

# SOLAR ROOF JACK INSTALLATION INS (SOP-0248-01)



## Overview




[Link to CURRENT version of this SOP](#)



This SOP describes describes the Solar Roof Jack (SRJ) installation requirements for flat tile and comp roofs. The Solar Roof Jack kit is used to relocate plumbing vents on the roof instead of installing modules around them. By relocating the vents it is possible to install more modules and provide a higher production for our customers.










A maximum of two vents shall be relocated per installation.



## Legend

General	
	Ensure all Arc Flash PPE is worn during the shown portion of the Installation SOP.
	This symbol indicates a safety-specific call out
	Photo or screenshot required for the Foreperson Installation Checklist (FIC).

	Pro Tip to help the installation procedure.
	Indicates to Tap on a screen or device within an application or website.

Safety Hazards		
 Health Hazard	 Explosive Hazard	 Environmental Hazard
 Acutely Toxic	 Oxidizing Hazard	 Flammable
 Pressurized Gas Hazard	 Corrosive Hazard	 Eye irritant, skin irritant, or both
See the Safety Data Sheet in the Related Documents list for additional information relating to OSHA Hazard Pictograms.		

## Tools & Materials Required

Estimated Time:	15-25 minutes
Tools	<ul style="list-style-type: none"> <li>• Chemlink sealant</li> <li>• Bandsaw</li> <li>• Drill</li> <li>• Grinder (for tile)</li> <li>• Shingle pry bar</li> <li>• Shingle snips</li> <li>• Chemlink sealant</li> <li>• Bandsaw</li> <li>• Drill</li> <li>• Impact driver</li> </ul>
Materials:	<p>Comp</p> <ul style="list-style-type: none"> <li>• Solar Roof Jack kit Comp Shingle (Includes vent flashing, 90° elbow (x2), and vent cap)</li> <li>• 2" PVC or ABS pipe (locally sourced)</li> <li>• PVC or ABS glue (locally sourced)</li> <li>• SnapNrack SpeedSeal conduit support</li> <li>• 2" Pipe clamp - Arlington QuickLatch or Caddy Superklip</li> </ul> <p>Tile</p> <ul style="list-style-type: none"> <li>• Solar Roof Jack kit Flat Tile (Includes vent flashing, 90° elbow (x2), and vent cap)</li> <li>• 2" PVC or ABS pipe (locally sourced)</li> <li>• PVC or ABS glue</li> <li>• Pipe clamp (Bridgeport UCS-150200)</li> </ul>

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|  | <ul style="list-style-type: none"><li>• 1/4"x2-1/4" Tapcon screws or Anchor kit</li></ul> |
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## Solar Roof Jack Installation- Comp Shingle



### Step 1: VENT PIPE PREPARATION

- Locate the vent that needs to be re-routed and measure height.

**IMPORTANT:** Plumbing code states that the highest point of the vertical extension pipe must be 6" above anticipated snow loads. It's recommended to match the height of the vent pipe to the original height prior to relocation.

- Cut the pipe down to the top of the existing roof jack. Carefully remove the existing roof jack flashing, taking care to cause as little damage to the shingles underneath as possible.
- Once the old flashing is removed, cut the vent pipe to approx. 1-1/2" from the roof surface.

**NOTE:** Cutting the vent pipe prior to removing the old flashing will make its removal easier.



## Step 2: FLASHING INSTALLATION

- Test fit the SRJ flashing. If the vent pipe is too tall the flashing will not sit flush with the roof.
- Trim the vent pipe as needed.
- Clear any debris from where the flashing will be installed and make sure the top of the pipe is free of any burrs.
- Trim the shingles to accommodate the roof jack and backfill any nail holes from removing the old flashing.
- Test fit the SRJ flashing again to verify proper fitment, check that all roof jack hardware is tight.

**IMPORTANT:** The flashing shall always be installed with the vent pipe opening facing up-slope.



- Apply an upside down “U” shaped bead of sealant to the bottom side of the flashing and install over the vent pipe.



