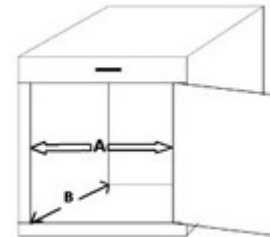


For all you handy and semi handy types looking for a great do it yourself home improvement project. Here is your chance to be a hero. Forget those kitchen gadgets and other kitchen accessories. Here is the information you need to measure and install our custom pull-out shelves or sliding shelves in your kitchen, pantry, and bathroom cabinets.

**Measuring guide**    **What you need to know to measure for sliding shelves**

**Installation Guide**    **Now you have your pullouts, here's how to install them**

### Measuring guide



#### Shelf Width

Shelves that Slide are custom made in 1/16" increments in width to the dimension that you order. We always use the cabinet dimension when referring to our shelves. The actual size of the shelf we will make is 1" less than the size of the cabinet opening. This is to allow for the sliding shelving systems hardware. The width dimension that is required is the clear cabinet opening (dimension A). This is usually the distance between the cabinet face frames. This dimension may be smaller due to any intrusions into the cabinet opening such as hinges or door placement. It is also important to check to make sure the door opens far enough, at least 90 degrees. In some instances the door may infringe on the opening more when it is fully open. This reduced dimension is the best one to use. Always give us the clear cabinet opening when ordering and we will adjust for the hardware. The maximum width for our pull out shelves is for a 39" cabinet opening.

#### Shelf depth

Shelves that slide sliding shelves come in depths from as small as 12" ( actual size 11 3/4" ) to as large as 22" (21 3/4") in 2" increments. As you can see from the previous examples the actual sizes for the shelves are 1/4" less than the listed size. A standard kitchen cabinet uses a 22" shelf and a standard bathroom takes a 20" shelf. If you do want shelves for a deeper cabinet, send us an email and we will give you a quote. To measure for pull-out shelves simply check the depth from the inside edge of the cabinet face frame (the back side) to the back wall of the cabinet (dimension B). Watch out for any protrusions such as pipes or electric wires or outlets and adjust the size accordingly. Sometimes it is better to make a pullout that is not as wide but can then be full depth rather than a shelf that is full width but 3" to 4" shorter. If you have a no shelf rear socket (see below) installation and the cabinets are over 24" deep you will need to special order deeper shelves on longer slides. Slides up to 31 1/2" long are available.

### **Existing Shelf Type**

There are three potential mounting arrangements for a sliding shelf. Existing full shelf, a half shelf, and no existing shelf.

#### **Full Shelf - 4 brackets**

A full shelf is pretty much as it sounds. It is a shelf either permanently mounted or on adjustable hardware or the bottom of the cabinet. It runs the full depth of the cabinet and from sidewall to sidewall. This is perhaps the easiest installation available and also the strongest. The drawer slides will have four "L" brackets attached and these "L" brackets are secured to your existing shelf or cabinet floor. We use a specially made bracket that is designed for this purpose. It is suggested that if the cabinet has adjustable shelves and if the hardware for this is plastic, the hardware should be replaced with metal hardware. It is also necessary to secure the back of adjustable shelves so that they can not tip up when the sliding shelf is extended. This is accomplished simply by inserting a couple of screws in the back or side walls with the heads of the screws protruding enough to hold the shelf down and prevent tipping when the slider is extended. If this is your set up specify full shelf on the order page.

#### **Half Shelf - 2 brackets**

Many newer cabinets come with a half shelf. This is a shelf that is usually 9" to 12" deep at the back of the cabinet. You will use this half shelf to secure the back part of the sliding shelf while the front of the sliding shelf hardware will attach to the cabinet face frames. The slides will have two "L" brackets in the rear to attach to your half shelf. If there are doors or hinges that protrude into the cabinet be sure to let us know the difference between the cabinet face frame dimension and the clear cabinet opening so we can include the proper spacers. In other words if you have a 15" opening and the shelf needs to be 14 7/8" because the hinge sticks out 1/8", we can include a 1/8" spacer for you to put between the slide and the cabinet face frame. This installation is very solid as long as the face frames are a hardwood and not a particle board. We suggest reinforcing particle board face frames with a hardwood piece placed vertically or installing a full stationary shelf to mount the slider to. Make sure the half shelf is secure so that it will not tip up when the sliding shelf is extended. See full shelf section for tip on screws in the back wall.

