

# Cone Sharpeners for Mortising Bits

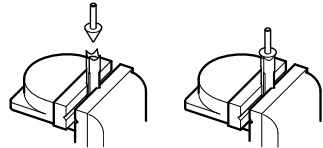
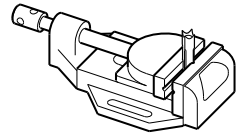
77J81.20

77J81.22

Mortise bits have traditionally been very difficult to sharpen, requiring precise hand filing or honing due to the lack of appropriate honing tools. These diamond cones have been made to match the bevel as supplied by the manufacturer. The Conical Sharpeners (77J81.20) go with the chisels for the Delta Mortising Attachment (04J10.20+), while the Large Cone Sharpeners (77J81.22) match the size range and geometry of the Japanese-made Premium Hollow Mortise Chisels (04J11.04+).

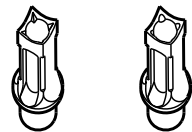
## Instructions

1. Secure the 180-grit diamond cone in your drill press.
2. Clamp the bit to be sharpened in a drill-press vise. If you do not have such a vise, you can secure the bit to a shop-made right-angle plate with a vertical fence.
3. Without starting the drill press, carefully lower the diamond cone into the mortising bit. Position the vise so that the cone and bit are in alignment.
4. Retract cone from bit. While holding the vise and with the cone spinning at a low speed (150 to 250 rpm), lower the diamond cone down until it just makes contact with the mortising bit. Withdraw cone and inspect inside bevel of bit to verify that cone and bit are in alignment – honing marks should be visible and consistent around the bevel. If not, repeat *steps 3 & 4*, allowing the spinning cone to help urge the vise and bit into alignment.
5. Carefully hone until a clean surface is obtained around the entire bevel and any nicks have been removed.
6. Replace the 180-grit cone with the 350-grit cone and lightly hone the inside bevel of the four tips.
7. Using a fine stone or micro-abrasive on a flat surface, lap the outside faces of the mortise bit to remove any burrs.



## Relieving Inside Corners

Even with a finely honed mortising bit you may find that the chisel requires a lot of pressure to penetrate into the wood; particularly hardwood. This can be remedied somewhat by relieving the inside corners of the bit to reduce the wedging action of the chips. This is done with a small, very fine-cut square or round file. Clamp the mortise bit in a vise and stroke toward the inside, removing no more material than illustrated at right.



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