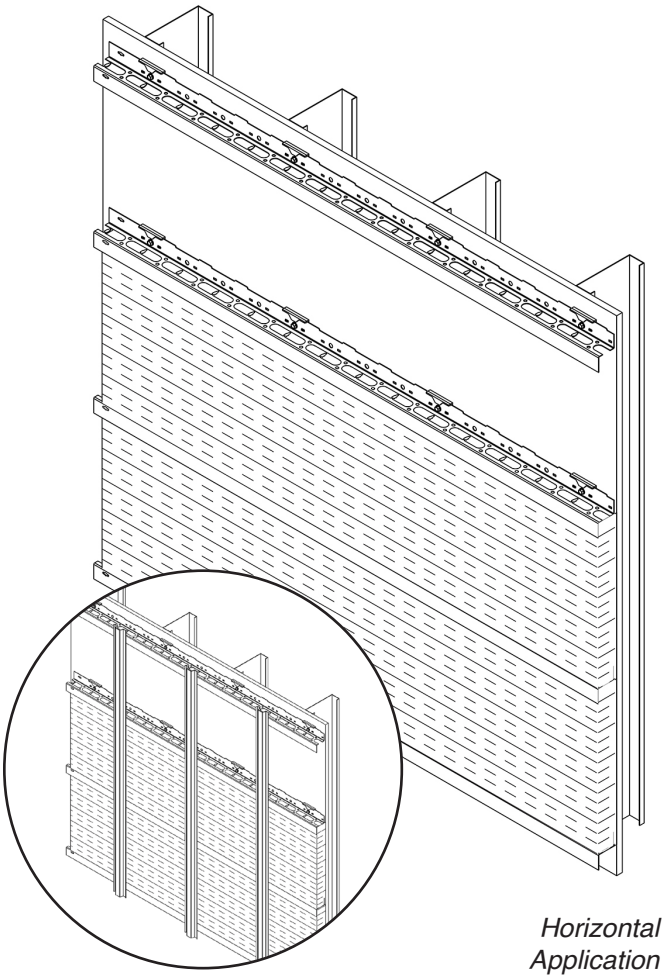
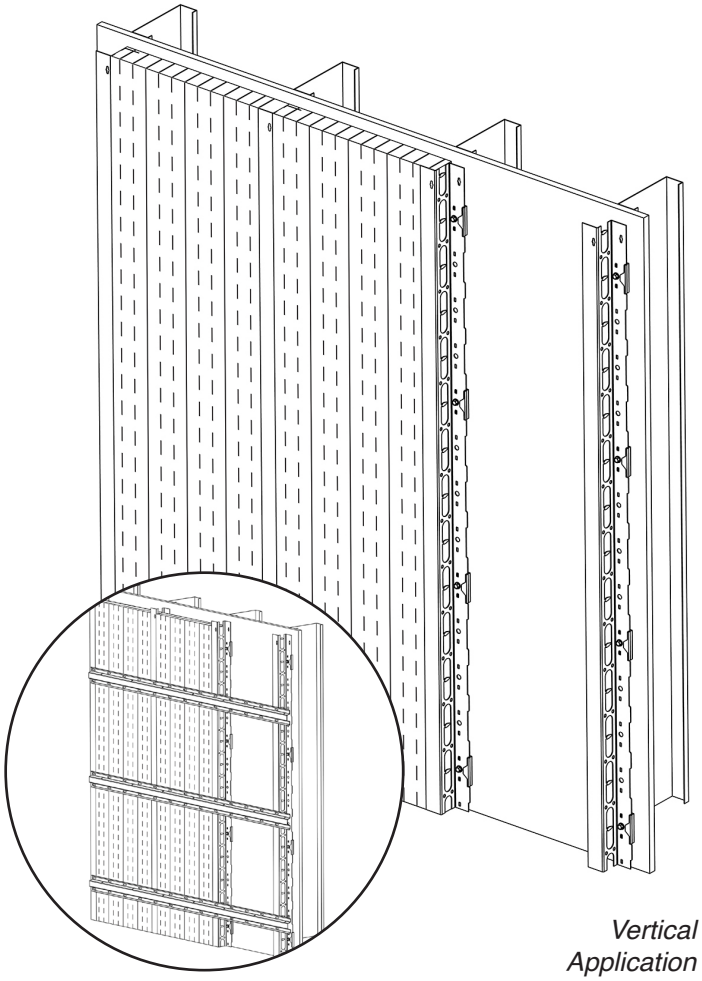
ADVANCED
ARCHITECTURAL
PRODUCTS