#### **No Shelf**

Just as it sounds the no shelf installation is for locations where you want to install a Pull Out Shelf and there is no existing shelf. We do not recommend no shelf installations for locations where a significant amount of weight is involved such as pantries. It is a very acceptable installation for bathroom cabinets where weight is not a factor. There are two types of no shelf installations. The first is with rear mount sockets. Plastic sockets are mounted to the end of the sliding hardware and are attached to the cabinet's back wall. The front of the slide is attached to the cabinet face frame as with the half shelf installation. The second method of installing with no shelf is to side mount. Spacers are used to attach the slides directly to the cabinet sidewalls. The sidewalls must be thick enough so that the screws do not pop out to the outside. If you are installing a series of shelves in one cabinet it may be better to cut a piece of wood the same thickness as the side to build it out as needed. If this wood is mounted vertically from the base of the cabinet up the installation can be very sturdy and support higher weight items such as canned food in a pantry. The same requirements for measuring apply for the no shelf install as they do to the half shelf installation. Make sure to order the spacers that you need when placing your order.

## **Installation Guide**

Looking for a do it yourself home improvement project to make your life easier? Here is what you need to know to install our custom made pull out kitchen shelves. There are four ways to mount Shelves That Slide into your cabinet. The first and most common is mounting on an existing full size shelf or cabinet base. The second is mounting to an existing half shelf that is 6" - 12" deep. The third is to mount to the rear wall with sockets. The fourth method is mount to the cabinet side walls. All of these installation methods have similarities. We will cover the basic steps first, then you can go on to the specifics for your method of installation.

### **Use the shelf**

The number one tip is to let the shelf be your tool for setting the slides. There are points in every method of installation that will be easiest to accomplish when you use the shelf as your placement guide. The drawer slides that we use have a control side and a free side. The right side slides are the control side, the track that the wheel rolls in is a captive one. The metal is bent around the wheel and the wheel will only track in that groove. The left side slide is the free side that allows for adjustment of the assembly. For this reason it is very important to pay attention to the left side slide. Any problems with slide alignment will be evident here, the right side will align itself.

### **Full shelf installation**

The easiest and usually strongest method of installing Shelves that Slide is when you are mounting onto a full depth existing shelf or the cabinet base. The first thing you need to consider is the existing shelf permanent or is it adjustable. If it is a permanent shelf you can go straight to installing the slides. If it is adjustable you need to look at two things. The first is what are the clips or pins that are holding it up made of? If they are plastic you need to replace them with metal clips or pins. The front mounting of the shelf will be subjected to twice the weight it is now exposed to when to extend a loaded shelf. The second consideration goes right along with the first in that when the loaded shelf is extended it will want to lift up in the back. This is easily remedied by place a couple of screws in either the back or the side walls (which ever is thicker, but don't go through to an exposed wall) just above the existing shelf and leave the head sticking out far enough to hold the screw down.

### **Installing the slides**

For a full shelf installation you should have two "L" shaped brackets on each cabinet slide. The wheeled end of the cabinet part of the slide is the front. Set the slides onto the existing shelf or cabinet base at the approximate width of the sliding shelf. Engage the shelf slides into the cabinet slides by setting the wheeled end of the shelf slide over the wheeled end of the cabinet slide. The most important side to get in place is the right side. You can always slip the left side into place after getting the right side in properly. Insert the shelf fully into the cabinet and align the front of the shelf for squareness and proper setback. The proper setback depends on your cabinet depth but it is usually about 1/2" to 3/4" back from the inside edge of the cabinet face frame. Get your screwdriver ready! When you have the shelf adjusted press down slightly and slide the shelf forward just far enough to expose the rear brackets. Insert a screw in one of the slots in the right rear bracket. Use the hole that goes side to side so you can adjust it later, tighten moderately. Now slide the shelf back into place and check the alignment. When it is adjusted properly slide the shelf out again to expose the rear bracket and place a screw in the opposite side slotted hole in a slot that goes from left to right and tighten moderately. Again slide the shelf in and check

alignment. If all is well you can carefully slide of the shelf without disturbing the position of the front brackets. This may take a couple of tries. Install screws in the front brackets the same as you did for the rear brackets. Insert the shelf again and check alignment. Remember to pay careful attention to the left side slide if the gap is too large in the rear the shelf will roll great but as soon as you add weight you will get a bump when you slide it out. After you get everything aligned you can remove the shelf and install a screw in the center hole of the bracket to lock it in place, two screws per bracket is all that is needed. Congratulations your shelf is done!!! Well almost, see plastic thing.

