

Construction Professional

Energy Efficient. Environmentally Friendly. Superior Strength.



NUDURA[®]
INTEGRATED BUILDING TECHNOLOGY

Building Value.

THE INTEGRATED PHILOSOPHY

NUDURA Corporation prides itself on service and quality. With over 50 years of combined industry experience NUDURA brings you the present and future of insulated concrete form construction.



NUDURA – AN INTEGRATED PHILOSOPHY

The concept for NUDURA was inspired by an interest in consolidating the best features of existing Insulated Concrete Form products and then improving on them to produce the most technologically advanced insulated concrete form. From NUDURA's inception, our philosophy has been one of integration.

INTEGRATING SALES WITH SERVICE

With the most technologically advanced insulated concrete form, comes service to match. NUDURA aligns itself with the best companies in local geographic areas to represent our products. With full technical support from NUDURA you can be sure you will have access to one of NUDURA's authorized distributors throughout the process of building with the NUDURA system.

INTEGRATING VALUE

The flexible design capabilities of NUDURA® products allow for innovative building concepts while allowing for cost competitive construction. We are committed to providing you with a product that will enable you to offer your customers much more than just a wall. When you build with NUDURA you offer them a quality product that is energy efficient, stronger and in most cases less expensive per square foot than most traditional building materials.

Quality. Support.

Product Innovations. Relationships.

TECHNICAL SUPPORT

NUDURA distributors provide extensive support from the design concept through to the installation, and can help you with:

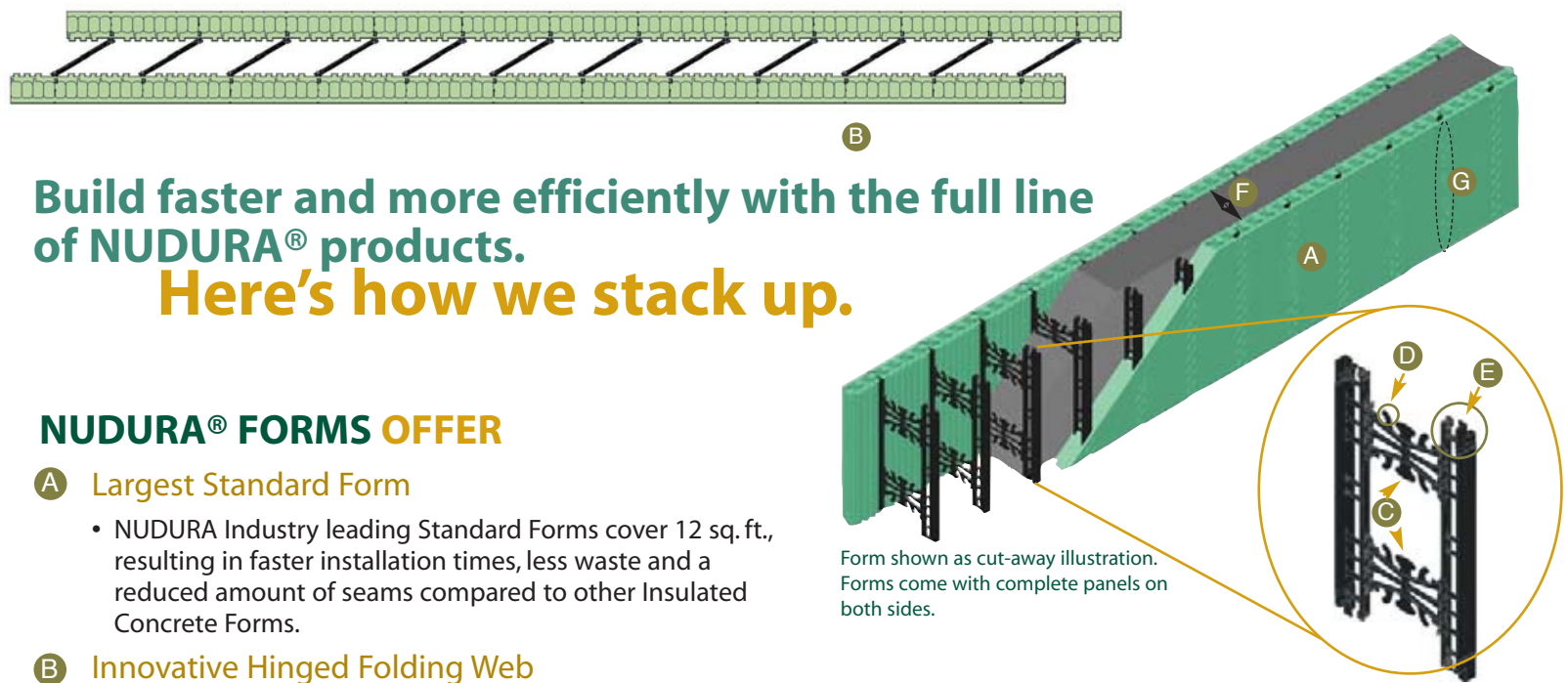
- Proven installation recommendations to maximize efficiency and cost savings.
- Code compliance advice for local, regional and national building codes.
- All NUDURA distributors have access to NUDURA's technical service support team that can provide further insight on specialty installations and code issues.





