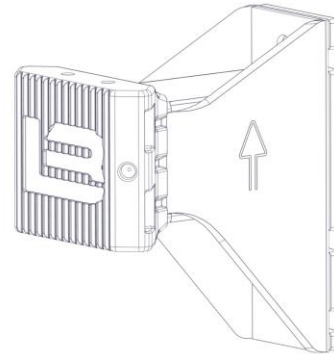




LONGBOARD®
INSPIRING ARCHITECTURE



Hitch™ Cladding Attachment System

Installation Guidelines

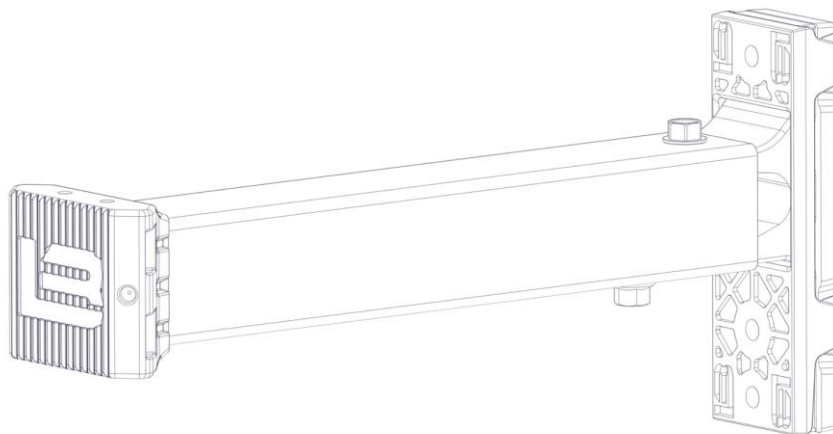
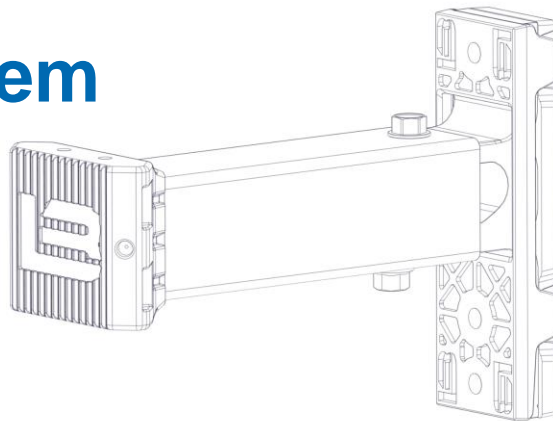


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Material Specifications

Longboard Hitch structural and thermal performance data has been analyzed, calculated, and documented in reports by RDH Building Sciences Inc. Through this process, Longboard has developed an easy-to-use calculator for cladding attachment design and material specifications. These tools and reports were prepared by Longboard Architectural Products and RDH Building Sciences Inc. and are not for use without express written consent.

It is recommended to always consult with a Longboard technical representative in using the calculator to develop an optimized attachment layout considering structural, thermal and project specific conditions. The results from the consultation are intended to be used as guidance and must be verified by a licensed engineer of record in the province or state where the product is being installed.

Contact Longboard at info@longboardproducts.com or 1-800-604-0343 for technical support.

Thermal Performance

- Passive House Certified -Advanced Component
- Up to 94% thermal efficiency
- R-values up to R60 for various wall assemblies



Structural Performance (Example: Concrete Substrate)

Hitch Clip	Dead Load Capacity★	Insulation Depth	Clip Spacing	Wind Load★★
SD	6 -7.5 psf	1 – 2.5"	32" x 48"	@35 psf
HD	16.5 psf	3"	32" x 48"	@35 psf
	3.5 psf	16"	32" x 48"	@35 psf
HD+	14 psf	6"	32" x 48"	@35 psf
	9.5 psf	16"	32" x 48"	@35 psf

★ 20MPa / 3000 PSI Concrete Substrate

★★ Factored / Ultimate Wind Load

Material Ordering & Delivery

- Ordering: Hitch Clips (preassembled): 12/box
Standard Girts & Edge Girts (¾" or 1"): 8', 10', 12, 16' lengths
Corner Girts & Corner Edge Girts (¾" or 1"): 6' lengths (Bent on site to 3'x3')
- Shipping: Lead time is 10 weeks* + shipping (**subject to change*), delivered on skids weighing up to 2000 lbs. A mechanical lift with forks is required on site to receive the order.
- QC: Always inspect the delivery for damage and contact LB ASAP if there are any issues: info@longboardproducts.com or 1-800-604-0343 and include your PO# and any pictures if possible. Mark the delivery receipt as "damaged" and accept the delivery as-is. Longboard is not responsible for the installation of blemished or damaged material.

Storage & Handling

Be sure to store the material flat, keep it dry, safe & secure and remain in unopened cartons until ready to be installed.

Warranty

Upon substantial completion of the project, register for warranty online here: longboardproducts.com/warranty

⚠ Registration is required for the warranty to be in effect.

Components

Components (Typical)










Longboard Hitch Cladding Attachment System consists of a Hitch Clip, Girts, and accessories. For all LB components go to longboardproducts.com.

 <p>Hitch SD Insulation 1" – 2.5" Available in 1/2" increments SD.15 – SD.30</p>	 <p>Hitch HD Insulation 3" – 16" Available in 1/2" increments HD.22 – HD.160</p>	 <p>Hitch HD+ Insulation 6" – 16" Available in 1/2" increments HDP.47 – HDP.155</p>	 <p>Fasteners (By others)</p>
 <p>Standard Girts Depths: 3/4"/1" Lengths: 8'/10'/12'/16' STDGRT</p>	 <p>Corner Girt/Corner Edge Girt Depths: 3/4"/1" Lengths: 6' CRNGRT/CRNEDGGRT</p>	 <p>Edge Girt Depths: 3/4"/1" Lengths: 8'/10'/12'/16' EDGGRT</p>	 <p>Girt Connector GRTCNCTR</p>
 <p>Girt Adapter GRTADPTR</p>	 <p>Plunger Tool</p>	 <p>Piercing Tool</p>	 <p>U-Shim (For Girt direct to substrate) SHIM.1001</p>
<p>Insulation Kit Includes: -Plunger Tool (x1) INSULKIT -Piercing Tool (x4)</p>			

Tools/Cutting/Fastening

Tools

Commonly used tools for Hitch System Install.

