼" required, excepted as noted below.
2. Where GWB is installed on the interior side of the wall, capacity of the gypsum may be added to the nominal Unit shear capacity in accordance with SDPWS, Table 4.3C.
3. For thicker continuous insulation applications, design is required in accordance with accepted engineering practice.
4. 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.
5. Requires installation using Senco SCN63LDXP Structural Foam Insulation Nailer. 1-3/16" Maximum THERMABASEci™ foam thickness.
6. 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.

5.8 *Fastener Attachments for THERMABASEci™ to Support Cladding Weight*

5.8.1 To develop the loads listed in Table 4 and Table 5, the fasteners attaching the THERMABASEci™ 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.

5.8.2 Fasteners are required to attach the THERMABASEci™ sheathing to the wall framing to carry the cladding weight.

5.8.2.1 See Table 6 through Table 11 for allowable cladding loads for various fastener types and sheathing thicknesses for wood stud framing.

5.8.2.2 See Table 12 through Table 17 for allowable cladding loads for various fastener types and sheathing thicknesses for light-frame cold-formed steel construction.

5.8.3 Minimum penetration into wood wall framing is 1¼" unless specifically noted in this TER.

5.8.4 Minimum allowable penetration into steel wall framing is the steel thickness plus three threads plus the tip.

5.8.5 For attaching to wood studs, fasteners with equal or greater design properties shall be permitted:

5.8.5.1 Rmax Nail Board Fastener SIPTP: 0.190" shank diameter, 0.625" head diameter

5.8.5.2 8d nail (0.131" x 2.5"): 0.281" head diameter

5.8.5.3 12d nail (0.148" x 3.25"): 0.312" head diameter

5.8.5.4 Simpson Strong-Drive SDWS22: 0.22" shank diameter, 0.435" head diameter

5.8.5.5 FastenMaster HeadLOK: 0.191" shank diameter, 0.625" head diameter

5.8.5.6 TruFast SIPTP: 0.190" shank diameter, 0.625" head diameter

5.8.6 For attaching to cold-form steel studs, fasteners with equal or greater design properties shall be permitted:

5.8.6.1 Rmax Nail Board Fastener SIPLD: 0.190" shank diameter, 0.625" head diameter

5.8.6.2 Rmax Nail Board Fastener SIPHD: 0.212" shank diameter, 0.625" head diameter

5.8.6.3 #8 screw: 0.164" shank diameter, 0.3125" head diameter

5.8.6.4 #10 screw: 0.190" shank diameter, 0.3400" head diameter

5.8.6.5 #12 screw: 0.216" shank diameter, 0.3400" head diameter

5.8.6.6 TruFast SIPLD: 0.190" shank diameter, 0.625" head diameter

5.8.6.7 TruFast SIPHD: 0.212" shank diameter, 0.625" head diameter

5.8.6.8 FastenMaster HeadLOK: 0.191" shank diameter, 0.625" head diameter

5.8.6.9 SFS intech Dekfast: 0.190" shank diameter, 0.625" head diameter

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.

TABLE 6. MAXIMUM FASTENER SPACING FOR THERMABASECI™ UTILIZING 7/16" & ½" 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 THERMABASECi™ (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	24	16	16
	¾	24	24	24	16	12	12
	1	24	24	20	12	12	8
	1 ½	24	16	12	8	8	8
	2	20	12	8	8	6	6
	2 ½	16	8	8	6	4	4
	3	12	8	6	4	4	4
	3 ½	8	6	4	4	4	-
	4	8	6	4	4	-	-
	4 ½	6	4	4	-	-	-
8d (0.131" x 2.5")	½	24	16	12	8	8	6
	¾	24	12	8	8	6	4
12d (0.148" x 3.25")	½	24	20	16	12	8	8
	¾	24	16	12	8	8	6
	1	20	12	8	8	6	4
	1 ½	12	8	6	4	4	4
TruFast SIPTP	½	24	24	24	24	16	16
	¾	24	24	24	16	12	12
	1	24	24	20	12	12	8
	1 ½	24	16	12	8	8	8
	2	20	12	8	8	6	6
	2 ½	16	8	8	6	4	4
	3	12	8	6	4	4	4
	3 ½	8	6	4	4	4	-
	4	8	6	4	4	-	-
	4 ½	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
	1 ½	24	20	16	12	8	8
	2	24	16	12	8	8	6
	2 ½	20	12	8	8	6	4

Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
		Specified Cladding Weight[2] (psf)					
		5	10	15	20	25	30
	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/m^2

