

About This Binder

Amvic recognizes and appreciates the important role Architects and Specifiers play in transforming ideas into real projects. This manual has been created to help you meet your unique needs during this process.

If any of your questions or concerns are not completely addressed, please attend one of Amvic's training seminars, AIA/CES programs (check your local area for schedule) or feel free to contact us and our staff will be happy to answer your questions. At Amvic, we pride ourselves in offering an exceptional level of customer service.

CD

The CD included in this binder contains the comprehensive ICF Specification and Design Guide which includes additional information required for specifying and designing with Amvic ICF. Please refer to this CD for any information which is not contained in this binder.

Technical Support

Please contact us with any inquiries pertaining to information included in this manual or if you require other technical assistance.

Technical Support 1-877-470-9991 (toll free)
1-416-410-5674 ext. 129

Amvic Website

The Amvic website is updated regularly with the most current news including testing reports, technical bulletins and evaluation reports. The comprehensive ICF Specification and Design Guide is also posted online.

Amvic website – www.amvicsystem.com



Disclaimer

This document is provided for informational purposes only. The information contained in this document represents the current view of Amvic Inc. on the issues discussed as of the date of publication. These opinions as expressed, should not be interpreted to be a commitment on the part of Amvic Inc. and cannot guarantee the accuracy of any information presented after the date of publication. The user assumes the entire risk as to the accuracy and use of this document.

This manual is intended to supplement rather than replace the basic construction knowledge of the construction professional. All structures built with the Amvic Building System must be designed and erected in accordance with all applicable building codes and/or guidance of a licensed professional engineer. In all cases, applicable building code regulations take precedence over this manual.

INFORMATION CONTAINED IN THIS DOCUMENT IS PROVIDED “AS IS” WITHOUT ANY WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND FREEDOM OF INFRINGEMENT.



The registration card at the bottom of this page must be completed by the Amvic Representative prior to the presentation of this binder. If you move, please complete the remaining card and mail it to Amvic Head Office.

We've Moved

Please Update my address in your files.



Please Print

Name: _____ Title: _____

Company: _____

Address: _____

City: _____ State/Province: _____ Zip / Postal Code: _____

Telephone: _____ Fax: _____

Email: _____

Registration Information



Please Print

Name: _____ Title: _____

Company: _____

Address: _____

City: _____ State/Province: _____ Zip / Postal Code: _____

Telephone: _____ Fax: _____

Email: _____





Amvic Inc.
501 McNicoll Ave.
Toronto, ON
M2H 2E2



Amvic Inc.
501 McNicoll Ave.
Toronto, ON
M2H 2E2



Table of Contents

PAGE

Product Literature

Project Profiles

Amvic ICF

What is Amvic ICF? 1
Why Amvic ICF? 2
Applications 4
Product Specification 5
Amvic ICF Products 7
Code Approvals 8

AmDeck™ Floor & Roof System

What is AmDeck™ Floor & Roof System? 9
Why AmDeck™? 10
Applications 11

Designing with Amvic

Amvic Design Software 13

CD

Table of Contents for ICF Specification and Design Manual (CD) 17





Amvic ICF

What is Amvic ICF?

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 (150mm, 203mm and 254mm) 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 – Best Western hotel constructed using Amvic ICF



Figure 2 – Typical Amvic reversible ICF block



Why Amvic ICF?

Benefits

Design Flexibility

Amvic ICFs have superior engineered spanning capabilities, making them ideal for long insulated window and door lintels, as well as for grade beam applications. They are also extremely flexible, making curved, square, plumb and straight walls easily obtainable. In addition, exterior and interior wall coverings are easily attached, dramatically improving a structure's appearance.

Green

ICFs combine expanded polystyrene (EPS) insulation and concrete thermal mass which even-out temperature fluctuations by absorbing and storing heat. This highly effective combination equates to an average of approximately 30-50% in monthly savings on heating and air conditioning. Amvic ICFs are also manufactured using recycled 60% materials by weight.

