What is Ambionse

Based on the simple building blocks of childhood, Ambionse Insulated Concrete Formwork (ICF) allows you to provide a more comfortable and healthy home for the homeowner with fewer hassles.

This ICF is able to give you a solid wall with all the benefits that have made concrete the material of choice for home building world-wide. The walls are strong, able to resist the ravages of fire, wind and time.

But Ambionse does plain concrete one better - or rather, two better - by giving you two built-in layers of insulation. This insulation provides the wall with an astonishingly high R-value of 3.0.
Ambionse is a great option for a builder familiar only with timber who wants build with, and reap the benefits of, concrete.

It is perfect for:

- general house construction
- retaining walls
- basements
- intertenancy walls
- insulated swimming pools

The wise choice is Ambionse, as homeowners will appreciate the quality of the finished home, much more than they would with timber. Homes created with Ambionse are designed to last for generations, not just one lifetime.

Easy Choice Not only is it simple, but it is also easy to create an Ambionse home. Although it may look new and different, any builder can easily adapt to using Ambionse. The interlocking blocks are simple and straightforward to install. Using Ambionse means that blocklaying skills are not required to build a concrete wall anymore. The hassle of waiting for and paying for a blocklayer will soon be a distant memory.

You will also get less callbacks as movement issues and wall cracks are things of the past.

Comfortable Choice An Ambionse home provides a sanctuary from the elements, allowing for greater physical and mental wellbeing. The living environment has a more even temperature, sharply reduced drafts, and is noticeably quieter. The sandwich of concrete and inherent insulation protects the inside of the home from the outside temperature swings as well as air infiltration.

The solidity of the walls protects the home from intruders of all size, providing definite peace of mind for the owners.

Healthy Choice There are no toxic materials within an Ambionse wall and there's no need for chemical preservative treatment. This eliminates hazardous off-gassing. Because there is no timber framing with cavities, there is no space and nutrients for dangerous mould and mildew to develop.

The health problems associated with mould build-up tend not to feature in an Ambionse home. Ambionse also allows you to create a surprisingly airtight structure that minimises the ingress of dust and pollen great for allergy sufferers.

Cost Effective Choice

It is difficult to compare "apples with apples" because other standard construction types do not provide the same level of insulation that an Ambionse wall does, and timber-framed walls are nowhere near as solid as an Ambionse wall.

A cost comparison carried out by a registered quantity surveyor shows you can save up to 20% by using Ambionse rather than conventional masonry blockwork. Ambionse also compares well cost-wise against traditional timber framed options, but offers a much more solid wall.

The homeowner will also have lower maintenance costs and because of the massive level of insulation, they will experience significant energy savings. These and other features mean that an Ambionse home has a greatly reduced lifecycle cost.

IMPORTANT INFORMATION

Series	Length	Width	Height	Cavity Width	Side Thickness	Empty Weight (kg)	Concrete volume (m^3 m&f wall)	Blocks/m^2	Corner Block
	(mm)								
180 Series	1200	190	300	90	50	0.75	0.09	2.77	Yes
250 Series	1200	250	300	150	50	0.80	0.15	2.77	Yes
300 Series	1200	300	300	200	50	0.85	0.20	2.77	No

ESTIMATING QUANTITIES

- Count the number of corners (both internal and external combined).
- Divide the wall height by 300mm and round up to the nearest whole number - this provides the number of courses.
- Multiply the number of courses by the number of corners - this will give you the total number of corner blocks (Half will be left hand and half will be right hand blocks).
- Determine the total perimeter length (ignoring openings).
- Multiply the number of corners by 1050mm and subtract this from the perimeter length. Divide this number by 1200mm to produce the number of straight blocks per course and multiply by number of courses.
- Calculate the area of the openings and multiply by 2.77 to find the number of blocks saved.
- Subtract this from the number of blocks (from above) to find the total straight blocks required for the project (we suggest adding 5% for wastage particularly if this is your first project). Waste can be reduced by using up the short length offcuts as the wall is built up.