1. Minimum fastener penetration into stud is 1¼".
2. The weight of THERMABASEci™ and sheathing is included in the fastener spacing calculations. The specified cladding weight shall include all other supported materials besides the THERMABASEci™ and sheathing.
3. THERMABASEci™ 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 THERMABASECI™ UTILIZING 7/16" & ½" 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 THERMABASECi™ (in)	Max. Fastener Spacing (in)					
		Specified Cladding Weight[2] (psf)					
		5	10	15	20	25	30
Rmax Nail Board Fastener SIPTP	½	24	24	20	16	12	8
	¾	24	20	16	12	8	8
	1	24	16	12	8	8	6
	1½	20	12	8	6	6	4
	2	12	8	6	4	4	4
	2½	8	6	4	4	-	-
	3	8	6	4	-	-	-
	3½	6	4	-	-	-	-
	4	6	4	-	-	-	-
	4½	4	-	-	-	-	-
8d (0.131" x 2.5")	½	20	12	8	6	4	4
	¾	16	8	6	4	4	-
12d (0.148" x 3.25")	½	24	12	8	8	6	4
	¾	20	12	8	6	4	4
	1	12	8	6	4	4	-
	1½	8	6	4	-	-	-
TruFast SIPTP	½	24	24	20	16	12	8
	¾	24	20	16	12	8	8
	1	24	16	12	8	8	6
	1½	20	12	8	6	6	4
	2	12	8	6	4	4	4
	2½	8	6	4	4	-	-
	3	8	6	4	-	-	-
	3½	6	4	-	-	-	-
	4	6	4	-	-	-	-
	4½	4	-	-	-	-	-
FastenMaster HeadLOK	½	24	24	20	16	12	12
	¾	24	24	16	12	12	8
	1	24	20	12	12	8	8
	1½	24	12	8	8	6	6
	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 THERMABASEci™ (in)	Max. Fastener Spacing (in)					
		Specified Cladding Weight[2] (psf)					
		5	10	15	20	25	30
	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/m^2

1. Minimum fastener penetration into stud is 1¼".
2. The weight of THERMABASEci™ and sheathing is included in the fastener spacing calculations. The specified cladding weight shall include all other supported materials besides the THERMABASEci™ and sheathing.
3. THERMABASEci™ 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 THERMABASECI™ 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 THERMABASECi™ (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	16	8	8	6	4	4
	3	12	8	6	4	4	4
	3½	8	6	4	4	-	-
	4	8	6	4	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 THERMABASEci™ (in)	Max. Fastener Spacing (in)					
		Specified Cladding Weight[2] (psf)					
		5	10	15	20	25	30
	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/m^2

1. Minimum fastener penetration into stud is 1¼".
2. The weight of THERMABASEci™ and sheathing is included in the fastener spacing calculations. The specified cladding weight shall include all other supported materials besides the THERMABASEci™ and sheathing.
3. THERMABASEci™ 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 THERMABASECI™ 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 THERMABASECi™ (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	12	8	8
	1	24	16	12	8	8	6
	1½	16	12	8	6	6	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 THERMABASEci™ (in)	Max. Fastener Spacing (in)					
		Specified Cladding Weight[2] (psf)					
		5	10	15	20	25	30
	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/m^2

1. Minimum fastener penetration into stud is 1¼".
2. The weight of THERMABASEci™ and sheathing is included in the fastener spacing calculations. The specified cladding weight shall include all other supported materials besides the THERMABASEci™ and sheathing.
3. THERMABASEci™ 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 THERMABASECI™ UTILIZING ⅝" OSB, ¾" OSB, OR ¾" 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 THERMABASEci™ (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	16
	¾	24	24	24	16	12	12
	1	24	24	20	16	12	8
	1½	24	20	12	12	8	8
	2	20	12	8	8	6	6
	2½	16	12	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	-	-
8d (0.131" x 2.5")	½	24	20	12	8	8	8
	¾	24	16	12	8	6	6
12d (0.148" x 3.25")	½	24	24	16	12	8	8
	¾	24	16	12	8	8	8
	1	24	16	12	8	6	6
	1½	16	8	8	6	4	4
TruFast SIPTP	½	24	24	24	20	16	16
	¾	24	24	24	16	12	12
	1	24	24	20	16	12	8
	1½	24	20	12	12	8	8
	2	20	12	8	8	6	6
	2½	16	12	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	-	-
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	20	12	8	8	6	6

Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
		Specified Cladding Weight[2] (psf)					
		5	10	15	20	25	30
	3	16	8	8	6	6	4
	3½	12	8	6	6	4	4
	4	8	8	6	4	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/m^2

1. Minimum fastener penetration into stud is 1¼".
2. The weight of THERMABASEci™ and sheathing is included in the fastener spacing calculations. The specified cladding weight shall include all other supported materials besides the THERMABASEci™ and sheathing.
3. THERMABASEci™ 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 THERMABASECI™ UTILIZING ⅝" OSB, ¾" OSB, OR ¾" 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 THERMABASEci™ (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	16	12	8	8
	1	24	16	12	8	8	6
	1½	20	12	8	8	6	4
	2	12	8	6	6	4	4
	2½	8	8	6	4	4	-
	3	8	6	4	4	-	-
	3½	6	4	4	-	-	-
	4	6	4	-	-	-	-
	4½	4	4	-	-	-	-
8d (0.131" x 2.5")	½	20	12	8	6	6	4
	¾	16	8	8	6	4	4
12d (0.148" x 3.25")	½	24	16	12	8	6	6
	¾	20	12	8	6	6	4
	1	16	8	8	6	4	4
	1½	8	6	4	4	-	-
TruFast SIPTP	½	24	24	16	12	12	8
	¾	24	20	16	12	8	8
	1	24	16	12	8	8	6
	1½	20	12	8	8	6	4
	2	12	8	6	6	4	4
	2½	8	8	6	4	4	-
	3	8	6	4	4	-	-
	3½	6	4	4	-	-	-
	4	6	4	-	-	-	-
	4½	4	4	-	-	-	-
FastenMaster HeadLOK	½	24	24	20	16	12	12
	¾	24	24	16	12	12	8
	1	24	20	12	12	8	8
	1½	20	12	8	8	6	6
	2	16	8	8	6	6	4
	2½	12	8	6	4	4	4

Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
		Specified Cladding Weight[2] (psf)					
		5	10	15	20	25	30
	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/m^2

1. Minimum fastener penetration into stud is 1¼".
2. The weight of THERMABASEci™ and sheathing is included in the fastener spacing calculations. The specified cladding weight shall include all other supported materials besides the THERMABASEci™ and sheathing.
3. THERMABASEci™ 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 THERMABASECI™ UTILIZING ½" OR ⅝" PLYWOOD WITH VERTICAL COLD-FORM STEEL STUDS SPACED 16" O.C.[1,3,4,5,6]

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASECi™ (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	4	4	4
		1	12	8	6	4	4	-
		1½	12	6	4	4	-	-
		2	8	6	4	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
	Rmax Nailboard Fastener SIPHD	½	16	8	8	6	4	4
		¾	16	8	6	6	4	4
		1	12	8	6	4	4	-
		1½	12	8	6	4	-	-
		2	8	6	4	4	-	-
		2½	6	4	4	-	-	-
		3	6	4	-	-	-	-
		3½	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	-	-	-	-
		2	4	-	-	-	-	-
		2½	4	-	-	-	-	-
	TruFast SIPLD	½	16	8	8	6	4	4

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		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	-	-	-	-	-
	TruFast SIPHD	½	16	8	8	6	4	4
		¾	16	8	6	6	4	4
		1	12	8	6	4	4	-
		1½	12	8	6	4	-	-
		2	8	6	4	4	-	-
		2½	6	4	4	-	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-
	HeadLOK	½	20	8	8	6	4	4
		¾	16	8	6	6	4	4
		1	16	8	6	4	4	4
		1½	12	8	6	4	4	-
		2	8	6	4	4	-	-
		2½	8	6	4	-	-	-
		3	6	4	4	-	-	-
		3½	4	4	-	-	-	-
		4	4	-	-	-	-	-
	SFS intech Dekfast	½	16	8	8	6	4	4
		¾	16	8	6	6	4	4
		1	16	8	6	4	4	4
		1½	12	8	6	4	4	-
		2	8	6	4	4	-	-
		2½	8	6	4	-	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-
		4	4	-	-	-	-	-
	Rmax Nailboard Fastener SIPLD	½	16	8	8	6	4	4
		¾	16	8	6	4	4	4

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
18 ga structural (43 mil)		1	12	8	6	4	4	-
		1½	12	6	4	4	-	-
		2	8	6	4	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
	Rmax Nailboard Fastener SIPHD	½	16	8	8	6	4	4
		¾	16	8	6	6	4	4
		1	12	8	6	4	4	-
		1½	12	8	6	4	-	-
		2	8	6	4	4	-	-
		2½	6	4	4	-	-	-
		3	6	4	-	-	-	-
		3½	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	-	-	-	-
		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	-	-	-

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

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		3	4	-	-	-	-	-
	Rmax Nailboard Fastener SIPHD	½	16	8	8	6	4	4
		¾	16	8	6	6	4	4
		1	12	8	6	4	4	-
		1½	12	8	6	4	-	-
		2	8	6	4	4	-	-
		2½	6	4	4	-	-	-
		3	6	4	-	-	-	-
		3½	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	-	-	-	-
		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	-	-	-	-	-
	TruFast SIPHD	½	16	8	8	6	4	4
		¾	16	8	6	6	4	4

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		1	12	8	6	4	4	-
		1½	12	8	6	4	-	-
		2	8	6	4	4	-	-
		2½	6	4	4	-	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-
	HeadLOK	½	20	8	8	6	4	4
		¾	16	8	6	6	4	4
		1	16	8	6	4	4	4
		1½	12	8	6	4	4	-
		2	8	6	4	4	-	-
		2½	8	6	4	-	-	-
		3	6	4	4	-	-	-
		3½	4	4	-	-	-	-
		4	4	-	-	-	-	-
	SFS intech Dekfast	½	16	8	8	6	4	4
		¾	16	8	6	6	4	4
		1	16	8	6	4	4	4
		1½	12	8	6	4	4	-
		2	8	6	4	4	-	-
		2½	8	6	4	-	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-
		4	4	-	-	-	-	-

SI: 1 in = 25.4 mm, 1 psf = 0.0479 kN/m^2

1. Minimum fastener penetration into stud is 1¼".
2. The weight of THERMABASEci™ and sheathing is included in the fastener spacing calculations. The specified cladding weight shall include all other supported materials besides the THERMABASEci™ and sheathing.
3. THERMABASEci™ 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 13. MAXIMUM FASTENER SPACING FOR THERMABASECI™ UTILIZING ½" OR ⅝" PLYWOOD WITH VERTICAL COLD-FORM STEEL STUDS SPACED 24" O.C.[1,3,4,5,6]

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASECi™ (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	-	-	-	-	-
	Rmax Nailboard Fastener SIPHD	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	-	-	-	-	-
	#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	-	-	-	-
		2½	4	-	-	-	-	-
	TruFast SIPHD	½	12	6	4	4	-	-
		¾	8	6	4	4	-	-

