

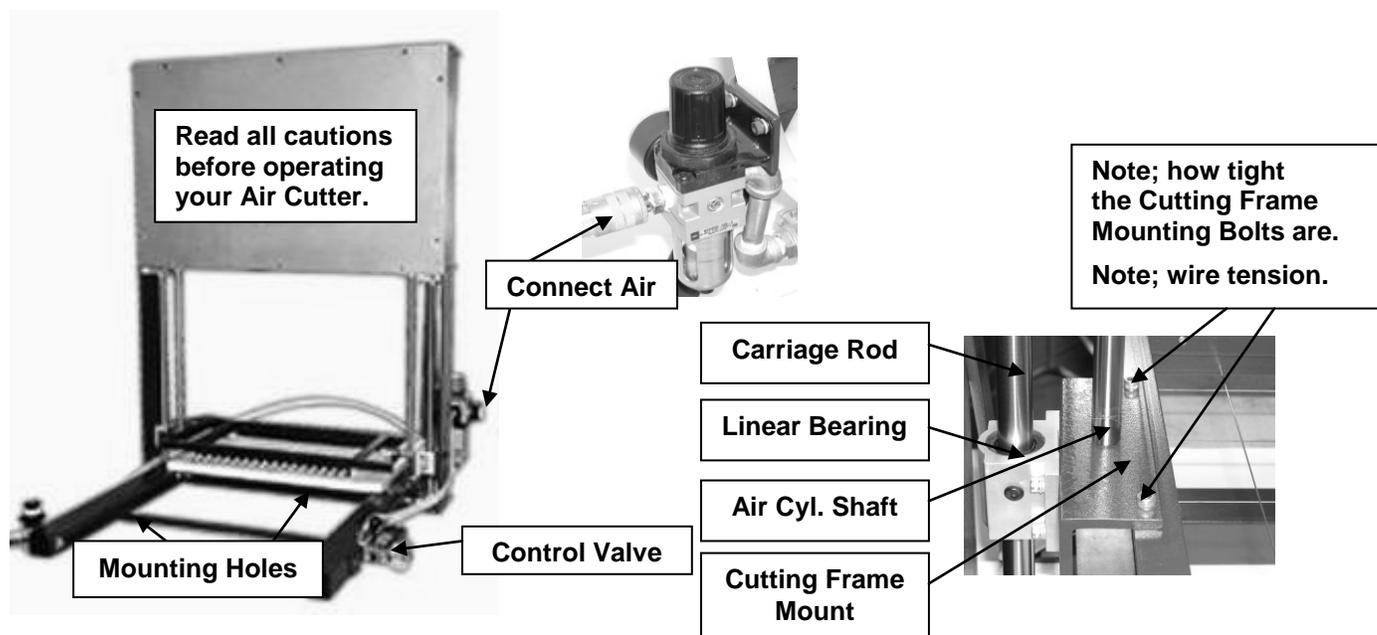
Willow Way Air Cutter Instructions

Set Up:

1. Mount your Air Cutter on a stable cabinet or table that will put the cutter table at about waist high. The frame should extend about a foot beyond the front of the table. This allows for easier loading and viewing during the cutting process. **See Air Cutter Stand Instructions, if mounting on our stand.**
Important note: to prevent tipping, anchor the stand or cabinet securely if you are using the Easy Hoist System.
2. There are four mounting holes. Using 5/16", (8mm) bolts or lags, mount the cutter so that the front mounting bar edge is flush with the edge of the table. **See Air Cutter Stand Instructions, if mounting on our stand.**
3. Airflow is set to fully open on the air regulator. Operate at 100 to 120 lbs (45 to 54 kg) pressure for optimum performance.
4. The carriage rods are pre-lubed and are what your cutting frames ride up and down on. See maintenance instructions.
5. Check for obstructions in and around the Air Cutter. You may now connect the air.

Note the tightness of the four mounting bolts for the cutting frame so that you will have an idea how tight they should be when changing cutting frames.

Very important; check both the sound and touch of the wires. This will give you an idea of the tension required for your wire. It is the only thing on this machine that you just have to feel, to determine whether it is right or not. Push with your thumb or finger; get used to how much pressure it takes to move the wire a certain distance. With the bar frame you can go more by sound.



