

MEASURING INSTRUCTIONS *



How To Accurately Measure Your Cabinets for Made-To-Fit Slide-outs

BEFORE YOU GET STARTED:

Measuring your cabinets for perfect fitting slide-out shelves is easy to do once you read and fully understand the easy-to-follow steps below.

First, we encourage you to print out these detailed instructions to use and reference while you are measuring your cabinets. *You should write the location and dimensions down as you measure each location so that you can quickly and easily reference them during the ordering process.*

WHAT YOU WILL NEED:

You will need a good sturdy tape measure that is accurate. Many tapes with excessive use get damaged and do not provide accurate/true dimensions. We recommend a stiff metal tape that is 1/2" or even 3/4" wide with at least 1/8" marked increments. A flashlight will also be invaluable to look for hidden obstacles in your cabinets. There is usually no need to empty cabinets to get accurate measurements, but you will definitely want to shift items a bit to be certain you are recording the correct dimensions and checking for obstacles not visible due to cabinets contents. These include gas and/or water lines, valves, electrical conduits, braces etc.

IMPORTANT NOTE: OUR SLIDE-OUTS ARE DESIGNED TO ATTACH TO THE BASE/FLOOR OF YOUR CABINETS AND/OR TO THE EXISTING FULL SHELVES YOU CURRENTLY STORE ITEMS ON. Typically this is referred to as "bottom-mounting." If a shelf in your cabinet does not exist you must add one. Or if you have a "half-shelf" in the back of your cabinet for any level, you will need to extend this shelf with additional shelving material that can be purchased and cut-to-fit at your local hardware/home center. See our FAQ for more details.

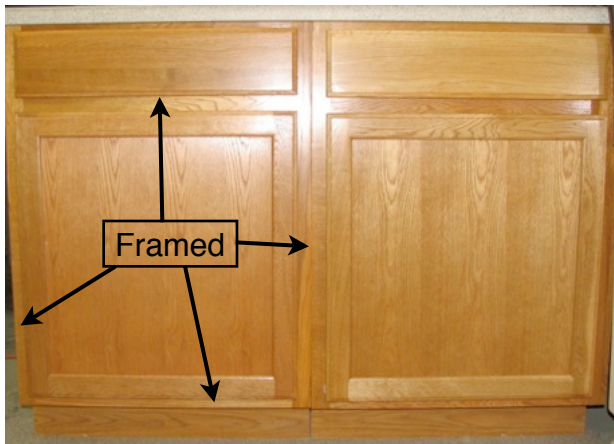


CABINET STYLE:

For the most part there are two (2) different styles of cabinets in most homes. When measuring, this will be an important difference to take note of. In either case the existing shelves in the cabinets should be at least 1/2" thick...5/8" or 3/4" is ideal.

FRAMED -

The traditional "framed cabinet" typically has a wood border that *frames* the opening of the cabinet (*see photo*). Sometimes in instances where the opening is very wide (28 to 42 inches) it will include a vertical center post, commonly called a 'stile', which divides the opening into two separate openings, usually with a door for each side closing in the center onto this *center post*.



IMPORTANT TIP: If your 'clear' cabinet opening is wider than 36 inches without a center post, you will require two (2) slide-out shelves mounted side-by-side, one behind each door. In this case measure the entire 'clear' opening, then, and only in this case, subtract 1/2 inch from your measurement and divide by 2. The resulting dimension is the 'clear' width of the opening behind each door.

If your cabinets are the framed style, the door hinges will either be attached to the front OUTSIDE surface of the frame or the INSIDE frame edge...and in some cases both. The hinges may not be visible from the outside when the doors are closed and may protrude into the opening....thus you will likely have to measure to them.

! IMPORTANT TIP: With a framed cabinet it is VERY common that the opening of the wood frame is narrower than the inside wall-to-wall compartment. For a slide-out shelf you ALWAYS want to measure the '**clear width of the framed opening at the narrowest point**' ... NOT the interior wall-to-wall dimension. If the edge of the door when opened reduces the size of the opening then take your measurement from the edge of the door not the frame.

FRAMELESS -

The other style of cabinet (see photo) growing in popularity in the U.S. is the "frame-less" (typically referred to as a European cabinet or *Euro-Style*). In most cases, but not all, this style cabinet offers shelf levels that rest on steel or plastic pegs or clips inserted into evenly spaced holes drilled into the interior walls of the cabinet. These allow the homeowner to adjust the shelves up and down. THIS HOLE SYSTEM IS ALSO USED IN SOME TRADITIONAL FRAMED CABINETRY.