LEED Certification

Amvic ICF contributes considerably to the LEED certification of a structure. Of the 26 required points for a structure to be LEED certified, Amvic ICF can contribute up to 28! Amvic is the only manufacturer on the market that has conducted a third party assessment which verifies this claim in a LEED Assessment Report.

Sound Barrier

Insulated concrete forms provide exceptional sound attenuation. Amvic ICF structures have an STC rating of 50+ which corresponds to a reduction in over two thirds of transmitted noise.

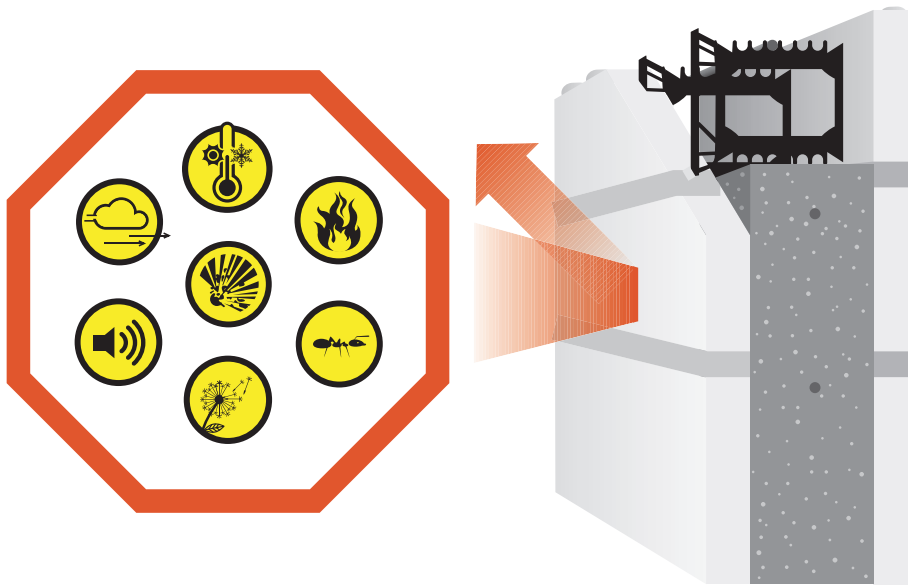
Superior Insulation

Amvic ICF replaces fiberglass insulation with expanded polystyrene (EPS). This eliminates all air borne glass fibers and insulation settlement. Amvic structures are constructed with non-organic materials, which greatly minimize the growth of mould and mildew. Also, the impermeable walls prevent the entry of dust, pollens and pollution.



Protection

Amvic structures are constructed with reinforced concrete, which tremendously increases strength and maximizes resistance to natural disasters such as storms, hurricanes, tornadoes and earthquakes. Amvic ICFs are also manufactured using only approved raw material bead with flame-retardant agents and have a 3+ hour fire rating.



Stops: wind, heat/cold, water, fire, projectiles, noise, dust, pollen, insects, mould.



Applications

Residential

For residential construction, ICFs are typically used for the structure's exterior walls from foundation to top plate, including basements. ICFs can also be used in combination with conventional stick frame or panel construction.



Figure 3 – A custom home being constructed with Amvic ICF

Commercial

For commercial construction ICFs are used for the structure's exterior walls but also often for interior walls to provide shear walls or acoustic, thermal and fire barriers between areas. ICFs are generally used for structures up to 10 stories in height, subject to engineering considerations.



Figure 4 – A multi-storey hotel being constructed with Amvic ICF



Product Specification

Manufacturer

Amvic Building System

501 McNicoll Ave
Toronto, On
M2H 2E2

Phone: 416 410 5674
Toll Free: 1 877 470 9991
Fax: 416 759 7402

Website: www.amvicsystem.com

Product Description

Amvic Insulated Concrete Forms (ICFs) are stay-in-place forms manufactured using two 2.5" panels of Type 2 1.5lb/cf density Expanded Polystyrene (EPS) held together by polypropylene webs placed 6" on center. The forms offer a "5 in 1" system that provides structure, insulation, vapor barrier, sound barrier and attachments for drywall and exterior siding in one.

