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MASTERING THE Table Saw

making a **Bevel Rip Cut**

Proper setup and the right technique are the keys to a perfect bevel.

■ Ripping a workpiece on the table saw is a pretty straightforward task to most woodworkers. But when you tilt the blade for a beveled cut, the process suddenly causes most of us to pause.

Still, there's no reason for concern. Starting with a solid setup and using the correct technique, you'll find that ripping a clean, smooth bevel is a snap.

SETTING UP THE SAW

Before getting into the specific techniques for making consistent



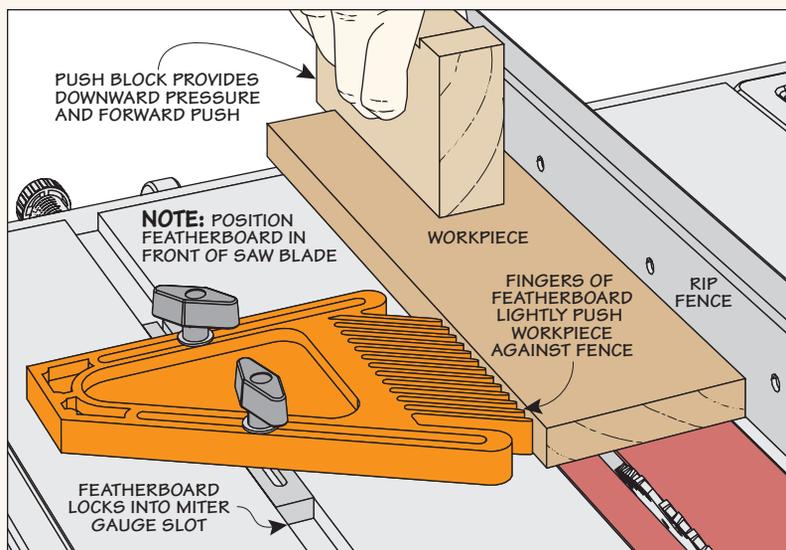
bevel cuts, there are a few things to mention. First, you'll get less cutting resistance and safer, cleaner cuts by starting with a sharp blade. I like to use a good quality rip blade. But a combination blade works almost as well.

Next, you'll want to check the alignment of the rip fence. You can avoid the chance of binding or a burned and scarred cut by ensuring the rip fence is perfectly parallel to the saw blade.

Finally, when making any type of rip cut, a good push block and a properly installed featherboard are essential (left drawing). Both help maintain solid control and minimize any chance of kickback.

Start with a Push Block. My simple push block is just a 2x4 scrap (main photo) that's notched along the bottom edge. This forms a "heel" at the back end and allows you to provide a firm, steady push along with the downward force necessary to keep the workpiece flat against the table.

Add a Featherboard. For even better control, you can add an extra set of "fingers" with a lock-in featherboard. A featherboard takes over



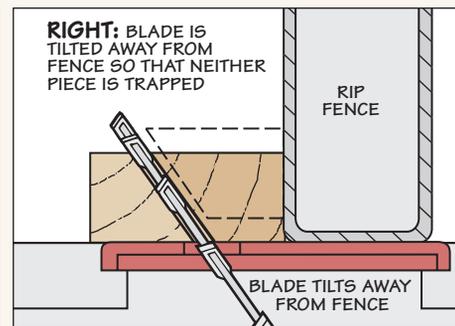
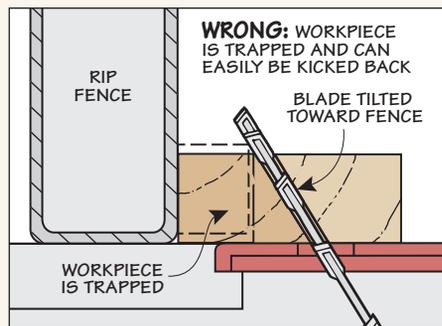
the responsibility of keeping the workpiece snug against the rip fence. With firm, continuous pressure, the workpiece can't wander away from the fence. And since the fingers only allow movement in one direction, the chance of the workpiece being kicked back is nearly eliminated.

In order for a featherboard to do its job well it has to apply the pressure in the right spot and with the correct amount of "push." Check out the drawing on the opposite page for more on adjusting it properly when you're setting up to make the cut.

MAKING THE CUT

At this point, you're just about ready to make a cut. And the last part of the setup process is just a matter of safely positioning the rip fence and the workpiece.

The correct way to make a bevel cut is shown in the main photo. Here you see that the blade is tilted



away from the fence. The drawings at the upper right explain why.

The left drawing shows that when the blade tilts toward the fence, the workpiece is completely trapped. If the workpiece shifts slightly, it can be pinched between the blade and fence and then kicked back. When you make a bevel cut as shown in the right drawing, neither piece is trapped.

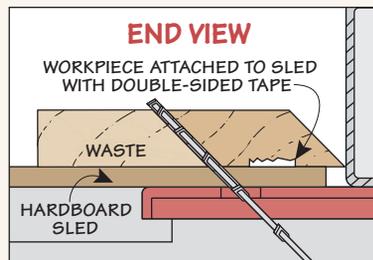
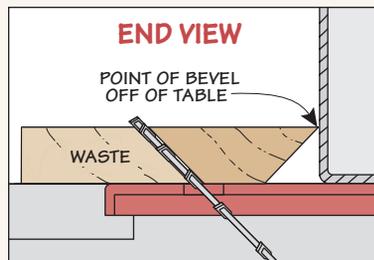
On a left-tilt saw, this isn't much of an issue. Just tilt the blade to the desired angle. But if you have a right-tilt saw (like mine), you'll have to shift the rip fence to the left side of the blade, which isn't a big deal.

Point Up. If you have to bevel both edges of a workpiece, there's one thing to keep in mind. On the second pass, you want the beveled point of the workpiece (the one against the fence) to be up off the table, as in the far left drawing below. Otherwise, the point can wedge under the rip fence.

Exceptions. Of course, there are exceptions. If the workpiece is narrow, I find it's safer to tilt the blade away from the fence. But I attach the piece to a 1/4" hardboard sled (left drawing). The sled "lifts" the point off the table so it can ride securely against the rip fence.

The other exception is beveling a wide workpiece. You may not be able to do this. Instead, use the technique shown below.

Making these setups and techniques standard practice in your shop will help keep you cutting safely. And you'll end up with a perfect bevel cut. 



breaking the rules: A Wide Workpiece

It's always a goal to make any bevel cut with the saw blade tilted away from the rip fence. Unfortunately, that won't work if you have a wide workpiece and you have a saw with a right-tilt blade. There's simply not enough rip capacity to move the fence to the left of the blade so it tilts away.

When that's the case, I make my cuts with the blade tilted towards the fence. Note: Use a hardboard sled as required to keep the opposite bevel from slipping under the fence.

What makes this a safer operation is that you can firmly push the

workpiece through the blade using both hands (right drawing). If the piece is bowed, it's important to keep it flat against the table (drawing below). By applying continuous downward pressure, the bevel will be consistent and you minimize the risk of kickback.

