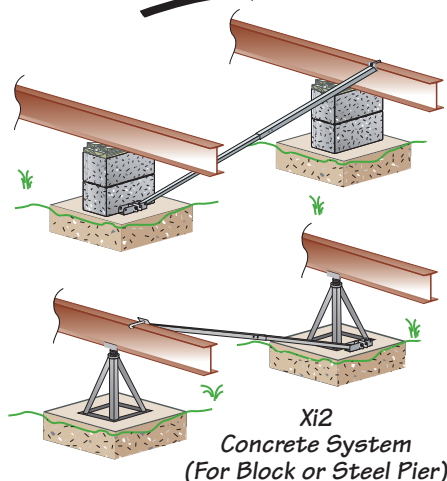


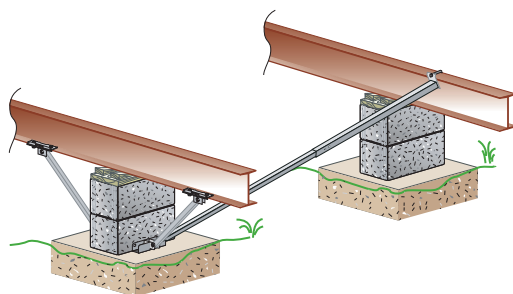


# Concrete Foundation System

Installation Instructions for Wind Zone I, II & III  
(Except Florida and California)  
By Tie Down



*Xi2  
Concrete System  
(For Block or Steel Pier)*



*Xi2 Concrete System  
with Longitudinal Stabilization  
(One Strut for Wind Zone I  
Two Struts for Wind Zones II & III)*

## REQUIREMENTS

- Install in any type soil, 4B (175 – 275 lbs.) or better.
- Main Rail spacing must be 75.5" – 99.5", 112" exception with proper strut.
- Maximum Pier height at system 48", with 6" maximum rise from the location of the system to the end of home. For all other piers use the manufacturers set up instructions.
- Wind zones II & III (100+ mph) require vertical sidewall anchorage for uplift, check local regulatory agency or manufacturer's instructions for requirements.
- Poured concrete must be 2,500 PSI minimum at 28 days. Bottom of footers must be below the frost line or a minimum of 4" below finished grade, check with authorities for local requirements (LAHJ).
- **Footer Requirement:** Must be large enough for the pier load at that location and be a minimum of 22" wide by 6" deep with anchor wedge bolts a minimum of 4" from any edge or 18" wide by 12" deep with anchor wedge bolts a minimum of 1-1/2" from edge. Strip footings minimum of 18" wide by 14" long by 6" deep or 27" wide by 14" long by 4" deep.
- Maximum vertical projection at sidewall is 9' wall and roof rim (9' wall and 12" eave). Higher walls may be used, when possible for design loads to be adjusted accordingly. For 10' Walls, check with Tie Down.
- Longitudinal strut angles need to be no more than 50 degrees and no less than 25 degrees. See page 4.
- Longitudinal stabilization is easily added with Tie Down's unique multi sided bracket. The longitudinal component of the Xi2 System replaces end frame ties. Check manufacturer's set-up requirements.
- The Xi2 System is installed on one of the pier footers required by the home manufacturer set up instructions, no other base pad required.
- Two systems designed to work with each other must be placed as evenly as possible. Measuring from the center of the block/pier, systems are to be placed a minimum of 2' and a recommended maximum of 10' (when needed may be a maximum of 1/4 the length of the home) from each end of the home as shown on pier placement chart. Additional systems per instructions, see page 3. Components of the Xi2 System such as the longitudinal strut and connecting hardware, may extend beyond pier location and can face in or out as long as both systems are facing the same direction.
- For roof slopes greater than 20 degrees, (4.37" in 12" Pitch) see page 3.
- This System only replaces normal lateral frame tie and or longitudinal end tie anchorage. The home manufacturer may require additional vertical anchor ties that are unique to a home's design. These locations may include shear walls, marriage line ridge beam supports, and rim plates. Check the manufacturer's installation instructions for set-up requirements.

