



# Patio Roof Riser Hardware



**BUILT STRONG**

- ✓ **SAVES TIME**
- ✓ **SAVES MONEY**
- ✓ **LOOKS AWESOME**
- ✓ **Instantly adjusts to any pitch!**
- ✓ **Raises the patio roof for headroom, runoff, light and airflow!**
- ✓ **Eliminates the need for additional support footings & posts!**
- ✓ **Can be used to build an open trellis pergola for shade, or, add some slope, install lightweight polycarbonate roofing, and enjoy year-round dry outdoor living space!**

Originally designed for use with decorative patio pergolas.

Instead of using a single 4x8 beam, Pergola beams are two 2x8s on both sides of the 4x4 posts connected with (2) ½" x 7½" galvanized bolts and (4) ½" x 2 ½" PRR Bridge/Timber washers required for side to side shear. This install allows for more decorative tails perpendicular to the rafter tails.

Installing the PRR 4x4s at 48"oc on the roof, allows you to use 4x6s or 6x6s up front because they are spaced wider at 8', 10' or 12'.

## Please read this important info before building:

*Safety First – Roof work can be dangerous- we recommend that you follow OSHA 3755-05 2015 guidelines before you build. Always check with your local government, state, county or city building regulatory officials to see if you require a permit. Even though the Patio Roof Riser is engineered for a 6500lb bearing load, we still recommend that you consult with a licensed structural engineer for your "Site Specific" structural requirements.*

**Patio Roof Riser is one component of a three part structural system.**

**PART 1** - The first part is the **PRR Hardware** itself. When properly installed it has an extremely strong front to back shear, bearing, and up-lift load capacity. Shear load front to back is so strong that in most cases there's no need to install diagonal braces back toward the house on your front patio posts.

**PART 2** - **PRR Structural Bridge-Timber Washers** – Use ½" bolts with the PRR Bridge-Timber washers through 2x8s & 4x4s are required for shear loads right to left. The ½" x 2 ½" PRR Powder Coated Structural Bridge-Timber Washers are sold individually so you can use them as needed throughout your design on your front posts, beams and diagonal braces.

**PART 3** - **Structural loads working together.** Install PRR posts every 48" to evenly distribute your overall structural loads. If you want to space your posts farther apart you should consult with a licensed engineer for your site specific structural requirements.

**Patio Roof Riser is a Trademark of Woodstone Structures, LLC Patent Pending**

## PRR PROJECT CALCULATOR

### How many Patio Roof Risers and Bridge/Timber washers do I need?

Up to 24" overhangs included below.

Width of project	Patio Roof Risers	PRR Bridge-Timber Washers
6 to 8 foot wide	2	16
10 to 12 foot wide	3	24
14 to 16 feet wide	4	32
18 to 20 foot wide	5	40
22 to 24 feet wide	6	48
26 to 28 feet wide	7	56
30 to 32 feet wide	8	64
34 to 36 feet wide	9	72
38 to 40 feet wide	10	80

**Don't forget to include matching PRR Bridge-Timber Washers  
for your front posts, beams and diagonal braces!**



**Where do I install the patio roof riser hardware?** To help you understand, visualize your existing house rafters only being 6" long overhanging past your existing exterior wall. That is where the PRR Hardware is mounted.

**What kind of roofing materials can the waterproof PPR hardware be installed on?** Composition shingles - three tab - architectural & heavy dimensional. Metal roofing - vertical panel and standing seam.

**How many PRR posts do I need?** For a strong install we recommend PRR Hardware evenly spaced set @ 48" O/C, 4"x 4" x 16" tall posts, installed on every other rafter.

**Determining your new patio roof layout** - Most Patio Roofs, Pergolas & Trellises are more effective and look better overhanging your patio or deck foot-print 16"-24" on all sides. With this in mind, the outside supporting corner posts should be installed in or close to the outside corners of your patio or deck location.

**How far do I overhang the roof above the PRR hardware?** Your new patio roof should be cantilevered at least 12" beyond the PRR post & beam above the existing building envelope.

