

PROKONCEPT – THE TECHNOLOGY

EOTA THE ENERGY-SAVING BUILDING SYSTEM

Our Construction system has an EOTA licence issued by the European Union.

The Prokoncept Energy Efficient Building System consists of wall, slab and roof elements made of Neopor polystyrene material. The essence of the system lies in its simple buildability: technology allows to solve the structural construction and the perfect thermal insulation without thermal bridges in one step.

ASSEMBLED EASILY LIKE LEGO BLOCKS



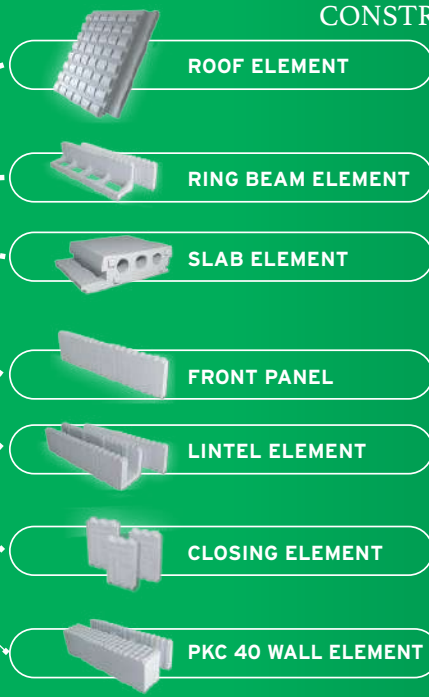
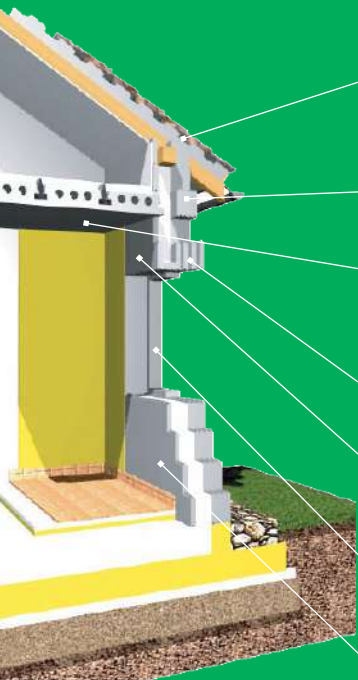
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THE ELEMENTS OF PROKONCEPT CONSTRUCTION SYSTEM



ROOF ELEMENT

Raw material

High strength Neopor hard foam (double-sided thermal insulation): 20% better thermal and soundproofing, like white polystyrene.

Structure

The elements are vertically 25 cm, consists of horizontal 5 cm grids, so they can be cut every 5 cm.

Mechanical engineering

Mechanical pipes before concreting they can be hidden in the wall elements.

Wires

A belső elosztó vezetékek a fal belső oldalán, a hosszirányú kerület kialakításra, helyüket utólag, egy speciális hokéssal zaj-, por-, és hulladékmentesen könnyedén ki lehet alakítani.

Inter cover

Plasterboard covering can be both glued and can be attached to the wall elements by screwing. The plasterboard covering is suitable to be combined with any type of covering material.

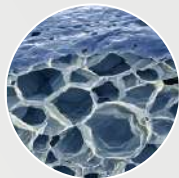
Outer cover

Traditionally, it can be covered in several ways, e.g.: with dryvit and lime plaster, brick, stone, or with wood covering.

Fixation

Heavy objects can be fixed to the concrete core, lighter objects can be fixed with plastic dowels to Neopor.

PRODUCT TECHNICAL SPECIFICATIONS



NEOPOR RAW MATERIAL

Our construction system, a permanent thermal insulation formwork, is made from NEOPOR, a material developed by the German company BASF. NEOPOR provides 20% better thermal insulation than traditional white polystyrene.