Xi2 components exceed HUD code 3280.306 g "Anchoring equipment exposed to weathering shall have a resistance to weather deterioration at least equivalent to that provided by a coating of zinc on steel of not less than 0.30 ounces per square foot of surface coated. The Xi2 Foundation System by Tie Down complies with 24CFR Part 3280 & 3285 when installed in accordance with the instructions provided by Tie Down.



**WARNING:** This product can expose you to chemicals including Nickel, which is known to the State of California to cause cancer. For more information go to: [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

Instruction #08107 - D974, Rev. 3/9/23

**TIE DOWN**  
MANUFACTURING INGENUITY

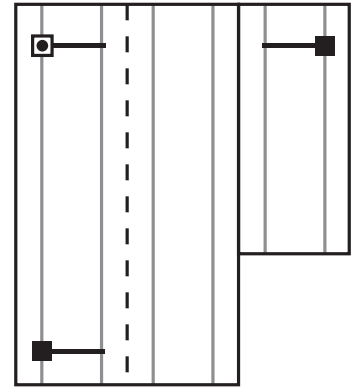
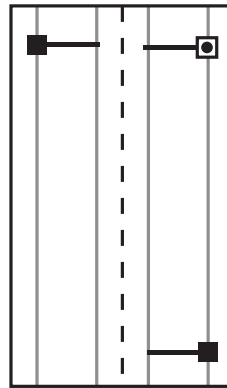
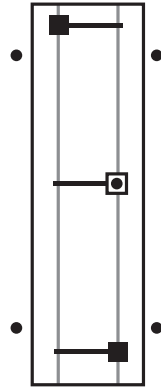
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605 Stonehill Drive SW, Atlanta, GA 30336  
[sales@tiedown.com](mailto:sales@tiedown.com)

## Xi2 Lateral Stabilization with Concrete Footers

●  
Approved Anchor\*  
with strap from  
45 to 90 degrees

■  
Xi2 Pier  
Placement

□  
3rd System  
for Placement



**Wind Zones  
I & II**

### Single Section Home

0 - 76' Box 2 Xi2 Systems  
Over 76' Box 3 Xi2 Systems

### Double Section Home

0 - 76' Box 2 Xi2 Systems  
Over 76' Box 3 Xi2 Systems

### Triple Section Home

0 - 76' Box 2 Xi2 Systems  
Over 76' Box 3 Xi2 Systems

**Wind Zones  
III**

### Single Section Home

0 - 64' Box 2 Xi2 Systems  
Over 64' Box 3 Xi2 Systems

### Double Section Home

0 - 64' Box 2 Xi2 Systems  
Over 64' Box 3 Xi2 Systems

### Triple Section Home

0 - 64' Box 2 Xi2 Systems  
Over 64' Box 3 Xi2 Systems

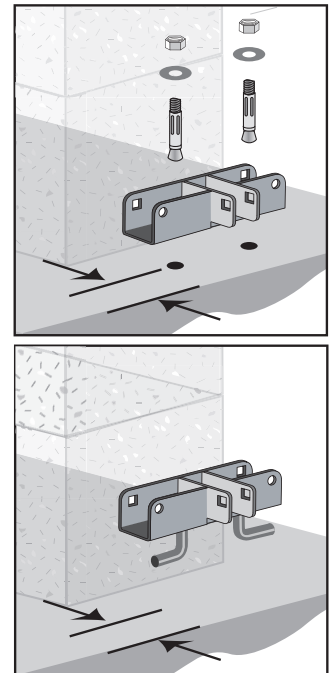
**\*For Wind Zone I – Approved uplift anchors and strap from 45 to 90 degrees, within 10' of the end of unit on all 4 corners of single section.**

Alternative Footing Anchoring Method: Poured concrete footings 18" X 18" X 48" Deep can have the anchors installed on the 4 corners within 10' of the end of the home, footings less than 48" Deep require a minimum of 18" X 18" X 12" Deep (Check for local minimum frost line depth requirements) with an anchor on all 4 of the corners and 1 in the middle on each side, for a total of 6. Anchors would be installed in the footings with straps installed vertically, replacing the frame ties. **Alternative Footing Anchoring Method NOT Approved in Missouri.**

**Note:** Diagram represents single section up to 16' width, double section up to 32' width, and triple section up to 48' width.

