



COUNTERTOP INSTALL

How to Install a Countertop (DIY)

MN Countertop

Step-by-step instructions on how to install a pre-made plastic laminate countertop in your kitchen or bathroom.

Family Handyman

We'll show you five techniques for a great looking countertop installation. Buy the countertops premade, then install them yourself by following our foolproof step-by-step instructions. We'll walk you through everything you need to know to improve the look and feel of your kitchen with new countertops.

TimeA full day

ComplexityIntermediate

CostVaries

Prefab laminate countertops



Plastic laminate countertops

You'll save a lot of money installing prefab laminate countertops yourself.

Plastic laminate countertops have been adorning kitchen cabinets for more than 50 years—and with good reason. Plastic laminate is a tough, durable material that comes in hundreds of colors and finishes. When applied to particleboard or plywood underlayment by a production shop, this proven product is ideal for kitchens, bathrooms and other settings. By installing premade countertops yourself, you'll save 50 percent of what a professional installer would charge.

In this article, we'll show you how to measure, buy and install your own countertops. Our instructions include how to make chip-free cuts, tight-to-the-wall scribes and nearly invisible joints for a professional looking job.

The easiest approach is to order custom-made laminate countertops (ours cost about \$30 per running foot) from a local home center, full-service lumberyard or cabinet/countertop shop. You can also buy premade take-it-with-you stock tops (in limited colors) at many home centers, for about half the price of custom countertops. Shop for the latest in plastic laminates on manufacturer Web sites.

You can also view product samples at home centers and countertop suppliers.

3 special tools make all the difference

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- A belt sander with an 80-grit belt is a must for removing material along the backside of the backsplash (Photo 7).
- You also need a scribing tool (Photo 6) to make accurate marks along irregular walls.
- A 10-in. mill file and a smaller half-round file will help you get perfect fits for end caps (Photo 12).
- Besides these special tools, a 10-point or finer handsaw, drill, jigsaw, masking tape and tape measure are all you need.

Measure carefully before you order your new prefab laminate countertops



Photo 1: Measure along the finished edge

Measure the hollow space under your new countertop for the correct build-up height. Your manufacturer can supply build-up strips or you can cut them yourself. Our measurement was 3/4 in., so we used 1x2s as build-up strips.



Photo 2: Attach the build-up strips

Screw the build-up strips to the tops of your cabinets (sides and along the back) using 1-1/4 in. drywall screws. You may not need them on the cabinet end where the manufacturer has installed a finished end.



Photo 3: Test fit the counter corner pieces

Slide the counter corner pieces into position first to test fit for scribing. Since our corner cabinet had a solid top, we cut inspection holes to tighten the miter bolts (next photo).

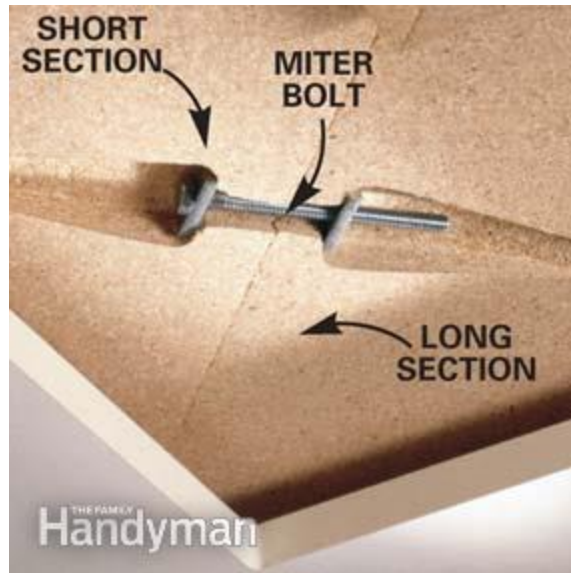


Photo 4: Hold the counter corners together

Temporarily bolt the two corner pieces together from below. Use the special miter bolts (above) that come with the countertop.



