

SIG I-House System incorporating Celcon Elements from H+H UK

# HIGH QUALITY, FAST CONSTRUCTION WITH THE FAMILIARITY OF TRADITIONAL BUILD



**SIG** OFFSITE

**H+H**

Sharing knowledge and expertise to build better

HELPING TO MEET  
HOUSING DEMAND



CREATE

## SIG Offsite

Since 1957 SIG has supported the UK construction industry with a nationwide distribution service supplying products and components. SIG Offsite provides pre-engineered offsite components, from panelised roofing systems through to entire modular buildings, helping to address the current shortage of on-site skilled workers and raising the performance of buildings and improving the efficiency of the construction process.

## H+H

H+H is the UK's largest manufacturer of aircrete products for the housebuilding industry. Manufacturing in the UK since 1959, its three factories are supported by a further 10 across mainland Europe, providing a range of aircrete components to meet the needs of the housebuilding industries in each region.



### SIG Offsite and H+H UK Ltd

In a unique collaboration, SIG Offsite has worked with H+H UK Ltd to create the SIG I-House System at a time when there is a demand to increase the volume of house building and when skilled workers are in short supply.

SIG I-House is an innovative housebuilding system - comprising the inner leaves of external cavity walls, floors, lintels, cavity closers, insulation and roof trusses, with the inclusion of soffit and fascia, to deliver the internal skin of a property which is fully wrapped and ready for follow-on trades.

The external skin can be brickwork or any other form of masonry. The system is a one stop shop for clients - with a single contractor to deliver the whole house shell.

# SPEED

ALL THE SPEED OF OFFSITE  
WITH THE FAMILIARITY OF  
A TRADITIONAL BUILD



## The SIG I-House System incorporating Celcon Elements from H+H

The system is intended for the construction of domestic houses of up to two storey with room in the roof. The essence of the system is to replace the structure of the inner leaf of external cavity walls, separating walls and internal partition walls with storey height Celcon Elements.

Celcon Elements are manufactured from the same intrinsic material as aircrete blocks and have the same performance advantages including excellent thermal performance with reduced heat loss at thermal bridges.



Celcon Elements are manufactured to the design storey height of the house with a width of 600mm and a thickness of 100mm. Elements are craned into place onto a bed of mortar on standard foundations. Vertical joints are filled with H+H element mortar – a fast-setting and very strong thin-layer mortar developed especially for use with the Elements and which forms a 2mm airtight joint.

Where the required width of the module is less than 600mm or in cases where the Elements are used under windows, the Elements are cut to size on site. Element utilisation is an important factor in the design process to help minimise any waste on site. The Elements are also lightly reinforced to facilitate handling and transportation without damaging the product. The external cavity insulation can be visually inspected before the outer leaf is applied, which eliminates thermal bridging.

# QUALITY

Separating walls are constructed as two leaves of Celcon Elements with a minimum 100mm full fill insulated cavity between. This, with effective edge sealing, will provide a zero heat loss party wall. Site acoustic testing has demonstrated that high levels of sound insulation can be achieved.

Timber I-Joist cassette floors are used in conjunction with the system and to maintain speed of build. Roofs are either standard truss construction or the 'Roofspace I-Roof' – panelised roof system. All main components of the construction are lifted into position by a crane.

# SIG I-HOUSE SYSTEM BENEFITS

The SIG I-House System can be used where lightweight or traditional construction would be considered and where the design compressive strength of the masonry is approximately  $3\text{N/m}^2$ . It is ideally suited for two storey housing and two storeys with room in the roof.

The SIG I-House System provides a watertight and airtight shell for the following trades to move on to. A house can typically be completed within a week of the scaffolding being erected. It is a very rapid build system that takes the construction of the outer leaf of a cavity wall off the critical path.



## THE KEY BENEFITS

- Rapid build
- Cost certainty
- Health and Safety improved
- Increased quality control
- Integrated system
- Fully managed package – design, manufacture, install, complete
- Traditional materials and familiar build
- Improved airtightness

# SIG OFFSITE TREATS SITE SAFETY AS A PRIORITY

# TRAINING

Training is crucial to SIG even more so with the I-House system being an integral part of the client's construction method. Through the team we hold years of industry experience, and within the team of SIG I-House we promote a strong work force of highly skilled employees that will not leave our academy until they are recognised as skilled and competent by our I-House training team.

Not only are the practical elements of the various installation processes taught (working alongside industry leaders to develop recognised qualifications) but modules on Customer Care and Health and Safety are also integral to our I-house Operatives education.

All new starters are taken into our training academy for an intense 3 week course. This is a mix of both practical and theory which will result in the operative being carded and approved as competent to install by both SIG and H+H UK.

With all of our staff both internal and external, we aim to create and maintain the very highest levels of professionalism and customer service enabling us to deliver the highest of standards to meet our client's expectations.





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H+H UK Limited



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KNOWLEDGE AND  
EXPERTISE TO  
BUILD BETTER

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