

Part 1 – Introduction

Amvic Insulated Concrete Forms (ICFs)

Amvic insulated concrete forms (ICFs) are hollow, lightweight forms manufactured using two 2½ inch (63.5mm), 1.5lbs/cu.ft density expanded polystyrene (EPS) panels which are connected by uniquely designed, high impact polypropylene webs. During construction, the forms are stacked then filled with concrete making stable, durable and sustainable walls.

Amvic ICFs combine the insulating effectiveness of EPS with the thermal mass and structural strength of a reinforced concrete wall. They also offer a “5 in 1” solution that provides structure, insulation, vapor barrier, sound barrier and attachments for drywall and exterior siding in one easy step.

Walls constructed with Amvic ICFs can provide a fire rating of 3+ hours (6, 8 and 10 inch walls), a sound transmission class (STC) of 50 (some wall assemblies exceed this value) and an insulation value of R-22+. By combining the performance R-value of EPS, the stabilizing effects of concrete thermal mass and the reduced air infiltration rates, Amvic ICF walls can perform up to an equivalent insulation value of R-50.



Figure 1.1 – Amvic ICF products



Figure 1.2 – Typical Amvic reversible ICF block

The webs used in Amvic ICF eliminate the need for tie downs and place reinforcing steel most effectively to ensure superior structural strength. The webs are manufactured using more raw material than competing products allowing for superior finishing capabilities and 198 lbs pull out strength for drywall screws. They are also spaced 6 inch (152mm) on center compared to 8 inch (200mm) on center resulting in greater rigidity, which keeps walls straight and plumb during stacking and the pouring of concrete.



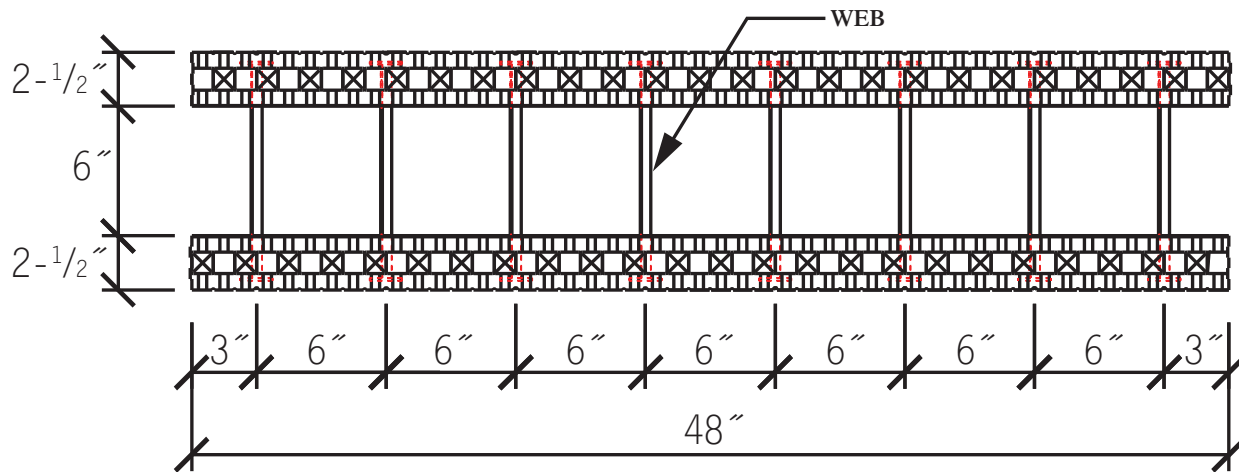


Figure 1.3 – Typical Amvic straight ICF block (6" shown)