Completed Amvic ICF walls offer an R-Value of 22+, a performance R Value of 50+ when concrete thermal mass is included, an STC rating of 50+ and a fire rating of 3 hrs+ (for a 6" core or more).

Type of ICF: Flat Wall
Raw Materials: BASF BF or BFL 327 beads, polypropylene

Methods of Manufacturing:
Molded raw beads through pressurized steam, Injection molded webs

Product Features

Amvic ICFs offer the following features which ensure exceptional quality as well reduce construction time and labour costs.



- **Form Capacity Strength of 865 lbs./sq.ft.**
- Fully reversible FormLock™ interlocking system with a depth of 1" which provides superior connection strength
- Webs have built-in clips which can hold 2 courses of reinforcing steel and place it most effectively to maximize structural strength
- Can withstand internal vibration
- Manufactured with over 60% recycled materials
- Generates less than 1% construction waste
- Can contribute up to 28 LEED points

Applications

Amvic ICF can be used both below and above grade for single and multi-storey residential, commercial, institutional and industrial construction.

Code Approvals

Amvic is approved by the following agencies:

- ICC-ES Report #1269
- CCMC Report #13043-R
- Bahamas Ministry of Works & Utilities. Report #MOW&U/BC/24/14
- City of Los Angeles, CA. Report #25477
- Ontario Ministry of Municipal Affairs & Housing, Report #02-02-89
- State of Florida
- State of Wisconsin

Technical Information and Support

Amvic has a comprehensive ICF Technical & Installation Manual available in print, on CD and on our website which covers detailed installation and technical information. Additional technical information is available on our website. If you require any other technical support please do not hesitate to contact our engineering department at 1 877 470 9991 ext 129.

Availability

Amvic ICFs are produced at multiple locations across North America and are available for purchase through Amvic's extensive network of Authorized Distributors.



Technical Testing

USA		
Expanded Polystyrene in accordance with ICBO ES AC12 "Acceptance Criteria for Foam Plastic Insulation" in Conjunction with ASTM C578-95	Requirement	Amvic Results
1 - Expanded Polystyrene Testing ASTM C578-95		
Density (ASTM C 1622-98)	1.35 lbs/ft ³	1.5 lbs/ft ³
Thermal Resistance (ASTM C 177-97)	4.0 F.ft ² .h/Btu	4.0 F.ft ² .h/Btu
Compressive Strength (ASTM D 1621-94)	15.0 psi	19.8 psi
Flexural Strength (ASTM C 203-99)	40.0 psi min.	42.57 psi
Water Vapor Permeance (ASTM E 96-94)	200 max ng/Pa.s. s ²	130.1 ng/Pa.s.s ²
Water Absorption (ASTM C272-91)	3.0% by vol max	2.95%
Dimensional Stability (ASTM D 2126-94)	2.0% max	0.52%
Limiting Oxygen Index (ASTM D 2863-97)	24% min	37%
Trueness and Squareness (ASTM C 550-95)		
Edge Trueness	0.03125 in/ft max	0.0197 in/ft
Face Trueness	0.03125 in/ft max	0.0197 in/ft
Length and Width Squareness	0.0625 in/ft max	0.0295 in/ft
2 - Plastic Tie Testing ICBO ES AC116		
Fastener Withdrawal (ASTM D1761-99)	N/A	39.61 lbs Safety Factor of 5
Fastener Shear Strength (ASTM D1761-99)	N/A	60.22 lbs Safety Factor of 3.2
Tensile Strength (ASTM D638-99)	N/A	810 lbs at Ambient Temperature
3 - Fire Testing		
Room Fire Test (UBC 1997 26-3)	N/A	Passed/Complied
Other Testing		
A - Flammability ASTM E 84		
Flame Spread	25 max	25 or less
Smoke Developed	450 max	450 or less
B - Fire Burning Characteristics of Plastic Ties		
Ignition Temperature (ASTM D1929-68 (1975)	329 (C) 650 (F) min	400 (C) 752 (F)
Burn Rate (ASTM D635-98)	40 mm/min max	20.2 mm/min
Smoke Density (ASTM D2843-93)	75%	25.80%







