

# ALUMASC

RAINWATER SYSTEMS

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February 2012

## Aluminium Rainwater Systems



  
**alumasc**  
EXTERIOR BUILDING PRODUCTS

# Maintaining a Flow of Information

**www.alumascrainwater.co.uk**

The Alumasc Rainwater website provides a wealth of information on all aspects of rainwater solutions, including gutters, downpipes and associated fittings. Also included are FAQs, file downloads for NBS specification clauses, COSHH information and a CAD library.



## Technical Support

Alumasc Rainwater Systems are backed-up by comprehensive technical literature and by hands on project support covering technical and design advice.

Alumasc's new Drainage Design Calculators are available as a download from the Alumasc Rainwater website. [www.alumascrainwater.co.uk](http://www.alumascrainwater.co.uk)

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# Alumasc - An Introduction

Alumasc Exterior Building Products is part of the Alumasc Group plc. The Group has over 800 employees, generating turnover in excess of £110 million. The aim is to focus on high quality, environmentally responsible building products within the construction arena in order to deliver first class customer service, long-term solutions and lasting relationships.

## About Alumasc

Alumasc Exterior Building Products (Alumasc) is a leading supplier of premium products and systems for specification, generating an annual turnover in excess of £30 million. The Company has been a major force in the UK construction industry for over 35 years, during which time Alumasc products and systems have been used on some of Europe's most prestigious buildings.

Alumasc ensures a high quality of product specification and installation, delivering risk-free, zero-defect solutions. The Company's commitment to making ongoing improvements is demonstrated through its accreditation to the ISO 14001: 2004 Environmental Management Standard.

By pursuing sustainable building products, systems and manufacturing processes, Alumasc aims to offer specifiers a wide choice of design alternatives, with long-term peace of mind. Recognised brands such as Harmer, Apex, Derbigum, ZinCo, Hydrotech, Firestone and M.R., together with Alumasc's well-known architectural rainwater range have been independently certified, and in some cases have a lifespan in excess of 60 years or for the life of the building.

Alumasc brands are divided into distinct but interrelated groups:

- Rainwater
- Drainage
- Waterproofing
- Façades

## Services and Support

Alumasc leads the way in the field of construction product and system manufacture and the delivery of proven solutions. This success is founded on four key areas:

### Premium Products

A constantly evolving range of quality proven, world class products and systems, fully accredited to UK, European and North American Standards.

### Technical Support

Comprehensive data for specification and use of all products and systems is available in published form, and on the company website. This is backed up by proactive project support, led by specialist area managers and using the latest CAD and calculation technology.

### National Stockists

Alumasc products are available through a national network of stockists. This allows close control over all matters to ensure first class customer service.

### Warranties

Alumasc products come with company-backed assurance as to their quality, life expectancy and suitability for purpose, ensuring long-term peace of mind for specifiers and end users.





# Quality and Sustainability

Alumasc has committed to a full spectrum of assessment procedures and quality control standards to monitor the manufacture and performance of its aluminium rainwater products. In addition to complying with environmental legislation, Alumasc is continuously developing its own measures to limit the adverse effects of its activities on the environment.

## Quality

### ISO 9001: 2008

Alumasc operates a quality management system which is independently audited to ISO 9001: 2008. The ISO 9001 framework governs the management of many aspects of Alumasc support services, manufacturing and transport operations. Alumasc extends quality management to its network of approved installers for single source accountability and peace of mind.



### Sustainability

Alumasc actively pursues sustainability in the full range of products it offers and, with its partners and its suppliers, is committed to putting consideration for the built and wider environment at the core of all aspects of current business and future development.

### ISO 14001: 2004

Alumasc's manufacturing site at St Helens, Merseyside is audited to the ISO 14001:2004 Environmental Management Standard. Alumasc is committed to achieving improvements across all of its operating sites, not only as a good neighbour to the surroundings of manufacturing plants, but in the responsible sourcing of raw materials and monitoring of the impact on the environment as a whole.



### BREEAM Standards

BREEAM points, as a framework for analysis and scoring, allow easy comparison of the relative merits of different construction types and also comparisons between different construction product groups. The BREEAM points system promotes the use of materials with a proven sustainable message and allows designers to differentiate between products with true ecological credentials and those not achieving the benchmark.

Indicative ratings for building materials given in the BRE Green Guide to Specification also allows designers to choose those products or construction methods that will be most beneficial in contributing to a high BREEAM points score.

Aluminium rainwater goods and fascia soffit systems are part of the range of high scoring Alumasc solutions. Promotion of these responsibly sourced materials brings clarity to the specification process thus achieving the desired effect of minimising the environmental impact of the construction process.



## Testing and Certification

### Applicable Rainwater Standards

BS EN 12056-3

Gravity drainage systems inside buildings, Part 3 Roof drainage layout and calculation.

BS 8530 (Formerly BS 2997)

Specification for traditional-style half round, beaded half round, victorian ogee and moulded aluminium rainwater systems.

BS EN 755

Aluminium and aluminium alloys - Extruded rod/bar, tube and profiles.

BS EN 1706:2010

Aluminium and aluminium alloys - Castings - Chemical composition and mechanical properties.

BS EN 1559

Founding - Technical conditions of delivery.

BS EN 1462:2004

Brackets for eaves gutters - Requirements and testing.

BS EN 12206-1:2004

Paints and varnishes - Coating of aluminium and aluminium alloys for architectural purposes.

British Board of Agrément

Certificate No. 86/1671

Alumasc Rainwater Systems

RIBA Assessed CPD Seminar

Rainwater Disposal from Pitched Roofs



# The Benefits of Aluminium

Aluminium is a metal with exceptional characteristics, both in respect of its functional performance and sustainable credentials. It has become increasingly important in the Construction Industry and is being used in ever more innovative ways by designers and specifiers.



## A 'Green Material'

To be deemed 'green', a material or product should be recyclable, sustainable and versatile. Aluminium has all of these properties and its production is strictly monitored for responsible sourcing of raw materials.

Aluminium has a light weight-to-strength ratio, which means it is strong yet economical. The reduced weight provides benefits in material transportation and application. Aluminium can also be formed in a variety of ways to accommodate off-site fabrication.

## Durable and Strong

Aluminium is resistant to corrosion and does not rust. It is weather-proof and is unaffected by the effects of UV rays, ensuring optimal performance over its lifetime.

Mixed with small amounts of other metal to form an alloy, aluminium can provide the strength of steel at only one third of the weight.

## Recyclable

Historically, aluminium has proven to be one of the most important materials in successful recycling programs. It offers a high scrap value, widespread consumer acceptance, and enjoys significant industry support.

Most aluminium products are made from 100% recycled scrap. The recycling process does not result in any loss of the materials' basic qualities and properties.

Recycled aluminium offers significant energy benefits as remelting used aluminium requires only 5 percent of the energy needed to produce primary metal. As aluminium can be recycled indefinitely it need never be disposed of in landfill.

## Versatile

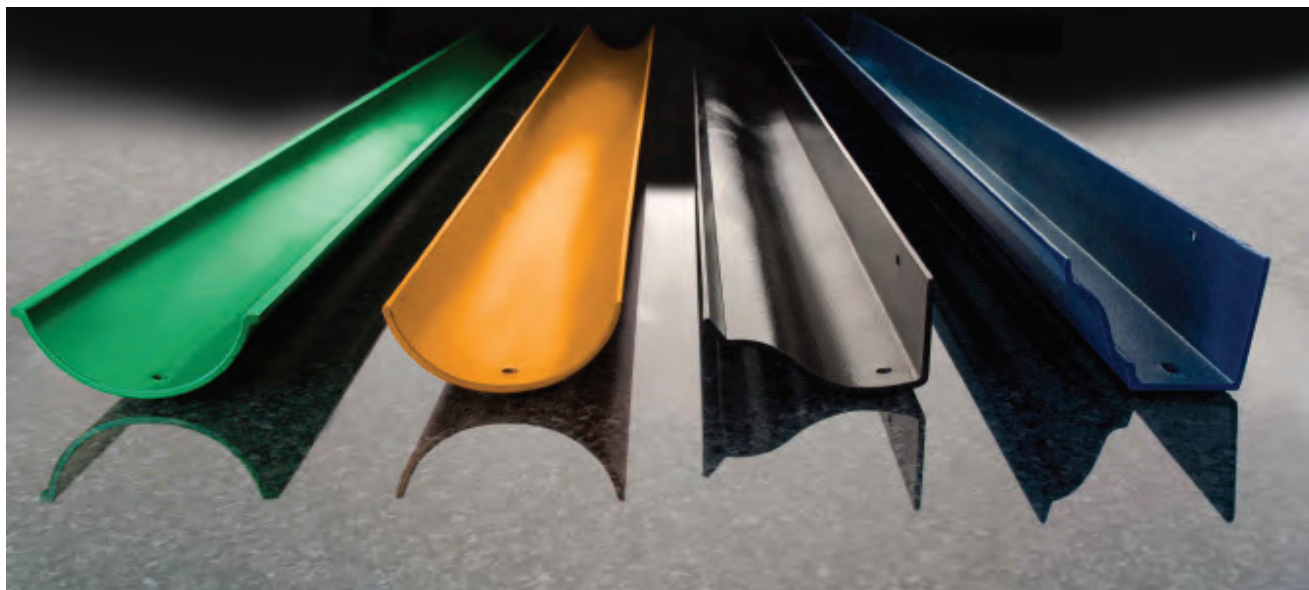
Aluminium and its alloys can be easily formed and shaped by rolling, extrusion, forging and casting, characteristics that reflect the wide choice of form and visual appearance of aluminium in construction applications.

## The Benefits at a Glance

- Corrosion Resistant
- Lightweight
- Durable and Strong
- Formable
- High Strength to Weight Ratio
- Cryogenically Strong
- Electrically Conductive
- Non-combustible
- Non-magnetic
- Non-sparking
- Non-toxic
- Resilient
- Thermally Conductive
- Fully Recyclable

# The Benefits of Alumasc Aluminium Rainwater Systems

Aluminium, with its unique properties, is the ideal material for creating high performance gutters and downpipes of all designs and styles. Alumasc is the UK's leading manufacturer of BBA certified, polyester powder coated aluminium rainwater systems with a complete range of products available to suit both contemporary and traditional architecture.



## Innovative

Aluminium is a young material, but has become the world's second most used metal after steel. It is known as 'the magic metal' because of its unique physical, chemical and mechanical properties which make it ideal for use in rainwater gutter and downpipe systems.

## Design Flexibility

Aluminium can be formed in different ways to fulfil different functional purposes and create different visual effects. It can be cast, extruded or pressed from rolled sheet. This allows great scope in the formation of gutters and downpipes, with appearance ranging from traditional to crisp and clean modern. Aluminium can even be finished to replicate cast iron, but at a fraction of the weight.

## Lightweight

The lightweight characteristics of aluminium rainwater products mean that they are economical and easy to transport. Consequently handling is easier and installation faster, with resultant cost effectiveness.

## Life Expectancy

Alumasc aluminium rainwater systems have a life expectancy in excess of 40 years in rural and suburban areas and up to 25 years in industrial and/or marine conditions.

This greatly enhances the product's cradle to grave embodied energy figure relative to systems (e.g. plastic) with shorter life spans. This also results in the removal of the appreciable costs, both environmental and monetary, of product replacement.

## Ecological Benefits

Alumasc aluminium rainwater goods contain no toxic substances and perform excellently when assessed from cradle to grave for effects on water quality (eutrophication) and water and ground contamination (ecotoxicity).

## Low Maintenance

In service, Alumasc aluminium rainwater systems are virtually maintenance-free. Apart from routine cleaning for visual reasons and special consideration for coastal areas, aluminium does not require any maintenance being carried out, providing a cost benefit over its lifetime.

## Choice of Finish

Alumasc rainwater systems offer a huge range of visual choice. The metal's natural protective coating of aluminium oxide gives a soft natural finish. An eye-catching choice of colours is available from Alumasc's BBA certificated Raincote range of powder coatings. Aluminium can also be finished with a surface texture to replicate cast iron (to special order).



# Alumasc Manufacturing and Support Services

Alumasc is one of the UK's leading manufacturers of Aluminium products for the Construction Industry. Our expertise in Aluminium casting, extrusion and fabrication stems from a proven track record accumulated over 60 years, enabling the provision of unrivalled technical support for designers, specifiers and contractors.

## Manufacturing

Alumasc's UK casting and fabrication facilities employ both traditional and cutting edge production methods. Alumasc aluminium rainwater goods are manufactured and independently assessed at the company's Burton Latimer site under the ISO 14001:2004 Environmental Management Standard. This not only ensures that upstream production processes have been monitored for their environmental impact, but that due consideration is taken for all aspects of packaging, transport and disposal, in order to deliver as sustainable a rainwater product as practicable.

## Performance

Alumasc rainwater solutions are designed to give optimum performance over their lifespan. In every aspect of material choice or detailing decision the aim is to produce premium, fit for purpose products and systems. This ethos has resulted in Alumasc being associated with innovative projects that have led the way in construction performance, stood the test of time and demonstrated good design.

## Materials

Alumasc offer a variety of aluminium finishes to the specifier. Whether you are seeking to replicate a period cast iron or contemporary appearance, Alumasc has the solution. Traditional cast aluminium gutter profiles and complementary downpipes can be finished to replicate cast iron to special order - ideal for period refurbishment or where a traditional design is required.

Alumasc's contemporary rainwater ranges include dry joint extruded and wet joint folded gutter profiles, which can be used in combination with various downpipes to fulfil different functional requirements (eg, high security) and for different visual effects to suit the building context. Products can be supplied in a plain mill finish or in Alumasc's Raincote range of polyester powder coated finishes.

## Support Services

Comprehensive information and advice for specification and use of our rainwater products and systems is provided through our technical literature, website and the Alumasc Technical Services department. This is backed by proactive support on a project-by-project basis, led by specialist Area Managers.

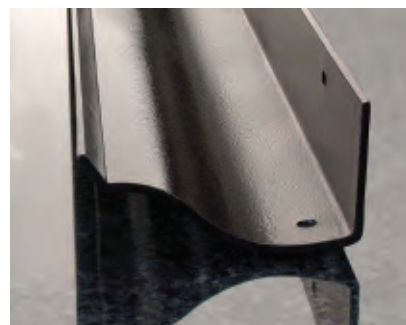
## Product Development

Alumasc routinely design, manufacture and patent new rainwater products for the UK and world markets.

Ongoing research and development ensures that our offer comprises high quality, world class products and systems that are fully accredited to UK and European standards.

Development of existing sound products and practices is central to the success of Alumasc and key to the way in which we provide our proven solutions. Equally, the basis for any new and innovative development is grounded in the knowledge and experience Alumasc has of its core manufacturing materials.

Alumasc's commitment to ongoing development and the promotion of best practice is reflected in our CPD programme which keeps the industry abreast of new standards and product solutions.



# Polyester Powder Coating

Alumasc Aluminium Rainwater systems are available in plain mill finish or in the Raincote range of BBA approved, factory applied polyester powder coatings.

## In-House Powder Coatings

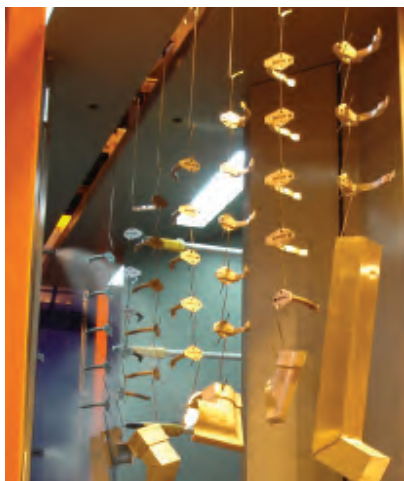
Alumasc's in-house powder coating plant gives both the control and the freedom to produce a range of colour finishes to a level not typically available in the construction industry. Utilising the technologies and procedures adopted for its automotive precision castings division, Alumasc benefits from high specification coating techniques that fulfil the rigors of testing prescribed by some of the worlds leading vehicle producers. Finishes of this quality maintain their appearance even when subject to harsh geographical weather conditions.

The aluminium undergoes a series of pretreatments to provide the ideal prepared surface to receive an electrostatically applied polyester powder in the chosen colour. This is then 'baked' and bonded to the fitting in a carefully controlled oven; the complete process is achieved on a continuous line to obtain the best results. The performance of polyester powder coated rainwater systems greatly exceeds that of site painted systems.

## Approvals & Quality Control

Polyester powder coating is in accordance with BS EN 12206-1:2004. This refers to the coating of aluminium and aluminium alloys for architectural purposes. In the case of rainwater systems it is accepted that such coating is both decorative and protective. Alumasc systems will certainly be finished to this standard, and will in most cases exceed it.

Along with independent auditing to the ISO 9001:2008 Quality Management Standard, Alumasc maintains BBA certification for the powder coating of its aluminium rainwater goods in respect of longevity of performance and colour fastness - British Board of Agrément Certificate No. 86/1671.

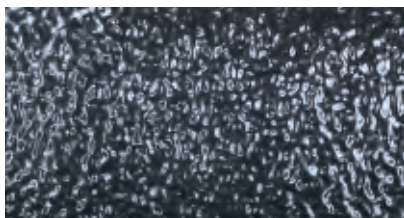


## Choice of Colour

The standard aluminium Raincote range comprises 16 colours with additional colours with a BS or RAL number available to special order, subject to quantity and cost.

The colours reproduced on this page are for general guidance only. Please contact Alumasc Technical Services for further information on colour choice and samples.

## Choice of Finish

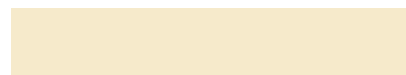


A surface texture that echoes the traditional appearance of cast iron can also be applied to Alumasc aluminium rainwater products. So called 'textured finish' is available in standard in black to special order. (Ref. BLACK/TXT)

Contact Alumasc Technical Services for further information.



RAL 1011m Brown Beige



RAL 1013m Pearl White



RAL 1021m Cadmium Yellow



RAL 2002m Vermilion



RAL 3003m Ruby Red



RAL 3005m Wine Red



RAL 5003m Sapphire Blue



RAL 5010m Flower Blue



RAL 6005m Moss Green



RAL 6018m Yellow Green



RAL 7024m Graphite Grey



RAL 7038m Agate Grey



RAL 8017m Chocolate Brown



RAL 8019m Grey Brown



RAL 9016m White



RAL 9017m Black

# Alumasc Aluminium Gutters - Range Summary

Three distinct ranges covering traditional appearance, striking modern lines, and box gutters for economical practicality. Available in a variety of finishes, including a range of BBA certified powder coatings.



## Heritage Gutters

A range of traditional cast aluminium gutter profiles (half round, beaded half round, beaded deep run, victorian ogee and moulded), supported by a full range of fittings. Traditional jointing and fixing; ideal for period and restoration projects, in a simple-to-install lightweight system. Can be finished to replicate cast iron, or with BBA certificated powder coatings in a wide range of colours - combining a striking retro look with the latest in paint technology.

See pages 14 to 27



## Aqualine Gutters

An extruded, high capacity gutter system in five alternative styles, each available in a choice of profile sizes. Tailor-made for today's fast track construction programmes in contemporary building design. Innovative secret fix bracketry, all weather 'dry' jointing fully accommodating thermal movement. Available in a choice of BBA certificated powder coatings.

See pages 36 to 47



## GX Gutters

A pressed gutter system designed for traditional wet jointing on site. Offered in three profiles (joggle, smooth and moulded). High capacity, uncluttered attractive appearance, and very cost-effective - the ideal solution when a simple conventionally installed box gutter system is required. Available in a choice of BBA certificated powder coatings.

See pages 48 to 55



# Alumasc Aluminium Downpipes - Range Summary

Three downpipe ranges manufactured in-house to complement our gutter systems. Heritage downpipes are specifically intended for use with our Heritage gutter range, but in effect all Alumasc downpipes and gutters are interchangeable.



## Heritage Downpipes

Traditional extruded aluminium pipework with cast sockets and fittings, available in round, square or rectangular section in a choice of sizes. Complementary rainwater heads are available to suit. Can be finished to replicate cast iron, or with BBA certificated powder coatings in a wide choice of colours.

See pages 28 to 35



## Flushjoint Downpipes

A range of round, square and rectangular downpipes with concealed spigots, giving a smooth, clean appearance. High impact resistance and offers excellent rigidity. Available in a wide colour choice of BBA certificated powder coatings.

See pages 56 to 65



## Guardian Downpipes

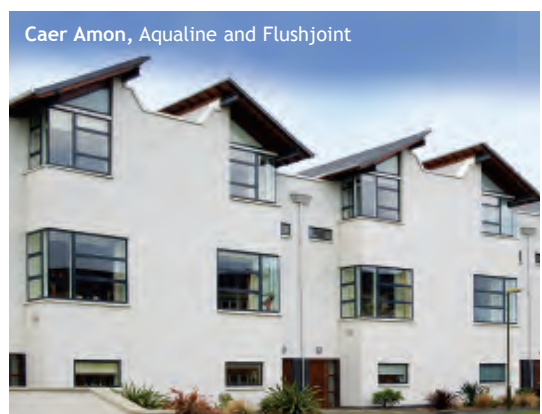
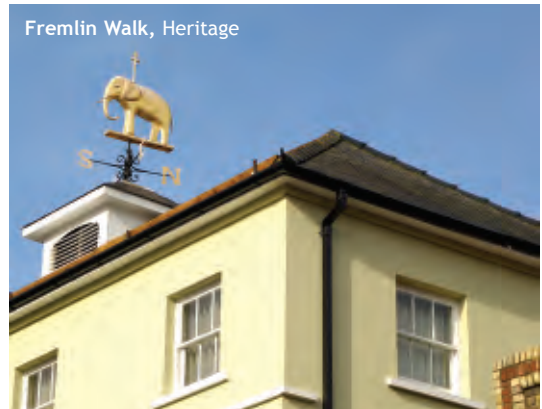
A range of flush fitting security pipes in a choice of profiles. Guardian pipework has concealed brackets and concealed jointing, providing a high level of security. Available in a wide colour choice of BBA certificated powder coatings.

See pages 66 to 71

# Alumasc Rainwater Project Gallery

Alumasc aluminium rainwater systems offer specifiers functional and stylistically appropriate solutions to rainwater drainage across all styles of building from traditional to contemporary.

Alumasc has a long and successful track record in architectural rainwater design.





# Alumasc Rainwater Project Gallery

Meridian Park, Skyline, Aqualine and Flushjoint



Private House, Heritage



Princesshay, Skyline, GX and Flushjoint



Woodhouse Triangle, Skyline, GX and Flushjoint

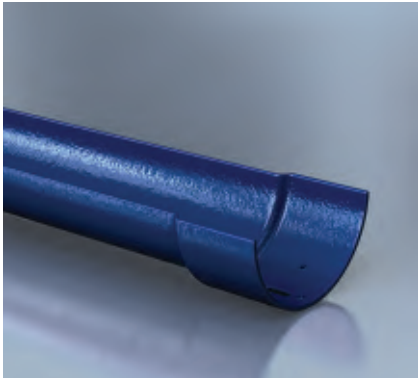


Office Development, Flushjoint





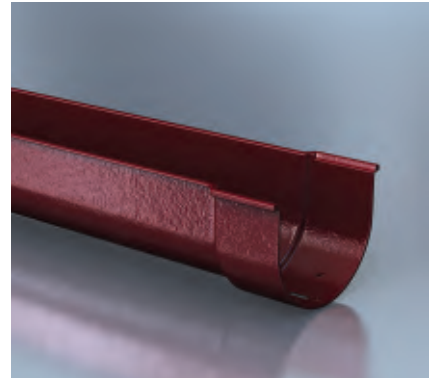
# Heritage - Cast Aluminium Rainwater Systems



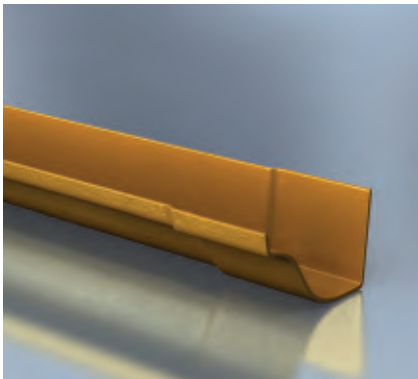
Heritage - Half Round Gutter



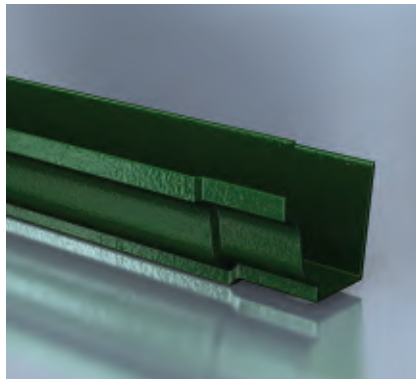
Heritage - Beaded Half Round Gutter



Heritage - Beaded Deep Run Gutter



Heritage - Victorian Ogee Gutter



Heritage - Moulded Gutter



Heritage - Circular Pipe



Heritage - Square Pipe



Heritage - Rectangular Pipe

# Heritage - Cast Aluminium Rainwater Systems

Heritage is a comprehensive range of traditional gutter profiles, round, square and rectangular pipes and all associated fittings and accessories. Designed to provide all the essential architectural features appropriate to traditionally designed buildings, the Heritage range is also fully in tune with modern fast track building contracts.

