

Operating Instructions

Groov-Master E-215

MACHINE CAPABILITIES

The GROOV-MASTER E-215 grooves all brands of duct board currently manufactured. The machine is shipped complete with all tools necessary for normal duct construction of 1" duct board. Eight tools lettered "A" – "G" and straight cutoff is mounted on the tool bar for shipment. Each tool is identified with a lettered measuring tab. Tool settings for various duct configurations are shown on a silver decal adhered in the center of the top of the machine. Using standard 120-volt electricity, the E-215 will groove one four-foot section of fiber glass in only eight seconds.

VISUAL INSPECTION

Your machine has been factory crated in a wooden crate, which we fully expect to protect it in normal shipping. If it appears that damage may have occurred, mark the freight bill accordingly at the time of receipt. Inspect the machine **IMMEDIATELY** and file claim with the freight carrier for any damage sustained.

UNCRATE AND LOCATE MACHINE

1. Remove plywood and 2" x 4" frame pallet.
2. Remove arms and legs from inside machine. A sack of fasteners is also included.
3. Remove wooden spacer blocks from between rollers (both ends).
4. Lift machine from pallet.
5. While E-215 is in elevated position, attach machine legs to ends of the machine using the provided fasteners. (Removal of end panels is required).
6. Locate machine with as much clear space as possible, front & rear. Grooving 4' widths requires a minimum of 6', while grooving 10' lengths requires a minimum of 12' (both sides).
7. Locate near 120v, 20 amp power source. Avoid extension cords if possible. **ANY EXTENSION CORD USED MUST BE 12 GAUGE WIRE OR HEAVIER TO AVOID MOTOR DAMAGE.**

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SET-UP PROCEDURE

1. Drive Roller spacing is factory set at 5/8" (gap between upper roller and lower drive roller). This spacing provides adequate drive force for 1" duct board.
2. Spray tool bar with silicone lubricant so that tools will slide more freely.
3. Correct blade settings are important for grooving fiber glass duct properly. All tools are pre-set at the factory and should need no adjustment. However, when blades are replaced, the new blades must be fine-tuned on the tool holder. The "A" tool is used to make the staple flap for closing the duct. Adjust the tool holder "A" so that it makes light contact against the bottom roller. When properly adjusted, this tool will clean the staple flap for closing the joint without needing additional cleaning by hand.
4. Tools "B", "C", and "D" are used to make shiplap cuts to form the corners of the duct section. All three tools have two blades set to make the shiplap cuts. One of the blades in each set has only one bend. Adjust these tools so that the blade with the single bend rests lightly on the bottom roller. Adjust the other blade 1/8" lower to make the proper cut. When properly adjusted, the blade with multiple bends should cut half the thickness of the board (the same thickness as the female shiplap of the factory edge).
5. Tool "E" is used to make the female shiplap cut (half the thickness of the board). This is perhaps the easiest blade to adjust. Groove a test piece of scrap and move the blade up or down as needed. The straight cutoff tool requires no adjustment because it is used to cut completely through the board.

The ultimate test of correct blade position is to set tools and groove a section of duct. A close inspection will indicate which cuts are correct and which need more work.

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MACHINE OPERATION

1. Tools are set from the left of the machine and arranged according to the silver Tooling Decal to make different styles of duct. A tool stop is provided at the far-left side of the tool bar. Slide the “A” tool as far as possible to the left until it rests against the stop. Measuring between the lettered tabs for the desired inside dimension sets the other tools.
2. Duct board is normally purchased in 4’ x 10’ sheets with factory shiplap edges along the 10’ sides. Stand near the center of duct board. Place the female shiplap edge (foil side down) between front drive rollers. With the board pushed against the guide at the left of the machine, push squarely into rollers (maintain even pressure across full width of the board to insure straight cut). Be sure the toggle switch located at the far-left side of the machine is in the FORWARD position. Depress foot switch until board completely exits rear rollers. Duct board should be driven straight through the machine. If it turns or stops, release foot switch. The REVERSE position on the toggle switch will allow you to backboard out of the rollers if necessary. See TROUBLE-SHOOTING section if problems exists.