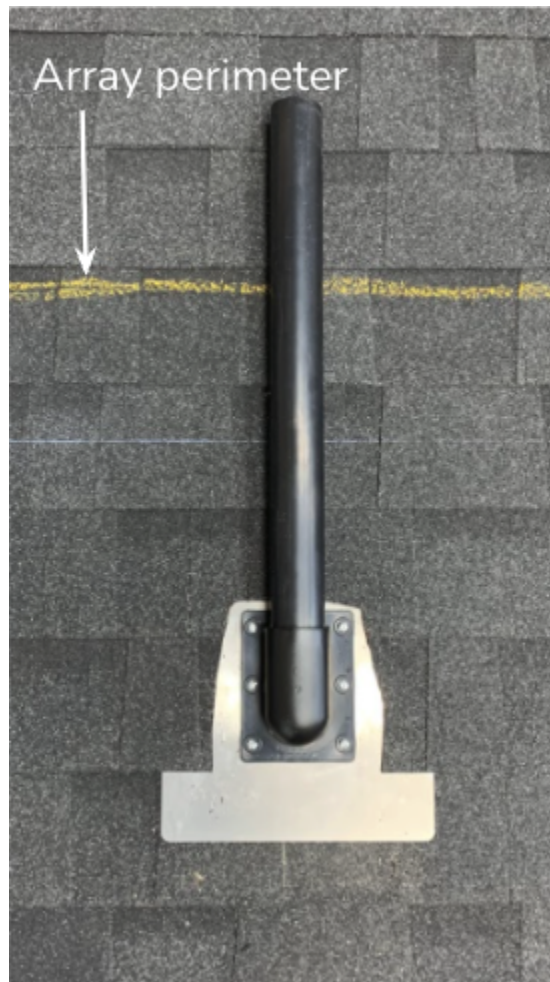
- Apply a small amount of sealant to the underside of the shingles to adhere them to the SRJ flashing.



### Step 3: EXTENSION PIPE INSTALLATION

- Determine length needed for extension pipe, the pipe shall extend beyond the array perimeter 6-12”.

**IMPORTANT:** The vent pipe extension can be run East, West, or North. East or West pipe runs will require a 90 degree elbow attached directly to the SRJ and shall be installed with an upward angle (towards the ridge) 1/4" per foot to allow proper ventilation and drainage for condensation.



- Apply appropriate pipe glue to the inside of the female fitting on the SRJ and then to the outside of the pipe or elbow being installed.



- For ABS to ABS connections, use Oatey ABS Cement or equivalent.
- If using PVC to ABS connections, use Oatey ABS to PVC transition cement or equivalent.
- Slide the pipe or elbow into the SRJ and give a 1/4 turn for the glue to adhere properly.



**IMPORTANT:** Extension pipe can be PVC or ABS, make sure the correct glue is used for the type of pipe that is being installed (Note: Solar Roof Jack is ABS).

## Step 4: STRAPPING

- Using a SnapNrack SpeedSeal conduit support with a 2" pipe strap installed, strap the extension pipe. Install the conduit support in accordance with [SnapNrack SpeedSeal Conduit Support steps - INS-SOP-0246](#).
  - Within 18" of the SRJ
  - Within 18" of vertical extension pipe
  - No more than 5' between straps



**IMPORTANT:** When the extension pipe is running E-W in locations where snow is expected, strapping distances shall be within 9" of SRJ or vertical extension pipe and 2-1/2' between straps.

## Step 5: VERTICAL EXTENSION

- Glue and install the supplied 90 degree elbows so that the next extension piece will be pointing straight up, not perpendicular to the roof angle. Temporarily installing the vertical extension may be needed to ensure it will be straight once the elbows are glued in place.
- Glue and install the final extension piece making sure it is straight and level.

**NOTE:** Depending on vent pipe direction, one or both of the supplied 90 degree elbows will be required for this step.





## Step 6: COMPLETE EXTENSION

- Cut the vertical extension and install the supplied vent cap.
- Take a picture of the completed extension for the FIC.





## Solar Roof Jack Installation- Tile

### Step 1: VENT PIPE PREPARATION

- Locate the vent that needs to be re-routed.
- Cut the pipe down to the top of the existing roof jack. Carefully remove the existing roof jack.
- Once the old flashing is removed, cut the vent pipe to approx. 2-1/2" above the tile.
- Test fit the SRJ flashing and trim tile as needed.

