OLIVER Technologies, Inc.
467 Swan Ave ● Hohenwald, TN 38462 ● (800) 284-7437 ● www.olivertechnologies.com ● Fax (931) 796-8811

Oliver Technologies 1100 "V" Series All Steel Foundation System
Installation Instructions for Wind Zone 3
Models 1100 IV & 1100 ICV

GENERAL NOTES:

1. All work shall conform to the requirements of this design and of the building code adopted by the agency having jurisdiction.
2. The "V" brace of the All Steel Foundation System has an approved design load as a pier of 4000 lbs. Support piers other than the "V" brace shall be in accordance with the home manufacturer's installation instructions and shall be approved designs of CMU or steel support stands.

SPECIAL CIRCUMSTANCE:

For eave width between 16" to 24": use additional transverse system (noted by T, see drawing page 3)

If the Following Conditions Occur:

STOP! Contact Oliver Technologies at 1-800-284-7437 for further instruction:

A. Pier height exceeds 48" (From top of footer to bottom of I-Beam).
B. Roof eaves exceed 24".
C. Sidewall height exceed 102".
D. Roof Pitch greater than 6/12.
E. Location is within 1500 feet of coastline.
F. Footing to surface area exceeds 3 square feet.
G. Main rail spacing exceeds 102".

SPECIAL NOTE:

The longitudinal "V" brace system serves as a pier under the home and should be loaded as any other pier would be. To properly load the system, it is recommended that after leveling all piers, add 1/4" to 1/2" of height to the home at system location. Then, setup the longitudinal "V" brace system completely and lower the home onto the piers. This will load the system. To begin setup, see "INSTALLATION OF LONGITUDINAL "V" BRACE SYSTEM" on page 2, steps 1 thru 5.

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INSTALLATION OF GROUND PAN FOR DIRT SET (IV & ITV)

1. Remove weeds and debris in an approximate three foot square to expose firm, level undisturbed soil or controlled fill for each ground pan (B).
2. Place ground pan (B) centered directly below chassis I-beam. Press or drive pan firmly into soil until flush with or below soil surface.

INSTALLATION OF LONGITUDINAL "V" BRACE SYSTEM

1. Select the correct square tube brace (E) length for set-up (pier) height at support location.

PIER HEIGHT = the dimension from the top of the pan to the bottom of the I-Beam

PIER HEIGHT (Approx. 40-60 degrees Max.)	1.5" Tube Length
14" to 18"	20"
18" to 25"	28"
24" to 35"	39"
30" to 40"	44"
36" to 48"	54"

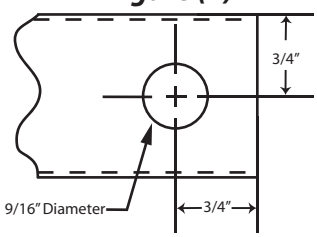
NOTE:

a) Installation of the longitudinal system eliminates the need for the longitudinal anchors.
b) Installation of the transverse system eliminates the need for most of the diagonal frame ties and stabilization plates.
c) All other home manufacturer's installation instructions of stabilizing devices must be followed, including installation of sidewall tie down anchors, shear wall or centerline tie down anchors.
d) If the home manufacturer's installation instructions are not available, the home must be installed in accordance with any state promulgated rules, or as required by the authority having jurisdiction.
e) If bolts, nuts or self tapping screws are lost; they may be replaced as long as they meet or exceed the specs listed in these instructions.

North Carolina: *All tubing must be galvanized.*

2. Place both 1.5" square tubes (E) into the "V" bracket (J). Insert 1 - 3", Grade 5 carriage bolt and leave nut loose for final adjustment.
3. Place I-beam connector (F) loosely on the bottom flange of the I-beam.
4. Attach the selected 1.5" tubes (E) to the I-beam connectors (F) and fasten loosely with 2 - 3", grade 5 bolts and nuts. *NOTE: The footer must be level in both directions to ensure the angle markings on the centerpoint connector are correct from the horizontal plane of the footer. The angle is not to exceed 60 degrees and not less than 40 degrees. The "V" bracket (J) is stamped with the angles to verify correct degree. Use proper length tube or cut and drill tube to achieve proper length. (The tube may be cut using any appropriate steel cutting method such as steel saw, cutting torch, etc. New holes must be drilled to the dimension and at the location as shown for* ***Figure (1)****.*
5. Using standard hand tools, tighten all nuts and bolts. When connecting the brace tube to the I-beam connector (F), tighten at least one and a half to two turns past hand tight.

Figure (1)



INSTALLATION OF (LATERAL) TRANSVERSE TELESCOPING ARM SYSTEM (1100 ITV)

1. Select the correct telescoping transverse sections for set up of lateral (transverse) arm at support location. The 60" sections are standard. The 72" sections are used on frame widths greater than 99.5" (Be sure to install the 1.5" tube at the the top side of the transverse section.)
2. Install the 1.5" transverse arm (H) to the transverse connector bracket(D) with a 2.5", grade 5 bolt and nut.
3. Slide the 1.25" transverse arm (H2) into the 1.5" transverse arm (H). Attach the 1.25" transverse arm (H2) to the I-beam connector (I) with a 2.5", grade 5 bolt and nut. Connect the I-beam connector (I) to the I-beam using the flat clamp, a 1", Grade 2 bolt and nut.
4. Secure the 1.5" transverse arm (H) to the 1.25" transverse arm (H2) using the four (4) 1/4" - #14 x 3/4" self-tapping screws the in pre-drilled pilot holes.

