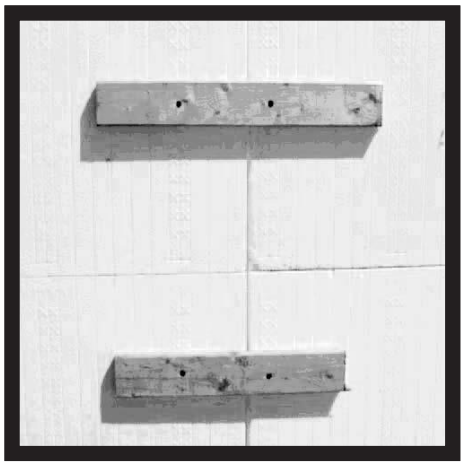
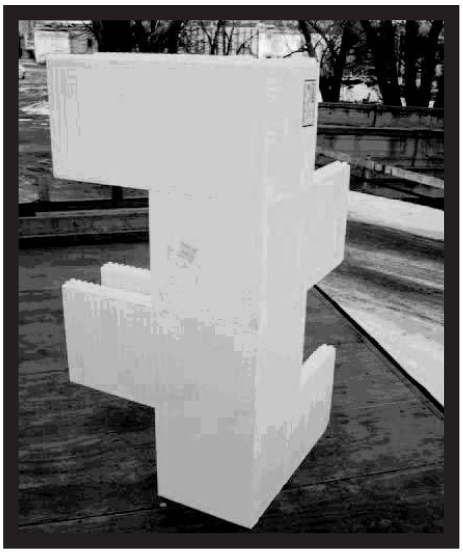
ICF WALL CONSTRUCTION

When a ICF form is cut, it can be identified using tabs and webs. If using LOGIX ICF you should always try to keep at least one side of your form a factory end with the offset interlock. If using NUDURA, the block is reversible and the only requirement is to cut at 4" past a web to be able to reuse it.



***ICF Quick tip:** A cut form with a factory end, two webs, and two tabs can be referred to as a "2+2". This keeps measurements consistent and creates clear communication with your team

By establishing a systematic form pattern that takes the building dimensions into account, maximum efficiency will be achieved.



Always install ICF blocks with interlock knobs facing up.

THE FIRST ROW

STEP 1: Begin at a corner. Set corner block so the outside panel of the block is on the chalk line.

STEP 2: Go to adjacent corner and place an opposing corner there. When using a non-reversible ICF form, alternate between left hand (LH) and right hand (RH) corners from one to the next. (ex. Row 1 has 6 90 deg corners. Use 3 left and 3 rights)

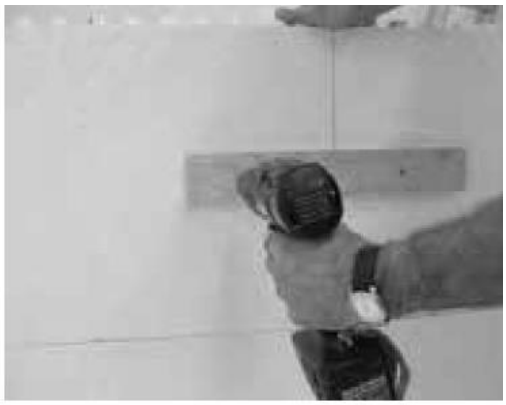
For reversible blocks such as NUDURA ICF, this is recommended as well, however, the blocks are reversible so no specific attention is required to grabbing the correct block.

STEP 3: Work towards the center of the wall placing standard (straight) ICF forms in place in an end-to-end fashion, zip-tying or using horizontal hooks to secure them together appropriately.

STEP 4: A cut will need to be made when the ICF forms are within 4' (LOGIX) or 8' (NUDURA) of one another. Ensure both corners and the standard forms are set properly on the chalk lines.

STEP 5: Cut a standard form to fit the space remaining between the ICF forms. The cut may not line up with a line. This is ok and is referred to a stack seam. Leave this seam to run vertical each row to the top of the wall.