				
Chop Saw with Steel cutting blade	Optional Carbide Ferrous Metal Blade 60-80T (for cutting Steel)	Hammer Drill (for Hitch Clip install onto concrete/CMU)	Cordless Drill with Clutch	5/16' & 7/16" Nut Driver Bit
				
Quick Grip Clamp	Tape Measure	Laser Level	Chalk or String Line	Nut Driver Extension Bit

Cutting

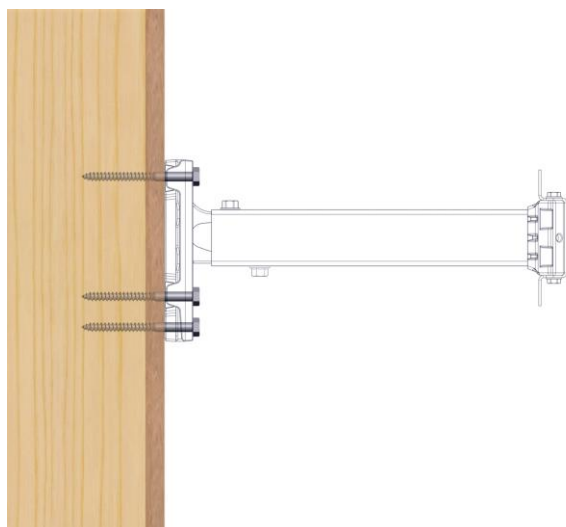
⚠ Always be sure to wear appropriate PPE: eye & hearing protection.

Cut girts using a Miter/Chop Saw to terminate to accurately measured distances between subsequent girts and area limitations.



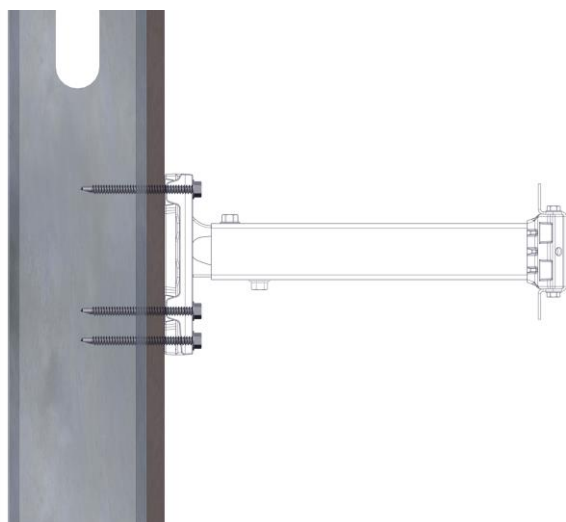
Fastening & Framing requirements

⚠ All fasteners should be suitable for exterior use and be compatible with the substrate type. **Fasteners should be anchored into a solid secure framing member.**

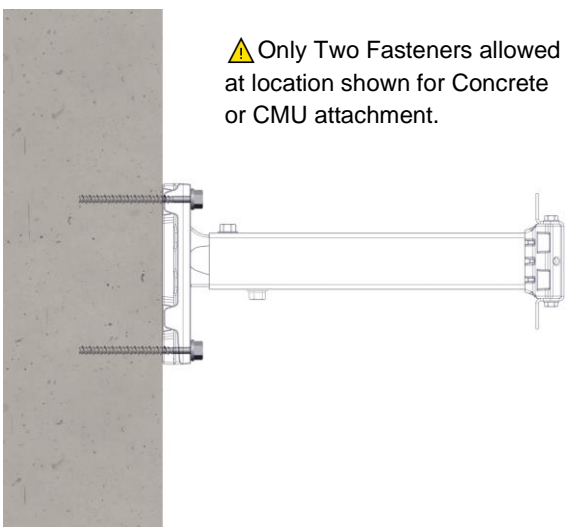


SD	Backup Wall	Fasteners
	Wood Stud SPF	Three #14 x 2 1/2" Lag wood screws/GRK

HD, HD+	Backup Wall	Fasteners
	Wood Stud SPF	Three #14 x 3 1/2" Lag wood screws/GRK



SD, HD, HD+	Backup Wall	Fasteners
	18 Gauge Steel Stud	Three ITW Tek 1/4"-14 x 2 1/2" Self-Drilling Screws
	16 Gauge Steel Stud	Three ITW Tek 1/4"-14 x 2 1/2" Self-Drilling Screws



⚠ Only Two Fasteners allowed at location shown for Concrete or CMU attachment.

SD, HD	Backup Wall	Fasteners
	20Mpa / 3,000 PSI Concrete	Two Ultracon + Hex Flange 1/4" x 3 1/4" (44.4mm Embedment) DFM2ELC170
	CMU*	Two Ultracon + Hex Flange 1/4" x 3 1/4" DFM2ELC170

HD+	Backup Wall	Fasteners
	20Mpa / 3,000 PSI Concrete	Two Hilti KH-EZ 1/4" x 3 1/2" (49mm Embedment)
	CMU*	Two Hilti KH-EZ 1/4" x 3 1/2"

*CMU fully grouted with 1500 psi prism strength(min)

**Minimum of 2" edge distance to be maintained

System Install

Layout

Step 1

Establish clip spacing

Contact Longboard and provide the following:

- Insulation thickness(inches)
- Girt clearance, if any(inches)
- Wind Load
- Backup Wall Structure type

Step 2

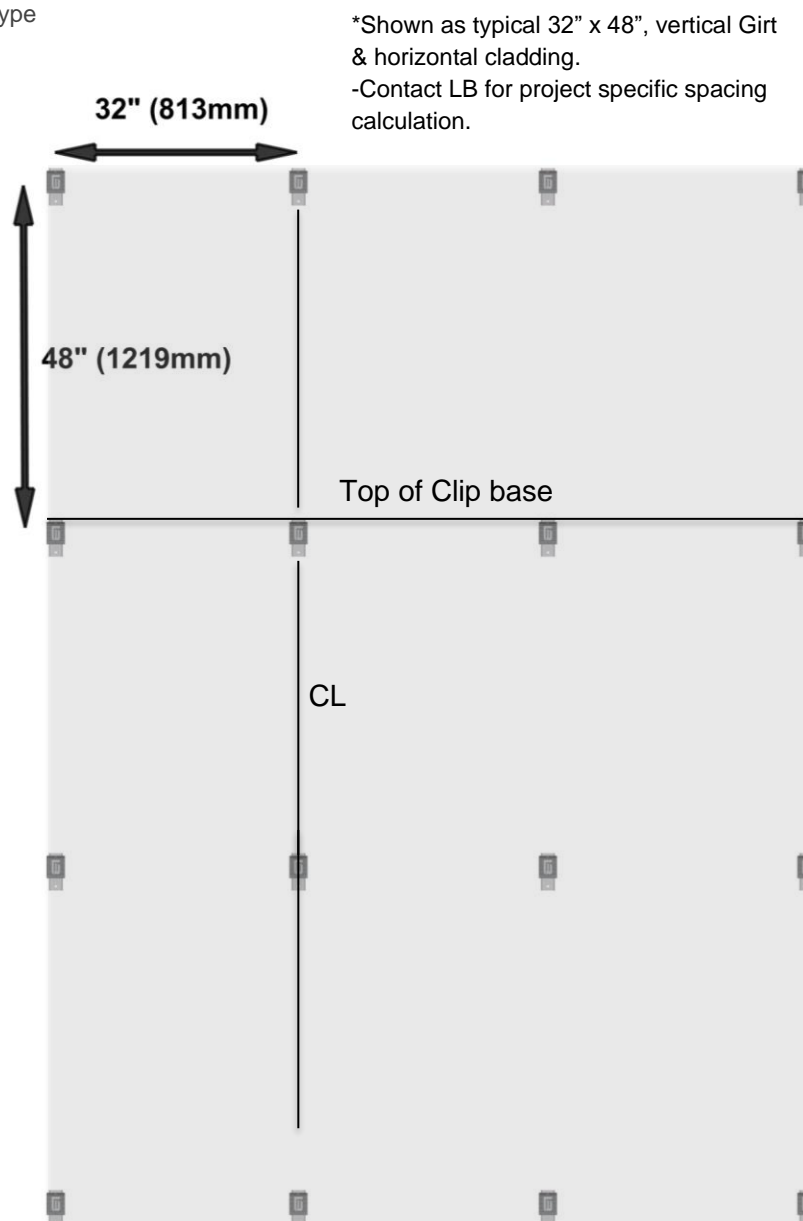
Layout and mark vertical centerlines of clip while maintaining minimum edge distances. Ensure all clips will land on a stud or framing member.