## Applications

- Ideal for traditionally designed buildings, in both new build and refurbishment applications
- Can be used as a direct replacement of cast iron
- For both flush and projecting eaves applications

## Features & Performance

- 5 gutter and 3 downpipe profiles available in a choice of sizes
- Pipes available in 1, 2 and 3 metre lengths
- Lightweight, durable and non-corrodible
- Life expectancy of aluminium: 40 years (rural/suburban areas); up to 25 years (industrial/marine areas)
- Easy to handle and fix
- BBA approved
- Aluminium is 100% recyclable

## Colours & Finishes

- BBA approved polyester powder coatings, factory applied at Alumasc
- 16 standard colours with additional BS or RAL colours available to special order
- Can be supplied to resemble cast iron surface texture (black only)
- Also available in plain mill finish for on-site painting

## Manufacture

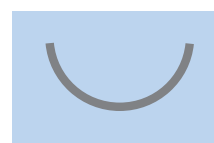
- UK manufactured by Alumasc
- Gutters and fittings made from commercial LM2 and LM6 grade aluminium alloy
- Gutters are gravity diecast, fittings are pressure diecast and downpipes are extruded aluminium
- Manufactured in accordance with BS 8530 (formerly BS 2997)

## Installation & Fixing

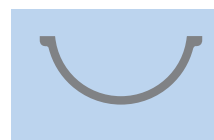
- Gutters are wet sealed with bolted joints, with a range of fixing options
- Gutter joints are secured with screws or bolts through integral holes/slots
- Victorian Ogee and Moulded gutters provided with slots in rear for direct fixing
- Brackets and fittings provided with fixing holes where appropriate
- Circular pipe jointing up to 100mm diameter is by separate sockets giving maximum flexibility for installation. 150mm circular pipes and all square and rectangular pipes have welded on sockets
- Simple fixing to wall by eared sockets or by a choice of pipe clips
- Minimal maintenance requirements



## Gutter Profiles & Sizes



**Half Round**  
100mm (4")  
113mm (4.5")  
125mm (5")



**Beaded Half Round**  
113 (4.5)  
125mm (5")



**Beaded Deep Run**  
113 x 75mm (4.5 x 3")

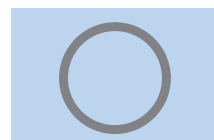


**Victorian Ogee**  
100mm (4")  
113mm (4.5")  
125mm (5")



**Moulded**  
100 x 75mm (4 x 3")  
125 x 100mm (5 x 4")  
150 x 100mm (6 x 4")

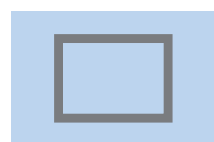
## Pipe Profiles & Sizes



**Circular Pipe**  
63mm (2.5")  
75mm (3")  
100mm (4")  
150mm (6")



**Square Pipe**  
75 x 75mm (3 x 3")  
100 x 100mm (4 x 4")



**Rectangular Pipe**  
100 x 75mm (4 x 3")

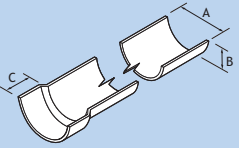
# Heritage - Half Round Gutters and Fittings



Heritage Half Round cast aluminium gutters are available in 3 sizes and 2 gutter lengths, together with a complete range of fittings. A classic socketed system, which can be finished to replicate cast iron or with BBA certificated powder coatings in a choice of colours.

Notes: All dimensions are in mm unless shown otherwise.  
Gutter sizes shown are nominal.

## Gutters

	Gutter Size	Gutter Length	A	B	C	T	Weight (kg)	Product Code
	100 (4")	1830mm	108	47	47	4	2.6	HR1/1
	113 (4.5")	"	122	52	47	4	4.0	HR2/16
	125 (5")	"	134	56	47	4	4.0	HR3/132
	100 (4")	610mm	108	47	47	4	0.9	HR1/153
	113 (4.5")	"	122	52	47	4	1.4	HR2/154
	125 (5")	"	134	56	47	4	1.4	HR3/155
Note: T = Gutter Thickness (nominal +/- 1mm)								

## Union Clips

	Gutter Size	A	B	Product Code
	100	96	46	HR1/11
	113	96	46	HR2/26
	125	96	46	HR3/148

## Stop-Ends

	Gutter Size	Type	A	Product Code
	100	External	51	HR1/13
	113	"	51	HR2/28
	125	"	51	HR3/150
	100	Internal	45	HR1/12
	113	"	45	HR2/27
	125	"	45	HR3/149

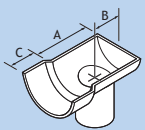
## Fascia Brackets

	Gutter Size	A	B	C	D	Product Code
	100	127	65	38	35	HR1/14
	113	140	70	38	40	HR2/29
	125	155	85	38	45	HR3/151

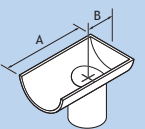


# Heritage - Half Round Gutters and Fittings

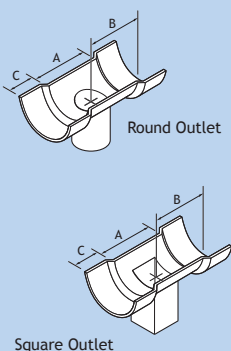
## Stop End Outlet - with Socket

	Gutter Size	Pipe Size	A	B	C	Product Code
	100	63 dia	125	61	47	HR1/9
	113	"	125	61	47	HR2/24
	125	"	125	61	47	HR3/144
	125	75 dia	125	61	47	HR3/143
Note: Designed to fit Heritage socketed aluminium pipes. Add suffix /F to product code to fit Flushjoint or Guardian pipes						

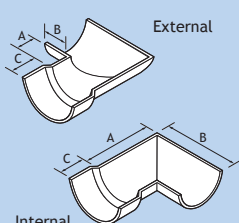
## Stop End Outlet - with Spigot

	Gutter Size	Pipe Size	A	B	Product Code
	100	63 dia	172	64	HR1/10
	113	"	172	64	HR2/25
	125	"	172	64	HR3/147
	125	75 dia	172	64	HR3/146
Note: Designed to fit Heritage socketed aluminium pipes. Add suffix /F to product code to fit Flushjoint or Guardian pipes					

## Running Outlet - with Double Spigot Socket

	Gutter Size	Pipe Size	A	B	C	Product Code
	100	63 dia	148	121	47	HR1/8
	113	"	148	121	47	HR2/23
	125	"	148	121	47	HR3/141
	100	75 dia	148	121	47	HR1/367
	113	"	148	121	47	HR2/3/23
	125	"	148	121	47	HR3/140
	125	100 dia	148	121	47	HR3/139
	100	75 x 75	148	121	47	HR1/381
	113	"	148	121	47	HR2/382
	125	"	148	121	47	HR3/383
Note: Designed to fit Heritage socketed aluminium pipes. Add suffix /F to product code to fit Flushjoint or Guardian pipes						

## 90° Angles

	Gutter Size	Type	A	B	C	Product Code
	100	External	27	77	47	HR1/5
	113	"	27	77	47	HR2/20
	125	"	27	77	47	HR3/136
	100	Internal	132	183	47	HR1/4
	113	"	146	197	47	HR2/19
	125	"	157	210	47	HR3/135

## 135° Angles

	Gutter Size	Type	A	B	C	Product Code
	100	External	27	77	47	HR1/7
	113	"	27	77	47	HR2/22
	125	"	27	77	47	HR3/138
	100	Internal	70	120	47	HR1/6
	113	"	70	120	47	HR2/21
	125	"	70	120	47	HR3/137

# Heritage - Beaded Half Round Gutters and Fittings



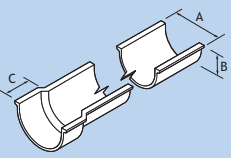
Heritage Beaded Half Round socketed cast aluminium gutters are available in 2 sizes and 2 gutter lengths, together with a complete range of fittings. There is a pronounced feature bead on both lips. Can be finished to replicate cast iron or with BBA certificated powder coatings in a choice of colours.

Notes: Beaded Half Round is an all socketed system and Union Clips are only available by special order.

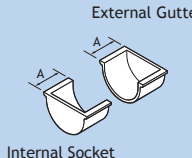
All dimensions are in mm unless shown otherwise.

Gutter sizes shown are nominal.

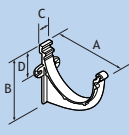
## Gutters

	Gutter Size	Gutter Length	A	B	C	T	Weight (kg)	Product Code
	113 (4.5")	1830mm	131	52	47	4	3.0	BHR5/300
	125 (5")	"	143	56	47	4	3.0	BHR6/325
	113 (4.5")	610mm	131	52	47	4	1.0	BHR5/303
	125 (5")	"	143	56	47	4	1.0	BHR6/328
Note: T = Gutter Thickness (nominal +/- 1mm)								

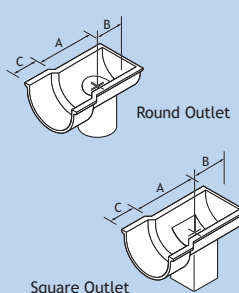
## Stop-Ends

	Gutter Size	Type	A	Product Code
	113	External	51	BHR5/306
	125	"	51	BHR6/331
	113	Internal	45	BHR5/318
	125	"	45	BHR6/149

## Fascia Brackets

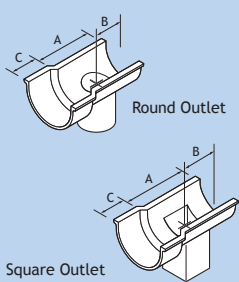
	Gutter Size	A	B	C	D	Product Code
	113	155	75	38	35	BHR5/315
	125	165	79	38	37	BHR6/337

## Stop End Outlet - with Socket

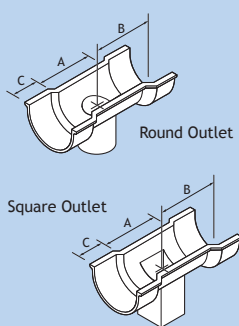
	Gutter Size	Pipe Size	A	B	C	Product Code
	113	63 dia	213	106	47	BHR5/RO25SE
	125	"	213	106	47	BHR6/RO25SE
	113	75 dia	213	106	47	BHR5/RO30SE
	125	"	213	106	47	BHR6/RO30SE
	113	75 x 75	213	106	47	BHR5/SO33SE
	125	"	213	106	47	BHR6/SO33SE
Note: Designed to fit Heritage socketed aluminium pipes. Add suffix /F to product code to fit Flushjoint or Guardian pipes						

# Heritage - Beaded Half Round Gutters and Fittings

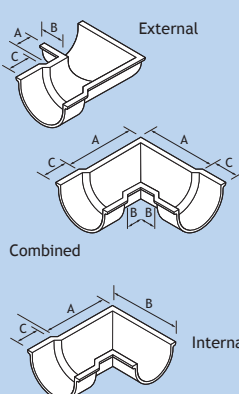
## Running Outlet - with Single Spigot/Socket

	Gutter Size	Pipe Size	A	B	C	Product Code
	113	63 dia	213	106	47	BHR5/305
	125	"	213	106	47	BHR6/330
	113	75 dia	213	106	47	BHR5/308
	125	"	213	106	47	BHR6/333
	113	75 x 75	213	106	47	BHR5/SO33
	125	"	213	106	47	BHR6/SO33
Note: Designed to fit Heritage socketed aluminium pipes. Add suffix /F to product code to fit Flushjoint or Guardian pipes						

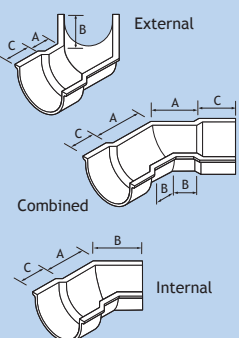
## Running Outlet - with Double Socket

	Gutter Size	Pipe Size	A	B	C	Product Code
	113	63 dia	213	160	47	BHR5/304
	125	"	213	160	47	BHR6/329
	113	75 dia	213	160	47	BHR5/307
	125	"	213	160	47	BHR6/332
	113	75 x 75	213	160	47	BHR5/384
	125	"	213	160	47	BHR6/385
Note: Designed to fit Heritage socketed aluminium pipes. Add suffix /F to product code to fit Flushjoint or Guardian pipes						

## 90° Angles

	Gutter Size	Type	A	B	C	Product Code
	113	External	62	62	47	BHR5/311
	125	"	62	62	47	BHR6/336
	113	Combined	192	62	47	BHR5/309
	125	"	192	62	47	BHR6/334
	113	Internal	192	192	47	BHR5/310
	125	"	192	192	47	BHR6/335

## 135° Angles

	Gutter Size	Type	A	B	C	Product Code
	113	External	62	62	47	BHR5/EA135
	125	"	62	62	47	BHR6/EA135
	113	Combined	192	62	47	BHR5/IA135D
	125	"	192	62	47	BHR6/IA135D
	113	Internal	192	192	47	BHR5/IA135
	125	"	192	192	47	BHR6/IA135



# Heritage - Beaded Deep Run Gutters and Fittings



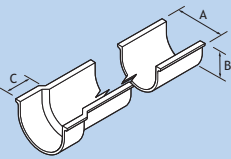
Heritage Beaded Deep Run gutters offer high flow capacity in one gutter size. A socketed system, which can be finished to replicate cast iron or with BBA certificated powder coatings in a choice of colours.

Notes: Beaded Deep Run is an all socketed system and Union Clips are only available by special order.

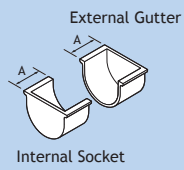
All dimensions are in mm unless shown otherwise.

Gutter sizes shown are nominal.

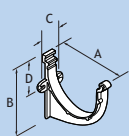
## Gutters

	Gutter Size	Gutter Length	A	B	C	T	Weight (kg)	Product Code
	113 x 75 (4.5" x 3")	1830mm	137	76	47	4	2.6	HR4/243
	113 x 75 (4.5" x 3")	610mm	137	76	47	4	0.9	HR4/246
Note: T = Gutter Thickness (nominal +/- 1mm)								

## Stop-Ends

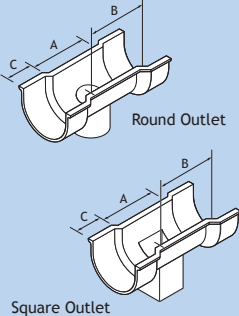
	Gutter Size	Type	A	Product Code
	113 x 75	External	42	HR4/250
	113 x 75	Internal	42	HR4/249

## Fascia Brackets

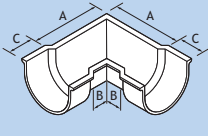
	Gutter Size	A	B	C	D	Product Code
	113 x 75	155	111	38	55	HR4/251
	Note: Each fascia bracket is supplied with a nylon retaining clip					

# Heritage - Beaded Deep Run Gutters and Fittings

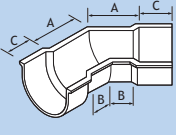
## Running Outlet - with Double Socket

 <p>Round Outlet</p> <p>Square Outlet</p>	Gutter Size	Pipe Size	A	B	C	Product Code
	113 x 75	63 dia	208	151	47	HR4/248
	113 x 75	75 dia	208	151	47	HR4/369
	113 x 75	75 x 75	208	151	47	HR4/410
	113 x 75	100 x 75	208	151	47	HR4/411
Note: Designed to fit Heritage socketed aluminium pipes. Add suffix /F to product code to fit Flushjoint or Guardian pipes						

## 90° Angles - with Double Socket

 <p>Combined</p>	Gutter Size	Type	A	B	C	Product Code
	113 x 75	Combined Internal/External	200	55	47	HR4/247

## 135° Angles - with Double Socket

 <p>Combined</p>	Gutter Size	Type	A	B	C	Product Code
	113 x 75	Combined Internal/External	112	55	47	HR4/371

# Heritage - Victorian Ogee Gutters and Fittings

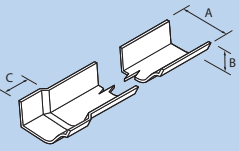


Heritage Victorian Ogee gutters are available in 3 sizes and 2 gutter lengths, together with a complete range of fittings. The traditional Ogee gutter profile is ideal for period applications and restoration. A left-hand socketed system, which can be finished to replicate cast iron or with BBA certificated powder coatings in a choice of colours.

Notes: All dimensions are in mm unless shown otherwise.

Gutter sizes shown are nominal.

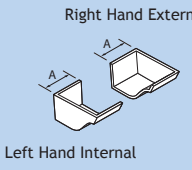
## Gutters

	Gutter Size	Gutter Length	A	B	C	T	Weight (kg)	Product Code
	100 (4")	1830mm	110	54	47	4	2.6	OG1/31
	113 (4.5")	"	121	60	47	4	4.0	OG2/45
	125 (5")	"	135	68	47	4	4.0	OG3/173
	100 (4")	610mm	110	54	47	4	0.9	OG1/156
	113 (4.5")	"	121	60	47	4	1.4	OG2/157
	125 (5")	"	135	68	47	4	1.4	OG3/176
Note: Victorian Ogee is a left hand socket system T = Gutter Thickness (nominal +/- 1mm)								

## Union Clips

	Gutter Size	A	B	Product Code
	100	98	47	OG1/41
	113	98	47	OG2/55
	125	98	47	OG3/184

## Stop-Ends

	Gutter Size	Type	A	Product Code
Right Hand External	100	Right Hand External	51	OG1/43
	113	"	51	OG2/57
	125	"	51	OG3/186
Left Hand Internal	100	Left Hand Internal	45	OG1/42
	113	"	45	OG2/56
	125	"	45	OG3/185

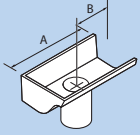
## Fascia Brackets

	Gutter Size	A	B	C	D	Product Code
	100	125	80	38	32	OG1/44
	113	137	85	38	38	OG2/58
	125	150	92	38	38	OG3/187

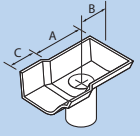


# Heritage - Victorian Ogee Gutters and Fittings

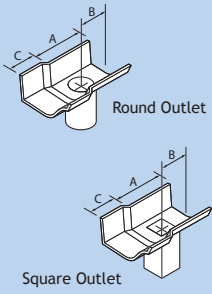
## Left Hand Stop End Outlet - with Spigot

	Gutter Size	Pipe Size	A	B	Product Code
	100	63 dia	172	64	OG1/40
	113	"	172	64	OG2/54
	125	"	172	64	OG3/183
	125	75 dia	172	64	OG3/3/183
Note: Designed to fit Heritage socketed aluminium pipes. Add suffix /F to product code to fit Flushjoint or Guardian pipes					

## Right Hand Stop End Outlet - with Socket

	Gutter Size	Pipe Size	A	B	C	Product Code
	100	63 dia	126	64	47	OG1/39
	113	"	126	64	47	OG2/53
	125	"	126	64	47	OG3/182
	125	75 dia	126	64	47	OG3/3/182
Note: Designed to fit Heritage socketed aluminium pipes. Add suffix /F to product code to fit Flushjoint or Guardian pipes						

## Running Outlet - with Single Spigot/Socket

	Gutter Size	Pipe Size	A	B	C	Product Code
	100	63 dia	194	121	47	OG1/38
	113	"	194	121	47	OG2/52
	125	"	194	121	47	OG3/181
	113	75 dia	194	121	47	OG2/368
	125	"	194	121	47	OG3/3/181
	100	75 x 75	194	121	47	OG1/386
	113	"	194	121	47	OG2/387
	125	"	194	121	47	OG3/388
	Note: Designed to fit Heritage socketed aluminium pipes. Add suffix /F to product code to fit Flushjoint or Guardian pipes					

## 90° Angles

	Gutter Size	Type	A	B	C	Product Code
	100	External	25	75	47	OG1/34
	113	"	25	75	47	OG2/48
	125	"	25	75	47	OG3/177
	100	Internal	133	184	47	OG1/35
	113	"	146	197	47	OG2/49
	125	"	159	210	47	OG3/178

## 135° Angles

	Gutter Size	Type	A	B	C	Product Code
	100	External	25	75	47	OG1/36
	113	"	25	75	47	OG2/50
	125	"	25	75	47	OG3/179
	100	Internal	70	121	47	OG1/37
	113	"	75	126	47	OG2/51
	125	"	80	134	47	OG3/180

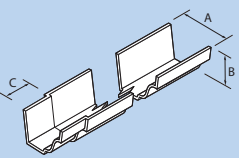
# Heritage - Moulded Gutters and Fittings



Heritage Moulded gutters are available in 3 sizes and 2 gutter lengths, together with a complete range of fittings. A socketed system, which can be finished to replicate cast iron or with BBA certificated powder coatings in a choice of colours. Ideal for restoration or contemporary applications.

Notes: All dimensions are in mm unless shown otherwise.  
Gutter sizes shown are nominal.

## Gutters

	Gutter Size	Gutter Length	A	B	C	T	Weight (kg)	Product Code
	100 x 75 (4" x 3")	1830mm	108	76	50	4	4.0	MG2/217
	125 x 100 (5" x 4")	"	140	102	50	4	5.4	MG1/196
	150 x 100 (6" x 4")	"	162	102	50	4	5.6	MG3/259
	100 x 75 (4" x 3")	610mm	108	76	50	4	1.4	MG2/220
	125 x 100 (5" x 4")	"	140	102	50	4	1.8	MG1/199
	150 x 100 (6" x 4")	"	162	102	50	4	1.9	MG3/262
Note: 100 x 75 and 125 x 100 moulded gutters are left hand spigot. 150 x 100 moulded gutter is right hand spigot T = Gutter Thickness (nominal +/- 1mm)								

## Union Clips

	Gutter Size	A	B	Product Code
	100 x 75	100	46	MG2/231
	125 x 100	100	46	MG1/213
	150 x 100	100	46	MG3/269

## Stop-Ends

	Gutter Size	Type	A	Product Code
	100 x 75	External Left Hand	50	MG2/233
	125 x 100	"	50	MG1/215
	150 x 100	External Right Hand	50	MG3/271
	100 x 75	Internal Right Hand	50	MG2/232
	125 x 100	"	50	MG1/214
	150 x 100	Internal Left Hand	50	MG3/270

## Fixing Supports

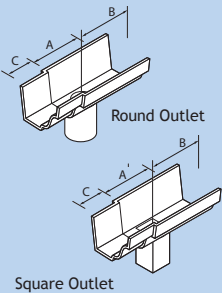
	Gutter Size	A	B	C	Product Code
	100 x 75	70	10	36	MG2/373
	125 x 100	94	12	36	MG1/374
	150 x 100	94	12	36	MG3/375

## Fascia Brackets

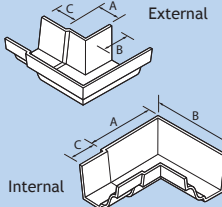
	Gutter Size	A	B	C	D	Product Code
	100 x 75	136	135	38	38	MG2/234
	125 x 100	135	136	38	39	MG1/216
	150 x 100	162	125	38	39	MG3/268

# Heritage - Moulded Gutters and Fittings

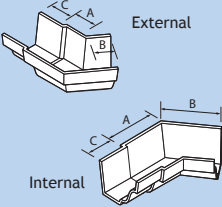
## Running Outlet - with Single Spigot

 <p>Round Outlet</p> <p>Square Outlet</p> <p>Note: Designed to fit Heritage socketed aluminium pipes. Add suffix /F to product code to fit Flushjoint or Guardian pipes</p>	Gutter Size	Pipe Size	A	B	C	Spigot	Product Code
	100 x 75	63 dia	190	120	50	Left Hand	MG2/225
	125 x 100	"	190	120	50	Left Hand	MG1/205
	150 x 100	"	190	120	50	Right Hand	MG3/267
	100 x 75	75 dia	190	120	50	Left Hand	MG2/370
	125 x 100	"	190	120	50	Left Hand	MG1/204
	150 x 100	"	190	120	50	Right Hand	MG3/266
	125 x 100	100 dia	190	120	50	Left Hand	MG1/253
	150 x 100	"	190	120	50	Right Hand	MG3/265
	100 x 75	75 x 75	190	120	50	Left Hand	MG2/356
	125 x 100	"	190	120	50	Left Hand	MG1/358
	150 x 100	"	190	120	50	Right Hand	MG3/361
	100 x 75	100 x 75	190	120	50	Left Hand	MG2/357
	125 x 100	"	190	120	50	Left Hand	MG1/359
	150 x 100	"	190	120	50	Right Hand	MG3/362
	125 x 100	100 x 100	190	120	50	Left Hand	MG1/360
	150 x 100	"	190	120	50	Right Hand	MG3/363

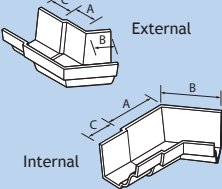
## 90° Angles

 <p>External</p> <p>Internal</p>	Gutter Size	Type	A	B	C	Spigot	Product Code
	100 x 75	External	25	75	50	Left Hand	MG2/221
	125 x 100	"	25	75	50	Left Hand	MG1/200
	150 x 100	"	25	75	50	Right Hand	MG3/263
	100 x 75	Internal	127	183	50	Left Hand	MG2/222
	125 x 100	"	158	215	50	Left Hand	MG1/201
	150 x 100	"	185	238	50	Right Hand	MG3/264

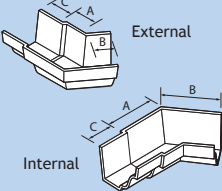
## 135° Angles

 <p>External</p> <p>Internal</p>	Gutter Size	Type	A	B	C	Spigot	Product Code
	100 x 75	External	25	75	50	Left Hand	MG2/223
	125 x 100	"	25	75	50	Left Hand	MG1/202
	150 x 100	"	25	75	50	Right Hand	MG3/272
	100 x 75	Internal	62	120	50	Left Hand	MG2/224
	125 x 100	"	79	130	50	Left Hand	MG1/203
	150 x 100	"	90	144	50	Right Hand	MG3/273

## 145° Angles

 <p>External</p> <p>Internal</p>	Gutter Size	Type	A	B	C	Spigot	Product Code
	125 x 100	External	25	75	50	Left Hand	MG1/329
	150 x 100	"	25	75	50	Right Hand	MG3/333
	125 x 100	Internal	97	47	50	Left Hand	MG1/330
	150 x 100	"	118	68	50	Right Hand	MG3/334

## 150° Angles

 <p>External</p> <p>Internal</p>	Gutter Size	Type	A	B	C	Spigot	Product Code
	125 x 100	External	25	75	50	Left Hand	MG1/331
	150 x 100	"	25	75	50	Right Hand	MG3/335
	125 x 100	Internal	94	44	50	Left Hand	MG1/332
	150 x 100	"	118	68	50	Right Hand	MG3/336




# Heritage - Cast Aluminium Bracketry

Alumasc can provide traditional style Bracketry for all of its standard gutter profiles. Where building detailing dictates, Alumasc can provide bespoke Bracketry to meet individual project requirements.

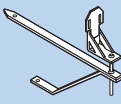
## Universal Brackets

For use with standard Fascia Bracket (purchased separately).

### Universal Rafter Arm

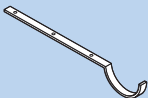
	Type	Angle	Product Code
	Top Fix	26°	UNI632915
	Top Fix	40°	UNI632916
	Side Fix	26°	UNI632917
	Side Fix	40°	UNI632918

### Universal Drive in Rise & Fall


	Gutter Size	Product Code
	Universal	UNI632919

## Traditional 'Old' Style Gutter Brackets


### Top Fix Rafter Arm - Half Round

	Gutter Size	Product Code
	100	HR1/RB/TF
	113	HR2/RB/TF
	125	HR3/RB/TF
	Note: Supplied with 40° angle of pitch as standard. Other pitches catered for on request - please specify pitch angle required.	


### Top Fix Rafter Arm - Beaded Half Round/Deep Run

	Gutter Size	Product Code
	113	BHR5/RB/TF
	125	BHR6/RB/TF
	113 x 75 Deep Run	HR4/RB/TF
	Note: Supplied with 40° angle of pitch as standard. Other pitches catered for on request - please specify pitch angle required.	


### Top Fix Rafter Arm - Victorian Ogee

	Gutter Size	Product Code
	100	OG1/RB/TF
	113	OG2/RB/TF
	125	OG3/RB/TF
	Note: Supplied with 40° angle of pitch as standard. Other pitches catered for on request - please specify pitch angle required.	