BUILDING ON STRENGTH & INNOVATION

NUDURA gives you the opportunity to build structures that will offer your customers more. Whether you build with traditional methods or another insulated concrete form, NUDURA offers you more than one reason to switch from your current building method.



Build faster and more efficiently with the full line of NUDURA® products. Here's how we stack up.

NUDURA® FORMS OFFER

A Largest Standard Form

- NUDURA Industry leading Standard Forms cover 12 sq. ft., resulting in faster installation times, less waste and a reduced amount of seams compared to other Insulated Concrete Forms.

B Innovative Hinged Folding Web

- NUDURA® Innovative Hinged Webs allow forms to be shipped more efficiently, reducing shipping by up to 40%, and allow for easy handling and maximum on-site storage.
- The folding form also eliminates costly assembly time on-site – just unfold and stack.

C Dual Cross Connecting Ties Within Web Design

D Reinforcing Steel Pre-positioning Cradle Within Web Design

E Patented Locking Mechanism

- NUDURA® Locking Mechanism locks forms together, eliminating float and compression and the need to secure forms with tape or wire, making the building process faster and more efficient.

F Variety of Core Sizes for All Building Types

G Continuous Fastening Strip for Interior and Exterior Materials on 8" (203mm) Centers

Form shown as cut-away illustration. Forms come with complete panels on both sides.

NUDURA offers a full line of accessories

End Caps	Height Adjusters
Ceiling and Floor Insulation	Alignment System (8-12' channels and higher with tall wall kit)
Form Lock	Anchor Hanger System (complete floor attachment kit)
Easy Buck (for windows)	Tall Wall Kit (For wall heights above 12' without intermediate floor connections)
Vertical Joint Clips	Waterproofing
Spray Foam	Parging

OTHER FEATURES:

When you build with NUDURA, a premium is not charged on specialty forms such as 45, 90, or T Forms. These come at the same per square foot cost as our standard unit. For specific commercial applications NUDURA can provide any foam density needed. Contact us or your local Authorized NUDURA Distributor for more information.

THE BETTER WAY TO BUILD

Join builders around the globe that have switched from their conventional building method to NUDURA, for more than one reason.



MAXIMUM ENERGY EFFICIENCY

NUDURA is a highly insulated steel reinforced, monolithic wall which vastly reduces air infiltration allowing for greater energy efficiency compared to traditional building methods. When you combine two panels of NUDURA's 2 5/8" (63.5mm) foam with the structural strength of reinforced concrete you can be sure you are building a structure that will be energy efficient and will reduce operating expenses for homeowners, building owners and operators.

STRENGTH

Compared to traditional building methods like wood, concrete block, or steel framed walls, NUDURA provides greater durability and strength. NUDURA® walls can withstand mother nature's worst, especially in high wind areas that are prone to hurricane and tornado force winds of up to 250 mph (7.0 kPa). With NUDURA's 4 hour fire protection rating you provide your customers additional benefits over conventional building methods.