CANADA		
Expanded Polystyrene in Accordance with Canadian Construction Material Center (CCMC) Technical Guide for "Modular Expanded - Polystyrene Concrete Forms" Master Format Section 03131 "	Requirement	Amvic Results
1 - Expanded Polystyrene Testing CAN/ULC S701-97, Type II		
Thermal Resistance (ASTM C177-97)	0.7 m ² .OC/W min	0.7 m ²
Water Vapor Permeance (ASTM E 96-94)	200 Ng/Pa.s. s ² max	130.1 Ng/Pa.s. s ² max
Dimensional Stability (ASTM D 2126-94)	1.5% max	0.52%
Flexural Strength (ASTM C 203-99)	240 KPa min	314.6 KPa
Water Absorption (ASTM D2842-97)	4.0% by vol max	0.93%
Compressive Strength (ASTM D 1621-94)	110 KPa min	136.5 KPa
Limiting Oxygen Index (ASTM D 2863-97)	24% min	37%
2 - Plastic Web Testing CCMC Technical Guide		
Tensile Strength (ASTM D638-99)	N/A	810 lbs
Fastener Withdrawal (ASTM D1761-99)	N/A	198.04 lbs
Fastener Shear Strength (ASTM D1761-99)	N/A	226.08 lbs
3 - Forming Capacity Test section 6.4.4 of CCMC Technical Guide for Modular Expanded Polystyrene		
Forming Capacity	40 KPa (835 lbs/ft ²)	41.4 KPa (865 lbs/ft ²)
Other Testing		
1 - Flammability CAN.4-S102.2		
Flame Spread	N/A	210
Smoke Developed	N/A	400-450
CANADA & USA		
1 - Fire Resistance Rating CAN/ULC S101-M89 and ASTM E119		
6 in wall with Drywall	N/A	3 hrs +
2 - 15 Minute Stay in Place Fire Test CAN/ULC S101-04 and ASTM E119-00a		
6 in wall with drywall	N/A	Passed/Complied



Amvic Products

Amvic ICF Products

Please refer to the chart below for Amvic ICF products and dimensions.