ROOF STRUCTURE

Using the ProKoncept roof element significantly reduces roof construction time by half. This method enables the cost-effective creation of roofs with exposed beams by streamlining three separate processes into one:

- 1. Roof Battens:** The roof element includes specially designed tile holders and air channels, eliminating the need for battening and counter-battening. It is compatible even with concrete tile roofs.
- 2. Roof Foiling:** Thanks to its triple connection system and specialized material, the roof element is fully waterproof and moisture-proof.
- 3. Thermal Insulation:** An average thickness of 15 cm of NEOPOR provides excellent roof insulation.



COVERING, PLASTERING

The exterior of the wall can be finished with "Dryvit" plaster, traditional lime plaster, decorative brick, natural stone, or wooden cladding. For the interior, any traditional covering solution can be used.



WALL ELEMENT

The wall elements of the ProKoncept Building System snap together easily, much like a well-known construction toy. Once assembled, the joined elements are filled with concrete, resulting in a perfectly insulated structure. The design ensures the elements fit correctly every time, making construction almost as simple as child's play. The system is complemented by specialized components, including corner, ring beam, front, lintel, and wall-closing elements.



SLAB

The ProKoncept slab system features a flat surface on both sides, with polystyrene slab elements serving as permanent formwork for perfect insulation. Each slab is custom-made to fit specific requirements. The system spans distances of up to 12 meters and can be delivered and installed without the need for costly cranes.



CONDENSATION

Condensation occurs due to temperature differences on the surface of a structure, known as thermal bridges (e.g., where brick meets concrete in slabs). These areas allow vapor to condense, leading to mold formation. In the ProKoncept system, continuous thermal insulation ensures uniform surface temperatures, eliminating the risk of thermal bridges.



EXTRA AREA

The thermal permeability of ProKoncept 25 cm classic wall element is equivalent to that of a 60 cm brick wall. Thanks to the compact size of the ProKoncept wall, the gross building area remains the same, but the usable interior space is significantly increased. This can result in an extra room, such as a wardrobe, bedroom, or toilet. For larger projects, like a 20-25 apartment development, it could even mean gaining the space of an entire additional apartment.



MECHANICAL ENGINEERING

The plasterboard covering of ProKoncept walls allows secure attachment of items such as kitchen cabinets or boilers using nails, screws, plasterboard anchors, or concrete dowels. Another advantage of ProKoncept wall system is the ease and speed of creating grooves for electrical and mechanical installations. Pipes and wires can be effortlessly cut into the polystyrene layer using a thermal knife, a process that is both dust-free and noise-free.

House built with the ProKoncept Building system use

UP TO 70% LESS ENERGY

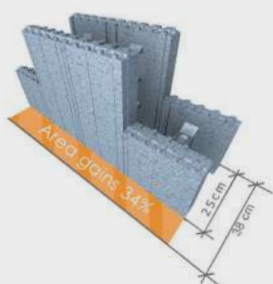
than traditional structures!



KEY METRICS – THE BENEFITS ANALYSIS

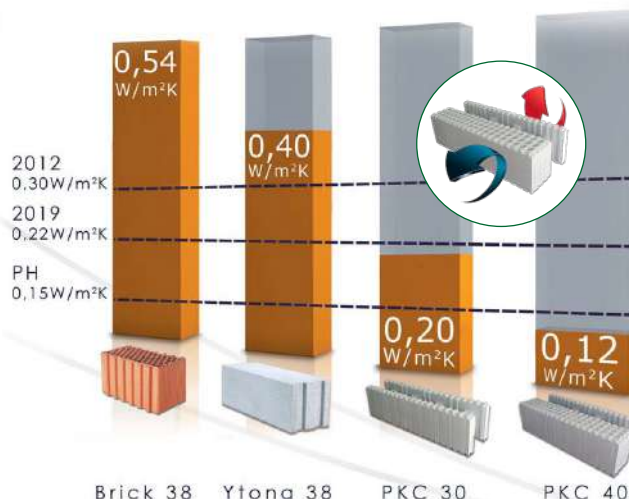
CONSTRUCTION PROCESS – SPEED & EFFICIENCY