SOUND RESISTANCE

NUDURA double foam insulated concrete core acts as an effective sound barrier, dampening sound vibrations. NUDURA's variety of concrete core sizes provide superior STC ratings making our forms a viable building choice for homes, schools, apartment buildings, theatres and many other commercial construction projects.

BUILD FASTER AND MORE EFFICIENTLY

LARGEST STANDARD FORM AVAILABLE IN THE INDUSTRY

NUDURA is the only insulated concrete form manufacturer to create a larger standard form that covers 12 sq. ft., resulting in faster installation times and less waste.

PATENTED 4-WAY REVERSIBLE INTERLOCK

The patented foam interlock allows the form to be 4 way reversible, almost eliminating waste. Eliminates left and right corners which allows NUDURA Forms to be used in twice as many scenarios as non reversible forms.

INNOVATIVE HINGED FOLDING WEB

The patented hinged web allows Nudura to be shipped flat, allowing for 40% more product on a truck. This patented technology also eliminates costly assembly time on the job site – just unfold and stack. NUDURA webs also have pre-positioned cradles built in, allowing rebar to be locked into place in a variety of positions for various building types.

LOCKING FASTENING STRIP

With NUDURA's Locking Fastening Strip the need to tape or wire forms is virtually eliminated. Our patented Fastening Strip securely locks forms into place eliminating float and compression – two major issues facing installers. NUDURA's unique design also provides continuous fastening for finish materials on 8" (203mm) centers.

See how easy NUDURA forms are to install.

Contact us or your local distributor for a NUDURA Basic Installation Methods DVD.



This is a
NUDURA building

Florida 2004



building green starts with NUDURA

Not only are NUDURA structures, stronger, safer, more energy efficient and faster to build they contribute significantly to a "Greener" building envelope. At NUDURA we are committed to improving the building process by manufacturing products that have minimal impact on the environment. Building with NUDURA allows you to offer your customers a more environmentally-friendly structure.

PRODUCT HIGHLIGHTS

- NUDURA is manufactured from recycled or recyclable material.
- NUDURA buildings produce little waste during construction, all waste is 100% recyclable. (Subject to local recycling programs.)
- NUDURA can contribute significantly towards achieving greater overall building energy efficiency.
- NUDURA® forms emit no CFC or HCFC's.
- NUDURA® forms are manufactured under strict guidelines using only processes that are non ozone-depleting.
- NUDURA contributes significantly to the LEED® Program.
- NUDURA's unique technological design creates less waste during the construction process, sending less waste to our landfills.



THE SOLUTION TO A HEALTHIER WORKING AND LIVING ENVIRONMENT

NUDURA combines the use of polystyrene (EPS) foam with reinforced concrete. The synergy of these materials together forms a structure that is extremely energy efficient, air tight and moisture resistant. NUDURA's inner fluted insulation panels bond intimately with the concrete to eliminate air gaps, minimizing the potential formation of mold growth and draft paths. The end result is a comfortably enclosed space that enables building mechanical systems to heat, cool and ventilate the structure more efficiently, creating a healthier living and working environment for building occupants. **These attributes make NUDURA the ideal building material for offices, schools, hospitals, apartments, senior's facilities, homes and more.**



▲ LEED® PLATINUM RATED WEST VILLAGE

Buildings are one of the heaviest consumers of natural resources and account for a significant portion of the green house gas emissions that affect climate change. In the U.S., buildings account for 38% of all CO₂ emissions.

