

It's great to build! *There is also another way: Easily and quickly with* the IsoteQ[®] building system

WHY ISOTEQ[®]?



BECAUSE...

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EFFECTIVE ENERGY CONSUMPTION

The heat transmission ability of IsoteQ[®] walls can be gradable from U=0,26 W/m²K to U=0,11 W/m²K. This is an extremely advantageous domain, so due to the significantly high performance of the walls even a passive house may be made from them.

PLEASANT MICROCLIMATE

For the even more perfect quality of air, plaster or plasterboard wall finish is applied inside, which provide a much more pleasant microclimate than the conventional lime-mortar finishes do.

LOADABILITY AND SECURITY

Buildings made from IsoteQ[®] system are more than five times stronger than the conventional ones. This means that an IsoteQ[®] wall is much more resistant to an earthquake or any special bearing force.

ENVIRONMENTALLY FRIENDLY USEAGE

Building made from $IsoteQ^{(B)}$ system have been designed for centuries. With using $IsoteQ^{(B)}$ walls we preserve natural resources, and, due to the efficient energy consumption, current comsumption and gas consumption are reduced. By using $IsoteQ^{(B)}$ system one can contribute to the spread of environmentally sound buildings.

ISOTEQ® INSULATING CONCRETE FORMS

The lsoteQ[®] building elements belong to the large family of the so-called ICF (Insulating Concrete Forms) construction materials. The common feature of these construction material family is that the cutted thermal-modules can be connected without mortar, with the help of the Lego-like junctions, without gaps. These systems have in common that their development is determined by the energy saving and the rapid – even own – feasibility.

THE ADVANTAGES OF THE ISOTEQ® INTELLIGENT BUILDING ELEMENTS...

COMPARED TO THE CONVENTIONAL ONES:

- There is no need for hoists or loaders, not even when transporting.
- There is no need for loaders when constructing either.
- It is not a problem to move further the elements that have already been put down.
- They do not hinder continuous work.
- To change the place of 50 m² that is 10 packages of $lsoteQ^{(m)}$ building elements does not take more than 5 minutes for 1 person.
- When constructing the walling, 1 package that is 5 m² of wall elements can be moved together by strength of arm, and it only takes 1 person.
- Workers will not get tired from the weight of bricks, so their efficiency is not lowered by these elements.
- The phase of building the walls above 1.5 m does not require any hard physical work.
- The elements can easily be lifted up to the scaffold and placed into the walling structure from there. Developing the walling from lsoteQ[®] elements is so fast and easy that it may even be done by only one person standing on a pair of steps, without being exposed to heavy physical burden. This obviously increases its efficacy.
- The building system can be used also in case of special thermal insulation requirements for construction of cold stores and swimming pools (slows down the cooling of the water temperature) due to ist excellent thermal insulation properties

THE SAME APPLIES TO THE LINTELS ABOVE DOORS AND WINDOWS:

- The lsoteQ[®] lintel can be put in its place easily by only one person.
- When puting in IsoteQ[®] ceiling blocks, mechanical aid is restricted to the concrete pump only.
- There is no need to worry about beams and plenty of delicate fillings to be lifted up by the aid of a crane and put into place with hard and time-consuming work.
- The IsoteQ[®] slab system can easily be cut to any size.

DID YOU KNOW?

THE LEGEND OF BREATHING WALLS

The "breathing wall" is now firmly in the public knowledge, although it is not technically perfect. The walls do not "breath", but in moisture-technical sense they can be opened or closed. The moisture does not need open gaps, can get through even through the solid masonry material from the warm side in the direction of the cold one. The main question is in which quantity? Anyway: can the outgoing damp through the outer walls reduce the humidity of the indoor air significantly? During the daily use 300g of steam per hour is developed in the house. Researches carried out on different masonries (not heat-insulated brick wall, insulated brick wall with polystyrene foam or mineral fiber) show that only a fraction of moisture reaches the perimeter walls, because most of the moisture (over 97%!) is removed by the ventilation . Moreover, when the air exchange (ventilation) reaches



minimum the average rate, then only up to 1% of the removed humidity will leave through the outer walls, regardless of the boundary wall structure. So we can say that maximum 0.5-3% of the total vapor leave through the exterior walls of an average house, and the outer walls are not able to even partially take over the role of the ventilation during the removal of the moisture, since the quantity of vapor to be removed is much more higher, than that which can come out through the walls.

