

Building the future with Ytong autoclaved aerated concrete

PRODUCT GUIDE



- low tolerances
- high quality

YTONG



Introduction

DISTINCTIVE BUILDING WITH AERATED CONCRETE

Ytong blocks are a well known global name for aerated concrete products. The product has unlimited constructional possibilities and good building physical properties. It is, for example:

- non-flammable
- impermeable to frost and moisture
- excellent insulating properties

Above all, however, it is quick and efficient to lay. In practice, this is a decisive argument for contractors to use aerated concrete, as this results in a high speed construction.

For house construction and commercial and industrial buildings.

Ytong blocks are not only used to construct inner leaves of cavity walls and dwelling partitioning walls but also internal, external and fire walls in both load-bearing and non load-

bearing designs. The building block therefore is known as being efficient for both house construction and for commercial and industrial buildings.

High construction speed

In addition to its versatility, the Ytong block is characterised by its ease of working and construction. The blocks can easily be sawn. This results in a relatively high construction speed which can deliver cost savings, particularly in high-volume projects. The construction advantages of the Ytong block are that it is light-weight, simple to lay, quick to assemble, simple to saw/cut and chase and it has unlimited finishing possibilities. All products are manufactured to comply with European standards EN 771-4 (CE-marked).

This is Xella

- Xella is a leading manufacturer of branded building materials with a global presence
- The largest manufacturer of aircrete and calcium silicate units under the Ytong, Hebel and Silka brands
- A leading supplier of high-quality dry-lining systems under the Fermacell brand
- One of Europe's leading suppliers of lime and limestone under the Fels brand

The main office of Xella UK is located in Sutton Coldfield.

Building materials: What does Ytong aircrete stand for?

- Building blocks with very good thermal insulation
- Efficient large formats are available for quick and easy building
- the Ytong block will be the only aerated block in the UK which is produced with sand (and no fly-ash)
- Excellent fire protection
- Future-oriented, high-quality construction



Some of the recent projects using Xella products:

- Scottish schools, Perth and Edinburgh
- Swindon schools, Swindon
- Terminal 5 Heathrow, London
- Butlins Hotel, Bognor Regis
- Riverside Project, Belvedere
- News International, Waltham Cross

YTONG 2,9 ENERGY BLOCKS

Density	Compressive strength	Size	Thickness	Thermal conductivity	Block weight	Blocks/pack
kg/m ³	N/mm ²	mm	mm	W/mK	kg	
approx. 425	2,9	440 x 215	100*	0,10	4,1	72
			140**		5,8	48
			215**		8,9	32
approx. 425	2,9	610 x 215	100**	0,10	5,7	72
			140**		8,0	48

- laid weight for design purposes incl. 3% moisture: approx. 440 kg/m³
- Applications:**
■ internal and external leaf of cavity walls
 ■ partitions
 ■ solid walls
 ■ flanking walls

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
			75*		3,5	96
			100*		4,6	72
			140*		6,5	48
			215*		10,0	32
450 - 480	3,6	610 x 215	100*	0,11	6,4	72
			140**		9,0	48

- laid weight for design purposes incl. 3% moisture: approx. 485 kg/m³
- Applications:**
■ internal and external leaf of cavity walls
 ■ partitions
 ■ solid walls
 ■ flanking walls

YTONG 4,0 STANDARD 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	100*	0,15	6,0	72

- laid weight for design purposes incl. 3% moisture: approx. 640 kg/m³
- Applications:**
■ block and beam flooring systems
 ■ partition walls
 ■ internal and external leaves of cavity walls
 ■ separating walls
 ■ solid walls
 ■ flanking walls

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	
680 - 750	7,3	440 x 215	75*	0,18	5,5	96
			100*		7,3	72
			140*		10,2	48
			215		15,7	32
680 - 750	7,3	610 x 215	100**	0,18	10,1	72

- laid weight for design purposes
incl. 3% moisture: approx. 745 kg/m³

Applications:

- internal and external leaf of cavity walls
- solid walls
- separating walls
- flanking walls
- partitions

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	275**	0,15	16,6	24
			300*		18,1	24
680 - 750	7,3	440 x 215	300*	0,18	21,9	24

Applications:

- foundation blocks can be laid below dpc level without mortared perpend
- fit for soil conditions DS-1, DS-2 and DS-3
- can be used above ground for solid walls

COURSING UNITS

Density	Compressive strength	Size	Thickness	Blocks/pack
kg/m ³	N/mm ²	mm	mm	kg
680 - 750	7,3	215 x 65	100*	468
			140**	312

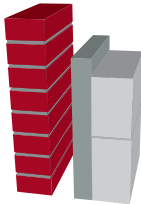
Characteristics:

- non-flammable
- impermeable to frost and moisture
- excellent insulating properties, reduces the amount of additional insulation
- helps to create a comfortable living environment
- provides an even temperature range in winter or summer
- highly recommended for use in thin joint systems because of low shrinkage values (< 0,2 mm/m) and accurate dimensions
- the 4,0 standard block can be used in many locations including block and beam flooring systems and separating walls according Robust Details (E-WM-6, E-WM-10, E-WM-13 and E-WM-15)
- light weight
- easy to cut and chase
- A1 reaction to fire rating
- excellent sound insulation

Below are some examples of external wall constructions and the U-values achieved.

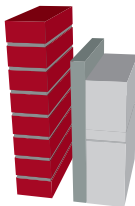
Partial fill cavity:

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



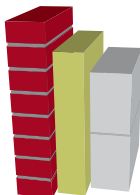
Partial fill cavity:

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



Full fill cavity:

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



2,9 Energy block	3,6 Standard block	4,0 Standard block
Total U-value 0,24 W/m ² .K	Total U-value 0,25 W/m ² .K	Total U-value 0,26 W/m ² .K
Total U-value 0,27 W/m ² .K	Total U-value 0,28 W/m ² .K	Total U-value 0,30 W/m ² .K
Total U-value 0,25 W/m ² .K	Total U-value 0,27 W/m ² .K	Total U-value 0,28 W/m ² .K



YTONG THIN JOINT MASONRY SYSTEM

Ytong aircrete blocks when used in a thin joint masonry system have many benefits:

- Improved thermal performance
- Excellent air tightness. A major consideration with the latest air permeability requirements.
- Faster build time.
- Reduction in site wastage.
- Ytong blocks are highly recommended for use in thin joint systems because of their low shrinkage values and accurate production with very narrow tolerances of the blocks.

Xella also supplies the specially developed thin bed mortar and the necessary tools for use with Ytong blocks if required.

Additional information

Xella North-West Europe has a Quality System Certificate according EN-ISO 9001. The YTONG products are accepted by NHBC (National House Building Council)

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