**Source: Energy information administration (2008) assumptions to the annual energy outlook.*

ENVIRONMENTALLY FRIENDLY BUILDINGS

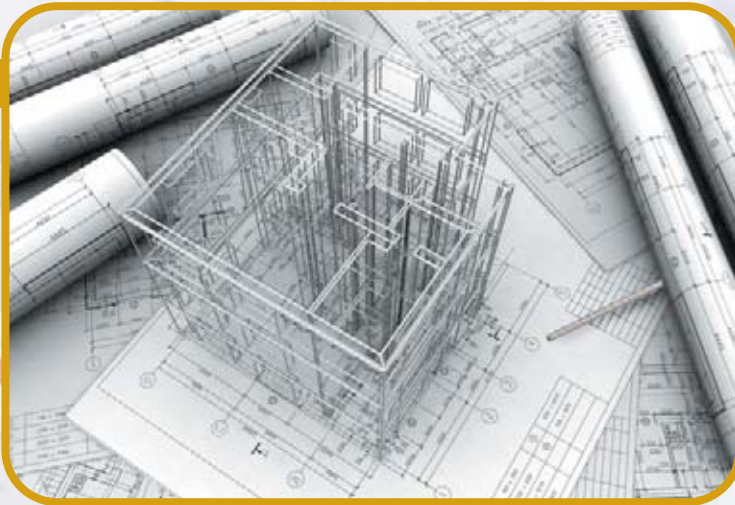
Projects specifying NUDURA provide much greater potential for saving valuable environmental resources, reducing energy consumption and CO₂ emissions, two major factors facing today's commercial and residential buildings. NUDURA promotes and supports sustainable design and synergistic use of our products with other sustainable products and is proud to contribute to the LEED® program.

For more information on how NUDURA contributes to LEED® visit Nudura.com and click on the "Building Green" section.



SOLUTIONS FOR INDUSTRY PROFESSIONALS

The NUDURA Integrated Building Technology system has been chosen by architects, engineers, builders, developers and contractors all over the world as a proven building alternative to traditional building methods



NUDURA FOR DESIGNERS, ARCHITECTS AND ENGINEERS

NUDURA offers limitless design capabilities to designers, architects and engineers. We provide design professionals with all the material they need to design with the NUDURA system. The NUDURA Design Specification Manual provides a step by step building approach that allows the design professional to quickly and optimally adapt their building to work with the NUDURA® Wall System. With this manual, designers, architects and engineers have full access to NUDURA details, downloadable from a user-friendly CD, and backed by full technical support.

NUDURA offers six 1 hour approved AIA Continuing Education sessions. For more information contact us or visit Nudura.com.



SIX WALL ELEMENTS IN ONE PRODUCT

The NUDURA® Wall System completes 6 building steps with one product:

- | | |
|------------------|--|
| 1 Form system | 4 Air barrier |
| 2 Wall structure | 5 Vapor barrier |
| 3 Insulation | 6 Interior and exterior finish anchorage |

Having six wall elements in one product eliminates costly building steps and allows your structure to be constructed faster and more efficiently.

NUDURA FOR BUILDERS AND DEVELOPERS

Installing the NUDURA system significantly reduces labor and transportation costs on typical installations. NUDURA® forms are easily handled, stored, and installed.

- With NUDURA's 6-in-1 one building step, we help cut substantial time from the construction schedule.
- Structures built with NUDURA can be built up to 25% - 50% faster and can reduce mechanical requirements by up to 75%.
- With NUDURA, heavy equipment is not required to move forms around the job site which can result in less on-site injuries due to lifting.

NUDURA FOR CONTRACTORS

- NUDURA forms are light and easy to maneuver and can be stored easily taking up minimal space on site.
- NUDURA® patented hinged folding webs eliminate costly on-site assembly and our interlocking fastening strip and clip accessories makes installations fast by eliminating the need to secure forms with tape or wire.
- Forms can be easily cut on site with a hand saw saving unnecessary on-site movement, keeping labor costs to a minimum.





NUDURA— EXCEEDING YOUR EXPECTATIONS

At NUDURA we work hard to ensure you have the training, technology, quality and the proper code approvals and testing to build better structures.

INNOVATIVE TECHNOLOGY

NUDURA is committed to leading the industry in product innovation. NUDURA's research and development group are dedicated to providing products that make the building construction process faster and easier, resulting in buildings that are stronger, more durable and more energy efficient. NUDURA prides itself on having the largest standard form on the market, with the most patented features. With a full range of forms and accessories, NUDURA has the products to suit your needs and the service to match.