THE INTERIOR CAN BE SHAPED TO ONES LIKING:

- The standard dimensions of the prefabricated, prestressed elements do not determine the interior spaces of the building.
- In the case of a conventional multi-storey building, the problems caused by the weight of the conventional building elements arise

 hoist, carrying the elements to their place -, but this time several metres high. Also, debris has to be brought down from the upper storeys: the refuse chute and the containers generate extra costs, too.
- When constructing a building form IsoteQ[®] elements, there is NO building debris. (Provided that the building is designed to be built from IsoteQ[®] system.)
- The lsoteQ[®] building system is entirely thermal bridge-free. This cannot be said of conventional building elements those can only be made thermal bridge-free with the aid of auxiliary materials which also generates extra costs (wages and material costs).
- Even the IsoteQ[®] Normal element is provided with better thermal insulation than a conventional wall.
- Energy consumption required for the upkeep of the building is significantly lower.
- IsoteQ[®] Passive Houses represent the most modern building technology of our age.
- This system is outstandingly energy-saving!
- On IsoteQ[®] elements surface finishing with cladding materials is easier.
- The srength of lsoteQ[®] walls stand every test, even earthquake motions.
- IsoteQ[®] walls will never crack!
- Sanitary engineering works can be carried out quickly, easily, free from dust and debris.
- The system provides the thermal bridge-free building-in of doors and windows (the case is heat-insulated all around).
- These works involve heavy costs (wages and material costs) in the case of a house built from conventional building elements.

THE SPECIAL ADVANTAGES OF THE BUILDING CONTRACTOR IN 13 POINTS:

- 1. less people needed
- 2. greater efficiency
- 3. lower costs
- 4. significantly longer execution season
- 5. employees can be engaged longer
- 6. lower per-unit costs of labourforce
- 7. several executions can be takne on within the same period of time
- 8. more certain time of delivery
- 9. shorter time of realization
- 10. trust in the building contructor grows
- 11. the good reputation of the contractor grows (this creates a new market for them)
- 12. costs are lowered further as there is only a minimal need for skilled labour
- 13. to assemble the lsoteQ[®] elements one person is enough, who puts down the first row precisely. Fitting up the rest of the elements hardly needs any skills.

PLANNING OF ISOTEQ® BUILDINGS

- The lsoteQ[®] buliding system is useable for external or internal load-bearing or infilling (steel, wood or reinforced concrete frames) masonries, ceiling or roof structures of residential, community, and industrial buildings under and above of the relief.
- While planning buildings of lsoteQ[®] System there is no limitation for the layout, but the main criteria is the compactness in order to reduce the number of wall corners. So walls of any length (continuous and rectangular or and different angle) can be designed, but for reducing the material loss and speed-up the construction it is recommended to design the buildings according to grids, which has the dimension of 25cm horizontally and of 5cm vertically.
- The lintel-height of the doors and windows should be preferably in line with an entire row. The needed 90-cm hight for parapet (which is usual in Hungary) can be reached easyly with a 10 cm conventional internal floor layer. In case of different heights the difference should be constructed of lsoteQ[®] raising elements on the parapet. By designing the windows and doors it is also recommended to consider the 25cm horizontal and vertical dimension system. The system is suitable for arched and circular windows as well.

The mansory of lsoteQ elements is an independent load-bearing mansory, which can be combined with almost any kind of ceilingsystem (prefabricated, monolitic or semi-monolitic) beside the lsoteQ[®] Professional-one. In case of building of mansards the kneewalls for taking-up the horizontal forces can be also built of lsoteQ[®] system. In this case there is no need for reinforcing pillars, but the reinforcement itself must be applied based on a special structural design.

- Any kind of partition wall (traditional or mounted) can be connected to the mansory and ceiling built of lsoteQ[®] elements in case of properly sized footing and ceiling of proper loading capacity.
- For the IsoteQ® Neopor Roof system we recommend a distance of 90cm between the rafters and a roof angle of 29-45 degrees.

BY USING ISOTEQ ® SYSTEM A SIGNIFICANT INCREASE OF NET FLOOR AREA CAN BE REACHED

Comparison of the floor plans of a house of traditional construction materials and one from IsoteQ® system



25 cm thick IsoteQ[®] House Gross floor area: 151,10 m² Net floor area: 127,35 m²



House of 38 cm traditional building materials Gross floor area 151,10 m² Net floor area 119,13 m²

ISOTEQ® OFFERS AGAINTS THE OTHER ICF – PRODUCTS AVAILABLE IN THE EUROPEAN MARKET:

COMPARED WITH ICF- BUILDING ELEMENTS THAT HAVE POLYSTYRENE SPACERS

The new generation of IsoteQ[®] elements have plastic connection elements, compared to other ICF products, where the technology still uses the old polystyrene spacer. The obvious advantage of the IsoteQ[®] wall against these products is, that no so-called "network structure" (holes) emerges in the reinforced concrete, and thus the structure is more favorable from the aspects of construction-, noise-and fire protection.

PLASTIC OR METAL SPACERS PRODUCTS AS OPPOSED TO THE ICF ISOTEQ®

CONTACT:

Our products are delivered into 21 countries of Europe. Our building elements can be ordered personally in Hungary, via e-mail, fax or via our online shop.

CONTINUOUS DELIVERIES:

Thanks to the modern production line, to the continuous production in three shifts and to the large inventory, our customers do not need not wait for months, as by smaller producers.

