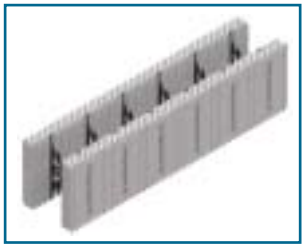
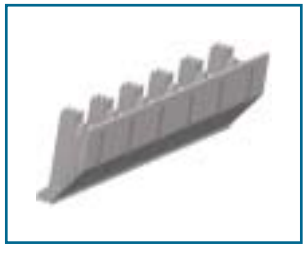
Insulating Concrete Forms (ICF)
Building System

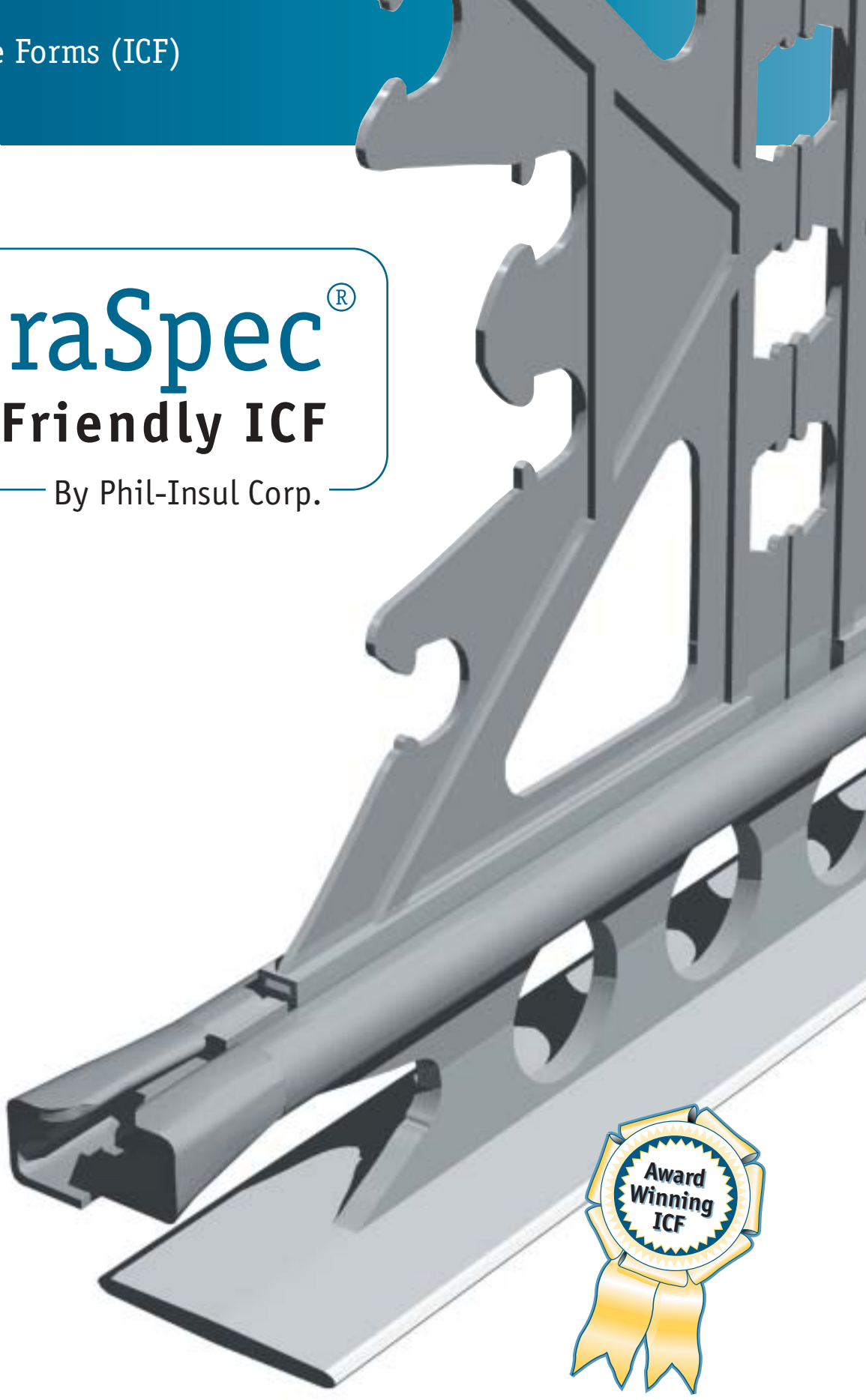
IntegraSpec®

The User Friendly ICF

By Phil-Insul Corp.



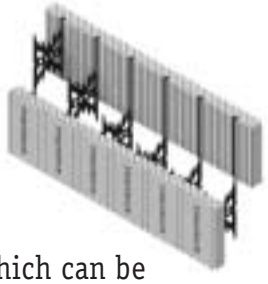




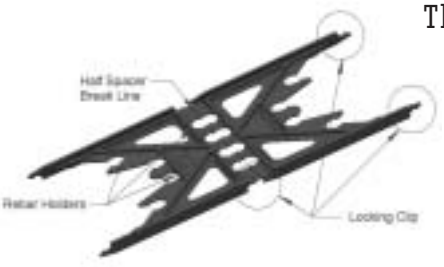
History . . .