Adjustable shelf systems could also utilize metal strips (called standards) secured to each wall front and back using metal clips for the shelf to rest on that can be adjusted.

The door hinges for this style cabinet are secured to the inside walls of the cabinet and the back of each door and are almost always NOT visible when the doors are closed. (See inset photo)



RECOMMENDATION: Be sure and review Tip #6 on the last page.

HOW TO MEASURE:

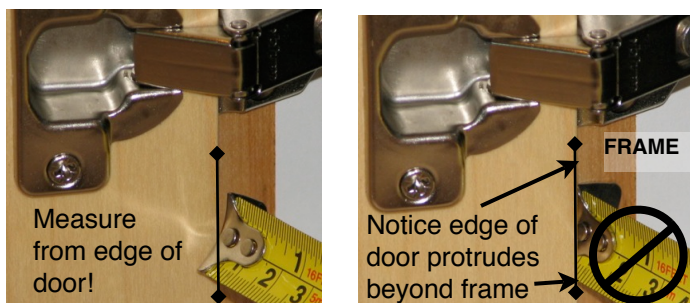
You will be taking and recording two (2) measurements/dimensions for each slide-out to be ordered; the 'clear WIDTH of the opening at the narrowest point' and the 'unobstructed interior cabinet DEPTH.' We will manufacture your slide-outs to the exact dimensions you provide...with a 1/8 inch clearance of the opening.

We can manufacture slide-outs for cabinet openings that are a minimum width of 6 inches and maximum width of 36 inches and will do so in 1/8 inch increments. Our minimum depth is 16 3/4 inches and maximum is 24 inches measured in 1/8 inch increments. During the production process the depth of each shelf will be adjusted to the nearest inch. The glide rails are manufactured and come every 2 inch increments in length for maximum extension in your cabinets.

The process for measuring framed or frame-less cabinets is virtually the same. A few differences are noted below.

MEASURING THE WIDTH OF THE CABINET OPENING -

First open the door of your cabinet to the position whereby the opening is at it narrowest. **With some hinge styles the vertical sides of the doors (at the hinged side) will actually protrude into the opening making the overall width of the opening slightly narrower.** (See photo comparison.)

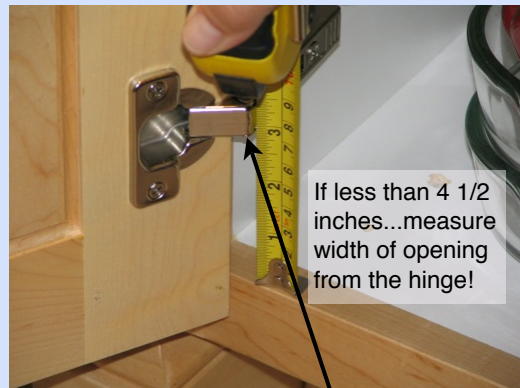
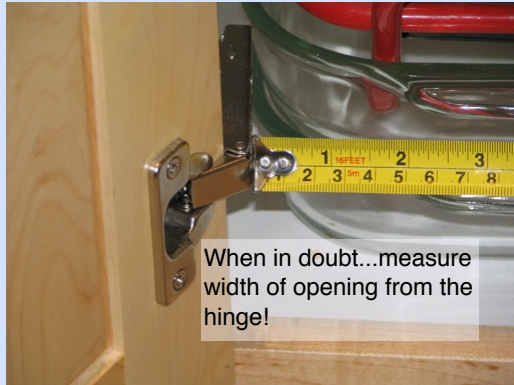


NOTE: You may have to open the door more the 90 degrees. See the Common Measuring Pitfalls section below for what to do when the door won't open at least 90 degrees due to the door knob or door striking an adjacent cabinet or appliance.



At this time you will need to take note of where the door hinge hardware is located and whether you need to measure from any part of the hinge mechanism or can ignore the hinge altogether when measuring the width of the opening.

First you need to measure from the cabinet floor/frame or the existing shelf surface up to the bottom of whichever part of the hinge protrudes the furthest into the opening...i.e. the hinge “elbow.” (If your hinge style is the type mounted on to the outside front of the cabinet and is visible when the door is closed, you can skip this step.)

