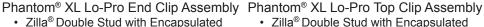
# Phantom<sup>®</sup> XL Lo-Pro Installation Instructions



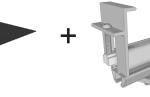
One or more patents apply to this product including without limitation: US Pat. 8,448,405; 8,479,455; 8,707,654; 8,689,517; 8,707,655; 8,833,032; 8,833,033; 8,752,338 and/or D732,703.

### Parts included in each assembly:

- Phantom<sup>®</sup> XL Flashing Assembly
  - Zilla<sup>®</sup> Base Plate XL
  - Zilla<sup>®</sup> Flashing XL
  - (8) 1/4" x 1-1/2" lags



- Gland Washer and hex nut
- Quad Combo XL rail section
- · End Clip XL Assembly with hardware



- Zilla<sup>®</sup> Double Stud with Encapsulated Gland Washer and hex nut
- · Quad Combo XL rail section
- · Top Clip XL Assembly with hardware



#### Other requirements:

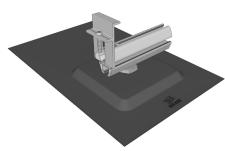
- Drill/Driver to secure hardware
- Torgue wrench

#### 5/32" allen wrench

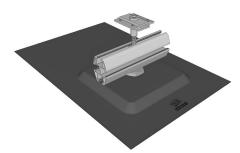
Channel Lock Pliers

• 3/8" & 9/16" hex drive sockets to match fastening hardware

**Assembled Flashings** 



Phantom<sup>®</sup> XL Lo-Pro End Clip



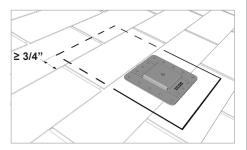
Phantom<sup>®</sup> XL Lo-Pro Top Clip

Installation Steps: verify layout and material quantities prior to installation.

or

## Attach the Base Plate XL

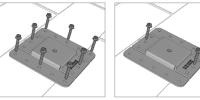
Place Base Plate XL upon roof so installed Flashing is  $\geq 3/4$ " beneath shingle course above in accordance with AHJ.



Hold Base Plate XL firmly against roof material while installing supplied lags using a 3/8" hex drive socket. Tighten until Base Plate XL is snug to roofing. DO NOT OVERTIGHTEN.

Note: Base Plate XL and Flashing XL location are based upon module mounting hole locations. Confirm design dimensions before installation. Zilla® Phantom<sup>®</sup> XL allows ~2" adjustment from Flashing placement.

Note: Care must be taken to install and fully support the Base Plate XL parallel to the roof sheathing. Removal or shimming of roofing material may be necessary.



Sheathing attachment

Structural attachment

Continued on next page

Zilla<sup>®</sup> So Simple It's Scary<sup>sM</sup> 77 Waneka Pkwy • Lafayette, CO 80026 • 720.880.6700 • fax 303.664.1268 • zillarac.com MADE IN USA 🚯 MADE WITH RECYCLED MATERIAL 🛛 © 2016 Zilla Corporation. All rights reserved.

# Phantom<sup>®</sup> XL Lo-Pro Installation Instructions Continued

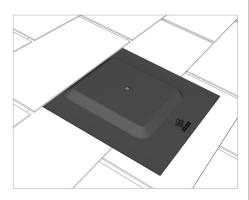


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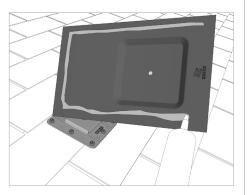
### Installation Steps

#### **2** Attach the Flashing XL Carefully install the Flashing XL

under the shingle course above with the required coverage. Follow shingle manufacturer recommendations and AHJ requirements for exposure and proper coverage.



Align the Flashing over the threaded hole in the Base Plate.



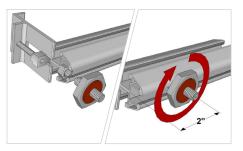
**Optional:** On the underside of the Flashing, apply a bead of caulk to the top and both sides of the Flashing prior to installation for added protection. Do not caulk the lower sloped edge of the Flashing.

Note: Quad Combo XL can be mounted vertically or horizontally for the lowest profile. *All* assembly profiles *must match* each other.

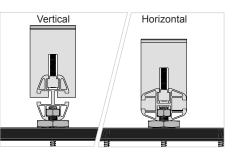
3 Assemble the Lo-Pro End Clip Place the End Bar into the channel of the Quad Combo XL and attach the Lo-Pro End Clip Assembly as shown. Adjust the End Bar so the slot of the End Bar is flush to the edge of the Quad Combo XL, tighten the inside set bolt to 13 ft-lbs using a 5/32" allen wrench.



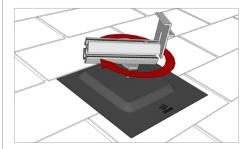
**Slip the hex nut** into the lower channel of the Quad Combo XL. Engage the Double Stud with the Encapsulated Washer facing down. Tighten the Double Stud 2" away from the edge near the Lo-Pro End Clip.



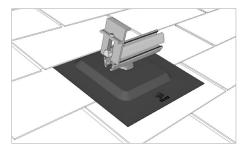
**Ensure** the Double Stud is spaced ≤ 2" from the outside edge of the Quad Combo XL of the Lo-Pro End Clip Assembly.



