

## Ridge

The *ridge* is the very top part (the spine) of your structure.

Please note that the quantities of pieces and stub spacing will vary order to order  
*Stubs* are welded on every 2, 3, 4 or 6 feet according to the requirements of your particular structure.

It is onto these *stubs* that the *hoops* will be fastened.

**It is mandatory that you report any *ridge* damage before starting the assembly**

**STEP THREE:** File down any galvanizing burrs or rough edges that you may find along the top side of the *ridge*. Hairline cracks in the galvanizing are surface only and no cause for concern.

### **A few points about the *Ridge*:**

- The joints of the ridge may not line up perfectly. A couple wraps of duct tape will protect your cover as the photo on the left shows
- The *ridge* section with a pair of *stubs* at both ends is your *ridge cross or starter*. **The connected piece of your starter NEVER goes on the end.** It faces inward and connects to the open end of the next ridge section (see drawing and photo 4)
- For 1x2 steel use #14 3/4 *speed screws*. The *hoops* are secured to the *ridge* with 4 #14 *speed screws*.
- It is a good idea to make the holes of the 1x3 *ridge* while it is still on the ground.



### Ridge Cross/Starter

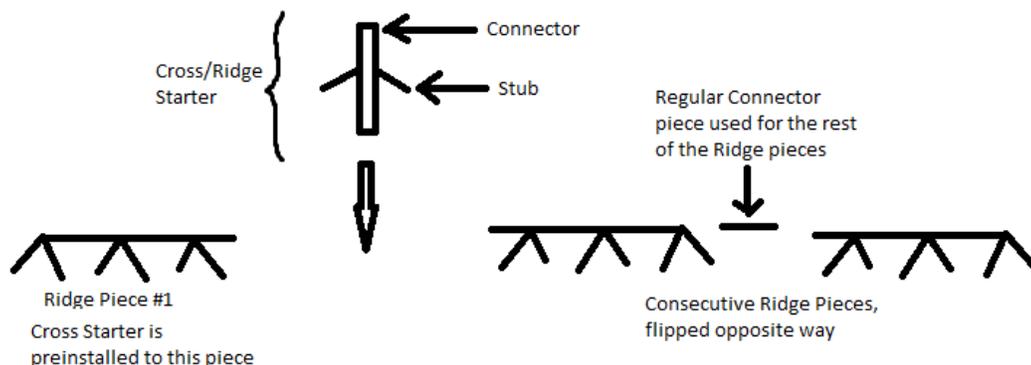


This photo shows the *starter stubs* for 1"x2" and 1"x3" hoops that is supplied by MSS, **usually preinstalled**, into the first *ridge*. This *ridge* is flipped around to connect in with the rest of the line of ridge pieces you will be installing.

The diagram below depicts 4' spacing only. If you have 3' *hoop* spacing, you will have 4 pairs of *stubs* per *ridge*; 2' spacing has 6 pairs of *stubs* per *ridge*; and 6' spacing has 2 pairs of *stubs* per *ridge*.

Also, please note, larger structures will have more *ridge* in the line for connecting. If your structure is not a multiple of 12' your starter *ridge* section will be shorter

and may not have the "standard" number of *stubs* as mentioned above.



The *ridge cross/starter* is always used to join the first and second length of *ridge* together.

Two #14 *speed screws* on either side of the connection, from the bottom are used.

*PLEASE NOTE: Any italicized words in this document are words that are listed in the glossary*

## Ridge joiners

When the structure is more than 24' long there will be one *ridge connector* for each additional 12' length of *ridge*. This connector is a 10" long galvanized piece of U-channel (same dimension as the ridge stubs).

These connectors will be secured from the underside with four #14 *speed screws* (2 on each side of the joint). This joint should be wrapped with duct tape to prevent cover damage since seldom is the connection perfect as per the previous photo. It is usually simple to secure the connector to the leading edge of the ridge while it is still on the ground.