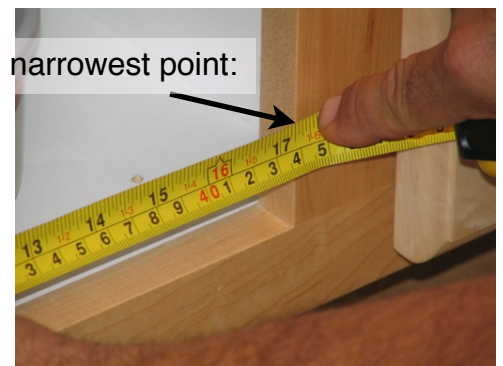
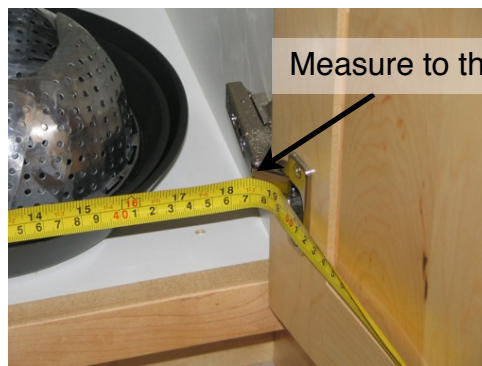


IF THIS MEASUREMENT IS MORE THAN 4 1/2 INCHES, THE HINGE WILL NOT BE IN THE WAY and under most circumstances will not need to be taken into consideration when measuring. You can measure from the edge of the door to maximize the width of the shelf. Please see Tip #6 on last page for more information.

NOTE: It is important to measure each location separately for each slide-out.

Now take your tape measure and measure the “clear” width of the opening AT THE NARROWEST POINT. Per the above instructions if your hinge height is less than 4 1/2 inches you will in most cases (see Tip #6) start with the end of your tape measure touching the part of the hinge that protrudes the furthest into the opening. Pull the tape measure across the opening to the other side...noting the exact measurement...at the narrowest point. In the case of double doors this measurement could be hinge-to-hinge or edge/corner of door on one side to the edge/corner of door on the other side.

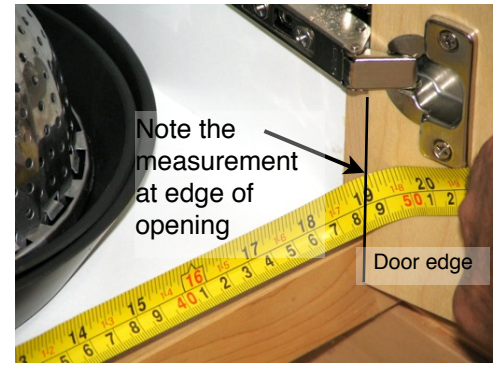
If your cabinets use the “traditional” style surface mounted hinges that are visible when the door(s) is(are) closed, your measurement will likely be from door frame to door frame.



If the height of the hinges of your cabinet are less than 4 1/2” (see Tip #6) or from the floor or shelf surface...measure the width of the opening from the point of the hinge that protrudes the furthest into the opening to the other side. In the case of double doors it would be hinge-to-hinge. For a single door cabinet it will be either from the hinge to the edge of the frame or the interior side wall if a frame-less cabinet. (See Exception point below.)

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EXCEPTION: For frame-less (Euro-style box) cabinets that have only a single door, hinged on the left or right, and ONLY in this case, you will need to subtract 1/4” from the “clear” width measurement you take before submitting your dimensions/order. This also applies X2 if you are measuring a compartment without doors or in the rare case you are actually measuring an opening that is actually wall to wall with no doors in the way.



If the hinges of your cabinet are $4\frac{1}{2}$ " or greater from the floor or shelf surface (see Tip # 6 on the last page)...measure from left to right edge of the opening.

! *IMPORTANT TIP: We manufacture the width of slide-outs to the opening of your cabinets in $\frac{1}{8}$ inch increments so please round down to the nearest $\frac{1}{8}$ inch. e.g. $23\frac{5}{16}$ " becomes $23\frac{1}{4}$ " or $16\frac{3}{16}$ " becomes $16\frac{1}{8}$ ".*

MEASURING THE INTERIOR DEPTH OF YOUR CABINET -

For the depth measurement you will want to "clear a path" from the front to back of the cabinets for your tape measure, and we recommend measuring both the right and the left side of the cabinet taking the smaller dimension. *It is usually not necessary to empty your cabinets.*

Measure from the back wall or "front" of any obstacle in the back of your cabinet that will limit the depth of the slide-out shelf...to the back of the face frame (at the front of the cabinet) OR the front edge of the shelf (which should be right behind the door when closed). *Round down to the nearest $\frac{1}{8}$ inch as well and record this measurement.*

NOTE: If necessary you can 'overhang' a slide-out one inch from the front edge of an existing shelf if it is set back from the front of the cabinet. Cabinet makers do this to sometimes accommodate door racks and other door accessory products.