### Top Fix Rafter Arm - Moulded

	Gutter Size	Product Code
	100 x 75	MG2/RB/TF
	125 x 100	MG1/RB/TF
	150 x 100	MG3/RB/TF
	Note: Supplied with 40° angle of pitch as standard. Other pitches catered for on request - please specify pitch angle required.	


### Side Fix Rafter Arm - Half Round

	Gutter Size	Product Code
	100	HR1/RB/SF
	113	HR2/RB/SF
	125	HR3/RB/SF
	Note: Supplied with 40° angle of pitch as standard. Other pitches catered for on request - please specify pitch angle required.	


### Side Fix Rafter Arm - Beaded Half Round/Deep Run

	Gutter Size	Product Code
	113	BHR5/RB/SF
	125	BHR6/RB/SF
	113 x 75 Deep Run	HR4/RB/SF
	Note: Supplied with 40° angle of pitch as standard. Other pitches catered for on request - please specify pitch angle required.	

### Side Fix Rafter Arm - Victorian Ogee

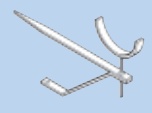
	Gutter Size	Product Code
	100	OG1/RB/SF
	113	OG2/RB/SF
	125	OG3/RB/SF
	Note: Supplied with 40° angle of pitch as standard. Other pitches catered for on request - please specify pitch angle required.	

### Side Fix Rafter Arm - Moulded

	Gutter Size	Product Code
	100 x 75	MG2/RB/SF
	125 x 100	MG1/RB/SF
	150 x 100	MG3/RB/SF
	Note: Supplied with 40° angle of pitch as standard. Other pitches catered for on request - please specify pitch angle required.	

# Heritage - Cast Aluminium Bracketry

## Rise & Fall - Half Round

	Gutter Size	Product Code
	100	HR1/R&F/ASSY
	113	HR2/R&F/ASSY
	125	HR3/R&F/ASSY

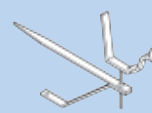
## Rise & Fall - Beaded Half Round/Deep Run

	Gutter Size	Product Code
	113	BHR5/R&F/ASSY
	125	BHR6/R&F/ASSY
	113 x 75 Deep Run	HR4/R&F/ASSY

## Rise & Fall - Victorian Ogee

	Gutter Size	Product Code
	100	OG1/R&F/ASSY
	113	OG2/R&F/ASSY
	125	OG3/R&F/ASSY

## Rise & Fall - Moulded

	Gutter Size	Product Code
	100 x 75	MG2/R&F/ASSY
	125 x 100	MG1/R&F/ASSY
	150 x 100	MG3/R&F/ASSY



## Bespoke Bracketry

Alumasc can design and manufacture a variety of Bracketry solution for gutters and pipes to create an integrated system solution. Such detailing can often be used to support fascia and soffit configurations.

Ornate holderbats and earbelts can be detailed to provide a unique, distinguished appearance to a rainwater stack.

Where standard fitting dimensions do not suit the project's requirements, Alumasc can fabricate its gutter and pipe Bracketry systems to accommodate building design.

# Heritage - Circular Pipes and Fittings

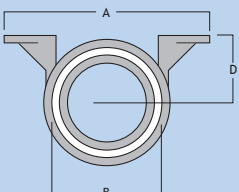


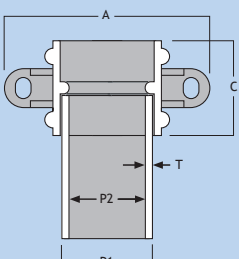
Heritage Circular Pipes are available in 4 pipe diameters and 3 pipe lengths, together with a complete range of fittings. Complementary rainwater heads are also available. Can be factory finished to replicate cast iron or with BBA certificated powder coatings in a range of colours.

Notes: Pipes are extruded sections with cast sockets. The majority of fixings are cast, however certain fittings are fabricated. Contact Alumasc for further details

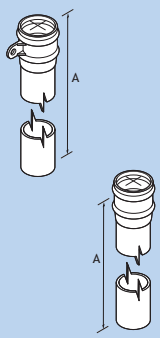
All dimensions are in mm unless shown otherwise.

Pipe sizes shown are nominal.

	Sockets (Nominal)	63	75	100	150
	A Length of flange overall	144	160	187	245
	B Internal diameter	73.5 to 70	85 to 81.5	110 to 108	163 to 160
	C Height of socket	89	95	90	125
	D Distance from centre line of pipe to wall	65	71	90	118
Note: All circular sockets are an interference fit with exception of 150mm which are factory welded					

	Pipes (Nominal)	63	75	100	150
	P1 External Diameter	63	76.5	102	152
	P2 Internal Diameter	60.5	74	98.5	147
	T Thickness	1.22	1.22	1.6	2.5

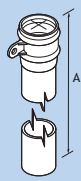
## Pipes - With and Without Ears

	Pipe Size	A	Product Code
	63 (2.5")	3000mm	RW1/3M
	"	2000mm	RW1/2M
	"	1000mm	RW1/1M
	75 (3")	3000mm	RW2/3M
	"	2000mm	RW2/2M
	"	1000mm	RW2/1M
	100 (4")	3000mm	RW3/3M
	"	2000mm	RW3/2M
	"	1000mm	RW3/1M
	150 (6")	3000mm	RW60/3M
	"	2000mm	RW60/2M
	"	1000mm	RW60/1M
Note: The codes given above are for pipes with ears. For pipes without ears suffix codes with /NE 63, 75 and 100mm pipes are supplied with separate interference-fit cast sockets			

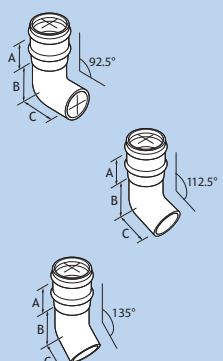


# Heritage - Circular Pipes and Fittings

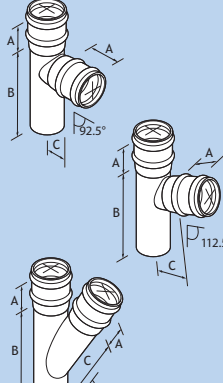
## Thickwall Pipes - With Ears

	Pipe Size	A	Thickness	Product Code
	63 dia	2000mm	3	RWT/25/2M
	75 dia	2000mm	3	RWT/30/2M
	100 dia	2000mm	3	RWT/40/2M
Note: The codes given above are for pipes with ears. For pipes without ears suffix codes with /NE 63, 75 and 100mm pipes are supplied with separate interference-fit cast sockets				

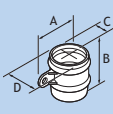
## Bends - Without Ears

	Pipe Size	Type	A	B	C	Product Code
	63 dia	92.5 Degree	89	21	140	RW1/69
	75 dia	"	95	15	146	RW2/83
	100 dia	"	90	80	159	RW3/128
	150 dia	"	125	114	109	RW60/B/92
	63 dia	112.5 Degree	89	32	110	RW1/70
	75 dia	"	95	26	120	RW2/84
	100 dia	"	90	43	110	RW3/129
	150 dia	"	125	85	144	RW60/B/112
	63 dia	135 Degree	89	41	107	RW1/165
	75 dia	"	95	35	120	RW2/327
	100 dia	"	90	43	110	RW3/328
	150 dia	"	125	85	144	RW60/B/135

## Branches - Without Ears

	Pipe Size	Type	A	B	C	Product Code
	63 dia	92.5 Degree	70	200	79	RW1/67
	75 dia	"	70	220	85	RW2/81
	100 dia	"	90	240	108	RW3/126
	150 dia	"	125	315	206	RW60/BR/92
	63 dia	112.5 Degree	70	200	79	RW1/68
	75 dia	"	70	220	85	RW2/82
	100 dia	"	65	265	108	RW3/127
	150 dia	"	125	135	206	RW60/BR/112
	63 dia	135 Degree	70	200	79	RW1/BR/135
	75 dia	"	70	220	85	RW2/BR/135
	100 dia	"	90	300	180	RW3/BR/135
	150 dia	"	125	375	245	RW60/BR/135

## Round Pipe Sockets - With Ears

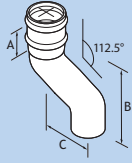
	Pipe Size	A	B	C	D	Product Code
	63 dia	144	89	65	73.5 to 70	RW1/240
	75 dia	160	95	71	86.5 to 81	RW2/241
	100 dia	187	90	90	110 to 108	RW3/242
	150 dia	245	125	118	163 to 160	RW60/PS
Note: The codes given above are for sockets with ears. For sockets without ears suffix codes with /NE						

## Access Pipes - Without Ears

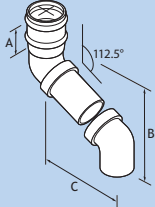
	Pipe Size	A	B	Product Code
	63 dia	95	245	RW1/256
	75 dia	95	245	RW2/257
	100 dia	95	245	RW3/258
	150 dia	125	295	RW60/ACP

# Heritage - Circular Pipes and Fittings

## 112.5° One Part Offsets - Without Ears

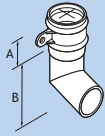
 <p>Note: Offsets in the 150mm Rainwater pipe range are fabricated, cut and mitred.</p>	Pipe Size	Offset	A	B	C	Product Code
	63 dia	75 (3")	70	184	76	RW1/87
	"	113 (4.5")	70	200	114	RW1/163
	"	150 (6")	70	215	152	RW1/62
	"	225 (9")	70	247	228	RW1/63
	"	300 (12")	70	279	304	RW1/64
	"	375 (15")	70	310	381	RW1/65
	"	450 (18")	70	342	457	RW1/88
	"	525 (21")	70	373	533	RW1/89
	"	600 (24")	70	405	609	RW1/164
	"	675 (27")	70	436	685	RW1/190
	"	750 (30")	70	468	762	RW1/191
	75 dia	75 (3")	70	187	76	RW2/90
	"	113 (4.5")	70	203	114	RW2/168
	"	150 (6")	70	218	152	RW2/76
	"	225 (9")	70	250	228	RW2/77
	"	300 (12")	70	282	304	RW2/78
	"	375 (15")	70	313	381	RW2/79
	"	450 (18")	70	345	457	RW2/91
	"	525 (21")	70	376	533	RW2/92
	"	600 (24")	70	408	609	RW2/169
	"	675 (27")	70	438	685	RW2/192
	"	750 (30")	70	471	762	RW2/193
	100 dia	75 (3")	69	205	76	RW3/118
	"	113 (4.5")	69	221	114	RW3/171
	"	150 (6")	69	236	152	RW3/119
	"	225 (9")	69	268	228	RW3/120
	"	300 (12")	69	300	304	RW3/121
	"	375 (15")	69	331	381	RW3/122
	"	450 (18")	69	363	457	RW3/123
	"	525 (21")	69	394	533	RW3/124
	"	600 (24")	69	426	609	RW3/172
	"	675 (27")	69	457	685	RW3/194
	"	750 (30")	69	489	762	RW3/195
	150 dia	75 (3")	125	318	76	RW60/PO/3
	"	150 (6")	125	334	152	RW60/PO/6
	"	225 (9")	125	349	228	RW60/PO/9
	"	300 (12")	125	413	304	RW60/PO/12
	"	375 (15")	125	444	381	RW60/PO/15
	"	450 (18")	125	476	457	RW60/PO/18
	"	525 (21")	125	539	533	RW60/PO/21
	"	600 (24")	125	570	609	RW60/PO/24

## 112.5° Two Part Offsets - Without Ears

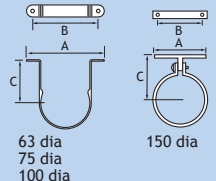
	Pipe Size	Offset	A	B	C	Product Code
	63 dia	225 (9")	70	247	229	RW1/350
	"	375 (15")	70	310	381	RW1/351
	"	450 (18")	70	342	457	RW1/352
	"	675 (27")	70	436	685	RW1/353
	"	900 (36")	70	529	914	RW1/354
	75 dia	225 (9")	70	250	229	RW2/343
	"	375 (15")	70	313	381	RW2/344
	"	450 (18")	70	345	457	RW2/345
	"	675 (27")	70	438	685	RW2/346
	"	900 (36")	70	534	914	RW2/347

# Heritage - Circular Pipes and Fittings

## Shoes - With and Without Ears

	Pipe Size	A	B	Product Code
	63 dia	55	105	RW1/66
	75 dia	64	112	RW2/80
	100 dia	69	135	RW3/125
	150 dia	125	215	RW60/SH
Note: The codes given above are for pipes with ears. For pipes without ears suffix codes with /NE				

## Standard Base Clips

	Pipe Size	A	B	C	Product Code
	63 dia	124	100	65	RW1/236
	75 dia	137	112	71	RW2/237
	100 dia	163	138	90	RW3/238
	150 dia	255	215	121	RW60/PC

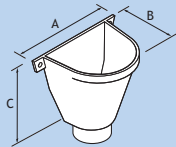
## Extended Base Clips

	Pipe Size	A	B	C	Product Code
	63 dia	87	47	279	RW1/364
	75 dia	87	47	285	RW2/365
	100 dia	87	47	304	RW3/366

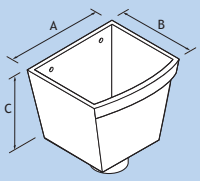
## Small Base Clips

	Pipe Size	A	B	C	Product Code
	63 dia	87	47	74	RW1/SB/PC
	75 dia	87	47	80	RW2/SB/PC
	100 dia	87	47	92	RW3/SB/PC

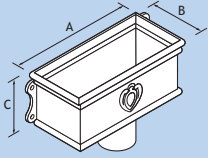
## Flat Back Rainwater Heads

	Pipe Size	A	B	C	Product Code
	63 dia	194	168	184	RW1/72
	75 dia	194	168	184	RW2/86
	100 dia	194	168	184	RW3/131
Note: Designed to fit Heritage socketed aluminium pipes. Add suffix /F to product code to fit Flushjoint or Guardian pipes					

## Rectangular Rainwater Heads

	Pipe Size	A	B	C	Product Code
	63 dia	258	190	178	RW1/111
	75 dia	258	190	178	RW2/112
	100 dia	258	190	178	RW3/113
Note: Designed to fit Heritage socketed aluminium pipes. Add suffix /F to product code to fit Flushjoint or Guardian pipes					

## Ornamental Rainwater Heads

	Pipe Size	A	B	C	Product Code
	63 dia	410	186	178	RWOH/25
	75 dia	410	186	178	RWOH/30
	100 dia	410	186	178	RWOH/40
Note: Designed to fit Heritage socketed aluminium pipes. Add suffix /F to product code to fit Flushjoint or Guardian pipes					



# Heritage - Square and Rectangular Pipes and Fittings

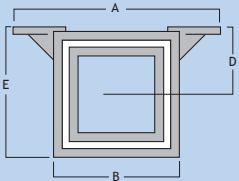


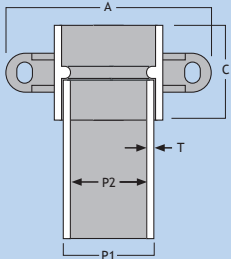
Heritage square and rectangular pipes are available in 3 pipe sizes and 3 pipe lengths, together with a complete range of fittings. A spigot and socket system, which can be finished to replicate cast iron or with BBA certificated powder coatings in a choice of colours. Complementary rainwater heads available to suit.

Notes: Pipes and fittings are made using extruded section with welded-on cast sockets.

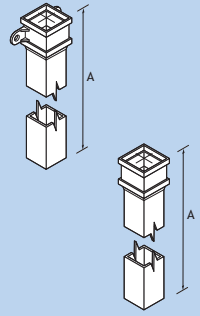
All dimensions are in mm unless shown otherwise.

Pipe sizes shown are nominal.

	Sockets (Nominal)	75 x 75	100 x 75	100 x 100
	A Length of flange overall	162	190	190
	B External width	90	122	122
	C Height of socket	82	85	85
	D Distance from centre line of pipe to wall	52	54	67
	E Distance from front of pipe to wall	98	102	130
Note: All square and rectangular sockets are factory welded				

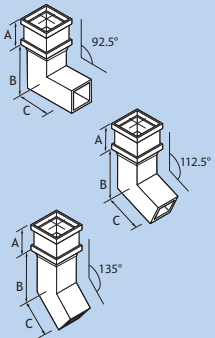
	Pipes (Nominal)	75 x 75	100 x 75	100 x 100
	P1 External Diameter	72 x 72	102 x 76	102 x 102
	P2 Internal Diameter	68 x 68	98 x 72	97 x 97
	T Thickness	2.0	2.0	2.5

## Pipes - With and Without Ears

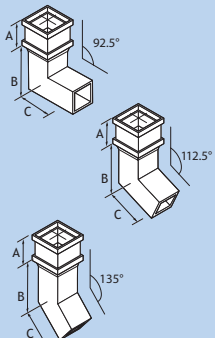
	Pipe Size	A	Product Code
	75 x 75 (3" x 3")	3000mm	RW33/3M
	"	2000mm	RW33/2M
	"	1000mm	RW33/1M
	100 x 75 (4" x 3")	3000mm	RW43/3M
	"	2000mm	RW43/2M
	"	1000mm	RW43/1M
	100 x 100 (4" x 4")	3000mm	RW44/3M
	"	2000mm	RW44/2M
	"	1000mm	RW44/1M
Note: The codes given above are for pipes with ears. For pipes without ears suffix codes with /NE			

# Heritage - Square and Rectangular Pipes and Fittings

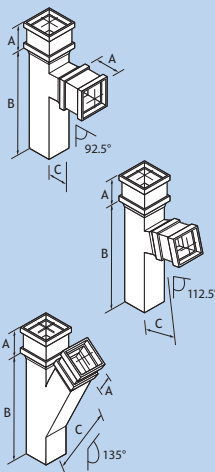
## Bends - Front and Back

	Pipe Size	Bend	A	B	C	Product Code
	75 x 75	92.5 Degree	82	67	137	RW33/B/92
	100 x 75	"	85	80	150	RW43/FB/92
	100 x 100	"	85	81	151	RW44/B/92
	75 x 75	112.5 Degree	82	57	127	RW33/B/112
	100 x 75	"	85	66	136	RW43/FB/112
	100 x 100	"	85	66	136	RW44/B/112
	75 x 75	135 Degree	82	47	117	RW33/B/135
	100 x 75	"	85	58	128	RW43/FB/135
	100 x 100	"	85	53	123	RW44/B/135

## Bends - Left and Right

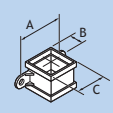
	Pipe Size	Bend	A	B	C	Product Code
	75 x 75	92.5 Degree	82	67	137	RW33/B/92
	100 x 75	"	85	80	150	RW43/SB/92
	100 x 100	"	85	81	151	RW44/B/92
	75 x 75	112.5 Degree	82	57	127	RW33/B/112
	100 x 75	"	85	66	136	RW43/SB/112
	100 x 100	"	85	66	136	RW44/B/112
	75 x 75	135 Degree	82	47	117	RW33/B/135
	100 x 75	"	85	58	128	RW43/SB/135
	100 x 100	"	85	53	123	RW44/B/135

## Branches - Left and Right

	Pipe Size	Branch	A	B	C	Product Code
	75 x 75	92.5 Degree	82	230	85	RW33/BR/92
	100 x 75	"	85	230	85	RW43/SBR/92
	100 x 100	"	85	230	85	RW44/BR/92
	75 x 75	112.5 Degree	82	248	118	RW33/BR/112
	100 x 75	"	85	248	118	RW43/SBR/112
	100 x 100	"	85	248	118	RW44/BR/112
	75 x 75	135 Degree	82	310	190	RW33/BR/135
	100 x 75	"	85	310	190	RW43/SBR/135
	100 x 100	"	85	310	190	RW44/BR/135

Note: 100x75 Front/Back Branches are also available. Product codes are as follows:  
 RW43/FBR/92 for 92.5° Branches  
 RW43/FBR/112 for 112.5° Branches  
 RW43/FBR/135 for 135° Branches

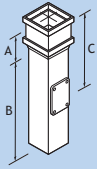
## Square Pipe Sockets

	Pipe Size	A	B	C	Product Code
	75 x 75	162	52	90	RW33/PS
	100 x 75	191	54	122	RW43/PS
	100 x 100	191	67	122	RW44/PS

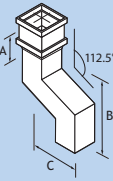
Note: The codes given above are for sockets with ears. For sockets without ears suffix codes with /NE

# Heritage - Square and Rectangular Pipes and Fittings

## Access Pipes

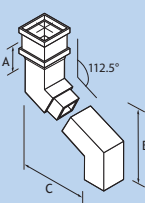
	Pipe Size	A	B	C	Product Code
	75 x 75	82	266	153	RW33/ACP
	100 x 75	82	266	153	RW43/ACP
	100 x 100	82	266	153	RW44/ACP

## 112.5° One Part Offsets

	Pipe Size	Offset	A	B	C	Product Code
	75 x 75	75 (3")	82	220	76	RW33/PO/3
	100 x 75	75 (3")	82	220	76	RW43/PO/3
	100 x 100	75 (3")	82	220	76	RW44/PO/3

Note: Alternative angles, e.g. 135° plinth offsets with ears are also available to order

## 112.5° Two Part Offsets

	Pipe Size	Offset	A	B	C	Product Code
	75 x 75	300 (12")	82	310	305	RW33/AO/12
	"	525 (21")	82	390	533	RW33/AO/21
	"	750 (30")	82	470	762	RW33/AO/30
	100 x 75	300 (12")	82	310	305	RW43/AO/12
	"	525 (21")	82	390	533	RW43/AO/21
	"	750 (30")	82	470	762	RW43/AO/30
	100 x 100	300 (12")	82	345	305	RW44/AO/12
	"	525 (21")	82	439	533	RW44/AO/21
	"	750 (30")	82	534	762	RW44/AO/30

Note: The order code for 112.5° side offsets should be suffixed with /L for left hand or /R for right hand discharge

## Shoes Front with Ears

	Pipe Size	A	B	Product Code
	75 x 75	82	106	RW33/SH
	100 x 75	82	106	RW43/SH
	100 x 100	82	148	RW44/SH

Note: The codes given above are for shoes with ears. For shoes without ears add suffix /NE




# Heritage - Square and Rectangular Pipes and Fittings

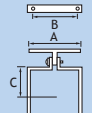
## Standard Base Clips

	Pipe Size	A	B	C	Product Code
	75 x 75	134	109	52	RW33/PC
	100 x 75	163	138	54	RW43/PC
	100 x 100	163	138	67	RW44/PC

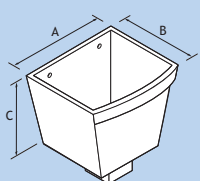
## Extended Base Clips

	Pipe Size	A	B	C	Product Code
	75 x 75	87	47	290 max	RW33/EX/PC
	100 x 75	87	47	292 max	RW43/EX/PC
	100 x 100	87	47	305 max	RW44/EX/PC

## Small Base Clips

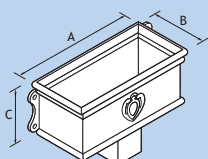
	Pipe Size	A	B	C	Product Code
	75 x 75	87	47	78	RW33/SB/PC
	100 x 75	87	47	80	RW43/SB/PC
	100 x 100	87	47	94	RW44/SB/PC

## Rectangular Rainwater Heads

	Pipe Size	A	B	C	Product Code
	75 x 75	258	190	178	RW33/RH
	100 x 75	258	190	178	RW43/RH
	100 x 100	258	190	178	RW44/RH

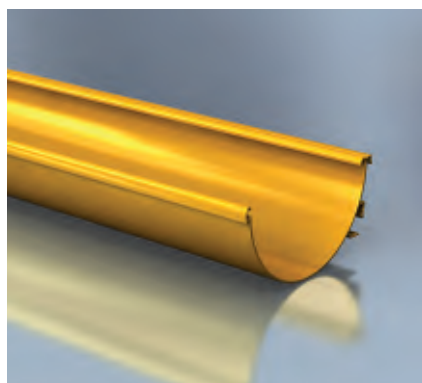
Note: Designed to fit Heritage socketed aluminium pipes. Add suffix /F to product code to fit Flushjoint or Guardian pipes

## Ornamental Rainwater Heads

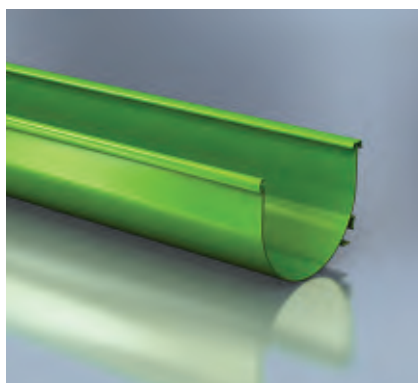
	Pipe Size	A	B	C	Product Code
	75 x 75	410	186	178	RWOH/33
	100 x 75	410	186	178	RWOH/43
	100 x 100	410	186	178	RWOH/44

Note: Designed to fit Heritage socketed aluminium pipes. Add suffix /F to product code to fit Flushjoint or Guardian pipes

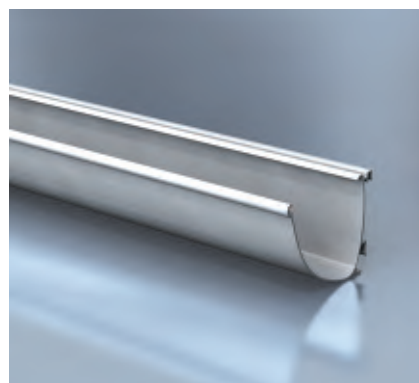
# Aqualine - Extruded Aluminium Gutter Systems



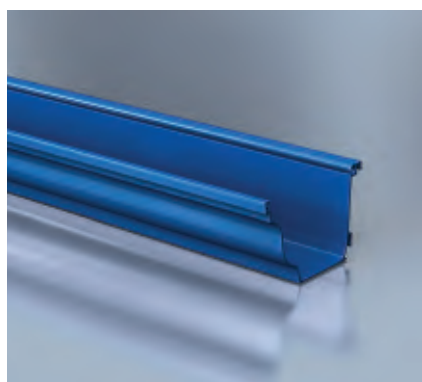
Aqualine - Half Round Gutter



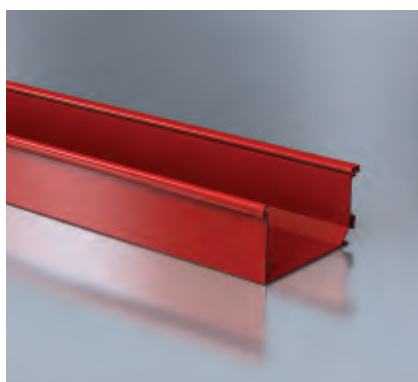
Aqualine - Deep Run Gutter



Aqualine - Modern Gutter



Aqualine - Moulded Gutter



Aqualine - Box Gutter



# Aqualine - Extruded Aluminium Gutter Systems

Aqualine provides a compact and efficient rainwater system that significantly enhances and complements the appearance and architectural character of the building. A choice of 5 standard profiles is available with secret fix bracketry and all weather 'dry' jointing, with full provision for thermal movement.

