Product guide:
Building the future with Ytong autoclaved aerated concrete

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 loadbearing 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

The main office of Xella UK is located in Northampton.

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
- Excellent fire protection
- Future-oriented, high-quality
- construction

Some of the recent projects using Xella products:

- Royal Crescent, Southampton
- Eastbourne College
- Bracknell Shopping Centre
- Tonbridge Extra Care Home
- Panorama Building
- Ashford Ampersand Apartments
- Kenley London Road
- Croydon

Ytong 3,6 standard blocks

Density	Comressive strength	Size	Thickness	Thermal conductivity	Block weight	Blocks/pack
kg/m³	**N/mm²**	**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	600x215	100	0,11	6,3	72
			140	0,11	8,82	48

- laid weight for design purposes incl. 3% moisture: approx. 485 kg/m³

Applications:
- internal and external leaf of cavity walls
- solid walls
- fit for soil conditions D S-1
- partitions
- flanking walls

Ytong 4,0 standard blocks

Density	Comressive strength	Size	Thickness	Thermal conductivity	Block weight	Blocks/pack
kg/m³	**N/mm²**	**mm**	**mm**	**W/mK**	**kg**	
approx. 620	4,0	440 x 215	100	0,15	6,1	72
		600 x 215	100	0,15	8,3	72
			140	0,15	11,62	48**

** made to order

- laid weight for design purposes incl. 3% moisture: approx. 640 kg/m³

Applications:
- transverse tested for use in beam and block flooring systems - **440mm only**
- partition walls
- internal and external leafs of cavity walls
- fit for soil conditions D S1, D S2 and D S3
- separating/party walls
- solid walls
- flanking walls

Ytong 7,3 HI-strength blocks

Density	Comressive strength	Size	Thickness	Thermal conductivity	Block weight	Blocks/pack
kg/m³	**N/mm²**	**mm**	**mm**	**W/mK**	**kg**	
680 - 750	7,3	440 x 215	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
			140	0,18	14,0	48

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

Applications:

- internal and external leaf of cavity walls
- solid walls
- separating/party walls
- flanking walls
- partitions
- transverse tested for use in beam and block flooring systems - 440mm & 600mm
- fit for soil conditions D S1, D S2 and D S3

Ytong foundation blocks

Density	Comressive strength	Size	Thickness	Thermal conductivity	Block weight	Blocks/pack
kg/m³	**N/mm²**	**mm**	**mm**	**W/mK**	**kg**	
approx. 620	4,0	440 x 215	300	0,15	18,2	24
			350	0,15	21,2	24
680 - 750	7,3	440 x 215	300	0,18	22,0	24
			350	0,18	25,6	24

Applications:

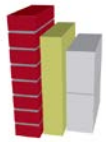
- foundation blocks can be laid below dpc level without mortared perpends
- fit for soil conditions DS-1, DS-2 and DS-3
- can be used above ground for solid walls

Coursing Units

Density	Comressive strength	Size	Thickness	Thermal conduc-tivity	Blocks/pack
kg/m³	**N/mm²**	**mm**	**mm**	**W/mK**	
450 - 480	3,6	215 x 65	100	0,11	468
		215 x 65	140	0,11	364
680 - 750	7,3	215 x 65	100	0,18	468
		215 x 65	140	0,18	364

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 oflow shrinkage values
- (< 0,2 mm/m)and accurate dimensions
- the 4.0 standard block can be used in many locations including block and beam floaring
- systems and separating walls accord-ing 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

Examples of external wall constructions and the U-values archieved.	**3.6 Standard block**	**4.0 Standard block**	**7.3 Hi Strength block**
Partial fill cavity: Brick outer leaf wall Clear cavity 50 mm Kingspan TW50, 40 mm Ytong block 440 x 215 x 100 mm 	Total U-Value 0,25 W/m²K	Total U-Value 0,26 W/m²K	Total U-Value 0,27 W/m²K
Partial fill cavity: Brick outer leaf wall Clear cavity 50 mm Kingspan TW50, 50 mm Ytong block 440 x 215 x 100 mm 	Total U-Value 0,28 W/m²K	Total U-Value 0,30 W/m²K	Total U-Value 0,31 W/m²K
Full fill cavity: Brick outer leaf wall Rockwool Dri Therm 32, 90 mm Ytong block 440 x 215 x 100 mm 	Total U-Value 0,25 W/m²K	Total U-Value 0,28 W/m²K	Total U-Value 0,29 W/m²K

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 there low shrinkage values and accurate production with very narrow tolerance of the blocks.

