ECO-Block™ Insulating Concrete Forms

Insulating Concrete Forms (ICFs) are one of the fastest growing sectors in the North American construction industry. It is estimated that in 1998, twenty thousand residential homes were constructed using ICF exterior walls. It is estimated that 100,000 homes will be built using ICFs by 2003. These forms consist of hollow blocks or panels made of plastic foam that construction crews stack into the shape of exterior walls. Reinforcing steel is added and then concrete is poured between the foam forms. The forms remain in place permanently providing a strong and energy-efficient structure. Nearly every major code organization in the United States and Canada has accepted this construction technique.

ECO-Block forms utilize leading ICF technology as a result of the company’s research and development. Their research and development is dedicated to continuous improvement. ECO-Block forms are modular blocks made of expanded polystyrene (EPS) and can be used to build concrete walls, floors, ceilings, and tilt-up construction. Sidewalls made of expanded polystyrene allow builders to pour concrete in extreme weather conditions of heat or cold. EPS provides an insulated environment in which the concrete “wet cures” allowing the concrete to reach maximum strength.

ECO-Block is superior to earlier ICF systems because it is cost competitive. Reduced EPS mold and manufacturing costs are passed on to customers. ECO-Block provides superior strength during the crucial period of the concrete pour. It is more versatile because the same side panels are used for concrete walls on any thickness from 4” to 24.” It is also easier to transport. Components allow assembly on site with almost no dead air space during shipping.

ECO-Block was named a Top 100 Product Pick by Building Products magazine in May 2000. It has been featured on the Discovery channel’s “Gimme Shelter” program. In addition, ECO-Block is a member of the U.S. Green Building Council. ECO-Block has numerous distributors including Home Depot. The Massachusetts State Highway Department has called for the use of ECO-Block on its “Areaways” network of municipal tunnels rehabilitation project in Boston.

The advantages of using ECO-Block ICFs are:

- **Environmentally friendly** – reduces the use of wood products
- **Energy efficient** – provides excellent insulation and reduces heating/cooling costs typically as much as 50%
- **Sound suppressing** – interior rooms are effectively shielded from street noises
- **Quick construction** – a four person crew can finish one house in 2-3 days
- **Extremely strong** – walls are “cast-in-place” monolithic, reinforced concrete
- **Versatility** – any standard interior or exterior can be applied

A study commissioned by the Portland Cement Association concluded that homes built with ICF exterior walls require an estimated 44% less energy to heat and 32% less energy to cool than comparable wood-frame houses. The combined performance of the R-Value of the expanded polystyrene, the stabilizing effects of the thermal mass of concrete and the reduced air infiltration gives ICF walls up to R-50 insulation.

ECO-Block is a proven product that has gained widespread acceptance by residential and commercial builders alike.
ECO-Block™ Insulating Concrete Forms

Figure 1. This picture displays the versatility and flexibility of the ECO-Block ICF building system. All three sizes are shown: 4 inch (102 mm), 6 inch (152 mm), and 8 inch (203 mm). On left is the standard side panel; on right is the standard side panel with connectors attached.

Figure 2. The blocks are stacked together to demonstrate placement of re-bar.

Figure 3. ECO-Block line of products.