AUTOCLAVED AERATED CONCRETE

AH 600 Precision Blocks

DESCRIPTION

AH 600 Precision Blocks are masonry building blocks formulated from cement, lime, silica sand, gypsum and aluminium. The slurry is cast into moulds which is transported into a green state curing section, where a chemical reaction takes place for aeration. This process gives the Autoclaved Aerated Concrete its light weight characteristics. The "Cake" is then wire cut and steam cured under pressure in an autoclave, providing enhanced strength characteristics. Once the autoclaving process is complete the AAC blocks are ready for installation.

TYPICAL APPLICATION

AH 600 Precision Blocks are predominantly used for non-load-bearing internal and external walls. Exterior surfaces require cement plaster for protection against the elements. Internal walls can be rendered using either cement plaster or gypsum plaster.

DIMENSIONS

Length	600mm (± 2mm)
Height	250mm (± 2mm)
Thickness	100, 150, 200mm (± 2)

DENSITIES

Dry Density	600kg/m^3
Delivered Weight (water)	750kg/m^3
Tolerance ± 50 kg/m^3	

STRUCTURAL PROPERTIES

Compressive Strength	3 MPa (± 0.5 MPa)
Wet Dry Movement	0.2mm/m

THERMAL PROPERTIES

Thermal Conductivity	0.145 W/mK

THERMAL RESISTANCE (R-Value)	
100mm thick	0.69 m^{2}k/W
150mm thick	1.03 m^{2}k/W
200mm thick	1.38 m^{2}k/W

THERMAL TRANSMITTANCE (U-Value)	
100mm thick	1.45 W/m^{2}K
150mm thick	0.97 W/m^{2}K
200mm thick	0.72 W/m^{2}K

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

FIRE PROPERTIES

110mm	2hr Non Load Bearing
150mm	2hr Load Bearing
220mm	2hr Load Bearing

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FIRE PROPERTIES

****NOTE** Fire ratings are based on walls without services. Therefore fire ratings are equal to the remaining thickness of the wall after installation of services. At junction areas such as movement joints, control joints and at soffits, Engineers and Architects must ensure the correct materials are used at these junction areas in order to maintain the fire rating.**

SOUND RESISTANCE VALUES

Without Render	
100mm thick	35.0 Rw (dB)
150mm thick	40.6 Rw (dB)
200mm thick	44.7 Rw (dB)
5mm CEM-SKIM 100 both sides	
100mm thick	38.4 Rw (dB)
150mm thick	42.1 Rw (dB)
200mm thick	46.5 Rw (dB)
8mm CEM-SKIM 100 both sides	
100mm thick	40.1 Rw (dB)
150mm thick	43.0 Rw (dB)
200mm thick	47.6 Rw (dB)

****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.**

BLOCKS PER M²

100, 150, 200mm thick	6.67 blocks per m²

WEIGHT PER BLOCK

Thickness	Dry	Wet
100mm	9.0 kg	11.25 kg
150mm	13.50 kg	16.87 kg
200mm	18.00 kg	22.50 kg

WEIGHT PER M²

Thickness	Dry	Wet
100mm	59.99 kg	74.99 kg
150mm	89.99 kg	112.45 kg
200mm	119.98 kg	149.98 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 after autoclaving.

HEAVY DUTY FIXINGS

Rawlplug – Pull out test results		
Product	kN (avg)	Anchor Spec
R-FF1-N-08	1.19	8 x 100mm
R-FF1-K-10	1.41	10 x 100mm

****NOTE** It is recommended to apply a safety factor of 2.5 to all pull out test results.**

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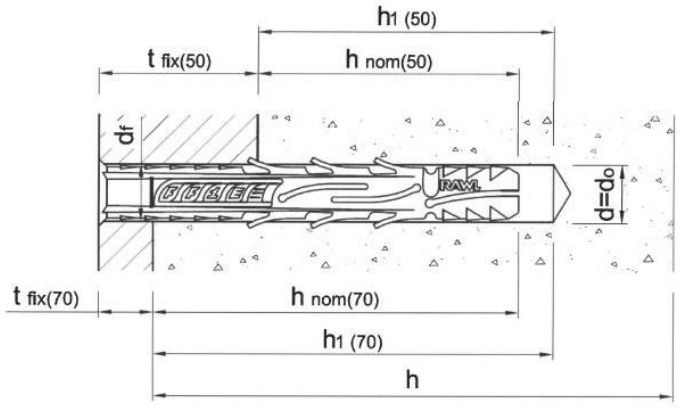
Rawlplug – Shear test results		
Product	**kN**	**Anchor Spec**
R-FF1-N-10	**1.80**	**10 x 120mm**

****NOTE** It is recommended to apply a safety factor of 1.5 to the shear test results.**



****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**

CONFORMITY

Blocks are manufactured in accordance with SANS 50771-4 standard. Aertec Thin Bed Mortar is manufactured in accordance with EN 998-2 standard.

Blocks can only be laid using Aertec supplied Thin Bed Mortar which has been specifically designed for the use with Aertec supplied AAC blocks. See Thin Bed Mortar data sheet for more information.