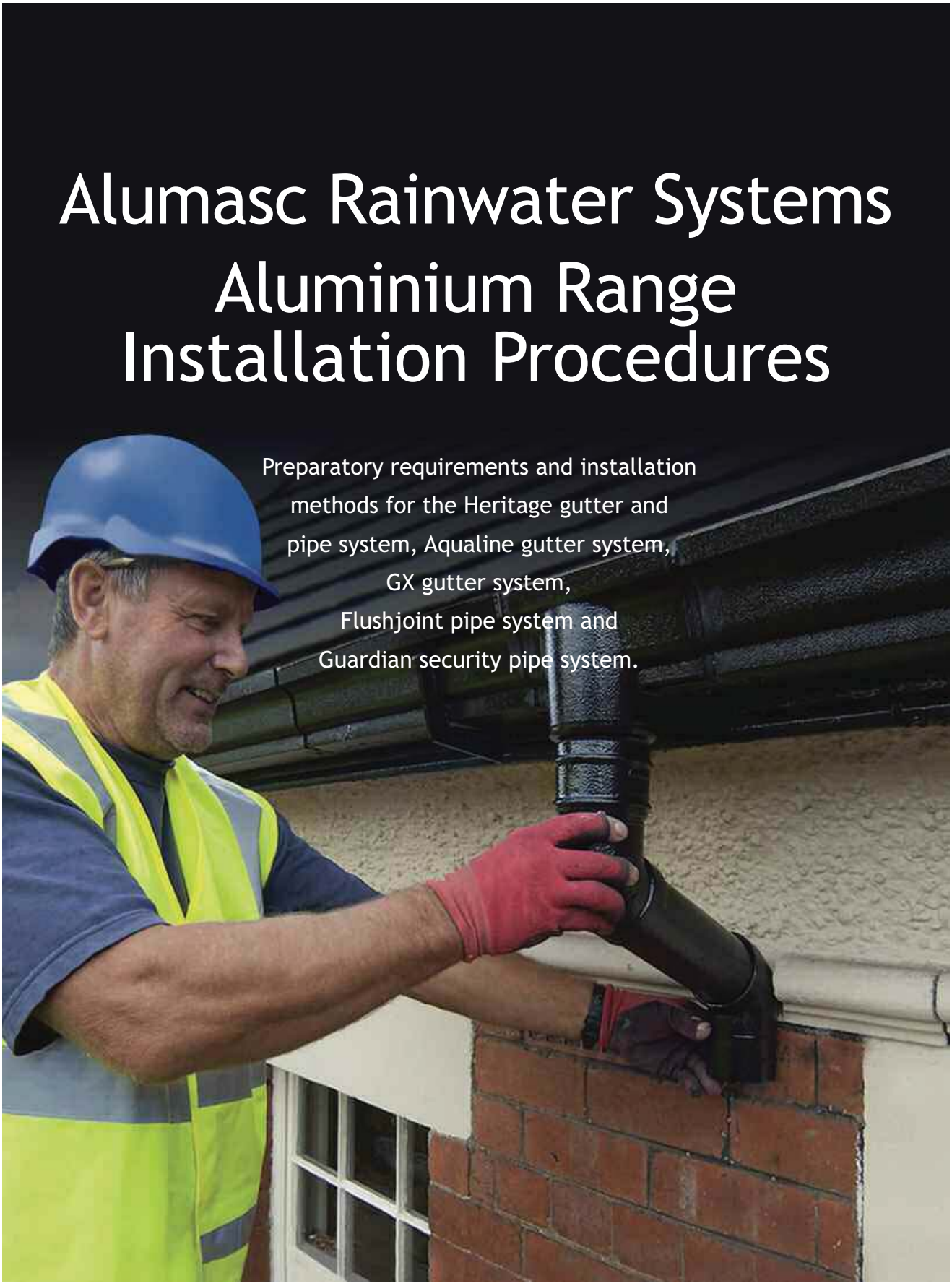
# Alumasc Rainwater Systems Aluminium Range Installation Procedures

Preparatory requirements and installation methods for the Heritage gutter and pipe system, Aqualine gutter system, GX gutter system, Flushjoint pipe system and Guardian security pipe system.

