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FRAME AND PANEL SIZING

It's very simple to panel a wall if the work is done on a step-by-step basis. The most important thing to remember is to plan everything before beginning the actual installation.

1. Before you begin designing your panel system, take the time to look at other panel systems. This will give you a much better idea of the logistics of panel construction, making your job much easier.
2. Decide on a rough size for your panel, keeping in mind that the panel moulding, once installed will reduce this width. Size can vary to whatever you feel is appropriate for the room, but 12" (304 mm) is a good starting point. Add to this the width of the style (the vertical part of the "frame" around each panel). A common size is 3 ½" (89 mm). In our example, we'll use the recommended sizes: a 12" (304 mm) panel and a 3 ½" (89 mm) style, giving a width of 15 ½" (393 mm).



3. Measure the width of your most dominant wall. (It will be 180" or 4572 mm in this example.) The styles at the corners should not be the same width as the rest of the styles. Make your corner styles slightly more than half the width of your main styles. We will use 2" (50 mm) corner styles, giving a combined face of 4" (100 mm), which would look closer to 3 ½" (89 mm) because of the corner. Add the two corner styles together (4" or 100 mm), and subtract this difference from the width of the wall (180" or 4572 mm). We now have a measurement of 176" (4472 mm).
4. You will have one more style than panel sections on each wall. For example. Three panels would result in four styles, i.e. style/panel/style/panel/style/panel/style. Subtract the width of the last style 3 ½" (89 mm) from the 176" (4472 mm) measurement since you already have the last style in the corner 2" (50 mm). This leaves you a total of 172 ½" (4381 mm). Divide the new adjusted room width of 172 ½" (4381 mm) by the combined width of your panel and style from step two. If this number divides evenly, you have the number of panel sections for your wall. In our example, we divide the adjusted wall width 172 ½" (4381 mm) by the panel and style width (15 ½" or 394 mm), giving us a result of 11.12 panels. You will most likely have a fraction as well, meaning a partial panel. Partial panels ruin the overall effect, so we will now adjust the size of the panels.

5. Round the number of panels to a whole number (11 in our example). You may have to come back to this point, rounding in the opposite direction (12 for us) if you don't like the resulting panels after you reach step 8. Divide this into the adjusted room width of 172 ½" (4381 mm). The result is the combined width of your style and panel. Using our numbers, we divide 172 ½" (4381 mm) or by 11 panels, resulting in a panel/style width of 15.68" (398 mm). For ease in measuring this can be rounded to .62" (16 mm) or 5/8" Each panel/style combination will be 15 5/8" (397 mm) wide.
6. Subtract the width of the style from your measurement, giving you two widths: style width and panel width. Our style was 3 ½" (89 mm), which will give us a panel width of 12 1/8" (308 mm). Because of the rounding back from .68 to .62 (16 mm) the last panel will be larger by approximately 1/16th of an inch (1.5 mm), which will be un-noticeable.
7. Now that you have panel and style widths, you will need to decide rail and panel heights. (Rails are the horizontal part of the panel "frame".) This is largely determined by personal preference. A general rule of thumb is to create three panels. The bottom panel would be approximately 35" (889 mm) high, the second panel 21" (533 mm), and the top panel 14" (356 mm). This gives a 5:3:2 proportion. A typical bottom rail measures approximately 4 ½" (114 mm), with 3 ½" (89 mm) rails used at the top. In general, a slightly larger rail at the bottom will give a look of stability to the panels. Adjust these to your walls, depending on your baseboard and cornices. It's important to remember that the bottom rail should start just below the top of the baseboard. A ½" (14 mm) margin with a 4 ½" (114 mm) rail leaves a 4" (100 mm) exposed rail. If a cornice is to be used (a good idea to finish the top of your panels), you will have to make a similar allowance so the cornice does not cover the top rail.
8. Draw your panels on the wall using a tape measure, straight edge, and pencil. This is your rough draft. Stand back and look at the panels. If they don't look right, you can go back and redesign them without having to destroy any work. Drawing your panels can save you a great deal of time, money, and aggravation.

Repeat this procedure for each wall, making allowances for a few special situations:

- If you are doing a wall with a door in it, divide the width of the wall to either side of the door as if they were two separate walls. Experiment with more than one panel width until you get sizes as close as possible to each other and to the size of the first wall.
- When you are panelling a wall with a window in it, follow the same procedure as with a door. The space under the window is treated separately and is divided into equal panels to fit under the window. When marking off walls with doors and windows, allow for the case that will be applied. The styles should be placed so that the case just overlaps the style, meaning the panel moulding will be in a vertical line with the outside edge of the casing. A filler can be used behind to support the case.
- Panelling a wall will increase the depth of all door and window jambs, so it is important that the jambs be done after the wall is panelled, or that the extra depth (the ¾" or 19 mm thickness of the style) is allowed when installing the jamb. Otherwise, an extra jamb extension will have to be added.
- Corners can be a little tricky. On inside corners, you will lose ¾" (19 mm) due to the thickness of the styles. On outside corners, you will gain this thickness. Make allowance for this in your measurements. Outside corners should be mitred to prevent showing a crack or seam on the wall.

After you have planned and checked your panels, it's time to start building. Take care in creating your styles and rails (the frame); if these are not at 90° angles, you will have to custom mitre each piece of panel moulding. A little bit of care in creating your frames will make your job much easier. If you have created right angles, you need only cut each section of panel moulding with a 45° mitre, and install. Remember: if you have any doubt, go back to step one and look at as many panel designs as you can.

