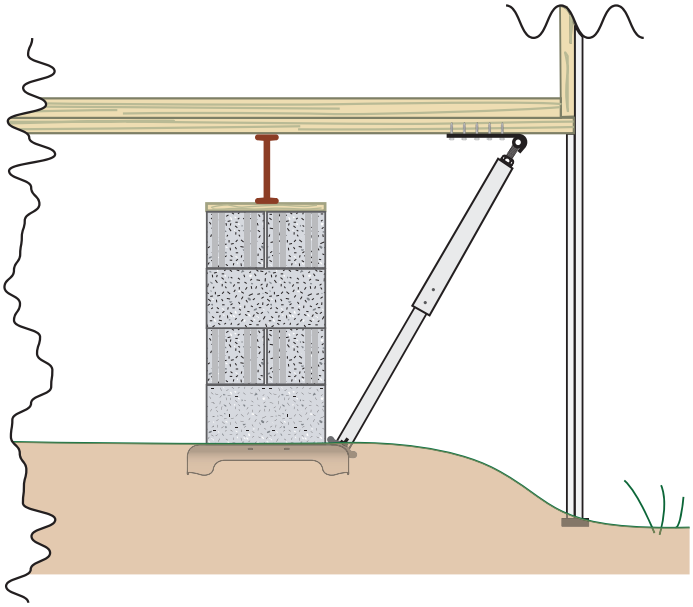
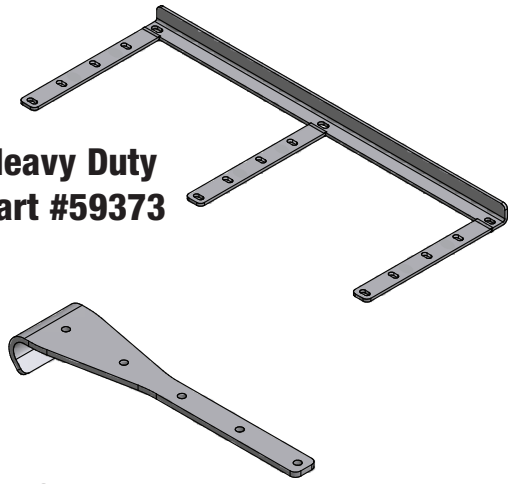
Frost Free Foundation Support System

Installation Instructions By Tie Down





Heavy Duty
Part #59373

Standard
Part #59372

A cost effective Engineered Perimeter Foundation Support for use with Frost Protected designs meeting Model Installation "Standard", HUD 24 CFR 3285, International Residential Code (IRC) Appendix E and ANSI A225.1.

Based on design assumptions from the "Standard" for frame plus perimeter pier support: Max 16'nominal sections width (15' actual), 12" eave, 300 lb. pier dead load, 35 plf wall dead load, and 10 plf chassis dead load.

Two separate joist support options, depending on needed load (see chart on page 4), allow for replacement of perimeter piers up to a maximum of 8 ft. for a 40 lb. roof live load. Table 2, 3285.303 perimeter blocking, this does not include flood and seismic design loads.

Follow the Manufacturers Installations Instructions in conjunction with the "Standards" for site contour and drainage. This design follows the guidelines for proper site preparation that doesn't allow moisture under the home. If surface moisture is prevented from soaking in under the home, the threat of frost heave is greatly diminished or eliminated, depending on other site factors.

The Xi2 Frost Free Foundation can be installed on concrete footers or steel ground pans at all required locations. Tie Down ABS footer pads or concrete footers can be used at all other pier locations with stacked concrete or steel piers. Follow manufacturers set up Manual, local or state requirements for proper footer spacing and all other set up requirements.

Lateral stability must be provided by other means, such as:

1) Xi2 foundation system per its installation instructions.
   or
2) Ground anchors installed per home manufacturer's instructions, with proper lateral support, this system may be used in Wind Zones I, II, and III.

