

– OVERVIEW

Installation of the Knight LevelTek Systems can begin once structural steel, exterior wall studs & weather resistant/air barriers (WRB) are properly installed and braced.

A drywall or siding contractor can begin immediately installing Knight Wall's LevelTek or similar Self-Leveling (SL) system to the exterior of the building envelope (the framing members can be left exposed for up to 150 days). Fastener penetrations through the primary building envelope (WRB) should be sealed when a self-sealing WRB is not used. Fastener penetrations can be sealed in numerous fashions including, but not limited to, silicone or butyl sealant, butyl tape, self-adhered membranes or closed-cell weatherproofing foam. Means of sealing should be as directed by the designer of record or specialty consultant.

The mounting system has been developed to facilitate the quick and easy installation of a variety of panels for a building façade. By utilizing this mounting system it is possible to add more thermal insulation to the wall assembly and to straighten walls as needed on both new and remodel construction sites. The mounting system is modular with regularly pre-punched holes for quick and easy installation. The pre-fabricated, precisely dimensioned parts guarantee that the installation is precise while still being efficient. The system can be installed over steel stud, wood stud, concrete or masonry substrates using appropriate fasteners for each.

Up to six inches of exterior insulation can be used with the LevelTek and SL systems. Exterior grade mineral wool (R-4.2/inch) is recommended for use with the mounting system. It is recommended that the installing contractor fit the insulation as tightly as possible around the vertical girts (SL-Girts or SL-SidingRail) and TekBrackets. Should rigid foam insulation be used, the installing contractor should use approved exterior grade spray foam at the TekBrackets and rigid foam insulation junction to

ensure proper thermal design is achieved. Gaps between joining insulation boards and framing members will create excess thermal losses damaging the overall performance of the building.

Once the exterior insulation is in place, the horizontal rails (if used) may be installed and the façade panels can be installed.

– PRODUCT STORAGE RECOMMENDATIONS

- Store in a dry location.
- If possible, store exterior framing components and pieces indoors. If stored outdoors, keep components tarped or covered to protect from weather.
- Store above standing water.

– INSTALLATION RECOMMENDATIONS

Component Preparation:

- Use shearing instruments (i.e. snips, nibbler, etc.) for cutting metal framing components. Saws are not recommended, as the sparks produced during cutting will damage the anti-corrosion coating.
- Minimum length of installed cut vertical SL-Girt or SL-SidingRail is 16" and must be joined to at least two (2) TekBrackets with supplied cap screw.
- Minimum length of installed cut horizontal RS-Rail or PanelRail is 24" (or 1.5 stud bays). Unsupported span of installed RS-Rail or PanelRail that extends past closest SL-Girt or SL-SidingRail must not exceed 12" in length. At opening jambs (i.e. windows, doors, etc.), the horizontal rail must not extend past the vertical member by more than 3" in length.
- Verify backup wall is free of defects and conforming to tolerances suitable for installation of the rain screen attachment system.
- Verify that the air/water barrier is complete, cured and conforming to the manufacturer's instructions and project specific details. Verify fenestrations, transitions, discontinuities and sills and ledgers are flashed and sealed to move

– INSTALLATION PROCEDURES –

moisture to exterior of building as part of the air/water barrier system.

NOTE: These recommendations are supplementary to and do not replace project-specific shop drawings. Framing system should always be installed in accordance with shop drawings.

1. Establish a level control line with a laser level or chalk line and mark starting height of mounting system brackets. System must start such that the cladding has a minimum of 1" gap at the bottom for free air flow (i.e. bottom of panels must be 1" from concrete sidewalk, landscaping, etc.).

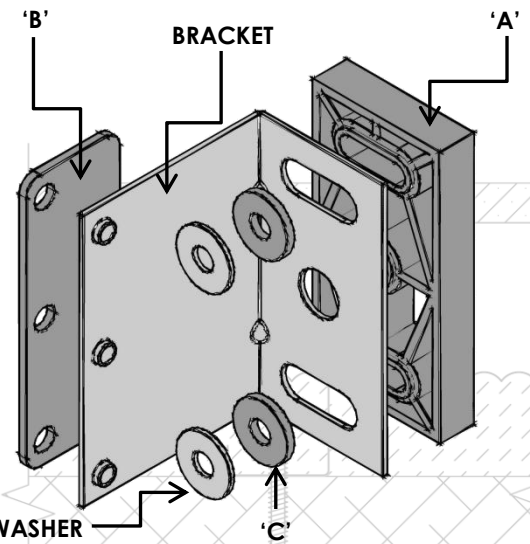
2. Thermally isolate metal wall bracket from substrate using ThermaStop Thermal Isolator part 'A'. Sandwich isolator 'A' between sheathing and metal bracket with wall anchors.

3. Isolate metal wall bracket from vertical girt by sandwiching the ThermaStop part 'B' between the two components with the provided stainless steel cap screws.

4. Mount wall brackets at 16 or 24 inch on center horizontally (stud location, as per shop drawings) over cured air/water barrier on support wall, using minimum 2 self-tapping screws at metal stud framed walls or 2 concrete/masonry anchors at concrete or masonry walls. Place ThermaStop thermal isolation washer (part 'C') and stainless steel washer onto self-tapping screws of sufficient length to penetrate and engage framing stud behind (~2.5"). Tighten anchors to manufacturer's instructions. Where using snug tight criteria, verify torque for each installer using hand tools at beginning of project.

