AUTOCLAVED AERATED CONCRETE

EX4 / 650 Precision Lintels

DESCRIPTION

EX4/650 Precision Lintels are masonry building lintels formulated from cement, lime, silica sand, gypsum and aluminium. The anti-corrosion coated reinforcing is placed into moulds, the slurry is then cast and the mould is transported to green state curing, where a chemical reaction takes place for aeration, giving the Autoclaved Aerated Concrete its light weight characteristics. The lintels are steam cured under pressure in an autoclave, providing enhanced strength characteristics. Once the autoclaving process is complete the AAC lintels are ready for installation.

TYPICAL APPLICATION

EX4/650 Precision Lintels can be used for load-bearing internal and external walls. The exterior surface requires cement plaster for protection against the elements. Internal walls can be rendered using either cement plaster or gypsum plaster.

DIMENSIONS

Length	**1000 - 3500mm**
Height	**250mm**
Thickness	**100, 150, 200mm**

****NOTE** Min. bearing length of 150mm (See page 2)**

DENSITIES

Dry Density	**650 kg/m³**
Delivered Density	**696 kg/m³**
Thickness	**100mm, 150mm, 200mm**
Tolerance ± 20kg/m³	

STRUCTURAL PROPERTIES

Compressive Strength	**avg. 5.0 N/mm²**
Modulus of Elasticity	**2250 N/mm²**
Shrinkage	**0.1 - 0.2 mm/m**

THERMAL PROPERTIES

Thermal Conductivity	**0.18 W/mK (EN 1745)**

****NOTE** calculations based on walls without render. EN 1745 standard and ASTM C518 Part 17 test method used.**

THERMAL RESISTANCE (R-Value)	
100mm thick	**0.55 m²K/W**
150mm thick	**0.83 m²K/W**
200mm thick	**1.11 m²K/W**

****NOTE** calculations based on walls without render**

THERMAL TRANSMITTANCE (U-VALUE)	
100mm thick	**1.81 W/m²K**
150mm thick	**1.20 W/m²K**
200mm thick	**0.90 W/m²K**

****NOTE** Thermal performance does not take into account the effects of services and and potential thermal bridge areas eg. concrete or brick walls, walls with soffits and movement joints. The Engineer or Architect must ensure that the correct materials are specified and used at these junction areas in order to maintain the thermal ratings.**

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SOUND RESISTANCE VALUES

Block Size	Render Type	STC (dB)
100mm	15mm Plaster	44
150mm	15mm Plaster	min. 46
200mm	15mm Plaster	50

****NOTE** Acoustic ratings do not take into account the effect of services including junction areas such as with concrete or brick walls, soffits and movement joints. Engineers and Architects must ensure the correct materials are used at these junction areas in order to maintain the acoustic ratings.**

MINIMUM BEARING REQUIREMENT

Clear Span (mm)	Bearing (mm)	Min. Thickness
900	150	100 - 200mm
901 - 2000	200	100 - 200mm
2001 - 3500	250	200

WEIGHT PER 1M LINTEL

100 mm thick	17.38 kg
150mm thick	26.08 kg
200mm thick	34.78 kg

CURING TIME

Autoclaved Aerated Concrete Blocks are steam cured at 190°C for 12 hours between 10-12 Bar pressure. Therefore AAC blocks are ready for use directly after autoclaving.

CONFORMITY

Lintels are manufactured in accordance with DIN 4223 standard. Aertec Thin Bed Mortar is manufactured in accordance with EN 998-2 standard.

Lintels can only be placed with Aertec supplied Thin Bed Mortar which has been specifically designed for the use with Aertec supplied AAC blocks and Lintels. See mortar data sheet for more information.

WALL FIXINGS

Course threaded wood screws minimum 50mm long can be used for fixings up to 25kg

HEAVY DUTY WALL FIXINGS

Rawlplug (Based on 3.5MPa Block)		
Product	**kN (avg)**	**Anchor Spec**
R-FF1-N-08	1.27	8 x 100mm
R-FF1-K10	2.43	10 x 100mm

****NOTE** FF1 Anchor system: - The innovative design of the expansion zones enables fixture into AAC blocks with embedment of only 70mm.The FF1 has the flexibility that allows you to define the fixing elements thickness (tfix) value, by adjusting the overall length of your anchor. Example FF1 10x100 has a maximum tfix = 30mm and FF1 10x140 has a maximum tfix = 70mm**

Fischer (Based on 3.5MPa Block)		
Product	**kN (avg)**	**Anchor Size**
Duopower	0.28	6 x 30mm
Duopower	0.80	6 x 50mm
Duopower	0.73	8 x 40mm
Duopower	1.20	8 x 65mm
Duopower	1.50	10 x 80mm

****NOTE** Pull out test report available upon request**