## Applications

- Provides smooth lines and intricate detailing to contemporary designed buildings
- High flow capacity for enhanced performance
- Suited to both flush and projecting eaves applications

## Features & Performance

- 5 gutter profiles available in 3 metre lengths, in a choice of sizes
- Designed to fully accommodate thermal movement at every joint
- Lightweight, durable and non-corrodible
- Life expectancy of aluminium: 40 years (rural/suburban areas); up to 25 years (industrial/marine areas)
- Easy to handle and fix
- Aqualine is patented and is also 'Design Registered'
- Aluminium is 100% recyclable

## Colours & Finishes

- BBA approved polyester powder coatings, factory applied at Alumasc
- 16 standard colours with additional BS or RAL colours available to special order
- Also available in plain mill finish for on-site painting

## Manufacture

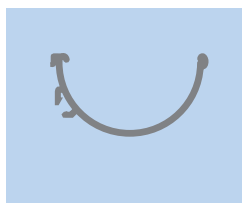
- UK manufactured
- Based on aluminium extrusions to BS 1474: 1972, material 6063, T6

## Installation & Fixing

- Concealed site fixing and jointing for a clean external appearance
- Once support brackets have been fixed to the building fabric all remaining assembly is by simple clip fix
- Joints are dry sealed using internal unions secured by sliding lock bars
- Minimal maintenance requirements

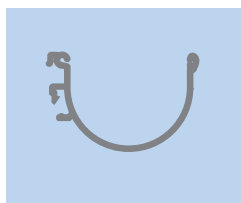


## Gutter Profiles & Sizes



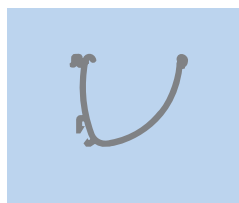
Half Round Gutter

100 x 50mm  
120 x 60mm  
150 x 75mm



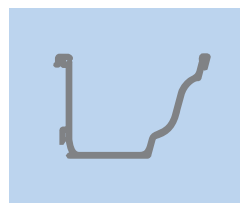
Deep Run Gutter

110 x 85mm



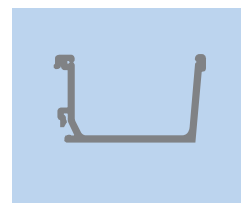
Modern Gutter

100 x 85mm  
150 x 120mm



Moulded Gutter

140 x 100mm  
160 x 100mm



Box Gutter

120 x 80mm  
140 x 100mm  
160 x 100mm

# Aqualine - Half Round Gutters and Fittings



Aqualine Half Round Gutters are available in 3 sizes and in standard 3m gutter lengths, together with a complete range of fittings. A contemporary profile with clean lines that fits well into virtually any design aesthetic. Factory finished in a choice of coloured BBA certificated powder coatings.

Notes: All dimensions are in mm unless shown otherwise.  
Gutter sizes shown are nominal.

## Gutter Assemblies

	Gutter Size	Gutter Length	A	B	T	Product Code
	100 x 50	3000mm	117	60	3	EHR10/3MA
	120 x 60	"	140	70	3	EHR12/3MA
	150 x 75	"	170	85	3	EHR15/3MA
Note: Gutter Assemblies are complete 3 metre assemblies including Gutter length, Union Clips, Brackets and Slide Locks T = Gutter Thickness (nominal)						

## Union Clip Assemblies

	Gutter Size	A	Product Code
	100 x 50	76	EHR10/UCA
	120 x 60	76	EHR12/UCA
	150 x 75	76	EHR15/UCA
Note: Gutter Assemblies are supplied with Union Clips and Brackets included. The codes in the table are for additional items, ordered as extras Union Clip Assemblies include Union Clips and Slide Locks			

## Brackets

	Gutter Size	A	B	Product Code
	100 x 50	40	70	EHR10/FB
	120 x 60	40	70	EHR12/FB
	150 x 75	40	80	EHR15/FB
Note: Gutter Assemblies are supplied with Union Clips and Brackets included. The codes in the table are for additional items, ordered as extras				

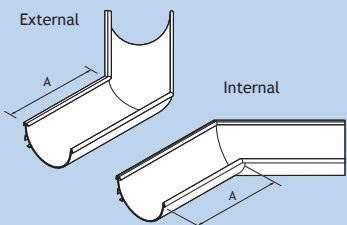
## 90° Angle Assemblies

	Gutter Size	Type	A	Product Code
	100 x 50	External	200	EHR10/EA90A
	120 x 60	"	200	EHR12/EA90A
	150 x 75	"	200	EHR15/EA90A
	100 x 50	Internal	200	EHR10/IA90A
	120 x 60	"	200	EHR12/IA90A
	150 x 75	"	200	EHR15/IA90A
Note: Union Clip Assemblies include Union Clips and Slide Locks				



# Aqualine - Half Round Gutters and Fittings

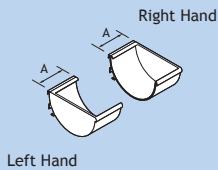
## 135° Angle Assemblies

	Gutter Size	Type	A	Product Code
	100 x 50	External	200	EHR10/EA13A
	120 x 60	"	200	EHR12/EA13A
	150 x 75	"	200	EHR15/EA13A
	100 x 50	Internal	200	EHR10/IA13A
	120 x 60	"	200	EHR12/IA13A
	150 x 75	"	200	EHR15/IA13A
Note: Union Clip Assemblies include Union Clips and Slide Locks				

## Running Outlet Assemblies

	Gutter Size	Pipe Size	A	Product Code
	100 x 50	63 dia	300	EHR10/RO25A
	120 x 60	"	300	EHR12/RO25A
	150 x 75	"	300	EHR15/RO25A
	100 x 50	75 dia	300	EHR10/RO30A
	120 x 60	"	300	EHR12/RO30A
	150 x 75	"	300	EHR15/RO30A
	100 x 75	100 dia	300	EHR15/RO40A
	100 x 50	75 x 75	300	EHR10/SO33A
	120 x 60	"	300	EHR12/SO33A
	150 x 75	"	300	EHR15/SO33A
	100 x 50	100 x 75	300	EHR10/SO43A
	120 x 60	"	300	EHR12/SO43A
	150 x 75	"	300	EHR15/SO43A
	150 x 75	100 x 100	300	EHR15/SO44A
Note: A choice of three pipe systems is available. Product codes above denote that running outlets fit to Heritage socketed aluminium pipes. Add suffix /F to product code to fit Flushjoint or Guardian pipes Union Clip Assemblies include Union Clips and Slide Locks				

## Stop-End Assemblies

	Gutter Size	Type	A	Product Code
	100 x 50	Left Hand	50	EHR10/SELHA
	120 x 60	"	50	EHR12/SELHA
	150 x 75	"	50	EHR15/SELHA
	100 x 50	Right Hand	50	EHR10/SERHA
	120 x 60	"	50	EHR12/SERHA
	150 x 75	"	50	EHR15/SERHA
Note: Union Clip Assemblies include Union Clips and Slide Locks				

## Starter Pack (required with each order)

Includes: P80 joint/seal lubricant. 2 x jointing tool. 10 x spare lock bars. 20 x spare No 12 screws. 8 x spare seal strips. 20 x shims.	Gutter Size	Product Code
	100 x 50	EHR10/START
	120 x 60	EHR12/START
	150 x 75	EHR15/START

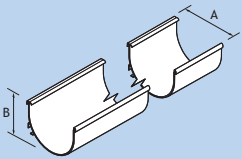
# Aqualine - Deep Run Gutters and Fittings



Aqualine Deep Run Gutters combine the clean lines of a modern half round gutter with high capacity and extra performance. Available in 1 size and in standard 3m gutter lengths, together with a complete range of fittings. Factory finished in a choice of coloured BBA certificated powder coatings.

Notes: All dimensions are in mm unless shown otherwise.  
Gutter sizes shown are nominal.

## Gutter Assemblies

	Gutter Size	Gutter Length	A	B	T	Product Code
	110 x 85	3000mm	137	88	3	EDR11/3MA
Note: Gutter Assemblies are complete 3 metre assemblies including Gutter length, Union Clips, Brackets and Slide Locks T = Gutter Thickness (nominal)						

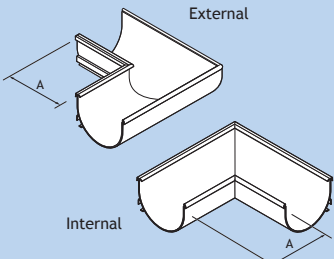
## Union Clip Assemblies

	Gutter Size	A	Product Code
	110 x 85	76	EDR11/UCA
Note: Gutter Assemblies are supplied with Union Clips and Brackets included. The codes in the table are for additional items, ordered as extras Union Clip Assemblies include Union Clips and Slide Locks			

## Brackets

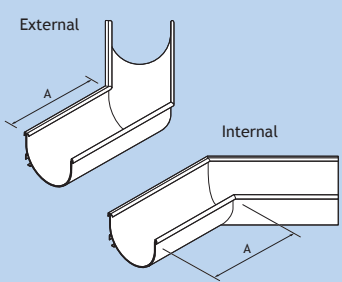
	Gutter Size	A	B	Product Code
	110 x 85	40	80	EDR11/FB
Note: Gutter Assemblies are supplied with Union Clips and Brackets included. The codes in the table are for additional items, ordered as extras				

## 90° Angle Assemblies

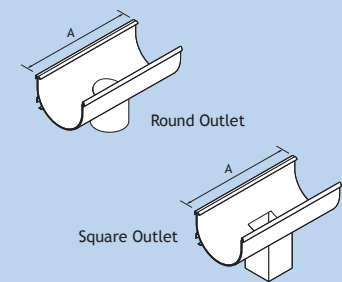
	Gutter Size	Type	A	Product Code
	110 x 85	External	200	EDR11/EA90A
	110 x 85	Internal	200	EDR11/IA90A
Note: Union Clip Assemblies include Union Clips and Slide Locks				

# Aqualine - Deep Run Gutters and Fittings

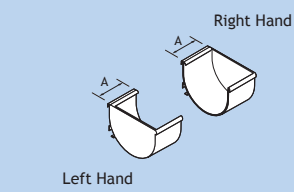
## 135° Angle Assemblies

	Gutter Size	Type	A	Product Code
	110 x 85	External	200	EDR11/EA13A
	110 x 85	Internal	200	EDR11/IA13A
Note: Union Clip Assemblies include Union Clips and Slide Locks				

## Running Outlet Assemblies

	Gutter Size	Pipe Size	A	Product Code
	110 x 85	63 dia	300	EDR11/RO25A
	110 x 85	75 dia	300	EDR11/RO30A
	110 x 85	100 dia	300	EDR11/RO40A
	110 x 85	75 x 75	300	EDR11/SO33A
	110 x 85	100 x 75	300	EDR11/SO43A
	110 x 85	100 x 100	300	EDR11/SO44A
Note: A choice of three pipe systems is available. Product codes above denote that running outlets fit to Heritage socketed aluminium pipes. Add suffix /F to product code to fit Flushjoint or Guardian pipes Union Clip Assemblies include Union Clips and Slide Locks				

## Stop-End Assemblies

	Gutter Size	Type	A	Product Code
	110 x 85	Left Hand	50	EDR11/SELHA
	110 x 85	Right Hand	50	EDR11/SERHA
Note: Union Clip Assemblies include Union Clips and Slide Locks				

## Starter Pack (required with each order)

Includes: P80 joint/seal lubricant. 2 x jointing tool. 10 x spare lock bars. 20 x spare No 12 screws. 8 x spare seal strips. 20 x shims.	Gutter Size	Product Code
	110 x 85	EDR11/START

# Aqualine - Modern Gutters and Fittings



Aqualine Modern Gutters are available in 2 sizes and in standard 3m gutter lengths, together with a complete range of fittings. Sophisticated contemporary appearance for striking visual detail at the roofline. Factory finished in a choice of coloured BBA certificated powder coatings.

Notes: All dimensions are in mm unless shown otherwise.  
Gutter sizes shown are nominal.

## Gutter Assemblies

	Gutter Size	Gutter Length	A	B	T	Product Code
	100 x 85	3000mm	122	104	3	EAQ10/3MA
	150 x 120	"	170	135	3	EAQ15/3MA

Note: Gutter Assemblies are complete 3 metre assemblies including Gutter length, Union Clips, Brackets and Slide Locks  
T = Gutter Thickness (nominal)

## Union Clip Assemblies

	Gutter Size	A	Product Code
	100 x 85	76	EAQ10/UCA
	150 x 120	76	EAQ15/UCA

Note: Gutter Assemblies are supplied with Union Clips and Brackets included. The codes in the table are for additional items, ordered as extras  
Union Clip Assemblies include Union Clips and Slide Locks

## Brackets

	Gutter Size	A	B	Product Code
	100 x 85	40	92	EAQ10/FB
	150 x 120	40	88	EAQ15/FB

Note: Gutter Assemblies are supplied with Union Clips and Brackets included. The codes in the table are for additional items, ordered as extras

## 90° Angle Assemblies

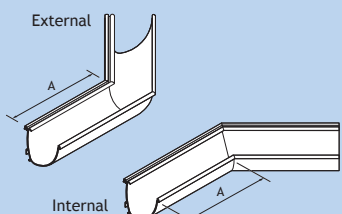
	Gutter Size	Type	A	Product Code
	100 x 85	External	200	EAQ10/EA90A
	150 x 120	"	200	EAQ15/EA90A
	100 x 85	Internal	200	EAQ10/IA90A
	150 x 120	"	200	EAQ15/IA90A

Note: Union Clip Assemblies include Union Clips and Slide Locks

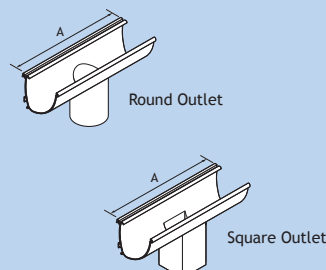


# Aqualine - Modern Gutters and Fittings

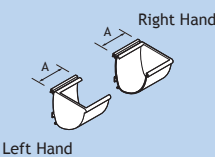
## 135° Angle Assemblies

	Gutter Size	Type	A	Product Code
	100 x 85	External	200	EAQ10/EA13A
	150 x 120	"	200	EAQ15/EA13A
	100 x 85	Internal	200	EAQ10/IA13A
	150 x 120	"	200	EAQ15/IA13A
Note: Union Clip Assemblies include Union Clips and Slide Locks				

## Running Outlets Assemblies

	Gutter Size	Pipe Size	A	Product Code
	100 x 85	63 dia	300	EAQ10/RO25A
	150 x 120	"	300	EAQ15/RO25A
	100 x 85	75 dia	300	EAQ10/RO30A
	150 x 120	"	300	EAQ15/RO30A
	150 x 120	100 dia	300	EAQ15/RO40A
	100 x 85	75 x 75	300	EAQ10/SO33A
	150 x 120	"	300	EAQ15/SO33A
	100 x 85	100 x 75	300	EAQ10/SO43A
	150 x 120	"	300	EAQ15/SO43A
	150 x 120	100 x 100	300	EAQ15/SO44A
Note: A choice of three pipe systems is available. Product codes above denote that running outlets fit to Heritage socketed aluminium pipes. Add suffix /F to product code to fit Flushjoint or Guardian pipes Union Clip Assemblies include Union Clips and Slide Locks				

## Stop-End Assemblies

	Gutter Size	Type	A	Product Code
	100 x 85	Left Hand	50	EAQ10/SELHA
	150 x 120	"	50	EAQ15/SELHA
	100 x 85	Right Hand	50	EAQ10/SERHA
	150 x 120	"	50	EAQ15/SERHA
Note: Union Clip Assemblies include Union Clips and Slide Locks				

## Starter Pack (required with each order)

Includes: P80 joint/seal lubricant. 2 x jointing tool. 10 x spare lock bars. 20 x spare No 12 screws. 8 x spare seal strips. 20 x shims.	Gutter Size	Product Code
	100 x 85	EAQ10/START
	150 x 120	EAQ15/START

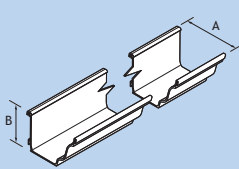
# Aqualine - Moulded Gutters and Fittings



Aqualine Moulded Gutters are available in 2 sizes and in standard 3m gutter lengths, together with a complete range of fittings. A classic moulded profile in a state-of-the-art contemporary gutter system. Factory finished in a choice of coloured BBA certificated powder coatings.

Notes: All dimensions are in mm unless shown otherwise.  
Gutter sizes shown are nominal.

## Gutter Assemblies

	Gutter Size	Gutter Length	A	B	T	Product Code
	140 x 100	3000mm	165	103	3	EMG14/3MA
	160 x 100	"	187	103	3	EMG16/3MA


Note: Gutter Assemblies are complete 3 metre assemblies including Gutter length, Union Clips, Brackets and Slide Locks  
T = Gutter Thickness (nominal)

## Union Clip Assemblies

	Gutter Size	A	Product Code
	140 x 100	76	EMG14/UCA
	160 x 100	76	EMG16/UCA

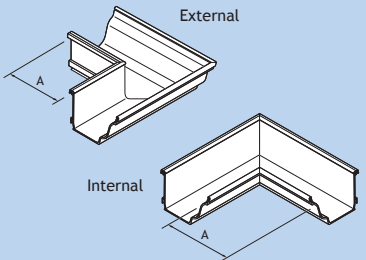
Note: Gutter Assemblies are supplied with Union Clips and Brackets included. The codes in the table are for additional items, ordered as extras  
Union Clip Assemblies include Union Clips and Slide Locks

## Brackets

	Gutter Size	A	B	Product Code
	140 x 100	40	92	EMG14/FB
	160 x 100	40	92	EMG16/FB

Note: Gutter Assemblies are supplied with Union Clips and Brackets included. The codes in the table are for additional items, ordered as extras

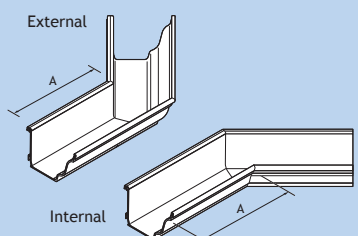
## 90° Angle Assemblies

	Gutter Size	Type	A	Product Code
	140 x 100	External	200	EMG14/EA90A
	160 x 100	"	200	EMG16/EA90A
	140 x 100	Internal	200	EMG14/IA90A
	160 x 100	"	200	EMG16/IA90A

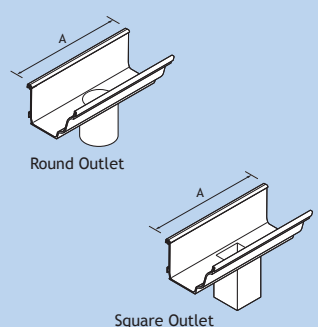
Note: Union Clip Assemblies include Union Clips and Slide Locks

# Aqualine - Moulded Gutters and Fittings

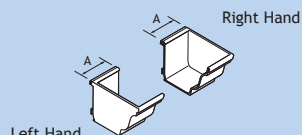
## 135° Angle Assemblies

	Gutter Size	Type	A	Product Code
	140 x 100	External	200	EMG14/EA13A
	160 x 100	"	200	EMG16/EA13A
	140 x 100	Internal	200	EMG14/IA13A
	160 x 100	"	200	EMG16/IA13A
Note: Union Clip Assemblies include Union Clips and Slide Locks				

## Running Outlet Assemblies

	Gutter Size	Pipe Size	A	Product Code
	140 x 100	63 dia	300	EMG14/RO25A
	160 x 100	"	300	EMG16/RO25A
	140 x 100	75 dia	300	EMG14/RO30A
	160 x 100	"	300	EMG16/RO30A
	160 x 100	100 dia	300	EMG16/RO40A
	140 x 100	75 x 75	300	EMG14/SO33A
	160 x 100	"	300	EMG16/SO33A
	140 x 100	100 x 75	300	EMG14/SO43A
	160 x 100	"	300	EMG16/SO43A
	160 x 100	100 x 100	300	EMG16/SO44A
Note: A choice of three pipe systems is available. Product codes above denote that running outlets fit to Heritage socketed aluminium pipes. Add suffix /F to product code to fit Flushjoint or Guardian pipes Union Clip Assemblies include Union Clips and Slide Locks				

## Stop-End Assemblies

	Gutter Size	Type	A	Product Code
	140 x 100	Left Hand	50	EMG14/SELHA
	160 x 100	"	50	EMG16/SELHA
	140 x 100	Right Hand	50	EMG14/SERHA
	160 x 100	"	50	EMG16/SERHA
Note: Union Clip Assemblies include Union Clips and Slide Locks				

## Starter Pack (required with each order)

Includes: P80 joint/seal lubricant. 2 x jointing tool. 10 x spare lock bars. 20 x spare No 12 screws. 8 x spare seal strips. 20 x shims.	Gutter Size	Product Code
	140 x 100	EMG14/START
	160 x 100	EMG16/START

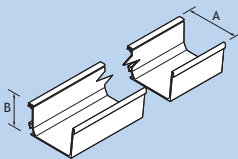
# Aqualine - Box Gutters and Fittings




Aqualine Box Gutters are available in 3 sizes and in standard 3m gutter lengths, together with a complete range of fittings. Pronounced angular lines make a strong visual statement. Factory finished in a choice of coloured BBA certificated powder coatings.

Notes: All dimensions are in mm unless shown otherwise.  
Gutter sizes shown are nominal.


## Gutter Assemblies

	Gutter Size	Gutter Length	A	B	T	Product Code
	120 x 80	3000mm	145	83	3	EBG12/3MA
	140 x 100	"	162	103	3	EBG14/3MA
	160 x 100	"	183	103	3	EBG16/3MA
Note: Gutter Assemblies are complete 3 metre assemblies including Gutter length, Union Clips, Brackets and Slide Locks T = Gutter Thickness (nominal)						

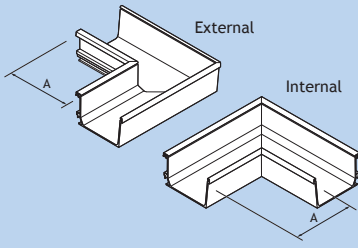
## Union Clip Assemblies

	Gutter Size	A	Product Code
	120 x 80	76	EBG12/UCA
	140 x 100	76	EBG14/UCA
	160 x 100	76	EBG16/UCA
Note: Gutter Assemblies are supplied with Union Clips and Brackets included. The codes in the table are for additional items, ordered as extras Union Clip Assemblies include Union Clips and Slide Locks			

## Brackets

	Gutter Size	A	B	Product Code
	120 x 80	40	88	EBG12/FB
	140 x 100	40	92	EBG14/FB
	160 x 100	40	92	EBG16/FB
Note: Gutter Assemblies are supplied with Union Clips and Brackets included. The codes in the table are for additional items, ordered as extras				

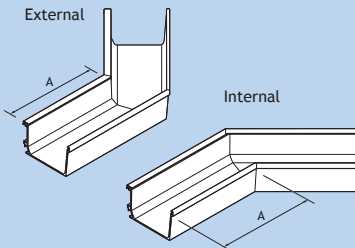
## 90° Angle Assemblies

	Gutter Size	Type	A	Product Code
	120 x 80	External	200	EBG12/EA90A
	140 x 100	"	200	EBG14/EA90A
	160 x 100	"	200	EBG16/EA90A
	120 x 80	Internal	200	EBG12/IA90A
	140 x 100	"	200	EBG14/IA90A
	160 x 100	"	200	EBG16/IA90A
Note: Union Clip Assemblies include Union Clips and Slide Locks				

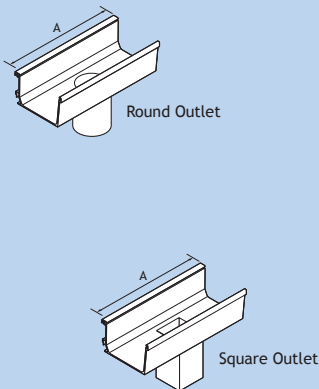


# Aqualine - Box Gutters and Fittings

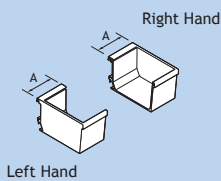
## 135° Angle Assemblies

	Gutter Size	Type	A	Product Code
	120 x 80	External	200	EBG12/EA13A
	140 x 100	"	200	EBG14/EA13A
	160 x 100	"	200	EBG16/EA13A
	120 x 80	Internal	200	EBG12/IA13A
	140 x 100	"	200	EBG14/IA13A
	160 x 100	"	200	EBG16/IA13A
Note: Union Clip Assemblies include Union Clips and Slide Locks				

## Running Outlet Assemblies

	Gutter Size	Pipe Size	A	Product Code
	120 x 80	63 dia	300	EBG12/RO25A
	140 x 100	"	300	EBG14/RO25A
	160 x 100	"	300	EBG16/RO25A
	120 x 80	75 dia	300	EBG12/RO30A
	140 x 100	"	300	EBG14/RO30A
	160 x 100	"	300	EBG16/RO30A
	140 x 100	100 dia	300	EBG14/RO40A
	160 x 100	"	300	EBG16/RO40A
	120 x 80	75 x 75	300	EBG12/SO33A
	140 x 100	"	300	EBG14/SO33A
	160 x 100	"	300	EBG16/SO33A
	120 x 80	100 x 75	300	EBG12/SO43A
	140 x 100	"	300	EBG14/SO43A
	160 x 100	"	300	EBG16/SO43A
	140 x 100	100 x 100	300	EBG14/SO44A
	160 x 100		300	EBG16/SO44A
Note: A choice of three pipe systems is available. Product codes above denote that running outlets fit to Heritage socketed aluminium pipes. Add suffix /F to product code to fit Flushjoint or Guardian pipes Union Clip Assemblies include Union Clips and Slide Locks				

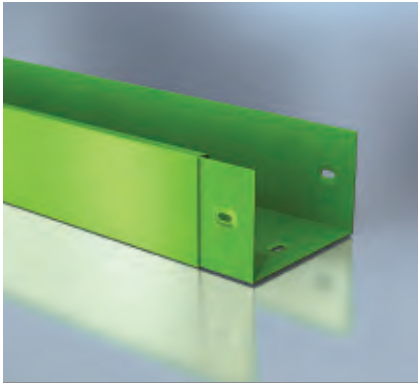
## Stop-End Assemblies

	Gutter Size		A	Product Code
	120 x 80	Left Hand	50	EBG12/SELHA
	140 x 100	"	50	EBG14/SELHA
	160 x 100	"	50	EBG16/SELHA
	120 x 80	Right Hand	50	EBG12/SERHA
	140 x 100	"	50	EBG14/SERHA
	160 x 100		50	EBG16/SERHA
Note: Union Clip Assemblies include Union Clips and Slide Locks				

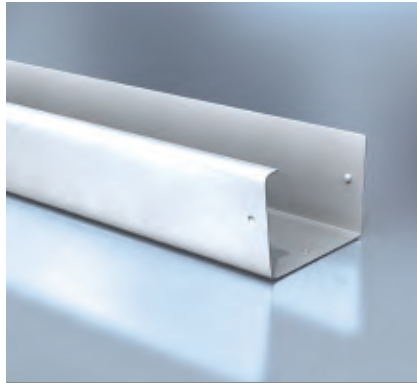
## Starter Pack (required with each order)

Includes: P80 joint/seal lubricant. 2 x jointing tool. 10 x spare lock bars. 20 x spare No 12 screws. 8 x spare seal strips. 20 x shims.	Gutter	Product Code
	120 x 80	EBG12/START
	140 x 100	EBG14/START
	160 x 100	EBG16/START

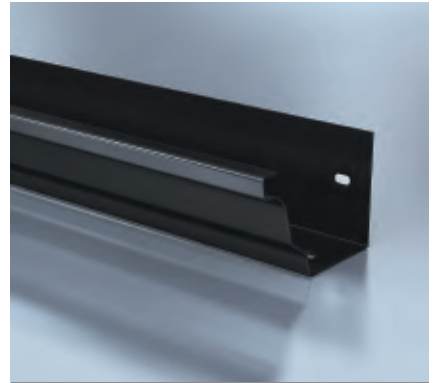
## GX - Pressed Aluminium Gutter Systems



GX - Joggle Gutter



GX - Smooth Gutter



GX - Moulded Gutter



# GX - Pressed Aluminium Gutter Systems

A robust and fully engineered box section gutter range designed for traditional wet jointing on site. GX is offered in three profiles in a choice of sizes and is especially suited to applications where maximum capacity gutters are required.