QUALITY PRODUCTS

NUDURA's manufacturing is unmatched by other insulated concrete forms. NUDURA forms are manufactured in-house without using sub-manufacturing. NUDURA has full control over the manufacturing process which allows our forms to be manufactured to the highest standards, and is audited quarterly by Warnock/Hersey which conducts regular plant inspections to ensure all aspects of NUDURA® products are consistent. Our forms undergo rigorous testing everyday making sure the quality is the same for every NUDURA product, resulting in the most reliable ICF form available.

CODE APPROVALS & TESTING



All NUDURA distributors provide the information needed to make sure your project is built with proven installation methods and provide necessary information about local and state building codes. In various tests NUDURA® walls have met and most often exceed statutory building codes around the globe. NUDURA is tested to the highest standards providing the safest, most comfortable living or working environments and actively maintains a wide variety of code approvals for North America and Europe.

TRAINING

If you are thinking of building with NUDURA we encourage you to take one of our training courses and see how efficient building with NUDURA really is. NUDURA is committed to providing the highest level of training, ensuring you get the knowledge you need to get the job done with efficiency and confidence. NUDURA has thousands of trained installers throughout the world who have switched to NUDURA from traditional building methods including other ICF products.

Visit Nudura.com for a training course in your area

SUPERIOR SUPPORT

NUDURA Corporation provides a variety of materials to help with design specs, product lists, training and installation.



NUDURA OFFERS FORMS FOR ANY BUILDING TYPE



Alvaton Elementary School, Bowling Green, Kentucky, USA

Project Description: Two storey elementary school

Size: 77,000 sq. ft.

Exterior Finish: Brick and Stucco

- Exterior load bearing walls built with 8" and 12" forms.
-



The Ridge Cinema, Pace, Florida, USA

Project Description: 8 Theatre Cinema

Size: 40,000 sq. ft.

Exterior Finish: Stucco

- Exterior load bearing walls built with 8" forms above and below grade
 - Tall wall height is 34 1/2'.
-



Industrial Building, Cambridge, Ontario, Canada

Project Description: Office/Industrial, multi-use building

Size: 24,000 sq. ft.

- 24,000 feet of exterior 28' high wall area with stucco finish.
 - Exterior load bearing walls built with 8" forms above grade and 10" forms below grade.
 - Floors made of precast concrete slabs tied into the high wall structure
 - Project completed 25% faster than standard reinforced concrete equivalent.
-



West Village, Hamilton, Ontario, Canada

Project Description: Student Residence

Size: 205,000 sq. ft. including 10,000 sq. ft. of commercial space

- 106 condos including 16 grad student/staff condos.
 - West Village utilized a combination of NUDURA® 6", 8" Forms for exterior walls and NUDURA® 10" and 12" for pilasters.
 - 449 student rooms.
 - LEED® Platinum Rated
-



Residential Condominium, Huntsville, Ontario, Canada

Project Description: 5 storey condominium with 36 units

Unit Sizes: 1728-2083 sq. ft.

Exterior Finish: Stone & Stucco

- Constructed with 8" forms below grade and 6" forms above grade.

NUDURA OFFERS FORMS FOR ANY BUILDING TYPE



Johnson City Eye Clinic, Johnson City, Tennessee, USA

Project Description: Two storey medical facility

Size: 40,000 sq. ft.

Exterior Finish: Brick

- Exterior load bearing walls built with 8" forms below grade and 6" forms above grade.
- 9' ceilings in basement and 15' main floor ceilings .



St. Thomas University, Fredricton, New Brunswick, Canada

Project Description: 3 storey student residence

Size: 39,000 sq. ft.

Exterior Finish: Brick

- Exterior load bearing walls built with 8" NUDURA forms.
- Hollow core concrete floor slabs



BUILDING BETTER AROUND THE WORLD

No matter where you are, or what you are building, NUDURA works for you. For more information on NUDURA projects visit Nudura.com.