## Installation of Concrete Bracket: Dry Set/Wet Set

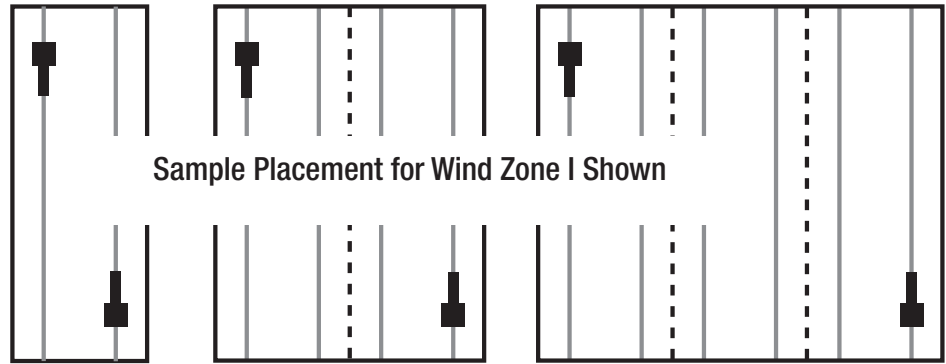
1. Identify the number of systems to be used on the home using the chart provided.
2. Identify the location where the lateral systems will be installed. If installing lateral and longitudinal together, check page 4 for alignment of bracket.
3. Build pier according to State, Local or Home Manufacturers guidelines.
- 4a. For dry set: drill two 3/8"x 3" deep holes in the concrete using holes in galvanized bracket as a guide. Attach bracket to concrete pad using 3/8"x 3-1/2" wedge anchors provided. Place nut & 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. Using a 9/16" socket wrench, tighten wedge/anchor bolt, securing bracket to the concrete.
- 4b. For wet set: align bracket and submerge legs completely in concrete. Bottom of bracket should rest on surface.
5. Attach the end of the smaller tube to the bracket mounted on the pad, using the grade 5, 1/2" x 2-1/2" bolt/nut provided.
6. Attach the flag end of the larger tube to the opposite I-beam using the "J" bolt over the top of the I-beam with the nut & washer provided. (Figure 1 on last page)
7. Install a minimum of four (#14 x 1" Tek screws) self-tapping screws into the holes provided in the lateral strut so that the two tubes are connected together with a minimum overlap of 4" to 6" (Figure 2 on last page).



**See "Footer Requirement"  
on page 1 for edge  
placement**

## Xi2 Longitudinal Stabilization for Wind Zone I, II & III

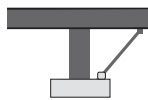
*When using longitudinal stabilization only, systems must be as evenly spaced as possible, no more than 10' from the end of the home. Longitudinal struts do not replace anchors on single section homes.*



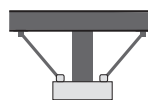
**Single Section**  
Up to 16' Nominal

**Double Section**  
Up to 32' Nominal

**Triple Section**  
up to 48' Nominal



**Use One Strut (per end)**  
**For WZ I**



**Use Two Struts (per end)**  
**For WZ II & III**

**NOTE:** On triple section homes in WZII & III an additional longitudinal system is required. It should be installed on the center section.

**3285.402(c)(3) All new manufactured homes must have longitudinal stabilization in all wind zones. Check with individual states for their installation requirements for used homes.**