Horizontal Application

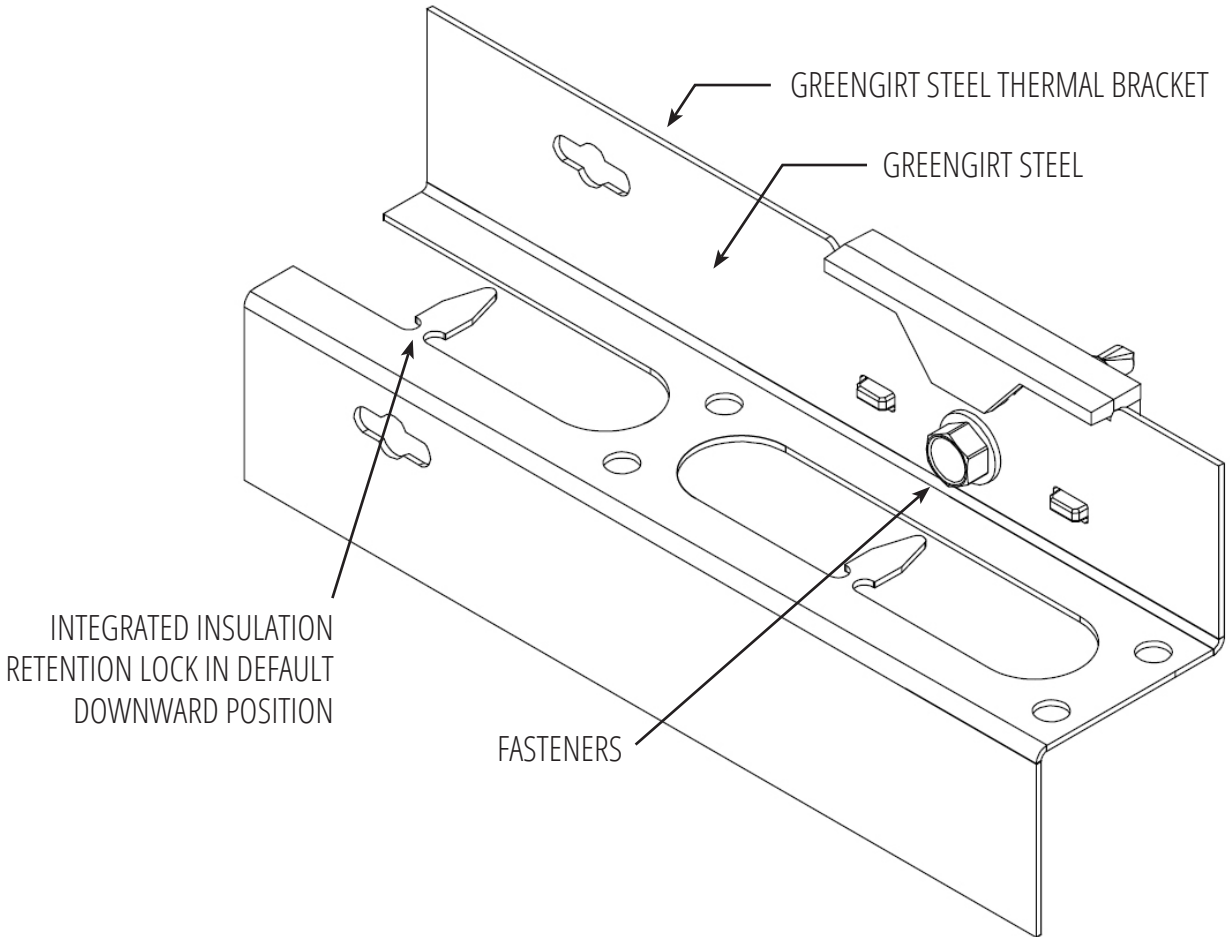


Vertical Application

GreenGirt Steel™

Preparation & Installation Guide

GreenGirt Steel™



Disclaimer:
This installation guide is only to be used in combination with GreenGirt Steel installation drawings and Advanced Architectural Products' (henceforth also A2P) suggested details. Details shown in project shop drawings take priority over any similar information in this manual. Shop drawings may be created either by A2P or by the system installation contractor. A2P's Technical Service Department is available to aid the system installation contractor in the review of shop drawings. This guide is meant to furnish the system installation contractor with recommend methods, procedures and guidelines for the installation of the GreenGirt Steel for commercial/industrial applications.