Personal Residence



Future's Inn - Hotel



Multi Residential



Financial Institution

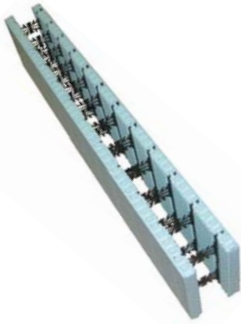


2 Storey Office



Personal Residence

PRODUCTS



STANDARD FORM UNIT

The Standard is our most-used form unit. It measures 8 ft long and provides an incredible 12 sq. ft. of wall area. NUDURA® Standards easily unfold for use, are fully reversible and are available with 4"/6"/8"/10"/12" cores.



90 DEGREE CORNER

To reduce shipping costs, we offer a unique 90 degree corner form that folds. Our corner forms are reversible so there is no need to keep track of left and right corners. Also, our corner forms have convenient, continuous fastening strips at the corners. Available with 4"/6"/8"/10"/12" cores.



45 DEGREE CORNER

Our 45 Degree Corners also fold to provide shipping efficiencies and are fully reversible. Available with 4"/6"/8"/10"/12" cores.



TAPERED TOP (ONE & TWO SIDED)

We offer Tapered Top forms to allow for conventional above-grade framing with a brick veneer, while offering maximum insulation performance at grade level. Available with 4"/6"/8"/10"/12" cores.



BRICK LEDGE FORM UNIT

When building with NUDURA® to the roof, our Brick Ledge Form Units are used to support a brick veneer. Available with 4"/6"/8"/10"/12" cores.



BRICK LEDGE EXTENSION

NUDURA offers the brick ledge extension to provide greater flexibility when establishing brick ledge locations.



END CAPS

NUDURA® End Caps slide quickly into place to serve as insulated bucks or bulkheads. End Caps are manufactured with a convenient center fastening strip. Available for 4"/6"/8"/10"/12" cores.



RADIUS FORM UNITS

Make the homeowner and architect dreams come true! NUDURA® makes curves and radius walls easy by providing factory-cut forms designed to your specifications. NUDURA®'s radius form units eliminate wasteful and time-consuming in-field work.



T FORM UNITS

Builders demanded it, and NUDURA® answered! NUDURA® T Form Units come in a Long "T" and a Short "T" version to provide proper joint overlap. The forms are available in every combination of 5 standard core thicknesses for both the Main and T wall cavities.



UNASSEMBLED PANELS & WEBS

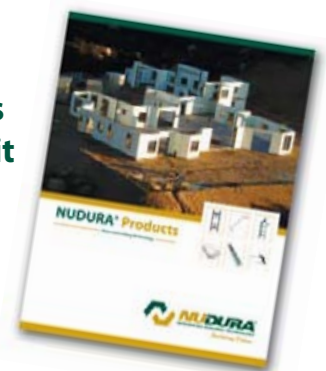
In order to provide as much versatility and flexibility as today's building industry demands, NUDURA® standard, tapered top and brickledge panels are available in unassembled packages. These panels are designed for NUDURA®'s slide-in webs which are available in all 5 standard core thicknesses.



