THOMAS ARMSTRONG (CONCRETE BLOCKS) LTD

AIRTEC FOUNDATION 215

Aerated Concrete Foundation Blocks

Airtec Foundation 215 blocks are 215mm high solid foundation blocks with a range of widths available in 3.6N and 7.3N strengths.

The 215 block is offered as an alternative to the traditional trench block height of 140mm for builders wishing to use conventional coursing heights. A solid foundation wall of Airtec blocks means a faster build, shallower trenches, less waste material, no need for wall ties, less mortar and zero chance of collapsed cavities.

All Airtec blocks are manufactured from high quality materials, consisting of up to 80% recycled raw material and are suitable for use above and below damp-proof course.

Airtec blocks are manufactured to BS EN 771-4 category I manufacturing, BBA certified and are ISO 9001 Quality Assured, ISO 14001 Environmentally Certified and hold BES 6001 Responsible Sourcing.

TECHNICAL PROPERTIES

Property	Airtec Standard Foundation 215	Airtec Seven Foundation 215
Face Size (BS EN 771-4):	620mm x 215mm	
Available Widths:	275mm, 300mm	
Dimensional Tolerance (BS EN 772-16):	TLMB	
Gross Dry Density (BS EN 772-13):	530 kg/m³	730 kg/m³
Mean Compressive Strength (BS EN 772-1):	3.6 N/mm²	7.3 N/mm²
Manufacturing Category (BS EN 771-4):	Category I	
Thermal Conductivity (BS EN 1745):	0.11 W/mK [protected] 0.18 W/mK [below ground]	0.17 W/mK [protected] 0.29 W/mK [below ground]
Moisture Movement (BS EN 771-4):	0.40 mm/m	
Fire Resistance (BS EN 13501-1):	Class A1 reaction to fire	
Configuration (BS EN 1996-1-1):	Solid - Group 1	
Available Texture, Finish:	Standard	

bsi. ISO 9001 Quality Management FS 665648 · ISO 14001 Environmental Management EMS 665649 · BES 6001 Responsible Sourcing of Construction Products BES 665651 BES 665634

BBA APPROVAL INSPECTION TESTING CERTIFICATION CERTIFICATE 06/4309

APPLICATIONS

- Solid foundation walls from 275mm to 300mm widths to support a range of solid or cavity walls.
- Suitable for use below dpc up to DS3 and exposure level MX2.2 (see overleaf).
- Low weight and 620mm long meaning faster, safer block laying.
- Suitable for both conventional 10mm and Thin-Joint mortar construction.
- Hand-holds are provided at the ends of every block for safer manual handling.

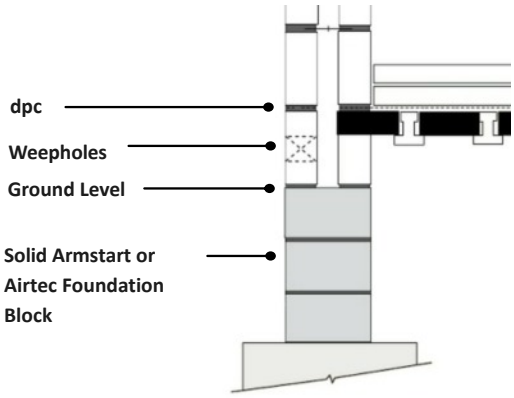
PHYSICAL PROPERTIES & PACK DETAILS

Block Type	Block Width mm	Blocks per Pack	m² per pack	Linear m² per Pack	Block Weight kg	Weight per Pack kg	Blocks per m²
Standard 3.6N	275	20	2.84	12.6	20.0	490	7.05
	300	20	2.84	12.6	21.8	534	
Seven 7.3N	275	20	2.84	12.6	27.6	674	7.05
	300	20	2.84	12.6	30.1	736	

- The m² per pack shown above includes the 10mm conventional mortar joint.
- A range of wagon sizes are available, with or without pallets. Ring your local sales office for further details.
- The block weights quoted are approximate and include the typical additional weight from the equilibrium (3%) moisture content.
- Pack weights are approximate and allow for the additional weight due to the natural moisture content.

AIRTEC FOUNDATION 215 Aerated Concrete Blocks

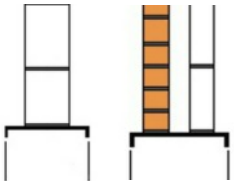
Typical Solid Foundation Wall Construction



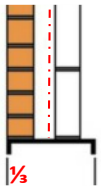
Position of Walls on Foundation Walls

BS 8103-1 "Structural Design of Low Rise Buildings" gives some general rules of thumb for the construction of foundation walls and the positioning of cavity solid walls above dpc.

