



# AIRTEC PARTY WALL

## Aerated Concrete Blocks

**Airtec Party Wall blocks are intended for use in Part E and Robust Detail party walls. As with all Airtec blocks, they combine strength and excellent thermal insulation properties. Weighing as little as 8.2kg, these 100mm blocks have the best possible dimensional category of 'TLMB' offering unrivalled physical and technical properties.**

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	Value
Face Size (BS EN 771-4):	620mm x 215mm
Dimensional Tolerance (BS EN 772-16):	TLMB
Gross Dry Density (BS EN 772-13):	600 kg/m <sup>3</sup> minimum
Mean Compressive Strength (BS EN 772-1):	3.6 N/mm <sup>2</sup>
Manufacturing Category (BS EN 771-4):	Category I
Thermal Conductivity (BS EN 1745):	0.13 W/mK [inner leaf] 0.15 W/mK [outer leaf]
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



## APPLICATIONS

- Inner & outer leaf of external cavity walls.
- Internal partition walls.
- Part E and Robust Standard Detail Party Walls
- Standard texture finish provides an excellent surface for mortars, renders and plasters.
- Suitable for use below dpc up to DS-1 and MX2.1
- Low weight and 620mm long meaning faster, safer block laying.
- Suitable for both conventional 10mm and Thin-Joint mortar construction.

## PHYSICAL PROPERTIES

Block Size mm	'R' Value m <sup>2</sup> k/W	Walled Weight kg/m <sup>2</sup> See Note 1	Sound Reduction Rw, dB See Note 2	Block Weight kg See Note 3	Fire Resistance Hours See Note 4
100	0.77	72	43	8.6	4

1. Walled weight is for a single-leaf wall, plastered on both sides.
2. Sound Reduction Rw values are based on wall mass and assumes a plastered finish on both sides.
3. The block weights quoted above are approximate and include the typical additional weight from the equilibrium (3%) moisture content of the block. Received block weights will be significantly higher and are variable due to moisture content.
4. Fire resistance periods to BS EN 1996-1-2 for a single-leaf, non-loadbearing plastered wall.

## PACK DETAILS

Block Size mm	Blocks per pack	m <sup>2</sup> per pack	Weight per Pack kg	Blocks per m <sup>2</sup>
100	56	7.94	564	7.05

The m<sup>2</sup> per pack shown above includes the 10mm conventional mortar joint. Figures will be less if using thin-joint mortar by approximately 4.8%.

Some block sizes and strengths are made to order. Please check with our sales office on block availability as far in advance as possible before the blocks are required.

## Thermal

The table below shows examples of how cavity walls built with an Airtec Party Wall Block inner leaf can meet a range of u-value targets. For specific calculations, please contact our technical department.

U Value W/m <sup>2</sup> K	Partially Filled Cavity Brick outer leaf   50mm clear cavity   plasterboard on dabs	Fully Filled Cavity Brick outer leaf   Fully filled cavity   plasterboard on dabs
0.25	40mm PIR/PU @ 0.018 50mm PIR/PU @ 0.022	100mm batt @ 0.034
0.22	50mm PIR/PU @ 0.018 60mm PIR/PU @ 0.022	125mm batt @ 0.037
0.20	55mm PIR/PU @ 0.018 70mm PIR/PU @ 0.022	125mm batt @ 0.032
0.18	65mm PIR/PU @ 0.018 80mm PIR/PU @ 0.022	100mm batt @ 0.021
0.15	85mm PIR/PU @ 0.018 105mm PIR/PU @ 0.022	100mm batt @ 0.021 + 20mm insulated drylining

Note: Insulation thicknesses shown are the minimum required to meet the target u-value. These sizes may not be available, therefore the next size up should be used.

## Acoustic

Airtec Party Wall blocks are suitable for Part E and Robust Standard Details party walls and internal partition walls. The figures below are predicted sound reduction ratings based on wall mass:

Block Type All 100mm	Walled Weight kg/m <sup>2</sup>	Predicted Sound Reduction, Rw		
		Unfinished	Plastered	Dry Lined
100mm	72	40	43	42

## Suspended Block & Beam Floors

Airtec Party Wall blocks are not suitable for use as infill blocks in block and beam suspended floors. Airtec Seven wall blocks or Airtec Large Format blocks can be used offering multiple width options.

## Fire Resistance

Airtec blocks are non-combustible with zero spread of flame and are classed as Class 'A1' in accordance with BS EN 13501-1. Notional fire resistance periods based on BS EN 1996-1-2 are:

Block mm	Loadbearing Wall		Non-loadbearing Wall	
	No Finish	VG Plaster	No Finish	VG Plaster
100	2 hours	4 hours	4 hours	4 hours

"VG" = vermiculite / gypsum plaster or perlite plaster 13mm thick applied to both faces of single leaf walls.

## 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.

NBS Clauses for our concrete block products can be found on [www.source.thenbs.com](http://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.

## External Rendering

Airtec blocks have moderate-high suction and brushing dry blocks with water immediately prior to adhesion is recommended. For even greater adhesion, a spatterdash or stipple undercoat may be used - please refer to our website for further details. Pretreatments such as RendAid may be used and metal lathing plus an additional coat should be used to reinforce the render where movement control has not been incorporated into the wall.

Traditional renders should be applied in 2 coats. The first coat should not exceed 15mm and the second coat should be 5-7mm. The first coat should be slightly stronger than the second.

Cement : Lime : Sand Sheltered to Moderate Conditions	Cement : Lime : Sand Moderate to Severe conditions	Cement : Sand with plasticizer Sheltered to Moderate Conditions	Masonry Cement : Sand Moderate to Severe conditions
1 : 2 : 9	1 : 1 : 6	1 : 6	1 : 5

## Wall Ties & Movement Joints

Generally under normal conditions, wall ties should be embedded 50mm into the mortar on each leaf, staggered in alternate courses and spaced in accordance with the following:

Leaf Thickness mm	Cavity Width mm	Horizontal Spacing mm	Vertical Spacing mm	Ties per m <sup>2</sup>
Less than 90mm	50 - 75	450	450	4.9
Over 90mm	50 - 150	900	450	2.5

For unreinforced Airtec masonry panels, movement joints should be placed at intervals of no greater than 6m and within 3m of a corner. Additional wall ties should be placed around openings and each side of movement joints at each course. In wall areas of higher stress such as around openings, joists or lintels, bed-joint reinforcement must be placed in the two courses immediately above and below the area to accommodate movement and stresses and to avoid the appearance of hairline cracks.

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

cumbriablocks@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