Information presented is accurate but may not cover all circumstances, building conditions and/or details of the specific project. Consult an A2P technical representative where this guide does not cover every unique construction condition. It is the sole responsibility of the project engineer and system installation contractor to ensure specified air and weather tightness of a building by good design and workmanship in accordance with approved drawings, using only approved sealants/tapes. It is the sole responsibility of the owner's representative and system installation contractor to uphold quality workmanship in accordance with approved shop drawings to ensure the best operation of the system. A2P recommends installers read this document completely before receiving materials at the job site. Guide is subject to change without notice. Installation information is available through A2P at (269) 355-1818. Follow the architect's approved shop drawings and engineering computations for project-specific fastening designs. The engineer of record is liable for verifying applicable design loads and system fastening requirements. All safety methods are the duty of the installer, general contractor or construction manager.

This installation guide is provided for information only and to outline general/typical requirements for the installation of GreenGirt Steel. Project specific engineering is available to address structural attachment. Contact A2P for further details. All implied warranties including merchantability and fitness for a particular purpose are expressly excluded.

Preparation & Configuration

Substrate:

- The substrate must be square, and support members to which panels are attached must be in the same plane and free of obstructions such as weld marks, bolts or fastener heads.
- Installer should verify the back-up wall construction matches the project specific engineering (stud gauge, stud spacing, etc.). Notify A2P or the engineer immediately should any become apparent.

Fastening:

- Fastener with minimum 0.5" flange diameter recommended.
- Follow the architects approved shop drawings and engineering computations for project-specific fastening designs. The engineer of record is liable for verifying applicable design loads and system fastening requirements.
- Steel fastening: Can be performed with self-drilling fasteners of sufficient diameter and loading capacity for the application.
- Concrete fastening: Can be accomplished by using threaded concrete fasteners of sufficient design to accommodate the design. Refer to specific project documents for fastener types and sizes.
- GreenGirt Steel attachment: Essential that the starting row be properly secured to the substrate and is level and true. The height of the first row above the base is generally determined by project-specific factors, such as type of insulation used, size and scale of exterior cladding material, and/or substrate-specific conditions,
- Generally, should begin at a transition/termination point. See construction details for more information.

Surface Preparation

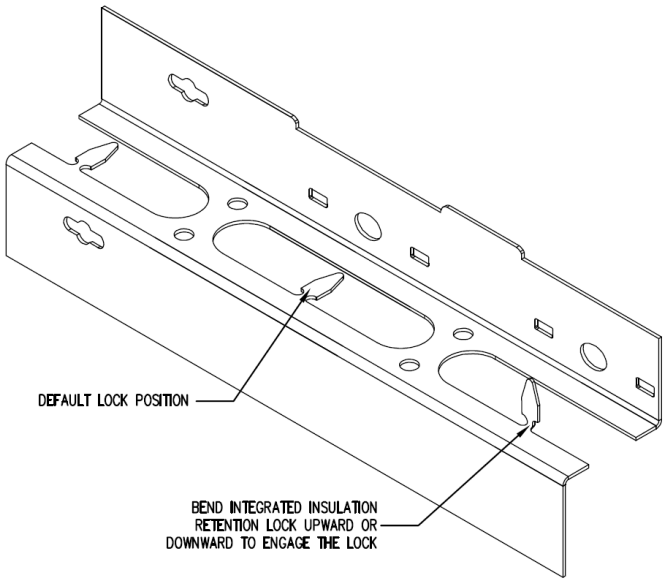
- Before installing, ensure that the substrate is dry, clean, sound, and free of any debris, residue, and any other surface contaminants.
- Remove high spots and fill in low spots prior to attaching to concrete or masonry substrate. Remove any extra materials protruding on surface of walls, such as chunks of mortar or concrete, and even wall surface to within ¼" per 8 feet**. All high and low spots should be leveled to provide an even wall surface.
- Verify the substrate is flat, without steps or voids greater than 1/4."
- A2P recommends that GreenGirt Steel is only installed under the direct supervision of an experienced craftsperson, trained in the proper application of its diverse offering of products and services. Please call (269) 355-1818.