## Applications

- High capacity gutters for traditional or modern buildings
- Fully compatible with Alumasc's Skyline fascia/soffit system
- Can provide an all aluminium eaves/soffit solution
- Gutters can be exposed or concealed

## Features & Performance

- 3 gutter profiles available in 3 metre lengths, in a choice of sizes
- Designed to fully accommodate thermal movement at every joint
- Lightweight, durable and non-corrodible
- Life expectancy of aluminium: 40 years (rural/suburban areas); up to 25 years (industrial/marine areas)
- Easy to handle and fix
- BBA approved
- Aluminium is 100% recyclable

## Colours & Finishes

- BBA approved polyester powder coatings, factory applied at Alumasc
- 16 standard colours with additional BS or RAL colours available to special order
- Also available in plain mill finish for on-site painting

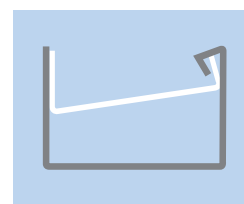
## Manufacture

- UK manufactured
- Gutter lengths, fittings and unions are pressed from various thicknesses of sheet aluminium (to BS EN 1462:1997, BS EN 612:1996 to BS EN 515:1993, BS EN 573:1995 and BS EN 485)

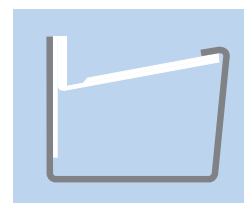
## Installation & Fixing

- Wet sealed and bolted joints - a simple, well proven method
- Simple screw fixing with bracketry, generally concealed after fixing
- GX Joggle is supported by top straps
- GX Smooth is designed for simple jointing for a sleek appearance, including no requirement for sole support brackets and visible screw fixing
- GX Moulded is wet jointed and is fixed directly to the building fabric
- Minimal maintenance requirements

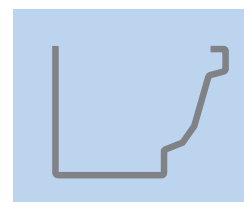
## Gutter Profiles & Sizes



**Joggle**  
100 x 75mm  
125 x 100mm  
150 x 100mm  
150 x 150mm  
200 x 150mm



**Smooth**  
120 x 75mm  
140 x 100mm  
170 x 125mm  
175 x 150mm  
225 x 150mm



**Moulded**  
113 x 75mm  
140 x 100mm  
160 x 100mm  
175 x 150mm  
200 x 150mm



# GX - Joggle Gutters and Fittings



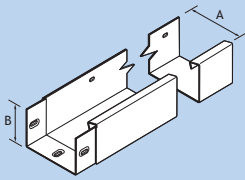
GX Joggle Gutters are available in 5 sizes, together with a complete range of fittings. The range comprises vertical sides, sharp angled bends, and a returned lip, plus top strap for increased strength and rigidity. Factory finished in a choice of coloured BBA certificated powder coatings.

Notes: All dimensions are in mm unless shown otherwise.

Gutter sizes shown are nominal.

Gutter Lengths are left hand spigot. All fittings are double spigot.

## Gutter Lengths

	Gutter Size	Gutter Length	A	B	T	Product Code
	100 x 75	3000mm	102	76	2	GXJ1/3MA
	125 x 100	"	127	102	2	GXJ2/3MA
	150 x 100	"	152	102	2	GXJ3/3MA
	150 x 150	"	152	152	2	GXJ4/3MA
	200 x 150	"	204	152	2	GXJ5/3MA
Note: T = gutter thickness (nominal) Gutter lengths are supplied complete with top strap and fixings						

## Top Straps

	Gutter Size	A	Product Code
	100 x 75	25	GXJ1/TS
	125 x 100	25	GXJ2/TS
	150 x 100	25	GXJ3/TS
	150 x 150	25	GXJ4/TS
	200 x 150	25	GXJ5/TS
Note: Gutters and fittings are supplied with top straps included. The codes in this table are for additional items, ordered as extras			

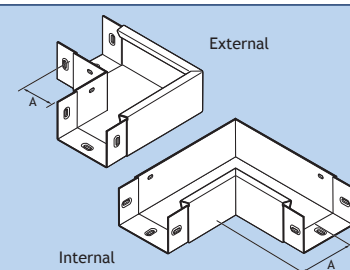
## Stop-Ends - Internal

	Gutter Size	Type	A	Product Code
	100 x 75	Left Hand	40	GXJ1/SELHA
	125 x 100	"	40	GXJ2/SELHA
	150 x 100	"	40	GXJ3/SELHA
	150 x 150	"	40	GXJ4/SELHA
	200 x 150	"	40	GXJ5/SELHA
	100 x 75	Right Hand	40	GXJ1/SERHA
	125 x 100	"	40	GXJ2/SERHA
	150 x 100	"	40	GXJ3/SERHA
	150 x 150	"	40	GXJ4/SERHA
	200 x 150	"	40	GXJ5/SERHA
Note: Stop-Ends are supplied complete with fixings				

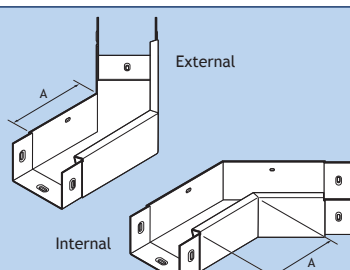


# GX - Joggle Gutters and Fittings

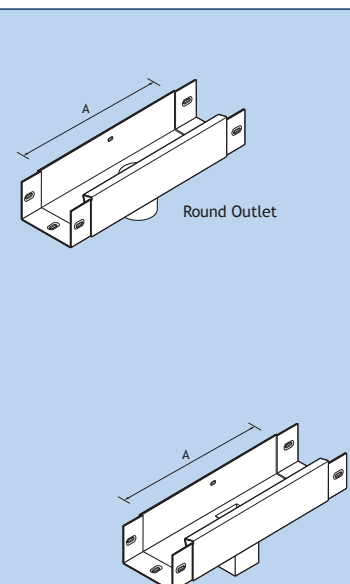
## 90° Angles

 <p>External</p> <p>Internal</p> <p>Note: Angles are supplied complete with top strap and fixings</p>	Gutter Size	Type	A	Product Code
	100 x 75	External	100	GXJ1/EA90A
	125 x 100	"	100	GXJ2/EA90A
	150 x 100	"	100	GXJ3/EA90A
	150 x 150	"	100	GXJ4/EA90A
	200 x 150	"	100	GXJ5/EA90A
	100 x 75	Internal	100	GXJ1/IA90A
	125 x 100	"	100	GXJ2/IA90A
	150 x 100	"	100	GXJ3/IA90A
	150 x 150	"	100	GXJ4/IA90A
	200 x 150	"	100	GXJ5/IA90A

## 135° Angles

 <p>External</p> <p>Internal</p> <p>Note: Angles are supplied complete with top strap and fixings</p>	Gutter Size	Type	A	Product Code
	100 x 75	External	100	GXJ1/EA135A
	125 x 100	"	100	GXJ2/EA135A
	150 x 100	"	100	GXJ3/EA135A
	150 x 150	"	100	GXJ4/EA135A
	200 x 150	"	100	GXJ5/EA135A
	100 x 75	Internal	100	GXJ1/IA135A
	125 x 100	"	100	GXJ2/IA135A
	150 x 100	"	100	GXJ3/IA135A
	150 x 150	"	100	GXJ4/IA135A
	200 x 150	"	100	GXJ5/IA135A

## Running Outlets - Standard

 <p>Round Outlet</p> <p>Square Outlet</p> <p>Note: A choice of three pipe systems is available. Product codes denote that running outlets fit to Heritage socketed aluminium pipes. Add suffix /F to product code to fit Flushjoint or Guardian pipes</p> <p>Running Outlets are supplied complete with top strap and fixings</p>	Gutter Size	Pipe Size	A	Product Code
	100 x 75	63 dia	300	GXJ1/RO25A
	125 x 100	"	300	GXJ2/RO25A
	150 x 100	"	300	GXJ3/RO25A
	150 x 150	"	300	GXJ4/RO25A
	200 x 150	"	300	GXJ5/RO25A
	100 x 75	75m dia	300	GXJ1/RO30A
	125 x 100	"	300	GXJ2/RO30A
	150 x 100	"	300	GXJ3/RO30A
	150 x 150	"	300	GXJ4/RO30A
	200 x 150	"	300	GXJ5/RO30A
	125 x 100	100 dia	300	GXJ2/RO40A
	150 x 100	"	300	GXJ3/RO40A
	150 x 150	"	300	GXJ4/RO40A
	200 x 150	"	300	GXJ5/RO40A
	100 x 75	75 x 75	300	GXJ1/SO33A
	125 x 100	"	300	GXJ2/SO33A
	150 x 100	"	300	GXJ3/SO33A
	150 x 150	"	300	GXJ4/SO33A
	200 x 150	"	300	GXJ5/SO33A
	100 x 75	100 x 75	300	GXJ1/SO43A
	125 x 100	"	300	GXJ2/SO43A
	150 x 100	"	300	GXJ3/SO43A
	150 x 150	"	300	GXJ4/SO43A
	200 x 150	"	300	GXJ5/SO43A
	125 x 100	100 x 100	300	GXJ2/SO44A
	150 x 100	"	300	GXJ3/SO44A
	150 x 150	"	300	GXJ4/SO44A
	200 x 150	"	300	GXJ5/SO44A

# GX - Smooth Gutters and Fittings

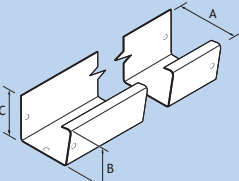


GX Smooth Gutters are available in 5 sizes, together with a complete range of fittings. The range comprises soft corner radii and an inclined front wall terminating to a radiused lip, and is directly fixing to the building fabric. Factory finished in a choice of coloured BBA certificated powder coatings.

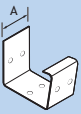
Notes: All dimensions are in mm unless shown otherwise.

Gutter sizes shown are nominal.


## Gutter Lengths

	Gutter Size	Gutter Length	A	B	C	T	Product Code
	120 x 75	3000mm	121	75	95	1.5	GXS1/3MA
	140 x 100	"	140	98	119	1.5	GXS2/3MA
	170 x 125	"	170	125	145	1.5	GXS3/3MA
	175 x 150	"	176	150	170	1.5	GXS4/3MA
	225 x 150	"	224	150	170	1.5	GXS5/3MA
Note: T = gutter thickness (nominal). Gutter lengths are supplied complete with union clip, bracket strap and fixings							

## Union Clips

	Gutter Size	A	Product Code
	120 x 75	76	GXS1/UCA
	140 x 100	76	GXS2/UCA
	170 x 125	76	GXS3/UCA
	175 x 150	76	GXS4/UCA
	225 x 150	76	GXS5/UCA
Note: Gutters & fittings are supplied with union clips included. The codes in this table are for additional items, ordered as extras			

## Bracket/Straps

	Gutter Size	A	Product Code
	120 x 75	110	GXS1/BRKA
	140 x 100	110	GXS2/BRKA
	170 x 125	110	GXS3/BRKA
	175 x 150	110	GXS4/BRKA
	225 x 150	110	GXS5/BRKA
Note: Gutters & fittings are supplied with bracket straps included. The codes in this table are for additional items, ordered as extras			

## Stop-Ends - Internal

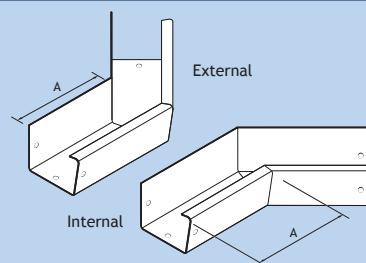
	Gutter Size	Type	A	Product Code
	120 x 75	Left Hand	100	GXS1/SELA
	140 x 100	"	100	GXS2/SELA
	170 x 125	"	100	GXS3/SELA
	175 x 150	"	100	GXS4/SELA
	225 x 150	"	100	GXS5/SELA
	120 x 75	Right Hand	100	GXS1/SERA
	140 x 100	"	100	GXS2/SERA
	170 x 125	"	100	GXS3/SERA
	175 x 150	"	100	GXS4/SERA
	225 x 150	"	100	GXS5/SERA
Note: Stop-Ends are supplied complete with union clip and fixings				

# GX - Smooth Gutters and Fittings

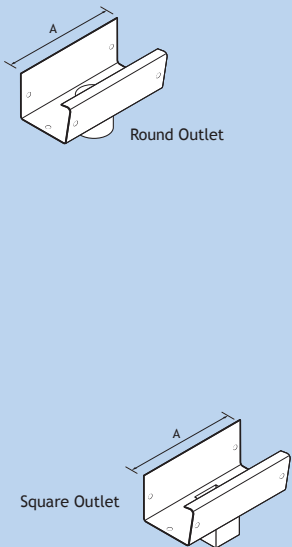
## 90° Angles

 <p>Note: Angles are supplied complete with union clip, bracket strap and fixings</p>	Gutter Size	Type	A	Product Code
	120 x 75	External	250	GXS1/EA90A
	140 x 100	"	250	GXS2/EA90A
	170 x 125	"	250	GXS3/EA90A
	175 x 150	"	250	GXS4/EA90A
	225 x 150	"	250	GXS5/EA90A
	120 x 75	Internal	250	GXS1/IA90A
	140 x 100	"	250	GXS2/IA90A
	170 x 125	"	250	GXS3/IA90A
	175 x 150	"	250	GXS4/IA90A
	225 x 150	"	250	GXS5/IA90A

## 135° Angles

 <p>Note: Angles are supplied complete with union clip, bracket strap and fixings</p>	Gutter Size	Type	A	Product Code
	120 x 75	External	250	GXS1/EA135A
	140 x 100	"	250	GXS2/EA135A
	170 x 125	"	250	GXS3/EA135A
	175 x 150	"	250	GXS4/EA135A
	225 x 150	"	250	GXS5/EA135A
	120 x 75	Internal	250	GXS1/IA135A
	140 x 100	"	250	GXS2/IA135A
	170 x 125	"	250	GXS3/IA135A
	175 x 150	"	250	GXS4/IA135A
	225 x 150	"	250	GXS5/IA135A

## Running Outlets - Standard

 <p>Note: A choice of three pipe systems is available. Product codes denote that running outlets fit to Heritage socketed aluminium pipes. Add suffix /F to product code to fit Flushjoint or Guardian pipes</p> <p>Running Outlets are supplied complete with union clip, bracket strap and fixings</p>	Gutter Size	Pipe Size	A	Product Code
	120 x 75	63 dia	500	GXS1/RO25A
	140 x 100	"	500	GXS2/RO25A
	170 x 125	"	500	GXS3/RO25A
	175 x 150	"	500	GXS4/RO25A
	225 x 150	"	500	GXS5/RO25A
	120 x 75	75 dia	500	GXS1/RO30A
	140 x 100	"	500	GXS2/RO30A
	170 x 125	"	500	GXS3/RO30A
	175 x 150	"	500	GXS4/RO30A
	225 x 150	"	500	GXS5/RO30A
	140 x 100	100 dia	500	GXS2/RO40A
	170 x 125	"	500	GXS3/RO40A
	175 x 150	"	500	GXS4/RO40A
	225 x 150	"	500	GXS5/RO40A
	120 x 75	75 X 75	500	GXS1/SO33A
	140 x 100	"	500	GXS2/SO33A
	170 x 125	"	500	GXS3/SO33A
	175 x 150	"	500	GXS4/SO33A
	225 x 150	"	500	GXS5/SO33A
	120 x 75	100 x 75	500	GXS1/SO43A
	140 x 100	"	500	GXS2/SO43A
	170 x 125	"	500	GXS3/SO43A
	175 x 150	"	500	GXS4/SO43A
	225 x 150	"	500	GXS5/SO43A
	140 x 100	100 x 100	500	GXS2/SO44A
	170 x 125	"	500	GXS3/SO44A
	175 x 150	"	500	GXS4/SO44A
	225 x 150	"	500	GXS5/SO44A

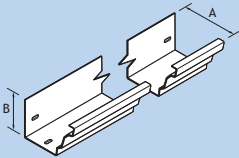
# GX - Moulded Gutters and Fittings



GX Moulded Gutters are available in 5 sizes, together with a complete range of fittings. In larger sizes the front wall is restrained by a top strap. The range is direct fixed to the building fabric. Factory finished in a choice of coloured BBA certificated powder coatings.

Notes: The GX Moulded range does not require brackets as it is direct fixed through the vertical back at pre-drilled, 600mm centre fixing holes.  
All dimensions are in mm unless shown otherwise.  
Gutter sizes shown are nominal.

## Gutter Lengths

	Gutter Size	Gutter Length	A	B	T	Product Code
	113 x 75	3000m	113	76	2	GXM1/3MA
	140 x 100	"	139	102	2	GXM2/3MA
	160 x 100	"	162	102	2	GXM3/3MA
	175 x 150	"	175	152	3	GXM4/3MA
	200 x 150	"	207	152	3	GXM5/3MA
Note: T = gutter thickness (nominal) Gutter lengths are supplied complete with union clip and fixings						

## Union Clips

	Gutter Size	A	Product Code
	113 x 75	76	GXM1/UCA
	140 x 100	76	GXM2/UCA
	160 x 100	76	GXM3/UCA
	175 x 150	76	GXM4/UCA
	200 x 150	76	GXM5/UCA
Note: Gutters and fittings are supplied with union clips included. The codes in this table are for additional items, ordered as extras			

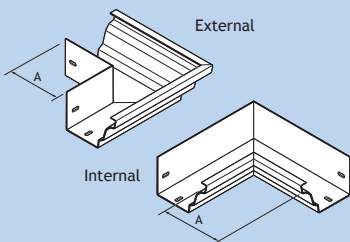
## Stop-Ends - Internal

	Gutter Size	Type	A	Product Code
	113 x 75	Left Hand	40	GXM1/SELA
	140 x 100	"	40	GXM2/SELA
	160 x 100	"	40	GXM3/SELA
	175 x 150	"	40	GXM4/SELA
	200 x 150	"	40	GXM5/SELA
	113 x 75	Right Hand	40	GXM1/SERA
	140 x 100	"	40	GXM2/SERA
	160 x 100	"	40	GXM3/SERA
	175 x 150	"	40	GXM4/SERA
	200 x 150	"	40	GXM5/SERA
	Note: Stop-Ends are supplied complete with fixings			

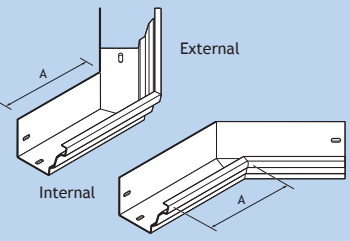


# GX - Moulded Gutters and Fittings

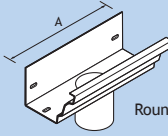
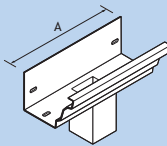
## 90° Angles

 <p>Note: Angles are supplied complete with union clip and fixings</p>	Gutter Size	Type	A	Product Code
	113 x 75	External	150	GXM1/EA90A
	140 x 100	"	150	GXM2/EA90A
	160 x 100	"	150	GXM3/EA90A
	175 x 150	"	150	GXM4/EA90A
	200 x 150	"	150	GXM5/EA90A
	113 x 75	Internal	150	GXM1/IA90A
	140 x 100	"	150	GXM2/IA90A
	160 x 100	"	150	GXM3/IA90A
	175 x 150	"	150	GXM4/IA90A
	200 x 150	"	150	GXM5/IA90A

## 135° Angles

 <p>Note: Angles are supplied complete with union clip and fixings</p>	Gutter Size	Type	A	Product Code
	113 x 75	External	150	GXM1/EA135A
	140 x 100	"	150	GXM2/EA135A
	160 x 100	"	150	GXM3/EA135A
	175 x 150	"	150	GXM4/EA135A
	200 x 150	"	150	GXM5/EA135A
	113 x 75	Internal	150	GXM1/IA135A
	140 x 100	"	150	GXM2/IA135A
	160 x 100	"	150	GXM3/IA135A
	175 x 150	"	150	GXM4/IA135A
	200 x 150	"	150	GXM5/IA135A

## Running Outlets - Standard

 <p>Round Outlet</p>  <p>Square Outlet</p> <p>Note: A choice of three pipe systems is available. Product codes denote that running outlets fit to Heritage socketed aluminium pipes. Add suffix /F to product code to fit Flushjoint or Guardian pipes</p> <p>Running Outlets are supplied complete with union clip and fixings</p>	Gutter Size	Pipe Size	A	Product Code
	113 x 75	63 dia	300	GXM1/RO25A
	140 x 100	"	300	GXM2/RO25A
	160 x 100	"	300	GXM3/RO25A
	175 x 150	"	300	GXM4/RO25A
	200 x 150	"	300	GXM5/RO25A
	113 x 75	75 dia	300	GXM1/RO30A
	140 x 100	"	300	GXM2/RO30A
	160 x 100	"	300	GXM3/RO30A
	175 x 150	"	300	GXM4/RO30A
	200 x 150	"	300	GXM5/RO30A
	140 x 100	100 dia	300	GXM2/RO40A
	160 x 100	"	300	GXM3/RO40A
	175 x 150	"	300	GXM4/RO40A
	200 x 150	"	300	GXM5/RO40A
	113 x 75	75 x 75	300	GXM1/SO33A
	140 x 100	"	300	GXM2/SO33A
	160 x 100	"	300	GXM3/SO33A
	175 x 150	"	300	GXM4/SO33A
	200 x 150	"	300	GXM5/SO33A
	113 x 75	100 x 75	300	GXM1/SO43A
	140 x 100	"	300	GXM2/SO43A
	160 x 100	"	300	GXM3/SO43A
	175 x 150	"	300	GXM4/SO43A
	200 x 150	"	300	GXM5/SO43A
	140 x 100	100 x 100	300	GXM2/SO44A
	160 x 100	"	300	GXM3/SO44A
	175 x 150	"	300	GXM4/SO44A
	200 x 150	"	300	GXM5/SO44A

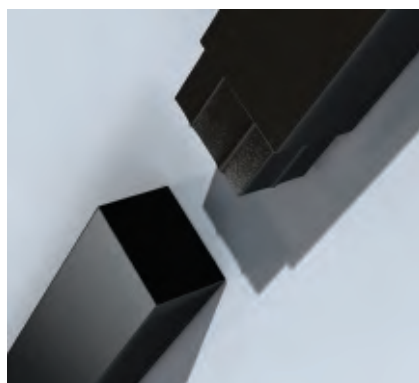
# Flushjoint - Aluminium Downpipe System



Flushjoint - Circular Pipe



Flushjoint - Square Pipe



Flushjoint - Rectangular Pipe



# Flushjoint - Aluminium Downpipe System

A contemporary range of extruded aluminium downpipes. The Flushjoint system is based on concealed spigots which give a smooth, clean appearance that complements modern building design. The pipes are mounted on brackets to stand clear of the structure.

## Applications

- Contemporary pipework system suitable for new build and refurbishment projects
- Compatible with Heritage, Aqualine and GX gutter systems
- Flushjoint is not designed for use in underground drainage or as part of a soil or waste system

## Features & Performance

- Choice of circular, square and rectangular pipes
- Hidden spigot jointing arrangement used to achieve completely smooth external appearance
- Material hardness and fixing mechanisms give excellent rigidity and high impact resistance
- Lightweight, durable and non-corrodible
- Life expectancy of aluminium: 40 years (rural/suburban areas); up to 25 years (industrial/marine areas)
- Easy to handle and fix
- Aluminium is 100% recyclable

## Colours & Finishes

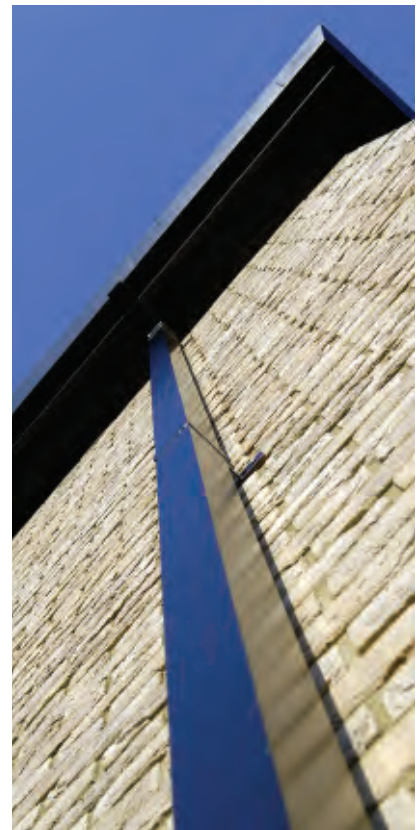
- BBA approved polyester powder coatings, factory applied at Alumasc
- 16 standard colours with additional BS or RAL colours available to special order
- Also available in plain mill finish for on-site painting

## Manufacture

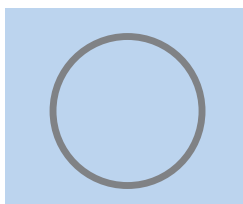
- UK manufactured
- Made from extruded aluminium to BS EN 12020:2001, BS EN 515:1993, BS EN 573:1995 and BS EN 755, from grade 6063 T6 alloy

## Installation & Fixing

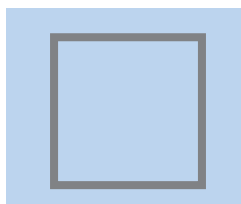
- Flushjoint pipework is built from the gutter downwards starting with the offsets and bends
- A choice of brackets are available to give varying projections
- Brackets secure pipework with minimum visual intrusion
- Minimal maintenance requirements



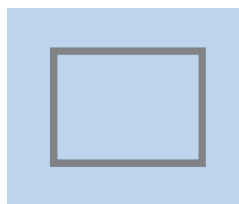
## Pipe Profiles & Sizes



**Circular Pipe**  
63mm dia  
75mm dia  
100mm dia  
150mm dia



**Square Pipe**  
75 x 75 mm  
100 x 100 mm



**Rectangular Pipe**  
100 x 75 mm

# Flushjoint - Circular Pipes and Fittings



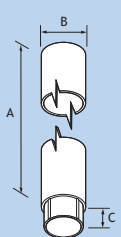
Flushjoint Circular Pipes are available in 4 sizes and 2 pipe lengths, together with a complete range of fittings. Flush spigot pipe connection for virtually undetectable joints. Factory finished in a choice of coloured BBA certificated powder coatings.