Step 3

Layout and mark horizontal lines to the top of the clip base where possible.

Step 4

Layout around windows, doors, or other penetrations.



Installation

Step 5 Clips

Step 5A -Place and secure Hitch Clips. Anchor with Fasteners into substrate/structural member. See page 6 for fastener type and Qty.

⚠ Note: Check to make sure Hitch Clip Base is securely fastened and tight to the substrate.

Step 5B -Check for high points of the wall area. It is good practice to check installation level/plumb and flat/straight, for best results.

Step 5C -Adjust Clip Depth

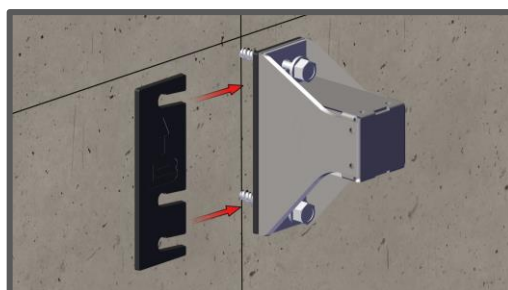
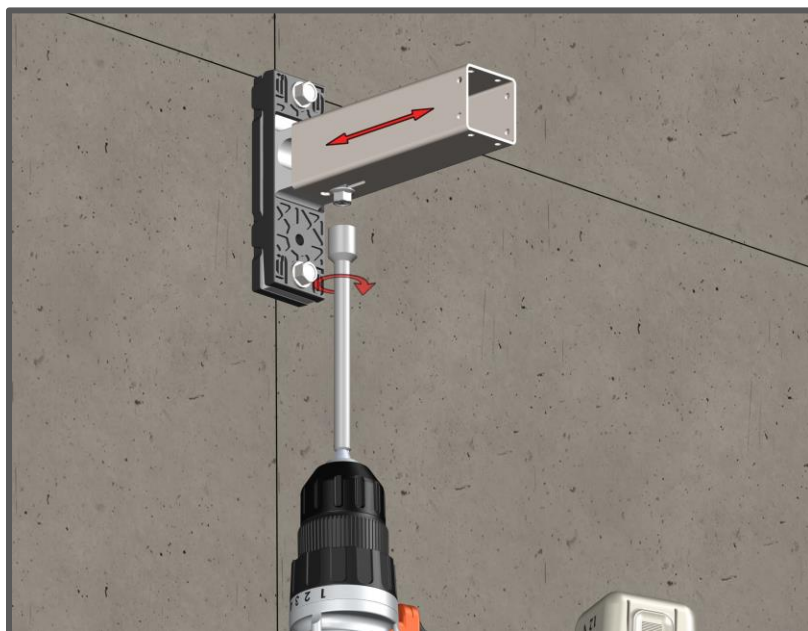
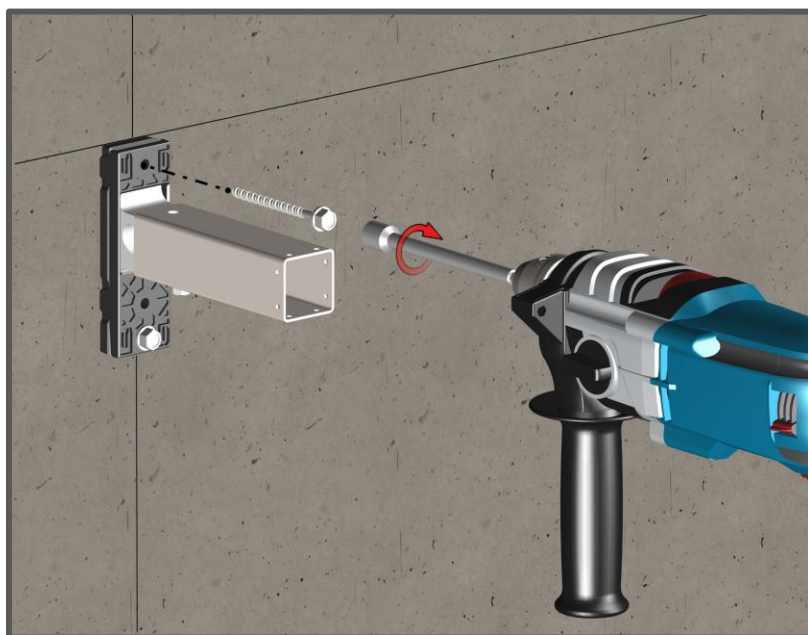
-HD/HD+

Adjust the Post Arm along the slot to achieve the correct measurement and wall alignment accordingly. Tighten screw under the Post Arm to secure Hitch Clip dimension.

Note: Check the measurement from substrate after tightening to confirm.