MACHINE MAINTENANCE

1. Glass Master blades are heat-treated and have excellent wear characteristics. However, they eventually become dull and must be changed. It is extremely difficult to sharpen Glass Master blades because they are made from hardened steel. When changing blades, be certain to refer to the blade set-up and adjustment procedures until you are familiar with the process.
2. Occasionally clean the tool bar and spray with silicone for easier tool movement.
3. Slippage between drive rollers and duct board will eventually wear the non-skip coating on the top and rear drive rollers. Replacement commercial grade emery-cloth can be ordered from Glass Master.
4. Routinely check drive chain and sprocket alignment. Should a sprocket become loose, realign and tighten.

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CHANGING BOARD THICKNESS

The E-215 machine is capable of grooving 5/8" through 2" duct board, with very few and simple adjustments. Please follow the next two sections closely when adjusting your machine.

NOTE: There are several differences in the tool holders and blades that will not allow them to interchange from one board thickness to another. New holders and blades will need to be purchased for each board thickness.

ADJUSTING DRIVE ROLLERS

1. Remove end cover on the left side of the machine. This will allow you to view the Chain Idler.
2. Working from the exit side of the machine, and below the drive rollers. Locate the two 3/8" bolts that attach the Chain Idler to the roller mounting plate. With a 9/16" socket or wrench loosen these two bolts until the Chain Idler slides front to back easily. **ANY ATTEMPT TO ADJUST DRIVE ROLLERS WITHOUT FOLLOWING STEP TWO CAN CAUSE SEVER DAMAGE!**
3. Using the drive roller-adjusting shaft, (located on each top corner of the machine) raise or lower the rollers to the desired height. Indexing decals are located in each corner to assure proper and even spacing.
4. Slide Chain Idler towards rear of machine, until all slack is removed from drive chain. Retighten Chain Idler bolts, and reattach end cover. Note: Do not over tension the chain. This can cause jumping and popping.

SETTING THE TOOL BAR

When changing board thickness it is necessary to change to the proper tool holders. Therefore, it is also necessary to adjust the Tool Bar accordingly. It is important that you follow these steps closely so that you will achieve the proper depth, dimension, and squareness of your cuts.

Note: In order to keep Tool Bar level, work on one end of the machine at a time. Do not loosen both ends at once.

1. There are three bolts at each end of the machine that will require adjustment. Two of the bolts are welded to the Tool Bar. These bolts receive the adjusting bracket, which raises, lowers, and holds the Tool Bar fixed in position. The third bolt joins the adjusting bracket to the machine allowing adjustment up and down. Using a 9/16 socket or wrench loosen the two nuts on the welded bolts.

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SETTING THE TOOL BAR (continued)

2. Adjust the third bolt to achieve more or less distance from the roller below. (This depends on what board thickness you are changing to) Using the tape flap tool (“A”, “B” or #5) as a gauge, place it in the Tool Bar close to one end. (Do not lock the Tool Clamp in place) The blade should rest on the cutting roller below it, causing a gap of approximately 1/16 to 1/8 inch between the front of the Tool Holder and the Tool Bar. This will give you a spring-loaded effect when locking down the tool, resulting in an extremely clean tape flap.
3. Now you are ready to tighten the two nuts on the Tool Bar, and repeat steps one and two on the opposite end of the Tool Bar.

Once you have completed steps one through three, you may install the other tools and begin fabricating.

Note: You may find that one or two of the tools need some adjustment, if this occurs please refer to the instructions entitled “SET-UP PROCEDURE”.

TROUBLE-SHOOTING

1. Pulling or tearing of glass fibers or board facing:
 - (a) Facing or adhesive build-up on blades.
 - (b) Dull blades (Most contractors elect to replace blades when they first become dull.)
 - (c) Inspect duct board for uniformity of binder distribution, proper curing of binder and possible chunks of glass.
 - (d) Lower blades on tools “B”, “C”, and “D” set too low.
2. Duct board turning sideways in machine:
 - (a) Incorrect feed procedure.
 - (b) Check drive roller spacing.
 - (c) Rollers not turning continuously or loose chain sprockets.
 - (d) Grit worn off the drive rollers.
 - (e) Dull blades.
 - (f) Improper blade setting.

The GROOV-MASTER E-215, like all Glass Master machines, is a rugged, almost maintenance free groover that will last for many, many years.

However, if you EVER have maintenance problems with this machine, PLEASE CALL US!

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