**What if my rafters are not evenly spaced to match the patio that I'm covering?** You do not have to install the PRR only on a rafter tail. You can install 4x8 DF solid blocking flat between the rafters. Predrill both rafters then install blocking flat using (6) 5" Ledgerloc lags 2" O.C. trough rafters into both ends of your 4x8 flat blocking.

**Tidbits** – For longest life and quick install, precut and pre-stain your pergola or trellis materials (including the ends) before you install them on the roof.

**If you have any questions please call 541.285.1965 for technical info.**



1.

Cut the roof pitch angle off the bottom of each post. Minimum 16" from long point of angle to square end of post. **PIC 1**



2.

Starting from the long side of the freshly cut angle, measure up the post and mark @ 8". Using a square, transfer the 8" mark to the side. For pitches 10/12-12/12 measure 9" instead of 8". **PIC 2**



3.

Using the insta-pitch bar as a template, set the bar flat, centered on the side of the post with the square end, to the 8" mark. Center the bar on the post. The round end of the bar should be cantilevering past the side of the angle. Mark the two side holes then drill (2) 9/16" holes through the post. **PIC 3**



4.

Next use a 10" table or beam saw to cut a 1/4" wide groove in the center of your post. Set cutting depth at 2-7/8". When using a table saw, mark your saw table with a perpendicular line butting into the center side of the blade. **PIC 4**



USE AN EXTERIOR WOOD SEALER OR OIL STAIN; BE SURE THAT BOTH ENDS OF YOUR POSTS AND THE INSIDE OF THE 1/4" GROOVE ARE SEALED.



5.

**CAUTION – Hold post FIRMLY to table with one hand and turn saw "OFF" with other. Do NOT remove your post from the table saw until the blade has COMPLETELY stopped turning.**

With the long angle facing up start your cut. Make sure your 8" post mark and center blade mark meet or slightly pass each other then stop! **PIC 5**

### TOOLS NEEDED:

- TAPE MEASURE
- CARPENTERS SQUARE
- LEVEL
- STRING LINE
- BEAM OR TABLE SAW W/ 10" BLADE
- 9/16 " DRILL BIT
- 5/16 " DRILL BIT
- 9/16 WRENCH OR 6 POINT SOCKET
- 15/16 " WRENCH & 6 POINT SOCKET
- 3/4 " WRENCH & 6 POINT SOCKET

**NOTE: WHEN USING AN IMPACT DRIVER, YOU MAY NEED TO TOUCH UP BOLT & LAG HEADS WITH RUSTOLEUM GLOSS BLACK**

STEPS 1-5  
ARE  
GROUND  
WORK

## ROOF TOP INSTALLATION

**6.** Locate for your two PRR end posts. For each end locate the center of the rafter and the outside of the exterior bearing wall. Use a level and transfer both locations above the rafter tails onto the roof. Mark the roofing with a "T".

The top horizontal line of the "T" being the exterior wall location below, and the center vertical line of the "T" being the center of the rafter tail below.



**7.**

Use PRR base plate as a guide, line it up covering the bottom portion of the "T". Look to see if there is a shingle lap under the baseplate. If so, adjust slightly up or down until there is no shingle lap under the plate. Now you have the exact horizontal location for your waterproof base plates. For the exact vertical, mark again, then move the base plate. Start in the center of your marked location probing with a micro drill bit to locate the exact center of the rafter. Again, use the base plate as a guide to squarely pre-drill 5/16" mounting holes in center of rafter. **PIC 7**



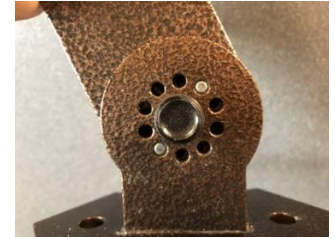
**8.**

Clean area with a damp rag removing moss, sawdust and dirt. **REMOVE THE BUTYL SEALER PAPER** Then install using the (2) 3/8" x 4" flange lag bolts provided. **PIC 8**



**9.**

After installing both ends Snap a chalk line or horizontally run a tight string line between the two ends and set the remaining center base plates @ 48" on center. **PIC 9**



**10.**

Set the Insta-pitch adjustable arms. Install the arm bar using the 5/8" flange bolt provided. Do not install the locknut yet. Use a torpedo level and set the bar close to the plum location. Install the lock-pins in the holes that line up. **PIC 10** You can now tighten your grade 8 bolt and locknut. Note; Because of variables "exactly perfectly plum" is adjusted when setting the 4x4 posts.



