

Ytong Energy+

UNIQUE AERATED CONCRETE FOR SOLID AND HIGHLY ENERGY-EFFICIENT BUILDING



YTONG

Ytong Energy+: the ultimate sustainable building block

Ytong Energy+ is a new aerated concrete block with unsurpassed insulating properties. It is used to construct supporting inner and outer walls. The Ytong Energy+ block has a high-compression supporting inner layer, a core with unequalled insulating properties and an extremely robust outer layer, which together guarantee a strong construction. All in a single, solid application. Ytong Energy+ blocks are manufactured in full compliance with the strict European housing energy performance regulations that will apply as from 2020.

With Ytong Energy+, Xella sets the new standard for energy-efficient, solid building: supporting aerated concrete blocks with unequalled insulating properties that, when applied 40-50 centimetres thick, have extremely high insulating values (lambda value λ 0.06 w/mK). This makes it possible to construct highly energy-efficient and, in accordance with European Commission requirements, even energy-neutral houses. Houses of which the outer walls are built from one and the same building block and without the use of additional insulating materials.

Robust and Innovative

Ytong Energy+ consists of three layers:

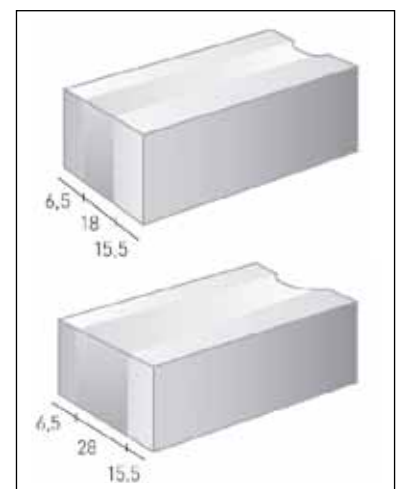
- a supporting inner layer made from Ytong aerated concrete (density 340 kg/m³), 15.5 centimetres thick;
- a core made from highly insulating Ytong Multipor insulation material (density 115 kg/m³), 18 or 28 centimetres thick;
- a building shell made from Ytong aerated concrete (density 340 kg/m³), 6.5 centimetres thick.

During production the three layers are moulded into a single, robust

block with a thickness of 40 or 50 centimetres (depending on the thickness of the Ytong Multipor insulation layer). This production method is both innovative and unique and is ISO 14025-certified as an environmental management system.

Sustainable

Ytong Energy+ is not only highly energy-efficient, it is also highly sustainable. In all stages of its life cycle: during the extraction of base materials, during production, while being used and finally when fully recycled.



- The block consists exclusively of sand, lime and cement - natural, abundantly available raw materials that are obtained from responsibly managed extraction sites.
- The production process creates very little CO² emission. Most energy is consumed in hardening the product by means of steam, and even then technology keeps energy consumption to an absolute minimum.
- Once manufactured, the blocks can be transported and used efficiently.
- The blocks retain their properties during the entire lifespan of a building; they never lose their energy-efficiency values.
- When a building is demolished, the blocks can be used again for the manufacture of new aerated concrete.

Advantages

Ytong Energy+ makes complex material combinations in constructing highly insulating (solid) outer walls unnecessary. The blocks make it possible to construct flawless, high-performance buildings of the future up to two storeys high in a single action with one and the same building block (average compressive strength: 2,6 N/mm²).

The advantages one by one:

- extreme insulating capacity
- solid block made from one and the same material
- no additional insulation material required
- stable and strong
- connections guaranteed cold bridge-free
- quick and simple, so less risk of flaws

Ytong Energy+ Cradle to Cradle Certification



The construction industry is irreversibly turning to the use of sustainable materials. Ytong Energy+ fits in seamlessly with that ambition. The blocks have been Cradle to Cradle certified by the EPEA (Environmental Protection and Encouragement Agency) in Hamburg, the company of founders doctor Michael Braungart and William McDonagh. At the core of this philosophy lies the ambition to chart the extent to which products contribute towards a better (living) environment. This is done by documenting and assessing all of the components of which they are made. Cradle to Cradle therefore far transcends the mere analysis of a product's life cycle and guarantees architects and building companies that Ytong Energy+ blocks have no negative impact on the environment, whether before, during or after being used.

- less materials, so orderliness at the construction site
- less costs

Advantages for occupants and users:

- extremely effective heat insulation
- heat accumulation and humidity regulation
- healthy and comfortable indoor climate
- fire safety (fire class A1)
- no flammable insulation materials
- mould-free
- environmentally friendly
- no harmful substances, so no health risk

Processing

Processing Ytong Energy+ blocks requires the same skills as with any other Ytong aerated concrete block. They are easily processed by hand, cut to size with an aerated concrete saw and fixed with Ytong-fix mortar paste. The only difference in processing is that the seams need to be reinforced with a mortar paste-embedded fabric.



Finishing

Walls constructed from Ytong Energy+ blocks are easy to finish. They can be plastered with any suitable aerated concrete plastering system. On the inside, the walls are ready to be wallpapered or coated. Outer walls can be finished with a wide variety of materials: from coir-cement sheets and wooden beams to any suitable coating system.

Energy+ lintels

Xella Energy+ lintels are available on the market for spanning openings in Ytong Energy+ block constructions. Contact Xella for more information.

Xella UK, a branch of Xella BE nv/sa

PO Box 10028

Sutton Coldfield

B75 7ZF

Tel: +44 (0)843 290 9080

Fax: +44 (0)843 290 9081

E: ytong-uk@xella.com

Internet www.xella.co.uk