### **Half shelf installation**

The second method of installing sliding shelves is also the second best and the second easiest. You will need a small level, preferably one with a magnetic strip on one side. Check the existing shelf to make sure it is secure and can not lift up. Also check to make sure the hardware that supports the existing shelf is metal. If you have plastic hardware and plan on loading more than lightweight items into the shelf you will have to replace the hardware with metal. The slides for your half shelf installation will have one metal "L" shaped bracket mounted toward the rear. The end with the wheels is the front! If you have brackets in the rear and front, the front ones will not be needed and should be removed. Set the rear bracket on the existing shelf and place the front edge of the slide against the cabinet face frame, back about 3/16" from the front. Place your level on the slide and level it. When you have the slide level mark the location of the front hole in the slide. You can then measure the height and make a corresponding mark on the other side face frame. It is best to drill a small pilot hole to prevent splitting, before screwing the slide in place. After you have the front of the slides attached you can set the shelf in place by lifting the wheels on the rear of the shelf slides over the wheels on the front of the cabinet slides. Pay careful attention to the right side slide. Insert the shelf all the way into the cabinet and align the shelf to be square with the cabinet front. If there is too much space between the cabinet face frames you will need to insert spacers or washers to build out. You can order spacers from us in 1/8", 3/8", and 1/2" sizes. You may also be able to find something similar in a local hardware store. Get your screwdriver ready! Check the alignment of the left side slide and when it is properly aligned press down slightly on the shelf and extend it far enough to see the rear bracket. Place a screw in one of the slotted holes and tighten moderately. Reinsert the shelf and check slide alignment. When alignment is correct repeat the process of extending the shelf and insert a screw in the other side's bracket. Again insert the shelf and adjust as needed. When everything is aligned extend the shelf again and place a screw in the center hole of the bracket to lock it in place. Congratulations your shelf is done!!! Well almost, see plastic thing.

### **Rear mount sockets**

Rear mount sockets are a great alternative mounting for shelves where there will not be much weight. They are perfect for adding a shelf in a bathroom cabinet. The main limitation is if they are loaded with a lot of weight they tend to only be good for a year or two before they succumb to the stress. The first step is to determine the height that you want the shelf. Make a mark on both cabinet face frames for the bottom of the shelf. Insert the cabinet slides partially into the plastic sockets (you must have specified a rear socket installation when ordering) note the brackets are different for left and right sides. Attach the front end of the slides (the end with the wheels) to the cabinet face frame where you marked. You will need to push the slide slightly against the back wall of the cabinet to get the socket seated to the needed depth. Install the shelf by lifting the rear

end of the shelf slides (the end with the wheels) over the wheels on the front of the cabinet slides. Slide the shelf in completely and align it to be square with the front of the cabinet. Now comes the fun part. Make a line on the back wall to mark the position of each slide for the horizontal placement. You can now remove the shelf and place a level on the cabinet slide. Align the slide with the previous line that you made and level the height. Now you can either install one screw in the socket or mark another line for the vertical position. Repeat this process for the other side and after you have one screw in each socket reinstall the shelf and check for proper operation. Once you have the shelf adjusted, install at least one more screw in each socket. If you are having trouble getting the shelf to slide smoothly make sure the slides are parallel to each other and not twisted. Congratulations your shelf is done!!! Well almost, see plastic thing.

### **Side mount method**

When you need more weight capacity than the rear socket method can provide and you either don't have or don't want full or half shelves in your cabinet, the answer is side mounting. We can provide spacers to install the cabinet slides to the cabinet side walls. The problem is the cabinet side walls are usually not more than 1/2" thick and there is about 1" of space or more that needs to be spaced out. Leverage will lead to this being a weak installation. However if you can install vertical strips of wood on both sides (two on each side, one near the front and the other near the back) that provide the proper filling to match the space behind the cabinet face frame, a side mount installation can be the strongest and most space efficient installation. It is best to use a piece of wood the same thickness as the space behind the face frame that runs from the bottom of the cabinet to above the height that you want the shelf installed. You can glue and screw this piece of wood in place to make a secure attachment. After the wood is installed you can measure up and make a mark where you want the slides installed. Simply screw the slides in where marked and you should be able to install the sliding shelf. Just lift the rear end of the shelf slides (the end with the wheel) over the wheels on the front end of the cabinet slides. Insert the shelf fully and check for alignment paying careful attention to the left side alignment, adjust as needed. Congratulations your shelf is done!!! Well almost, see plastic thing.

