



Hollow Chisel Mortiser Safety Rules

The Hollow Chisel Mortiser is a specialized woodworking machine used to cut square holes in a piece of lumber. By taking multiple cuts it can remove the wood from a rectangular area, such as the mortise in a mortise and tenon joint. Similar to a drill press in many respects, it combines the precise cutting action of a four-sided chisel with a drill bit in the. The bit clears out most of the material to be removed, and the chisel ensures the edges are straight and clean. To avoid accidents, the following safety rules must be observed by everyone working with the Hollow Chisel Mortiser. Failure to follow these safety rules may result in serious personal injury or injury to others and can result in a loss of shop privileges.

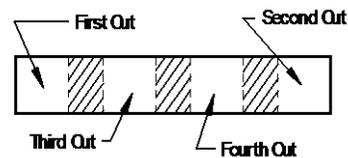
Start with a Risk Assessment to ensure a safe work area:

1. Follow all procedures in **CHARLOTTE WOODWORKERS' ASSOCIATION Shop Rules and Guidelines**.
2. A four (4) foot perimeter around the mortiser should be kept clear of people, debris and sawdust that could impair traction or footing to avoid slips and falls.
3. The mortiser table should also be clean and clear of off-cuts, sawdust, and other material prior to making adjustments and using the Hollow Chisel Mortiser. Starting with a clean table and fence will improve your odds of making accurate cuts the first time.
4. Safety glasses with side shields or a face shield must be worn. Everyday eyeglasses are only made of impact resistant glass, they aren't safety glasses. If you're not wearing actual safety glasses, wearing safety goggles over your regular glasses can provide the protection you need.
5. Hearing protection should be worn.
6. Remove loose fitting clothing and jewelry.
7. Tie back, or otherwise secure, long hair, and roll sleeves up past the elbows.
8. Do not wear gloves or anything that would allow a hand, fingers or clothing to be wrapped around the revolving bit.
9. Check the column and drive components of the Hollow Chisel Mortiser for contamination and dust. If they need maintenance, the problems should be corrected. Contact the Shop Foreman who will help you find the procedures, materials, and assistance you need to do this correctly. The owner's manual for the machine should provide details on the correct cleaning process and proper lubricants are for the drive gears and the column. If the manual isn't in the shop, it can usually be found online. Incorrect cleaning and or lubrication can damage machines, so be sure you know what to do before proceeding.
10. If the operating lever is one that can be repositioned without using tools to remove it, be sure that the engagement mechanism is clean and working properly.
11. Make sure that the table is square to the bit in both directions. If it's not, contact the Shop Foreman who will assist you in finding someone to get this problem corrected. The procedure will likely differ from one mortiser model to another.
12. Make sure that the reference face of the fence is square to the table. Check at several points along the fence. It should be square at all points.
13. Before using the Hollow Chisel Mortiser, ensure that all guards are in place, and that they function properly.

Operational Safety Rules:

1. Approach your work in the shop and on the Hollow Chisel Mortiser with a safe attitude!

2. Make sure that the Hollow Chisel Mortiser is the right tool for the job you want to perform. Do not force a tool or attachment to do a job for which it was not designed. The right tool will do the job better and be safer.
3. There are many different models of router Hollow Chisel Mortiser. While their fundamental principle of operation is the same, be sure that you understand how the specific mortiser you're going to use operates. If you need help with this, contact the Shop Foreman and they will help you find someone who can assist you.
4. Give the work your undivided attention.
5. Make sure that bench top mortisers are firmly secured to a table or bench before use.
6. Check for alignment, binding and breakage of moving parts, mounting and any other conditions that could affect the mortiser's operation. A guard or other part that is damaged should be properly repaired or replaced.
7. Maintain tools with care. Keep chisel and drill bits sharp and clean for the best and safest performance. Follow instructions in the tool's owner's manual for lubricating and changing accessories.
8. Make all machine adjustments or perform other maintenance with the machine unplugged from the power source and stopped.
9. Both the bits and the chisels used with Hollow Chisel Mortisers are extremely sharp. Treat them with proper respect.
10. The auger bit should extend 1/16 inch, or a bit less, beyond the end of the chisel for clearance. Setting this clearance spacing is important for proper operation. If there is too little clearance, the bit will rub on the inside of the chisel and the heat generated can cause the chisel to fail, sometimes in a spectacular fashion. I've seen a chisel that peeled apart like a banana from overheating due to improperly set clearance. Proper clearance is also necessary to properly clear the waste generated by the chisel and auger bit. This isn't a case of "more is better". Set properly the tool will function correctly. If you don't know how to do this ask for assistance.
11. After installing the bit and chisel, turn the bit around one complete revolution by hand before the power is turned on. It should turn freely without binding or rubbing.
12. Set the depth stop so the tip of the bit and the chisel will not strike the table at the bottom of the cutting stroke. Be aware that the tip of the bit typically extends a bit further than the corners of the chisel.
13. Make sure the workpiece is securely attached or clamped to the table. Never use your hand to hold the workpiece.
14. Keep safety guards in place at all times when the machine is in use. If guards are removed for any purpose, use extreme caution and replace the guards correctly before operating the mortiser.
15. Remove adjusting keys and wrenches from the machine before turning it on.
16. Keep your hands at least 3" away from the chisel and bit while operating the machine.
17. Maintain a balanced stance at all times so that you do not fall or lean against the chisel and drill bits or other moving parts.
18. Do not overreach or use excessive force to perform any machine operation.
19. Don't cut a three sided hole. When cutting mortises the chisel should always be supported on 4 sides or only on 2 parallel sides, never 3. Cut the end holes, then skip past material about 2/3 size of hole, and drill again. Continue in this manner until mortise length is achieved. Cleanup the mortise by removing material between holes (see Figure below for an example of this approach).



Finally, cut away each of the cross-hatched areas

Failure to follow a procedure similar to this one will often result in a ruined chisel and bit.

20. Never leave the machine running unattended. Turn the power off and do not leave the machine until it comes to a complete stop.