	Product	Concrete Core Width	Form Dimension Inches LxHxW (Metres)	Concrete Volume Per Form	Concrete Volume per sq.ft. of wall area	Surface Area Per Form
	Amvic Straight Reversible Block	4" (102mm)	48" x 16" x 9" (1.22 x 0.41 x 0.23)	0.066 cu-yd 0.050 m ³	0.012 cu-yd 0.009 m ³	5.33 ft ² 0.50 m ²
		6" (152mm)	48" x 16" x 11" (1.22 x 0.41 x 0.28)	0.099 cu-yd 0.076 m ³	0.019 cu-yd 0.014 m ³	5.33 ft ² 0.50 m ²
		8" (203mm)	48" x 16" x 13" (1.22 x 0.41 x 0.33)	0.132 cu-yd 0.101 m ³	0.025 cu-yd 0.019 m ³	5.33 ft ² 0.50 m ²
		10" (254mm)	48" x 24" x 15" (1.22 x 0.61 x 0.38)	0.247 cu-yd 0.189 m ³	0.031 cu-yd 0.024 m ³	8.00 ft ² 0.74 m ²
		12" (305mm)	48" x 24" x 17" (1.22 x 0.61 x 0.43)	0.296 cu-yd 0.227 m ³	0.037 cu-yd 0.028 m ³	8.00 ft ² 0.74 m ²
	Amvic 90° Corner Reversible Block*	4" (102mm)	[24.5" + 12.5"] x 16" x 9" (0.62 + 0.32) x 0.41 x 0.23	0.037 cu-yd 0.028 m ³	0.009 cu-yd 0.007 m ³	4.11 ft ² 0.38 m ²
		6" (152mm)	[26.5" + 14.5"] x 16" x 11" (0.67 + 0.37) x 0.41 x 0.28	0.059 cu-yd 0.045 m ³	0.013 cu-yd 0.010 m ³	4.56 ft ² 0.42 m ²
		8" (203mm)	[28.5" + 16.5"] x 16" x 13" (0.72 + 0.42) x 0.41 x 0.33	0.083 cu-yd 0.064 m ³	0.017 cu-yd 0.013 m ³	5.00 ft ² 0.46 m ²
		10" (254mm)	[42.5" + 18.5"] x 24" x 15" (1.08 + 0.47) x 0.61 x 0.38	0.226 cu-yd 0.172 m ³	0.022 cu-yd 0.017 m ³	10.17 ft ² 0.94 m ²
		12" (305mm)	[38.48" + 20.5"] x 24" x 17" (0.98 + 0.52) x 0.61 x 0.43	0.243 cu-yd 0.186 m ³	0.025 cu-yd 0.019 m ³	9.83 ft ² 0.91 m ²
	Amvic 45° Corner Reversible Block*	4" (102mm)	[21" + 9"] x 16" x 9" (0.53 + 0.23) x 0.41 x 0.22	0.036 cu-yd 0.027 m ³	0.011 cu-yd 0.008 m ³	3.33 ft ² 0.31 m ²
		6" (152mm)	[21.25" + 9.25"] x 16" x 11" (0.54 + 0.23) x 0.41 x 0.28	0.053 cu-yd 0.041 m ³	0.016 cu-yd 0.012 m ³	3.39 ft ² 0.31 m ²
		8" (203mm)	[22" + 10"] x 16" x 13" (0.56 + 0.25) x 0.41 x 0.33	0.073 cu-yd 0.055 m ³	0.020 cu-yd 0.016 m ³	3.56 ft ² 0.33 m ²
	Amvic Tapered Top Block	6" (152mm)	48" x 16" x 11" - 9.5" concrete width at top (1.22 x 0.41 x 0.28 - 0.24 concrete width at top)	0.108 cu-yd 0.083 m ³	0.020 cu-yd 0.016 m ³	5.33 ft ² 0.50 m ²
		8" (203mm)	48" x 16" x 13" - 11.5" concrete width at top (1.22 x 0.41 x 0.33 - 0.29 concrete width at top)	0.141 cu-yd 0.108 m ³	0.026 cu-yd 0.020 m ³	5.33 ft ² 0.50 m ²
	Amvic Brickledge Block	6" (152mm)	48" x 16" & 5" Brick Ledge space (1.22 x 0.41) & 0.13	0.138 cu-yd 0.105 m ³	0.026 cu-yd 0.020 m ³	5.33 ft ² 0.50 m ²
		8" (203mm)	48" x 16" & 5" Brick Ledge space (1.22 x 0.41) & 0.13	0.171 cu-yd 0.130 m ³	0.032 cu-yd 0.024 m ³	5.33 ft ² 0.50 m ²
		8" to 6" transition	48" x 16" & 4.5" Brick Ledge space (1.22 x 0.41) & 0.11	0.157 cu-yd 0.120 m ³	0.029 cu-yd 0.023 m ³	5.33 ft ² 0.50 m ²
	Amvic Height Adjuster	2" (51mm)	48" x 2" x 2.5" (1.22 x 0.05 x 0.06)	N/A	N/A	N/A
		3" (76mm)	48" x 3" x 2.5" (1.22 x 0.076 x 0.06)	N/A	N/A	N/A
		4" (102mm)	48" x 4" x 2.5" (1.22 x 0.10 x 0.06)	N/A	N/A	N/A