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		1	8	6	4	-	-	-
		1½	8	4	4	-	-	-
		2	6	4	-	-	-	-
		2½	4	-	-	-	-	-
		3	4	-	-	-	-	-
	HeadLOK	½	12	6	4	4	-	-
		¾	12	6	4	4	-	-
		1	8	6	4	-	-	-
		1½	8	4	4	-	-	-
		2	6	4	-	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
	SFS intech Dekfast	½	12	6	4	4	-	-
		¾	8	6	4	4	-	-
		1	8	6	4	-	-	-
		1½	8	4	4	-	-	-
		2	6	4	-	-	-	-
		2½	4	4	-	-	-	-
		3	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	-	-	-	-	-
	Rmax Nailboard Fastener SIPHD	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	-	-	-	-	-
	#8 Screw	½	6	-	-	-	-	-
		¾	4	-	-	-	-	-

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		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	-	-	-	-
		2½	4	-	-	-	-	-
	TruFast SIPHD	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	-	-	-	-	-
	HeadLOK	½	12	6	4	4	-	-
		¾	12	6	4	4	-	-
		1	8	6	4	-	-	-
		1½	8	4	4	-	-	-
		2	6	4	-	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
	SFS intech Dekfast	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 THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		2½	4	4	-	-	-	-
		3	4	-	-	-	-	-
16 ga structural (53 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	-	-	-	-	-
	Rmax Nailboard Fastener SIPHD	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	-	-	-	-	-
	#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	-	-	-	-
		2½	4	-	-	-	-	-
	TruFast SIPHD	½	12	6	4	4	-	-
		¾	8	6	4	4	-	-

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		1	8	6	4	-	-	-
		1½	8	4	4	-	-	-
		2	6	4	-	-	-	-
		2½	4	-	-	-	-	-
		3	4	-	-	-	-	-
	HeadLOK	½	12	6	4	4	-	-
		¾	12	6	4	4	-	-
		1	8	6	4	-	-	-
		1½	8	4	4	-	-	-
		2	6	4	-	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
	SFS intech Dekfast	½	12	6	4	4	-	-
		¾	8	6	4	4	-	-
		1	8	6	4	-	-	-
		1½	8	4	4	-	-	-
		2	6	4	-	-	-	-
		2½	4	4	-	-	-	-
		3	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 THERMABASEci™ and sheathing is included in the fastener spacing calculations. The specified cladding weight shall include all other supported materials besides the THERMABASEci™ and sheathing.
3. THERMABASEci™ 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 14. MAXIMUM FASTENER SPACING FOR THERMABASECI™ UTILIZING 7/16" OSB, ½" OSB, OR ¾" PLYWOOD WITH VERTICAL COLD-FORM STEEL STUDS SPACED 16" O.C.[1,3,4,5,6]

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (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	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	-	-	-	-	-
	Rmax Nailboard Fastener SIPHD	½	24	16	8	8	6	6
		¾	24	12	8	8	6	4
		1	20	12	8	6	6	4
		1½	16	8	8	6	4	4
		2	12	8	6	4	4	-
		2½	8	6	4	4	-	-
		3	8	4	4	-	-	-
		3½	6	4	-	-	-	-
		4	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	-	-	-

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		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	-	-	-	-	-
	TruFast SIPHD	½	24	16	8	8	6	6
		¾	24	12	8	8	6	4
		1	20	12	8	6	6	4
		1½	16	8	8	6	4	4
		2	12	8	6	4	4	-
		2½	8	6	4	4	-	-
		3	8	4	4	-	-	-
		3½	6	4	-	-	-	-
		4	4	-	-	-	-	-
	HeadLOK	½	24	16	8	8	6	6
		¾	24	12	8	8	6	4
		1	20	12	8	6	6	4
		1½	16	8	8	6	4	4
		2	12	8	6	6	4	4
		2½	12	8	6	4	4	-
		3	8	6	4	4	-	-
		3½	8	4	4	-	-	-
		4	6	4	-	-	-	-
		4½	4	-	-	-	-	-
	SFS intech Dekfast	½	24	16	8	8	6	6
		¾	24	12	8	8	6	4
		1	20	12	8	6	6	4
		1½	16	8	8	6	4	4

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		2	12	8	6	4	4	4
		2½	12	8	6	4	4	-
		3	8	6	4	4	-	-
		3½	6	4	4	-	-	-
		4	4	4	-	-	-	-
		4½	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	-	-	-	-	-
	Rmax Nailboard Fastener SIPHD	½	24	16	8	8	6	6
		¾	24	12	8	8	6	4
		1	20	12	8	6	6	4
		1½	16	8	8	6	4	4
		2	12	8	6	4	4	-
		2½	8	6	4	4	-	-
		3	8	4	4	-	-	-
		3½	6	4	-	-	-	-
		4	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	-	-	-	-	-

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
	#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	-	-	-	-	-
	TruFast SIPHD	½	24	16	8	8	6	6
		¾	24	12	8	8	6	4
		1	20	12	8	6	6	4
		1½	16	8	8	6	4	4
		2	12	8	6	4	4	-
		2½	8	6	4	4	-	-
		3	8	4	4	-	-	-
		3½	6	4	-	-	-	-
		4	4	-	-	-	-	-
	HeadLOK	½	24	16	8	8	6	6
		¾	24	12	8	8	6	4
		1	20	12	8	6	6	4
		1½	16	8	8	6	4	4
		2	12	8	6	6	4	4
		2½	12	8	6	4	4	-
		3	8	6	4	4	-	-
		3½	8	4	4	-	-	-
		4	6	4	-	-	-	-
		4½	4	-	-	-	-	-