Detail of miter bolts

These special miter bolts temporarily hold the countertop corners together.

Before ordering new countertops, you'll need to make accurate measurements of your cabinet layout. A word of warning here: If you have a U-shaped kitchen with two large miters and have never installed countertops before, you may want to hire a pro. Configurations like this require you to scribe three walls at one time. But if you have only one inside corner as we did, the project is well within the skill level of the average do-it-yourselfer.

Make a sketch and then, starting from the back walls, measure the exact lengths from the walls to the edge of each run of cabinets. Add $\frac{3}{4}$ in. to the length of each section to allow for overhangs. Allow an extra inch to protrude into a freestanding range space. You'll trim it off later for an exact fit (Photo 11). Order a laminate end cap (or make your own, Photo 12). If you need to butt the countertop into a side panel like a pantry or refrigerator cabinet, add an extra 1 in. for notching (Photos 14 – 16). This will give a more finished look than a straight cut. Also measure the depth of your base cabinets. Standard laminate tops are 25 in. deep. Check to make sure you'll have at least $\frac{1}{2}$ -in. overhang beyond all the drawer fronts.

Most manufacturers will supply preshaped and preglued iron-on end caps to cover finished ends, but I prefer to order a little extra plastic laminate that I can score and cut and glue into place with contact cement for a longer-lasting grip. Either system works fine, but if this is your first go at this type of project, you'll find the iron on end caps easier to install. Just keep in mind you'll need to do a bit of filing in either case to shape the end caps. Another important consideration is corner and edge style. To fit our design requirements, we chose square corners for all our edges. If you want any rounded corners on exposed edges, discuss this with your supplier ahead of time and ask to see sample profiles.

You'll also need build-up strips (usually 3/4 in.) (Photo 2) to support the top across the cabinets. At first glance, countertops appear to be 1-1/2 in. thick, but the substrate that the laminate is glued to is actually just 3/4 in. thick, as the underside reveals. Applying additional build-up strips to the top of your cabinets will fill the void at support points and elevate the countertops above top drawers. When ordering, ask for build-up strips, but keep in mind you can easily make your own from scrap 3/4-in. plywood or 1×2 pine.

Once you complete your measurements, take your drawing to your countertop supplier and discuss your plan to make sure you've covered all the bases. If you don't have a home center near you or your lumberyard doesn't provide this service, check the internet for "Countertops." When you place your order, ask about delivery to your home. In most cases, the odd shapes are unwieldy and won't rest securely on top of the family car.

Measure at Least Twice to Locate the Sink

You can get into trouble here if you don't think through three important steps:

- Center the sink over the sink base cabinet.
- Set the sink back far enough to clear the cabinet front.
- Cut the hole smaller than your sink's rim.

For most stainless steel sinks, it's safe to flip the sink over and trace around it and then make another line 1/2 in. inside the trace line (Photo 8). The exception here is an asymmetrical shape where the left side is different from the right side. Check this carefully, especially if you're reinstalling your old sink and no longer have the original template (most new sinks come with a full-size template). If you're installing a cast iron enameled sink, you should make an even smaller cutout, leaving more countertop to support the weight of the sink. Usually most cast iron sinks will allow you to cut inside the traced perimeter at least 1 in. Once you've traced the outline, draw another line inside the first, drill your holes (Photo 9), then flip the countertop over, transfer the lines (Photo 10) and cut out the top.

Scribing your backsplash to the wall is the most crucial step



Photo 5: Tighten the miter bolts

Make sure the miter is flush on top as you tighten the bolts. Once the bolts are tight and the top is flush, slide the countertop into the corner and examine the fit along each wall.



Photo 6: Scribe the backsplash

Set your scribing tool to the width of the widest gap along each wall. Apply masking tape to the top of the backsplash and use your scribe to mark the entire length of each countertop. Scribe to each wall, adjusting your scribing tool each time for the largest gap on that wall.



