

DOWELING KNIVES

Standard sizes in doweling are usually readily available in Birch or Maple from building supply stores. BUT what happens when you need a dowel for the Walnut furniture you have just finished? Where do you find doweling to finish that set of Butternut kitchen cabinets for that very special customer? Perhaps you need doweling that is a special size, where do you find it? Now YOU CAN MAKE PERFECT DOWELING on your WOODMASTER, RIGHT IN YOUR OWN SHOP and chances are you can machine the doweling from the off-cuts, those pieces you were going to burn!

Manufacturing doweling with your WOODMASTER is a very simple operation. We recommend that you use a single 2-up knife in the custom knife holder for doweling from 5/16" up to 1" (Doweling smaller than 5/16" is difficult to machine because the wood is so flimsy) and a matched set of three knives in the planer head for doweling sizes from 1" to 2-1/4". When manufacturing doweling, two passes are required to accomplish the finished dowel. The same knife is used for both passes and the bed is adjusted on the second pass to machine the dowel accurately.

The advantages of using a 2-up knife will be obvious the first time you use it. The 2-up knife will mold two identical pieces of doweling (top or bottom) with each pass. The molding blank is much more stable and you will double your production.

TO MAKE DOWELING: For our sample we will use a WM121 2-UP knife to make 2 pieces of 3/4" dowel.

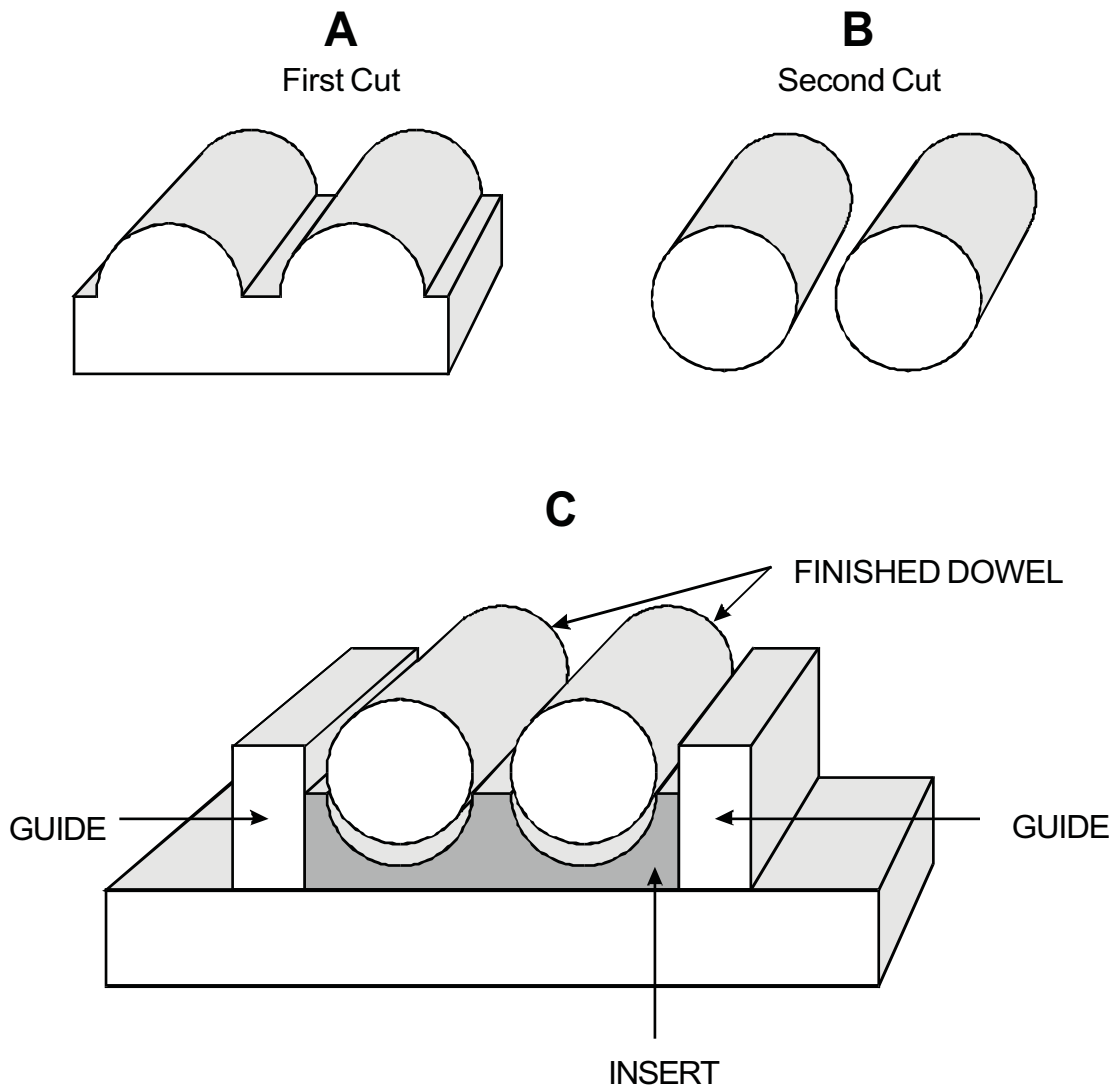
1. Prepare the molding blanks from CLEAN KILN-DRIED wood. The blank should measure 1-15/16" wide and 13/16" thick. It is very important that all the blanks be exactly the same width to ensure that they are snugly held by the guides as the doweling is being machined. Make a few extra blanks to use as test pieces.
2. Center the knife in the custom knife holder and tighten the gib screws to 5 foot pounds. (This can easily be done with a torque wrench).
3. Position the bedboard guides so the blank fits snugly when fed through them. Make sure the guides are at exact right angles with the accessory shaft.
4. Position the custom knife holder so the knife is centered on the molding blank. Tighten the knife holder to the accessory shaft.
5. Set the depth of cut to cut the full profile plus 1/32". When adjustment is correct, machine all blanks on one side. Keep your blanks butted end to end to avoid tear-out.
6. Turn blanks end for end and adjust depth of cut to make a perfectly round dowel. Remember to keep blanks butted.