11.

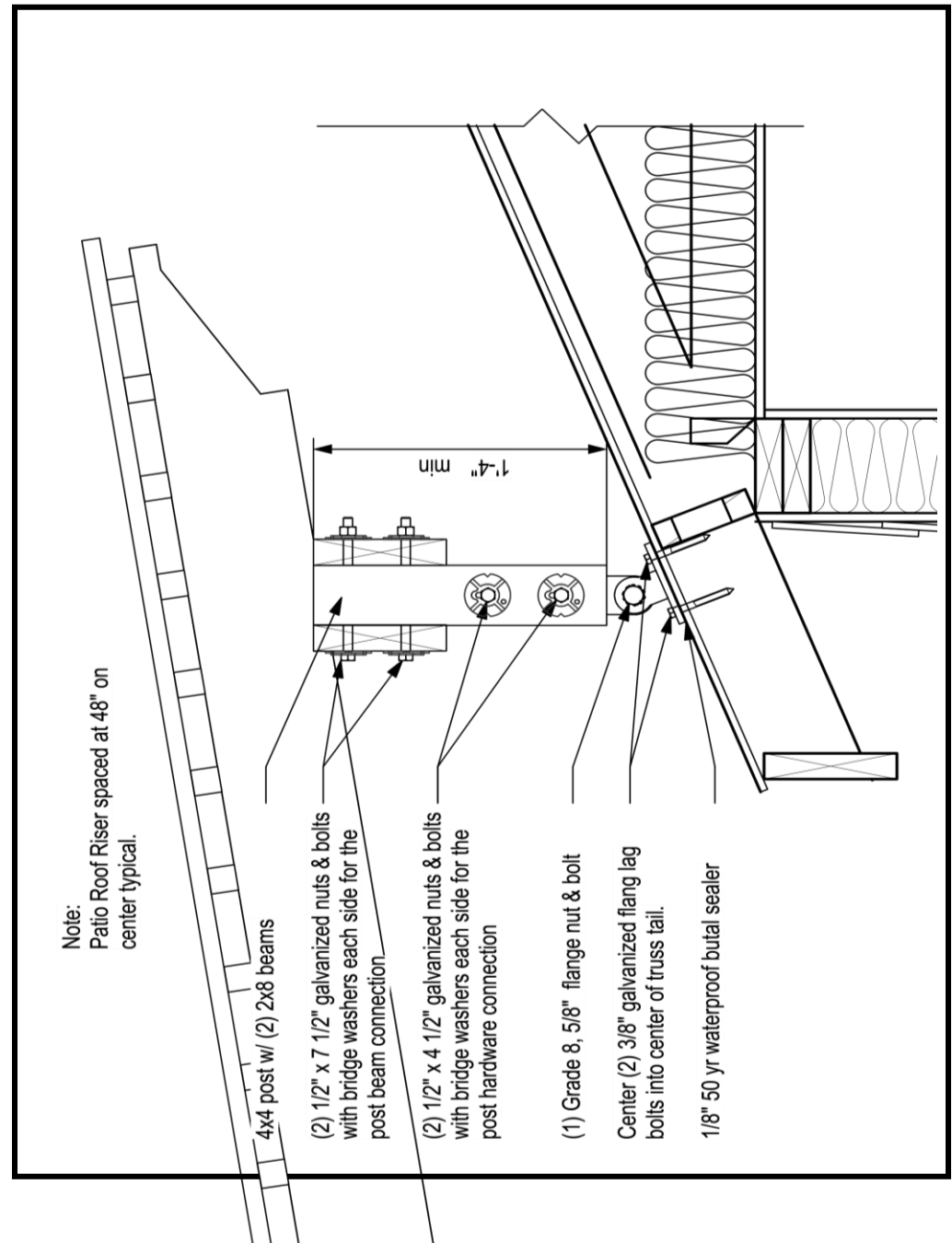
Install your 4x4 posts. Start with the two end posts. Slide the post over the bar with the slot of the post facing the peak of the house roof. Use 4 decorative PRR bridge/timber washers and (two)  $\frac{1}{2}$ " x  $4\frac{1}{2}$ " galvanized bolts and nuts then assemble hand tight snug. Using a torpedo level adjust the post to perfectly plumb then tighten the half inch bolts for permanent installation. Run a tight string line between the two end posts. Plumb the remaining posts to the string then tighten for permanent installation.