## Xi2 System Requirements for Roof Pitches Higher than 20 degrees

| Module Length (Feet) | Wind Zone I |      |      |      | Wind Zone II |      |      |      | Wind Zone III |      |      |      |
|----------------------|-------------|------|------|------|--------------|------|------|------|---------------|------|------|------|
|                      | 5:12        | 6:12 | 7:12 | 9:12 | 5:12         | 6:12 | 7:12 | 9:12 | 5:12          | 6:12 | 7:12 | 9:12 |
| 34                   | 2           | 2    | 2    | 2    | 2            | 2    | 2    | 2    | 2             | 2    | 3    | 3    |
| 36                   | 2           | 2    | 2    | 2    | 2            | 2    | 2    | 3    | 2             | 2    | 3    | 3    |
| 38                   | 2           | 2    | 2    | 3    | 2            | 2    | 2    | 3    | 2             | 3    | 3    | 3    |
| 40                   | 2           | 2    | 2    | 3    | 2            | 2    | 2    | 3    | 3             | 3    | 3    | 3    |
| 42                   | 2           | 2    | 3    | 3    | 2            | 2    | 3    | 3    | 3             | 3    | 3    | 3    |
| 44                   | 2           | 2    | 3    | 3    | 2            | 2    | 3    | 3    | 3             | 3    | 3    | 3    |
| 46                   | 2           | 3    | 3    | 3    | 2            | 3    | 3    | 3    | 3             | 3    | 3    | 4    |
| 48                   | 2           | 3    | 3    | 3    | 3            | 3    | 3    | 3    | 3             | 3    | 3    | 4    |
| 50                   | 3           | 3    | 3    | 3    | 3            | 3    | 3    | 3    | 3             | 3    | 3    | 4    |
| 52                   | 3           | 3    | 3    | 3    | 3            | 3    | 3    | 3    | 3             | 3    | 4    | 4    |
| 54                   | 3           | 3    | 3    | 3    | 3            | 3    | 3    | 3    | 3             | 3    | 4    | 4    |
| 56                   | 3           | 3    | 3    | 3    | 3            | 3    | 3    | 3    | 3             | 3    | 4    | 4    |
| 58                   | 3           | 3    | 3    | 3    | 3            | 3    | 3    | 3    | 3             | 3    | 4    | 4    |
| 60                   | 3           | 3    | 3    | 3    | 3            | 3    | 3    | 3    | 3             | 3    | 4    | 5    |
| 62                   | 3           | 3    | 3    | 3    | 3            | 3    | 3    | 3    | 4             | 4    | 4    | 5    |
| 64                   | 3           | 3    | 4    | 4    | 3            | 3    | 4    | 4    | 4             | 4    | 4    | 5    |
| 66                   | 3           | 3    | 4    | 4    | 3            | 3    | 4    | 4    | 4             | 4    | 4    | 5    |
| 68                   | 3           | 4    | 4    | 4    | 3            | 4    | 4    | 4    | 4             | 4    | 5    | 5    |
| 70                   | 3           | 4    | 4    | 4    | 3            | 4    | 4    | 4    | 4             | 4    | 5    | 5    |
| 72                   | 3           | 4    | 4    | 4    | 4            | 4    | 4    | 5    | 4             | 4    | 5    | 5    |
| 74                   | 4           | 4    | 4    | 5    | 4            | 4    | 4    | 5    | 4             | 5    | 5    | 5    |
| 76                   | 4           | 4    | 4    | 5    | 4            | 4    | 4    | 5    | 4             | 5    | 5    | 6    |
| 78                   | 4           | 4    | 4    | 5    | 4            | 4    | 4    | 5    | 4             | 5    | 5    | 6    |
| 80                   | 4           | 4    | 4    | 5    | 4            | 4    | 4    | 5    | 4             | 5    | 5    | 6    |

### Additional Systems:

On a single section home the 3rd system is placed in the middle of the home. When using 3 or 4 systems (double and triple sections) install on opposite corners, if needed, a 5th system would be in the center of the unit on either side.

