



All's Weld That Ends Weld

Be the only one in your neighbourhood to weld your own garden trellis! Even if you've never even thought about welding before, you're going to want to try it after seeing how easy it is to get started.



Materials:

- 1 ½" screws
- Scraps of ¾" pine
- 7 pieces of ½" (#4) concrete reinforcing bar 10' long

Cut List:

- Six 10' rebar pieces
- Nine 3' rebar pieces

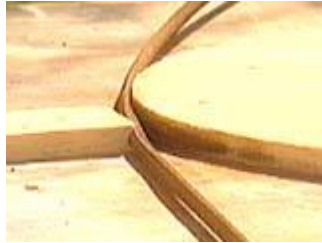
Tools

- Drill
- Driver bits
- Jig saw
- Wire-feed MIG welding unit
- Welding helmet
- Leather apron
- Leather gloves
- Face shield
- Hearing protection
- Grinder with a steel cutoff blade or a Hacksaw

Steps:



Attach two pieces of wood to a table top as a jig to bend the re-bar



Place the re-bar between the two pieces of wood to bend it

Using a 16" x 12" piece of pine, cut an arc. It doesn't have to be perfect, just a long arc.

Attach the arc to a sturdy table with screws. Attach a 4" x 12" piece of pine at the apex of the arc leaving a $\frac{3}{4}$ " space between the two boards.

Bend arcs in the reinforcing bar by slipping the bar between the pieces of wood and using your body weight to pull on the bar. Make gentle, smooth bends by pushing the bar further into the bending jig an inch at a time. Continue until the desired shape has been achieved.



Use your body weight and pull the re-bar to make the bends



Turn it over to bend in the opposite direction

Flip the bar to get a curve that runs in the opposite direction from the first curve. Continue bending all nine pieces of steel into wavy shapes.



Cut two of the long pieces into thirds with a hacksaw



Or use a grinder



Be sure to wear a face shield and ear protection

Cut three of the bars in thirds with a grinder or a hacksaw. Be sure to protect your eyes and ears with safety gear and follow the manufacturer's directions for operating the grinder.



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Lay the long pieces on a table



Place the shorter pieces across them



Leave enough room at one end to push the trellis into the ground

Lay out the six long pieces and place the shorter pieces on top in any desired position. Be as wild as you want to make a shape that is pleasing to you.

Be sure to leave enough room at the bottom to push the trellis into the ground. Also provide a bar low enough that climbing plants can easily reach it. The bottom crosspiece should be about 2 ½' to 3' up from the bottom.

If you have trouble pushing the trellis into the ground, you can always drive in heavy-duty steel grade stakes and tie the trellis to it with heavy gauge wire.



Before using the welder be sure you have the correct protective gear



A welders helmet is essential



The easiest type of MIG welder feeds wire when the trigger is squeezed



When the wire contacts the metal to be welded, the circuit is completed and the wire melts



A proper weld contacts both pieces of metal that are to be bonded together

Tack the pieces together with the welding gun. Be sure to catch each side of a joint so the molten metal will bond the two pieces together. With a wire-feed welding unit, you hold a welding gun and depress the trigger. This feeds a continuous spool of steel wire out of the gun, a little at a time. When you touch the metal re-bar with the wire, it completes an electrical circuit. The surface of the re-bar is etched a little by the electrical charge and the metal wire melts and bonds the two pieces together. When all the pieces are tacked together, go back and add more metal to make solid joints.



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Details of completed trellis

It is important to get some instruction from a professional welder or take a class with a welding school. There are many configurations of welding tools and materials that will essentially perform the same function. Also, safety is an issue and a professional can tell you exactly what is important to remember when welding, and which equipment is essential. Welding is easy and a few hours with a professional can provide skill and confidence and preventing injury.

In the Toronto area, [Advanced Welding Techniques Inc](http://www.advancedweldingtechniques.com) provides complete courses designed by you. They can be reached at 905-212-9948 or look in your telephone directory for someone nearer you.



Be sure to shake out your hair when the job is completed



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