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
	SFS intech Dekfast	½	24	16	8	8	6	6
		¾	24	12	8	8	6	4
		1	20	12	8	6	6	4
		1½	16	8	8	6	4	4
		2	12	8	6	4	4	4
		2½	12	8	6	4	4	-
		3	8	6	4	4	-	-
		3½	6	4	4	-	-	-
		4	4	4	-	-	-	-
		4½	4	-	-	-	-	-
16 ga structural (53 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	-	-	-	-	-
	Rmax Nailboard Fastener SIPHD	½	24	16	8	8	6	6
		¾	24	12	8	8	6	4
		1	20	12	8	6	6	4
		1½	16	8	8	6	4	4
		2	12	8	6	4	4	-
		2½	8	6	4	4	-	-
		3	8	4	4	-	-	-
		3½	6	4	-	-	-	-
		4	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 THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		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	-	-	-	-	-
	TruFast SIPHD	½	24	16	8	8	6	6
		¾	24	12	8	8	6	4
		1	20	12	8	6	6	4
		1½	16	8	8	6	4	4
		2	12	8	6	4	4	-
		2½	8	6	4	4	-	-
		3	8	4	4	-	-	-
		3½	6	4	-	-	-	-
		4	4	-	-	-	-	-
	HeadLOK	½	24	16	8	8	6	6
		¾	24	12	8	8	6	4
		1	20	12	8	6	6	4
		1½	16	8	8	6	4	4
		2	12	8	6	6	4	4
		2½	12	8	6	4	4	-

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		3	8	6	4	4	-	-
		3½	8	4	4	-	-	-
		4	6	4	-	-	-	-
		4½	4	-	-	-	-	-
	SFS intech Dekfast	½	24	16	8	8	6	6
		¾	24	12	8	8	6	4
		1	20	12	8	6	6	4
		1½	16	8	8	6	4	4
		2	12	8	6	4	4	4
		2½	12	8	6	4	4	-
		3	8	6	4	4	-	-
		3½	6	4	4	-	-	-
		4	4	4	-	-	-	-
		4½	4	-	-	-	-	-

SI: 1 in = 25.4 mm, 1 psf = 0.0479 kN/m^2

1. Minimum fastener penetration into stud is 1¼".
2. The weight of THERMABASEci™ and sheathing is included in the fastener spacing calculations. The specified cladding weight shall include all other supported materials besides the THERMABASEci™ and sheathing.
3. THERMABASEci™ 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 15. MAXIMUM FASTENER SPACING FOR THERMABASECI™ UTILIZING 7/16" OSB, ½" OSB, OR ¾" PLYWOOD WITH VERTICAL COLD-FORM STEEL STUDS SPACED 24" O.C.[1,3,4,5,6]

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (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	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	-	-	-	-	-
	Rmax Nailboard Fastener SIPHD	½	16	8	6	4	4	4
		¾	16	8	6	4	4	-
		1	12	8	6	4	4	-
		1½	8	6	4	4	-	-
		2	8	6	4	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
		3½	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	-	-	-	-	-
	TruFast SIPLD	½	16	8	6	4	4	-
		¾	12	8	6	4	4	-

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		1	12	8	6	4	4	-
		1½	8	6	4	4	-	-
		2	8	4	4	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
	TruFast SIPHD	½	16	8	6	4	4	4
		¾	16	8	6	4	4	-
		1	12	8	6	4	4	-
		1½	8	6	4	4	-	-
		2	8	6	4	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
		3½	4	-	-	-	-	-
	HeadLOK	½	16	8	6	4	4	4
		¾	16	8	6	4	4	-
		1	12	8	6	4	4	-
		1½	12	6	4	4	-	-
		2	8	6	4	4	-	-
		2½	8	4	4	-	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-
		4	4	-	-	-	-	-
	SFS intech Dekfast	½	16	8	6	4	4	4
		¾	16	8	6	4	4	-
		1	12	8	6	4	4	-
		1½	12	6	4	4	-	-
		2	8	6	4	-	-	-
		2½	8	4	4	-	-	-
		3	6	4	-	-	-	-
		3½	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	-	-

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASECi™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		2	8	4	4	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
	Rmax Nailboard Fastener SIPHD	½	16	8	6	4	4	4
		¾	16	8	6	4	4	-
		1	12	8	6	4	4	-
		1½	8	6	4	4	-	-
		2	8	6	4	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
		3½	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	-	-	-	-	-
	TruFast 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	-	-	-	-	-
	TruFast SIPHD	½	16	8	6	4	4	4

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		¾	16	8	6	4	4	-
		1	12	8	6	4	4	-
		1½	8	6	4	4	-	-
		2	8	6	4	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
		3½	4	-	-	-	-	-
	HeadLOK	½	16	8	6	4	4	4
		¾	16	8	6	4	4	-
		1	12	8	6	4	4	-
		1½	12	6	4	4	-	-
		2	8	6	4	4	-	-
		2½	8	4	4	-	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-
		4	4	-	-	-	-	-
	SFS intech Dekfast	½	16	8	6	4	4	4
		¾	16	8	6	4	4	-
		1	12	8	6	4	4	-
		1½	12	6	4	4	-	-
		2	8	6	4	-	-	-
		2½	8	4	4	-	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-
16 ga structural (53 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	-	-	-	-	-
	Rmax Nailboard Fastener SIPHD	½	16	8	6	4	4	4
		¾	16	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 THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		1½	8	6	4	4	-	-
		2	8	6	4	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-
		3½	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	-	-	-	-	-
	TruFast 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	-	-	-	-	-
	TruFast SIPHD	½	16	8	6	4	4	4
		¾	16	8	6	4	4	-
		1	12	8	6	4	4	-
		1½	8	6	4	4	-	-
		2	8	6	4	-	-	-
		2½	6	4	-	-	-	-
		3	4	-	-	-	-	-