Photo 7: Sand to the scribe line

Belt sand to your scribe line using an 80-grit belt. Make sure the top is clamped down to your work surface to keep it from “walking” away from you as you sand. Sand only to your scribe line, keeping the belt sander at 90 degrees or more to the top of the backsplash as shown. Reposition the top and rescribe and sand if necessary.



Photo 8: Trace around the sink

Flip our sink upside down into position over the sink cabinet. If your sink is not symmetrical, use a template. Mark around the perimeter, then mark another line 1/2 in. inside the perimeter (1 in. for cast iron) you've just marked. This will be the cutout size.



Photo 9: Drill holes inside the template

Drill 1/2-in. dia. holes about 2 in. from each corner. The edges of the holes should just kiss the inside edge of the inner line.



Photo 10: Connect the drill holes

Flip the top upside down. Connect the dots. The lines should touch the outer circles of the 1/2-in. holes. Use a coffee mug to round the corners. Cut out the top from the bottom side with a jigsaw. Set the sink into the opening to check the fit.

You can start with any section of countertop, but it's best to begin with the longest corner section because the other sections often join or relate to this piece. Our long section had a number of fitting challenges—especially the corner. To get an accurate scribe to the wall here, you need to temporarily join the corner (Photo 5).

To do this, install the miter bolts as shown in Photo 5 and then slide the top into the corner for a test fit. Before you scribe, align the front edges of the countertop parallel to the cabinet fronts. Close gaps where the backsplash meets the wall if possible. Scribe the top as shown in Photo 6. Keep in mind you can remove up to 1/2 in. from the backside of the backsplash to fit your wall. This is more than enough in most cases, so don't panic if your adjoining wall looks out of whack.

Next, sand down the back edge (Photo 7) of the backsplash to your scribe line with a belt sander. Tip the belt sander slightly to undercut the backsplash for a tighter fit. Set the countertop back against the walls and check it for fit. It should fit on the first try, but you may need to do some additional sanding for a tight fit.

Next, remove the miter bolts and separate the sections so you can cut the sink opening (Photos 8 – 10).

Tip: Be sure you have a build-up strip under the backsplash behind the sink and at each side of the sink base cabinet. The full weight of the sink needs continuous support.

Cut the Opening from the Bottom Side

Use a jigsaw with a medium-cut blade. The blade cuts on the up stroke, so do all your cuts from the bottom of the countertop to minimize chipping. Be sure the cutout is supported when you reach the end of your cut so you don't break an edge. After the hole is cut, set the sink into the opening to check the fit. Do a bit of trimming if it binds as you drop it in.

Use a handsaw to cut the countertop to length



Photo 11: Use a handsaw to cut the countertop

Trim the end of the countertop with a sharp 10-tooth-per-inch handsaw. First apply masking tape over the edge and then mark the cutoff line with a pencil. Cut 1/16 in. outside the mark and then belt-sand to the line. Next, glue (use carpenter's glue) and clamp a buildup strip onto the underside of the top and flush with the edge.



Photo 12: File the end cap

Cut and glue the end cap for your trimmed end. Use a fine mill file to fine-tune the end cap so it conforms to the shape of your countertop. Use a half-round file for inside curves.



Photo 13: Caulk the miter joint

Squeeze a bead of siliconized acrylic adhesive caulk onto the edge of each miter joint and then fasten the countertop sections together as before. Be sure the tops are flush as you tighten the bolts.

Before we could assemble the miter joint, we had to cut the short section of the countertop exactly flush with the cabinet end (Photo 11) to make room for the range. If you're skilled with a circular saw, you can make this cut from the underside with a 40-tooth carbide blade, but it's risky. One false move and you've got another workbench top! Why take chances? A sharp handsaw will give you a nice, slow, controlled cut and time to react if the cut is straying from your mark. *Use a traditional saw that cuts as you push the blade away from you.* Press masking tape over the area you plan to trim.

The masking tape serves a dual purpose here: It lets you easily see your pencil mark and it reduces chipping of the laminate as you cut. After the cut, use a belt sander to sand right to the line. Make sure you've made a square edge. Next, glue a build-up strip to the bottom flush with the newly cut edge and clamp it in place.