Instruction #08156

D1165 Rev. 9/6/23

TIE DOWN
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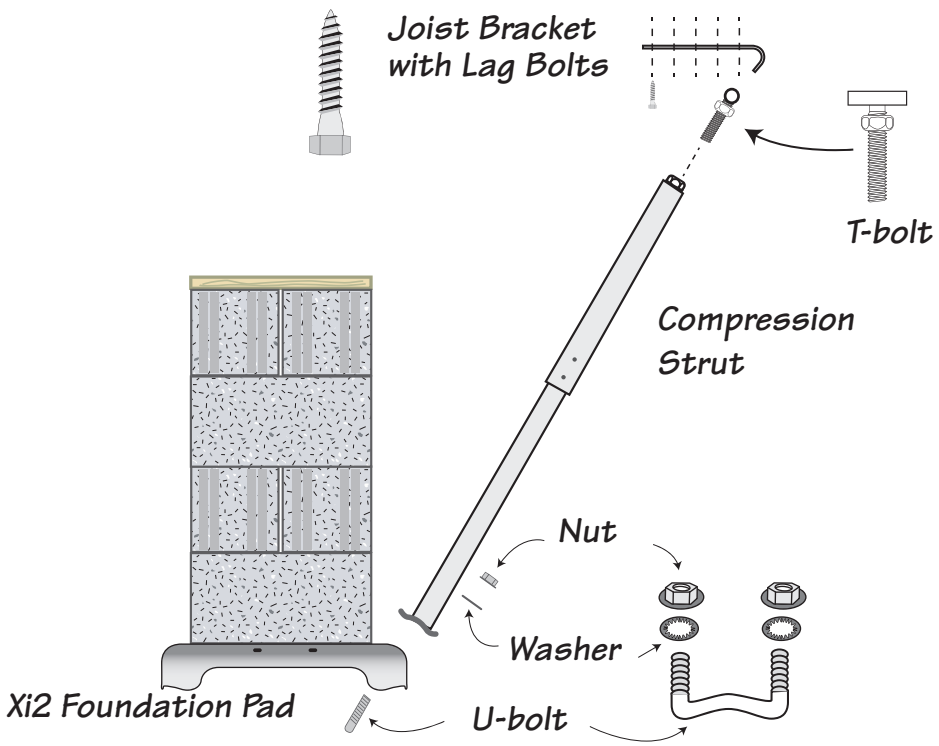
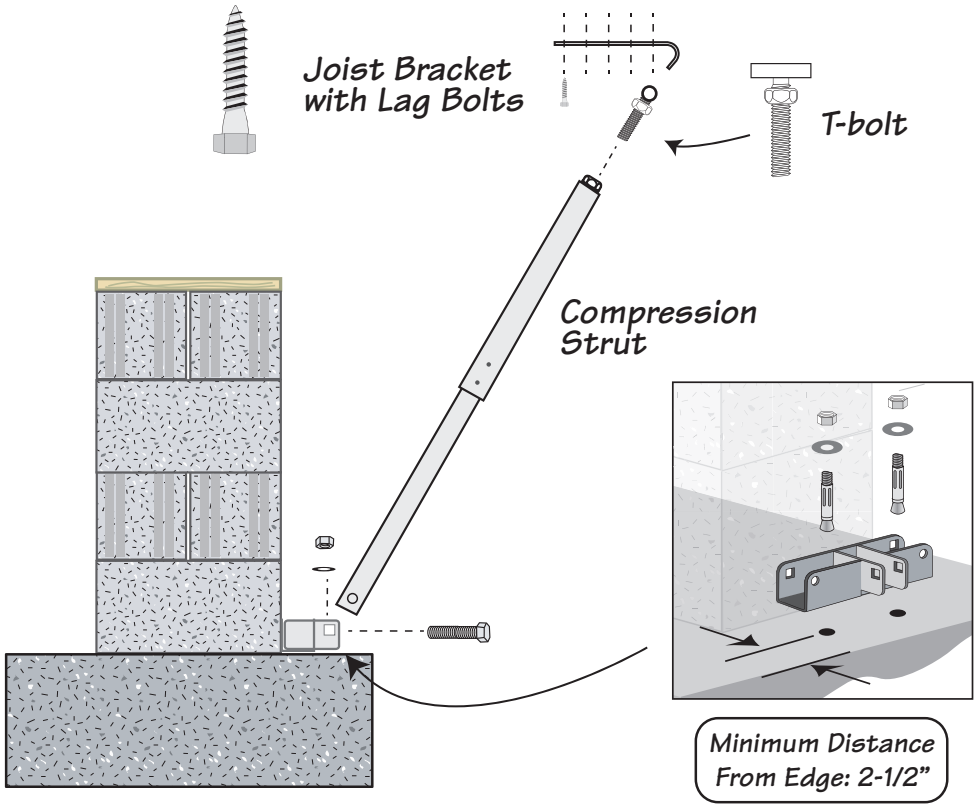
Frost Protection Strut - Ground Installation



