



R-TEC CI SYSTEM

Mounting guide for a steel stud wall with exterior insulation to achieve ASHRAE 90.1 continuous insulation barrier.

Summary

The R-TEC CI System for affixing facade cladding to a steel stud wall consists of an aluminum-substructure composed of R-Tec Brackets and either a single layer or double layer of aluminum profiles. The Brackets and profiles are applied with fasteners through the external insulation and into the steel studs (Definition of ASHRAE 90.1 continuous insulation).

IMPORTANT NOTE: To increase the speed and efficiency of installing the R-TEC Brackets, mark reference points/lines identifying the center line of wall stud locations at the parapet (roof line) and base of wall (or some other conveniently located reference) before the installation of the exterior sheathing and exterior insulation. This will ensure that the brackets are installed on center of the steel studs as specified in the bracket and profile layout plans.

Mounting Steps

1. Determine that the steel studs are appropriate as to gauge thickness, on center spacing and length to accommodate the design loads.
2. Review the bracket and profile layout plans provided with the R-TEC System. These plans are unique to each elevation of the building receiving the R-TEC System.

Pay particular attention to the bracket spacing both horizontally and vertically.

3. Determine the location of the first row of R-TEC brackets running horizontally across the wall. The height above grade, distance from the top of the parapet (roof line), etc. will be noted on the bracket and profile layout plans.
4. At the specified vertical spacing, snap horizontal chalk lines or use a laser alignment device to establish vertical reference points for bracket placement. Be



careful to ensure your reference lines are level and parallel to the horizontal edges of the wall elevations, windows, doors, and roof line (if not sloping), etc.

5. At the specified horizontal spacing, snap vertical chalk lines or use a laser alignment device to establish horizontal reference points for bracket placement. Be careful to ensure your reference lines are plumb and parallel to the vertical edges of the wall elevations, windows, doors, and roof line (if not sloping), etc.
6. The intersection of these lines/reference points identifies a grid pattern for the location of each bracket.
7. Install the first bracket by doing the following:
 - a. Align the bracket on the wall at the marked intersection point (as described in steps 4-6). For horizontal R-TEC Brackets, center the bracket's flange (located 3 ¾" from the bottom of the bracket) with the intersection point. For vertical R-TEC Brackets, center the bracket's extruded ridge (3 ¾" from the bottom of the bracket) with the intersection point. Then, mark the top hole of the bracket on the insulation.
 - b. Two types of self tapping screws (anchors) are provided with the R-TEC System.

NOTE: Horizontal Screws (anchors) are the shorter of the two versions of self-tapping steel screws provided. Diagonal screws (anchor) are the longer.

- c. Place self-tapping horizontal JT3-D-6H-5 steel screw through the top hole of the bracket and fasten through the insulation and sheathing into the steel studs. **BE VERY CAREFUL TO NOT OVER TIGHTEN THE SCREW.**
- d. Plumb the bracket. Place the second self-tapping horizontal JT3-D-6H-5 steel screw through the bottom hole of the bracket and fasten through the insulation and sheathing into the steel stud. **DO NOT OVER TIGHTEN!**
- e. Locate the correct alignment hole for the insulation thickness (hole is on the bracket face) and predrill a pilot hole through the insulation, sheathing and steel stud.
- f. Place the self-tapping JA3-6 steel screw (diagonal screw) through the hole on the lower 45° angled surface and fasten through the insulation and



sheathing into the steel stud. The diagonal screw will intersect with the pilot hole drilled into the steel stud. **DO NOT OVER TIGHTEN!**

- g. Apply subsequent horizontal and vertical R-TEC Brackets following the same procedure.
- 8. R-TEC Systems can be single layer vertical only, single layer horizontal only, or double layer starting with a horizontal profile and then a vertical profile. See the R-TEC brochure for illustrations. **THE SYSTEM REQUIRED DEPENDS UPON THE CLADDING BEING APPLIED, THE PANEL SIZE AND THE JOINT LOCATION REQUIREMENTS.**
- 9. Vertical Systems use vertical R-TEC Brackets and Horizontal Systems use horizontal R-Tec Brackets.

Note: For Vertical System installations go to page 4. For Horizontal System installations go to page 5.



Vertical Systems

1. Vertical Systems use vertical R-TEC Brackets.
2. For Vertical Systems the “L” Bracket with the hands free clip is affixed to the vertical R- TEC Bracket using two (2) of the JT4-6-5 screws supplied.
3. The Vertical “L” profiles supplied are then applied vertically between the brackets using two (2), per bracket, of the JT4-3H/5-5,5x19 screws supplied. It is noted on the bracket and profile layout plan provided which profiles are affixed through the fixed point holes in the “L” bracket (w/hands free clip) and which are affixed through the sliding point slots. Place screw in center of the slot for sliding points.

Apply all the vertical “L” profiles noting the lengths and locations specified on the bracket and profile layout plan.

Note: Reference the details provided on the bracket and profile layout plans.

Follow the Cladding Manufactures install guidelines for applying the cladding to the vertical profiles.

Also, Reference the Cladding Manufacturers Shop Drawings for panel installation, locations, etc.



Horizontal Systems – Single Layer

1. Horizontal Systems use horizontal R-TEC Brackets.
2. The Horizontal “L” brackets supplied are applied horizontally between the brackets using two (2), per bracket, of the JT4-3H/5-5,5x19 screws supplied. It is noted on the bracket and profile layout plan provided which profiles are affixed through the fixed point holes and which are affixed through the sliding point slots. Place screw in center of the slot for sliding points.

Apply all the horizontal “L” profiles noting the lengths and locations specified on the bracket and profile layout plan.

Note! Reference the details provided on the bracket and profile layout plans.

Follow the Cladding Manufacturers install guidelines for applying the cladding to horizontal profiles.

Also, Reference the Cladding Manufacturers Shop Drawings for panel installation, locations, etc.

Horizontal Systems – Double Layer

1. Follow procedure for Horizontal Systems - Single Layer.
2. Apply the vertical “Z” or “Hat Channels” to the horizontal profile using the specified quantity of the JT4-6-5,5x19 screws provided. Note the lengths and locations specified on the bracket and profile layout plan.

Note! Reference the details provided on the bracket and profile layout plans.

Follow the Cladding Manufacturers install guidelines for applying the cladding to vertical profiles.

Also, Reference the Cladding Manufacturers Shop Drawings for panel installation, locations, etc.