

How to Prepare Outside Panels for Greater Flexibility in Smaller Radius Walls

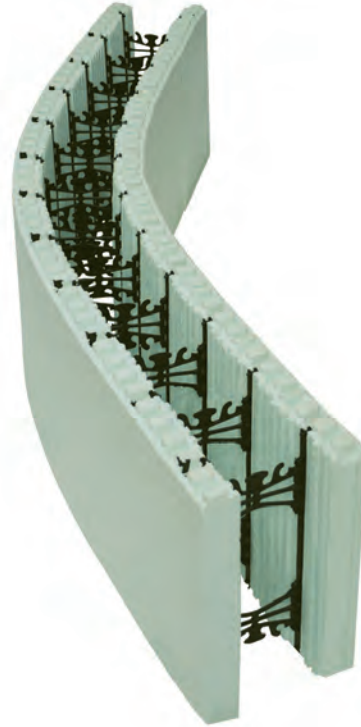
This Technical Bulletin is prepared as a companion piece to NUDURA's Technical Bulletin on Radius Wall Estimating and Installation.

NUDURA insulation panels are sufficiently flexible that radius walls as small as 8 feet (2.44 m) in radius dimension can be formed with little difficulty in bending them to meet the required curvature. However, on the occasions where radii are smaller than this, it will be necessary to prepare the outer panels prior to installation to enable greater flexibility for being able to be installed to the desired radius.

Preparing the outside panel to bend to the required radius is very simple. Start by placing the radius form unit on a flat surface with the cut lines of the exterior panel facing up. Then, use NUDURA's 1" (25mm) fiber tape, cut 4 lengths of tape - each being 8 feet (2.44m) long. Apply the strips of tape linearly across the panel length, spaced 3" to 4" apart, and press each strip firmly onto the face of the panel. The fiber tape will provide excellent support during bending of the form and, subsequently, during placement of concrete into the assembled form.

Greater flexibility of the form is achieved by cutting grooves into the interior "dovetailed" surface of the exterior panel or the form at regular intervals. NOTE: Avoid making these cuts using a hot knife as melting the foam in this manner can change its molecular structure at the knife contact area - making it more brittle and substantially lowering the flexural strength of the foam panel between webs.

You will also need a cordless circular saw with a 5 ¼" (133 mm) non-carbide tip blade for this operation. Before mounting the blade into the saw, the blade must be prepared for making a wider than normal cut by using pliers to incrementally bend every other tooth of the blade outward off axis in opposite directions such that the width between the tips of each tooth is laterally measured at about 3/16" (5mm).



How to Prepare Outside Panels for Greater Flexibility in Smaller Radius Walls

1 First, set the base plate of the saw to ensure that the blade will cut to a depth of 1 ½" (38 mm).

2 Place the factory cut radius form unit onto the work surface with the INTERIOR cut surface segments facing up and full EXTERIOR panel facing down.

3 Starting on the left side, lift the first interior cut segment upward and pivot it by the hinged web to the left side of the unit to expose the grooved back surface of the exterior panel.

4 Begin the cutting operations by placing the LEFT side of the saw base plate against the side of the web hinge located to your LEFT. Keep this position of the saw in place and complete the cut from one edge of the panel to the other ensuring that the base plate remains in line with the second hinge connection. The resulting groove from the completed cut should be at about the center of the panel space between the webs.

5 Repeat Step 4, but this time, guide the cut by placing the RIGHT side of the saw base plate against the side of the hinge connections to your RIGHT.

6 Move the saw to the opposite working edge of the panel and repeat Step 5 exactly but this time guide the cut back towards your original working edge. You will now have made 3 cuts into the foam – 1 being at the center and 2 cuts about 1 ½" away from the side of the web hinges.

7 Finally, simply fold open the next cut segment from left to right to expose the next web space and follow steps 4 to 6 in repeated sequence until all 35 of the panel relief cuts have been completed. The radius form is now ready for assembly into the wall.

