

The Heat Is On!

Robbie Cousins reports on innovations in prefabricated chimney systems.

The chimney and fireplace remain a highly desirable aspect of the home, with much documented evidence of their appeal to the purchaser from an aesthetic, lifestyle and comfort viewpoint. They also provide an element of fuel independence that, with rising fuel costs, looks set to become even more important in the years to come. And because electricity is a carbon intensive energy source, it makes more sense to install a flue that can be used in conjunction with gas, multi-fuel or wood burning appliances.

Over the past few years manufactured chimney systems have become the norm on most building sites in this country and, as developers look for more efficiency in their build, adaptations of the traditional chimney system have emerged.

The basic principle behind any chimney system is that it keeps the flue gasses warm until they leave the building. However chimney systems have become much more than a flue and fireplace, and must not be viewed in isolation from the rest of the house. As the secondary heating package of a house, a properly specified and installed system should contribute to the overall energy performance and reduce the carbon usage of the house.

UK regulations

In the UK, changes to Building Regulations Document L last April resulted in chimney systems becoming a more central part of the build. Their benefits in terms of carbon savings and fuel versatility have resulted in massive growth across the market. Under the new UK regulations, incorporation of chimneys/flues in domestic properties will normally give developers 'carbon credits', provide the opportunity for savings to be made in other elements of construction and offer a choice of secondary heating that will add to the sales appeal of properties.

The UK based Chimney Development Association outlines how chimneys systems can contribute to helping new builds meet the new UK regulations by stating: "where a chimney is installed in conjunction with a modern, efficient heating appliance this will offer a carbon positive benefit, relative to electric heating. This saving then potentially allows economies in other aspects of construction, such as thermal insulation requirements and glazing specifications. The carbon benefit is a key factor likely to encourage incorporation of flues in new homes in the UK."

Irish regulations

Because the Irish Government had already amended the building regulations a few years back, the amendments to Part L of the regulations earlier this year did not present as big a challenge to Irish builders as the UK amendments have to their UK counterparts. However, developers in this country – and particularly those working with timber frame – have long appreciated the benefits of chimney systems, and have been keen to explore prefabricated options.

Schiedel Swift chimney system

Schiedel's Dennis Milligan explains that the Schiedel Swift chimney system can be adapted to suit any heating system or house type. "Within the UK market we are currently informing clients how the latest adaptations to our systems can reduce the carbon usage in houses by connecting efficient chimneys to efficient appliances. The whole function of a chimney is to transfer the gasses from an appliance to the atmosphere without allowing them to liquify. This can only be done by keeping them warm in a well-insulated chimney. Our chimneys are manufactured with steel and clay, and they work at a lower heat than traditional products.

"When specifying a system we work out the carbon efficiency of the appliance and develop a custom solution for the client. For example, a stove will be placed in a tighter opening than an open fire. Our kit is supplied with custom made connections to bring the stove gases to the flue. In the past connecting stoves to

the chimney was somewhat of a challenge for the builder. But we have developed adapters to simplify the process.”

The Schiedel Swift system can be adapted to suit the needs of the four main types of fire application: open fire, insert appliance (built in to the wall), stove and cooker.

Milligan explains: “Our focus is on making an energy efficient chimney easier and faster to build, so we are constantly adapting the system to meet specific client needs.”

From ground to pot it takes about five hours to install the Schiedel Swift system.

Anki Chimney Systems

Anki Chimney Systems supplies an Isokern double-module chimney system for standard open fire chest and for larger chests ranging from 600mm to 1200mm openings. The system comprises an inner lining and outer casing, both made from volcanic pumice rock, which reduces the risk of blow down into the room. Like other precast systems, there is no need for any back fill with the two modules. The components are glued together with a lip-glue supplied by Anki.

The system’s exceptional insulation, simplicity, ease of installation and longevity of life make it especially suitable for timber frame properties.

The Lego-style Isokern systems are also suitable for use with gas, oil, solid fuel and wood burning appliances.

For timber frame houses the Anki’s Isokern DM 44 block system maintains flue gas temperatures while preventing heat transference to the outer casing. The internal flue has a diameter of 200mm and is fed by a fire chest with a 350mm opening. The separation of the inner and outer components also allows for thermal movement, reducing the risk of cracking and subsequent leaking or staining. Anki also supplies the Isokern DM54 system, which is fed from an extra-large fireplace opening (950mm) and again is highly insulated, so it doesn’t need any back filling.

Anki Chimney Systems was established in Ireland by Tom Byrne, who has been in the chimney and stove business for over 25 years and has long experience of chimneys and of the problems that arise when chimneys are not built correctly.

Benefits to the developer

A correctly specified flue will provide developers with the option of using a variety of heating appliances in the build, thus enabling them to offer alternatives to the purchaser and so enhance the bespoke element of the property – and its sales appeal. Developers should be able to offer potential buyers open fronted fires with convector gas, wood and multi fuel burners or open fronted deep and shallow bed fuel effect fires. Further greater benefits can be gained with glass fronted wood burning stoves and inset cassette fires. Chimney system manufacturers and suppliers in Ireland have been developing their systems to provide these options, while also contributing to the overall energy efficiency of the home.