Amvic T-Blocks	Block Type	Concrete Core Width	Form Dimension Inches LxHxW (Metres)	Concrete Volume Per Form	Concrete Volume Per sq.ft. of Wall Area	Surface Area Per Form
	Short Leg T-Block	6" (152mm)	[30"+9.5"]x16"x11" ([0.76+0.24]x0.4x0.28)	0.081 cu-yard 0.062m ³	0.018 cu-yard 0.014m ³	4.39ft ² 0.41m ²
	Long Leg T-Block	6" (152mm)	[30'+21.5"]x16"x11" ([0.76+0.55]x0.4x0.28)	0.106 cu-yard 0.081m ³	0.018 cu-yard 0.014m ³	5.72ft ² 0.53m ²
	Short Leg T-Block	8" (203mm)	[32'+9.5"]x16"x13" ([0.81+0.24]x0.4x0.33)	0.114 cu-yard 0.087m ³	0.025 cu-yard 0.019m ³	4.61ft ² 0.43m ²
	Long Leg T-Block	8" (203mm)	[32'+21.5"]x16"x13" ([0.81+0.55]x0.4x0.33)	0.147 cu-yard 0.112m ³	0.025 cu-yard 0.019m ³	5.94ft ² 0.55m ²

Table 1 – Amvic ICF Products

* All dimensions taken are based on the outer perimeter of form.



List of Code Approvals

Code Approvals

Major Code Approvals

ICC-ESR 1269 - http://www.icc-es.org/reports/pdf_files/ICC-ES/1269.pdf



CCMC 13043-R - http://irc.nrc-cnrc.gc.ca/ccmc/registry/03/13043_e.pdf



Local/Regional Code Approvals

Bahamas Ministry of Works & Utilities. Report# MOW&U/BC/24/14

City of Los Angeles, CA. Report #25477

Ontario Ministry of Municipal Affairs & Housing, Report # 02-02-89

State of Florida

State of Wisconsin



AmDeck™ Floor & Roof System

What is AmDeck™ Floor & Roof System?

The AmDeck™ Floor & Roof System is a modular stay-in-place form, made of Expanded Polystyrene (EPS) for the construction of concrete floors and roofs. The decking formed by AmDeck™ is a one-way reinforced concrete joist construction type (a.k.a one-way ribbed floor). The use of small standardized, lightweight units, make the system much easier to use and handle than competing products. When installed properly, the system provides structural strength through reinforced concrete and insulation through EPS.



Figure 5 – AmDeck™ Form



Figure 6 – Condominium constructed using AmDeck™ and Amvic ICF

The EPS used in the AmDeck™ Floor and Roof System has a density of 1.5 pcf (24 kg/m³) and is in compliance with ASTM C578 and CAN/ULC S701 type II. The EPS is made from BASF BF or BFL beads, with a maximum flame spread and smoke developed of 25 and 450 respectively, as per ASTM E 84, and flame spread and smoke developed of 210 and 400-450, as per CAN/ULC-S102.2.

The AmDeck™ forms are reinforced with injection molded high impact polypropylene webs. As a result, the forms are able to carry construction loads comfortably without being damaged or the EPS fracturing.



Why AmDeck™?

Shoring Spans up to 20 ft (6 m)

AmDeck™ implements full 10 inch deep (254 mm), lightweight steel joists with design thicknesses of 0.0566 inch (1.4 mm), 0.0713 inch (1.8 mm), and 0.1017 inch (2.6 mm) (formerly referred to as gauge 16, 14 and 12, respectively). The joists support temporary construction loads until the poured concrete gains its specified strength. As a result, shoring can be placed up to 20 ft (6 m) on center, (depending on topping slab thickness and allowable deflection tolerances) which substantially reduces shoring requirements and overall construction costs when compared to competing products.