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		3½	4	-	-	-	-	-
	HeadLOK	½	16	8	6	4	4	4
		¾	16	8	6	4	4	-
		1	12	8	6	4	4	-
		1½	12	6	4	4	-	-
		2	8	6	4	4	-	-
		2½	8	4	4	-	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-
		4	4	-	-	-	-	-
	SFS intech Dekfast	½	16	8	6	4	4	4
		¾	16	8	6	4	4	-
		1	12	8	6	4	4	-
		1½	12	6	4	4	-	-
		2	8	6	4	-	-	-
		2½	8	4	4	-	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-

SI: 1 in = 25.4 mm, 1 psf = 0.0479 kN/m^2

1. Minimum fastener penetration into stud is 1¼".
2. The weight of THERMABASEci™ and sheathing is included in the fastener spacing calculations. The specified cladding weight shall include all other supported materials besides the THERMABASEci™ and sheathing.
3. THERMABASEci™ 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 16. MAXIMUM FASTENER SPACING FOR THERMABASECI™ UTILIZING ⅝" OR ¾" OSB WITH VERTICAL COLD-FORM STEEL STUDS SPACED 16" O.C.[1,3,4,5,6]

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (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	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	-	-	-
		3½	4	-	-	-	-	-
	Rmax Nailboard Fastener SIPHD	½	24	16	12	8	8	6
		¾	24	16	12	8	8	6
		1	24	12	8	8	6	6
		1½	16	12	8	6	6	4
		2	12	8	8	6	4	4
		2½	12	8	6	4	4	-
		3	8	6	4	4	-	-
		3½	6	4	-	-	-	-
		4	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	-	-	-	-
	#12 Screw	½	16	8	8	6	4	4
		¾	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 THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		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	-	-	-
		3½	4	-	-	-	-	-
	TruFast SIPHD	½	24	16	12	8	8	6
		¾	24	16	12	8	8	6
		1	24	12	8	8	6	6
		1½	16	12	8	6	6	4
		2	12	8	8	6	4	4
		2½	12	8	6	4	4	-
		3	8	6	4	4	-	-
		3½	6	4	-	-	-	-
		4	4	-	-	-	-	-
	HeadLOK	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	12	8	8	6	4
		2½	16	8	8	6	4	4
		3	12	8	6	4	4	4
		3½	8	6	4	4	4	-
		4	8	6	4	-	-	-
		4½	6	4	-	-	-	-
	SFS intech Dekfast	½	24	20	12	8	8	8
		¾	24	16	12	8	8	6

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		1	24	16	12	8	8	6
		1½	20	12	8	8	6	6
		2	16	12	8	6	6	4
		2½	12	8	6	6	4	4
		3	12	8	6	4	4	-
		3½	8	6	4	4	-	-
		4	6	4	4	-	-	-
		4½	4	-	-	-	-	-
18 ga structural (43 mil)	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
		2	16	8	8	6	4	4
		2½	12	8	6	4	4	4
		3	8	6	4	4	-	-
		3½	6	4	-	-	-	-
	Rmax Nailboard Fastener 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	12	8	6	6	4
		2½	12	8	6	6	4	4
		3	8	6	6	4	4	-
		3½	8	4	4	-	-	-
		4	4	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	-

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		1½	12	6	4	4	-	-
		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 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	4
		3	8	6	4	4	-	-
		3½	6	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	12	8	6	6	4
		2½	12	8	6	6	4	4
		3	8	6	6	4	4	-
		3½	8	4	4	-	-	-
		4	4	4	-	-	-	-
	HeadLOK	½	24	20	12	12	8	8
		¾	24	20	12	8	8	8
		1	24	16	12	8	8	6
		1½	24	16	12	8	6	6
		2	20	12	8	8	6	4
		2½	16	8	8	6	6	4

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
16 ga structural (53 mil)		3	12	8	6	6	4	4
		3½	8	6	6	4	4	-
		4	8	6	4	4	-	-
		4½	6	4	-	-	-	-
	SFS intech Dekfast	½	24	20	12	12	8	8
		¾	24	20	12	8	8	8
		1	24	16	12	8	8	6
		1½	24	12	8	8	6	6
		2	16	12	8	8	6	4
		2½	16	8	8	6	4	4
		3	12	8	6	4	4	4
		3½	8	6	4	4	-	-
		4	6	4	4	-	-	-
		4½	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
		2	16	8	8	6	4	4
		2½	12	8	6	4	4	4
		3	8	6	4	4	-	-
		3½	6	4	-	-	-	-
	Rmax Nailboard Fastener 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	12	8	6	6	4
		2½	12	8	6	6	4	4
		3	8	6	6	4	4	-
		3½	8	4	4	-	-	-
		4	4	4	-	-	-	-
	#8 Screw	½	16	8	6	4	4	4
		¾	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 THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		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	-	-	-	-
	#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 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	4
		3	8	6	4	4	-	-
		3½	6	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	12	8	6	6	4
		2½	12	8	6	6	4	4
		3	8	6	6	4	4	-
		3½	8	4	4	-	-	-
		4	4	4	-	-	-	-

