

# Koscianski Storage Cabinets

Build Journal

## To-Be Finished Cabinets

Two cabinets 19" Tall by ~16.5" Deep and widths of 43" and 45". Steel, matte black base frames with adjustable felt feet. Naturally finished hard maple cabinets with single adjustable shelf. Soft-close cabinet doors, full overlay with vertical fluted fronts and routed pull recesses; top center. Coloring and finish to closely match Room and Board maple dining table recently purchased.



# Materials

S1 and rough-cut hard maple to be flattened and joined to make all cabinet panels and shelf. 1" x 1" X 16-gauge square tubing to be cut and welded into the base frame with 10-gauge steel tabs for cabinet mounting.





# Base Frame Construction

Steel cut to dimensions for each cabinet with mating 45-degree corners for the horizontal frame and stub legs at 90 degrees. 1" x 1" 10-gauge bases for each leg drilled for ¼" adjustable feet. 10-gauge tabs welded directly to horizontal frame for cabinet mounting. Finished with 4 coats of matte black paint and 2 coats of matte clear protective finish.



# Cabinet Builds – About working with the wood

All wood, and especially species like hard maple can either be purchased fully milled and mostly straight at a premium. But not all dimensions are available in this grade and despite the pre-milling and dimensional cutting, most pieces still have a warp, cut or bend in them.

Using S-1 or rough-cut dimensional lumber is a better option. There are no limitations to dimensions, but each board must be worked on all sides before using to build furniture. Advantages include dimensional variety and oversized base dimensions to allow for flattening/shaping.

The first step is to cut the raw lumber to dimensions close to final lengths and widths, but leaving plenty of excess on all sides to make sure the piece stays within final dimensions once it has been milled and planed.

Each board is first leveled on one side using a router sled and special carbide bit. This removes cups, warps and bows from one side of each board. Once flat, each board is then planed to the final thickness, skill-sawed to create a straight side edge and then further cut to a slightly wider than final width. This process produces perfectly flat and square boards on all sides, ready for joinery into the cabinet panels.



# Cabinet Builds – Wood preparation for panel builds

Boards milled, planed and skill-saw cut, ready for table saw cutting and joining into cabinet panels.





# Cabinet Builds – Interesting Wood Characteristics

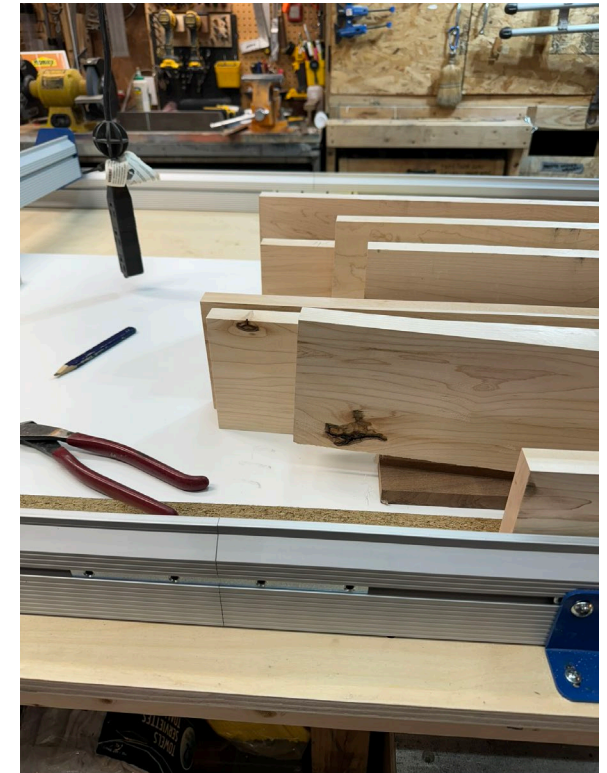
For this project, some of the boards selected have interesting properties that will provide a subtle unique character you will not find in store bought furniture ..



Near curly maple grain figuration (creates a sense of depth when finished)



Interesting grain interruptions in just one or two boards (these are not knots)

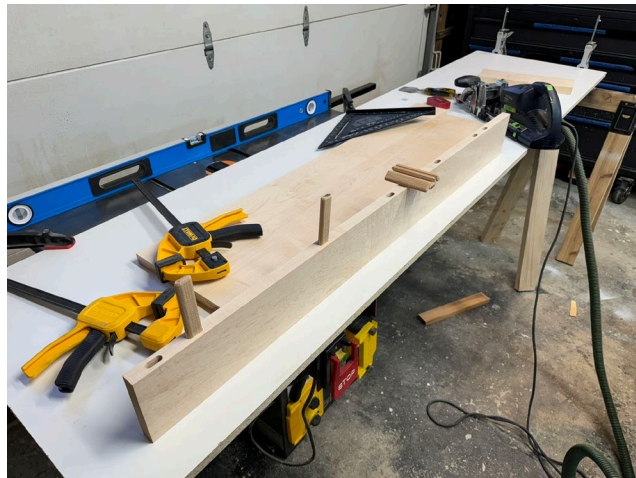


A few small knots that add just a bit of rustic to the overall contemporary cabinet style

# Cabinet Builds – Cabinet Panel – Planing & Joinery

Once every board has been leveled on one side with the router sled, the final thickness for each is then achieved by running them through a planer. Multiple passes are required for each board, making each perfectly flat.