# Xi2 Lateral Foundation System

Figure 1

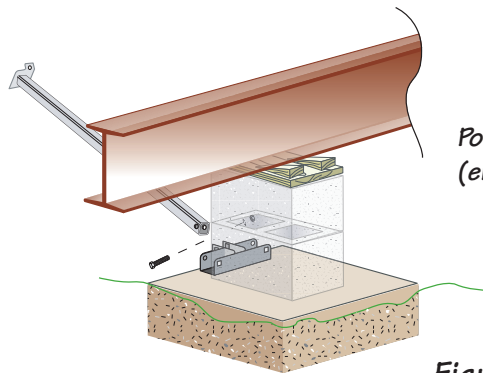
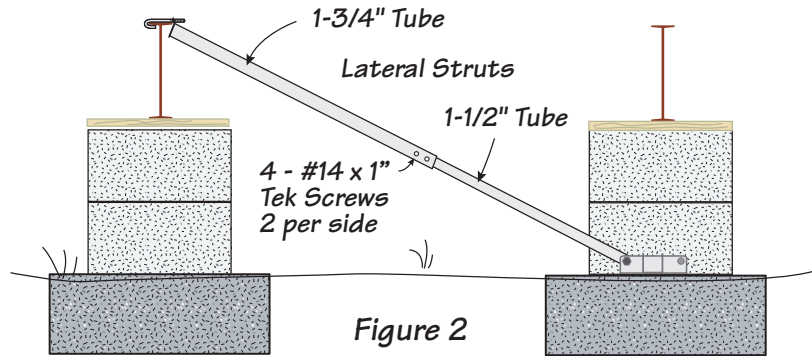
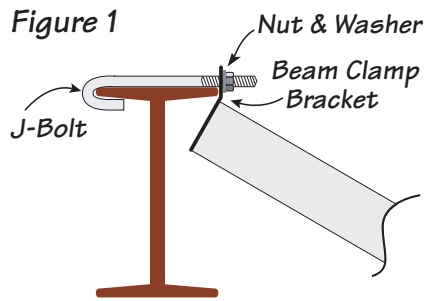
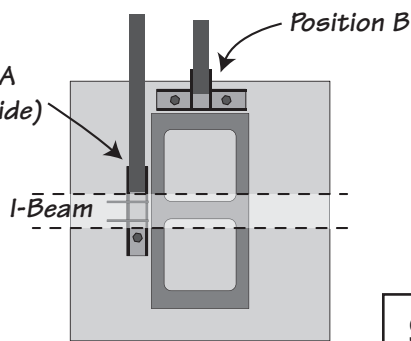


Figure 3

## Lateral Stabilization



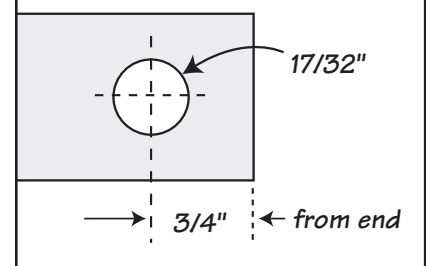
## Xi2 Concrete System Part #59307

Includes: Strut #48609 &  
Hardware kit #59327.  
Longer struts are available

## Strut Angles:

Need to be no more than 50 degrees and not less than 25 degrees. If needed, tube can be cut to proper length and a new hole drilled according to chart on below.

## Strut



# Xi2 Longitudinal Installations

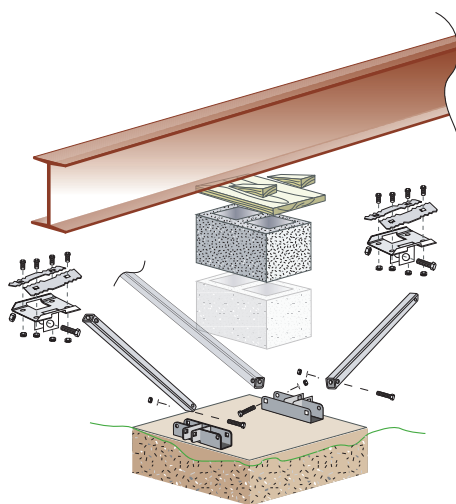
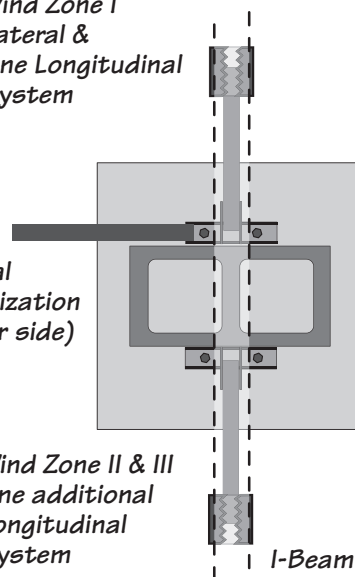


Figure 4

## Wind Zone I Lateral & One Longitudinal System

Lateral  
Stabilization  
(either side)

Wind Zone II & III  
One additional  
Longitudinal  
System



Longer lateral struts and double beam hardware also available.

Page 4 of 4