INSTRUCTIONS FOR C2121, C2122, C2123 "V" PANELING CUTTER SETS

⚠WARNING

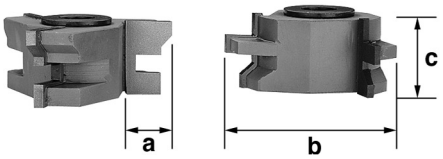
- **Failure to follow these guidelines will result in serious personal injury.**
- **ALWAYS WEAR ANSI APPROVED EYE AND EAR PROTECTION when using this cutter.**
- **These cutters should only be used in a shaper machine, never in a handheld router.**
- **Never feed lumber with the rotation of the cutter.**
- **Follow the safety guidelines set forth by the manufacturer of the shaper.**

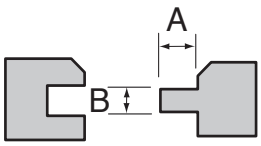
Grizzly Industrial, Inc.®

⚠CAUTION

These shaper cutters have sharp edges. Use care while removing the waxy protective coating. Never turn on the router with the protective coating still on the bit.

	C2121	C2122	C2123
A	1/4"	3/8"	3/8"
B	3/16"	1/4"	1/4"
a	7/16"	5/8"	5/8"
b	2 5/8"	2 3/4"	2 3/4"
c	3/4"	1"	1 3/16"
W	1/2"	3/4"	1"





The "V" Paneling Cutter Set can produce paneling, wainscoting and flooring with a minimum of setup while producing excellent results. The carbide cutting edges are precision ground which can make your project accurate and repeatable. The chart above shows the dimensions of the cutters for each of the three styles. The dimension noted as “W” is the maximum board thickness which will provide good results. For large jobs it is recommended that a powerfeeder be used to regulate the feed rate. This will minimize variances in depth of cut as well as providing a more consistent result.

⚠WARNING

- **Unplug shaper before installing or adjusting cutter.**
- **Keep all guards and anti-kickback devices in place.**
- **Double check bit to insure it is tight and secure in spindle.**
- **Always inspect lumber and other wood materials for cracks, knots, or other imperfections that could cause lumber to kick or shatter while milling.**

Step 1. The Tongue Cutter Setup: UNPLUG THE SHAPER!

Place the Tongue Cutting bit on the spindle and secure tightly. Make sure that the orientation is as shown in **Figure A**. Adjust the spindle height so that the bottom corner of the 45˚ cutter surface is even with the the shapers table top.

Adjust the fence(s) so that they are aligned with the inside edge of the bit. In this case, the inside edge would be the inner most portion of the slot. Use a good straight edge across the fence(s). Adjust the fence(s) until the bit barely touches the straight edge while slowly rotating the spindle by hand.

Use a piece of scrap wood to check if the cutter is at the proper height. If set too low, the tongue will be set close to the finish side of the board and may cause weakness and alignment problems later. If set too high, a sharp lip will develop along the edge of the "V" groove, again causing alignment problems.

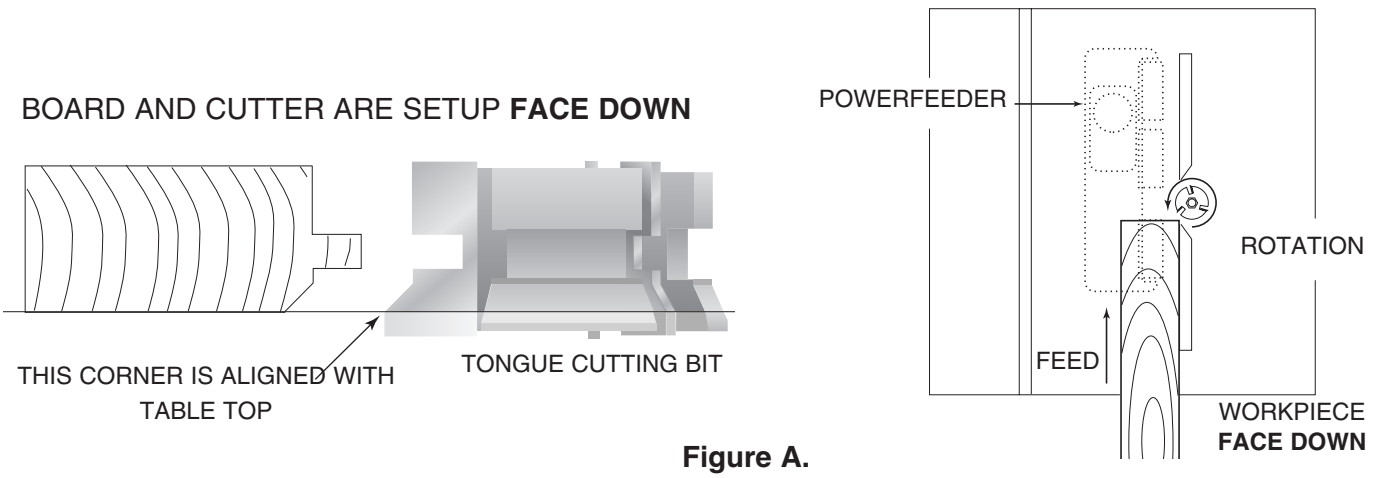


Figure A.

