

Structural Masonry

The innovative package from H+H

build with ease





Introduction

At H+H we believe that manufacturing aircrete is only the beginning. Our detailed technical support helps to provide our customers with our modern method of structural masonry necessary to build their dream home. Foundations and walls are the fundamental elements of any build project and we aim to take some of the worry out of tackling these vital first stages.

For our smaller building contractors and self-build customers we offer a unique masonry wall package. This service includes technical advice, detailed product specification and the supply of vital masonry product required for the walls.

Our modern masonry package works like this: our customer sends in their drawings for a new home. Our technical team assesses the drawings and makes recommendations for compliance with building regulations, and in particular the requirements of the new energy Regulations. Information can also be provided on thermal bridging and of course, the most appropriate type of block to use.



The Thin-Joint System

Our modern masonry package is an innovation. Our package is offered using our Thin-Joint System which has benefits to the smaller developer or self builder.

In a Thin-Joint System the traditional mortar is largely replaced with a fast-drying, ultra-thin layer of cement-based Thin Layer mortar. The result is the robust, flexible and environmentally sound structure you expect from aircrete, but with a wall that can be built much faster, saving considerable cost on site.



Thin-Joint vs traditional mortar

- Improved thermal performance
- Reduction of site wastage
- Improved stability during construction
- Cleaner Cavities
- Improved build accuracy of finished walls



The Package Principle

Our dedicated estimation team provides a bespoke service to smaller developers and self-builders.

The principle is to provide a competitive and simple method of procurement for projects, easing the load on quantity surveyors or assisting where there is no dedicated quantity surveyor in charge of the buying process.

Working from the design drawings supplied, our team will calculate the materials required to build the inner skin of external cavity or solid wall in Thin-Joint aircrete masonry and provide a fixed price for all the structural materials covered by the estimate, ensuring it is delivered to site all together.

Our package options typically use our larger format aircrete blocks with Thin Layer mortar. This will include our Multi Plates (large format units, with nearly 2½ times the wall area of traditional blocks, for improved speed of installation) or H+H's Jumbo Blok or Plus Blocks where a block thickness of more than 140mm is required. The customer has then only to decide what the final outer finish on his home will be: brickwork or render and source a quote accordingly from that supplier.



The Package Process

When you first contact us to discuss your project, we will ask you a series of questions about your aims and objectives and how you would like your project to progress. We will ask you to submit your drawings and, once we have examined them, we will calculate the amount of aircrete required* for the entire project. The cost provided will not be a cost per m² but will be a total cost for the whole package. All the walls included will be shown in our marked up version of your design drawings, for ease of reference.

We appreciate that building a wall is not only about the aircrete blocks so to simplify the process, we will also include the quantity of Thin Layer mortar, appropriate wall ties and dpc material and cavity trays. We can even include standard steel lintels for the aircrete blockwork if desired.

After we have calculated the cost we will forward a clearly detailed estimate along with the marked up drawings confirming where an allowance has been made for materials.

If amendments or reasonable variations are needed, we are happy to re-work the estimate to suit your specific needs. Upon acceptance of the package quote, an order is placed with a suitable Builder's Merchant and we will liaise directly with site from there.

The aim is to ensure that you get everything you need, when you need it, with the package of materials despatched on H+H supplied lorries to site.†

We can even help you by providing details of our recommended contractors: companies who are used to working with our aircrete and Thin Layer mortar system.

The package benefits

- Bespoke masonry package
- Fixed price formula
- Simple method of procurement
- Technical Support
- Large format blocks
- Delivered direct to site

*with appropriate wastage
† in mainland UK



Thin-Joint speed benefit

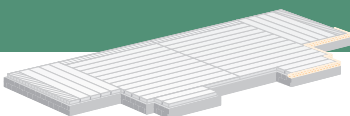
The Thin-Joint method of masonry build has been around for many years in Europe and is growing in popularity in the UK. It is proving attractive because it offers an enhanced quality build, technical benefits and potential for greatly improved construction times and therefore reduced costs.

Thin-Joint is faster because of the special Thin Layer mortar which is a vital component. This dries extremely quickly, providing a near full-strength bond in minutes and allows for storey height construction in a single day. For some single storey residential building projects contractors can raise a wall to roof height in just one day. Larger format blocks are specified within the Thin-Joint system to further increase the speed of build.

The Thin-Joint system was originally developed with the building contractors in mind, but we have found that the advantages of a quicker build are equally compelling for the self-builder who is likely to be incurring additional cost for every day the project takes.

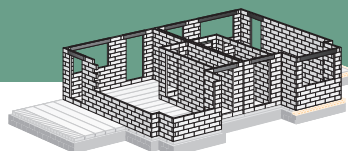
Step 1

Starting with the ground works complete, the contractor takes responsibility for the site to build you a weather-tight masonry shell.