INSTALLATION USING CONCRETE RUNNER/FOOTER ("ICV")

The concrete footer, runner or slab may be any shape that has a minimum of 2646 cu. in. total. The minimum depth shall be 3 1/2" (dry set) or 6" (wet set), at each system location. The surface of the footing must be large enough to support the pier load and allow at least 4" from the concrete bolt to the edge of the concrete (example: 21" X 21" X 6"). The concrete shall be minimum 2500 psi mix (pre-blended sacked concrete mix is acceptable). Special inspection of footing is not required.

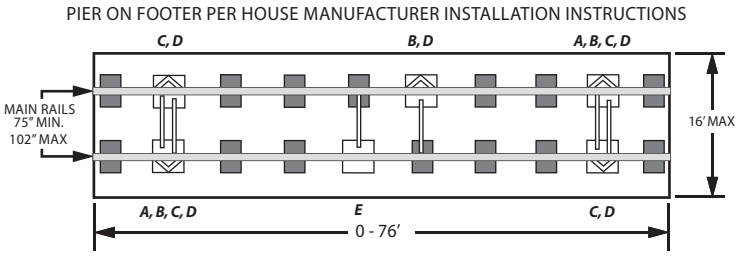
* If the 1100 ITC transverse system, (D/W or D bracket only) is to be installed without using the 1100 ILC longitudinal system (J/W or D bracket), it MUST be installed within 18" of a pier.

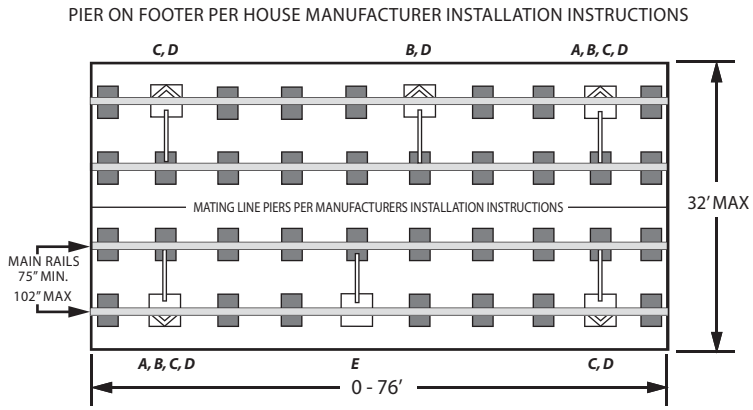
LONGITUDINAL ("V"): When using the 1100 wet set J(W) bracket, simply install the bracket in runner/footer OR when installing in cured concrete, use the 1100 dry set J(D) bracket. The 1100 dry set J(D) bracket is attached to the concrete using (2) 1/2" X 3" concrete wedge bolts. Place the bracket in desired location. Mark bolt hole locations, then using a 1/2" diam. masonry bit, drill a hole to a minimum depth of 3". Make sure all dust and concrete is blown out of the holes. Place wedge bolts into drilled holes, then place 1100 J(D) bracket onto wedge bolts and start wedge bolt nuts. Take a hammer and lightly drive the wedge bolts down by hitting the nut (making sure not to hit the top of threads on bolt). The sleeve of concrete wedge bolt needs to be at or below the top of concrete. Complete by tightening the nuts.

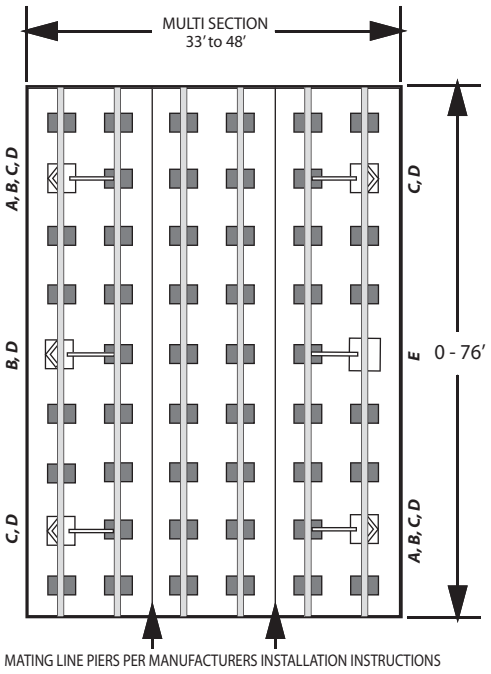
LATERAL (Transverse Arm): For wet set installation set the transverse connector bracket D(W) into runner/footer at desired location. For dry set installations, the transverse connector bracket D(D) is attached to the concrete using (2) 1/2" X 3" concrete wedge bolts. Mark bolt hole locations, then using a 1/2" diam. masonry bit, drill a hole to a minimum depth of 3". Make sure all dust and concrete is blown out of the holes. Place wedge bolts into drilled holes. Attach transverse connector bracket D(D). If needed, take a hammer and lightly drive the wedge bolts down by hitting the nut (making sure not to hit the top of threads on bolt.) Complete by tightening the nuts.