IntegraSpec® was created with the input of structural engineers, computer assisted design and more than 75 years of field experience in the residential/commercial concrete forms and general construction industry. **IntegraSpec®** insulating concrete form (ICF)/building system was developed to address and eliminate the problems that most ICF systems encounter: blowouts, form unit flotation/lift, bulging, wall compression and wavy walls. **IntegraSpec®** was also designed to dramatically reduce waste, set up/bracing, labor costs and shipping costs.

Design Features . . .

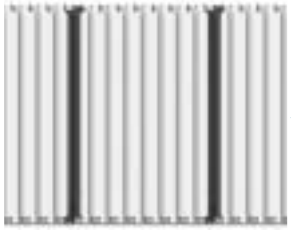


The **IntegraSpec®** system consists of stay-in-place expanded polystyrene concrete form panels which are shipped to site flat in easy to handle bundles, installed in courses and spaced with various sized patented interlocking spacers. The patented form units are bi-directional, allowing the panels to be laid no matter which way they are placed, reducing waste and installation time.



The spacers are available in 4", 5", 6", 8", 10" and 12" which can be combined for increased concrete core thicknesses. Any wall thickness can be achieved by simply changing the spacers. Spacers are designed for fast snap-in-place rebar for a choice of steel sizes and spacing and are easily cut to quickly form openings and provide specific heights. Most importantly, spacers provide mechanical interlock to eliminate form lift.

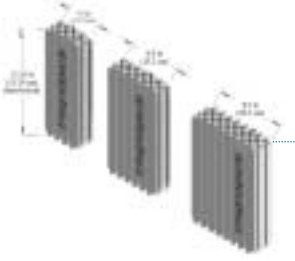
After rapid wall set up and easy alignment, concrete is poured, resulting in a solid monolithic concrete wall structure, ready for exterior/interior finishes.



Panel interior is dovetailed for proper concrete placement and bonding with flush inserts to easily slide in the spacer.

Panel exterior has visible 1" cut lines with logo to clearly indicate furring/studs and deep grooves for placement of steel channels to meet commercial fire codes.

Inserts are molded inside the panels every 8" on center and provide 1⅝" furring/studs, reinforcement against form unit bulging and the connection for spacers. When forming a wall, the channels fit into the next to eliminate form compression.



Eliminates woodbucks.
Exclusive IntegraBucks provide a fastening strip at the face of any opening. Simply slide the piece into the dovetails grooves inside any two IntegraSpec panels to form windows, doors or any opening with IntegraHeaders (not shown).

IntegraSpec®

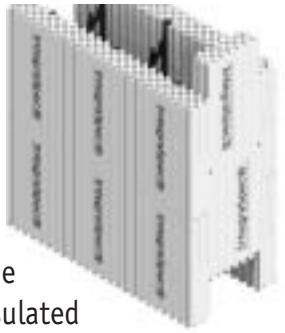
5 Steps in one application:

1) Diverse structural integrity
2) Super insulation
3) 1⅝" furring strips/studs
4) Vapor barrier
5) Air barrier

- **ONE STEP**
- **ONE CONTRACTOR/CREW**
- **LESS TIME**

According to Mr. Michel Philippe, President, Phil-Insul Corp.

"Insulated concrete has always had the potential to decrease construction costs and time, provide outstanding energy performance, indoor air quality, superior sound, fire resistance and lessen the overall operating/maintenance costs. IntegraSpec® is your best choice of insulated concrete form (ICF) to deliver these benefits."



IntegraSpec® quality and performance gives builders the edge in delivering a higher end finished product while increasing profits. Many awards have been won recognizing the contribution **IntegraSpec®** has made to the building industry and more specifically to the Insulated Concrete Form (ICF) industry

Awards . . .

ICF BUILDER

Best Heavy Commercial ICF Project Award and Best Overall ICF Project 2005

Received for the overall design complexity of Conservatory Pond Retirement Home, inlcuding a combination of 6" and 8" **IntegraSpec®** ICF walls, **IntegraSpec®** exclusive buck and header system, concrete hollow core floors, stucco/masonry finish and the unique **IntegraSpec®** Exposed Concrete Face (ECF) for the elevator shafts.

Conservatory Pond Retirement Home

Residential (light)

Project: McGahuey Residence
Location: Mount Ayr, Iowa

Features: 6" IntegraSpec garage
8" IntegraSpec foundation
8" IntegraSpec above grade

3,950 ft² country home was built with very little waste. Owners wanted an energy efficient home that could stand up to tornados and the test of time.

"Obvious choice ICF" - R. McGahuey

Residential (large)

Project: Dothan Residence
Location: Alabama

Features: 12" IntegraSpec foundation, 16' high
6" IntegraSpec above grade walls
19" IntegraSpec colonnade walls

20,000 ft² residence built with the design flexibility that only IntegraSpec ICF could offer. The independent panel design assembled faster and with less waste on site than other systems.