The minimum depth we manufacture is $16\frac{3}{4}$ inches and the maximum is 24 inches. The glide rail systems come in two inch increments and we will adjust the overall depth to one inch increments so your slide-out will clear the door and not strike the back wall of your cabinet when pushed in.

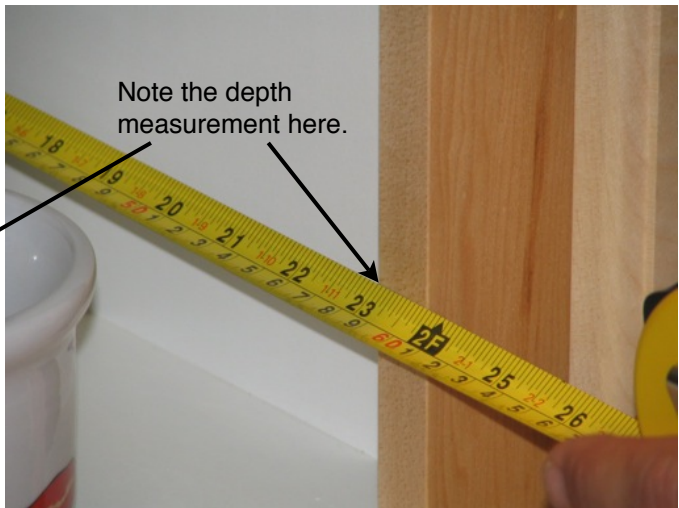
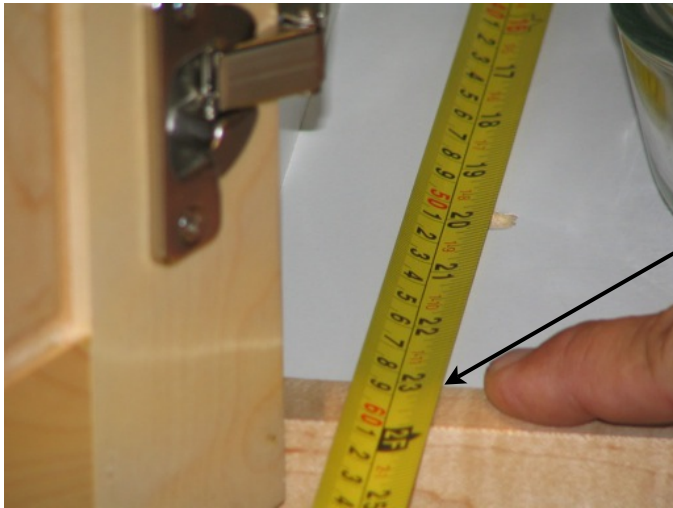
! *IMPORTANT TIP: Be certain to measure each and every location you plan to install a slide-out in. DO NOT assume the depths are the same. Be aware that often times there is a vertical or horizontal wood brace or valve, pipe or electrical conduit box that is secured to the back wall and must be the point you measure from for a proper fitting shelf.*



Measure on the left side



...and measure on the right.



Once you have measured both sides...use the smaller dimensions when placing your order.

IN SUMMARY -

If you have ever spent any time with an accomplished carpenter you would have heard this old adage: *'If you don't get anything else hear this, when working with wood measure twice...cut once!'* We will be doing the "cutting" for you so double check your measurements before ordering.

Remember, even if your cabinets do not look quite like the ones in these photos the measuring steps and principles are the same. We only need two (2) measurements...the clear width of the opening at the narrowest point where the slide-out will be installed and the unobstructed interior depth. Our goal is to manufacture for you the *perfect fitting* slide-out!

If you have any questions you may call our Customer Service Department.

COMMON MEASURING PITFALLS:

Here are some common things folks miss when measuring their cabinets for made-to-fit slide-out shelves.