-SD

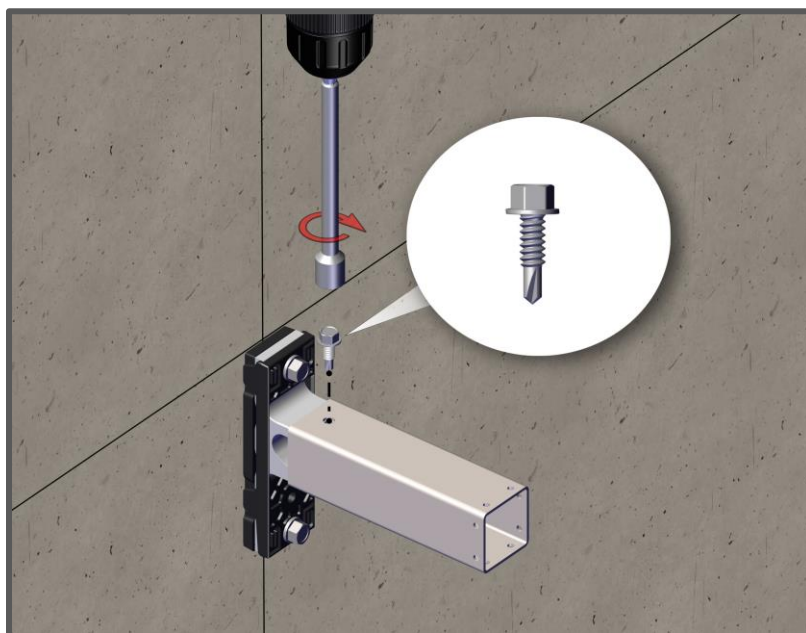
Loosen fasteners and place additional shim(s) where needed at low spots. Limit the use of SD shims to 3 max (3/8"). (Skip to Step 2)



Step 5D

-HD/HD+

Install the 1/4" -20 Self-Drilling Hex Head Screw(supplied) into the top hole to secure Post Arm into place. If necessary, pre-drill the hole using a 3/16" drill bit.



Step 6 Stick Pins

Install Stick Pins where necessary to prep for insulation.

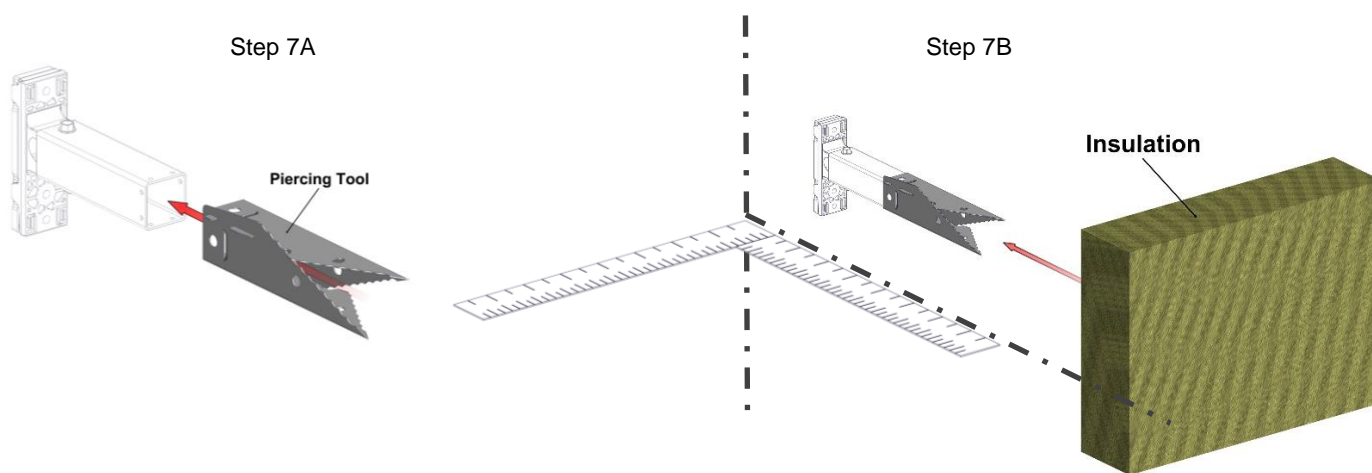
Step 7 Insulation

Compatible insulation:

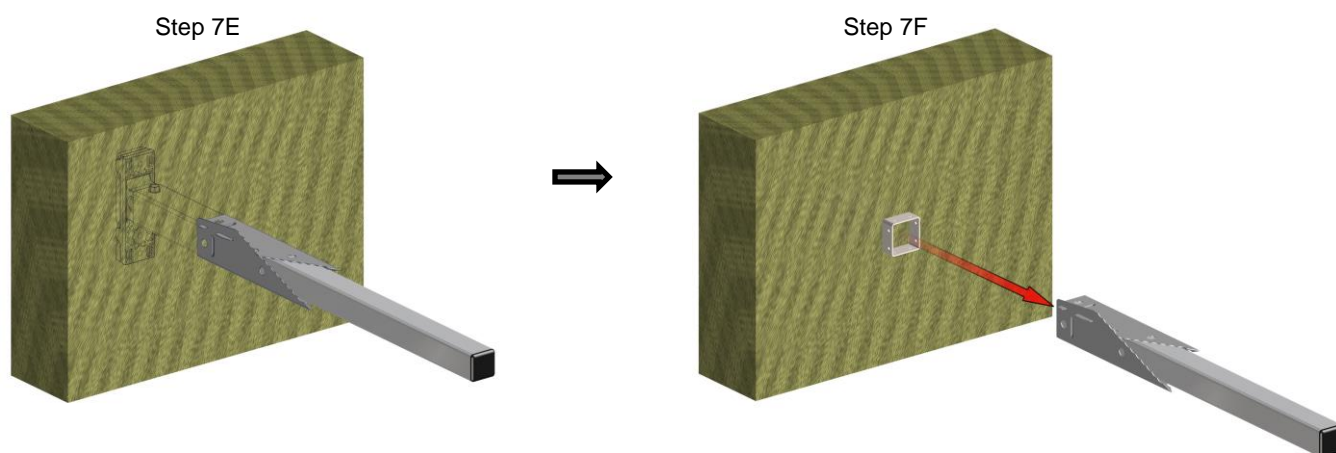
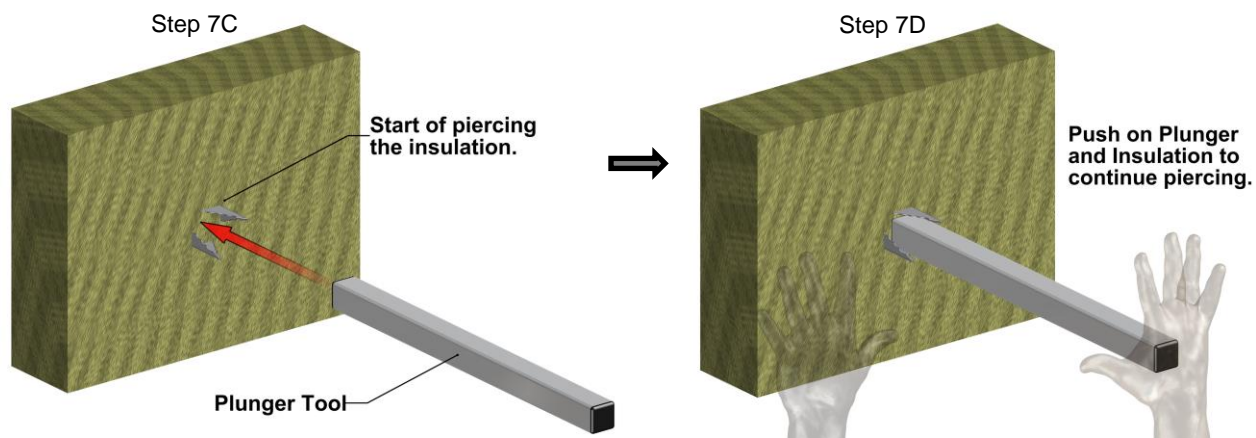
- Mineral Wool
- Poly ISO
- EPS
- XPS
- Fiberglass