Xella also supplies the specially developed thin bed mortar and the necessary tools for use with Ytomg 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)

Product Weight, Pack & Load Size Guide

Product	Width	Length x Height	Strength	Blocks per pack
Ytong Standard Block (10003996)	50mm	440 x 215mm	3.6N	128
Ytong Standard Block (10003214)	100mm	440 x 215mm	3.6N	72
Ytong Standard Block (10003219)	140mm	440 x 215mm	3.6N	48
Ytong Standard Block (10003260)	215mm	440 x 215mm	3.6N	32
Ytong Standard Block (10003519)	100mm	600 x 215mm	3.6N	72
Ytong Standard Block (10018169)	140mm	600 x 215mm	3.6N	48
Ytong Standard Block (10003257)	100mm	440 x 215mm	4.0N	72
Ytong Standard Block (10003263)	300mm	440 x 215mm	4.0N	24
Ytong Standard Block (10004147)	350mm	440 x 215mm	4.0N	24
Ytong Standard Block (10003520)	100mm	600 x 215mm	4.0N	72
Ytong Standard Block (10018171)	140mm	600 x 215mm	4.0N	48
Ytong Hi-Strength Block (10003216)	100mm	440 x 215mm	7.3N	72
Ytong Hi-Strength Block (10003217)	140mm	440 x 215mm	7.3N	48
Ytong Hi-Strength Block (10003279)	215mm	440 x 215mm	7.3N	32
Ytong Hi-Strength Block (10003224)	300mm	440 x 215mm	7.3N	24
Ytong Hi-Strength Block (10013953)	350mm	440 x 215mm	7.3N	24
Ytong Hi-Strength Block (10003521)	100mm	600 x 215mm	7.3N	72
Ytong Hi-Strength Block (10013946)	140mm	600 x 215mm	7.3N	48
Ytong Coursing Unit (10003256)	100mm	215 x 65mm	3.6N	468
Ytong Coursing Unit (10018155)	100mm	215 x 65mm	4.0N	468
Ytong Coursing Unit (10003264)	100mm	215 x 65mm	7.3N	468
Ytong Coursing Unit (10018156)	140mm	215 x 65mm	3.6N	364
Ytong Coursing Unit (10018157)	140mm	215 x 65mm	4.0N	364
Ytong Coursing Unit (10018158)	140mm	215 x 65mm	7.3N	364

Please note that this document is a guide only and load sizes can vary.

M2 per pack	KG per pack	Flatbed artic / curtainsider (MAX 28T OR 60 PACKS)	Wagon and drag (MAX 27.5T OR 48 PACKS)	RIGID (MAX 18T OR 25 PACKS)
12.80	413	60	48	25
7.20	464	60	48	25
4.80	433	60	48	25
3.20	443	60	48	25
9.89	636	44	43	25
6.60	581	51	48	25
7.20	552	50	48	25
2.40	442	50	48	25
2.40	643	43	42	25
9.89	757	37	36	23
6.60	712	39	38	25
7.20	685	40	40	25
4.80	642	43	42	25
3.20	655	42	42	25
2.40	684	40	40	25
2.40	782	35	35	23
9.89	938	29	29	19
6.60	859	32	32	20
7.80	400	60	48	25
7.80	533	52	48	25
7.80	687	40	40	25
6.06	446	60	48	25
6.06	581	48	47	25
6.06	701	39	39	25

For sales & technical advice please contact:

Xella UK
A branch of Xella BE nv/sa
Victory House
400 Pavillion Drive
Northampton
NN4 7PA
Tel: +44 (0) 8432 909 080
Fax: +44 (0) 8432 909 081
ytong-uk@xella.com
www.xella.co.uk

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