Small/Compact Units

AmDeck™ comes in standardized, small, lightweight modular units, which make the system easier to handle and use. The modular units are assembled on-site to construct the floor or roof span in an easy and fast manner. AmDeck™ forms can also be easily cut from both orthogonal directions to fit a specific span or width, making this system extremely flexible, in comparison to competing products.

Provides Structure

One-way concrete floor/roof joists which are formed by AmDeck™ can span up to 30 ft (9.1 m) using normal concrete mixes and conventional reinforcing steel. Spans greater than 30 ft (9.1 m) can be achieved using higher strength concrete and post-tensioned reinforcing cable strands.

Reduces Costs

AmDeck™ is a fully reversible system which reduces labor costs, installation time, allows for multiple installation teams and minimizes material wastage. In addition, AmDeck™ is a “ready to finish” system that requires no additional furring strips, saving both time and money.



High Performance

When used for roofs, AmDeck™ provides protection against fire and extreme weather such as tornadoes and hurricanes. In addition, the EPS used in AmDeck™ provides continuous thermal insulation and considerably reduces the amount of sound transmission between floors.

Applications

AmDeck™ is highly versatile and can be used for a variety of applications in all sectors of the construction industry including residential, commercial and institutional. The system can be used to create floors, flat roofs, pitched roofs, balconies and cantilevers (subject to engineering review and design). In addition to being fully compatible with ICF walls, AmDeck™ can also be used with structural concrete and steel framing systems.





Designing with Amvic

Design Resources

For comprehensive information on designing with Amvic ICF, please refer to Part 3 of the Design & Specification CD.

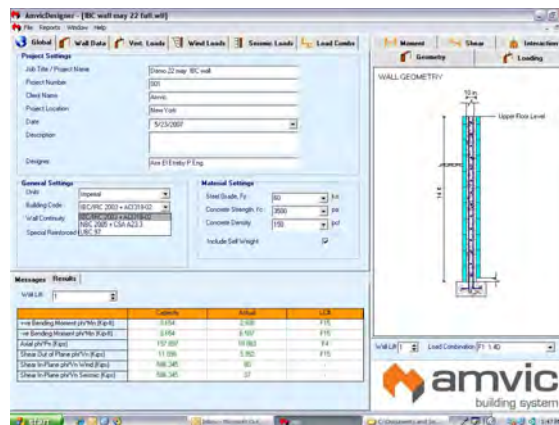
NEW Amvic Design Software

Amvic has recently developed industry leading engineering software for checking the structural adequacy of Amvic ICF walls, lintels and the AmDeck™ Floor & Roof System. The software is an extremely useful tool for engineers and architects who need to streamline their design process and increase efficiency.

The software is visually interactive and any changes or inputs made by the user are automatically reflected on the graphics screen in real time. The software also has built-in text and graphic reports output for complete transparency on the analysis and design checks performed.

Easy as 1, 2, 3...

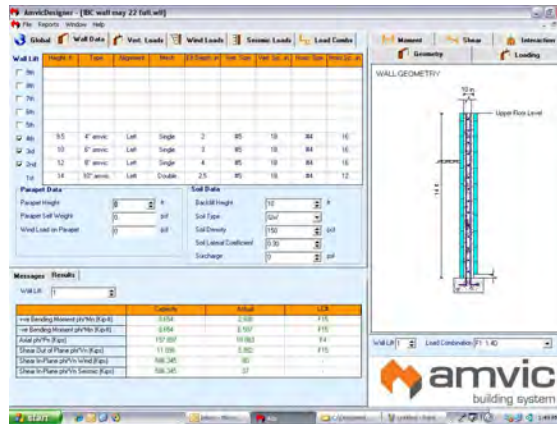
1. Choose the appropriate building code for the application or geographic area and the system of measurement of your choice. The software will automatically adjust all relevant default settings to comply with the code and units selected.*