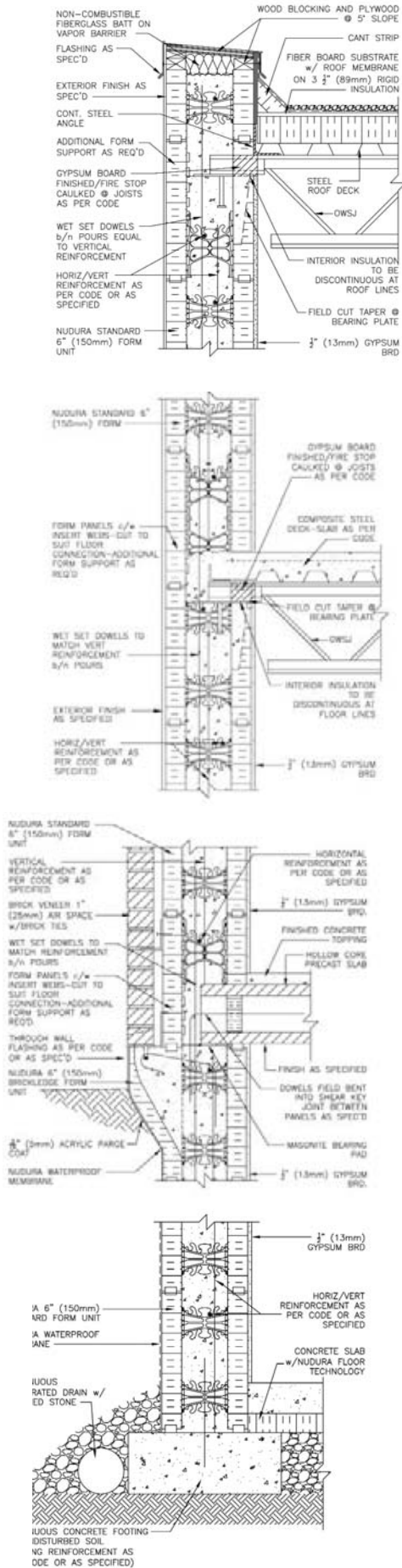
NUDURA® ALIGNMENT SYSTEMS

NUDURA® Alignment Systems are specifically designed for use with NUDURA® Integrated Building Technology. The system bracing aligns the wall prior to concrete placement, provides a working surface during concrete placement, and is used to plumb the wall after concrete placement.

For the full line of
NUDURA® products
and accessories visit
Nudura.com and
download our
product catalog.



DETAILS AND SPECIFICATIONS



NUDURA Products (when installed per Code requirements) have been designed, tested and approved to comply (i.e. meet or exceed minimum compliance benchmarks) set by all the following applicable Codes Standards and Evaluation Criteria for the use in both combustible and non-combustible construction for ALL types of building occupancies and construction types:

CODE COMPLIANCE EVALUATIONS

Canada: National – CCMC:	13063-R
Ontario – MMAH:	04-13-117 (13063-R)
New Brunswick –NBFMO:	File: 3955 –Compliance to 82-20
Europe: European Union (BBA):	ETA-07/0034
USA: National – ICC-ES:	ESR-2092 (under review to 2009 IRC/IBC)
Florida –BCO	FL1585 (under review to 2007 FBC)
Miami Dade County-BCCO:	NOA No. 05-0330.02
Wisconsin –DOC S&BD:	200427-1
New York City – OTCR:	complies with BB 2009-020
Los Angeles:	RR25595 (under review to 2008 CBC)

