

Insulating Concrete Forms

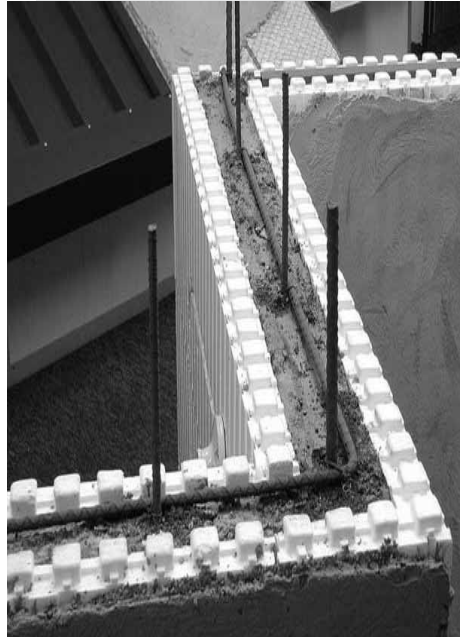
Homes built using an insulating concrete form (ICF) system literally have the insulation built into the walls as part of the structure. This system creates walls that have a high thermal resistance, with R-values typically above R-17. Even though ICF homes are constructed using concrete, they look just like traditional stick-built homes.

Exterior walls can be stucco, brick or lap siding. You decide on exterior and interior treatments.

Types of ICF Systems

Insulating concrete forms (ICFs) are basically forms for poured concrete walls, which remain as part of the wall assembly. These forms also provide a backing for drywall on the inside of a home for stucco, lap siding, or brick on the outside.

ICF systems consist of interconnected foam boards or interlocking, hollow-core foam insulation blocks. Foam



Solid concrete walls with verticle and horizontal steel reimbursements

boards, steel rods (rebar) can be added for reinforcement before the concrete is poured. When using foam blocks, steel rods are often used inside the hollow-cores to strengthen the walls.

But That's Not All

Air infiltration in an ICF home is minimal due to the continuous air barriers provided by the foam insulation and the concrete.

The concrete walls of an ICF home have high thermal mass, which buffers the interior of a home from the extremes of outdoor temperature during every 24-hour cycle. This reduces both peak and total heating and cooling loads.

This combination of high R-values, low air infiltration, and high thermal mass is believed to account for the amazing 25% to 50% energy savings of ICF versus wood or steel-framed homes.

ICF Benefits

- ✓ *Better Insulation*
- ✓ *More protection for your family*
- ✓ *Reduces outside noises*
- ✓ *Reduces air infiltration*



Using ICF forms reduces construction time.

In fire wall tests, ICFs stood exposure to intense flame without structural failure longer than did common frame walls. The polystyrene foam used in most ICF forms is treated so it will not support combustion. Also, tests show that its tendency to transmit an outside flame source is less than that of most wood products.

ICFs are so efficient to build with and easy to use, that the cost of building an ICF house is comparable to that of an ordinary 2x6 wood-framed house. But you get so much more home for your money.