

# R22 Insulated Concrete Forms

Amvic™ Insulated Concrete Forms (ICF) are stay in place formwork manufactured using two 2.5" (63.5mm) Type II/Type 2, closed cell, Expanded Polystyrene (EPS) panels connected by polypropylene webs placed at 6" (152mm) on center.

The forms offer a 6-in-1 system that provides structure, insulation, vapor barrier, air barrier, sound attenuation and attachments for interior finishes and exterior cladding.

Completed Amvic™ ICF walls offer a sustainable and resilient building structure with R-Value of 22, STC rating of 50+ and a Fire Resistance Rating (FRR) of 3+ hours.

### Applications

- Below grade foundation walls
- Above grade walls
- Frost walls
- Additions to existing buildings
- Multi-story residential and commercial construction
- Institutional buildings
- High wind/hurricane areas

Amvic™ ICF ensures exceptional quality, reduced construction time and labor costs.

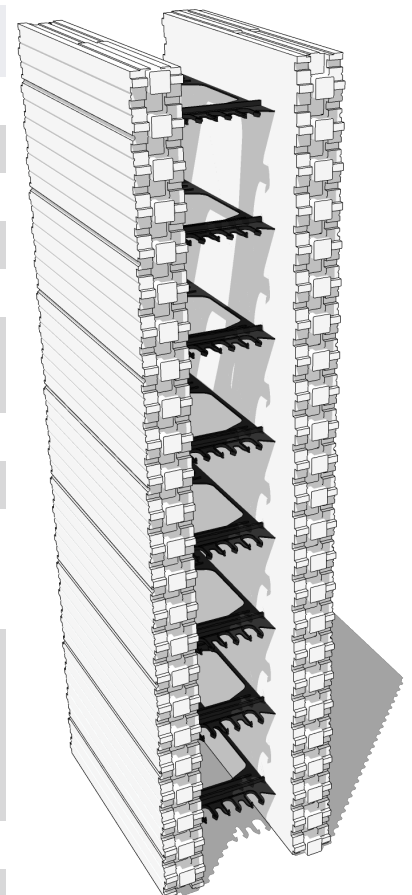
- One of the strongest ICF with form capacity strength of 865 psf (41 kPa).
- Fully reversible FormLock™ interlocking system with a depth of 1" (25mm) which provides superior connection strength between blocks.
- Webs have built-in clips which can hold two courses of reinforcing steel greatly reducing the need for additional tying.
- Withstands internal vibration.
- Manufactured with over 60% recycled materials (by weight).
- Generates less than 1% construction waste.

### Code Approvals

- QAI Listing #B1061-2
- ICC-ES Report #1269
- State of Florida
- State of Wisconsin

### Physical Properties Table as per ASTM C578 and CAN/ULC S701

Density	ASTM C1622	1.5 lb/ft <sup>3</sup> (24 kg/m <sup>3</sup> )	
Compressive Strength	ASTM D1621	19.80 psi (136.5 kPa)	
Flexural Strength	ASTM C203	42.57 psi (293.5 kPa)	
Thermal Resistance	ASTM C177	4.0 F.ft <sup>2</sup> .hr/Btu (0.70 m <sup>2</sup> K/W)	
Water Vapor Permeance	ASTM E96	2.27 US perm (130 ng/Pa.s.m <sup>2</sup> )	
Water Absorption	ASTM C2842	0.93%	
	ASTM C272	2.95%	
Dimensional Stability	ASTM D2126	0.52%	
Limiting Oxygen Index	ASTM D2863	37.0%	
Trueness and Squareness (Maximum)	ASTM C550	Edge:	0.03125 in/ft
		Face:	0.03125 in/ft
		Length and Width:	0.06250 in/ft
Surface Burning Characteristics	ASTM E84	Flame Spread:	25 or less
		Smoke Developed:	450 or less
	CAN/ULC-S102	Flame Spread:	250 or less
		Smoke Developed:	500 or more
Form Capacity Strength	CCMC Section 6.4.4	865 psf (41.4 kPa)	
Fire Resistance Rating (FRR)	CAN/ULC-S101	3+ hrs	



