

Section 1

Introduction to TF System®

What is TF Insulated Concrete Building System?

Insulated Concrete Forms (ICFs) are a stay-in-place concrete forming product that serves as a functional part of the wall after the concrete is poured. The TF System® ICF consists of two main components: high-density polystyrene panels and structural I-beams. On or off site, these components are assembled as vertical concrete wall forms. When filled with concrete, they form solid, energy efficient walls to create a high performance structure. TF System is used to construct frost walls, basements, and above grade walls, in both residential and commercial construction.

Why Choose TF System®?

The design of the TF System is based upon decades of actual contractor experience. Our extensive product and jobsite knowledge allow us to provide superior technical support and unparalleled customer service. We recognize the challenges contractors face and remain dedicated to providing the highest quality product, based on the latest research and development.

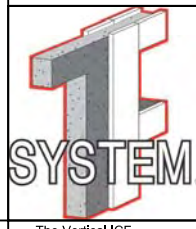
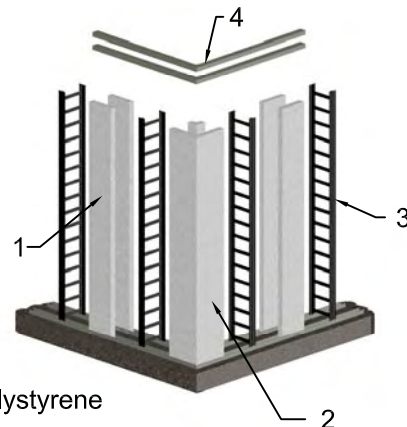
Why The Vertical ICF is Better?

TF System has been engineered to solve the common problems of horizontal ICF design. The vertical orientation eliminates the possibility of wall form floating and settling, providing a wall that is dimensionally accurate. There is no need for gluing, taping, or tying components together, making assembly simple and efficient. TF System components form the walls, provide insulation, create a vapor barrier, and serve as convenient and predictable attachment points - all in one easy step. Using this unique design differentiates innovative professionals in the building industry, while providing the competitive edge they desire.

TF System® -- The Vertical ICF
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TF System® is comprised of four main components:

1. Panels: made of 2.5-inch, high-density (1.95 pcf min.) rigid polystyrene
2. Corner sets: made of 2.5-inch, high-density (1.95 pcf min.) rigid polystyrene
3. I-beams: available in two materials
 - a) (Standard) rigid, recycled PVC
 - b) (Custom) double thickness 26-gauge galvanized steel
4. C-channel: 27-gauge galvanized and painted steel



The Vertical ICF

Product Information

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TF System will form, insulate, and stud a concrete wall, in one step. A vertically-oriented insulated concrete forming system consisting of rigid polystyrene planks held in place by a vertical framework (I-beams), that when filled with concrete result in full width, monolithic concrete walls of exceptional strength and energy efficiency. The vertical framework also serves as a convenient and predictable attachment point for both interior and exterior wall treatments.

Preparation:

Top face of concrete footings or slabs must be level, smooth, and flat to ensure uniform height of wall and ease of installation. Refer to TF System installation manual for additional information on required tools and installation procedures.

Application:

Mark outside perimeter of structure walls with a chalk line. Place outside bottom C-channels starting with precut corner channels and filling in between with straight channels. Attach outside C-channels with concrete nails or powder driven fasteners. Layout interior C-channels but do not attach them to concrete. Begin form installation at corners by installing two corresponding polystyrene corner pieces into the bottom C-channels. Insert I-beam into grooves in the poly corner and slide firmly into the bottom channels. Construct corner assembly outward from corner approximately 5 feet in both directions by alternating placement of I-beam ladders and poly panels. Plumb and brace corner assembly to prevent movement during the erection or pouring process. Refer to the TF Installation Manual for bracing instructions. Continue installation from the corner assemblies toward the center section of walls. At the point where the form assemblies meet, insert a pair of splice pieces vertically from top of wall. Before installing top C-channels, poly panels may be slid up for access to inside of form system. Install top C-channel on both exterior and interior sides to complete the wall form assembly. Overlap top channels a minimum of 16 inches and screw attach together to provide a continuous band around top of form assembly to prevent assembly from expanding during concrete pour. For heavy rebar schedules install exterior poly panels and I-beams only, brace as required, leaving interior of form system exposed for rebar installation access. Install interior poly planks, tie rebar, and continue installation process. Interior Wall Treatments: Gypsum board, or any covering meeting a 15 minimum thermal index, may be directly applied to I-beam flanges using drywall screws in conventional fastening patterns. Exterior Walls below Grade: Treat TF System walls as you would conventional poured concrete walls. In most areas damp proofing is required by code. Use water-based asphalt emulsion product compatible with polystyrene. In areas where additional moisture protection is required, use sheet membrane waterproofing or foundation envelope systems. Exterior Walls above Grade: TF System walls may be covered with conventional wall treatments including synthetic stucco, cement plaster, brick or stone veneer, vinyl or wood siding, half log siding, wood plank siding, or fiber cement siding.

Precautions:

Prolonged exposure to sunlight will cause polystyrene to turn yellow, therefore minimize exposure to direct sunlight. Rigid foam plastic insulation must be covered by a code approved thermal barrier on interior walls. TF System walls are subject to ACI (American Concrete Institute) Chapter 318 (latest revision), which indicates reinforcement requirements for standard poured walls. Because TF System forms are NOT waffle grid or post and beam design, no additional engineering is required except for cases where ACI 318 calls for engineering of specific applications. Essentially, TF System walls are conventional poured walls with the insulation applied before, rather than after, the pour. TF System walls provide comparable R-value to conventional poured concrete wall assemblies with 2x6 stud framing, six inches of fiberglass batt insulation, and one inch of exterior sheathed insulation. Labor cost savings, speed of installation, and exceptional wall performance make insulated concrete forms very cost competitive. Contact manufacturer for local TF System representative.



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System Overview

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