Notes: Flushjoint can be used with any Alumasc Gutter System, providing the girth of the gutter is sufficient to accommodate the cross section area of the pipe. Running outlets are made to order according to choice of gutter and project requirements.

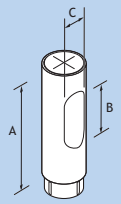
All dimensions are in mm unless shown otherwise.

Pipe sizes shown are nominal.

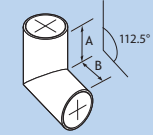
## Pipes

	Pipe Size	Pipe Length (A)	B	C	Product Code
	63 dia	3000mm	63	40	CP25/3MA
	"	2000mm	63	40	CP25/2MA
	75 dia	3000mm	76.5	40	CP30/3MA
	"	2000mm	76.5	40	CP30/2MA
	100 dia	3000mm	102	40	CP40/3MA
	"	2000mm	102	40	CP40/2MA
	150 dia	3000mm	152	40	CP60/3MA
	"	2000mm	152	40	CP60/2MA

## Access Pipes

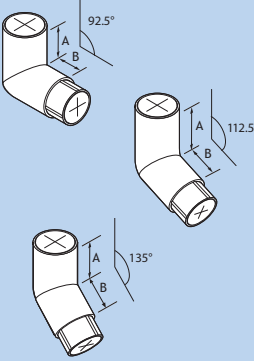
	Pipe Size	A	B	C	Product Code
	63 dia	300	150	50	CP25/ACPA
	75 dia	300	150	60	CP30/ACPA
	100 dia	300	150	70	CP40/ACPA
	150 dia	400	200	100	CP60/ACPA

## Shoes

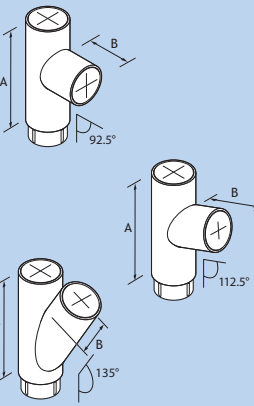
	Pipe Size	A	B	Product Code
	63 dia	100	25	CP25/SHA
	75 dia	100	25	CP30/SHA
	100 dia	100	25	CP40/SHA
	150 dia	125	30	CP60/SHA

# Flushjoint - Circular Pipes and Fittings

## Bends

	Pipe Size	Type	A	B	Product Code
	63 dia	92.5 Degree	100	100	CP25/B/92A
	75 dia	"	100	100	CP30/B/92A
	100 dia	"	100	100	CP40/B/92A
	150 dia	"	100	100	CP60/B/92A
	63 dia	112.5 Degree	100	100	CP25/B/112A
	75 dia	"	100	100	CP30/B/112A
	100 dia	"	100	100	CP40/B/112A
	150 dia	"	100	100	CP60/B/112A
	63 dia	135 Degree	100	100	CP25/B/135A
	75 dia	"	100	100	CP30/B/135A
	100 dia	"	100	100	CP40/B/135A
	150 dia	"	100	100	CP60/B/135A

## Branches

	Pipe Size	Type	A	B	Product Code
	63 dia	92.5 Degree	300	100	CP25/BR/92A
	75 dia	"	300	100	CP30/BR/92A
	100 dia	"	300	100	CP40/BR/92A
	150 dia	"	400	150	CP60/BR/92A
	63 dia	112.5 Degree	300	100	CP25/BR/112A
	75 dia	"	300	100	CP30/BR/112A
	100 dia	"	300	100	CP40/BR/112A
	150 dia	"	400	150	CP60/BR/112A
	63 dia	135 Degree	300	100	CP25/BR/135A
	75 dia	"	300	100	CP30/BR/135A
	100 dia	"	300	100	CP40/BR/135A
	150 dia	"	400	150	CP60/BR/135A

## 92.5° Two Part Offsets

	Pipe Size	Offset	A	B	Product Code
	63 dia	250	100	250	CP25/250/92A
	"	500	100	500	CP25/500/92A
	"	750	100	750	CP25/750/92A
	"	1000	100	1000	CP25/1000/92A
	75 dia	250	100	250	CP30/250/92A
	"	500	100	500	CP30/500/92A
	"	750	100	750	CP30/750/92A
	"	1000	100	1000	CP30/1000/92A
	100 dia	250	100	250	CP40/250/92A
	"	500	100	500	CP40/500/92A
	"	750	100	750	CP40/750/92A
	"	1000	100	1000	CP40/1000/92A
	150 dia	250	100	250	CP60/250/92A
	"	500	100	500	CP60/500/92A
	"	750	100	750	CP60/750/92A
	"	1000	100	1000	CP60/1000/92A



# Flushjoint - Circular Pipes and Fittings

## 112.5° Two Part Offsets

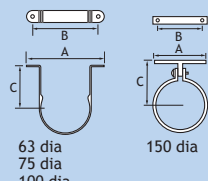
	Pipe Size	Offset	A	B	Product Code
	63 dia	250	100	250	CP25/250/112A
	"	500	100	500	CP25/500/112A
	"	750	100	750	CP25/750/112A
	"	1000	100	1000	CP25/1000/112A
	75 dia	250	100	250	CP30/250/112A
	"	500	100	500	CP30/500/112A
	"	750	100	750	CP30/750/112A
	"	1000	100	1000	CP30/1000/112A
	100 dia	250	100	250	CP40/250/112A
	"	500	100	500	CP40/500/112A
	"	750	100	750	CP40/750/112A
	"	1000	100	1000	CP40/1000/112A
	150 dia	250	100	250	CP60/250/112A
	"	500	100	500	CP60/500/112A
	"	750	100	750	CP60/750/112A
	"	1000	100	1000	CP60/1000/112A

## 135° Two Part Offsets

	Pipe Size	Offset	A	B	Product Code
	63 dia	250	100	250	CP25/250/135A
	"	500	100	500	CP25/500/135A
	"	750	100	750	CP25/750/135A
	"	1000	100	1000	CP25/1000/135A
	75 dia	250	100	250	CP30/250/135A
	"	500	100	500	CP30/500/135A
	"	750	100	750	CP30/750/135A
	"	1000	100	1000	CP30/1000/135A
	100 dia	250	100	250	CP40/250/135A
	"	500	100	500	CP40/500/135A
	"	750	100	750	CP40/750/135A
	"	1000	100	1000	CP40/1000/135A
	150 dia	250	100	250	CP60/250/135A
	"	500	100	500	CP60/500/135A
	"	750	100	750	CP60/750/135A
	"	1000	100	1000	CP60/1000/135A

# Flushjoint - Circular Pipes and Fittings

## Standard Base Clips

	Pipe Size	A	B	C	Product Code
	63 dia	124	100	65	RW1/236
	75 dia	137	112	71	RW2/237
	100 dia	163	138	90	RW3/238
	150 dia	255	215	121	RW60/PC

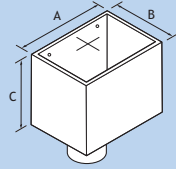
## Extended Base Clips

	Pipe Size	A	B	C	Product Code
	63 dia	87	47	279	RW1/364
	75 dia	87	47	285	RW2/365
	100 dia	87	47	304	RW3/366

## Small Base Clips

	Pipe Size	A	B	C	Product Code
	63 dia	87	47	74	RW1/SB/PC
	75 dia	87	47	80	RW2/SB/PC
	100 dia	87	47	92	RW3/SB/PC

## Contemporary Rainwater Heads

	Pipe Size	A	B	C	Product Code
	63 dia	250	180	200	CP25/HOP
	75 dia	250	180	200	CP30/HOP
	100 dia	250	180	200	CP40/HOP
	Note: Traditional design hopper heads can also be used if desired. Please refer to sections of this brochure covering Heritage Pipes and Fittings.				

# Flushjoint - Square and Rectangular Pipes and Fittings



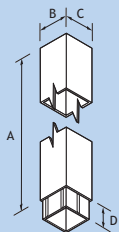
Flushjoint Square and Rectangular Pipes are available in 3 sizes and 2 pipe lengths, together with a complete range of fittings. Flush spigot pipe connection for virtually undetectable joints. Factory finished in a choice of coloured BBA certificated powder coatings.

Notes: Flushjoint can be used with any Alumasc Gutter System, providing the girth of the gutter is sufficient to accommodate the cross section area of the pipe. Running outlets are made to order according to choice of gutter and project requirements.

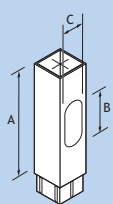
All dimensions are in mm unless shown otherwise.

Pipe sizes shown are nominal.

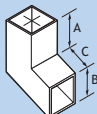
## Pipes

	Pipe Size	Pipe Length (A)	B	C	D	Product Code
	75 x 75	3000mm	72	72	40	CP33/3MA
	"	2000mm	72	72	40	CP33/2MA
	100 x 75	3000mm	102	76	40	CP43/3MA
	"	2000mm	102	76	40	CP43/2MA
	100 x 100	3000mm	102	102	40	CP44/3MA
	"	2000mm	102	102	40	CP44/2MA

## Access Pipes

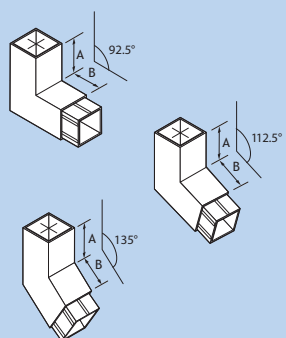
	Pipe Size	A	B	C	Product Code
	75 x 75	300	150	60	CP33/ACPA
	100 x 75	300	150	75	CP43/ACPA
	100 x 100	300	150	75	CP44/ACPA

## Shoe

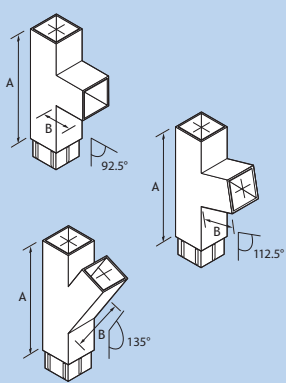
	Pipe Size	A	B	C	Product Code
	75 x 75	100	55	25	CP33/SHA
	100 x 75	100	70	25	CP43/SHA
	100 x 100	100	70	25	CP44/SHA

# Flushjoint - Square and Rectangular Pipes and Fittings

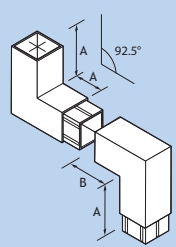
## Bends

	Pipe Size	Type	A	B	Product Code
	75 x 75	92.5 Degree	100	100	CP33/B/92A
	100 x 75	"	100	100	CP43/B/92A
	100 x 100	"	100	100	CP44/B/92A
	75 x 75	112.5 Degree	100	100	CP33/B/112A
	100 x 75	"	100	100	CP43/B/112A
	100 x 100	"	100	100	CP44/B/112A
	75 x 75	135 Degree	100	100	CP33/B/135A
	100 x 75	"	100	100	CP43/B/135A
	100 X 100	"	100	100	CP44/B/135A

## Branches

	Pipe Size	Type	A	B	Product Code
	75 x 75	92.5 Degree	300	100	CP33/BR/92A
	100 x 75	"	300	100	CP43/BR/92A
	100 x 100	"	300	100	CP44/BR/92A
	75 x 75	112.5 Degree	300	100	CP33/BR/112A
	100 x 75	"	300	100	CP43/BR/112A
	100 x 100	"	300	100	CP44/BR/112A
	75 x 75	135 Degree	300	100	CP33/BR/135A
	100 x 75	"	300	100	CP43/BR/135A
	100 x 100	"	300	100	CP44/BR/135A

## 92.5° Two Part Offsets

	Pipe Size	Offset	A	B	Product Code
	75 x 75	250	100	250	CP33/250/92A
	"	500	100	500	CP33/500/92A
	"	750	100	750	CP33/750/92A
	"	1000	100	1000	CP33/1000/92A
	100 x 75	250	100	250	CP43/250/92A
	"	500	100	500	CP43/500/92A
	"	750	100	750	CP43/750/92A
	"	1000	100	1000	CP43/1000/92A
	100 x 100	250	100	250	CP44/250/92A
	"	500	100	500	CP44/500/92A
	"	750	100	750	CP44/750/92A
	"	1000	100	1000	CP44/1000/92A

# Flushjoint - Square and Rectangular Pipes and Fittings

## 112.5° Two Part Offsets

	Pipe Size	Offset	A	B	Product Code
	75 x 75	250	100	250	CP33/250/112A
	"	500	100	500	CP33/500/112A
	"	750	100	750	CP33/750/112A
	"	1000	100	1000	CP33/1000/112A
	100 x 75	250	100	250	CP43/250/112A
	"	500	100	500	CP43/500/112A
	"	750	100	750	CP43/750/112A
	"	1000	100	1000	CP43/1000/112A
	100 x 100	250	100	250	CP44/250/112A
	"	500	100	500	CP44/500/112A
	"	750	100	750	CP44/750/112A
	"	1000	100	1000	CP44/1000/112A

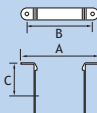
## 135° Two Part Offsets

	Pipe Size	Offset	A	B	Product Code
	75 x 75	250	100	250	CP33/250/135A
	"	500	100	500	CP33/500/135A
	"	750	100	750	CP33/750/135A
	"	1000	100	1000	CP33/1000/135A
	100 x 75	250	100	250	CP43/250/135A
	"	500	100	500	CP43/500/135A
	"	750	100	750	CP43/750/135A
	"	1000	100	1000	CP43/1000/135A
	100 x 100	250	100	250	CP44/250/135A
	"	500	100	500	CP44/500/135A
	"	750	100	750	CP44/750/135A
	"	1000	100	1000	CP44/1000/135A

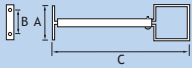


# Flushjoint - Square and Rectangular Pipes and Fittings

## Standard Base Clips

	Pipe Size	A	B	C	Product Code
	75 x 75	133	109	52	RW33/PC
	100 x 75	163	138	54	RW43/PC
	100 x 100	163	138	67	RW44/PC

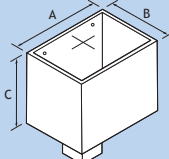
## Extended Base Clips

	Pipe Size	A	B	C	Product Code
	75 x 75	84	47	290 max	RW33/EX/PC
	100 x 75	84	47	292 max	RW43/EX/PC
	100 x 100	84	47	305 max	RW44/EX/PC

## Small Base Clips

	Pipe Size	A	B	C	Product Code
	75 x 75	84	47	78	RW33/SB/PC
	100 x 75	84	47	80	RW43/SB/PC
	100 x 100	84	47	94	RW44/SB/PC

## Contemporary Rainwater Heads

	Pipe Size	A	B	C	Product Code
	75 x 75	250	180	200	CP33/HOP
	100 x 75	250	180	200	CP43/HOP
	100 x 100	250	180	200	CP44/HOP
Note: Traditional design hopper heads can also be used if desired. Please refer to sections of this brochure covering Heritage Pipes and Fittings.					

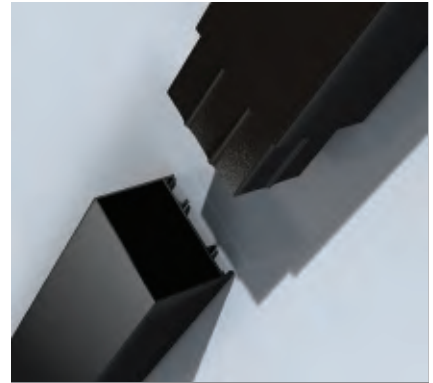
## Guardian - Aluminium Security Pipe System



Guardian - Circular Pipe



Guardian - Square Pipe



Guardian - Rectangular Pipe



# Guardian - Aluminium Security Pipe System

A contemporary range of extruded aluminium downpipes designed for mounting flush with the building fabric. Guardian pipework has concealed brackets and concealed jointing which provides a high level of security.

## Applications

- Specifically designed for security conscious environments
- Suitable for new build and refurbishment projects
- Compatible with Heritage, Aqualine and GX gutter systems

## Features & Performance

- Choice of circular, square and rectangular pipes
- Profiles fit flush to the wall making them vandal resistant and ungrippable
- Lightweight, durable and non-corrodible
- Life expectancy of aluminium: 40 years (rural/suburban areas); up to 25 years (industrial/marine areas)
- Easy to handle and fix
- Aluminium is 100% recyclable

## Colours & Finishes

- BBA approved polyester powder coatings, factory applied at Alumasc
- 16 standard colours with additional BS or RAL colours available to special order
- Also available in plain mill finish for on-site painting

## Manufacture

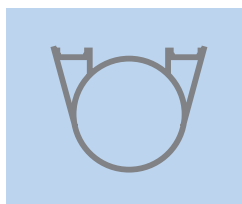
- UK manufactured
- Made from extruded aluminium to BS EN 12020:2001, BS EN 515:1993, BS EN 573:1995 and BS EN 755, from grade 6063 T6 alloy

## Installation & Fixing

- Method of fixing allows pipes to be fitted into a recess in the facade
- Systems are assembled from the ground upwards connecting to running outlets
- Special drain connectors are available for connection to gullies
- Minimal maintenance requirements

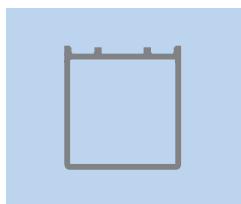


## Pipe Profiles & Sizes



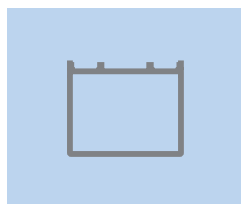
Circular Pipe

86 x 106mm  
111 x 138mm



Square Pipe

80 x 72mm  
109 x 102mm



Rectangular Pipe

84 x 102mm

# Guardian - Circular Pipes and Fittings



Guardian Circular Pipes are available in 2 sizes and pipe lengths of 2m. Concealed flush fixing ensures that the pipe cannot be scaled. Factory finished in a choice of coloured BBA certificated powder coatings.

Notes: Guardian is a bespoke manufactured range. Contact Alumasc Technical Services for more information.

All dimensions are in mm unless shown otherwise.

## Pipes

	Pipe Size	Pipe Length (A)	B	C	D	E	Product Code
	86 x 106	2000mm	86	106	70	47	HSP/V30/2MA
	111 x 138	2000mm	111	138	102	60	HSP/V40/2MA

## Access Pipes

	Pipe Size	A	B	Product Code
	86 x 106	300	150	HSP/V30/ACP
	111 x 138	300	150	HSP/V40/ACP

## Shoe

	Pipe Size	A	B	Product Code
	86 x 106	30	100	HSP/V30/SH
	111 x 138	30	100	HSP/V40/SH

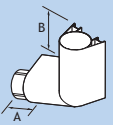
## Drain Connector

	Pipe Size	A	B	C	D	Product Code
	86 x 106	100	100	100	Variable	HSP/V30/ZADP
	111 x 138	100	100	100	Variable	HSP/V40/ZADP

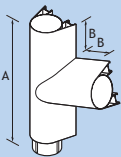
Note: This is a made to order item. Dimensions are required from the wall to the centre of the drain prior to placing an order

# Guardian - Circular Pipes and Fittings

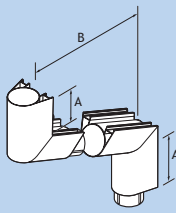
## Bend

	Pipe Size	A	Product Code
	86 x 106	100	HSP/V30/ZBND
	111 x 138	100	HSP/V40/ZBND
	Note: Please specify whether left, right, front or rear is required Please specify whether 92.5, 112.5 or 135° is required		

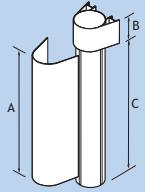
## Branch

	Pipe Size	A	B	Product Code
	86 x 106	300	100	HSP/V30/ZBRN
	111 x 138	300	100	HSP/V40/ZBRN
	Note: Please state whether left or right hand is required Please specify whether 92.5, 112.5 or 135° is required			

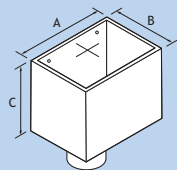
## Offset

	Pipe Size	Offset	A	B	Product Code
	86 x 106	Up to 305	100	305	HSP/V30/305
	111 x 138	Up to 305	100	305	HSP/V40/305
	86 x 106	Up to 533	100	533	HSP/V30/533
	111 x 138	Up to 533	100	533	HSP/V40/533
	86 x 106	Up to 762	100	762	HSP/V30/762
	111 x 138	Up to 762	100	762	HSP/V40/762
Note: Please specify whether 92.5, 112.5 or 135° is required Front, left and right offsets also available					

## Make-Up Piece

	Pipe Size	A	B	C	Product Code
	86 x 106	340	60	380	HSP/V30/MUP
	111 x 138	340	60	380	HSP/V40/MUP

## Contemporary Rainwater Heads

	Pipe Size	A	B	C	Product Code
	86 x 106	250	180	200	HSP/V30/HOP
	111 x 138	250	180	200	HSP/V40/HOP



# Guardian - Square and Rectangular Pipes and Fittings



Guardian Square Pipes are available in 3 square/rectangular sizes and pipe lengths of 2m. Concealed flush fixing ensures that the pipe cannot be scaled. Factory finished in a choice of coloured BBA certificated powder coatings.

Notes: Guardian is a bespoke manufactured range. Contact Alumasc Technical Services for more information.

All dimensions are in mm unless shown otherwise.

## Pipes

	Pipe Size	Pipe Length (A)	B	C	D	E	Product Code
	80 x 72	2000mm	80	72	41	44	HSP/S33/2MA
	84 x 102	2000mm	84	102	71	46	HSP/S43/2MA
	109 x 102	2000mm	109	102	71	59	HSP/S44/2MA

## Access Pipes

	Pipe Size	A	B	Product Code
	80 x 72	300	150	HSP/S33/ACP
	84 x 102	300	150	HSP/S43/ACP
	109 x 102	300	150	HSP/S44/ACP

## Shoe

	Pipe Size	A	B	Product Code
	80 x 72	30	100	HSP/S33/SH
	84 x 102	30	305	HSP/S43/SH
	109 x 102	30	100	HSP/S44/SH

## Drain Connector

	Pipe Size	A	B	C	D	Product Code
	80 x 72	100	100	100	Variable	HSP/S33/ZADP
	84 x 102	100	100	100	Variable	HSP/S43/ZADP
	109 x 102	100	100	100	Variable	HSP/S44/ZADP

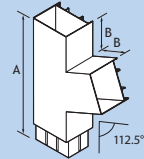
Note: This is a made to order item. Dimensions are required from the wall to the centre of the drain prior to placing an order

# Guardian - Square and Rectangular Pipes and Fittings

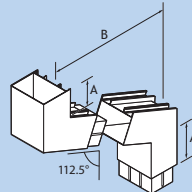
## Bend

	Pipe Size	A	Product Code
	80 x 72	100	HSP/S33/ZBND
	84 x 102	100	HSP/S43/ZBND
	109 x 102	100	HSP/S44/ZBND
Note: Please specify whether left, right, front or rear is required Please specify whether 92.5, 112.5 or 135° is required			

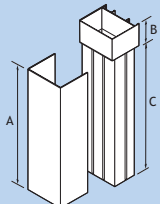
## Branch

	Pipe Size	A	B	Product Code
	80 x 72	300	100	HSP/S33/ZBRN
	84 x 102	300	100	HSP/S43/ZBRN
	109 x 102	300	100	HSP/S44/ZBRN
Note: Please state whether left or right hand is required Please specify whether 92.5, 112.5 or 135° is required				

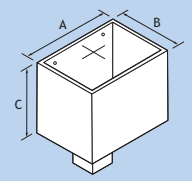
## Offset

	Pipe Size	Offset	A	B	Product Code
	80 x 72	Up to 305	100	305	HSP/S33/305
	84 x 102	Up to 305	100	305	HSP/S43/305
	109 x 102	Up to 305	100	305	HSP/S44/305
	80 x 72	Up to 533	100	533	HSP/S33/533
	84 x 102	Up to 533	100	533	HSP/S43/533
	109 x 102	Up to 533	100	533	HSP/S44/533
	80 x 72	Up to 762	100	762	HSP/S33/762
	84 x 102	Up to 762	100	762	HSP/S43/762
	109 x 102	Up to 762	100	762	HSP/S44/762
Note: Please specify whether 92.5, 112.5 or 135° is required. Front, left and right offsets also available					

## Make-Up Piece

	Pipe Size	A	B	C	Product Code
	80 x 72	340	60	380	HSP/S33/MUP
	84 x 102	340	60	380	HSP/S43/MUP
	109 x 102	340	60	380	HSP/S44/MUP

## Contemporary Rainwater Heads

	Pipe Size	A	B	C	Product Code
	80 x 72	250	180	200	HSP/S33/HOP
	84 x 102	250	180	200	HSP/S43/HOP
	109 x 102	250	180	200	HSP/S44/HOP

# Non-Standard Items

Alumasc can tailor designs to meet individual project requirements, whether it is exact matching of rainwater products on restoration projects or stylish design solutions for new, contemporary buildings.