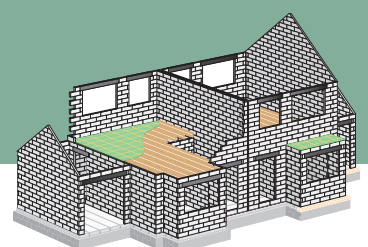
Step 2

The Thin-Joint walls are initially bedded on a levelling course of traditional mortar. Once this first course is complete the build progresses without delay, quickly building the internal leaf of the external walls and any required partition walls to first lift. With the workability of H+H Aircrete, any openings are easily formed for windows or doors.



Step 3

With the first lift complete, the floors are installed using timber either built in to the walls or on joist hangers finished with weather deck or similar products.





The Rå Build method

H+H has also pioneered a unique system of house building which is both dramatic in impact and simple in principle. We call it our Rå Build method of construction.

Not forgetting the foundations

Thin-Joint blockwork is only recommended for use above dpc. However, H+H also produce Foundation blocks which are laid in traditional mortar and offer a very robust, cost effective and simple solution below dpc.

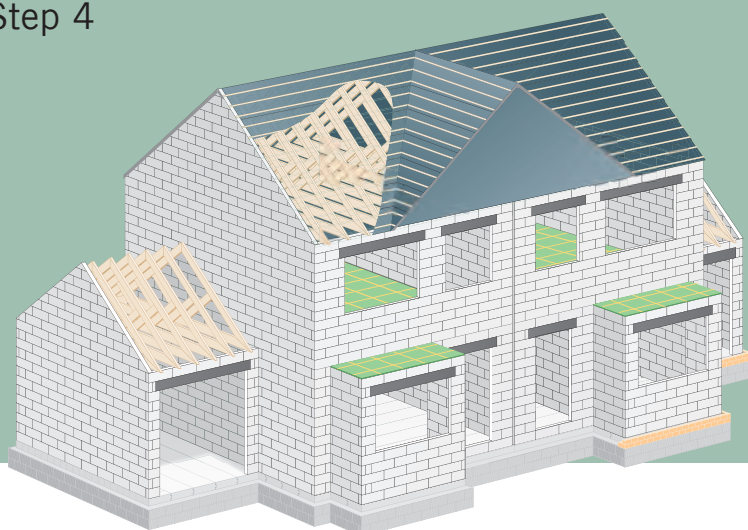
Our package estimates can also include a cost for Foundation Blocks if appropriate for your particular project.

Rå Build works on the premise that, using Thin-Joint mortar, it is possible to build the supporting shell of a house in a very short time. As soon as the supporting walls are up, the roof is erected and made watertight. You then have the shell of the building erected and weathertight and follow-on trades such as first-fix carpentry, electricians and plumbers can start work within this shell.

While the internal work is starting, insulation and outer leaf brickwork will be added to the outside of the walls. This method is intended to ensure that the site operates as economically as possible.

Traditionally when building houses, the aircrete walls and brick outer skin are built up at the same time. By building the 'shell' first, both the outer skin and the inside trades can work in parallel. It is possible to build a weathertight - 2 storey shell from dpc to roof height in 2 weeks.

Step 4



The build then continues apace with the second lift soon complete, with any gable ends built or spandrel panels positioned. The roof trusses are installed with felt and fly battens completing the Rå Build structure; handing the weather-tight masonry shell over to allow completion of the external leaf of the envelope whilst internally the first fix can start.

H+H heritage



H+H aircrete has been sustainably produced in the UK for over 60 years. Aircrete is a widely recognised and popular material choice for masonry build and is widely used in house building. Its lightweight nature and aerated cell structure makes it strong, yet easy to handle. H+H aircrete blocks are produced in a range of sizes that meet the regulatory health and safety weight requirements for one man to lift and lay.

H+H's aircrete will also address the need for sustainable and thermally efficient construction techniques. The product's excellent thermal performance will contribute to low U-values and importantly can also significantly reduce heat loss at thermal bridges that occur at the junctions within a building.

Our range of Celcon Blocks is still one of the best known and widely used masonry products and is still supplied to builder's merchants and housebuilders today.

Modern houses have to be built to last for over 100 years and take account of future climate change. Being of a relatively high density (compared to lightweight framed structures), walls built with aircrete can provide a significant degree of thermal mass – which helps create a comfortable internal environment in the building. This is significant in reducing the risk of summer overheating.

For further information on aircrete as a building material, its uses and its sustainability credentials, visit our website at: www.hhcelcon.co.uk or find out more on Tel: 01732 880111 or email us at iot@hhcelcon.co.uk

Technical

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