Each board is then cut to near final horizontal dimension per spec, first with a skill saw on one side of each to establish a straight edge, and then the opposite side with the table saw. The boards are then mated and joined to create the rough panels and shelves needed for each panel.



Panel top board planed, cut dimensionally (width) and punched for domino joining



Joined panels with first sanding pass complete. Intentionally long for cutting post-join to spec.



Full set of panels and shelves for both cabinets (sans doors)



# Cabinet Builds – Pre-Assembly Layout and Finish Details

Before joining the panels to form the cabinets, the dimensions/fit is checked, and the layout is done for the router and interior details. This includes the cutouts for the rear panel, pin holes for the adjustable shelves and the reveal between the frame and the cabinet along the bottom. These details are cut prior to final assembly.



Checking square, fit and marking detail cuts/punches to be made prior to final assembly



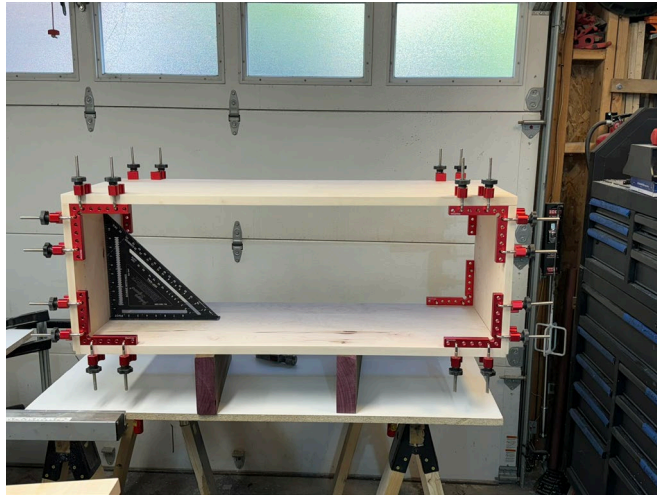
Details cut including inset for rear panel bottom side reveal and pin holes for adjustable shelves



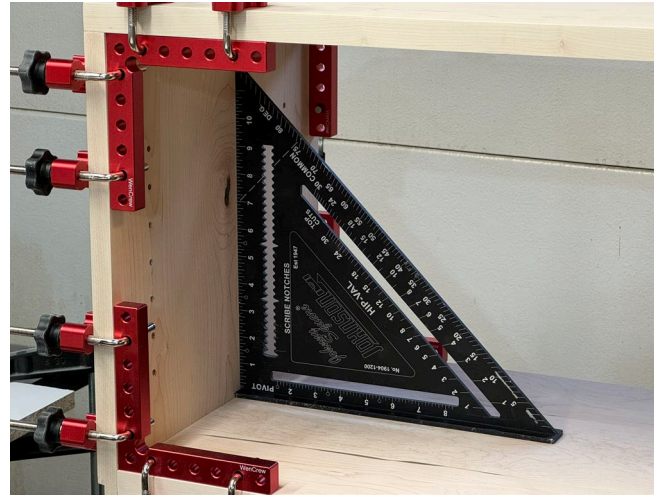
Each panel is sanded to 220 grit pre-assembly, making post glue-up finishing much easier

# Cabinet Builds – Final fit check, Domino Joins and Glue-up

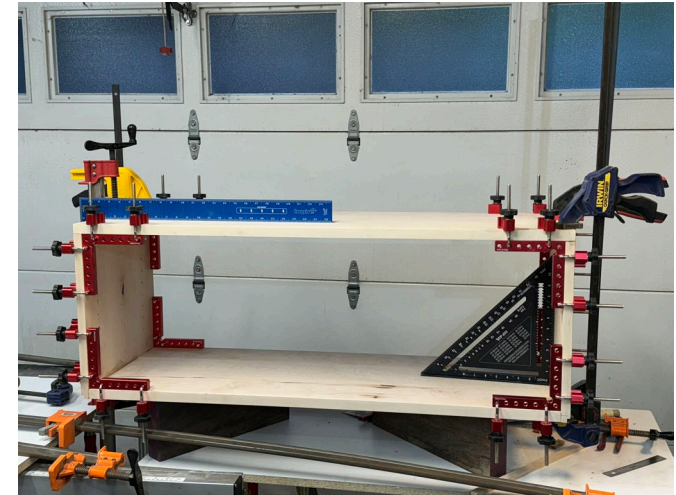
With the panels prepped, the cabinet shell is assembled prior to joining and gluing for a final fit check and square. Passing this test, the panels are punched for the domino joins (5 on each edge), glued together and re-clamped as quickly as possible and squared. The glued cabinet assembly cures overnight.



Assembled 43” cabinet box prior to joining and gluing to check fit and square



Every angle is checked, the jigs hold the trued-up panels to for the test and curing period



The joined and glued-up 43” cabinet box after initial clamping and squaring. Cures overnight.

Rinse and repeat for the 45” cabinet box