



NUDURA® Integrated Building Technology Insulated Concrete Form System

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Detailed description

NUDURA® Integrated Building Technology Insulated Concrete Forms (ICFs) are used as stay-in-place permanent formwork for structural concrete, loadbearing and non-loadbearing, below-grade and above-grade walls. The forms are used in construction of plain and reinforced concrete beams, lintels, exterior and interior walls, basement/cellar walls, foundation and retaining walls. The forms remain in place after placement and curing of concrete which is required by all Codes and Regulations to be protected by approved interior and exterior finish material. Subject to specific UK Regulations, the forms may also be used for applications requiring fire resistive construction, or non-combustible construction for buildings of any type, shape, height and any building area. Structures to 40 storeys achievable.

Performance:

- Thermal comfort combined with thermal mass advantage yields potential energy savings for end use client of over 70% depending upon geographic location and fresh air ventilation requirements for occupancy type.
- U values of 0.24, 0.18, 0.14, 0.11.
- 17 Thermally Modelled Junctions calculated in accordance with EN ISO 10211_2007/BRE IP 1/06 & BR 497 with reference to EN ISO 6946/BRE 443 as well as per PHPP. Calculated y-value of between 0.025 - 0.03 achievable, dependent on design.
- Sound attenuation of SRI 51 (minimum), for 152 mm core and above.
- Air permeability tested as low as 0.5 m³/h.m².
- Fire resistive construction of up to 4 hours (ULC listed UL classified).
- Reaction to Fire, Euroclass E as per EN13501-1:2007
- Disaster safe occupancy – can be reinforced to sustain wind loads up to 250 mph (402 km/h).
- Improved IAQ (Indoor Air Quality) as EPS foam does not propagate mould growth. No interstitial condensation.
- BRE Green Guide Accredited A+ rating (100mm core) A rating (150mm core and above).
- Full flexibility of cladding options available.
- NHBC, LABC, Premier Guarantee approved.
- CML (Council of Mortgage Lenders) approved.

Product guidance - As Standard

Composition:

Two uniform thickness panels of expanded polystyrene (EPS) foam plastic insulation material that are cross-linked in parallel with a combination of injection moulded polystyrene fastening strips fitted with polypropylene

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plastic insert webs and integrally moulded foldable polypropylene hinged web/ fastening strips.

Size (l x h):

2438 x 457 mm.

Options

Accessories:

45° and 90° angle form units, 'T'-form units, brick corbel forms, brick corbel extensions, height adjusters (with fastening ties) and cavity closers are also available for each thickness of form unit offered.

Concrete infill:

Typically specified as normal-weight concrete, complying with BS 8500 Parts 1 & 2, having a maximum aggregate size of 13 mm for up to 150 mm core forms and 19 mm for 203 mm core forms and beyond, with a minimum compressive strength of 17 kN at 28 days.

Structural Design:

Can be designed as per BS 8110, BS 8102:1990.

Structural reinforcing tables for below ground, above ground and lintels as per Eurocode 2 and Eurocode 8 are available.

BIM Library and Design Guide available on-line.

Installation Manual:

Full installation manual and typical details available on-line.

Product specification

Manufacturer

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Product reference NUDURA® Integrated Building Technology Insulated Concrete Form System

Width 235 mm - To form 102 mm thick flat monolithic concrete walls.
286 mm - To form 152 mm thick flat monolithic concrete walls.
337 mm - To form 203 mm thick flat monolithic concrete walls.
388 mm - To form 254 mm thick flat



monolithic concrete walls.
438 mm - To form 305 mm thick flat
monolithic concrete walls.