- ✓ Assembled easily like LEGO BLOCKS, no possibility of any mistakes: the ProKoncept elements are designed to ensure flawless assembly every time.
- ✓ Very light elements: less people, no crane needed: 1 pallet of wall element is only **15kg=5m²**.
- ✓ Up to **70% savings** on construction time and at least **50% savings** on labor costs to: the forms act as both the framework for the concrete and the insulation.
- ✓ More Space: one 25 cm wall's isolation ability is equal to a **38 cm** clay/brick wall thus gaining **34%** area/interior space. For every 20-25 apartments, get 1 FREE apartment.
- ✓ Less waste of materials contributing to more sustainable building practices.
- ✓ No weather conditions effect: the isolation elements protect the concrete.
- ✓ Design Flexibility / Architectural Versatility: the forms can be shaped into a variety of designs and can be coated (both from inside and outside) with many alternatives.



THE PROKONCEPT BUILDING

- ✓ Superior Insulation: even **70%** utilities cost & significant energy savings for cooling (& heating), the walling's isolation ability is 400% higher than the average therefore suitable to build Passive Houses.



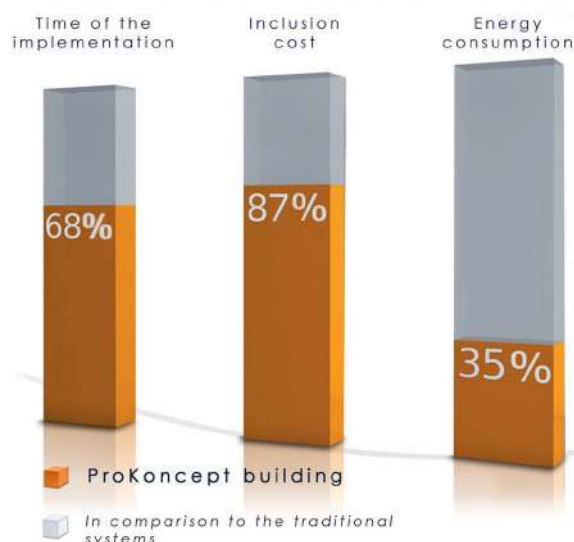
- ✓ Structural Strength: highly resistant to earthquakes, hurricanes/storms, floods and other natural disasters.
- ✓ Sound Insulation: excellent soundproofing with even 30% less noise transmission.
- ✓ Durability & Longevity: long-lasting life due to resistance to moisture (NO mold), pests and decay reducing long-term maintenance costs.
- ✓ Applicable for Residential & Commercial: homes, apartment buildings, pools, schools, offices and even industrial buildings.



WATCH THE VIDEO HOW TO BUILD AN ENERGY-SAVING PROKONCEPT HOUSE

THE ENERGY-SAVING BUILDING SYSTEM

- ✓ Energy Efficiency: 50-70% energy savings with much less greenhouse gas emissions, buildings meet or exceed all Energy & Environmental standards.
- ✓ Sustainability: biologically neutral & recyclable materials and with their energy efficiency they reduce the carbon footprint of buildings.
- ✓ Improved Indoor Air Quality: its airtight walls reduce drafts, allergens, pollutants and sands.
- ✓ Fire & Safety: the concrete core provides excellent fire resistance having higher fire rating compared to e.g. wood-framed structures.
- ✓ Passive Houses: with the use of Prokoncept further elements the building's energy consumption can even be halved. The value of our best isolating element is 0,12 W/m 2 K in this case our walling's isolation ability is four times higher than the average being therefore suitable to build passive houses.



COST CONSIDERATION

UP TO 50%
LESS CONSTRUCTION COST

UP TO 50-70%
LESS LIVING COST

LEADERSHIP TEAM



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