5. Establish and re-establish and restart bracket locations using laser or chalk-line at fenestrations and other obstructions to establish horizontal alignments of screw holes for horizontal rail, if pre-threaded screw holes are present on vertical rail.

6. Once the starting height has been determined, the TekBrackets (wall brackets + ThermaStop thermal isolators) and the vertical



SL-Girts (or SL-SidingRail) can be mounted in one operation. The first (lowest) bracket should be attached to the vertical rails first slotted hole (with the included cap screws). The slotted holes on the vertical rail are spaced at ~4" increments to make wall bracket layout quick and simple. Continue attaching the remaining brackets at 24" O.C. spacing (or as indicated on shop drawings). Attachment of cap screw to center hole of bracket is used for brackets within the field/mid-span of vertical girts. Once all brackets are attached to the vertical girts at appropriate spacing, the entire assembly (brackets, vertical girts & isolators) can be attached to the wall in one step.

7. Mount the lowest bracket on the wall at the marked starting height and raise the vertical girt into an upright position. Fasten the other brackets to the wall. You can straighten any possible deviations from the plane in the existing wall by sliding the vertical girt in or out at the slotted connection where the brackets are connected.

8. The next vertical girt (succeeding) will be installed above the previous, upward, in the same way, except that the lowest end of that vertical girt is fastened onto the last bracket on the vertical girt below it. The upper and lower pre-threaded holes on the brackets are used for these vertical girt joints.

9. Once vertical girts are in place, straight and plumb, insulation may be installed. Semi-rigid mineral wool in highly recommend for use with the LevelTek and other SL (self-leveling) systems. Insulation must be installed to fit snug tight around brackets and girts to help reduce any unforeseen, or unplanned, thermal shorts.

10. With supplied cap screws or stainless steel self-drilling fasteners, mount lowest (first) horizontal RS-Rail (or PanelRail) to vertical girt. Tighten cap screw fasteners to between 90 and 100 in/lbs torque. If installed using power drill, verify for each installer at beginning of project the proper torque setting of each drill.

11. Install next horizontal rail (RS-Rail or PanelRail), spaced appropriately above the lowest (first) rail, as indicated on shop drawings or as required for the panel veneer.

12. Install successive horizontal rails (RS-Rails or PanelRails) as indicated on shop drawings or as

required for proper panel alignment/attachment.

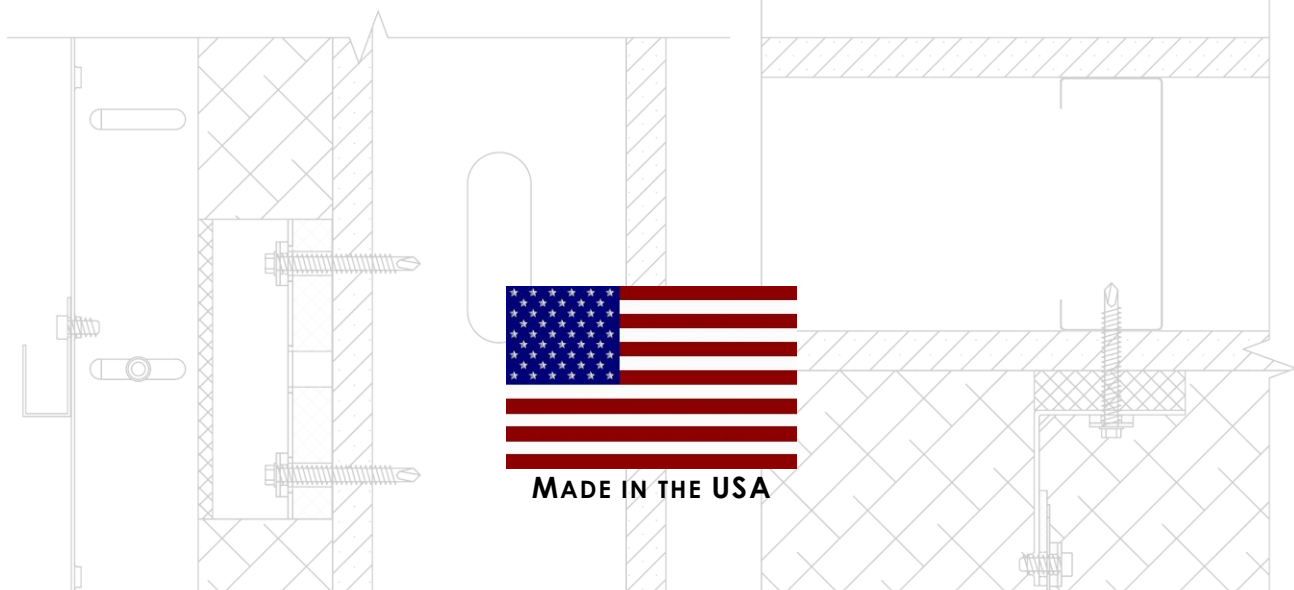
13. At windows and other openings mount horizontal rails so that fastening points are as close to the lower and upper edges of the windows and openings as possible.

– **TECHNICAL SUPPORT**

Knight Wall Systems can provide technical information and support in developing details and installation when using the LevelTek or SL system. For assistance, please call 1.855.KWS.WALL

– **MANUFACTURER**

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Building and/or construction practices unrelated to building materials could greatly affect moisture and the potential for mold formation. No material supplier including Knight Wall Systems can give assurance that mold will not develop in any specific system.

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