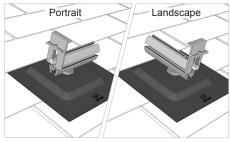
**4** Install the Lo-Pro End Clip Thread the Lo-Pro End Clip assembly onto the base, turning by hand, to sandwich the Flashing XL between Base Plate XL and Double Stud XL (washer).



**NOTE:** Once the Flashing XL is in firm contact with the Base Plate XL and washer, turn the Lo-Pro End Clip Assembly to desired orientation. **DO NOT OVERTIGHTEN** 



**Installer Tip:** Mount Lo-Pro End Clip to accommodate Landscape or Portrait module orientations.



Continued on next page

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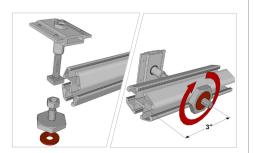
# Phantom<sup>®</sup> XL Lo-Pro Installation Instructions Continued



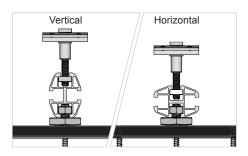
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### **Installation Steps**

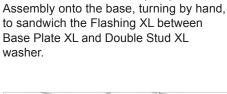
**5** Assemble the Lo-Pro Top Clip Thread a square nut onto the bottom of the set bolt and the Top Clip onto the top of the set bolt. Slide the square nut into the top channel of the Quad Combo XL and loosely secure in the center (~3" away from the end).



**Slip the hex nut** into the lower channel of the Quad Combo XL. Engage the Double Stud with the Encapsulated Washer facing down. Tighten the Double Stud in the center (~3" away from the end).



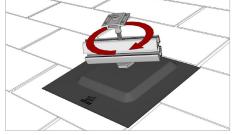
**Note:** Quad Combo XL can be mounted vertically or horizontally. *All* assembly profiles *must match* each other.



Install the Lo-Pro Top Clip

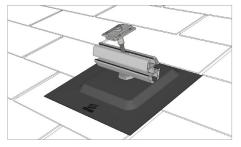
Thread the Lo-Pro Top Clip

0

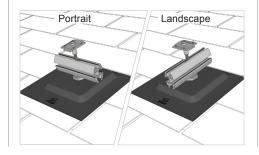


**NOTE:** Once the Flashing is in firm contact with the Base Plate XL and washer, turn the Lo-Pro Top Clip Assembly to desired orientation.

#### DO NOT OVERTIGHTEN

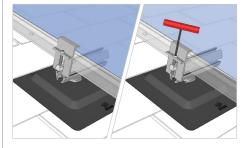


**Installer Tip:** Mount the Lo-Pro Top Clip Assembly to accommodate Landscape or Portrait module orientations.



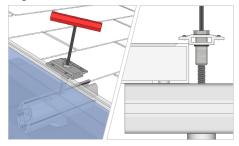
## Place End Module

Place the end module so that the module frame sits against the vertical portion of the Lo-Pro End Clips. Ensure that the outside edge of the Quad Combo XL is within 2" of the Double Stud XL, make adjustments as necessary.



**Tighten** each End Clip to 12 ft-lbs using a 5/32" allen wrench.

**Slide** the Lo-Pro Top Clip Assembly against the module so that the vertical edge of the Top Clip is flush against the edge of the module frame.



**Tighten** the set bolt to 13 ft-lbs using a 5/32" allen wrench.

**Note:** the set bolt must be  $\ge 3/4$ " from either edge of the Quad Combo XL.

**Installer Tip:** Install a few columns of Flashings at a time to minimize measurement error across the entire array.

# Phantom<sup>®</sup> XL Lo-Pro Installation Instructions Continued



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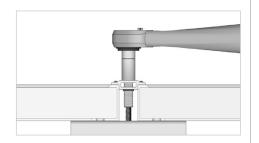
### Installation Steps

## **Q** Complete Each Row

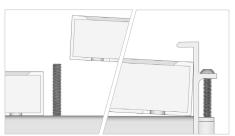
**C Ensure** all required Flashing XL's and Lo-Pro Top Clips are installed per design then place the next module against the vertical edge of the Top Clip.

**Remove** the Top Clip and bushing on the last Top Clip. **Place** the last module in the row against the vertical edge of the End Clip.

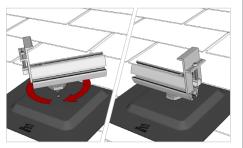
**Engage** the End Clip and secure the button head screw with a 5/32" allen wrench, tighten to 12 ft-lbs.



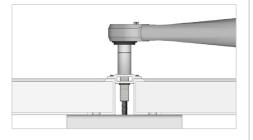
**Tighten** the Top Clip nut to 13 ft-lbs with a 9/16" socket. Repeat as needed to complete each row.



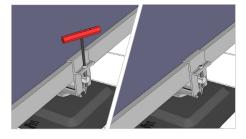
**Replace** the Top Clip and bushing. Ensure the edges of the modules are flush against the vertical edges of the Top clip. Adjust as needed.



**Finish the row** measure the spacing from the Flashing at the beginning of the row and duplicate the measurement. Install a Lo-Pro End Clip Assembly, refer to Steps 3 & 4. **Tighten** the End Bar set bolt to 13 ft-lbs using a 5/32" allen wrench. Adjust the Quad Combo XL as needed and attach to the Flashing XL.



**Tighten** the Top Clip nut to 13 ft-lbs with a 9/16" socket.



Secure all End Clips per module. Repeat Steps 1 through 8 for each row to complete the designed array.