In general, walls should be positioned so that the vertical centre line of the wall aligns with the vertical centre line of the foundation wall as shown on the diagram opposite:



Where the external face of the wall is at or near to the edge of the foundation block, it is sufficient to ensure that the vertical centre line of the wall is within the middle third of the foundation width.

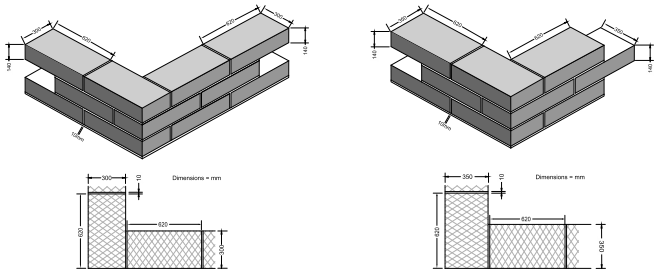


It is not recommended that the wall above the foundation should overhang the width of the foundation block below.

Corner Bonding of Airtec Foundation Blocks

Blockwork is normally built in stretcher bond with the vertical joints in successive courses overlapping the preceding one. A regular bond pattern should be maintained with a minimum overlap of 0.4 x the height of the block as recommended in BS EN 1996-1-1.

- For a 215mm high block, this equates to an 86mm minimum overlap.
- For a 140mm high block, this equates to a 56mm minimum overlap.



NBS Clauses for our concrete block products can be found on **www.source.thenbs.com**

Mortars

Airtec blocks offer a good surface for accepting mortars. On dry blocks, surfaces can be brushed with clean water immediately before applying mortar to overcome the suction. The preferred approach is to adjust the consistency of the mortar to suit the suction of the block. The weakest mortar mixture appropriate to the structural requirements should be selected as per BS 5628-3. A weaker mix should always be used with Airtec blocks.

	Mortar Class BS EN 1996-1-1	Recommended mix proportions of materials by volume (as per BS EN 998-2)	
Above dpc	(iii) M4	1 : 1 : 5½ to 6 1 : 5½ to 6 1 : 4½ to 5	Cement : Lime : Sand Cement : Sand (with plasticiser) Masonry Cement : Sand
Below dpc	(ii) M6	1 : ½ : 4 to 4½ 1 : 3½ to 4	Cement : Lime : Sand Cement : Sand

Airtec is suitable for Thin Joint mortar construction using mortar supplied in the form of 25kg bags of dry, pre-mixed powder. Mixing is simply done by adding water to the powder in accordance with the manufacturer's instructions. Please visit our website for further details.

Exposure and Below Ground

Airtec Standard Foundation blocks blocks are suitable for use below dpc in soil conditions DS1 as defined in BRE Special Digest 1 and condition MX2.2 as defined in BS EN 1996-2 : 2006.

Airtec Seven Foundation blocks blocks are suitable for use below dpc in soil conditions DS1, DS2 & DS3 as defined in BRE Special Digest 1 and condition MX2.2 as defined in BS EN 1996-2 : 2006.

Current building practice is such that wherever masonry is used below ground level it is usually limited to the top 1 meter depth. At the same time, sulphate levels in the top 1 meter of UK soils are rarely more severe than class DS-1. It follows that the depth at which samples are taken to enable the sulphate soil classification to be determined should be indicative of the depth where the masonry is being used. BRE Special Digest 1 draws attention to this.

Good Site Practice & Safe Handling

- Packs should be stored on firm, level ground no more than 2 packs high and protected from severe weather to preserve their quality. Care must be taken when removing the plastic bands as individual blocks may fall out. Never un-band packs above shoulder height.
- In the absence of a revised version of the HSE guidance given in their withdrawn Construction Sheet 37 ' Handling Building Blocks' the following principles should be followed: There is a risk of injury in the repetitive handling of blocks heavier than 20kg. Repetitive manual handling of blocks over 20kg should be subject to a risk assessment and a safe system of work should be established before block-laying commences.
- Blocks should not be laid if the temperature is at or below 3°C and falling.
- Blocks should always be laid on a full bed of mortar and vertical joints filled.

September 2023

North East Region :	Tel: 01207 544 214	Fax: 01207 541 800	blocks@thomasarmstrong.co.uk
Cumbria, North Lancashire and Borders Region :	Tel: 01900 68114	Fax: 01900 66136	cumbriablocksales@thomasarmstrong.co.uk
Yorkshire, Humber and Lincolnshire Region :	Tel: 0113 232 0022	Fax: 0113 287 0839	leedssales@thomasarmstrong.co.uk
North West, Cheshire, Staffordshire and West Midlands Region :	Tel: 0151 525 5991	Fax: 0151 530 1676	aintreesales@thomasarmstrong.co.uk