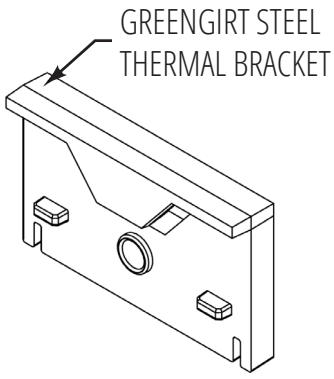
Structural Alignment

- Review shop drawings prior to installation to verify that structural members are in the correct location.
- Support members shall be installed within the following tolerances of plus or minus 1/8" (3.17 mm) in 10 feet (3048 mm) in any direction along plane of framing, with non-accumulative spaces. Any variance from tolerances can affect both performance and aesthetics and must be reported to the architect and general contractor, and corrected by the responsible party before installation begins.
- GreenGirt Steel is installed horizontally or vertically from the bottom up, starting at a transition/termination point. Depending on the starting location, and from left to right, refer to general and/or project specific construction details to determine how to begin the installation.

Configuration Options

- **Orientation:** Horizontal or vertical. Depending on the starting location, refer to general and/or project specific construction details to determine how to begin the installation.
- **Material composition:** 16 ga. or 18 ga. G90 steel or ZM40 with thermal bracket
- **Length:** The standard girt length is 96" (plus 4" for overlap; 100" total) and optional 120" (plus 4 for overlap; 124" total) available
- **Widths:** 1.5", 2", 2.5", 3", 3.5", 4", 4.5", 5"
- **Thermal expansion:** Integrated perforations
- **Overlapping:** A minimum of 3" is needed for each joint to overlap. The overlapping locking point for attachment—must run screw through larger opening for thermal expansion.
- **Cantilever:** Distances larger than 8" beyond last wall anchor must be evaluated by a project specific engineer.
- **Attachment:** The edge distance of any fastener-hole shall be a minimum of 1/2" from the edge of the profile to the closest side of the fastener-hole.





Cutting & Shimming

- **Cutting** - Shearing tools, such as snips and nibblers, are recommended for cutting metal framing components. While saws may be used, they are not advised due to the risk of damaging the anti-corrosion coating from sparks. If sparks are unavoidable, take necessary precautions to shield the components and any nearby material stockpile from sparks. Components should not be cut once installed on the building unless using a shearing tool.
- **Shimming** - GreenGirt Steel can be shimmed between the back-up wall and the girt. It is crucial to use properly sized shims that provide full bearing between the back flange of the girt/isolator and the wall. Undersized shims can lead to increased prying, rocking, and other connection instabilities. Shims should be installed with the face downward to minimize water collection. Shims thicker than 1/2-inch are not recommended. If shims thicker than 1/2-inch are required, consult with project-specific engineering or contact A2P to confirm their viability.

Insulation

- Insulation can be specified as rigid insulation, mineral wool, or expandable sprayed foam:
  - Rigid insulation panels of either rigid polyisocyanurate (polyiso) or extruded polystyrene over a solid substrate and a properly applied waterproof drainage plane; custom-profiling (by A2P) of 1.5", 2", 2.5", 3", 3.5", or 4" rigid insulation may be necessary—contact A2P to discuss. Non-custom-profiled rigid insulation is available by others.
  - Mineral wool (by others) may be installed over a solid substrate and a properly applied waterproof drainage plane.
  - Expandable, sprayed foam insulation (by others) may be installed over a solid substrate.