Ground Installation

1. Check the manufacturers set up manual to identify the amount of perimeter blocking required for pier spacing and roof load. We offer 2 different Joist brackets for use based on amount of load needed.
2. Systems are installed in conjunction with complete Xi2 systems or at separate specified perimeter support locations.
3. Make sure all organic matter and debris are cleared from pad site.
4. Place U-bolt through pan facing to outside of home and attach lock washers.
5. Press or drive pan into the ground until level and flush with ground surface.
6. Build pier according to State, local, or home manufacturers guidelines.
7. Attach to floor joists approximately 6” in from outside wall using 3/8” X 3” lag bolts in pre drilled holes in Joist Bracket. Keep strut angle as close to 45 degrees as possible.
8. Install compression strut by placing mount bracket over U-bolt and attach with nuts. Do not tighten at this time.
9. Insert adjustable T-bar head in top of compression strut with nut screwed to top of the rod next to T. Slide the T end of strut up and position to rest in the bend of angle iron support. While holding in place, install a minimum of 4 (#14 X 1” tek screws) self tapping screws into the holes provided in the compression strut so the two tubes are connected together with a minimum overlap of 4” to 6”.
10. Tighten nuts on U-bolt at ground pan.
11. Adjust support by tightening T-bar against Joist Bracket support with adjustment nut.