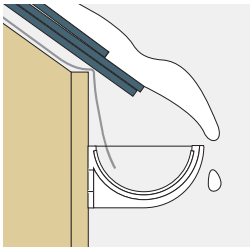


# Aluminium Rainwater System Installation – Introduction

For safe and satisfactory installation of Alumasc rainwater systems, the following good practice guidelines should be reviewed before installation commences. Where unusual or special conditions arise contact Alumasc Technical Services for assistance.

## General Preparation and Good Practice

Securely fixed fascia boards must be painted and capable of supporting a fully loaded gutter. Check fascia for straightness and whether shims will be necessary to align brackets without creating stress at gutter joints. Where fascia boards are not being used Alumasc provide top and side fix rafter arm brackets as well as masonry drive-in brackets.

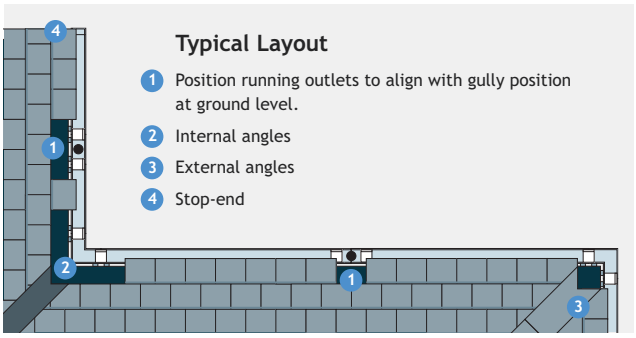


Fix brackets so as to position the gutter centrally and as close below the roof edge as possible, taking into consideration locality and roof slope finish.
If there is a risk of sliding snow, adjust the bracket positions to prevent snow hitting the front of the gutter. Extra fixings, brackets and snowboards should be considered where appropriate.

Where high winds are expected, a small bead of sealant must be applied between gutter and brackets a flexible adhesive. An occasional screw, fixed through a slot in the back of the gutter and into the fascia may be preferred, at a minimum of two per length.

Alumasc advise that the designer and contractor satisfy themselves that the application is suitable.

## Setting Out




After setting out angles and outlets, fit gutters and brackets according to installation procedures for the specific rainwater system being used, as detailed in this brochure.

### Cutting and Drilling

Aluminium can be cut and drilled on site with regular metalworking tools. Pencil cut lines and apply masking tape either side of cut line to protect against accidental saw damage.

### Site Painting

Degrease with white spirit and clean thoroughly. Prime with zinc phosphate or similar aluminium primer, followed by at least two coats of full gloss paint on all exposed surfaces. Undercoating is not required. Where powder coated materials have been cut, it is necessary to deburr exposed edges and follow the above painting procedure.

### Health and Safety

Always refer to current Health and Safety legislation, safe systems of work and the relevant material safety data sheets.

### Storage and Handling

Colour coated rainwater gutters and pipes must be handled with care to prevent scratches and dents. Materials should be stored on a level surface or racking, preferably under secure cover. Uneven fading or water marks on coated and mill finish surfaces may occur if water enters protective packing or goods are stored exposed to sunlight.

Mill finish goods will have manufacturing blemishes such as grinding and fettling marks, welding will be visible on fabricated items and extruded/pressed aluminium items may also be vulnerable to scratch marks or blemishes caused in-transit. It is recommended mill finish material is painted on-site.

Store seals and sealants under cover and make secure and separate provision for solvents. Dispose of packing materials responsibly.

### Testing

Allow sufficient time for sealant joints to fully cure. Check all bracket and gutter fixings are secure and plug outlets. Fill up to overflow level (but not beyond). Allow 5 minutes before inspecting all joints for leaks.

### Care and Maintenance

Regularly clean out rainwater heads and gutters and ensure that downpipes are clear. Check joints and fixings are secure by periodic inspection no less than twice a year, preferably at the start of Autumn and end of Winter.