AMBIONSE

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AMBIONSE

Create a Feeling!

Builder's Guide

Simple To Build

FOOTINGS
Create a header block by trimming 100mm from the top of one side of the Ambionse block. A timber straight edge can be used on the outside to keep the footings aligned.

FIRST COURSE
Work from the corners and cut only the straight blocks where necessary to fit and for openings. Once the first course is in place, level it up to the highest point on the slab and apply adhesive expanding foam under both sides to secure and seal.

BLANK ENDS
Where blank ends are required (at openings or wall ends), extend the wall at least one bridge past where the blank end is to be installed. This helps to prevent localised bulging of the wall.

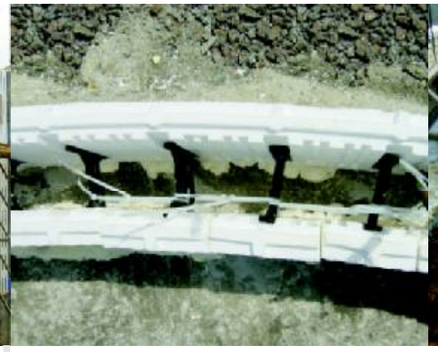
OPENINGS
Cut the blocks for the openings as the wall is built. Place timber blank ends at the bottom and top of the jamb and every 600mm. Install skewed/bent galvanised nails in the timber blank ends to fix into the concrete. The Ambionse sill blocks can be placed after the concrete pour.

SERVICES
Services can be placed in conduits within the concrete core if desired, but it is easier to install the services in chase cuts in the sides of the Ambionse block.

FINISHINGS
Internally, plasterboard can be screw fixed directly onto the flanges of the Ambionse block. While there are many ways to finish the external of the wall, plaster is the most common and easiest method.

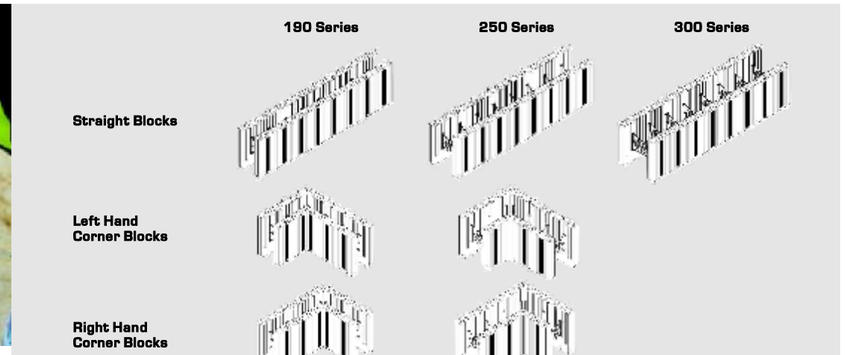
STACKING BLOCKS
Begin each course at the corners, using the opposite corner block, to force the correct offset between courses. Place the horizontal steel as the wall progresses and the vertical steel after all the courses have been placed.

BRACING
Bracing should be installed once 3 or 4 course have been placed. Fix the upright to every course of blocks at 1200mm centres. The screws should be snug but not tight, to allow for settling during the concrete pour. Fix the brace to the floor at the base of the wall and at the bottom of the diagonal stay. Horizontal strongbacks at the top of the wall can help.



CREATING CURVES
For slight curves, simply bend the Ambionse blocks. For tighter curves, cut slots in the face on the inside of the curve. Tie the bridges together to produce the correct curve and then seal in place, ensuring the block is level.

CONCRETE POURING
Before pouring, check that all the blocks are pushed down to limit settling and that the wall is straight. Pour concrete under all windows first then pour the rest of the wall in two lifts with around 45 minutes between pours. After the pour check the wall is plumb and straight and adjust as required.



Suggested Tools Knife, Saw, Expanding Adhesive Foam, Level, Stringline, Zip Ties