- Reinforce this joint with a piece of plywood or lumber and screw into the ties on each side of the joint. This will reinforce the joint to make sure it does not blow out when pouring concrete.
- Make sure this is done on both sides of the wall



STEP 6: Continue around the wall in this manner until the first row is complete and dimensions are verified.

STEP 7: Place necessary rebar in first row as specified and according to local code and as per the manufacture engineering requirements. *(Don't have this, please*

contact ICForming and we will be happy to email it to you) We recommend placing rebar in the groove furthest inside, to avoid hitting the footing dowels which should be close to the center of the blocks.

THE SECOND ROW

STEP 1: Starting at the original corner, place opposing corner form to create a 16" (406mm) offset. If using LOGIX ICF and you used a RH corner on row one, now you should use a LH corner. If using NUDURA ICF ensure the long side of the corner extends the opposite direction as the first row (ie. flip the block upside down).

STEP 2: Fasten every corner end-to-end to adjoining forms using zip ties or horizontal hooks, and/or adhesive foam.

STEP 3: Continue placing forms around the wall, working in the same direction as first row.

STEP 4: It is important to secure every form tightly to the form below to minimize settlement during concrete placement. There should be little to no gap between horizontal block joints.

STEP 5: All webs should line up vertically

STEP 6: After completion of second row, place necessary rebar as specified and according to local code and manufacture ICF engineering. *(Don't have this, please contact ICForming and we will be happy to email it to you)* We recommend offsetting the rebar in this row to the center groove of the block.

STEP 7: Confirm that the wall is straight and level. If adjustment is required, shim or trim the bottom of the wall until level is achieved. Humps or dips will compound each row and cause the wall measurements to be skewed later.

STEP 8: Use adhesive spray foam to fasten the straightened and levelled wall to the footing or slab.

When vertical block joints from one row to the next are less than 8 inches (203 mm) apart, additional form support is required.

It is important to note that at this point the wall pattern has been established. Row number 1 will be the pattern for all odd numbered rows (3, 5, 7, etc.). Row number 2 will be the pattern for all even numbered rows.

ADDITIONAL ROWS

STEP 1: Repeat pattern for row 1 on odd numbered rows and row 2 for even numbered rows.

Make note of window heights and plan to cut in the window bucks accordingly. Mark them out on the wall forms and cut the sections out to fit the bucks, then proceed to block up to the bucks and continue building the wall.

STEP 2: Fasten every corner end-to-end to adjoining forms using zip ties or horizontal hooks, and/or adhesive foam.

STEP 3: After completion of each row, place necessary rebar as specified and according to local code and ICF manufacture engineering. *(Don't have this, please contact ICForming and we will be happy to email it to you)* We recommend continuing using the offsets established on rows 1 and 2 for each additional row.

Wall bracing/scaffolding system to be installed at some point between the third and fifth rows, at no more than 5'4" (8 webs) intervals.

STEP 4: Secure final row (taper tops and corners) to the forms below with adhesive spray foam to prevent them from lifting during concrete placement. This step is NOT required with NUDURA ICF as the forms clip secure together each row.

STEP 5: Secure forms end-to-end in the top row to maintain building dimensions using zip ties or horizontal hooks, and/or adhesive foam.

STEP 6: If additional stories are planned, the interlock needs to be protected prior to concrete placement.

STEP 7: Check building dimensions. Check corners for plumb.

STEP 8: Ensure straight walls by placing a string line at the top row set off from the wall using 3/4 inch (19 mm) pieces of wood placed in the corners. Check for straightness by running another 3/4 inch (19 mm) piece of wood between the string and wall.

***Note:**

If you need to stack identical corners in subsequent courses, you will need to provide additional form support where the stacked joints are created.

All reinforcement is required to be 2 inches (51 mm) from door and window buck material to ensure adequate concrete coverage.