Mill finish goods will develop a protective grey aluminium oxide, however it is recommended mill finish material is painted on-site. Polyester powder coated surfaces can be cleaned by washing with warm detergent solution and leathering off.

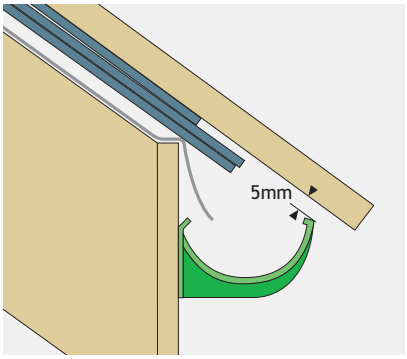
Aluminium rainwater systems installed in a coastal environment can be subject to harsh atmospheric conditions that can accelerate the oxidization process. Alumasc do not normally recommend using aluminium rainwater systems in such locations. However, applying a double coat of polyester powder coating prior to despatch, together with a strict and frequent maintenance regime, should result in the product having a life expectancy in excess of 15 years.

NB: This life expectancy depends on any installation damage being repaired immediately with appropriate touch-up paint, as should any site-cut ends exposing bare metal, which must be de-burred and then repainted in accordance with Alumasc's site painting procedure.

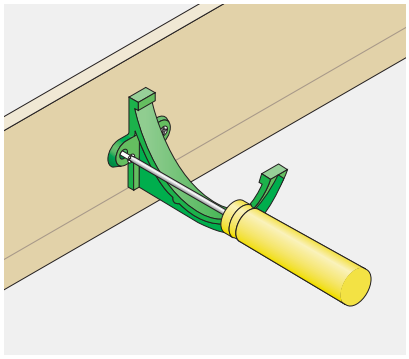
Please contact Alumasc Technical Services for further information.

# Installation – Heritage Gutters

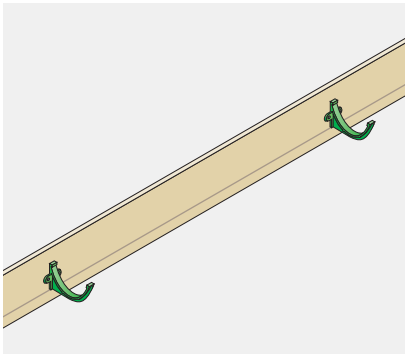
Heritage gutters are available in a choice of five profiles with a range of brackets to accommodate all types of eaves condition. Each profile range can be connected to aluminium pipework systems in either round, square or rectangular sections secured by standard and offset brackets. Assembly and installation of each profile range must be considered individually, although general aspects of preparation are common to them all as shown below.



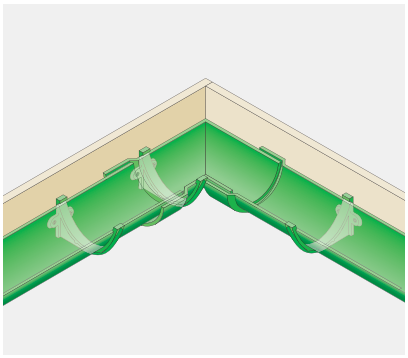

1. Using a straight edge or ruler, shim gutter brackets with 5mm clearance so that the last roof tile or slate will align with the mid point of the gutter.



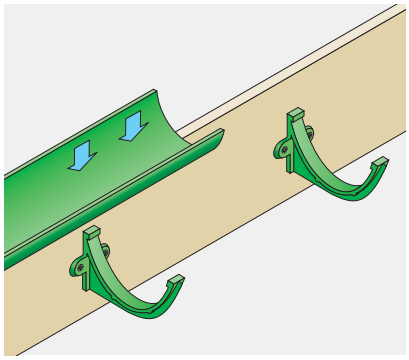
2. Generally, position brackets at 915mm centres. Allow at least 2 brackets per gutter length, 1 per angle and outlet.