7A -Install the insulation by placing the Piercing Tool onto the Hitch Clip and slide it onto the end of the Post Arm and make sure it is secure.

7B -Next slide your insulation at the measured location onto the Piercing Tool. See continued piercing sequence next page.



Piercing Sequence

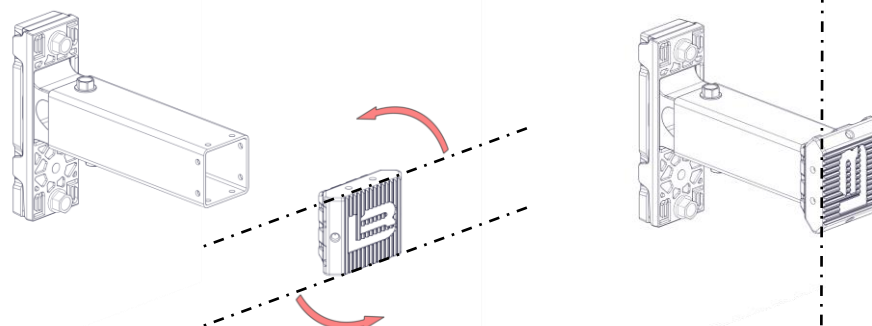
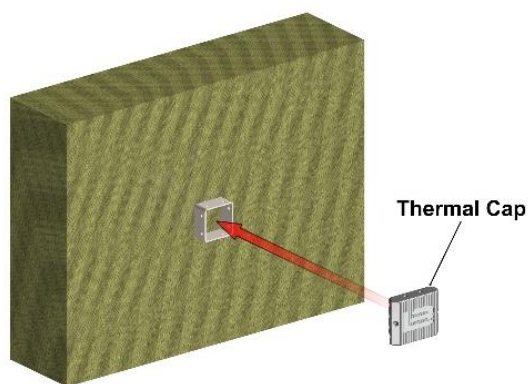


HD/HD+

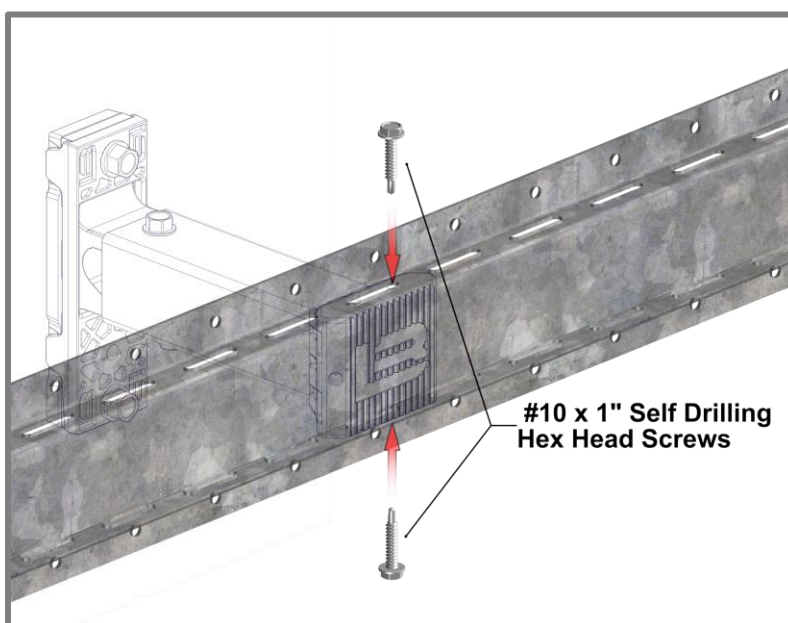
The Piercing Tool cuts an internal plug of the insulation, to be fully inserted into the Hitch Post Arm to eliminate thermal convection loading.

Step 8 – Thermal Cap and prep for Girts

After insulation is installed, place the Thermal Caps with the flat sides of the caps in the orientation of the Girts. The Thermal Cap and the Post Arm have pre-drilled holes for fastening.



Rotate Thermal Cap 90° to change Girt orientation.

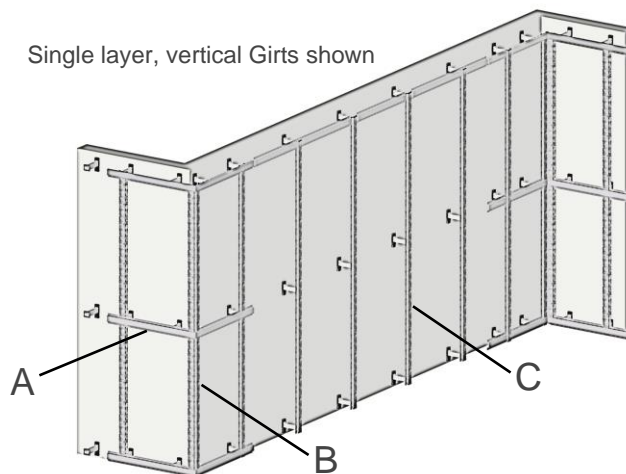


Note: 2 x #10 x 1" Self Drilling Hex Head Screws are included with Thermal Cap.