## Alternative Gutter Profiles

Alumasc design and supply engineered rainwater systems and have the ability to develop patterns that are tailored to individual buildings' specific needs.

Whether the aim is to match an existing profile or simply to differentiate a building's appearance, Alumasc can offer bespoke gutter profiles to suit.

## Radiused Gutter Sections

Where gutters are required to follow a particular roof radius, patterns can be engineered from detailed dimensions or existing gutter installations to yield a fully cast gutter that can be installed to suit the roof parameters. These are generally supplied in 1m lengths.

As an alternative to fully cast sections, Heritage and Aqualine profiles can be fabricated by cutting, mitring and welding to create a segmented radii gutter. GX profiles can be fabricated by mitring and seam-welding sections to create a segmented radii gutter. This often provides a cost effective solution for such architectural detailing.

## Fabricated Gutter Sections

Standard gutter profiles can be fabricated into non-standard plan angles that can suit a host of different building geometries. Transition pieces for jointing mismatch gutter shapes, back outlets for drainage through parapet walls can all be expertly manufactured by Alumasc.

## Rainwater Heads (Hoppers)

Ornate rainwater heads can be supplied to match existing design or one-off, personalised designs that will add enduring character and value to the building.

Rainwater heads can be manufactured from new patterns by the casting process. Alternatively, due to the flexibility afforded by the use of pressed aluminium sheet, fabricated items can be supplied to suit a whole range of requirements and applications.

Alumasc rainwater heads can also be enhanced by adding ornate enrichments or detailing, such as place names or initials onto the rainwater heads.

## Bespoke Bracketry

Alumasc can design and manufacture a variety of bracketry solutions for gutters and pipes to create an integrated system. Such detailing can often be used to support fascia and soffit configurations.

Ornate holderbats and earbelts can be detailed to provide a unique, distinguished appearance to a rainwater stack.

Where standard fitting dimensions do not suit the project's requirements, Alumasc can fabricate pipe systems to accommodate building design.

Ornate pipes can be supplied to match existing designs or one-off, personalised designs. Special enrichments can be added to create enduring character and value to the building.





# Accessories

## Touch Up Paint


RAL Code	Description	Size	Product Code
 RAL 1011m	Brown Beige	1 litre	TUP992073
 RAL 1013m	Pearl White	1 litre	TUP992074
 RAL 1021m	Cadmium Yellow	1 litre	TUP992075
 RAL 2002m	Vermilion	1 litre	TUP992076
 RAL 3003m	Ruby Red	1 litre	TUP992077
 RAL 3005m	Wine Red	1 litre	TUP992078
 RAL 5003m	Sapphire Blue	1 litre	TUP992079
 RAL 5010m	Flower Blue	1 litre	TUP992080
 RAL 6005m	Moss Green	1 litre	TUP992081
 RAL 6018m	Yellow Green	1 litre	TUP992082
 RAL 7024m	Graphite Grey	1 litre	TUP992083
 RAL 7038m	Agate Grey	1 litre	TUP992084
 RAL 8017m	Chocolate Brown	1 litre	TUP992085
 RAL 8019m	Grey Brown	1 litre	TUP992086
 RAL 9016m	White	1 litre	TUP992087
 RAL 9017m	Black	1 litre	TUP992088
 —	*Black (aerosol)	400ml	TUP/BLACK/TXT

Note: \*Aerosol paint for use with textured finish.  
The colours reproduced on this page are for general guidance only.


## Lightning Link

Type	Product Code
 Flexible Type	Flexible Flat Braid Assembly LL635007
 Rigid Type	Rigid Type Assembly LL632914
	Oxide Inhibitor Compound (50 joints per tube) LL991972
Note: Provides an earth continuity bond intended for connection across joints on-site thereby providing electrical continuity throughout the entire metal gutter system. Extra pre-drilled fixing holes in gutter and fittings can be provided.	


## Backing Foam

Type	Product Code
 10m Roll x 6mm dia Backing Foam	BF991408


## Solvent Cleaner

Type	Product Code
 Fast Drying Solvent Cleaner	SC991281



## Silicone Sealant

Type	Colour	Size	Product Code
 Dow Corning 791	White	310ml Cartridge	SS991558
Dow Corning 791	Grey	310ml Cartridge	SS991559
Dow Corning 791	Bronze	310ml Cartridge	SS991560
Dow Corning 791	Black	310ml Cartridge	SS991561
Dow Corning 791	Limestone	310ml Cartridge	SS991562

## Gutter Bolts (Nut, Bolt & Washer)

Type	Size	Notes	Product Code
 Aluminium Nut/Bolt/Washer	M6 x 12mm	For use with the GX Gutter Range	NBW 630308
Aluminium Nut/Bolt/Washer	M6 x 20mm	For use with the Heritage Gutter Range	NBW 630307

## Woodscrew

Type	Size	Notes	Product Code
 Countersunk	No.12 x 1.5"	To fix rafter arms to GX Brackets	ZNBW969041
 Roundhead	No.12 x 1.5" With Washer	To fix Heritage Fascia Brackets or for 'direct fix' Gutter range	NBW 630362
Roundhead	No.12 x 2" With Washer	To fix pipe sockets with ears or pipe clips	NBW 630361

# Rainwater System Design

Alumasc Technical Services is a fully experienced team of Rainwater specialists who use the latest CAD technology and calculation tools to provide an unrivalled support service to Architects, Designers and Contractors.

## The Alumasc Rainwater Drainage Design Service

Alumasc Technical Services use dedicated design software in conjunction with the requirements of *BS EN 12056:2000: Gravity drainage systems inside buildings - Part 3* to calculate the most appropriate Alumasc rainwater system to suit project requirements.

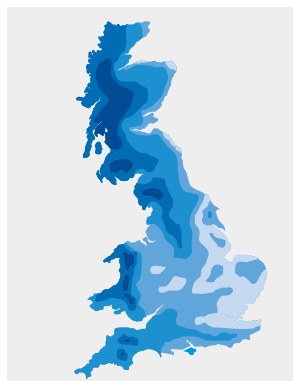
The gutter flow software automatically checks the capacity of downpipes used and suggests the minimum size to which downpipes can be sized. Contact Alumasc for further information.

## Sizing of Gutters and Downpipes

The level of rainfall a given roof drainage system should cope with is based on the position of the gutter, the potential use of the building and its projected lifespan. All true eaves gutters (external) are designed using a 1 year storm event. This is generally accepted because overflow from an external eaves gutter will fall clear of the building, which is not normally a problem. Any gutter which is classed internal, even if it is at the eaves, should be designed for an intensity based on the building life and a suitable factor of safety.

### Step 1

#### Geographical Location and Rainfall Intensity Maps

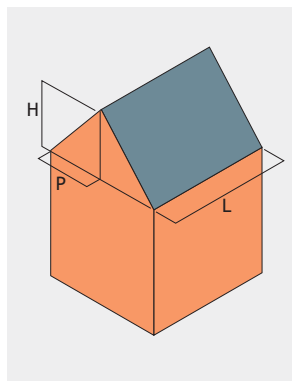


BS EN 12056-3: 2000 contains maps showing rainfall intensity in litres/second per m<sup>2</sup> for 1, 5, 50 and 500 year storms of 2 minute duration.

(All external gutters designed for 1 year event).

### Step 2

#### Calculating Catchment Area



$$CA = (P + H/2) \times L$$

CA = Catchment area in square metres

P = Horizontal distance between eaves and ridge

H = Height of roof

L = Length of eaves

## Calculation Criteria

Calculation of the most efficient drainage solution takes into consideration the following criteria:

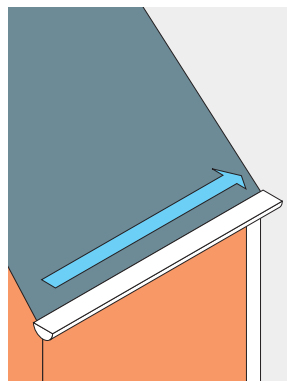
- Catchment area
- Local rainfall intensity
- Building life and safety factor
- Size and flow rate of gutters
- Frequency and size of outlets and downpipes

This factor will vary from 1.5 for conventional buildings to 4.5 for very important structures. For most buildings a 60 year life and safety factor of 1.5 would be the most suitable (90 year protection life).

All the parameters of flow calculations cannot be captured using a single formula. The guide below provides a basic method for calculating flow requirements. For accurate project specific specification advice on rainwater flow calculations contact Alumasc Technical Services.

### Step 3

#### Frequency and Positioning of outlets/downpipes



Calculate the number of outlets per run.



### Step 4

#### Calculate Flow Requirements

##### Overall Rainfall

$$\text{Catchment area (CA)} \times \text{Rainfall intensity (RI)} = \text{Overall Rainfall (OR)}$$

##### Flow Rate Per Outlet

$$\text{Overall Rainfall (OR)} \div \text{Number of Outlets} = \text{Flow Rate Per Outlet}$$

Choose Gutter/Outlets according to published Flow Rate capacities.

##### Note:

Depending on building type, a safety factor should be allowed for the sizing of internal gutters. Contact Alumasc Technical Services for further information.

## Technical Support

Alumasc's new Drainage Design Calculators are available as a download from the Alumasc Rainwater website.  
[www.alumascrainwater.co.uk](http://www.alumascrainwater.co.uk)



# Aluminium Gutter System Flow Rates

All Flow Rates quoted on this page are shown in litres per second. Gutter capacities are based on BS EN 12056-3:2000, assuming a maximum distance of 50 x gutter depth, from high point to outlet. Longer gutters or gutters with corners exceeding 10° will have a reduced capacity. For further information contact Alumasc Technical Services.

Gutter Range	Profile	Size (mm)	Pipe/Outlet Diameter (mm)			Pipe outlet size (mm)		
			63	75	100	75x75	100x75	100x100
Heritage	Half Round	100	1.14	1.24	-	1.24	1.24	-
		113	1.14	1.62	-	1.62	1.62	-
		125	1.24	2.08	-	2.08	2.08	-
	Beaded Half Round	113	1.62	1.62	-	1.62	1.62	-
		125	1.77	1.90	-	2.08	2.08	-
	Beaded Deep Run	113x75	1.77	1.90	-	2.10	3.06	-
	Victorian Ogee	100	1.32	1.32	-	1.32	1.32	-
		113	1.35	1.82	-	1.82	1.82	-
		125	1.35	2.12	-	2.10	2.34	-
	Moulded	100x75	1.40	1.64	-	2.10	2.44	-
		125x100	1.52	1.97	3.81	2.10	4.62	4.62
		150x100	2.42	2.84	3.81	2.10	4.65	5.12
Aqualine	Half Round	100x50	0.99	1.12	-	1.12	1.12	-
		120x60	0.99	1.71	-	1.86	1.86	-
		150x75	0.99	1.71	3.44	2.10	3.44	3.44
	Deep Run	110x85	0.99	1.71	2.88	2.10	2.88	2.88
	Modern	100x85	0.99	1.71	-	2.10	2.38	-
		150x120	0.99	1.71	3.81	2.10	3.63	5.41
	Moulded	140x100	0.99	1.71	-	2.10	3.52	-
		160x100	0.99	1.71	3.81	2.10	3.63	4.38
	Box	120x80	1.39	2.08	2.72	2.38	3.32	3.72
		140x100	1.55	2.32	4.21	2.66	4.02	5.32
		160x100	1.55	2.33	4.26	2.67	4.04	5.39
GX	Joggle	100x75	1.32	1.95	-	2.28	-	-
		125x100	1.52	2.31	4.14	2.64	3.99	5.23
		150x100	1.52	2.31	4.14	2.64	3.99	5.23
		150x150	1.89	2.83	5.16	3.24	4.89	6.59
		200x150	1.89	2.83	5.16	3.24	4.89	6.59
	Smooth	120x75	1.32	1.93	-	2.27	2.87	-
		140x100	1.52	2.28	3.99	2.61	3.95	5.04
		170x125	1.73	2.59	4.73	2.97	4.48	6.04
		175x150	1.90	2.84	5.20	3.26	4.92	6.63
		225x150	1.88	2.82	5.15	3.23	4.88	6.57
	Moulded	113x75	0.99	1.71	-	2.10	-	-
		140x100	0.99	1.71	3.81	2.10	3.63	5.41
		160x100	0.99	1.71	3.81	2.10	3.63	5.41
		175x150	0.99	1.71	3.81	2.10	3.63	5.41
		200x150	0.99	1.71	3.81	2.10	3.63	5.41

## Rainwater Pipe Flow Rates

The capacity of a rainwater system is usually dependent upon the capacity of the gutter outlet or flat roof outlet rather than the rainwater pipe. Please refer to BS EN 12056-3:2000, Section 6, Table 8 for capacities of vertical rainwater pipes.

# NBS Specification

A typical NBS Specification for Alumasc aluminium gutters and downpipes is provided below. A full range of NBS specifications are available via Alumasc's online NBS Specification Builder at [www.alumascrainwater.co.uk](http://www.alumascrainwater.co.uk). For project specific specification advice, contact Alumasc Technical Services.

NBSPlus

## R10 Rainwater Drainage Systems

### GENERAL

- Gravity Rainwater Drainage System.
- Rainwater outlets, gutters, pipework and accessories as per detail sections below.

### SYSTEM PERFORMANCE

- Design Standard: To BS EN 12056-3:2000, clauses 3-7 and National Annexes.
- Collection and Distribution of Rainwater: Complete, and without leakage or noise nuisance.
- Design Parameters: Design rate of rainfall as per BS EN 12056-3:2000, National Annex NB.2 - Category 1

### PRODUCTS (TYPICAL SPECIFICATION)

#### HERITAGE ALUMINIUM HALF ROUND GUTTER (100mm)

##### 311 HERITAGE ALUMINIUM GUTTERS

Gutters and fittings to: BS 8530 (formerly BS 2997)  
Manufacturer: Alumasc Exterior Building Products Ltd  
White House Works, Bold Road, Sutton, St Helens, Merseyside WA9 4JG.  
Tel: 01744 648400, Fax: 01744 648401, Email: [info@alumasc-exterior.co.uk](mailto:info@alumasc-exterior.co.uk)

Reference: Heritage cast aluminium rainwater system  
Profile: Half Round  
Size: 100mm  
Outlet Size: 75mm  
Type/grade: Made from LM2 and LM6 grades of Aluminium alloy to BSEN1559:1997, BSEN 1676:1997 and BSEN 1706:1998  
Finish: Polyester powder coated to BS EN 12206-1:2004  
Colour: To be advised

Jointing: Gutter lengths or fittings are overlapped at the joint with a spigot and socket. Slots are provided for fixing using M6 mushroom head aluminium screws with nuts and washers. Seal evenly across the joints with Dow Corning 791.

Fixing: Fascia bracket fixed at 915mm centres and at each fitting using number 12x38mm round head twin thread screws and washers bright zinc plated.

### PRODUCTS (TYPICAL SPECIFICATION)

#### FLUSHJOINT ALUMINIUM DOWNPIPE (75mm diameter)

##### 370 FLUSHJOINT ALUMINIUM PIPEWORK FOR EXTERNAL USE:

Pipes, fittings and accessories to: BS 2997  
Manufacturer: As above

Reference: Flushjoint aluminium downpipe system  
Size: 75mm diameter  
Type/grade: 6063 TF alloy  
Finish: Polyester powder coated to BS EN 12206-1:2004  
Colour: To be advised

Fixing: Pipe clip fixed at maximum 2.0m centres. Plug and screw to wall with number 12 x 50mm round head twin thread screws and washers bright zinc plated to BS 1706:1960 Class ZN3. Seal internal spigot joints with Dow Corning 791 silicone sealant allowing for a 3-4 mm vertical thermal movement gap.

Accessories: Bends, Branches, Access Pipes, Offsets, Shoes, Rainwater Heads, Pipe Clips



**NBS Specification Builder**

Select System:	Aluminium Gutter Systems
Product Type	Heritage Cast Aluminium
Gutter Profile	Half Round
Gutter Size (mm)	100
Downpipe Size (mm) (Flow rate in l/s)	75 (1.24 l/s)
Material Finish	Polyester powder coated
Colour	To be advised

Create Alumasc Rainwater System NBS specifications by selecting the required product range, profile, size and finish by visiting:

[www.alumascrainwater.co.uk](http://www.alumascrainwater.co.uk)

**NBS Specification Builder**

Select System:	Aluminium Downpipe Systems
Product Type	Flushjoint
Size (mm)	75 mm diameter
Material Finish	Polyester powder coated
Colour	To be advised

# General Specification Advice

General specification clauses for aluminium rainwater systems are provided below.

For project specific specification advice, contact Alumasc Technical Services.

## 600 PREPARATION, ENSURE:

- Below ground drainage is ready to receive rainwater or that the discharge can be dispersed by approved means to prevent damage or disfigurement of the building fabric.
- Any specified painting of surfaces which will be concealed or inaccessible is completed.

## 605 INSTALLATION GENERALLY:

- Install pipework/gutters to ensure the complete discharge of rainwater from the building without leaking.
- Obtain all components for each type of pipework/guttering from the same manufacturer unless specified otherwise.
- Provide access fittings and rodding eyes as necessary in convenient locations to permit adequate cleaning and testing of pipework.
- Avoid contact between dissimilar metals and other materials which would result in electrolytic corrosion.
- Do not bend plastics or galvanized steel pipes.
- Adequately protect pipework/gutters from damage and distortion during construction. Fit purpose made temporary caps to prevent ingress of debris. Fit all access covers, cleaning eyes and blanking plates as the work proceeds.
- Where not specified otherwise use plated, sherardized, galvanized or nonferrous fastenings, suitable for the purpose and background, and compatible with the material being fixed.

## 610 FIXING AND JOINTING GUTTERS:

- Fix securely at specified centres and at all joints in gutters, with additional brackets near angles and outlets.
- Provide for thermal and building movement when fixing and jointing, and ensure that clearances are not reduced as fixing proceeds.
- Seal as specified to make watertight.
- Spread jointing compound evenly over jointing face of socket.
- For gutters with bolted joints, tighten joints in the gutter sole before any other bolts. Fit suitable washers, and spacers to prevent overtightening, unless specified otherwise.
- Tighten fixing to squeeze out some compound.
- Remove surplus, squeezed out compound and neatly clean off.
- Ensure that roofing underlay is dressed into gutter.

## 615 SETTING OUT EAVES GUTTERS - TO FALLS

- Set out to a true line and even gradient to ensure no ponding or backfall. Position high points of gutters as close as practical to the roof and low points not more than 50 mm below the roof.
- Position outlets to align with connections to below ground drainage, unless shown otherwise on drawings.

## 630 RAINWATER OUTLETS, ENSURE THAT:

- Outlets are securely fixed before connecting pipework.
- Junctions between outlets and pipework can accommodate all movement in the structure and pipework.

## 435 FIXING PIPEWORK:

- Fix securely at specified centres plumb and/or true to line.
- Make changes in direction of pipe runs only where shown on drawings unless otherwise approved.
- Fix branches and low gradient sections with uniform and adequate falls to drain efficiently.
- Fix externally socketed pipes/fittings with sockets facing upstream.
- Provide additional supports as necessary to support junctions and changes in direction.
- Fix every length of pipe at or close below the socket collar or coupling.
- Provide a load bearing support for vertical pipes at not less than every storey level. Tighten fixings as the work proceeds so that every storey is self supporting and undue weight is not imposed on fixings at the base of the pipe.
- Isolate from structure where passing through walls or floors and sleeve pipes as specified in Section P31.
- Provide for thermal and building movement when fixing and jointing, and ensure that clearances are not reduced as fixing proceeds.
- Fix expansion joint pipe sockets rigidly to the building and elsewhere use fixings that allow the pipe to slide.

## 650 JOINTING PIPEWORK/GUTTERS:

- Joint using materials, fittings and techniques which will make effective and durable connections.
- Joint differing pipework/gutter systems with adaptors recommended by manufacturer(s).
- Cut ends of pipes to be clean and square with burrs and swarf removed. Chamfer pipe ends before inserting into ring seal sockets.
- Ensure that jointing or mating surfaces are clean, and where necessary lubricated, immediately before assembly.
- Form junctions using fittings intended for the purpose ensuring that jointing material does not project into bore of pipes, fittings and appliances.
- Remove surplus flux/solvent/cement/sealant from joints.

## 675 COATED PIPEWORK/GUTTERS:

- Make good to coatings after cutting and any other damage or recoat, as recommended by the manufacturer.

## 685 IDENTIFICATION OF INTERNAL RAINWATER PIPEWORK:

- To BS 1710 using self-adhesive bands or identification clips located at junctions, at both sides of each slab, bulkhead and wall penetration, and elsewhere as directed.

## 690 ELECTRICAL CONTINUITY:

- Use clips or suitable standard couplings supplied for the purpose by pipework manufacturer to ensure electrical continuity at all joints in metal pipes with flexible couplings and which are to be earth bonded.

## 700 ACCESS FOR TESTING AND MAINTENANCE:

- Install pipework and gutters with adequate clearance to permit testing, cleaning and maintenance.
- Position access fittings and rodding eyes so that they are not obstructed by other pipework, framing, etc.

## COMPLETION CLAUSES

### 900 TESTING GENERALLY:

- Inform the Contractor Administrator sufficiently in advance to give him a reasonable opportunity to observe tests.
- Check that all sections of installation are free from obstruction and debris before testing.
- Provide clean water, assistance and apparatus for testing as required.
- Carry out tests as specified. After testing, locate and remedy all defects without delay and retest as instructed.
- Keep a record of all tests and provide a copy of each to the Contractor Administrator.

### 905 INTERNAL PIPEWORK TEST - ENGLAND, WALES AND NORTHERN IRELAND:

- Temporarily seal open ends of pipework with plugs.
- Connect a 'U' tube water gauge and air pump to the pipework via a plug.
- Pump air into pipework until gauge registers 38 mm.
- Allow a period for temperature stabilization, after which the pressure of 38 mm is to be maintained without loss for not less than 3 minutes.

### 906 INTERNAL PIPEWORK TEST- SCOTLAND

- Standard - To BSEN12056-3:2000, National Annex NG

### 910 GUTTER TEST:

- Block all outlets, fill gutters to overflow level and after 5 minutes closely inspect for leakage.

### 915 MAINTENANCE INSTRUCTIONS

- At completion, submit printed instructions recommending procedures for maintenance of the rainwater installation including full details of the recommended inspection, cleaning and repair procedures.

### 920 IMMEDIATELY BEFORE HANDOVER:

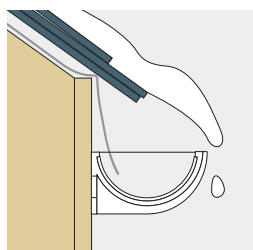
- Remove construction rubbish and debris from all roofs and gutters. Where possible, sweep and remove fine dust which may enter rainwater systems. Do not sweep or flush dust or debris into the rainwater system.
- Remove swarf, debris and temporary caps from the entire rainwater installation.
- Ensure that all access covers, rodding eyes, outlet gratings, etc. are secured complete with all fixings.

# 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.

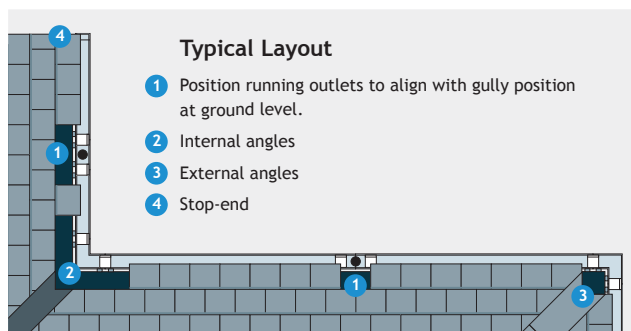


Fix brackets so as to position the gutter centrally and as close below the roof edge as possible, taking into consideration locality and roof slope finish. If there is a risk of sliding snow, adjust the bracket positions to prevent snow hitting the front of the gutter. Extra fixings, brackets and snowboards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

Before jointing and assembly, where powder coated materials have been cut, it is necessary to deburr exposed edges and degrease with solvent cleaner using clean rags or paper towels. Apply a zinc phosphate or aluminium etch primer and, when dry, apply 2 coats of matching touch up paint (supplied by Alumasc).

## 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.

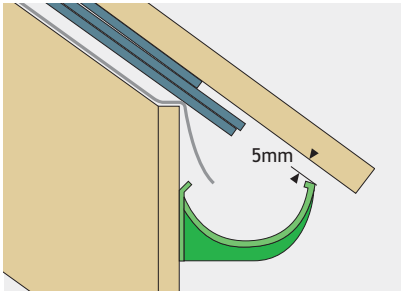
Aluminium rainwater systems installed in a coastal environment can be subject to harsh atmospheric conditions that can accelerate the oxidization process. Alumasc do not normally recommend using aluminium rainwater systems in such locations. However, applying a double coat of polyester powder coating 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.

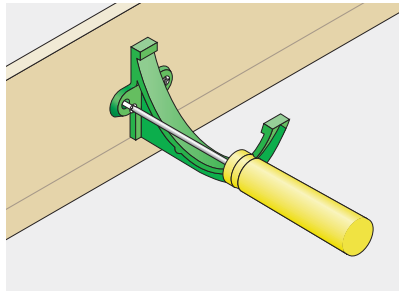
Please contact Alumasc Technical Services for further information.

# Installation - Heritage Gutters

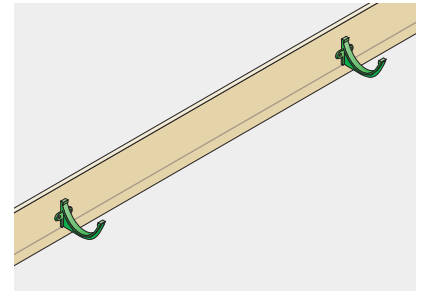
Heritage gutters are available in a choice of five profiles with a range of brackets to accommodate all types of eaves condition. Each profile range can be connected to aluminium pipework systems in either round, square or rectangular sections secured by standard and offset brackets. Assembly and installation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



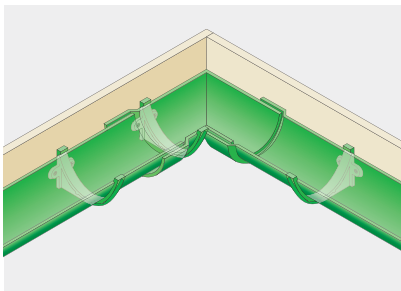
1. Using a straight edge or ruler, shim gutter brackets with 5mm clearance so that the last roof tile or slate will align with the mid point of the gutter.



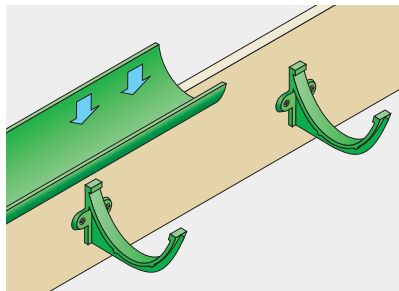
2. Generally, position brackets at 915mm centres allowing additional brackets on either side of where gutter joints will occur.