HINTS

Feed stock slowly, especially when starting and finishing the cut. You can increase feed speed to match the dowel size and the wood species when the blank is in contact with the outfeed rollers. Stop your machine, disconnect the power and retighten the gib after machining the first blank.

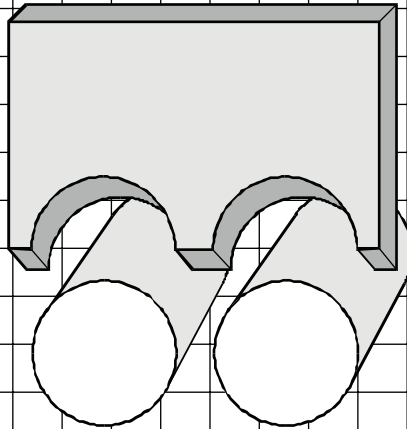
A WELCOME ADDITION

The most critical part of machining dowelling is to ensure that the blank is centered in relationship to the knife on the second pass. The simplest way of doing this is to make up a guide insert as described in drawing C. Our CNC machining center allows WOODMASTER to make knives which are exact mirror images of the dowelling knife which you order. With this knife you can make an insert which precisely aligns the blank and makes the machining operation and life in general a whole lot easier.

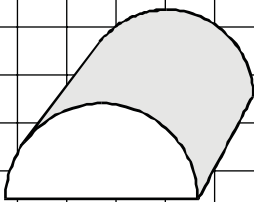


HALF ROUNDS

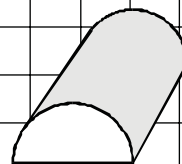
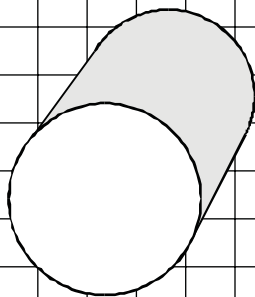
Half Round Knives will also accomplish doweling and are recommended in 2-up knives.
These knives are available in a great variety of sizes. Check with us!



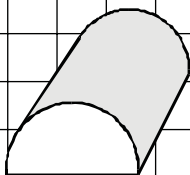
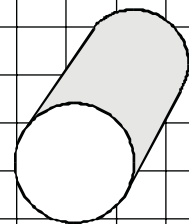
WM121 2-UP
3/4"



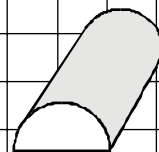
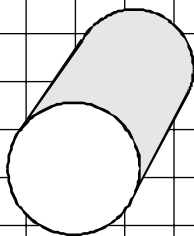
WM120
1"



WM123
5/8"



WM122
11/16"



WM124
1/2"

