



YTONG

Building Blocks

Ytong aerated concrete building blocks are used for internal partition walls and load bearing external walls constructions. Ytong blocks can be laid in either standard mortar or thin layer mortar. Any mortar used should comply with BS EN 998-2 specification for Mortar for Masonry. Ytong blocks is a thermal efficient option due to their insulating properties. The dimensional accuracy of Ytong blocks make them perfect choice for thin joint system. Moreover, Ytong blocks are highly sustainable.

The Ytong block consists of sand, lime and cement - natural abundantly available raw materials that are obtained from responsibly managed extraction sites. During the manufacture CO₂ emissions are reduced as the energy is consumed in curing the product by means of steam, and even

then technology keeps energy consumption to an absolute minimum. Highly durable Ytong blocks never lose their energy efficiency or structural values. Used Ytong blocks can be recycled to manufacture a new aerated concrete.

The use of Ytong blocks with no cavity and





with the external insulation is becoming more popular amongst builders and developers in the UK. Ytong products offer good thermal insulation what reduces the extreme in the internal temperature of the building. In construction built with Ytong blocks the heat is absorbed during a day and released overnight. The thermal mass significantly reduces the overheating problem. The Ytong block of 4.0 compressive strength can be used in various locations like block and beam floating system or separating walls.

In addition to their excellent thermal properties Ytong blocks allow for high speed construction. The blocks can be easily cut, lightweight, simple to lay, quick to assemble and allow for unlimited finishes.

Ytong blocks can be used to build both load-bearing and non load-bearing:

- Inner leaves of cavity walls
- Solid walls
- Block and beam flooring
- Partition walls
- Internal walls
- External walls
- Fire walls
- Roof and ceiling elements

Due to its characteristic structure of millions of tiny pores filled with air, Ytong block helps to accumulate heat and avoid loss of energy. Thermal bridges are significantly reduced as the in-

ulating properties of the Ytong block are evenly distributed. Ytong block reduces the temperature fluctuations to a minimum and ensures proper air ventilation.

A 400 mm thick wall of Ytong blocks has an equivalent Lambda value of only 0.065 W/(mK) and achieves a U-value 0.15 W/(m K). A wall thickness of 48 cm can even achieve the Passivhaus standard U-value for external walls of 0.14 W/(m K). Such aerated concrete masonry meets the highest standards for energy efficiency without the need to use any additional insulation.

Ytong blocks have unlimited construction possibilities and great properties:

- Non flammable (offers up to 3 hours of protection against fire)
- Impermeable to frost and moisture
- Highly thermally efficient (til-lambda 0.07)
- Create the healthy living environment
- Provides an even temperature
- Low shrinkage values (<0,2 mm/m) and dimensional accuracy (perfect choice for thin joint system)
- Lightweight
- Easy to cut
- Excellent sound insulation
- Easy to transport and handle on site
- Large format allows quick and easy building
- Future high-quality construction



YTONG 3,6 Standard Blocks - perfectly suited to build the internal and external leafs of cavity walls, solid walls, separating walls, partitions, flanking walls, soil conditions D S-1. Available in range of thicknesses. Laid weight for design purpose incl. 3% moisture approx. 485 kg/m³.

YTONG 7,3 HI-Strength Blocks - available in the range of strength, can be applied in internal and external leafs of cavity walls, solid walls, separating walls, partitions and flanking walls but

also in block and beam flooring systems and are fit for soil conditions D S1, D S2, D S3.

YTONG Foundation Blocks - are commonly used in a range of thicknesses for use below the ground level. Offering beneficial thermal performance, load bearing features for the support of cavity walls and solid walls, framed construction, suspended floors incl. beam and block floors. Very resistant to water penetration. These can be laid below DPC level without mortared perpend

and are fit for soil conditions DS-1, DS-2, DS-3. Ytong Foundations blocks can be used also above ground for solid walls.

YTONG Coursing Units - allow for design and build consistency and are used to finish off the wall openings with no need to use indifferent material.

When selecting a suitable mortar, it is important to ensure that the composition is compatible in strength with the blocks selected for the project.

YTONG 3,6 STANDARD BLOCKS

Density	Compressive strength	Size	Thickness	Thermal conductivity	Block weight	Blocks/pack
kg/m ³	N/mm ²	mm	mm	W/mK	kg	
450 - 480	3,6	440 x 215	50**	0,11	2,3	128
			100*	0,11	4,6	72
			140*	0,11	6,5	48
			215*	0,11	10,0	32
450 - 480	3,6	600 x 215	100*	0,11	6,3	72
			140**	0,11	8,8	48

YTONG 7,3 HI-STRENGTH BLOCKS

Density	Compressive strength	Size	Thickness	Thermal conductivity	Block weight	Blocks/pack
kg/m ³	N/mm ²	mm	mm	W/mK	kg	
			100**	0,18	7,3	72
			140**	0,18	10,3	48
			215**	0,18	15,8	32
680 - 750	7,3	600 x 215	100**	0,18	10,0	72

YTONG FOUNDATION BLOCKS

Density	Compressive strength	Size	Thickness	Thermal conductivity	Block weight	Blocks/pack
kg/m ³	N/mm ²	mm	mm	W/mK	kg	
approx. 620	4,0	440 x 215	300*	0,15	18,2	24
approx. 620	4,0	440 x 215	350*	0,15	21,2	24
680 - 750	7,3	440 x 215	300*	0,18	22,0	24

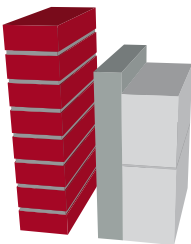
COURSING UNITS

Density	Compressive strength	Size	Thickness	Thermal conductivity	Blocks/pack
kg/m ³	N/mm ²	mm	mm	W/mK	
450 - 480	3,6	215 x 65	100*	0,11	468
680 - 750	7,3	215 x 65	100*	0,18	468

Examples of External Wall Constructions and U-values

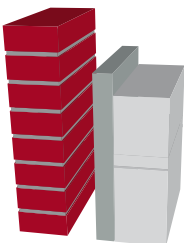
Partial fill cavity:

Brick outer leaf wall
Clear cavity 50 mm
Kingspan TW50, 50 mm
Ytong block 440 x 215 x 100 mm



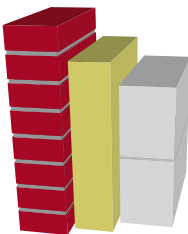
Partial fill cavity:

Brick outer leaf wall
Clear cavity 50 mm
Kingspan TW50, 40 mm
Ytong block 440 x 215 x 100 mm



Full fill cavity:

Brick outer leaf wall
Rockwool Dri Therm 32, 90 mm
Ytong block 440 x 215 x 100 mm



3.6 Standard block	4.0 Standard block	7.3 Hi Strenght block
Total U-value 0,25 W/m²K	Total U-value 0,26 W/m²K	Total U-value 0,27 W/m²K
Total U-value 0,28 W/m²K	Total U-value 0,30 W/m²K	Total U-value 0,31 W/m²K
Total U-value 0,27 W/m²K	Total U-value 0,28 W/m²K	Total U-value 0,29 W/m²K

Extract from Ytong Aerated Concrete Product Guide p.6