"IntegraSpec made it look easy" - Wingham

Commercial

Project: Grande Caribbean Condominium
Location: Orange Beach, Alabama

Features: 6" IntegraSpec walls, parapet balcony supports, columns and underground garage

160,000 ft² condominium with 101 units. 100% pre-sold due to ICF advantages. Withstood forces of Hurricane Ivan in 2004 with minimal damage to the roof only.

"Versitility & Strength" - D. Lindsey

IntegraSpec quality and performance means:

Design

8 unique panels secured with variable size spacers allow the user to build a super insulated wall with any concrete thickness. Each panel is completely reversible requiring less effort on site, less waste and offering flexibility to any design.

Concrete Pour

IntegraSpec is compatible with most ICF alignment and scaffolding systems. Bracing is not required for walls up to 4 feet. Form flotation, compression and blowouts are eliminated by the patented interlocking system.

After Pour

Professional, straight, true walls. Form unit bulging eliminated by the patented panel design. Fully insulated wall structure is ready for any exterior or interior finish.

Finished Building

A stronger, more durable, better insulated, quicker to build and less costly building to construct than alternative construction methods can provide.

General specifications

Approvals
- ICC # ESR-1147
- Standard and Uniform Building Codes (USA)
- CCMC #12938-R, Minister's Ruling (ON) 04-19-123
- National Building Code Canada/CMHC

Wall design principle
- monolithic structural concrete wall

Exterior surface area/std. form unit
- 4.08 ft^2, 0.38 m^2

Concrete volume required/std. form unit

	Imperial	Metric
4" Cavity	0.050 yd^3	0.038 m^3
5" Cavity	0.063 yd^3	0.049 m^3
6" Cavity	0.076 yd^3	0.058 m^3
8" Cavity	0.101 yd^3	0.077 m^3
10" Cavity	0.126 yd^3	0.096 m^3
12" Cavity	0.151 yd^3	0.115 m^3

Patents
- US Patent No. 5,428,933
- Canadian Patent No. CA 2142517

Material
- HIPS+ type II flame retardant EPS

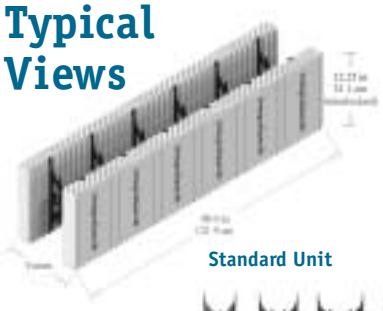
Thermal resistance
- R-22+ per ASHRAE Fundamentals (1997)

Sound resistance
- Minimum STC(Sound Transmission Class) =50+

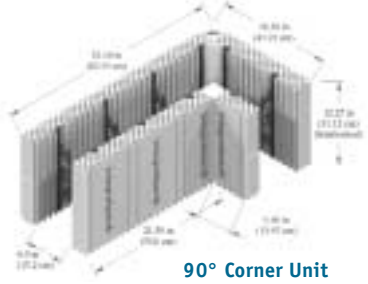
Fire resistance
- flash ignition @ 705° F (374° C)
- self ignition @ 842° F (450° C)
- per DIN 54 836
- fire channel profile 8" o.c.

Pour height
- up to 10 ft, 3.1 m continuous pour

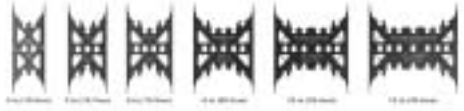
Typical Views



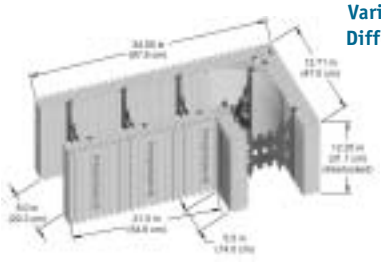
Standard Unit



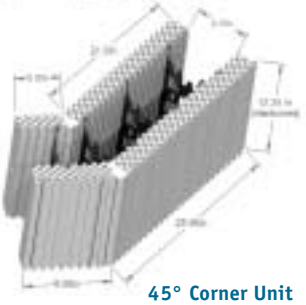
90° Corner Unit



Various Web Sizes
Different Concrete
Thickness

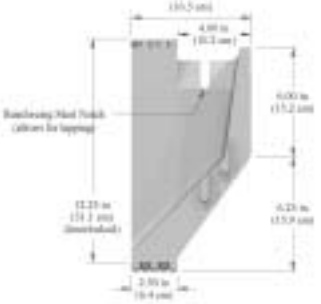


90° Commercial Corner Unit

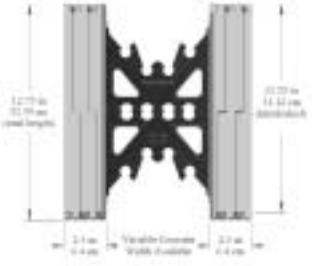


45° Corner Unit

End Views



Brick Ledge Panel



Typical End View

Insulating Concrete Form Association

GREEN PRODUCT

PS

ISO 9002

CHANGE FOR THE BETTER WITH ENERGY STAR

IntegraSpec®

Insulating Concrete Form (ICF) Building System
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