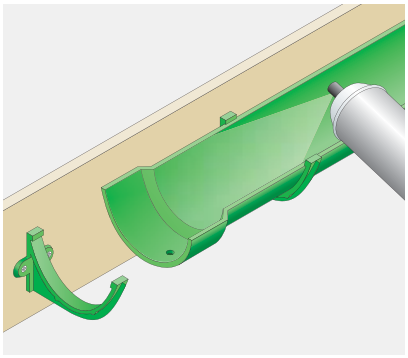
3. Use a string line to set out brackets to a fall of 1:600 to 1:350 (max) or if not possible, level.



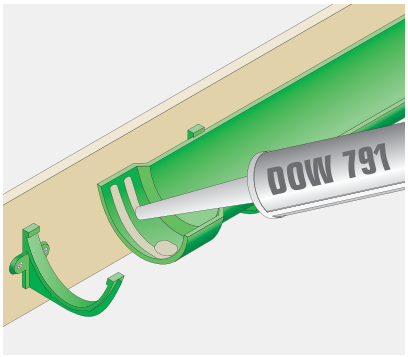
4. Plumb line outlets with gullies at ground level. Position angles, allowing an additional bracket adjacent to the joint with the gutter length.



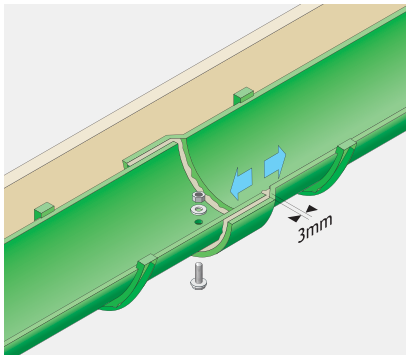
5. Lower the gutter onto the brackets ensuring sufficient clearance for the gutter joint. Clip gutter into bracket.



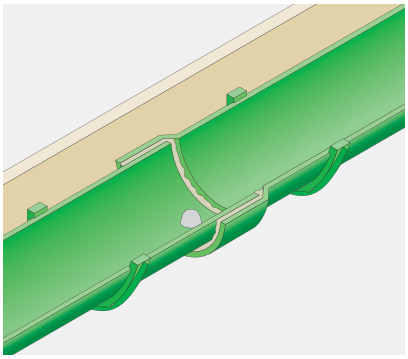
6. Cast gutters overlap at the joint with a spigot and socket. Thoroughly clean and degrease the ends that must be jointed.




7. Apply two 6mm beads of DOW 791 silicone sealant either side of, and around the fixing hole.




8. Insert the spigot end of the gutter allowing a 3mm expansion gap. Secure joint using aluminium M6 x 20mm nut, bolt and washer provided. (Bolt head preferably to underside).



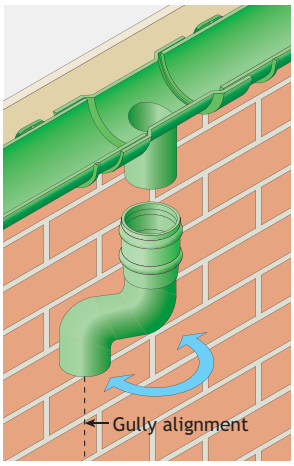
9. Finally, cone-off the exposed bolt stud and nut inside the gutter with a generous application of silicone sealant. Tool off excess silicone around the joint and from external surfaces.

# Installation – Heritage Rainwater Pipe

Heritage traditional rainwater pipes have cast pipe sockets either with ears for wall fixing or without for use with pipe clips. Installation is generally from the eaves downward.

Where sockets are supplied separately these must be lightly driven home into the rainwater pipe using a softwood block or adequate protection at the pipe end to prevent damage. Saw cuts must be square and free from dents and burrs. A light application of silicone sealant must be applied to both surfaces to ensure a waterproof seal.

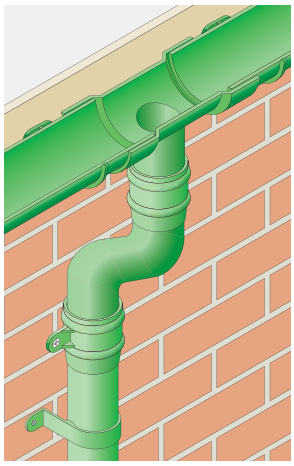
### Pipe Alignment




Where square or rectangular pipes are being installed and offsets are required, alignment between the gutter outlet and gully must be exact.

