

Focus on Cast Iron Rainwater Goods

HISTORY

Cast iron was the first gutter and pipe system to be truly mass-produced and its development came about because of the Industrial Revolution. However, it was the Victorians who developed the design possibilities of cast iron; prior to this gutters were fashioned from lead or timber and there are still original and restored examples on display today. Regional foundries were established which largely produced what became generic shapes and profiles, although there were certain profiles that were specific to particular areas.

The original process for casting in iron was floor moulding using a natural bonding green sand. A pattern would be made from wood to mirror the required shape or profile, which is then used to form the male and female sand moulds. Molten iron is then poured into the mould where it quickly cools and solidifies. The casting is then taken from the mould and excess sand is removed by shot blasting prior to paint priming. This process is still employed today when replicating non-standard pipes, gutters and fittings and hopper heads.

More recently, the casting of gutters is mainly carried out using metal dies into which molten metal is gravity fed enabling a more constant wall thickness and finer surface appearance. Pipes are manufactured by a process of casting which is the introduction of molten iron into a circular sectioned die which actually spins to create centrifugal force thus forming the pipe bore. Again, this method produces a constant wall thickness.

Whatever the process, today's cast iron gutters are faithful reproductions of those from the 19th century and are interchangeable.

TODAY'S MARKET

It may come as a surprise to learn that cast iron gutter and rainwater pipes amount to around £6 million sales per annum and sales have grown in recent years due to a greater trend

towards conservation by property managers and designers. This, in turn, is coupled to a more vigorous sales drive by the manufacturers who have invested in tooling and stocks.

Plain Half Round



Cast iron is used mainly on the more traditional new build properties and extensively in the refurbishment market for domestic, churches, industrial and municipal buildings. Clearly, the presence of cast iron rainwater goods in the UK market is set to continue for many years to come.

Deep Half Round



Ogee



WHAT IS AVAILABLE?

There are thousands of existing profiles of cast iron gutter displayed on existing buildings and all of these can be replicated today using the traditional fabrication and sand casting techniques. The current manufactured stock ranges include half round, ogee and box sections in a variety of sizes and come ready primed for subsequent site painting on site prior to installation. Pipes are available on round, square and rectangular sections.

Moulded O.G.No. 46



Box



WHERE IS IT AVAILABLE?

The national builders' merchants network supplies cast iron and some merchants carry stock. Details of manufacturers can be obtained by contacting the Association who will put you in touch with the appropriate member.

INSTALLATION

The gutters are normally supported by fascia brackets that are screwed to timber grounds but some profiles can be directly fixed. There is also the option of rise and fall brackets and rafter brackets where no fascia board is available.

Pipes are fixed through eared socket connectors or by using pipe clips or holder bats.

JOINTING

In the past, gutter joints were made using putty substances with bolts to hold the connection however, today silicone sealants can be used for their adhesive and durability qualities.

Pipes are usually connected via eared sockets where no jointing sealants are required.

OTHER TRADITIONAL PRODUCTS

Ornamental rainwater heads are readily available and come in standard patterns as well as made to order and are used to adorn churches, public buildings and any traditional structure.

The old soil or LCC pipes which have a socketed joint are still available and service a thriving refurbishment market.

METAL GUTTER CPD GIVES THE FACTS

The Metal Gutter Manufacturers Association (MGMA) has produced a CPD seminar, titled, ***Selecting and Designing Metal Gutters***, designed to inform specifiers about the types of metal gutter systems available, their applications and good practice.

The 40 minute seminar examines design considerations, shapes and profiles, fixings and joint detailing. In addition, the seminar looks at materials, finishes, maintenance and sitework and is supported by a comprehensive series of illustrations and samples.

The seminar also demonstrates how rainwater intensity design rate is determined, the basic method of calculating volume of rainwater run off and the changes to the BS 6367 standard.

In the past there has been a lack of detailed guidance available covering the specification of metal gutters and the MGMA believes that this CPD seminar will give specifiers the knowledge they need to specify metal gutter systems with confidence.

If you would like to arrange a seminar for your practice please contact us on **0151 652 3846**.

PUBLICATIONS

Metal Gutters: The Guide

The roof drainage system is an important aspect of the overall roof design and ***Metal Gutters: The Guide*** is intended to help designers specify the correct metal gutter system for any given building application.

The 12-page guide covers design considerations, materials, gutter manufacturing processes, fixings, joint details and sitework. Also included are examples of typical shapes and profiles of gutters and downpipes.

MGMA data sheet 1

This data sheet sets out the basic principles of metal gutter installation in a clear, easy to read format. The data sheet considers the merits of the different materials available, including aluminium, steel, cast iron, stainless steel, copper and zinc. In addition, commonly used fixing methods are also explained.

Visit our web site

Visit our web site – www.mgma.co.uk - where you can contact MGMA members at the click of a mouse and discover the products and services available. Members are only too pleased to help with any problems you have and can provide design assistance should you need it.

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