TESTING STANDARDS AND COMPLIANCES

- **Form EPS Foam** certified to meet ALL requirements of Type II foam per ASTM C578 (USA) / CAN/ULC S-701 (CAN)
- **Structural Design** NUDURA forms structurally reinforced flat uniform thickness monolithic concrete walls:
 - Engineered Design:** USA: per ACI 318, CAN: per CAN/CSA A23.3
 - Prescriptive Design:** USA per R404, R611 IRC 2006/2009, PCA/EB 118 / PCA-100-2007
 - : CAN: per NBC 2005, Section 9.17 and 9.20
 - : NUDURA Installation Manual Structural Tables per Appendix D&E
- **Fire Resistance Testing** per UL-263 (USA) (=ASTM E-119) and CAN/ULC S-101 (CAN)
 - 6 inch (152 mm) Core & above : 4 Hours
 - 4 inch (102 mm) Core : 2 Hours
 - UL Classified: BXUV.U930 (USA) / UL Listed: BXUVC.WO12 (CAN)
- **Assembled Thermal Resistance/Conductance**
 - R 22.4 (RSI 3.94) /U Value : 0.2538 W/m².K
 - Based on Std Finished 6 inch (152 mm) Core Form calculated to ASHRAE Handbook of Stds. and confirmatory testing of EPS to ASTM C518 (USA & CAN) & ISO 8301 (EUR)
- **Wall Assembly Sound Transmission Classification**
 - STC 50 (RW 50) min. for Finished 6 inch (152 mm) Core Walls and above
 - (Testing per ASTM E336 (USA/CAN)/ ISO 140-4 (EUR)
- **Wall Assembly Vapor Permeance**
 - Inner or Outer Panel (EPS) Foam qualifies as a vapor barrier when tested to ASTM E-96
 - 0.624 Perm-Inch (36 Ng/Pa.s.m²) for 2 5/8-inch (66.7mm) thickness of EPS Foam
- **Thermal Barrier Protection Testing**
 - Std. 1/2-inch (12.7 mm) Gypsum qualifies as Thermal Barrier as per code requirements
 - **Gigacrete Plastimax coatings qualify as Thermal Barriers per listings as spec'd by Gigacrete (USA only)
 - Tested/Comply (with NFPA 286 (UBC 26-3) (USA) & CAN/ULC S-101 & CAN4-S124 (CAN)
- **Fastener Withdrawal and Shear Resistance**
 - Various screw fasteners tested for both Lateral Pullout Withdrawal and Vertical Shear
 - Testing conducted per ASTM D-1761 (Test results available from www.nudura.com)
- **Flash Ignition/Self Ignition Testing – EPS Foam**
 - Flash Ignition Temperature = 698 deg F (340 deg C)
 - Self Ignition Temperature = 806 deg F (430 deg C) Tested per ASTM D-1929
- **Flame Spread and Smoke Developed Indices –EPS Foam**
 - Flame Spread Index 10* (USA) 140** (CAN)
 - Smoke Developed Index 300* (USA) over 380** (CAN)
 - * from UL file No. R5817(A) ** from ULC File CR1762 .Used by permission of BASF Corporation
- **NUDURA System Approved for Types I through V Construction (USA)* and for Non-Combustible Construction (Part 3 Design)(CAN)***
 - *When exterior EPS foam finished with approved non-combustible finishes (consult NUDURA for details)

Nudura. Building Has Evolved.™

Energy Efficient. Environmentally Friendly. Superior Strength. Maximum Comfort.

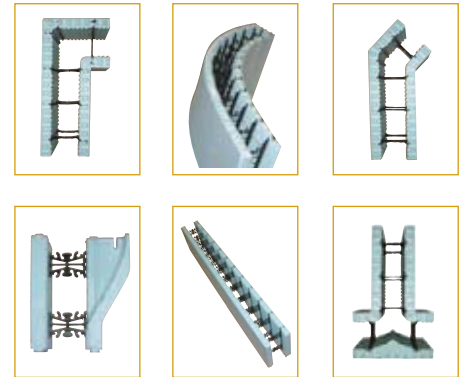
All NUDURA® Products are backed by over 50 years of building experience, and tested to the highest standards



Mixed Sources

Product group from well-managed forests, controlled sources and recycled wood or fiber

www.fsc.org Cert no. SW-COC-002080
© 1996 Forest Stewardship Council



Authorized Distributor

www.nudura.com



866-468-6299

Contact us for the distributor nearest you

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The performance claims referred to in this Brochure are based on a comparison between a typical 8' high NUDURA® wall with a 6" core, properly built to the National Building Code of Canada (NBC) and installed in accordance with NUDURA® Corporation's specifications and a typical 8' high 2"x 6" wood-framed wall insulated with R20 batt insulation, properly built to NBC and with regard to "fire resistance" on ratings listed in the NBC, with regard to "sound resistance" on ratings listed in the NBC and in the study "Insulating Concrete Forms" by VanderWerf, Feige, Chammas and Lemay, with regard to "durable" and

"comfort" on an independent analysis and with regards to "energy efficiency" in the study "Energy Consumption of Concrete Homes Versus Wood Frame Homes" published by Dr. Pieter VanderWerf for the Portland Cement Association. Such performance claims may vary depending on certain atmospheric conditions and geographic locations. STC Ratings are based on a 6" (152mm) core form and greater. Note: 4" (102mm) form is not to be used as a suite or corridor separation wall, except as specified by NUDURA. For further details or questions please contact NUDURA.