Delivery, Inspection Upon Delivery

- GreenGirt Steel is professionally packaged, wrapped and carefully shipped on flat bed trailers to the construction site. When a shipment is received, check all items against the shipping document for quantities, dimensions, colors, transit damage, etc. Document any shortage of girts and accessories or any damage on the bill of lading and have it signed by the driver. It is the receiver's responsibility to make any damage claims immediately.
- Please note that although every effort is made to prevent shipping damage, A2P is not responsible for damage which may occur during transportation, delivery, storage, or on-site handling.

System Handling

- Inspect travel route to assure a reasonable level and compacted surface free of ruts and excavations.
- The recommended loading/unloading method for bundles less than or equal to 8 feet is to use a single forklift with appropriately spaced forks placed under the center of the bundle, transporting only one at a time.
- The recommended crane lifting method is to use nylon straps positioned at a minimum of two points along the length of the bundle. Suitable wood spreaders should be used and located at the top and bottom of the bundles at the strap positions to protect the edges. Extreme care should be taken to avoid bumping and snatching of the bundles when lifting.

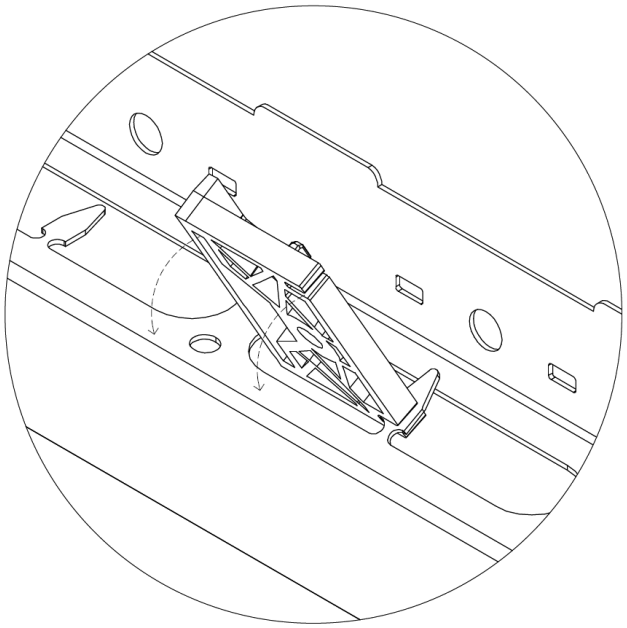
Storage, System Storage On Site

- Site must have adequate storage space to receive and store GreenGirt Steel components. This space must be level, firm, clean and free from standing water. Components should be stored in a dry condition, off the ground, covered continuously when not in use. Avoid outdoor storing for longer than 45 days.
- Panels should be inspected upon delivery for presence of moisture. If moisture is present, packaging should be opened immediately to allow ventilation and drainage. Do not store insulation panels in direct sun. If GreenGirt Steel is to be used immediately, bundles should be placed at pre-planned strategic locations around the building perimeter, as close as possible to the specific work areas. Review installation shop drawings to determine the best locations.
- Insulation panels in opened bundles should be covered by a plastic sheet or tarp at the end of the working day. The covering and bundles must be securely fastened to prevent wind damage. When handling GreenGirt Steel, ropes, steel cables or chains must not be used. Insulation panel pallets should not be stacked more than two high in the field.