## Hoops

**Note: Be aware of safety and use a scaffold for putting up the larger structures, especially when building the unit on a wall**



**General Notes:** The curved part of the *hoop* is usually the bottom; the straight part is the top. For structures that have been supplied as a cathedral unit (for RV, boats, etc.) the curved part goes up and the long straight part goes down.

**Always put hoops up in pairs for better balance and stability.**

Apply downward pressure on the top edge of the *hoop*.

**The fastener ALWAYS goes horizontally.**

**STEP FOUR:** Find your *starter* piece as previously explained. One person on a ladder or scaffold will hold this at the approximate required height. The person (s) on the ground will slide the top of the *hoop* over the *ridge stub* and the bottom end over the *base bracket* or *anchor post*. Fasten the top end of each *hoop* to the *ridge* as you go. This prevents something coming loose accidentally and hitting someone.

Please see our website for larger versions of installation photos



While person 1 holds the ridge have person 2 swing an arch upside down to person 1



Flip the arch right side up slide it into the **middle** ridge stub, and over the base bracket or anchor post  
**FASTEN**



slide the arch into the ridge stub

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get **one pair** of arches standing attached to the middle ridge stubs before continuing



continue with the next pairs in the same manner fastening the arch to the ridge and the base bracket until all stubs in the ridge have been used



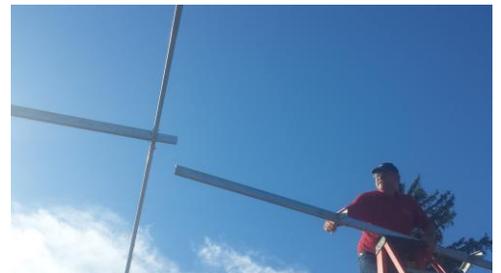
**STEP FIVE** Before continuing on the other *ridge* pieces, the purlins should be attached and then **IT IS CRITICAL at this point to secure the structure in a vertical position with two guide ropes (inverted V).** The guide ropes must go both ways as an inverted V and be secured with some sort of anchoring post to ensure everything stands vertical. If you do not plumb the building NOW, it will be much more difficult later. If your structure is more than 24' long you will have additional ridge sections connected with a U-Channel connector. Each additional ridge section with the hoops and purlins is installed until the entire frame is up



use a rope to secure the section until the rest is complete



Tape any connections with duct tape to ensure nothing will rub on the cover



connect the next section of ridge to the ridge starter at the end of the previous ridge section



make sure you are securing each arch to the ridge stub before continuing, then secure the two sections of ridge together



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**STEP SIX:** For the remaining *ridge* sections:

1. Always secure to the *connector* of the previous *ridge* first
2. Then secure the last pair of *hoops* and then do the intermediate *hoops*.
3. Sometimes the end of the *hoop* has a dimple, this can be removed with pliers or the claw of a hammer.

**1 x 2 Hoops with Base Brackets**

- hold the *ridge* at the appropriate height, short scaffold is best, but 2 step ladders will also work
- slide the top of the *hoop* over the *ridge stub* and secure with a #14 *speed screw*
- slide the bottom of the *hoop* over the *base bracket* and secure with a #14 *speed screw*

**1 x 2 with Anchor Posts**

- Always fasten the bottom first and then insert over the *ridge stub*.
- The top of a 1 x 2 *hoop* is secured with a #14 *speed screw*.

**When your building has 1 x 3 ribs**

1. **Always bolt the top first.**
2. The person on the ground can move the *hoop* so that the top hole lines up.
3. The *base bracket* or *anchor post* is done second.

**Hoops for a Lean-to**

- set your base beam and secure your *base brackets* to the beam at required spacing
- attach header (2x4 or 2x6) to wall at predetermined height
- attach wall brackets to header slide top end of *hoop* over top bracket, and place end of *hoop* on bottom bracket
- apply downward pressure on top of the *hoop* while fastening *hoop* to bracket with self-tapping screw, then complete tightening of lag bolts at the top.



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