



# SAFETY INFORMATION

- Be sure to work from secure and safe platforms and ladders
- Secure area underneath your work space to make sure nobody gets hurt in case you drop something
- Edges of cut copper are sharp; be sure to wear proper gloves when handling cut gutter
- When cutting copper, be sure to wear approved safety goggles
- Never install or work on damaged roof material or structure
- When you install gutters, make sure the collected water can run off without causing damages
- Never modify parts without consulting a professional or Slate and Copper's technical support team
- Dispose of leftovers and off-cut safely and in accordance with best practices
- Never leave any parts or tools unsecured on your roof, they might fall down causing serious damage or injury
- Never do installation work alone- always work in a team
- Check for power lines
- Never install on icy or slippery roofs or in windy conditions

**-IF YOU DO NOT FEEL YOU CAN COMPLETE THIS WORK SAFELY, CALL A LOCAL CONTRACTOR**

## WARNING:

Copper is a sharp metal and will bite you if you let it. Firmly and securely hold all pieces when working with them. Do not slide your hands or fingers along any straight or finished edges. This is partly the reason why we wore gloves in our demonstration. Wearing gloves will also help minimize the fingerprint marks on the gutter system. The best gloves to use especially for grip are ones with the palm and fingers coated with a rubber or latex material.

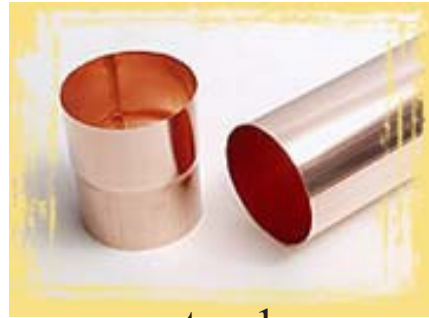
# INSTALLING DOWNSPOUT CONNECTOR

## Tools Required:

\* Downspout Crimping Tool also known as just a crimping tool

If Riveting the Downspout Connector onto the Downspout:

- \* Cord or Cordless Drill (3/8" size drill is perfect)
- \* 1/8" Drill Bit for Drill
- \* Pop Rivet Gun
- \* 1/8" Diameter Copper Rivets



step 1



step 2

The downspout connector replicates the top flange on a full piece of downspout. The flared out flange at the top of Slate and Copper's plain round seamless downspout makes it easier to join another piece of downspout and/or an elbow into it. The downspout connector is used when you are trying to join two cut sections of downspout together, and neither of the pieces have a flanged end. The most common use of the downspout connector is when you need to cut small sections of downspout for in-between elbows to get back to the wall on eave depths greater than the elbows put together (see Step 1).

Downspout connector installation is fairly straight forward, and in the future it will be even easier. This piece requires no crimping if being installed into a piece of 18 ounce or less copper downspout. But because Slate and Copper stocks all 20.44 ounce copper downspout, the downspout connector needs to be crimped in one place on the piece to get it to slide down inside of a cut end of a piece of downspout. Slate and Copper is working to have this piece modified so this crimping process is eliminated.

# PART 1

Take a standard downspout crimping tool and in one place on the piece, not right on the seam, make a crimp (see pictures Step 2, Step 3, Step 4, & Step 5). You want to make a crimp on the skinnier side of the piece, because this is the end that will slide down inside of the downspout. After making the crimp insert the downspout connector into a cut end of a piece of downspout (see pictures Step 6 & Step 7). Insert the downspout connector in as far as it will go, it may or may not slide all the way down inside of the cut end of the downspout, depending on how large of a crimping tool you used on the DS connector. Not to worry; you can rivet it on either side of the downspout, and use it as is, if you really wanted to, but the correct thing to do would be one of the following. Either use a hammer to tap the downspout connector into place, or use the downspout as a hammer to drive the downspout connector into place. If you have a hammer and a couple pieces of scrap wood handy, then you can do the following.



step 3

Take a scrap piece of plywood, cardboard, or carpet for padding on the ground; also find a scrap 2 X 4, position the downspout upright so the bottom is on the bottom padding, and the DS connector is on top, lay the 2 X 4 across the top of the downspout connector, now take the hammer and knock the top of 2 X 4 to drive the downspout connector down in as far as it will go. When the downspout connector is driven all the way down into position it should look like picture Step 8.

# PART 1

Depending on how big the piece of downspout is you are trying to put the downspout connector into, you can also turn the piece of downspout upside down, so the downspout connector is facing the ground, and use the ground to pound the downspout connector up into the downspout. If you are doing it this way, then you will need a hard ground surface and a scrap piece of wood, cardboard, or carpet for padding on the ground. Once the downspout connector is slid all the way into position (see picture Step 8), then you can rivet the downspout connector on either side of the downspout to fully secure the two pieces together. Because the downspout connector is such a tight fitting piece you do not need to rivet it to the downspout if you do not want to.



step 4



step 5



step 6



step 7



step 8