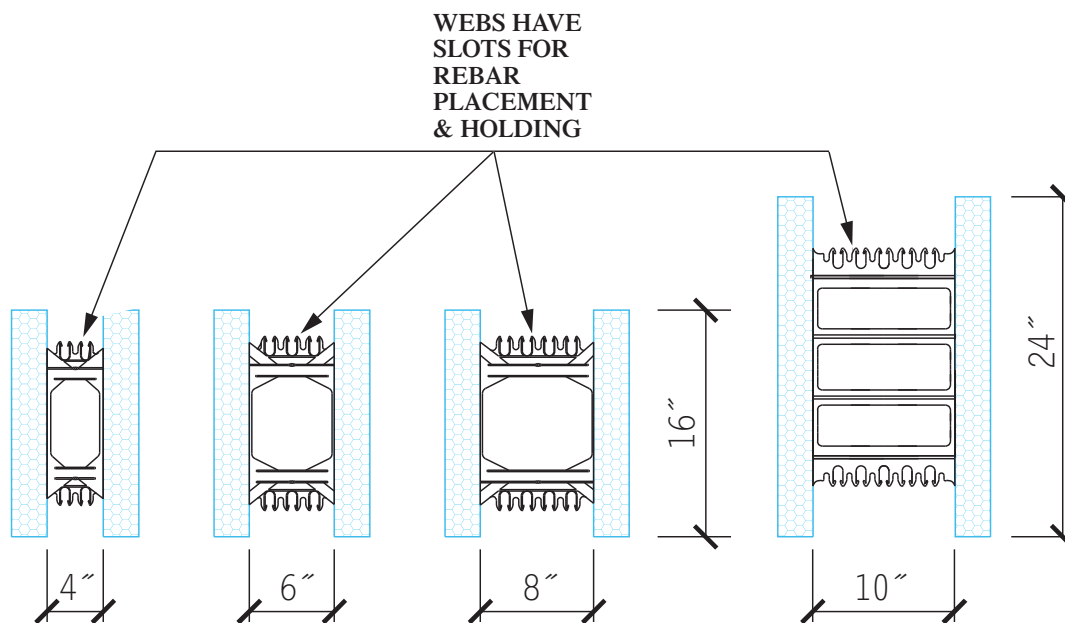


Figure 1.4 – Cross section of Amvic ICF blocks

Amvic webs connect the EPS panels and terminate with a 1½ inch (38mm) flange which is embedded 5/8 inch (16mm) beneath the outside surface of the panels. The flange has a height of 15 inches (381mm) in all blocks except the 10 inch (254mm) block which has a flange height of 23 inches (584mm). When the Amvic blocks are stacked, the flanges form a continuous horizontal and vertical grid which is used to attach interior finishes like drywall and exterior finishes like stucco, wood siding and brick veneer. (Please refer to the interior and exterior applications sections of this manual for more details.)



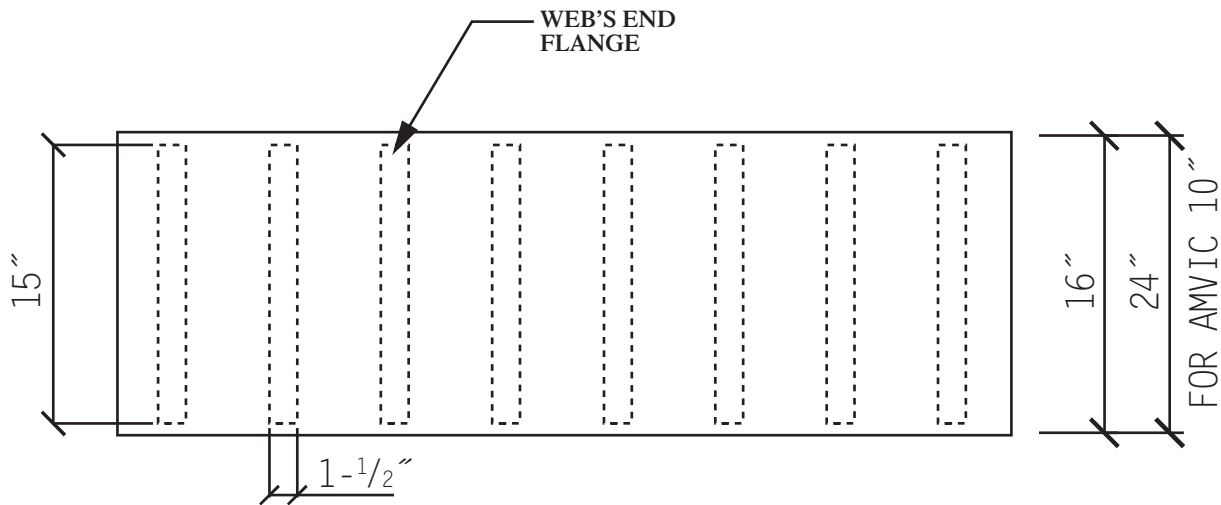


Figure 1.5 – Side view of Amvic ICF straight block showing web flanges

Amvic ICF blocks use the FormLock™ interlocking system developed by Amvic, which has considerably deeper grooves than competing products. The interlock exists on all edges allowing the blocks to be fully reversible. It also secures the courses together, preventing any movement or leakage during the concrete pour. This unique feature allows Amvic ICF to be stacked quickly, easily and without the need for glue or ties. Amvic’s user friendly, easy to install system increases job site efficiency and worker productivity which saves time and money.