Cutting Your Soap:

1. **The most important thing to remember is to cut your soap as soon as possible.**
 - a. It is important to cut as soon as possible the first few times you pour, so you can get an idea on how quick your block is ready.
 - b. The softer the soap, the easier it is on you and your wires.
2. Start checking your soap in about 16 to 24 hours. If the block is firm when you press in the middle the soap, it is likely to be ready. If it is spongy, wait another four hours & try again. After a few blocks, you will know the right time.
3. Air Cutter Molds are generally ready in 24 to 48 hours. Manual Cutter Molds are generally ready in 16 to 30 hours.

4. **Important Note:**

- If discounting water, your soap will be harder to cut. Cut sooner or add some water back into your formula.
 - Our recommendation is this: Do not cut your water on the first few batches, until to get a feel for things. You may find yourself unnecessarily breaking or stretching your wires.
 - Remember large batches drive off moisture due to heat, so if you discounted your water before, you may not need to now.
 - If you Hot Process, you must cut as soon as possible.
 - Cure and cut your soap in a heated room, 72° (22°C) or better. Your soap will cut easier. Cold soap makes for harder soap.
 - If you use, Steric Acid, Animal Fats, Beeswax. Your soap will be harder....Cut Sooner.
 - If you use lots of Hard Oils, Palm, etc.....Cut ASAP then experiment by seeing how long you can go.
 - If you use herbs, clays, oats, etc., your wait time to cut will be much shorter, and your soap may be harder to cut through. Cut ASAP then experiment by seeing how long you can go.
 - Watch your first few batches carefully and take notes. If you change your base formula often, take notes.
 - We use the toughest, strongest wires in existence. Thousands of our cutters are cutting soap every day. If you are having trouble cutting, look to Time, Formula, Water Discount, Ingredients, and Method.
 - Just one little change can bring you success, perfectly cut bars, more speed, and greater efficiency in your production.
5. Note on cleaning wires: You can clean your tables and wires with a brush or towel. Be careful not to bang on your wires.

Attaching Your Loaf Cutting Frame and Loading the Mold:

1. Connect the air and move cutting frame to full up position. If no Cutting Frame is connected, follow the directions below.

Caution: When changing frames or working on the Air Cutter, disconnect the Air Line.

2. Locate your Loaf Cutting Frame. It is the one with the squares or rectangles. It also the largest frame. The Bar Cutting Frame is the one with parallel wires. We generally have the Loaf Frame mounted to your Air Cutter when it ships.
3. Place the frame on the rolling table with the Wire Bars facing down. This will put the flat part of the frame up.
4. Bring the Cutting Frame Mounts (see picture above on right) down to just above the Cutting Frame. You do this by pushing in on your Safety Valve and pulling back on your Control lever, slowly bringing them down with short air bursts. Do not worry about their travel being uneven.
5. Once the Mounts are down to the frame, run your bolts in and tighten them well. This will keep your frame travel even.
6. Raise the Cutting Frame.
7. Check for obstructions to the sliding table and carriage assembly.
8. Pull cutting table out to fully extended position and place locking pins.
9. Hoist mold onto table carefully and lower it down easily. Then with slight movement, align with guide pins on the cutting table.
10. Remove sides and ends of mold.
11. When De-Molding your soap, use a rubber mallet to lightly tap the mold sides loose from the liner paper. There will usually be a little suction holding them tight to the block of soap. After the sides are removed, tap off the end pieces.
7. Remove all of the mold lining paper on the soap block. Leave the bottom liner, the wires will depress into this.
8. Remove locking pins on cutting table and roll table back into cutting position.
9. Replace the locking pins for the cutting table, to prevent table movement.

Cutting Your Loaves:

1. Depress Safety Valve (on left);); then operating the Control Valve and using very short blasts of air (short strokes) lower cutting frame to just above surface of soap. Note: Due to occasional uneven air pressure in cylinders, valves, and lines, there can be a quick movement of cutting frame when air is applied. To prevent this and balance the air pressure, use short strokes of the valve lever whenever you raise or lower the frame. A couple of airbursts will even out the air.
2. Check for alignment of block with cutting wires.

3. With short bursts of air, move the cutting frame down, until it presses slightly into the soap. Lightly tap the wires that are touching, into the top layer of soap with a Rubber Mallet, Do no use anything Else! Again, tap the air lever and bring the frame down slightly and tap the rest of the wires in. Some of your batches may not require this but if in doubt, use the mallet.