Single layer, vertical Girts shown

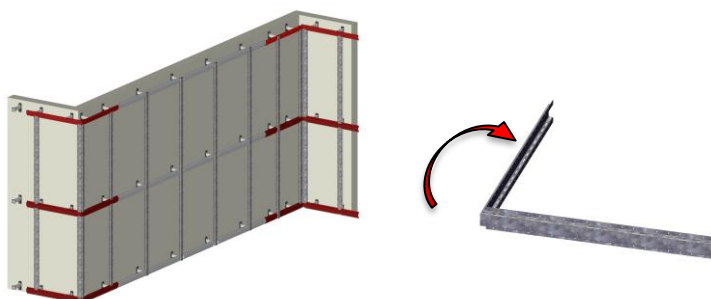
Step 9 Girts

- A – Corner Girts
- B – Edge Girts
- C – Standard Girts



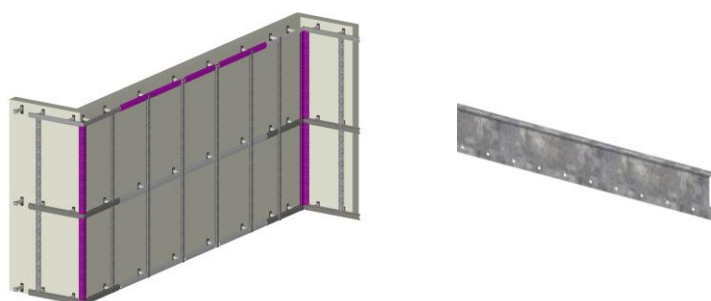
Step 9A - Corner Girts/Corner Edge Girts

The Corner Girt is supplied straight with cut flanges in the middle and needs to be bent onsite to the required angle. It can be bent for outside or inside corners. Install at the corners of the building.



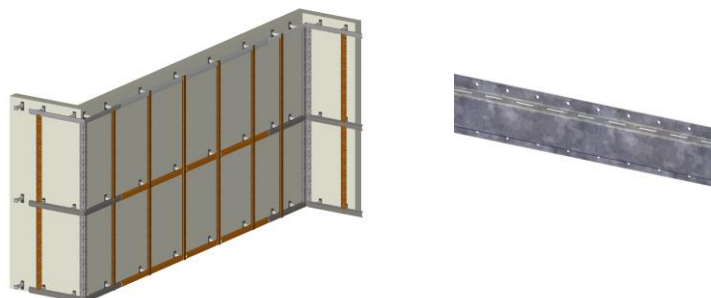
Step 9B – Edge Girts

Install Edge Girts around the perimeter of the wall area. These Girts support cladding components at the edge of the application where required. Use Girt Connectors to attach to adjacent Girts.

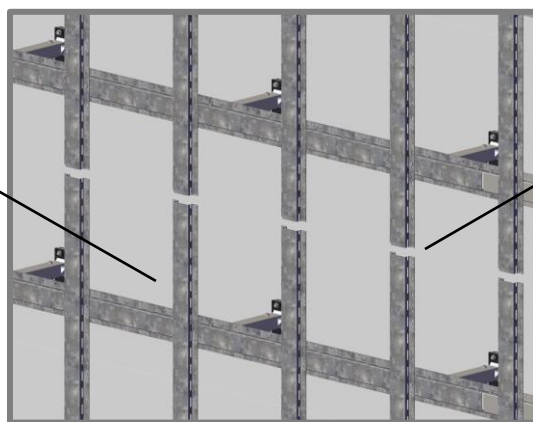


Step 9C - Standard Girts

Next install the Standard Girts throughout the main wall area. For support needed in specific areas use Standard Girts and Girt Connectors to Bridge across areas.
(See next page for Girt Connector details).



Girts max 12" cantilevered without support.



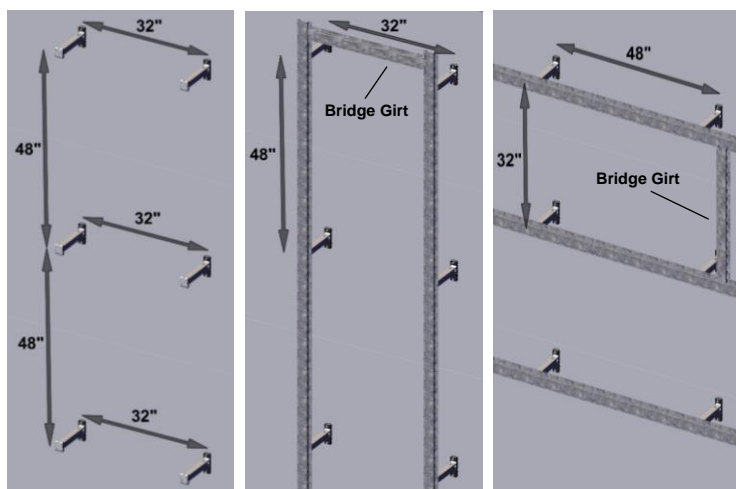
Allow for 1/4" gap between Girt ends.

Substructure Design Options

HITCH CLIP SPACING CONSISTENT, TO MAINTAIN THERMAL EFFICIENCY

SINGLE LAYER GIRTS

WIND LOAD <40 PSF using Longboard Planks



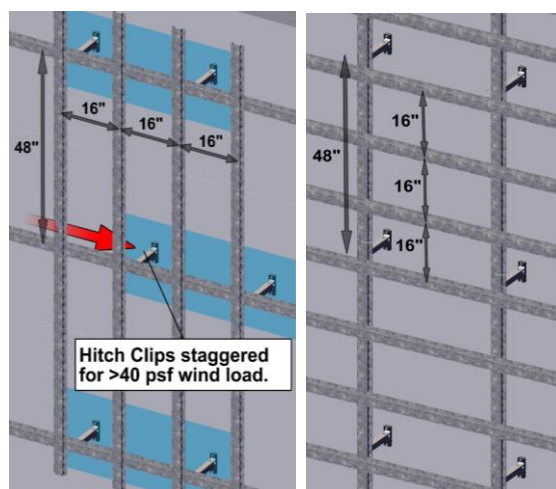
Typical Hitch Clip Layout 32" x 48"

Horizontal Cladding Install
Girts Installed Vertically

Vertical Cladding Install
Girts Installed Horizontally

DUAL LAYER GIRTS

WIND LOAD >40 PSF using Longboard Planks



Hitch Clips staggered for >40 psf wind load.

