



## FOCUS ON SEAMLESS ALUMINIUM PRE-PAINTED GUTTER SYSTEMS

### INTRODUCTION

Aluminium seamless gutters were originally developed in Canada and the USA to cope with their very variable weather conditions. From the 1980s onwards, the use of seamless gutters has grown in the United Kingdom due to the increasing availability of low maintenance roofing products.

Aluminium has established itself as one of the principal materials for the manufacture of metal gutter systems in the domestic, municipal and commercial sectors and enables manufacture of both bespoke and proprietary systems to offer unrivalled low maintenance, durable and environmentally friendly products.

### MANUFACTURE

Seamless gutters are manufactured on site by roll-forming continuous lengths (to a maximum length of 30 metres) from pre-painted aluminium coil which has been pre-cut to width. The gutters are produced on site to the precise dimensions of the building which ensures that joints are reduced to a minimum.



Hidden fixing brackets are factory-made using HE9T6 mill finish aluminium extrusions. Accessories such as stop ends, outlets, leaf traps, locking corners and connector/expansion joints are supplied to an agreed specification.

The seamless gutter is produced on site using factory pre-set passive roll-forming gutter machine. The quality of the finished roll-formed gutter is controlled on site by visual and dimensional checks and by the correct maintenance of the roll-forming equipment.

## INSTALLATION

Downpipes are positioned and marks corresponding to their centres are made on the fascia board. An exact measurement is taken of the length of gutter required, noting the marked positions of the downpipes. An initial one metre length of the gutter section is roll formed and the process stopped for an end cap to be fitted to the open end. The gutter is crimped centrally near the edge of the rear, front and base to create raised fixing nibs. The end cap is pressed home causing the internal slotted securing clips to fully engage over the fixing nib, ensuring a non-removable fitting. The completed fitting is sealed inside the gutter with at least three beads of the sealant (minimum diameter 7mm). Roll-forming to the exact gutter length is then completed.

*Note:* Only use sealant recommended by the manufacturer; use of other sealants may result in early joint failure. Do not use sealants that are out of date.



Aluminium fixing brackets are clipped into position at centres not exceeding 450mm as roll forming is continued. The formed gutter is cut to length and a stop end fitted to the remaining open end.

Corners are formed by mitring the ends of the gutter lengths and the installation of a two-piece polycarbonate locking corner fitting, sealed with mastic and held together with stainless steel screws. Connector expansion joints are installed in the same manner; the corners and connectors do not require mechanical fixing and allow for thermal movement.

At the downpipe positions in the gutter a hole is formed using a tank cutter, into which a low-density polyethylene outlet/leaf trap is fitted and sealed with mastic. The gutter is positioned and fixed with M4 by 40mm stainless steel, self-tapping screws, in accordance with the manufacturer's recommendations. The fixings are located in pre-drilled holes in the fixing brackets and driven through the back of the gutter into the fascia.

### **EXPANSION**

The British Board of Agrément recommends that expansion joints are only needed where the required gutter is over 30 metres long.

### **MAINTENANCE**

Seamless aluminium gutters are designed and manufactured to give many years of reliable service. To ensure their longevity, gutters should be inspected at regular intervals and any deposits such as leaves, soil or litter must be removed. External cleaning can be done by using a non-abrasive detergent.

### **LEAF GUARDS**

Leaf guard meshes are a popular ancillary item and are generally available to fit all gutter profiles.



**ENVIRONMENTAL**

All MGMA members place great emphasis on ensuring that all manufacturing processes are environmentally responsible. This extends to packaging as well as raw material handling and process controls.

Aluminium is 100 per cent infinitely recyclable, without losing any of its characteristics. The majority of aluminium smelting plants worldwide are now hydro electro powered, reducing SO<sub>2</sub> and CO<sub>2</sub> emissions. Thirty per cent of aluminium used today is from recycled material, which only requires five per cent of the energy used in production of the primary aluminium.

**MGMA DISCLAIMER**

Whilst the information contained in this bulletin is believed to be correct at the time of publication, the Metal Gutter Manufacturers Association Limited and its member companies cannot be held responsible for any errors or inaccuracies and, in particular, the specification for any application must be checked with the individual manufacturer concerned for a given installation.

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