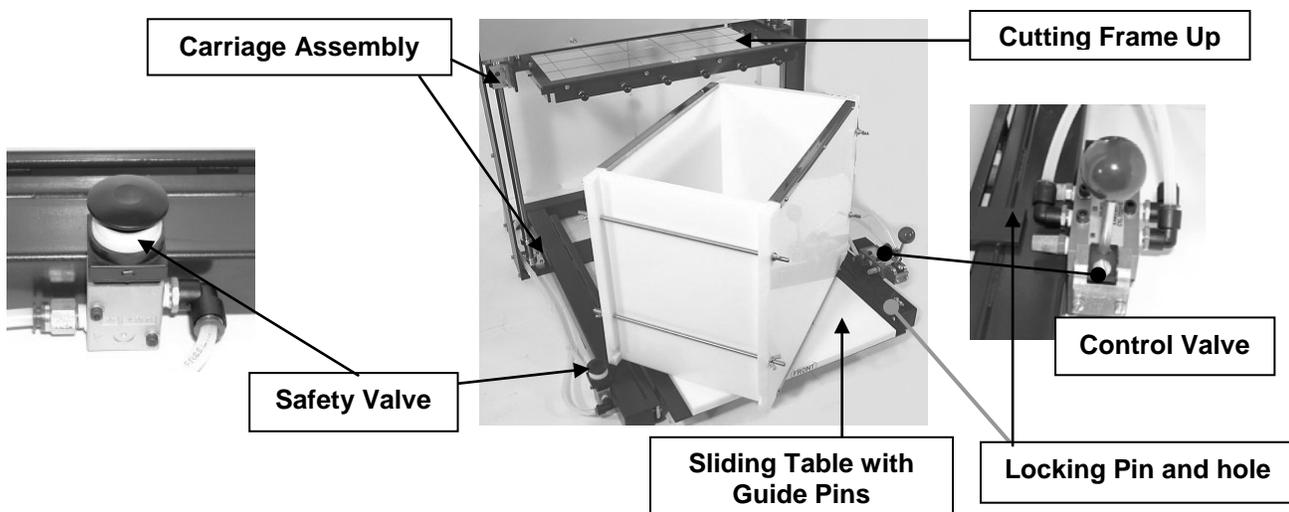
By carefully getting your wires through that tough top layer of soap, you will extend the life of your wires indefinitely. This only takes a few seconds.

4. Now you can pull back on air lever and cut the rest of the way, making a smooth cut.
5. Leave cutting frame in down position.
6. You can now start removing your loaves. Always remove your loaves by working all the way around the outer perimeter. Continue working the perimeter until you arrive at the middle. This will allow your wires to drop towards the center of the grid, where they will finally impress into the liner and center grooves.
7. Stack and cross stack the loaves with air space between them.
8. After removing and stacking your loaves, raise cutting the frame.
9. Finish cutting the rest of your molds.
10. Cut off the air in preparation to change cutting frames and tables.
11. Check loaves at this time for cure. They should be skinned over enough that you will not leave fingerprints, when picking them up. An hour or so cure time, if needed, will usually be sufficient to allow you to handle the loaves easily. Note: For most types of soap this time is not necessary

Note: It is most efficient to cut all your molds into loaves first, then change to your bar frame and cut into bars. This will also allow some time for your loaves to skin over slightly, for easier handling.

Cutting Bars:

1. Cut off air and remove the mold bottom (cutting table)
2. Place bar cutting table on to the rolling table.
3. Turn on air and bring loaf-cutting frame down close to cutting surface.
4. Cut off air and remove loaf-cutting frame.
5. Place and anchor bar cutting frame, tightening bolts firmly.
6. Check for obstructions to cutting frame or surface.
7. Raise cutting frame all the way up.
8. Place loaves on their side on the bar cutting table, lining up with front of cutting table for the best cut and least waste with your wires. Make sure the loaves are as even as possible end to end. Note: you may stack loaves up to a couple inches from cutting frame.