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
	HeadLOK	½	24	20	12	12	8	8
		¾	24	20	12	8	8	8
		1	24	16	12	8	8	6
		1½	24	16	12	8	6	6
		2	20	12	8	8	6	4
		2½	16	8	8	6	6	4
		3	12	8	6	6	4	4
		3½	8	6	6	4	4	-
		4	8	6	4	4	-	-
		4½	6	4	-	-	-	-
	SFS intech Dekfast	½	24	20	12	12	8	8
		¾	24	20	12	8	8	8
		1	24	16	12	8	8	6
		1½	24	12	8	8	6	6
		2	16	12	8	8	6	4
		2½	16	8	8	6	4	4
		3	12	8	6	4	4	4
		3½	8	6	4	4	-	-
		4	6	4	4	-	-	-
		4½	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 THERMABASEci™ and sheathing is included in the fastener spacing calculations. The specified cladding weight shall include all other supported materials besides the THERMABASEci™ and sheathing.
3. THERMABASEci™ 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 17. MAXIMUM FASTENER SPACING FOR THERMABASECI™ UTILIZING ⅝" OR ¾" OSB WITH VERTICAL COLD-FORM STEEL STUDS SPACED 24" O.C.[1,3,4,5,6]

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (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	-	-	-	-	-
	Rmax Nailboard Fastener SIPHD	½	20	12	8	6	4	4
		¾	16	8	8	6	4	4
		1	16	8	6	6	4	4
		1½	12	8	6	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	-	-	-	-
		2½	4	-	-	-	-	-

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		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	-	-	-	-	-
	TruFast SIPHD	½	20	12	8	6	4	4
		¾	16	8	8	6	4	4
		1	16	8	6	6	4	4
		1½	12	8	6	4	4	-
		2	8	6	4	4	-	-
		2½	8	4	4	-	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-
	HeadLOK	½	20	12	8	6	6	4
		¾	20	12	8	6	6	4
		1	16	12	8	6	4	4
		1½	12	8	6	6	4	4
		2	12	8	6	4	4	-
		2½	8	6	4	4	-	-
		3	8	6	4	-	-	-
		3½	6	4	-	-	-	-
		4	4	4	-	-	-	-
		4½	4	-	-	-	-	-
	SFS intech Dekfast	½	20	12	8	6	6	4
		¾	16	12	8	6	4	4
		1	16	8	8	6	4	4
		1½	12	8	6	4	4	4
		2	12	8	6	4	4	-
		2½	8	6	4	4	-	-
		3	8	4	4	-	-	-
		3½	6	4	-	-	-	-

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		4	4	-	-	-	-	-
18 ga structural (43 mil)	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	6	4	-	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-
	Rmax Nailboard Fastener SIPHD	½	20	12	8	8	6	4
		¾	20	12	8	6	6	4
		1	16	12	8	6	4	4
		1½	12	8	6	4	4	4
		2	12	8	6	4	4	-
		2½	8	6	4	4	-	-
		3	6	4	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	-	-	-	-
		2½	4	-	-	-	-	-

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		3	4	-	-	-	-	-
	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	6	4	-	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-
	TruFast SIPHD	½	20	12	8	8	6	4
		¾	20	12	8	6	6	4
		1	16	12	8	6	4	4
		1½	12	8	6	4	4	4
		2	12	8	6	4	4	-
		2½	8	6	4	4	-	-
		3	6	4	4	-	-	-
		3½	4	-	-	-	-	-
	HeadLOK	½	24	12	8	8	6	4
		¾	20	12	8	6	6	4
		1	20	12	8	6	6	4
		1½	16	8	8	6	4	4
		2	12	8	6	4	4	-
		2½	8	6	4	4	4	-
		3	8	6	4	4	-	-
		3½	6	4	4	-	-	-
		4	4	4	-	-	-	-
		4½	4	-	-	-	-	-
	SFS intech Dekfast	½	24	12	8	8	6	4
		¾	20	12	8	6	6	4
		1	16	12	8	6	4	4
		1½	16	8	6	6	4	4
		2	12	8	6	4	4	-
		2½	8	6	4	4	-	-
		3	8	6	4	-	-	-

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		3½	6	4	-	-	-	-
		4	4	-	-	-	-	-
16 ga structural (53 mil)	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	6	4	-	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-
	Rmax Nailboard Fastener SIPHD	½	20	12	8	8	6	4
		¾	20	12	8	6	6	4
		1	16	12	8	6	4	4
		1½	12	8	6	4	4	4
		2	12	8	6	4	4	-
		2½	8	6	4	4	-	-
		3	6	4	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 THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		2½	4	-	-	-	-	-
		3	4	-	-	-	-	-
	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	6	4	-	-	-
		3	6	4	-	-	-	-
		3½	4	-	-	-	-	-
	TruFast SIPHD	½	20	12	8	8	6	4
		¾	20	12	8	6	6	4
		1	16	12	8	6	4	4
		1½	12	8	6	4	4	4
		2	12	8	6	4	4	-
		2½	8	6	4	4	-	-
		3	6	4	4	-	-	-
		3½	4	-	-	-	-	-
	HeadLOK	½	24	12	8	8	6	4
		¾	20	12	8	6	6	4
		1	20	12	8	6	6	4
		1½	16	8	8	6	4	4
		2	12	8	6	4	4	-
		2½	8	6	4	4	4	-
		3	8	6	4	4	-	-
		3½	6	4	4	-	-	-
		4	4	4	-	-	-	-
		4½	4	-	-	-	-	-
	SFS intech Dekfast	½	24	12	8	8	6	4
		¾	20	12	8	6	6	4
		1	16	12	8	6	4	4
		1½	16	8	6	6	4	4
		2	12	8	6	4	4	-
		2½	8	6	4	4	-	-