**NOTE:** The bottom of the SRJ flashing shall be flush with or higher than the tile course it is installed on.

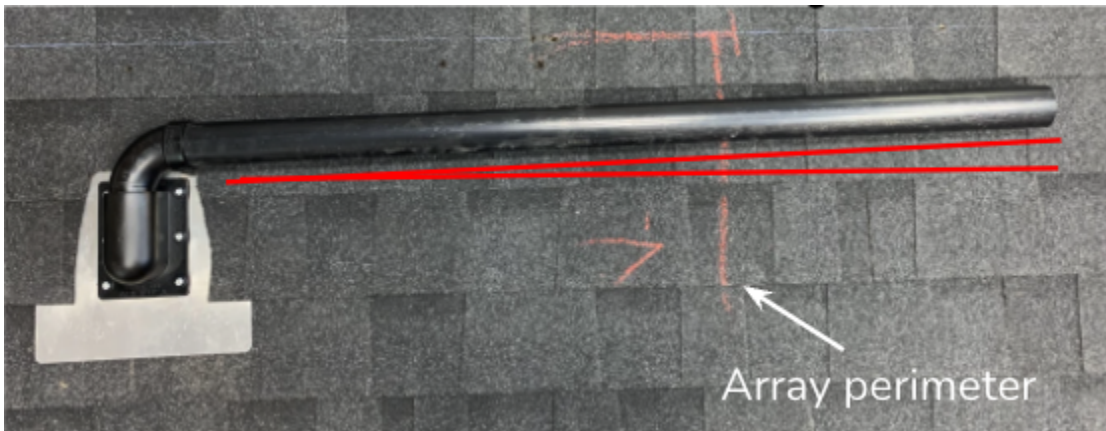
**IMPORTANT:** The flashing shall always be installed with the vent pipe opening facing up-slope.



## Step 2: FLASHING INSTALLATION

- Check SRJ hardware and tighten as needed.
- Apply an upside down “U” shaped bead of sealant to the bottom side of the flashing and install over the vent pipe.

**IMPORTANT:** The vent pipe extension can be ran East, West, or North. East or West pipe runs shall be installed with an upward angle (towards the ridge) approx. 1/4” per foot to allow proper ventilation and drainage for condensation.



**Comp shingle as example**

### Step 3: EXTENSION PIPE INSTALLATION

- Determine length needed for extension pipe, the pipe shall extend past the array perimeter 6-12”.
- Apply pipe glue to the inside of the female fitting on the SRJ and then to the outside of the pipe.
- Slide the pipe into the SRJ and give a 1/4 turn for the glue to adhere properly.



## Step 4: STRAPPING

- Strap the extension pipe to the roof using either a Tapcon anchor or concrete anchor kit.
- Determine strap location and drill a hole in the tile with the drill bit included with the anchor kit.
- Apply a small bead of sealant over the hole prior to inserting the anchor.
- Tighten the anchor. Take care to not over torque the anchor.
- Apply a bead of sealant over the head of the anchor to prevent water intrusion.
- Strapping requirements
  - Within 18" of SRJ
  - Within 18" of vertical extension pipe

- No more than 5' between straps



## Step 5: VERTICAL EXTENSION

- Glue and install the supplied 90 degree elbows so that the next extension piece will be pointing straight up, not perpendicular to the roof angle. Temporarily installing the vertical extension may be needed to ensure it will be straight once the elbows are glued in place.
- Glue and install the final extension piece making sure it is straight and level.
- Install the supplied vent cap.
- Take a picture of the completed extension for the FIC.

**NOTE:** Depending on vent pipe direction, one or both of the supplied 90 degree elbows will be required for this step.



## Step 6: COMPLETE EXTENSION

- Install the supplied vent cap.
- Take a picture of the completed extension for the FIC.



## Verification

### SRJ Comp

- ☐ Verify shingles trimmed around Solar Roof Jack flashing so that all shingles are sitting flat.
- ☐ Verify extension pipe strapped in accordance with step 4.
- ☐ Verify all extension pipe pieces are glued with appropriate glue for the type of pipe used.
- ☐ Verify E-W extension pipes are running upslope in accordance with step 2.
- ☐ Verify vertical extension pipe height is similar to existing vent pipes.
- ☐ Verify vertical extension pipe is level and not perpendicular to the roof surface.
- ☐ Verify that the vent pipe cap is installed.

### SRJ Tile

- ☐ Verify extension pipe strapped in accordance with step 4.
- ☐ Verify all extension pipe pieces are glued with appropriate glue for the type of pipe used.
- ☐ Verify E-W extension pipes are running upslope in accordance with step 2.
- ☐ Verify vertical extension pipe height is similar to existing vent pipes.
- ☐ Verify vertical extension pipe is level and not perpendicular to the roof surface.
- ☐ Verify that the vent pipe cap is installed.

## Product Feedback

Use the links below to provide feedback on SOPs and/or products:

- [SOP/Work Instruction Feedback](#)
- [Product Feedback](#)

## Approvals

Approvals			
Prepared by: J.Ferreira	07/26/2024	Training: Dan Takahashi	8/07/2024
Reviewed by: J. Costner	8/23/2024	Safety:	
Electrical:		Structural:	
Design:		CRT: Z.Thibert	8/02/2024

Product:		Other:	
Quality:		Other:	

Revision History

Revision	Date	Description	Approval
1	08/23/2024	Initial Release	J. Costner

