

Making fixed Louvers with the Domino

by Gary Nichols

Our house has forty-five windows of varying sizes, and whether you figure two, four or even eight panels per window, that's a whole lot of louvers to make. And under most of these windows, are the baseboard heating units I recessed into the six inch stud walls, because louvered wooden wainscot looks a whole lot nicer than the standard "Institutional" surface-mounted metal cabinets. Add to that, louvered closet doors for six bedrooms, three and a half baths, plus laundry and mudroom storage. But this story almost didn't even happen. You see, while waiting for Domino's arrival & debating between it and the Leigh Frame Mortise & Tenon Jig, Leigh announced a new louver-cutting template for their FMT. Fortunately for me, I waited, because the Domino is so much more versatile. But suddenly, figuring how to make louvers with the Domino became a high priority.

So, just how do you override Festool's engineering and force a Domino to cut "crooked" mortises? Turned out that Domino's retractable indexing pins would become the heart of this scheme. Ever seen that little plastic jig with a pin at each end and a pencil hole in the middle for marking exact centers of boards? Well, think of the Domino just like that jig. You simply set its base on the stile edge, with one pin snugly straddling each side. Just remember to rotate the unit 90° when cutting the opposite stile. The photos show scraps of 1 3/8" and 1 1/8" thick interior door stock with 6mm mortises cut at the widest setting. I haven't done much with 5mm louvers on 3/4" or 20mm thick material for window shutters yet, but I do know that as the stock gets thinner, the mortise angle becomes flatter, too flat actually, and you'll need spacer strips along each side to get back to a good working angle. This will also improve stability of the Domino base sitting on such narrow stock.

To achieve a uniform spacing, stick a 6mm Domino in the mortise you just cut and slide the cutter base up against it for your next plunge. Make sure both pins are kept snug against the stile. Using a full Domino as a spacer places the bottom of the upper louver about even with the top of the lower louver, leaving little or no overlap. This may be fine for heating vents or closets, but if some amount of privacy is an issue, you can increase the overlap by milling the exposed part of the Domino thinner, thus decreasing the spacing between the louvers. Make sure to always insert this milled side toward the cutter base. I used a Forstner bit in my drill press and set the plunge depth to get a uniform thickness. In the future, I'll cut the mortises

deeper, offering more stability and less play in the spacer-Domino.

Adjustable louvers are cool, yes, but if you've ever tried maneuvering all those louver pins into their holes while assembling the stiles & rails before the glue sets, you'll appreciate the next few sentences. After cutting all the stile & rail and louver mortises, just glue up the frame without the louvers. It's that simple. Then sand, stain if you must, and oil-finish the louver stock and assembled frame separately. Now that the urgency of curing glue has passed, you can slip the louvers into the mortises, one at a time, at your leisure. Cut the louver stock to be slightly shorter than the opening plus the depth of one mortise. Then, slide completely into the mortise on one stile until it clears the other side, and then pull back out as you guide it halfway into the opposing stile. 5mm & 6mm louver slats are usually flexible enough to do this pretty easily. If the fit is exceptionally loose, a drop of glue should keep them from coming back out. I think starting next to the rails and working toward the center of the open areas is easiest. I ask for "quarter-sawn fir", but the local lumberyard bills it as "clear fir" and some boards do have the "quarter-sawn" grain oriented more on the edge than on the flat side. These are the ones to rip for the louvers, since that edge will become the flat side of the louver stock that will actually show in the finished project. Dimension the stock with your thickness planer to achieve a fit snug enough to hold the louvers in place, but not so snug that you can't slip them in the mortises without compressing the grain. And if you happen to have a Performax 16-32 drum sander with 220 or finer grit sitting around (and I do), don't hesitate to make your final passes with that. If you got it, use it, I always say. A 1/8" round over bit in my router table seemed to match the 3mm radius of the 6mm louvers pretty well. I actually got surprisingly good results just using my Radi-Plane on all four edges. Festool makes a 3mm round over bit that would work for 6mm louvers, but I need to purchase an 8mm bushing first. As far as using 5mm louvers in the 3/4"-20mm stock for window shutters, hopefully Festool's 2mm round over bit will do, since there is no 2.5mm listed.



Photo #1: As you can see, beveling the rail to match the louver angle exposed too much flat-sawn grain on a quarter-sawn project.

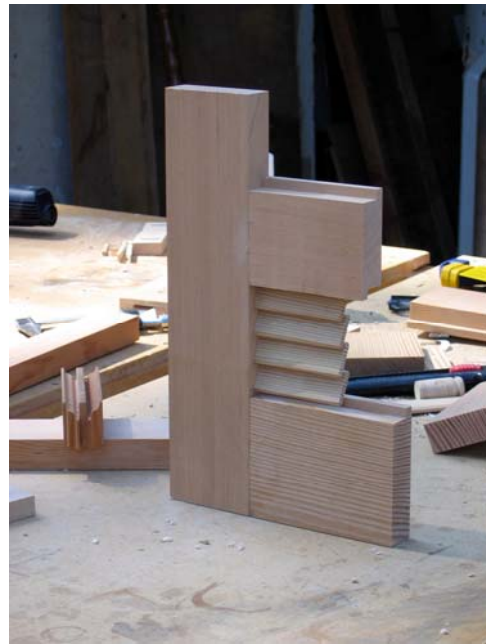


Photo #2 & #3: I then tried a rabbeted profile like our store-bought door. A little less rabbet, next time. The profile photo depicts the bottom and intermediate rails. Obviously, an actual 6' 8" door would have considerably more louvers between them.



Photo #4 & #5 show how the spacer-domino works.



Photo #6 shows the 6mm louver material with quarter-sawn grain after being sliced off a flat-grain board. The Radi-Plane that rounded the edges in lieu of using Festool's 3mm round over router bit in a router table. This spacer-Domino was a little loose & sloppy because so much of it was trimmed away to get a closer spacing. Cut your mortises deep enough that at least half of the spacer-Domino has a full shoulder.