Once the glue is dry, you can apply matching plastic laminate over this built-up edge. If you don't have a precut end cap, cut one from your extra piece of laminate. Make a couple of practice cuts with a laminate cutter (Photo 12) before you try the real thing. Set your laminate on scrap wood (not on your new countertop!) and draw the shape of the end cap plus 1/4 in. extra on both the top and front.

Score the top several times to cut through the laminate, using a straightedge as a guide. Be careful near the corner where the backsplash section leaves a right angle rise. It's easy to break this little chunk off.

Apply contact cement to each mating surface and let it dry to the touch (about 20 minutes). Then position the end cap even with the bottom edge of the build-up filler strip and press it firmly into place.

Using a dry rag, firmly wipe the surface to further press it for a good bond. Now file the end cap flush to the countertop (Photo 12). Take your time with slow, controlled strokes. When the edge is almost flush, slightly bevel the end cap to remove sharp corners that could snag a dishcloth later. Finally, push the sections back together, apply caulk and join the miter (Photo 13). Then install the miter bolts using the method shown in Photos 4 and 5.

Cutting a return



Photo 14: Scribe the overhang

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Set your scribe to the overhang dimension. Use this setting to scribe the left side of the top for the return .



Photo 15: Mark the left side of the countertop

Scribe the left side of the top, then cut along your mark with a handsaw, leaving the front edge to nestle around the end panel and create a notch return.



Photo 16: Test fit the countertop notch

Check the cut for fit and sand if necessary. Use contact adhesive on the exposed notch edge and on a small piece of laminate. Once the adhesive is dry to the touch, press the laminate piece in place and file the edge for a clean, precise fit.

You may not have to make a “return” cut in your countertop like the one shown in Photos 14—16. If you do, follow the photo sequence. Then cut and glue a small piece of laminate to the exposed edge.

Although we made the countertop flush with the cabinet side (to accommodate the range, Photo 14), you may have to adjust your scribe to allow for an overhang (Photo 15).

Use steel angles to anchor the top



Photo 17: Attach the countertops to the cabinets

Screw the countertop to the cabinet sides using 1-1/2 in. steel angles with 5/8-in. long No. 8 screws. For a tight fit, screw the angles to the cabinet first and then draw the top down to meet the steel angle with the second screw.



Photo 18: Caulk along the backsplash

Pull the colored silicone caulk tube nozzle in one continuous motion along the seam between the backsplash and the wall. Use just enough to fill the gap, then smooth the bead with a moist rag. Use a color-matched siliconized latex caulk for best results. It's paintable and cleans up with soap and water.

Professional installers vary greatly in their methods of fastening countertops to base cabinets. Some just glue them down with construction adhesive, while others screw through the cabinet corner braces or sides into the top. Using 1-1/2 in. steel angles like those shown in Photo 17 is foolproof and simple.

You can buy them at any hardware store, but don't use the screws provided. Instead, buy 5/8-in. long No. 8 screws. I like to place them a hair lower than the top of the cabinet (or build-up) and then draw the top down tight with a screw into the underside of the countertop. Use as many angles as it takes to get a solid installation. Figure on using four every 3 ft.

Good Care Means No Harsh Cleaners

To get the most life from your new countertops, follow these simple rules:

- Never use the countertop as a cutting board.
- Never use bleach or abrasive cleaners. Instead, use products like Fantastic, Formula 409 or Pine-Sol applied with a soft cotton cloth.
- Avoid setting anything hotter than 140 degrees F. on your countertops. You could burn the laminate or break the glue bond below.

Required Tools for this premade countertops project

Have the necessary tools for this DIY project lined up before you start—you'll save time and frustration.

You'll also need a specialty tool: a laminate cutter

Required Materials for this premade countertops project

Avoid last-minute shopping trips by having all your materials ready ahead of time.

Here's a list.