NUMBER & TYPE OF FOUNDATION BRACING SYSTEMS REQUIRED

Roof Pitch	TABLE 1 Homes *up to* 64' box length	TABLE 2 Homes 64'- 76' box length
4/12	***Requires Two (2) Full Systems (IV) see A***	***Table 1 plus One (1) Transverse System (ITV) see E***
5/12	***Requires Three (3) Full Systems (IV) see B***	***Table 1 plus One (1) Transverse System (ITV) see E***
6/12	***Requires Four (4) Full Systems (IV) see C***	***Table 1 plus One (1) Transverse System (ITV) see E***
7/12	***Requires Four (4) Full Systems (IV) see C***	***Table 1 plus One (1) Transverse System (ITV) see E***
9/12	***Requires Five (5) Full Systems (IV) see D***	***Table 1 plus One (1) Transverse System (ITV) see E***







LEGEND:
1. Length of the house is the actual box size.
2. = Location of "Full System" (IV or ICV)
3. = Location of "Transverse Alone" (ITV or ITCV)

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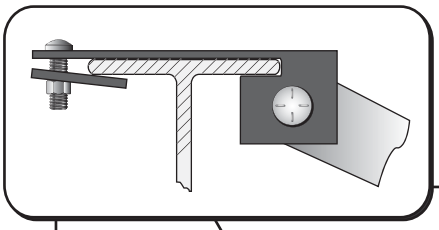
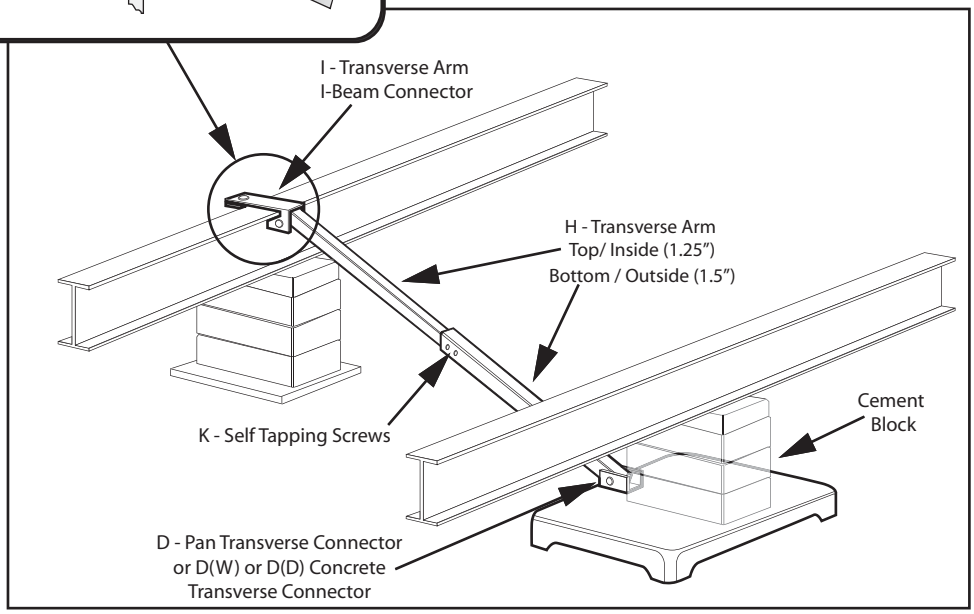
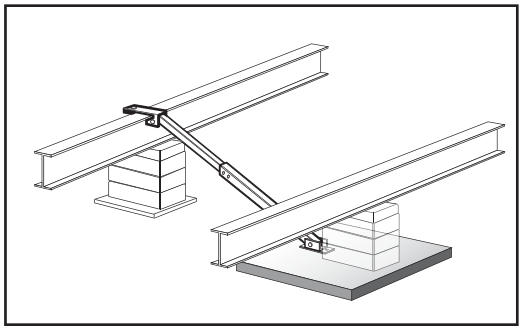


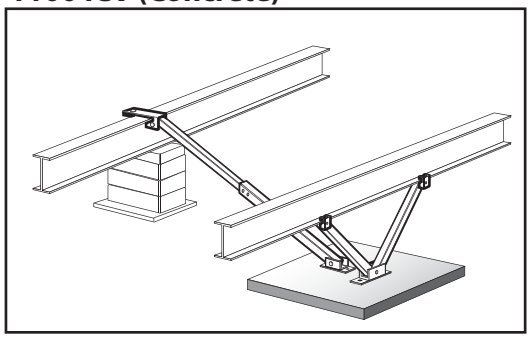
1100 ITV



1100 ITCV (Concrete)



1100 ICV (Concrete)



1100 IV