© MAY 2003 Grizzly Industrial, Inc.

When you are satisfied that the spindle height is set correctly, shape all of the project boards that require this profile along one edge. **THINK SAFETY!**

Step 2. The Groove Cutting Setup: UNPLUG THE SHAPER!

Remove the Tongue Cutter from the shaper spindle and place the Groove Cutter on the spindle as shown in **Figure B.** Change the spindle height until the tongue of the cutter is at the exact same height as the tongue of a previously shaped board, placed finish side up, on the table.

Adjust the fence(s) as before. This time use the vertical cutter surface located below the tongue (see arrow) as a reference point to set the fence(s).

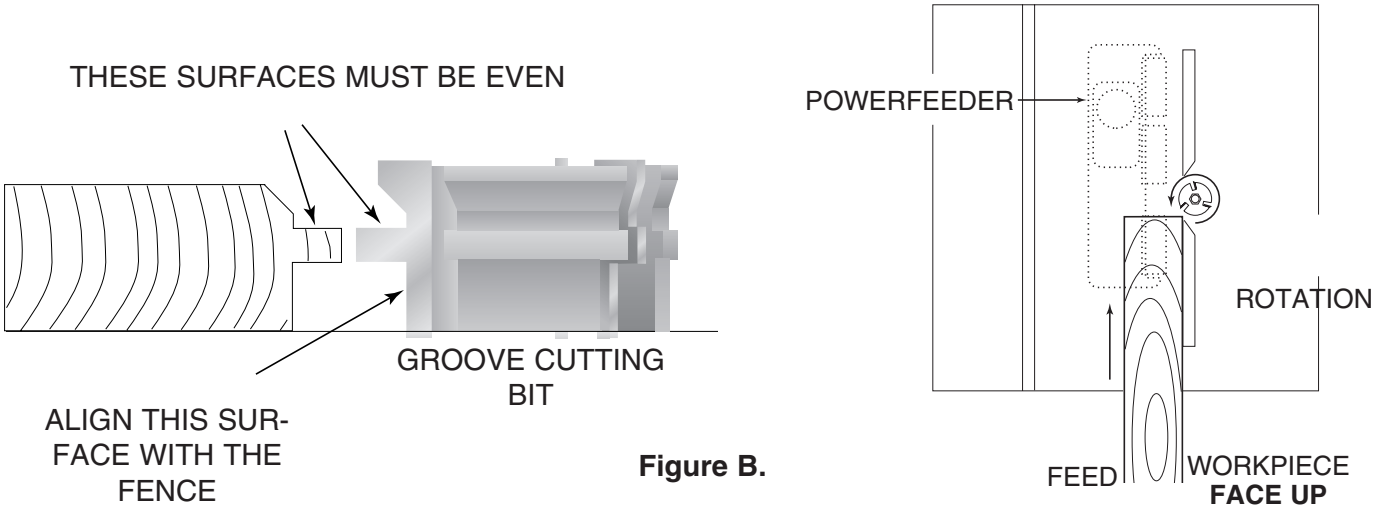


Figure B.

Before continuing, check for correct spindle height by shaping a piece of scrap wood. Make sure it is the exact thickness of the project boards. After shaping, assemble this board to a previously shaped board and carefully check for offset as in **Figure C.**

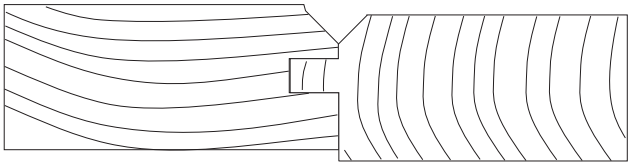


Figure C.

If you find that your offset is as illustrated in **Figure C**, the spindle is set too low. If the bit is set too high the newly shaped board will be lower than the board with the tongue. Repeat the Tongue alignment as stated at the beginning of **Step 2.** If the boards are uneven on one side only, the boards are not the same thickness.

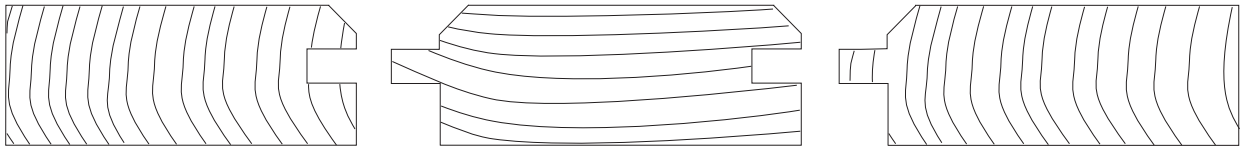


Figure D.

Figure D shows finished project with the outside boards having plain edges. Please note that setting the fences as described above, you should expect a loss of ⅜" on the edge of each board with a tongue.

© MAY 2003 Grizzly Industrial, Inc.