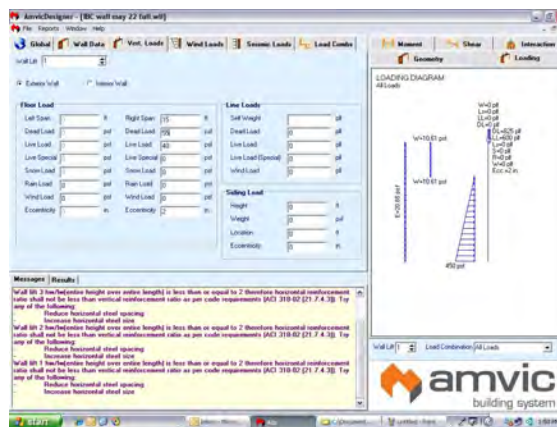
**Amvic Design Software can determine code compliance for the IBC 2003 (US), NBC 2005 (Canada) and UBC 1997 (California).*



2. Enter project information, reinforcement, loads, load combinations and other data. The system works in real time, so every input will be instantly reflected on the Graphics screen.



3. Review the Messages and Results screen to check for any faults in the design.



After completing these steps for each applicable module, you should have a comprehensive design.



Unique Features

- Built-in text and graphic reports output for complete transparency
- Ability to view inputs and changes to the design on a graphic in real time
- Code compliance for the IBC 2003, NBC 2005 and UBC 1997
- Metric and Imperial units
- Intuitive and user-friendly interface
- Detailed tutorials

Free Trial

For a **30-day free trial** of the Amvic Design Software (ADS), please visit www.amvicsystem.com.

To Order

For more information, or to order your version of the Amvic Design Software (ADS) for only **\$349 USD or \$399 CDN**, call 1-877-470-9991, or visit www.amvicsystem.com.





Table of Contents – ICF Specification & Design Guide

The following is a comprehensive table of contents for the ICF Specification and Design Guide CD.

	PAGE
Part 1 – Introduction	1
1.1 – Amvic Insulated Concrete Forms (ICFs)	1
Part 2 – Construction Overview	5
2.1 – Amvic ICF 10 Step Construction Guide	5
Part 3 – Designing with Amvic	11
3.1 – Introduction to Designing with Amvic ICF	11
3.2 – Amvic Design Software	11
3.3 – Applications	12
3.4 – Design Flexibility	13
3.5 – Design Constraints	15
3.6 – Block Sizes	15
3.7 – Wall Dimensions	16
3.8 – Combining Materials	17
3.9 – Foundations	17
3.10 – Windows & Doors	20
3.11 – Plumbing & Electrical	22
3.12 – Attachment to Walls	24
3.13 – Floors & Roofs	27
3.14 – Special Applications	29
3.15 – Concrete Specification	30
3.16 – Steel Reinforcement for Walls	30
3.17 – Lapped Splices for Multiple Concrete Pours	35
3.18 – Designing Reinforcing Steel for Walls	36
3.19 – Steel Reinforcing Bars and Jobsite Safety	38
3.20 – Preferred Coursing & Corner Dimensions	40



Part 4 – Product Specifications 49

Part 5 – CSI Specifications 51

Part 6 – Engineering 65

6.1 – ICF Engineering 65

6.1.0 – Canada 65

6.2.0 – USA 74

Part 7 – Approvals & Evaluations 95

7.1 – Amvic ICF – Technical Testing 95

7.2 – List of Code Approvals 96

7.3 – CCMC Report 97

7.4 – ICC Report 111

Part 8 – Special Topics 117

8.1 – Utility Service Installations 117

8.2 – Below Grade Moisture Protection 123

8.3 – Termites and ICF Construction 129

Part 9 – ICF FAQs 145

9.1 – Amvic ICF 145

9.2 – Why Amvic is Better 145

9.3 – Construction 146

9.4 – How To 148

9.5 – External Finishes 150

9.6 – Architectural/Engineering 150

9.7 – Cost & Performance 151

9.8 – Health & Safety 152

Part 10 - Warranty 153

Appendix A – CAD Drawings 155

