

# CONCRETE COMMON

## Dense Concrete Bricks

Concrete Common units also known as 'frogged bricks' are 100mm wide coursing bricks which are designed to work independently and in conjunction with Thomas Armstrong's Dense Concrete blocks for applications above and below damp-proof course (DPC).

All dense blocks are manufactured from high quality class 2 aggregates, including a significant proportion of recycled raw material and are suitable for use above and below damp-proof course (DPC) in protected, non-exposed applications.

Commons are manufactured to BS EN 771-3 and are ISO 9001 Quality Assured, ISO 14001 Environmentally Certified and hold BES 6001 Responsible Sourcing certification.

## TECHNICAL PROPERTIES

Property	Value
Face Size (BS EN 771-3):	65mm x 215mm 73mm x 215mm
Dimensional Tolerance (BS EN 772-16):	Category D1
Gross Dry Density (BS EN 772-13):	1850 - 2100 kg/m <sup>3</sup>
Mean Compressive Strength (BS EN 772-1):	21.0 N/mm <sup>2</sup>
Manufacturing Category (BS EN 771-3):	Category II
Thermal Conductivity (BS EN 1745):	1.17 W/mK [inner leaf] 1.26 W/mK [outer leaf]
Moisture Movement (BS EN 772-14):	< 0.6 mm/m
Fire Resistance (BS EN 13501-1):	Class A1 reaction to fire
Configuration (BS EN 1996-1-1):	Frogged upper face
Available Texture, Finish:	Standard



## APPLICATIONS

- Manufactured to BS EN 771-3.
- Inner & protected outer leaf of external cavity walls.
- Not suitable for external applications exposed to the weather.
- Internal partition walls.
- Foundation walls below damp-proof course (DPC).
- Acoustic separating party walls to Part E of the Building Regulations and Robust Details.
- Standard texture finish provides an excellent surface for mortars, renders and plasters.
- Robust, accepts most standard fixings.

## PHYSICAL PROPERTIES & PACK DETAILS

Block Height mm	Blocks per pack	Block Weight kg	m2 per pack	Blocks per m2	Pack Details
65	416	3.0	7.02	60	Non-void pack on wooden pallets
65	424	3.0	7.07	60	Voided pack
73	360	3.3	6.67	54	Voided pack

- The block weights quoted are approximate and include the typical additional weight from the moisture content.
- The m2 figures include the conventional 10mm mortar joint.
- Pack details may vary slightly between manufacturing locations. Always check details with your nearest sales office.

Acoustic

Common bricks are suitable for use in acoustic separating party walls between dwellings and for internal partitions in accordance with Part E of the Building Regulations. They are also suitable for a range of Robust Standard Detail party walls.

Below Ground

All of our aggregate and dense concrete blocks are durable products which are suitable for use in soil conditions up to Design Sulphate class DS-3 as defined in BRE Special Digest 1.

Fire Resistance

Concrete Common bricks are non-combustible with zero spread of flame and are classed as category '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	2 hours	4 hours

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

Mortars

Common brick surfaces offer an excellent surface for accepting mortars and no pre-treatment is required other than ensuring that all dirt and debris is removed. Generally, in order to avoid unsightly cracking, the weakest mortar mixture appropriate to the structural requirements should be selected as per BS 5628-3. For most applications, we recommend that grade iii mortar is used.

	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

External Rendering

Standard texture Common bricks have a surface which provides an excellent key for adhesion. These blocks have low - moderate suction and no special pre-treatment of the wall is required other than ensuring that all dirt and debris is removed from the surface.

Traditional renders should be applied in 2 coats. The first coat should not exceed 15mm and the second coat should be 5 to 7mm thick. The first coat should be slightly stronger than the second coat. Render designation iii/M4 should be used, recommended proportions:

Cement : Lime : Sand With or without air entrainment	Cement : Sand With or without air entrainment	Masonry Cement : Sand With non-lime filler	Masonry Cement : Sand With lime filler
1 : 1 : 5 or 6	1 : 5 or 6	1 : 4 or 5	1 : 3½ to 4

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 m²
Less than 90mm	50 - 75	450	450	4.9
Over 90mm	50 - 150	900	450	2.5

For unreinforced masonry panels, the typical recommended spacing between vertical movement joints for Dense blocks is 7m - 9m for internal and external 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)

June 2023



Product details and availability may vary between manufacturing locations. Please contact your nearest regional sales office for sales, product and technical advice.

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