### **Plastic thing**

Finally we come to that white plastic thing. That thing is a door protector. There is one door protector per shelf included. If you have a cabinet with two doors closing on one shelf (a door on both the left and right side with no center divider) you will need two door protectors per shelf. Please request the extra door protectors under special instructions. No door protectors are needed for the economy shelves due to the extended front wood trim. The door protector is mounted to the side of the shelf. The purpose of the door protector is of course to protect the door. The plastic sticks out about 1/16" more than the drawer slide to keep you from scratching the door in case it is not opened fully before sliding out the shelf. Just screw the door protector to the side of the shelf (one screw). Watch for hinge clearance and if the door has a recessed panel make sure you mount the door protector as low as possible.

### **Disclaimer**

This page is offered as a guide for installing a pull out shelf and it is not intended to offer every detail for every possible installation. It is expected that the home improvement do-it-yourselfer has sufficient knowledge as to judge the soundness of their installation of kitchen and bathroom shelves.

Because it always helps to have another viewpoint on home improvement and shelving systems installations. Here are some installation instructions from a customer

My assembly instructions follow. I had a full non-adjustable bottom shelf in my cabinet, so I only wrote the instructions for this option.

### **FULL SHELF INSTALLATION**

The number one tip is to let the installed right side cabinet guide be the control for installing the left side cabinet guide. The right side sliding shelf slide has a bent edge around the wheel track and the wheel on the slide is to the rear. Assemble the right cabinet guide with its wheel in front to the right sliding shelf slide. Place this assembly onto your cabinet shelf and place it so the back of the sliding shelf touches the front of your cabinet back. The shelf is centered on the door opening. Now slide the left side cabinet guide with its wheel to the front under the left sliding shelf slide (no bent over track edge). You are now ready to set measurements for proper assembly. First check for set back dimension. Move the shelf assembly forward to within ½" to ¾" from the back inside of the face frame. It should be centered on the available opening and squared to the front of the cabinet back.

Get your screwdriver and supplied screws. All screws are to be lightly hand tightened until final alignment is accomplished. Lightly push down on the right side of the shelf as you move it towards you to expose the rear bracket on the right cabinet guide. Maintaining the above alignment, drive a screw through the rear front to back slotted hole in the exposed rear bracket. While still maintaining alignment install a screw into the front left to right slotted hole of the same bracket. Remove the shelf and the left side cabinet guide leaving the screwed in place right side cabinet guide. This will expose the front bracket on the right cabinet guide and once again check square to the front of the cabinet back and install two screws just as was done to the right rear bracket.

Next step is to install the left side cabinet guide. While holding the left side cabinet guide against the cabinet shelf bottom and approximately a shelf width left of the already installed right cabinet guide, reinstall the shelf onto the attached right side cabinet guide and onto the left side cabinet guide. Check your alignment and square. Install two screws into each bracket (front and back) on the left side using the same method as used on the right side cabinet guide.

Reinstall the shelf into the right side cabinet guide and onto the left side cabinet guide. Move the shelf back and forth and if it binds adjust the left side cabinet guide to allow the shelf to move easily. When you are satisfied everything is aligned and moving smoothly install and tighten a screw into the center hole of each of the four brackets. Tighten all other screws.

Congratulations your shelf is done!!!! Well almost, see the plastic thing.

### **PLASTIC THING**

Finally we come to the white plastic bumper, which is utilized to prevent damaging the inside surface of the door. This might occur when closing against a partially protruding shelf or when the door is in the way of your pulling out a shelf. The plastic bumper is mounted with one screw to the front of the shelf closest to the door hinges. Watch for hinge clearance and if door has a recessed panel make sure you mount the door protector bumper as low as possible. Included with very wide shelves, two bumpers are supplied assuming the opening has two doors per shelf. This "honey do" project was a snap and I believe if you use my ideas other neophyte installers will be as pleased as I am with your product and its ease of installation.

Respectfully,

Harry S.

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