9. Slowly lower cutting frame in short bursts of air, until wires are close to soap. Note: Due to occasional uneven air pressure in cylinders, valves, and lines, there can be a quick movement of cutting frame when air is applied. To prevent this and balance the air pressure, use short strokes of the valve lever whenever you raise or lower the frame. A couple of airbursts will even out the air.
10. Check alignment of soap.
11. Slowly in shorts bursts, lower until wires are cutting, then continue to cut smoothly through soap. It is a good idea to stop occasionally as you cut to remove loaf ends and rack the soap bars onto trays as you go.
12. Continue procedures 8 through 13 for rest of your loaves.

Miscellaneous:

You may wipe cutting grids with towel or brush off wires with a brush to remove previous debris. Leaving soap to dry makes it easier to brush off, if there is time. **Note: Be careful when brushing wires off, overly stretching wires may break them.**

Airflow and speed may be adjusted at the needle valve located by the main valve lever. Higher speeds usually run smoother.

You may think that when the frame is not mounted, and the carriage is traveling up and down unevenly that something is wrong.....this is not the case. Slight differences in airline length and valve openings, will restrict airflow, more to one cylinder than another.

General Maintenance:

1. Always turn off air when performing maintenance, lower cutting frame all the way down and bleed off air.
2. Lightly grease Carriage Rods once every few weeks under heavy use, once every two months under light use. Heavy means cutting three or more blocks a day. Use a Multi-Purpose grease. Most Automotive parts stores carry small tubes of this.
3. You should put a few drops of Mineral Oil on each Linear Bearing, every month or so under heavy usage.
4. Periodically check all bolts and pins for tightness.
5. Check movement of cutting table and clear off obstructions in its guide track.
6. Check air hoses and fittings for leaks.
7. Check tightness of the cutting frame wires periodically. (Get familiar with the tension on wires when you receive the cutter so you will know how much tension is required. **Do not over-tighten. Wires will stay tuned after one or two very slight adjustments.**)
8. Check hoses to make sure they are clear of moving parts and in loading the soap block.

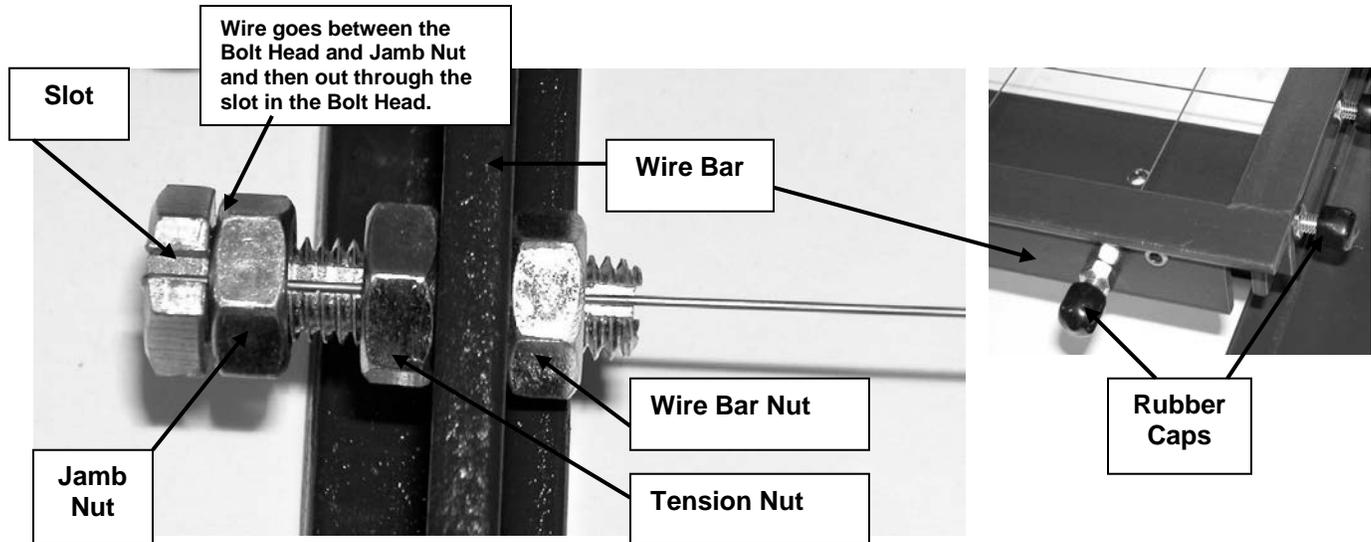
VERY IMPORTANT: SAFETY PROCEDURES FOR THE AIR SOAP CUTTER:

