

Installation Guide for the Luminous Ellipse SkyCeiling Perimeter Angle without a Framing Plate

Please read through the entire instruction packet before beginning.

Step 1: Verify Bulkhead Dimensions

Verify the following conditions:

1. Verify bulkhead sidewall opening with Grid Plan G1. If they do not match, do not install the SkyCeiling. Contact The Sky Factory at 866-759-3288 and we will help you find the best solution.
2. Verify the depth of the bulkhead with Grid Plan G1. The bulkhead depth has been specially designed to maximize lighting. Improper depth will result in poor image lighting.

Step 2: Determine The Initial Perimeter Angle Attachment Points

An ellipse has a long axis and a short axis. See G1.

1. Using two string lines, locate the points where the long axis and short axis meet with the sidewall opening.
2. When locating these intersection points:
 - a. the long axis and short axis must be perpendicular to each other and
 - b. the long axis and short axis must be centered on each other.
 - 1) Note: The intersection of the two strings forms a point. This point divides each axis into two segments. Make sure both segments of each axis are equal.

Step 3: Initial Attachment of the Perimeter Arcs

Caution: When lifting the Curved Perimeter Angle into place, **care must be taken to not bend or stress it. Pre-drill all attachment holes in the perimeter angle to prevent cracking or splitting.**

1. Determine the proper height of the perimeter angle and place blocking to hold up the arcs when installing. Be sure to pad the blocks so the finish on the bottom face of the perimeter angle is not damaged.
2. Attach the two "B" arcs first. The "B" arcs fit the sides of the ellipse where the short axis meets the sidewall. The center of each arc has been marked.
 - a. Pre-drill a hole through the center line at least 1/2" and not more than 1" above the horizontal leg and attach the arc to the attachment point with a pan or washer head screw.
 - b. Shim both arcs at the attachment points so:
 - 1) the vertical leg is plumb and
 - 2) the distance between the two arcs at the center points, from the inside of the vertical leg to the inside of the vertical leg, is equal to the distance "y" on G1 minus 1/8" (for the thickness of the two vertical legs.)
3. Attach the two "A" arcs next. The "A" arcs fit the ends of the ellipse where the long axis meets the sidewall. The center of the arcs has been marked.
 - a. Pre-drill a hole through the center line at least 1/2" and not more than 1" above the horizontal leg and attach the arc to the attachment point with a pan or washer head screw so that its ends lie on top of the "B" arcs.
 - b. Shim both arcs at the attachment points so:
 - 1) the vertical leg is plumb and
 - 2) the distance between the two arcs at the center points, from the inside of the vertical leg to the inside of the vertical leg, is equal to the distance "x" on G1 minus 1/8" (for the thickness of the two vertical legs.)
4. Using two string lines:
 - a. make sure that the long axis and the short axis are still perpendicular to each other.
 - b. make sure the attachment points are centered. (See Step 2, Point 2)

If not, adjust your shims as necessary to make them equal and still maintain the same distance as established in Points 2 and 3.

Step 4: Initial Attachment of the Perimeter Arcs Cont'd

An installation jig, which consists of four 1/4" by 3 1/2" templates of equal size, is included.

1. Lay one of these templates on the horizontal leg, lining up the ends of the template to the center lines of an Arc A and Arc B pair.
2. Holding the template firmly against the center points, place a pan or washer head screw every 12", shimming the vertical leg of the A and B arcs firmly to the template.
 - a. When shimming, make sure the vertical leg is plumb and that the template is resting on the horizontal leg of the perimeter angle.
 - b. Stay back at least 12" from the overlap on Arc A to allow for the arc to gradually ease over the end of Arc B.
 - c. Place a cap screw 2" back of the overlap on the B arc.
 - d. Pre-drill all attachment points in the perimeter angle to prevent cracking or splitting.
3. The B arcs are cut 1" long on both ends and the approximate final joint location is marked. If the end of the A arc does not fall close to the final joint location, re-check the lay-out of your attachment points and the dimensions between them before continuing.
4. Repeat points 1-3 for the other three AB pairs.

Step 5: Cutting the Joints

1. Using the end of the A arc as a guide, mark your cut on the B arc with a sharp pencil.
 - a. **Caution:** the actual length of the B arc will need to be slightly longer than the mark when the end of the A arc moves back into position, so be sure to cut the B arc 1/32" long. Extra length will also allow for any final modifications in the fit.
2. The perimeter angle is a PVC composite. It cuts fairly easily with a **sharp** utility knife and files easily for a final fit. Follow these points when cutting:
 - a. Use a small steel straight edge as a guide, clamping it to the top of the horizontal leg. **Be sure to use a non-marring clamp pad on the bottom face to protect the finish.**
 - b. Always place the guide on the center line side of the perimeter angle. This will help keep the knife from accidentally cutting into the finished end.
 - c. Make two cuts. Make the first cut 1/8" wide of the mark to remove the excess. Then make the final cut 1/32" wide of the mark to allow for the needed length when moving

the ends back into position. The cut on the vertical leg may be relieved a little for an easier fit.

d. Remove enough screws to be able to move the end of Arc A out of the way and be able to manipulate the end of Arc B to make the cut. Arc B may be removed completely to do the cuts if needed. It can then be re-installed for the final fit.

4. Once the joinery is done, place pan or washer head screws and shims 1" on either side of the joint for stability.

5. Repeat Steps 1-4 for the other three AB pairs.

Step 6: Final Attachment of the Perimeter Arcs

1. Assemble the installation jig inside the perimeter angle.

a. Rest it on the horizontal leg, match the joints and duct tape the joints together.

b. If more room is needed for the jig to fit, increase the opening by adjusting the shims. If gaps result in the joints, see point 3 below.

2. Finish securing the perimeter angle to the sidewall. Place pan or washer head screws every 4". Shim the perimeter angle to the jig at each screw. Be sure to keep the vertical leg plumb.

3. If gaps result in the joints, the perimeter angle may be gradually shimmed in to close the gap. **If adjustment is needed, be sure to start back far enough to maintain a smooth gradual curve in the final product.**

Important: The perimeter angle is a trim system. It is not designed to support the weight of the grid. All runners (and all spanners over 24 inches) should be suspended by wires or attached directly to the bulkhead.

If the finish on the bottom face is marred and needs touched up, use Armstrong Grid Touch-Up Paint, White.

For technical support, please call us toll free at 866-759-3228. We want your installation to go as smoothly as possible. Thank you for choosing The Sky Factory.