**PIC 11**



12.

Installing the 2x8 horizontal beams and PRR bridge/timber washers for needed shear. Use a tight level string line end to end. Temporarily install both level beams using 3" galvanized screws sandwiching the 4 x 4 posts between and close to flush on top. **PIC 12** Go back and check for plumb on each post. Locate the vertical centers of the posts and beams. Measure down  $1\frac{3}{4}$ " from the top of the beam and up  $1\frac{3}{4}$ " from the bottom of the beam. Mark and drill two  $\frac{1}{2}$ " holes through both the beams and post. Install decorative PRR bridge/timber washers with (two)  $\frac{1}{2}$ " x  $7\frac{1}{2}$ " galvanized bolts and nuts.



# Patio Roof Riser Limited Warranty

Effective Date: April 17, 2018

## Patio Roof Riser is a trademark of Woodstone Structures, LLC.

Patio Roof Riser ("PRR") is a hardware product ("product") intended for use with construction of elevated patio coverings. PRR is manufactured by Woodstone Structures, LLC ("Woodstone"). This Limited Warranty applies to all PRR products purchased after the effective date while this Limited Warranty remains in effect. All future purchases of products are subject to the terms of the Limited Warranty in effect as of the purchase date. This Limited Warranty must be read in conjunction with all applicable General Notes, General Instructions for the Installer, and Terms & Conditions of Sale, along with any other information or specifications published by Patio Roof Riser or Woodstone available on the [www.patioroofriser.com](http://www.patioroofriser.com) website ("Website") or on the product package, label or product manual (collectively, "Patio Roof Riser Documentation"). All applicable Patio Roof Riser Documentation must be carefully reviewed before using any Product. Patio Roof Riser warrants, to the original purchaser only, that each **product will be free from substantial defects in materials, manufacturing and design if properly specified, installed, and maintained, and when used in accordance with the design limits and the structural, technical, and environmental specifications provided by your legal (Site Specific) licensed engineer, and approved by your (Site Specific) designated building code regulatory official.**

This Limited Warranty is void and does not apply to any (a) Product purchased from an unauthorized dealer, retailer or distributor, (b) Product deterioration or damage due to environmental conditions or inadequate or improper handling, transportation, storage or maintenance, (c) Failure or damage caused by improper installation, application, or preparation, (d) Use of this Product without the installer obtaining (site specific) engineering and approval from (site specific) designated local building code enforcement official. (e) Normal wear and tear, (f) Product that was subjected to negligence or excessive or improper use, including any use not in accordance with Documentation, (g) Failure or damage caused by the building site, foundation, or any third-party products, building materials or components, (h) Failure or damage caused by use of a Product in a structure that has a design or other defect or that does not comply with all applicable building codes, laws, rules and regulations, (i) Modified Product, or any nonstandard use or application of a Product, (j) Failure or damage caused by termites or other wood destroying organisms, animal or insect activity, wood fungal decay, rot, mold, mildew, exposure to chemicals or other hazardous substances, a corrosive environment or materials, inadequate moisture protection, or premature deterioration of building materials, (k) Failure or damage caused by an act of God, including any hurricane, earthquake, tornado, lightning, ice, snow, high wind, flood or other severe weather or natural phenomena, (l) Installation workmanship or services, including any failure or damage caused by installation of any Product by any person other than a Patio Roof Riser employee, whether or not in accordance with the Patio Roof Riser Documentation, or (m) Failure or damage caused by the gross negligence, willful misconduct, or other acts or omissions of the builder, general contractor, installer or any third party, including the building owner. Notwithstanding the foregoing, Woodstone and Patio Roof Riser disclaims and does not provide any warranty related to the design of any custom-order or non-catalog Product.