**Design Specifications Table**

Block Type	Core Size	Block Dimensions L*H*W	Concrete Volume Per Block	Concrete Volume Per ft <sup>2</sup> of Wall Area	Surface Area Per Block
Straight	4" (102mm)	48 x 16 x 9" (1219 x 406 x 229mm)	0.066 yd <sup>3</sup> (0.050 m <sup>3</sup> )	0.012 yd <sup>3</sup> (0.009 m <sup>3</sup> )	5.33 ft <sup>2</sup> (0.50 m <sup>2</sup> )
Short 90° Corner	4" (102mm)	[24.5+12.5] x 16 x 9" ([622+318] x 406 x 229mm)	0.037 yd <sup>3</sup> (0.028 m <sup>3</sup> )	0.009 yd <sup>3</sup> (0.007 m <sup>3</sup> )	4.11 ft <sup>2</sup> (0.38 m <sup>2</sup> )
Short 45° Corner	4" (102mm)	[21+9] x 16 x 9" ([533+229] x 406 x 229mm)	0.036 yd <sup>3</sup> (0.027 m <sup>3</sup> )	0.011 yd <sup>3</sup> (0.008 m <sup>3</sup> )	3.33 ft <sup>2</sup> (0.31 m <sup>2</sup> )
Straight	6" (152mm)	48 x 16 x 11" (1219 x 406 x 279mm)	0.099 yd <sup>3</sup> (0.076 m <sup>3</sup> )	0.019 yd <sup>3</sup> (0.014 m <sup>3</sup> )	5.33 ft <sup>2</sup> (0.50 m <sup>2</sup> )
Long 90° Corner	6" (152mm)	[48+24] x 16 x 11" ([1219+610] x 406 x 279mm)	0.126 yd <sup>3</sup> (0.096 m <sup>3</sup> )	0.016 yd <sup>3</sup> (0.012 m <sup>3</sup> )	8.00 ft <sup>2</sup> (0.74 m <sup>2</sup> )
Short 45° Corner	6" (152mm)	[21.25+9.25] x 16 x 11" ([540+235] x 406 x 279mm)	0.053 yd <sup>3</sup> (0.040 m <sup>3</sup> )	0.015 yd <sup>3</sup> (0.011 m <sup>3</sup> )	3.39 ft <sup>2</sup> (0.31 m <sup>2</sup> )
Brick Ledge	6" (152mm)	48 x 16 x 16" <sup>1</sup> (1219 x 406 x 406mm) <sup>1</sup>	0.138 yd <sup>3</sup> (0.105 m <sup>3</sup> )	0.026 yd <sup>3</sup> (0.020 m <sup>3</sup> )	5.33 ft <sup>2</sup> (0.50 m <sup>2</sup> )
Double Taper Top	6" (152mm)	48 x 16 x 11" <sup>2</sup> (1219 x 406 x 279mm) <sup>2</sup>	0.108 yd <sup>3</sup> (0.083 m <sup>3</sup> )	0.020 yd <sup>3</sup> (0.015 m <sup>3</sup> )	5.33 ft <sup>2</sup> (0.50 m <sup>2</sup> )
Straight	8" (203mm)	48 x 16 x 13" (1219 x 406 x 330mm)	0.132 yd <sup>3</sup> (0.101 m <sup>3</sup> )	0.025 yd <sup>3</sup> (0.019 m <sup>3</sup> )	5.33 ft <sup>2</sup> (0.50 m <sup>2</sup> )
Long 90° Corner	8" (203mm)	[48+24] x 16 x 13" ([1219+610] x 406 x 330mm)	0.162 yd <sup>3</sup> (0.124 m <sup>3</sup> )	0.020 yd <sup>3</sup> (0.015 m <sup>3</sup> )	8.00 ft <sup>2</sup> (0.74 m <sup>2</sup> )
Short 45° Corner	8" (203mm)	[22+10] x 16 x 13" ([559+254] x 406 x 330mm)	0.073 yd <sup>3</sup> (0.056 m <sup>3</sup> )	0.021 yd <sup>3</sup> (0.016 m <sup>3</sup> )	3.56 ft <sup>2</sup> (0.33 m <sup>2</sup> )
Brick Ledge	8" (203mm)	48 x 16 x 18" <sup>3</sup> (1219 x 406 x 457mm) <sup>3</sup>	0.171 yd <sup>3</sup> (0.131 m <sup>3</sup> )	0.032 yd <sup>3</sup> (0.024 m <sup>3</sup> )	5.33 ft <sup>2</sup> (0.50 m <sup>2</sup> )
Double Taper Top	8" (203mm)	48 x 16 x 13" <sup>4</sup> (1219 x 406 x 330mm) <sup>4</sup>	0.141 yd <sup>3</sup> (0.108 m <sup>3</sup> )	0.026 yd <sup>3</sup> (0.020 m <sup>3</sup> )	5.33 ft <sup>2</sup> (0.50 m <sup>2</sup> )
Straight <sup>5</sup>	10" (254mm)	48 x 24 x 15" (1219 x 610 x 381mm)	0.247 yd <sup>3</sup> (0.189 m <sup>3</sup> )	0.031 yd <sup>3</sup> (0.024 m <sup>3</sup> )	8.00 ft <sup>2</sup> (0.74 m <sup>2</sup> )
Short 90° Corner	10" (254mm)	[42.5+18.5] x 24 x 15" ([1080+470] x 610 x 381mm)	0.225 yd <sup>3</sup> (0.172 m <sup>3</sup> )	0.022 yd <sup>3</sup> (0.017 m <sup>3</sup> )	10.17 ft <sup>2</sup> (0.94 m <sup>2</sup> )
Straight <sup>5</sup>	12" (305mm)	48 x 24 x 17" (1219 x 610 x 432mm)	0.296 yd <sup>3</sup> (0.226 m <sup>3</sup> )	0.037 yd <sup>3</sup> (0.028 m <sup>3</sup> )	8.00 ft <sup>2</sup> (0.74 m <sup>2</sup> )
Short 90° Corner	12" (305mm)	[38.5+20.5] x 24 x 17" ([978+521] x 610 x 432mm)	0.243 yd <sup>3</sup> (0.186 m <sup>3</sup> )	0.025 yd <sup>3</sup> (0.019 m <sup>3</sup> )	9.83 ft <sup>2</sup> (0.91 m <sup>2</sup> )

<sup>1</sup> 11" (279mm) block width at the base

<sup>2</sup> 13" (330mm) block width at the base

<sup>3</sup> 9.5" (241mm) concrete bearing width at the top

<sup>4</sup> 11.5" (292mm) concrete bearing width at the top

<sup>5</sup> Single taper top block is available for special order, see product drawings on Alleguard website

<sup>6</sup> 6" (152mm) and 8" (203mm) T-Block design specifications are available as product drawings on Alleguard website