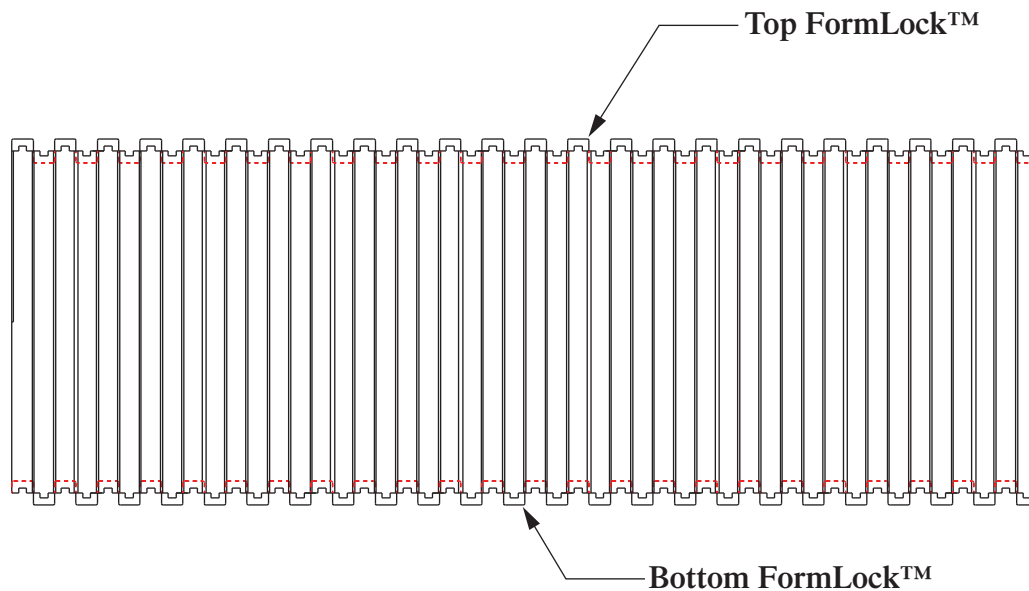


Figure 1.6 – Side view of Amvic straight block showing top and bottom interlocking system



Amvic ICFs are available in a variety of sizes allowing for concrete cores of 4, 6, 8, 10 or 12 inches (100, 152, 200, 254, 304mm). Straight, 90-degree corner, 45-degree corner and curved forms are available in most sizes.

Amvic's NEW 90-degree corner form features a polypropylene insert and additional interlock at the corner. The purpose of the insert is to provide an attachment point for finishings, while the additional interlock enhances the strength of the form during concrete pouring.

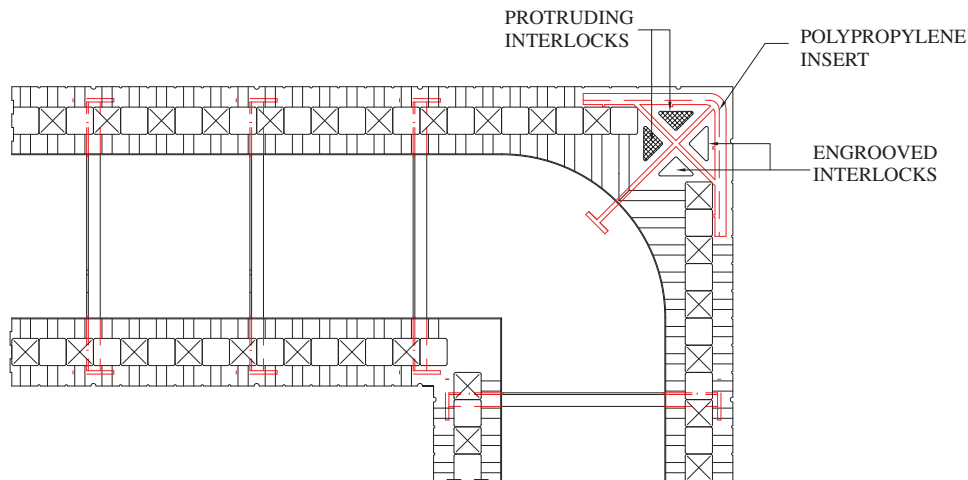


Figure 1.7 – Typical ICF corner form showing polypropylene insert and additional interlock

Amvic is the best ICF system available on the market today. Competitive pricing, extensive product distribution and professional technical support are combined to provide customers with a superior product with an installation cost less than comparable systems.