Although Products are designed for a wide variety of uses, Woodstone and Patio Roof Riser assumes no liability for confirming that any Product is appropriate for an intended use, and each intended use of a Product must be reviewed and approved by qualified professionals. Each Product is designed for the load capacities and uses listed in PRR Documentation, subject to the limitations and other information set forth in PRR Documentation.

Due to the particular characteristics of potential impact events such as earthquakes and high velocity winds, the specific design and location of the structure, the building materials used, the quality of construction, or the condition of the soils or substrates involved, damage may nonetheless result to a structure and its contents even if the loads resulting from the impact event do not exceed Patio Roof Riser specifications and the Products are properly installed in accordance with applicable building codes, laws, rules and regulations. This Limited Warranty does not apply to cosmetic defects, including discoloration.

Product demonstrations, training, operator examinations and similar services provided by PRR are based on Patio Roof Riser present knowledge and experience, are conducted for illustrative or instructive purposes only, do not constitute a warranty of Product capabilities, specifications or installation and do not modify the applicable Limited Warranty set forth herein. Woodstone and Patio Roof Riser assumes no liability for any representations or statements made as part of such Product demonstrations, training, operator examinations or other similar services. In the event of any inconsistency between any information provided during any such demonstration or service, and the information in any applicable PRR Documentation, the information in the Patio Roof Riser Documentation shall govern. In the event of any inconsistency between any information provided on the Website, and the information in any other Patio Roof Riser Documentation, the information on the Website shall govern.

ALL WARRANTY OBLIGATIONS OF WOODSTONE AND PATIO ROOF RISER SHALL BE LIMITED, AT WOODSTONE'S AND PATIO ROOF RISER'S ABSOLUTE DISCRETION, TO EITHER REPAIRING THE DEFECTIVE PRODUCT OR PROVIDING A REPLACEMENT FOR THE DEFECTIVE PRODUCT. THIS REMEDY CONSTITUTES WOODSTONE'S AND PATIO ROOF RISER'S SOLE OBLIGATION AND LIABILITY AND THE SOLE AND EXCLUSIVE REMEDY OF PURCHASER AND, WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, EXCLUDES ANY LABOR OR OTHER COSTS INCURRED IN CONNECTION WITH A WARRANTY CLAIM. **PURCHASER ASSUMES ALL RISK AND LIABILITY ASSOCIATED WITH ANY USE OF THE PRODUCT, INCLUDING BUT NOT LIMITED TO SUITABILITY FOR ITS INTENDED USE.**

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To obtain warranty service, you must contact Patio Roof Riser at 136 42<sup>nd</sup> st. Springfield, OR [patioroofriser@gmail.com](mailto:patioroofriser@gmail.com) 541.246.8099 , regarding any potential claim, no later than sixty (60) days after you discover the potential claim. Upon request by PRR, you must provide PRR with: (a) proof of purchase and written records evidencing, in reasonable detail, the date and manner of installation, application, preparation of the Products, as applicable, (b) a reasonable opportunity to inspect the site where the Product was installed, and (c) samples of the Products from the actual installation in sufficient quantities in order for PRR to perform testing to determine whether or not the Product failed as set forth herein. PRR may, in its absolute discretion, request that you return the allegedly defective Products to PRR, in which case PRR will issue a Return Materials Authorization (RMA), which must be completed and returned to PRR with the Product. PRR is not responsible for any costs or expenses incurred in connection with any inspection (other than by Simpson employees) or in connection with the return of Products to PRR, but PRR shall bear all costs and expenses incurred in connection with the shipment of replacement Products in the event that PRR determines that the Product should be replaced in accordance with this Limited Warranty. If PRR elects to repair or replace the Product, PRR shall have a reasonable time to do so.

No one is authorized to change or add to this Limited Warranty. If at any time Woodstone does not enforce any of the terms, conditions or limitations stated in this Limited Warranty, Woodstone shall not have waived the benefit of said term, condition or limitation and can enforce it at any time. This Limited Warranty is extended only to the original purchaser and is not transferrable. It is not intended nor shall it be construed to create rights in any third party.