Framing Member	Screw Fastener Type & Minimum Size	Max. Nominal Thickness of the Polyiso Portion of THERMABASEci™ (in)	Max. Fastener Spacing (in)					
			Specified Cladding Weight[2] (psf)					
			5	10	15	20	25	30
		3	8	6	4	-	-	-
		3½	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 THERMABASEci™ and sheathing is included in the fastener spacing calculations. The specified cladding weight shall include all other supported materials besides the THERMABASEci™ and sheathing.
3. THERMABASEci™ 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.

6 INSTALLATION

6.1 Installation shall comply with the manufacturer's installation instructions and this TER. In the event of a conflict between the manufacturer's installation instructions and this TER, the more restrictive shall govern.

6.2 *Installation Procedure*

6.2.1 *Orientation:*

6.2.1.1 THERMABASEci™ 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.

6.2.1.2 THERMABASEci™ shear wall aspect ratio must not exceed 3.5:1.

6.2.2 *Attachment:*

6.2.2.1 Fasteners shall be installed with a minimum edge distance of ⅜" (9.5 mm).

6.2.2.2 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.

6.2.2.3 Fasteners shall be installed with the on center spacing as indicated in Table 4 through Table 17.

7 TEST ENGINEERING SUBSTANTIATING DATA

7.1 Test reports and data supporting the following material and structural properties of THERMABASEci™:

7.1.1 Flame spread and smoke developed ratings in accordance with *ASTM E84*, performed by Intertek

7.1.2 Air permeance in accordance with *ASTM E2178*, performed by Exova

7.2 Foam Sheathing Committee Tech Matters, *Guide to Attaching Exterior Wall Coverings through Foam Sheathing to Wood or Steel Framing*

7.3 New York State Energy Research and Development Authority, *Fastening Systems for Continuous Insulation*

7.4 Some information contained herein is the result of testing and/or data analysis by other sources which conform to *IBC* Section 1703 and relevant professional engineering law. DrJ relies on accurate data from these sources to perform engineering analysis. DrJ has reviewed and found the data provided by other professional sources to be credible.

7.5 Where appropriate, DrJ's analysis is based on design values that have been codified into law through codes and standards (e.g., *IBC, IRC, NDS®,* and *SDPWS*). This includes review of code provisions and any related test data that aids in comparative analysis or provides support for equivalency to an intended end-use application. Where the accuracy of design values provided herein is reliant upon the published properties of commodity materials (e.g., lumber, steel, and concrete), DrJ relies upon the grade mark, stamp, and/or design values provided by raw material suppliers to be accurate and conforming to the mechanical properties defined in the relevant material standard.

8 FINDINGS

8.1 When used and installed in accordance with this TER and the manufacturer's installation instructions, the product(s) listed in Section 1.1 are approved for the following:

8.1.1 Use as a nail base for support of cladding materials when installed in accordance with the manufacturer's installation instructions and this TER.

8.1.2 Thermal resistance for use as insulating sheathing in accordance with *IECC* Section R402.1 and *IRC* 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.

8.2 *IBC* Section 104.11 (*IRC* Section R104.11 and *IFC* Section 104.9 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, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the *building official* finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in 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*.

8.3 This product has been evaluated in the context of the codes listed in Section 2 and is compliant with all known state and local building codes. Where there are known variations in state or local codes applicable to this evaluation, they are listed here.

8.3.1 No known variations

9 CONDITIONS OF USE

9.1 Walls shall not be used to resist horizontal loads from concrete and masonry walls.

9.2 THERMABASEci™ may be used as a nail base for cladding. Fastener size and spacing for attaching THERMABASEci™ to the wall framing shall be in accordance with Table 4 through Table 17.

9.3 Cladding attachments shall be in accordance with the cladding manufacturer's installation instructions or an approved engineered design.

9.4 Where required by the *building official*, also known as the authority having jurisdiction (AHJ) in which the project is to be constructed, this TER and the installation instructions shall be submitted at the time of *permit* application.

9.5 Any generally accepted engineering calculations needed to show compliance with this TER shall be submitted to the AHJ for review and approval.

9.6 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 *registered design professional*).

9.7 At a minimum, this product shall be installed per Section 6 of this TER.

9.8 This product is manufactured under a third-party quality control program in accordance with *IBC* Section 104.4 and 110.4 and *IRC* Section R104.4 and R109.2.

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. Therefore, the TER shall be reviewed for code compliance by the *building official* for acceptance.

9.10 The use of this TER is dependent on the manufacturer's in-plant QC, the ISO/IEC 17020 third-party quality assurance program and procedures, proper installation per the manufacturer's instructions, the *building official's* inspection, and any other code requirements that may apply to demonstrate and verify compliance with the applicable building code.

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's 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 of this TER, visit drjcertification.org.

11.2 For information on the current status of this TER, contact DrJ Certification.