1. The existing shelf and cabinet base could be warped or the base of the cabinet could be recessed down below the front frame. In either case you may need to do some 'shimming' with thin paneling material during the installation of your shelves.
2. On occasion an obstacle (conduit, electrical box, valve, brace etc.) inside the cabinet may force you to record a dimension smaller than the actual opening or depth. If this obstacle is in the back corner, you will have to decide whether to adjust the width or the depth measurement.
3. For obstacles that may hang down from above or protrude off the back wall (i.e. pipes, valves, etc.) you can use a coping or jig saw and easily trim away part of the back of the slide-out to allow the obstacle to clear (see photo right).
4. DOOR PROBLEMS - When measuring the width, you need to consider first if the door opens all the way. Check this, as it should open at least 90 degrees to the opening. If the door knob itself or another door, or an appliance etc. prevents the door from opening all the way you will want to adjust the width measurement taken and then when installing the slide-out justify it to the opposite side of the opening. This way, when extended, the slide-out will not hit the partially closed door (see photo sequence below).





The easiest way to measure and make this adjustment is to use a large angle square, placing it against the front of the cabinet extending out and sliding it to the door.

Take the width measurement at the point that the right angle hits the door. It will become obvious that your slide-out can only be this wide.

5. OBSTACLES INSIDE A CABINET - If an obstacle inside your cabinet will force you to reduce the width of the slide-out you install, you can simply use the same right angle square and measuring method used above. Just move the contents out of the way and place the right angle against the front of the cabinet with the other 'leg' of the angle protruding into the cabinet. Slide it over to the obstacle and take your widest width measurement at that point.

6. A FINAL WORD ON HINGES. If you have gotten this far you are demonstrating a keen attention-to-detail skill level.

Hidden or concealed hinges, which are also commonly called European style hinges, often times confuse people when they are measuring. Notwithstanding the above instruction, if you have this style hinge and you want the width of your slide-out for both levels in a traditional "under the countertop" base cabinet to be the same...you can take one additional measurement to determine if you can ignore the protruding hinge 'elbow' as far down as 2 1/2 inches off the floor or existing shelf of the cabinet.

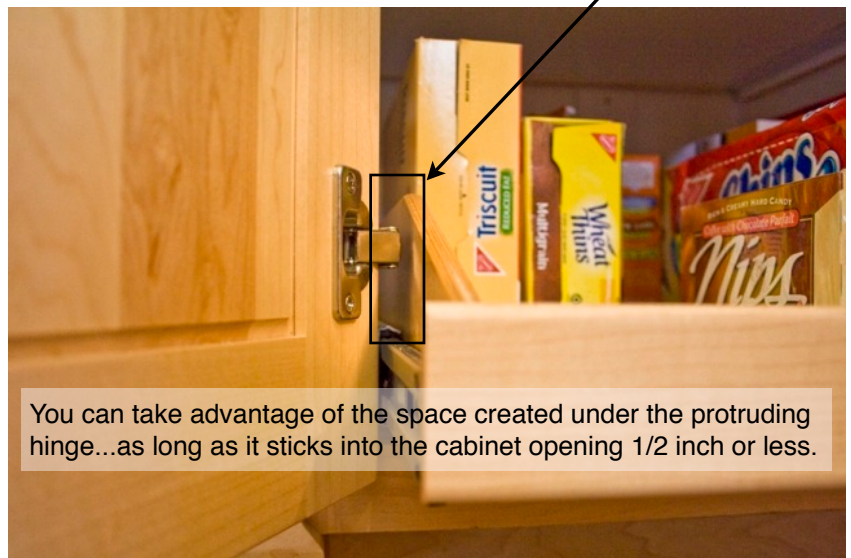


Because our rail system is 1/2 inch thick and is mounted on the side of the slide-out, there is an actual clearance zone above the cabinet rail member of nearly 1/2 inch wide that the hinge elbow can occupy without binding on the slide-out. *If the bottom of the hinge elbow is **not lower** than 2 1/2 inches from the base, or shelf* for that matter, and it does NOT



protrude into the opening more than 1/2 inch (see photo inset left)...you can measure the

opening of the cabinet at the narrowest point ignoring the hinge altogether. This extra step will gain a little extra space, but more importantly will create visual symmetry between the upper and lower slide-outs. This applies to both sides/ hinges in the case of a double door cabinet. The shelf side/rail of the slide-out will pass right by/under the hinge elbow!



You can take advantage of the space created under the protruding hinge...as long as it sticks into the cabinet opening 1/2 inch or less.