Horizontal Cladding Install
Second Layer Girts Installed Vertically

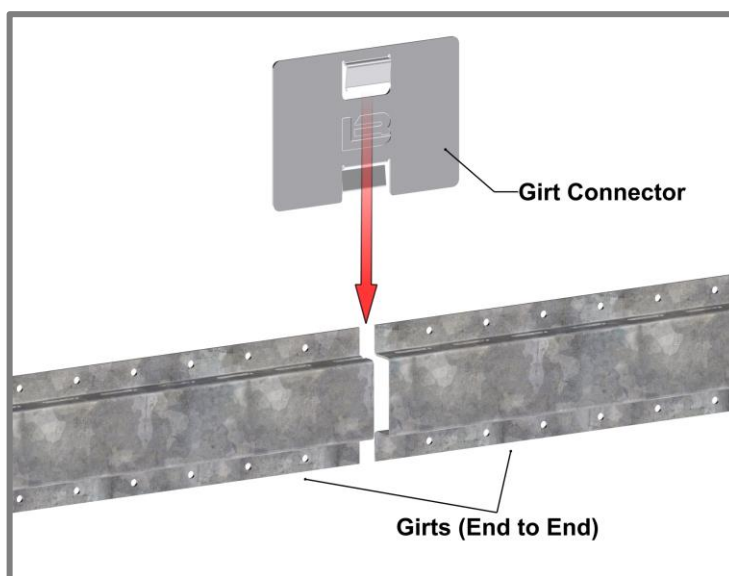
Vertical Cladding Install
Second Layer Girts Installed Horizontally

Girt Connector

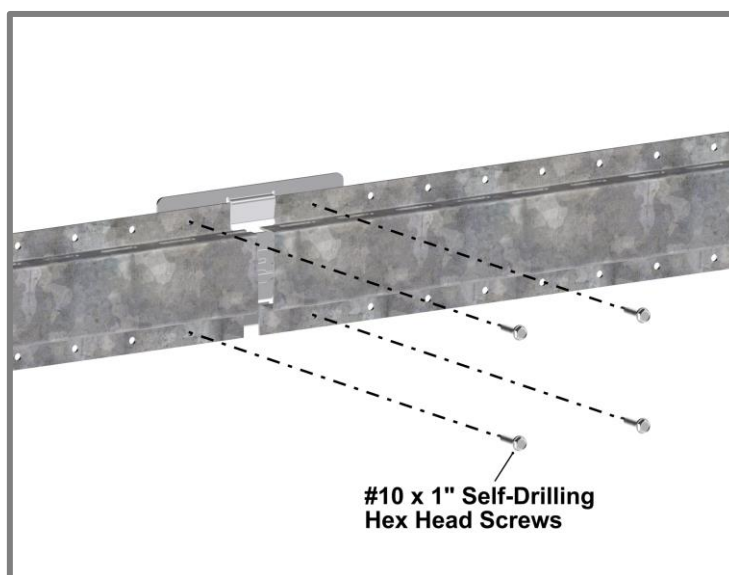
The Girt Connector is used to connect Girts perpendicular and end to end. It is used to connect Standard Girts, Edge Girts, and Corner Girts.

End to End Connection

Slide the Girt Connector tab over the Girt flange to hold it in place while using screws to secure it.

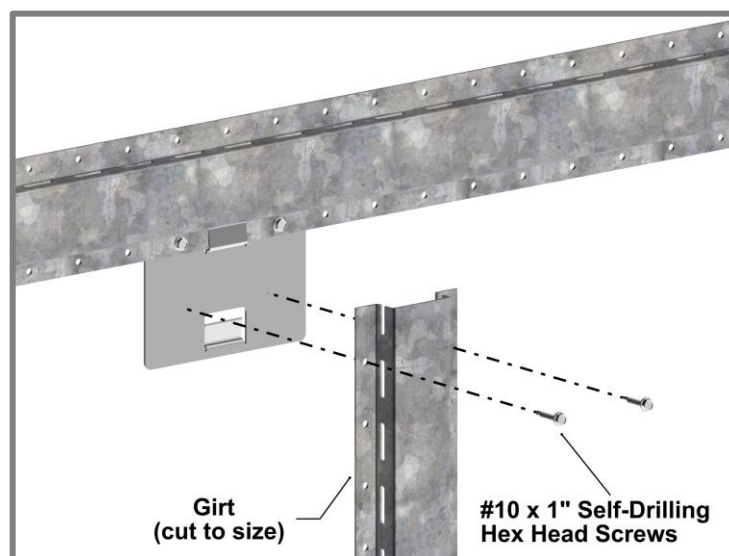
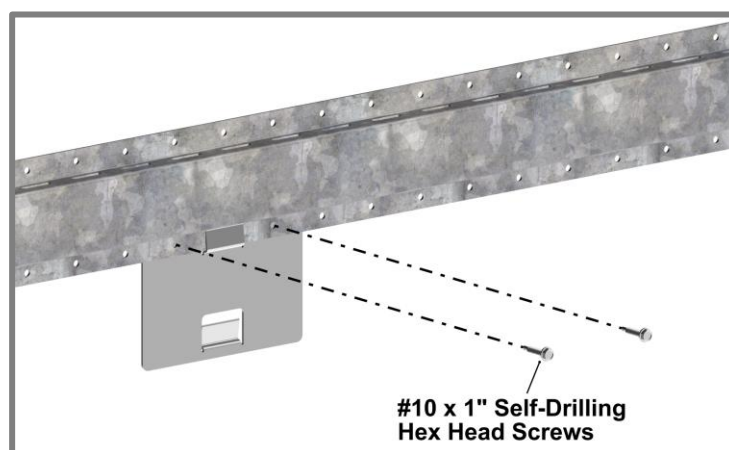
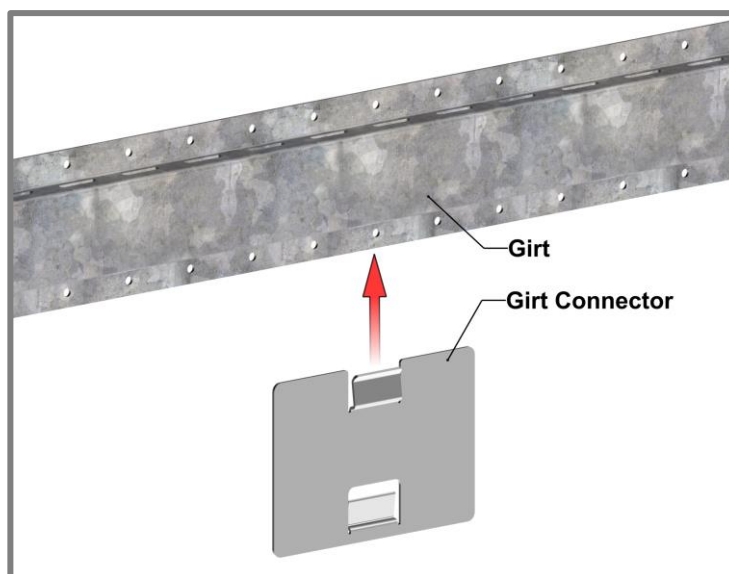


⚠ Note: Confirm measurement of Girt before installing screws.