QUALITY ASSURANCE:

The ultra-modern facilities, the high quality raw material, the work of the highly qualified professionals and the ISO 9001 quality certificate (our products are made from NEOPOR®) ensure the consistent, high quality. Our system has demonsitriet its excellence in various forums during the recent years, received numerous awards and recognitions: Excellent Building Element, Hungarian Product Grand Prix

TIP

LET US MEET PERSONALLY!

Visit our office in Budapest (Hungary) and ask our Colleague personally! (We require to inform us before your visit - thank you!) Place: Allee Corner Business Center, Október huszonharmadika utca 8-10., Budapest, 1117



ISOTEQ® OFFERS AGAINTS THE OTHER ICF – PRODUCTS AVAILABLE IN THE EUROPEAN MARKET:

TECHNOLOGICAL AND LEGAL SECURITY

The lsoteQ[®] element family has all the licenses required for the distribution and installation across Europe. Our technology and brand names are protected by national and international trademark and patent.

- ETA (European Technical Approval ETA-09/0072)
- CE -Marking
- Technical Approval of the Building Industry (A 23/2007)
- Certificate of Conformity on Fire Protection (TMI)

CUSTOMER-FRIENDLY SERVICES

Some of them:

- Call Center in 4 Languages
- Free quotations
- International transport organisation
- Technical advice At the construction site

BRAND

The owners of IsoteQ[®] GROUP have been developing polystyrene building elements, and their production and installation for 15 years. IsoteQ[®] Group is a manufacturing and service company for ICF wall cast technology with an outstanding selection. With the IsoteQ[®] PRAKTIK elements our Clients have 22 different products to choose from, so our selection is globally outstanding.

DID YOU KNOW? ISOTEQ® PRACTIC SYSTEM

IsoteQ[®] PRACTIC with its unique, patented technical procedure helps us to transport the heat-insulating layers and the plastic connections separately onto location! It is easy to fit and the result is the same tried and tested IsoteQ[®] wall form with extreme tensile strength. But we could transport even 2.5 TIMES MORE ELEMENTS THAN BEFORE ON THE SAME VOLUME.

- The thickness of the inner insulation layer can be changed arbitrarily, thereby walling insulation can vary between broad limits.
- With the IsoteQ[®] PRAKTIK elements our Clients have 22 different products to choose from, so our selection is globally outstanding.
- We could transport even 2.5 times more elements than before on the same volume reducing transport charges.
- The building elements can be cut easily to size.
- The same volume needs only half the space to storage.
- If the wall module is damaged on one side, it is easy and quick to replace the damaged size.
- It is easier to form corners without using IsoteQ® battlement closing element which involves cost savings.
- The waste is easily recyclable (e.g. parapet-insulation).
- Greater load-bearing walls can be constructed with the variable thickness of the concrete (15 cm and 20 cm).



ADVICES

CHOOSE A DESIGNER!

- The planning of our house is basically a matter of trust, so it is important to find the right planner. It is important to find a planner who can unite our ideas with the legal framework, the financial resources and with he specific building rules.
- In this long process the conscious planner must get to know our family and our lifestyle in order to be able to plan the right house for us.
- The characteristics of a good planner are the following: being informed, giving information, professional approach againts the usual businessman approach in the market
- The list of planners of the Chamber of Architects can help you to find the right planner.
- In the planning phase of the building the help of a structural engineer is required for the planning of the reinforcements.

TIP: Don't make compromises in design and calculation: ask for a certified passive house designer.

CHOOSE A BUILDING MATERIAL!

- Ask for a quote from several sources.
- Buy building materials only from reliable sources.
- Ask for certificates, licenses, product descriptions of the builidng materials (technical approval, declaration of conformity for suppliers, guarantee, etc.)
- Ask for the Application Technical Manual of the manufacturer.
- Let the contractor use only best quality materials for the building. Choose products, which has a Certification of Passive-Housesuitable component, and ask the manufacturer for the certified connections, which contain instructions for proper building to support effective construction.
- Do not be impressed by the temtation! Always ask for the invoice! You can enforce your warranty claims in the future just based on this.

CHOOSE A CONTRACTOR CAREFULLY!

- Always write a building contract, which contains prices to avoid extra works.
- Always contract with an experienced contractor, with good references. Talk with previous house-builders (not only with those recommended by the contractor)! Read about the topic on the internet. Make sure that the contractor have the required assets and workforce, or works with a subcontractor. It is important, because later he can pass the responsibility, when a possible construction defect occurs.
- Ask an expert who is independent of the contractor to be a Site Manager; who will represent your interests objectively in the constuction area!

Order minimum 150m² IsoteQ[®] PASSIVE wall elements, and we give you the Certification Documentation for the Products Suitable for Passive Houses of the German Passive House Institute for free, which describes the professional way of planning and installing of the IsoteQ[®] PASSIVE-building system with certified connection drawings in about 100 pages, which helps the effective work of architects and constructors.