Installation

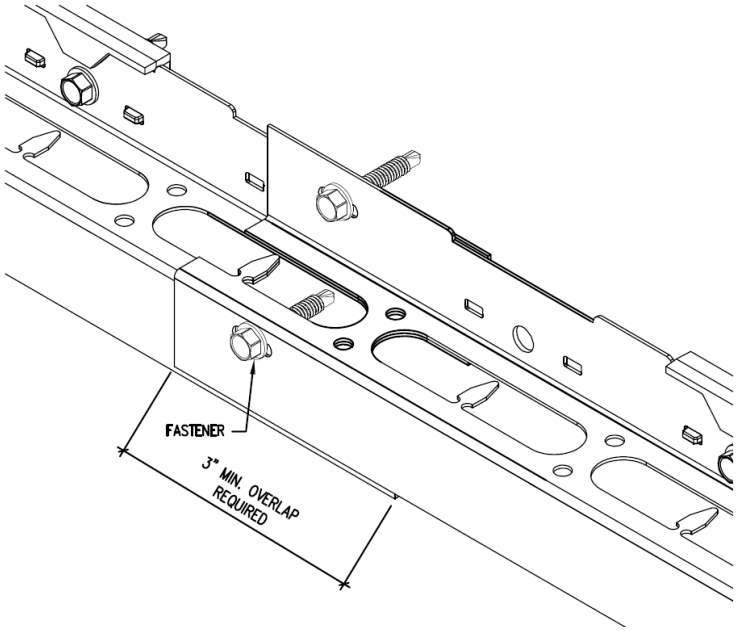
- Upon delivery, installers will receive the GreenGirt Steel girts and thermal brackets.
- Refer to project-specific conditions, architectural and engineering documents to determine proper starting and spacing.
- Prior to aligning the girt to the wall, it is recommended that the thermal brackets align with and/or are clipped at every attachment point.
- Attach thermal brackets on the rear-facing flanges of GreenGirt Steel based on the spacing requirements of your specific project. The thermal brackets incorporate an audibly engaging snap-on feature, facilitating for a quick and efficient “blind install.” It is a self-aligning feature, designed for a quick and intuitive installation.
- Following this, the integral insulation retention locks on the girt must be turned up 90 degrees using the provided hand tool or a notched thermal bracket. The number of locks to be turned up is dependent on the insulation type, the amount of retention needed, and the directive provided on the shop drawings.

USE THE HAND TOOL OR THERMAL BRACKET (SHOWN) TO ADJUST THE RETENTION LOCK INTO LOCKING POSITION



- It is highly recommended that thermal brackets be placed prior to turning up the integral insulation retention locks. Insulation retention locks corresponding with an attachment point must not be turned up (see illustration on page 3).
- Attach at each attachment point, and/or at each thermal bracket. Installers must screw through the elevated ring feature on the thermal bracket. The elevated ring feature, and thermal bracket in totality allow for improved thermal conductivity.
- To fasten each girt together, there is an overlapping locking point feature available on each girt. You must use this feature for each overlapped joint. There is a minimum of 3" for each joint to overlap.
- Addressing thermal expansion; when running your screw through the overlapped joint feature, installers must make sure to screw through the center (or larger opening) to account for thermal expansion.
- When installing mineral wool or rigid insulation with GreenGirt Steel, it is recommended to follow a bottom-up stacking method. Begin by installing a GreenGirt Steel girt at the base. Secure the insulation panel in place using the integrated insulation locks. Then, place the next GreenGirt Steel girt on top of the secured insulation panel, and continue this method upward for the remainder of the installation.

FOR GREENGIRT STEEL, OVERLAP FROM RIGHT TO LEFT SO THAT PRE-EXISTING OVERLAPPING FASTENER SLOTS AND PERFORATION ALIGN. USE AT LEAST ONE FASTENER ON THE EXTERIOR TO SPLICE ADJACENT GIRTS TOGETHER.



Warranty

- 1-Year Limited Warranty - Available on all GreenGirt Steel products. This warranty covers the replacement of any material found to be defective, subject to the terms and conditions of the warranty.
- 10-Year Limited Warranty - Available on all GreenGirt Steel products when A2P also supplies project-specific engineering.
- Please note, failure to follow the precise procedures outlined in this Installation Guide, all applicable laws, ordinances and codes, and/or accepted industry safety procedures will render any and all warranties null and void. A2P will not be responsible in any way for merchandise, installed or not, that is damaged or defective as a result of negligible practices and/or a failure to follow these guidelines, deficiencies in workmanship or construction, or dangerous site conditions.
- Warranties and other product information are available from A2P. For information regarding general and product-specific warranties, please contact A2P at (269) 355-1818.

Availability & Support

All Advanced Architectural Products' systems are purchased directly, with customer service and order assistance is available through an extensive network of local sales representatives. Advanced Architectural Products can provide technical and engineering support for each GreenGirt Steel purchase/installation. Material lead time is dependent upon quantities and material requirements. Contact A2P at (269) 355-1818 for Finite Element Analysis (FEA), engineering review, support, Q+A, lead times, etc.

Advanced Architectural Products
959 Industrial Drive, Allegan, MI 49010
(269) 355-1818
GreenGirt.com

General revision October 2025