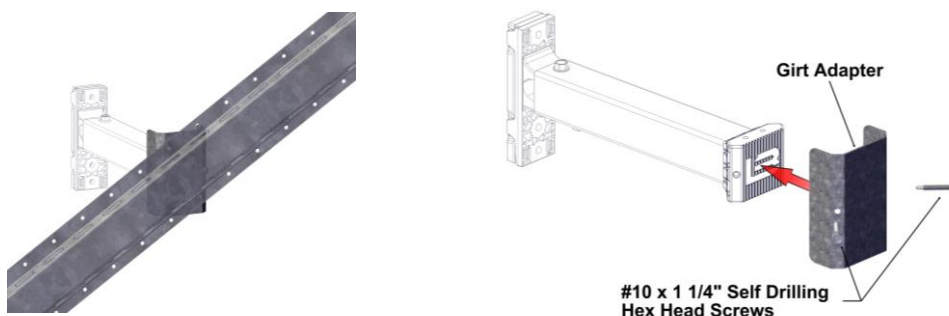
Perpendicular Connection

Slide the Girt Connector tab over the Girt flange to hold it in place while using screws to secure it. Then align second Girt and secure with screws.



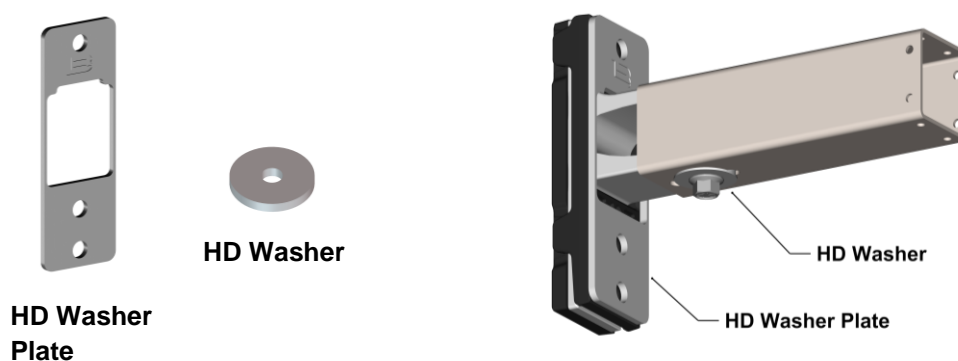
Girt Adapter

The Girt Adapter is an accessory to the Hitch system to be used when 3rd party Girts/Rails are specified. It allows a surface for mounting at any angle. The Girt Adapter can also be rotated.



HD Washer and Washer Plate

The HD Washer and HD Washer Plate are required for project specific wind loads and larger depth walls. These components come pre-assembled.



U-Shim

The 1/16" U-Shim is installed between the Girts and the substrate to allow for water run-off. U-Shims are sold separately.



Appendix

HITCH Order Information

Hitch™ Clips *

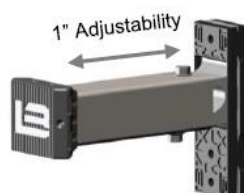
Type	1"	1.5"	2"	2.5"
HITCH™ SD	HITCH.SD.15	HITCH.SD.20	HITCH.SD.25	HITCH.SD.30

Type	3"	4"	6"	8"	10"	16"
HITCH™ HD	HITCH.HD.22	HITCH.HD.32	HITCH.HD.52	HITCH.HD.72	HITCH.HD.92	HITCH.HD.152

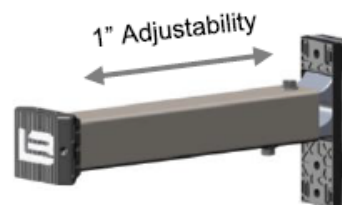
Type	6"	8"	10"	12"	14"	16"
HITCH™ HD+	HITCH.HDP.47	HITCH.HDP.67	HITCH.HDP.87	HITCH.HDP.107	HITCH.HDP.127	HITCH.HDP.147



Hitch SD



Hitch HD



Hitch HD+

* Clip SKUs and order information are non-exhaustive and for illustrative purposes only
Sample clip sizes are presented that would accommodate a certain exterior insulation thickness
Always consult the Hitch calculator and Longboard technical representative to verify clip order information

Hitch™ Girts

Type	96"	120"	144"	192"
3/4" Standard Girt	HITCH.75STDGRT.96	HITCH.75STDGRT.120	HITCH.75STDGRT.144	HITCH.75STDGRT.192
1" Standard Girt	HITCH.1STDGRT.96	HITCH.1STDGRT.120	HITCH.1STDGRT.144	HITCH.1STDGRT.192
3/4" Edge Girt	HITCH.75EDGGRT.96	HITCH.75EDGGRT.120	HITCH.75EDGGRT.144	HITCH.75EDGGRT.192
1" Edge Girt	HITCH.1EDGGRT.96	HITCH.1EDGGRT.120	HITCH.1EDGGRT.144	HITCH.1EDGGRT.192



Standard Girt



Edge Girt

Hitch™ Corner Girts

Type	72"
3/4" Corner Girt	HITCH.75CRNGRT.72
1" Corner Girt	HITCH.1CRNGRT.72
3/4" Corner Edge Girt	HITCH.75CRNEDGGRT.72
1" Corner Edge Girt	HITCH.1CRNEDGGRT.72



Corner Girt



Corner Edge Girt

Hitch™ Installation Accessories

Girt Adapter	HITCH.GRTADPTR
Girt Connector	HITCH.GRTCNCNTR
U-Shim	SHIM.1001
Insulation Piercing Tool	HITCH.PRCNGTL
Insulation Plunger Tool	HITCH.PLNGRTL
Insulation Piercing Kit	HITCH.INSULKIT

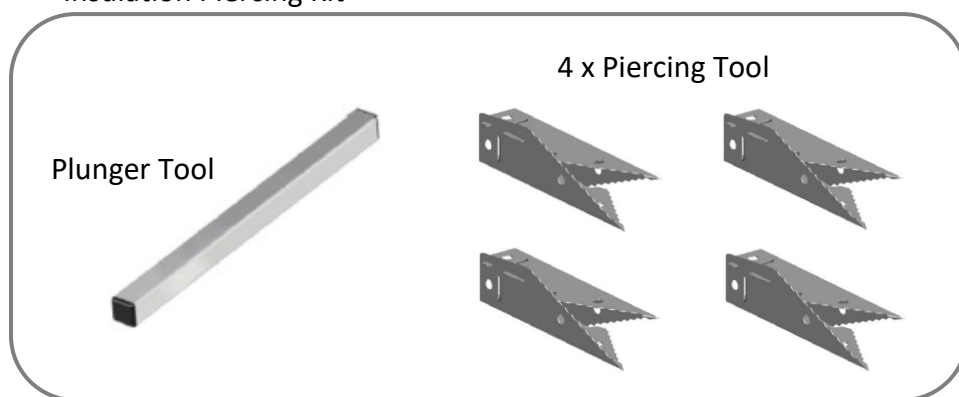


Girt Adapter



Girt Connector

Insulation Piercing Kit



U-Shim

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For more information, contact client care at info@longboardproducts.com or call toll free 1-800-604-0343.