1. **Always disconnect the Airline when changing frames or working on the Air Cutter for maintainance.**
2. **Keep hands and head away from cutter frame and carriage while cutting soap.**
3. **Do not bypass, disconnect or tape off Safety Valve.**
4. **Do not operate Air Valve without depressing Safety Valve.**
5. **Do not tamper with settings of air cylinders and valves.**
6. **Do not place or leave objects on cutter frame or cutter table, other than soap.**
7. **When moving cutting table forward and backward, keep hands on top of table. Use caution when loading soap block.**
8. **Always lock cutting table in its position using lock pin.**
9. **Do not wear loose fitting clothing when operating cutter. Keep sleeves clear off moving parts. Always wear safety glasses.**
10. **When the Air Cutter is not in use, run cutter frame all the way down and cut off air.**

Replacing Wires

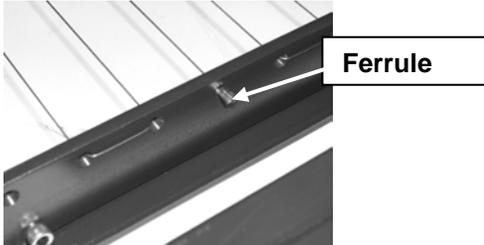
Tools needed: You will need a pair of side-cut pliers or electrical dykes (Best), two ½" (13mm) open-end wrenches and a small pair of Vice-Grip Pliers. Don't scrimp on tools. If you are making soap professionally, you should have the proper tools to get you back up and running fast. The whole point of having production equipment is efficiency, your time is valuable, the last thing you want to do is waste it on improper tools.

Before starting, look at the way the other wires are strung. Remember these wires are sharp. Be careful!



1. The thinner wire goes on the Bar Frame and thicker on the Loaf Frame.
2. Turn the frame Up Side Down. Remove the old wire.
Note: The Slot in the Wire Bolt is always Down when cutting, Up when tying!
3. Run the Bolt Head and Jamb Nut, down close to the Wire Bar so that when Bolt is tightened, you have plenty of thread left to tighten with.
4. Leave about a 1/16" (2mm) space between the Bolt Head and the Jamb Nut to wrap the wire around, one turn between them.
5. Tighten the two Wire Bar Nuts on each side of the Wire Bar so that the Bolt does not spin.
6. Cut a length of wire at least 6" (15cm) longer than what is needed. You need this to work with the stiff wire. Insert the wire through the holes in the Wire Bar and through the Three Nuts and slot in the bolt.
7. Using the Vice-Grips, *clamp* the wire and pull firmly. Note: If your wire wraps around to the next bolt beside it, then skip this step until you are ready to tie the last bolt.
8. Wrap the wire Counter-Clockwise around the shaft of the bolt between the Bolt Head and the Jamb Nut, just one turn.
9. **Bring the wire out through the Slot in the Bolt Head. This is extremely important to hold tension. Cut the wire off flush with the bolt head.**
10. Now, run the Jamb Nut up to the wire and snug it up with your Open-End Wrench. Using both wrenches, tighten the Jamb Nut securely.
11. To put tension on the wire, loosen the Wire Bar Nut that is on the inside of the Wire Bar, five or six full turns, Holding the head of the bolt (keeping it from turning) slowly turn the Wire Bar Nut on the outside of the Wire Bar.

12. Continue to turn the Wire Bar Nut until you have the proper tension.
13. Adjust the Bolt so that the slot is straight up. Now tighten the Wire Bar Nut on the inside of the Wire Bar.
14. Slip the Rubber Protector back over the Bolt Head.
15. Some wires may have a Ferrule on them, to anchor a single wire. Observe how they are tied. If you lose your Ferrule, you may use a small washer or nut to replace it.
16. The wire goes through the hole, around and back over the wire itself. Take a few turns around the wire.
17. It helps to hold the Ferrule or nut with pliers while wrapping the wire around itself.



Don't forget to use a Rubber Mallet on your Loaf Frame when cutting difficult soap.

If you take care of your wires, they will last many years.

Thank you very much for you purchase.

Visit us at... www.soapequipment.com - 765-530-0307 or 870-429-8230

If you experience any difficulties with your equipment, have questions or suggestions, please email us at

Tech@soapequipment.com or call Technical Support at 765-530-0300