Frost Protection Strut - Concrete Installation

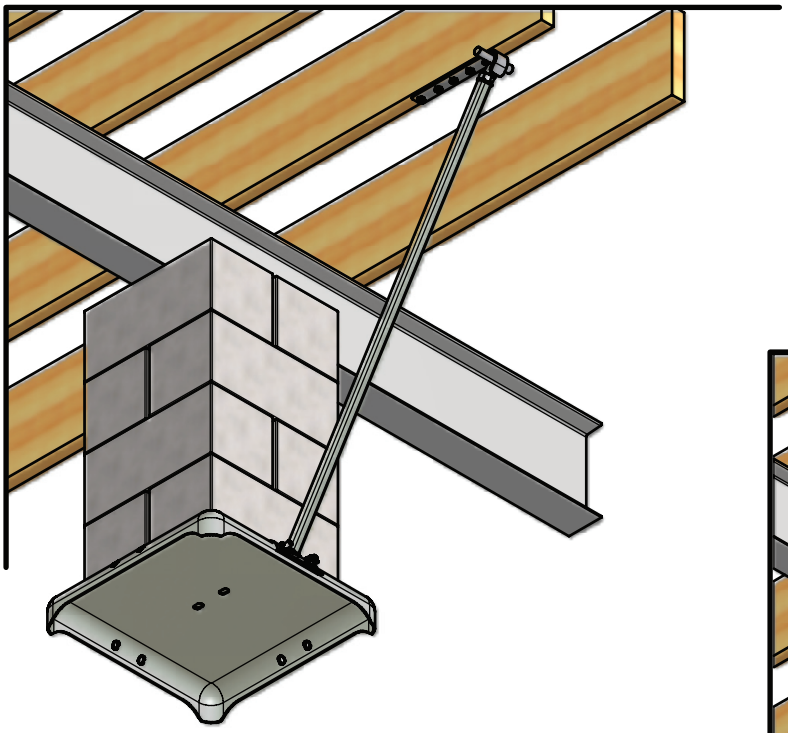


Concrete Installation

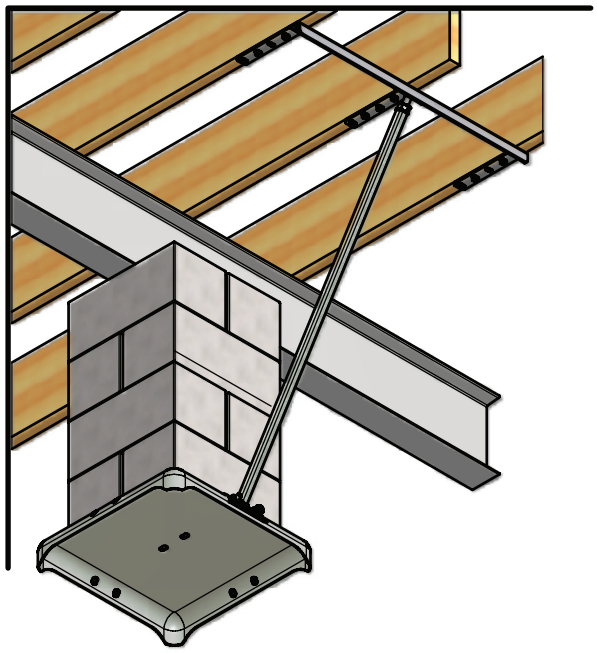
1. Check manufacturers set up manual to identify the amount of perimeter blocking required for pier spacing and roof load. We offer 2 different Joist brackets for use based on amount of load needed.
2. Systems are installed in conjunction with complete Xi2 systems or at separate specified perimeter support locations.
3. Using poured concrete pad locations under piers, drill two 3/8" X 3" deep holes in concrete using the galvanized bracket as a guide. Attach bracket to concrete using 3/8" X 3-1/2" wedge anchors provided. Place nut and washer on anchor; leave enough room for 1 to 2 threads showing on top of bolt. Using a hammer, tap the wedge bolts into hole through bracket, leaving nut & washer flush with bracket. Tighten wedge bolt securing bracket to concrete.
4. Build pier according to State, local, or home manufacturers guidelines.
5. Attach Joist Bracket support to floor joists approximately 6" from outside wall using 3/8" X 3" lag bolts in pre-drilled holes in the Joist Bracket. Keep strut angle as close to 45 degrees as possible.
6. Attach compression strut to concrete bracket with 1/2" bolt provided. Do not tighten at this time.
7. Insert adjustable T-bar head in top of compression strut with nut screwed to top of the rod next to T. Slide T end of strut up and position to rest in the bend of angle iron support. While holding in place, install a minimum of 4 (#14 X 1" tek screws) self tapping screws into holes provided in the compression strut so the two tubes are connected together with a minimum over lap of 4" to 6".
8. Tighten nuts on strut to concrete bracket at this time.
9. Adjust support by tightening T-bar against the Joist Bracket support with adjustment nut.

Minimum Number of Lag Screws Required

Strut Spacing	Roof Live Load / Flat Roof Snow Load (PSF)								
	20	25	30	35	40	45	50	55	60
4’ - 0”	5	6	6	7	7	8	8	9	9
5’ - 4”	7	8	8	9	9	10	11	11	12
6’ - 8”	8	9	10	11	12	13	13	14	15
8’ - 0”	10	11	12	13	14	15	N/A	N/A	N/A



Standard System
Part #59372



Heavy Duty System
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ISO 9001:2015 Certification

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