

MITER GAUGES AND HOW THEY (DON'T) WORK

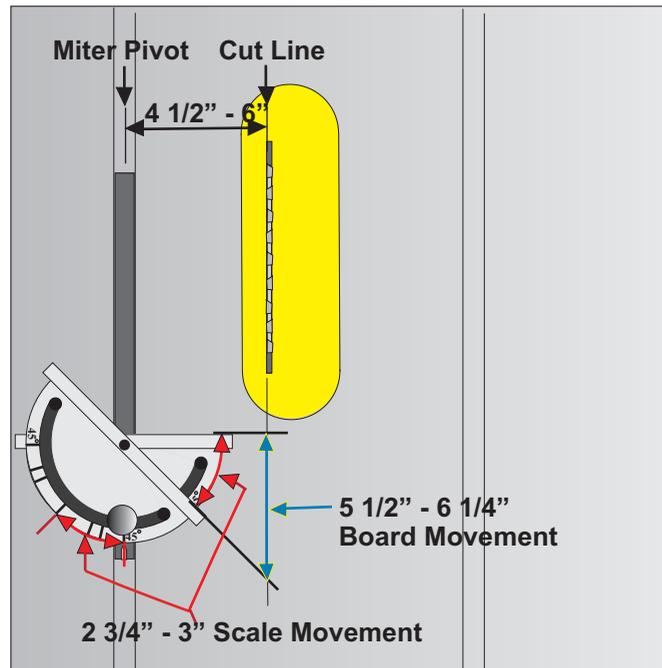
STANDARD MITER GAUGE SCALE INACCURACY

In the illustration to the right, a view of a typical table saw and a “standard” miter gauge is shown. Notice that the scale on the miter gauge is between the miter gauge pivot point and what I would call the “cut line” of the table saw.

When the miter gauge is pivoted from 0 to 45 degrees, the movement (shown in red) on the scale of the standard miter gauge will be around 2 3/4” to 3”, depending on the actual radius of the miter gauge.

Since the “cut line” of the saw (shown in blue) is further from the miter gauge pivot point, the actual movement on the “cut line” will be much greater than the movement on the scale.

The result of this design is an angle scale that has degree lines that are very close together, and is extremely difficult to set accurately. If you want to do precision work, you need an angle scale that is large enough to read. I strongly recommend that you consider a more accurate accessory than the miter gauge that came with your saw for all of your mitering work. After all, you can't cut angles you can't find!



MITER GAUGES CAN WORK BACKWARDS

Almost all miter gauges (and even some miter sleds) can be pivoted counter-clockwise to make a cut, as shown in the illustration to the right. In this configuration, the material being cut would be cut from the outside corner to the inside corner. This almost guarantees (since you are cutting against the grain of the wood on the part you will keep) that you will have tear-out on the finished cut, and that the inside corner of the material may be “blown out”.

If you want to “miter smart”, always cut your pieces as shown in the illustration below. By rotating the miter clockwise, you will be cutting from the inside corner to the outside corner, cutting with the grain. You will have almost no tear-out on the cuts you make, and the inside corner will not “blow out” as mentioned using the technique above.

MITER GAUGES PROVIDE POOR SUPPORT

With the material being cut resting on the table saw top, the force of the blade cutting through the material forces it downward on the saw top. This makes it hard to slide the material in a straight line as you make a cut. This also puts pressure on the material at the point where it meets the face of the miter gauge, which acts as a pivot point.

If the material is not held firmly in place against the miter gauge face, the result will be a movement of the material during the cut. The material can be pulled away from the face of the miter gauge on the outer end. The material may be pulled toward the blade, or you may have a combination of both. In any case, this movement will result in incorrect length(s) or angle(s), resulting in gaps in frame corners.