Round pipe systems are more flexible to install and offsets can be adjusted and “swung” into alignment with the gully position.

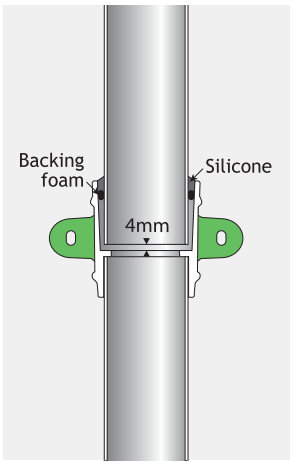
### Outlets and Offsets



Commence installation from the gutter outlet by fitting and adjusting the one part or two part offsets.

Check vertical plumb line positioning and seal spigot and socket joints using DOW791 silicone sealant.

### Pipe Jointing and Fixing



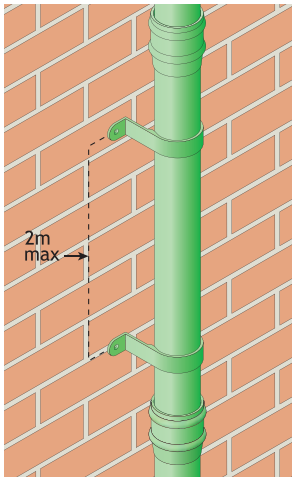

Allow a 4mm expansion gap between pipe end and socket, and insert a 6mm backing foam into the pipe joint. Seal with DOW 791 silicone sealant.

Fix to wall at 2m centres using No12 x 50mm screws. Eared sockets have elongated fixing holes to permit the use of pipe nails.

### Tools Required

- String or plumb line
- Tape measure
- Drill
- File
- Masonry bit
- Wall fixing (e.g raw plug)
- Cleaning rags
- Marker pen
- Solvent cleaner
- Posi and plain screwdriver
- Paintbrush
- Hacksaw
- Masking tape
- Mastic gun
- Spirit level
- Protective gloves
- Adjustable spanner

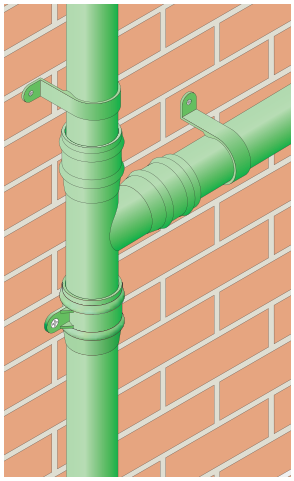
### Pipe Clips




Where uneared pipework is being used it must be secured at maximum 2m centres.

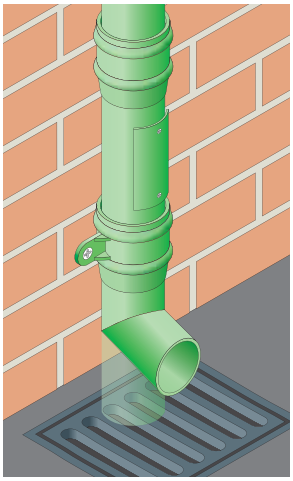
Pipe clips should be chosen according to visual or practical considerations and comprise Standard Base, Small Base and Extended Base options.

### Bends and Branches



Bends and branches are secured into the pipe socket. Where additional fixing is required e.g a change of direction at a bend, use additional pipe clips.

### Shoes and Access Pipes



At ground level rainwater pipes can terminate with a shoe for free discharge over a gully or be directly connected into the gully.

In the case of direct connections it is recommended that an access pipe fitting is included within 750mm of ground level.

### General Installation Sequence

- Complete installation of gutters; alternatively, locate rainwater heads
- Position offsets, bends and branches
- Fit pipes and brackets
- Fit plinth offsets
- Fit access doors and shoes

### Sealant

For durable all weather seals and best results, Alumasc recommend the use of DOW 791 silicone sealant.

### Rainwater Heads

Fix to masonry through external lugs or preformed holes in back.