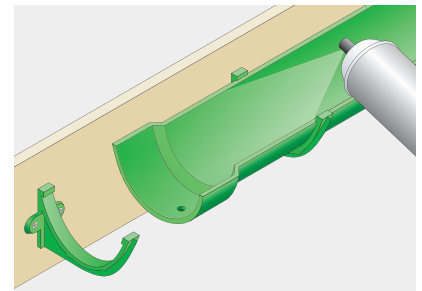
3. Use a string line to set out brackets to a fall of 1:600 to 1:350 (max) or if not possible, level.



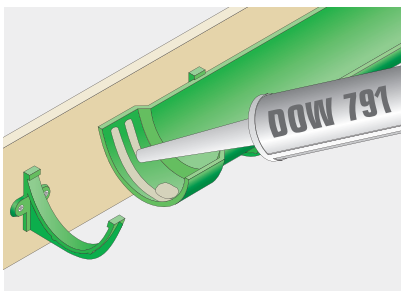
4. Plumb line outlets with gullies at ground level. Position angles, allowing an additional bracket adjacent to the joint with the gutter length.



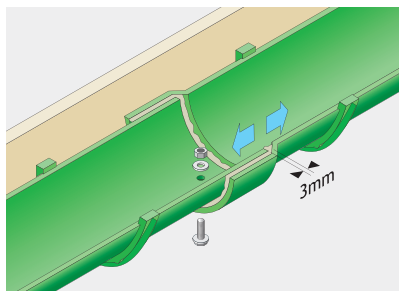
5. Lower the gutter onto the brackets ensuring sufficient clearance for the gutter joint. Clip gutter into bracket.



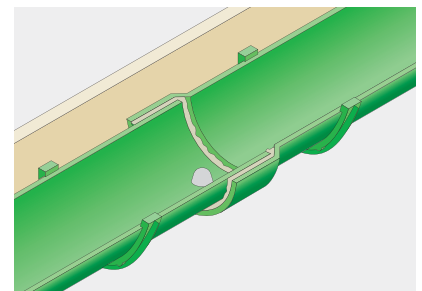
6. Cast gutters overlap at the joint with a spigot and socket. Thoroughly clean and degrease the ends that must be jointed.



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.

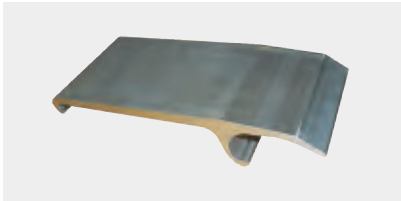


# Installation - Aqualine Preparation and Brackets

Aqualine gutters are available in five profiles which are supported on secret fix brackets. Joints are made flush using dry seals and slide locks. As a dry jointed system, each gutter profile range is supplied with the required components to achieve a successful installation. Refer to the Rainwater System Installation Guidance on page 78 and review the information below before fitting the Aqualine gutter range.

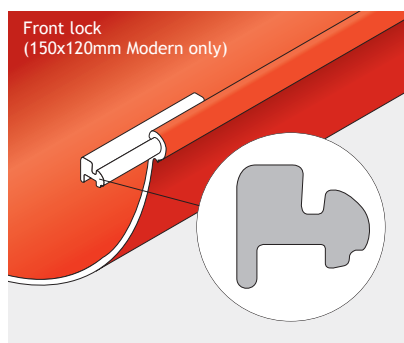
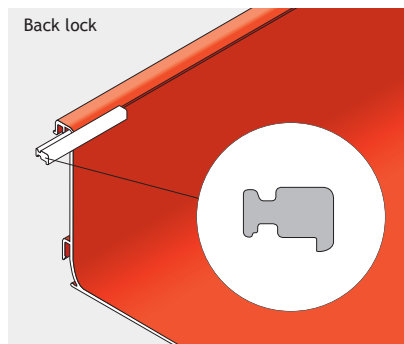
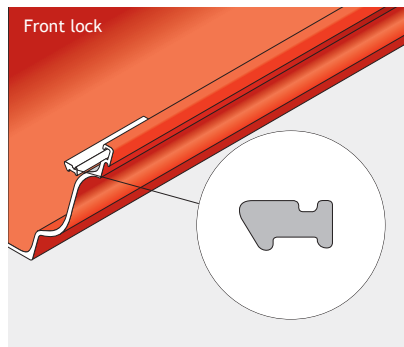
## Joining Tool

The joining tool is used to compress the gutter seals whilst positioning slide locks.



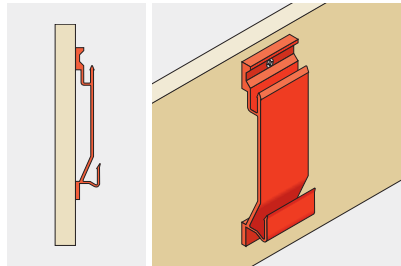
## Slide Locks

Seen here are the 3 types of slide lock (depending on rainwater system) shown positioned as they would be inserted.

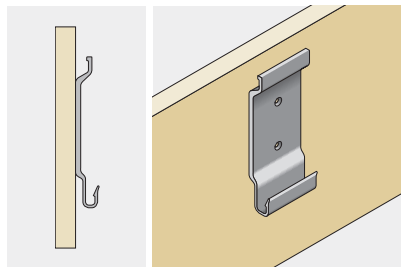


## Aqualine Brackets

There are two types of Aqualine gutter bracket depending on the Aqualine gutter profile to be installed.



Bracket for Half Round and Deep Run gutters  
(Supplied to colour match gutter)



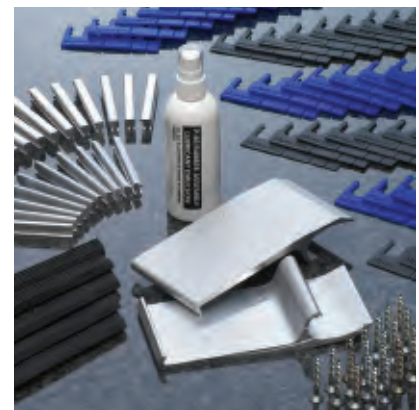
Bracket for Modern, Moulded and Box gutters  
(Supplied mill finish)

## Aqualine Starter Pack

Starter Packs contain essential installation items.

- P80 joint seal lubricant
- 2 x joining tool
- 10 x spare slide locks
- 20 x spare No 12 screws
- 8 x spare seal strips
- 20 x shims

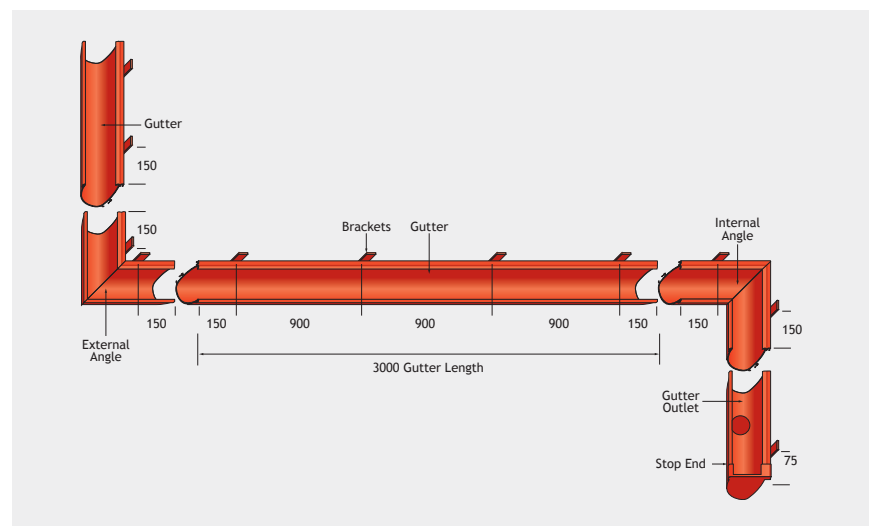
When unpacking locate the Aqualine Starter Pack and keep in a safe place.



Aqualine starter pack

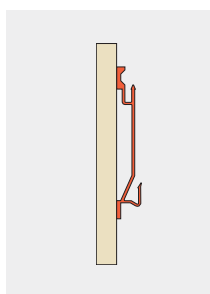
## Setting Out

As a guide there would be 4 brackets per 3m length. Position angles using 2 brackets per angle inset 150mm from each open end. Position outlets using 1 bracket inset 75mm from open end. At gutter ends where there is no outlet, position 1 bracket inset 150mm.

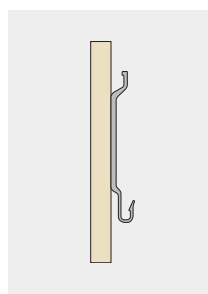
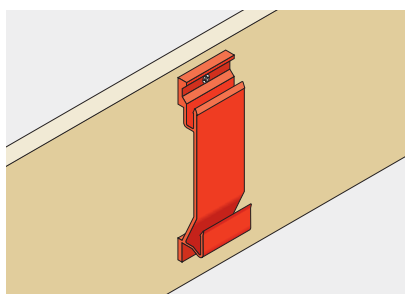


# Installation - Aqualine Preparation and Brackets

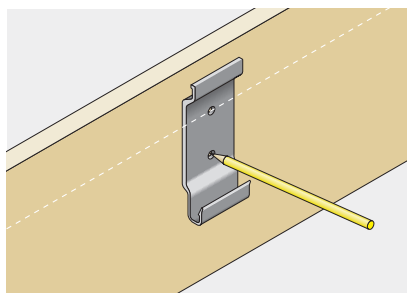
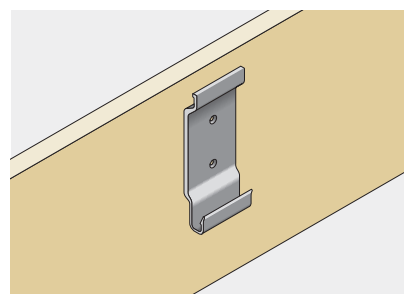
Aqualine gutter systems are supported on concealed bracketry which requires pre-painted fascia boards to be straight and level. The use of shims provided in the Aqualine Starter Packs assists bracket alignment and improves gutter connections whilst minimising stress within the joints. As a guide there are 4 brackets per 3 metre gutter length. Position angles using 2 brackets per angle, inset 150mm from each open end. Position outlets using 1 bracket inset 75mm from open end. At gutter ends where no outlet exists, position 1 bracket inset 150mm.



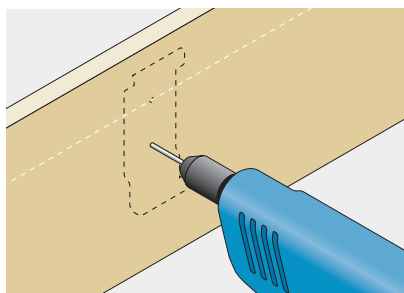
Bracket for Half Round and Deep Run gutters.



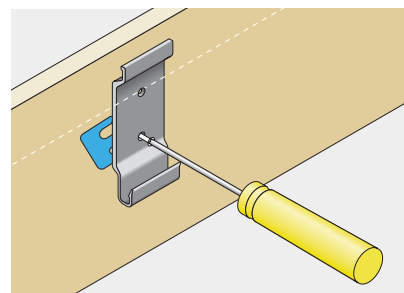
Bracket for Modern, Moulded and Box gutters.



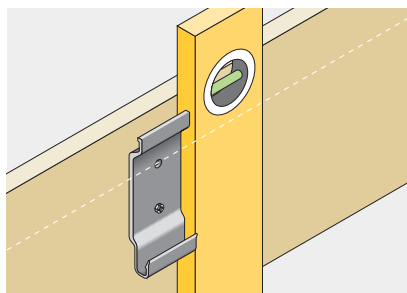
1. Use a string line or laser to set out brackets. (Aqualine must be laid level).



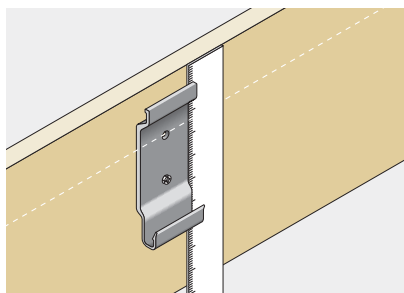
2. Position and pilot 3.5mm diameter hole.



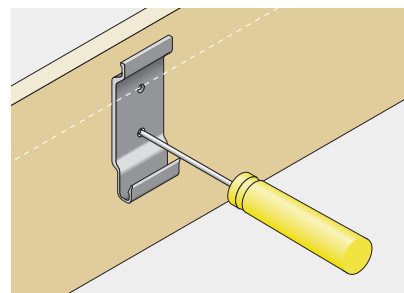
3. Lightly tighten and shim if necessary to align plumb. Fix using No12 x 38mm roundhead screws.



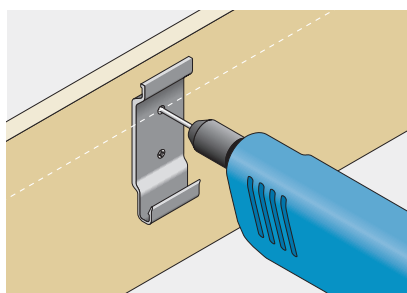
4. Set square.



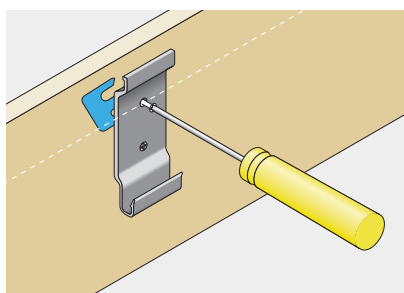
5. Check positioning and adjust if necessary.



6. Tighten.



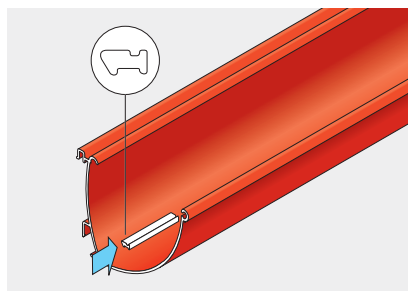
7. Pilot 3.5mm diameter hole.



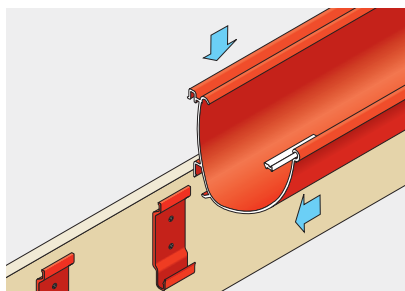
8. Check for plumb, shim if necessary and tighten.

# Installation - Aqualine Half Round, Deep Run and Modern Gutters

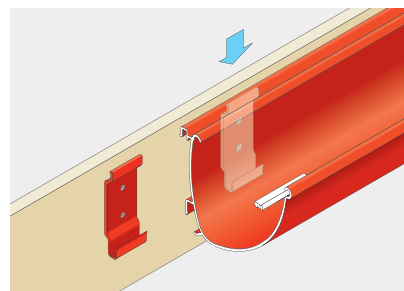
Aqualine Half Round, Deep Run and Modern gutters use a unique dry jointing system to give a completely clean external appearance. Gutters drop and lock onto concealed brackets where internal joints are aligned and locked using slide bars. Assembly of Half Round, Deep Run and Modern gutters requires the use of single front lock bars. The entire gutter system is completely secure whilst at the same time allowing free linear thermal movement.



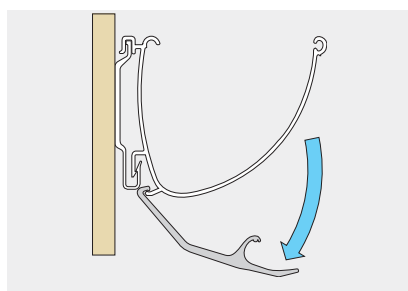
1. Pre-insert slide lock bars (1 per joint). Check for right way up.



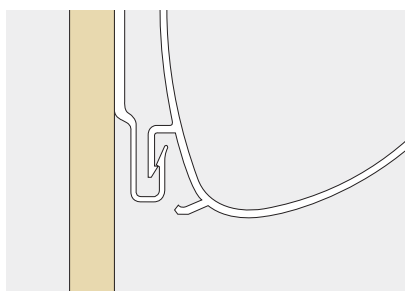
2. Position gutters loosely, do not lock down.



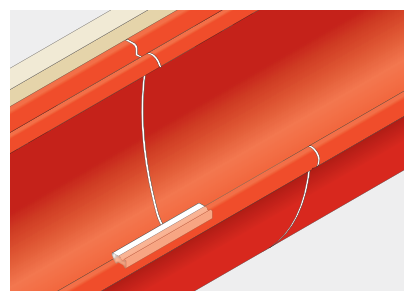
3. Locate gutters onto top rail of brackets and allow 4mm gap.



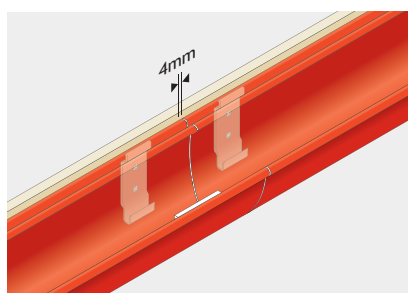
4. Lock down gutter with Aqualine jointing tool.



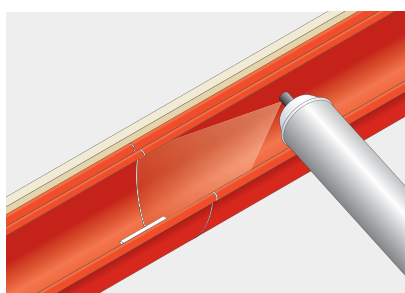
5. Check for positive location.



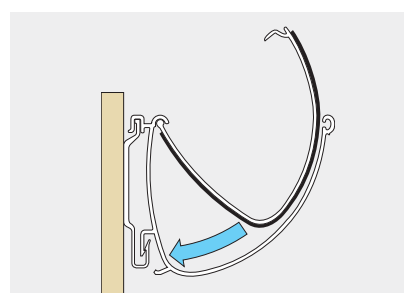
6. Slide lock bar within 50mm of joint but NOT across gutter joint.



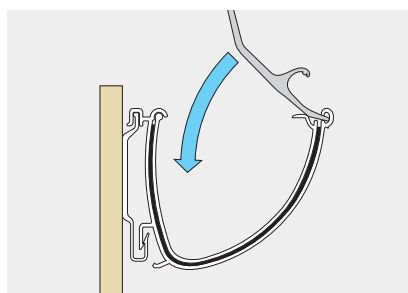
7. Check and reset 4mm expansion gap as necessary.



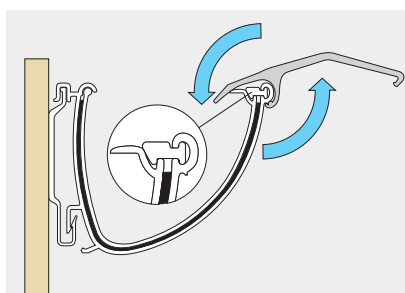
8. Clean jointing surfaces and spray apply Alumasc lubricant.



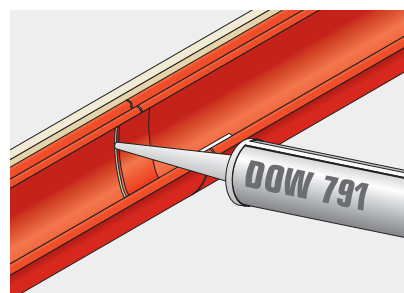
9. Hook joint union into gutter receiver channel and pivot down.



10. Compress joint union and start lock bar across joint.



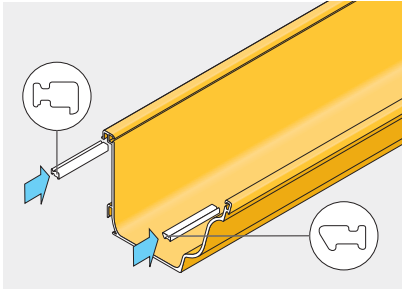
11. Reverse tool apply equal pressure around pivot point to complete lock bar positioning fully across joint. Take care not to dislodge gutter from fascia bracket.



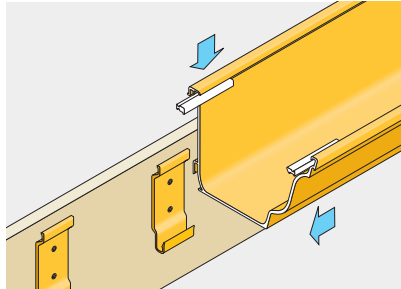
12. Dry gutter and apply DOW 791 silicone sealant to weather edges of union.

# Installation - Aqualine Moulded and Box Gutters

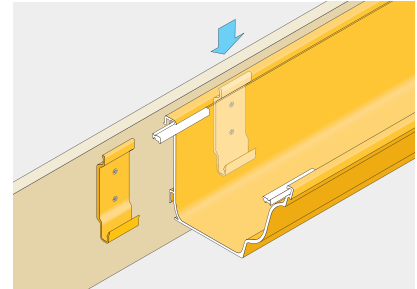
Aqualine Moulded and Box gutters use a unique dry jointing system to give a completely clean external appearance. Gutters drop and lock onto concealed brackets where internal joints are aligned and locked using slide bars. Assembly of Moulded and Box gutters requires the use of lock bars located at the front and rear. The entire gutter system is completely secure whilst at the same time allowing free linear thermal movement.



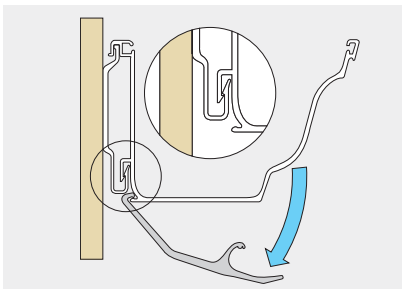
1. Pre-insert slide lock bars front and rear. Check for right way up.



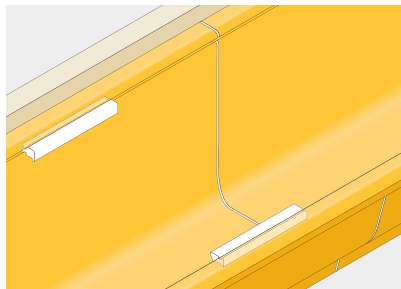
2. Position gutters loosely, do not lock down.



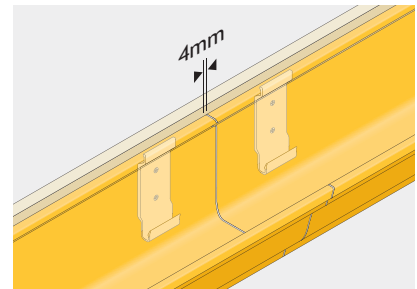
3. Locate gutters onto top rail of brackets and allow 4mm gap.



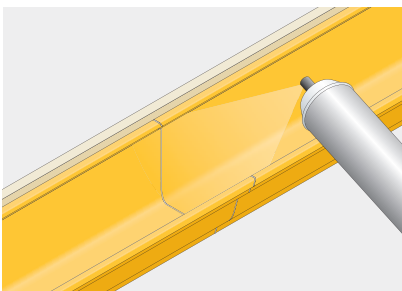
4. Lock down gutter with Aqualine jointing tool and check for full location.



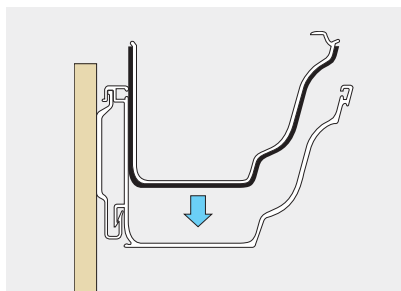
5. Slide lock bars up to but NOT across gutter joint.



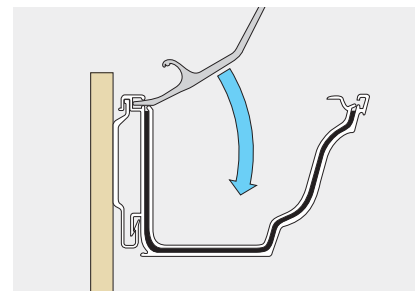
6. Check and reset 4mm expansion gap as necessary.



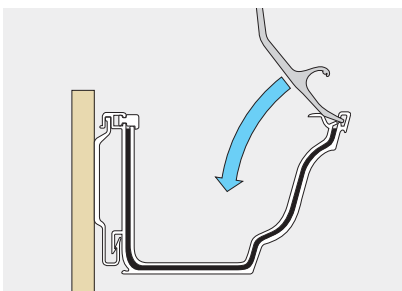
7. Clean jointing surfaces and spray apply Alumasc lubricant.



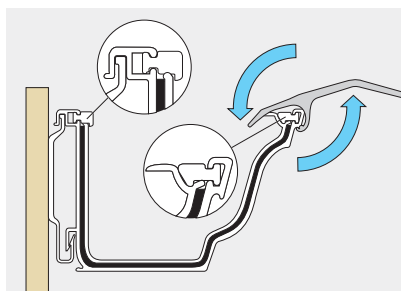
8. Push in joint union from above.



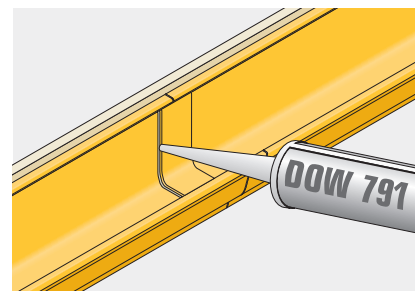
9. Compress joint union (back) and slide rear lock bar fully across joint.



10. Compress joint union (front) and start front lock bar across joint.



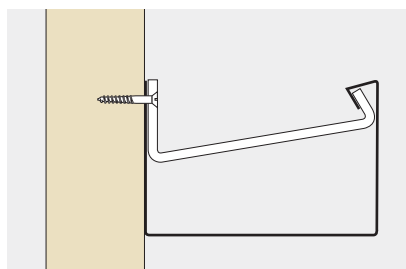
11. Reverse tool apply equal pressure around pivot point to complete lock bar positioning fully across joint. Take care not to dislodge gutter from fascia bracket.



12. Dry gutter and apply DOW 791 silicone sealant to weather edges of union.

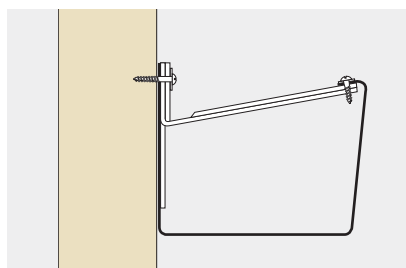
# Installation - GX Preparation

The GX range consists of three gutter profiles designed for managing high volumes of rainwater. GX gutters use traditional wet jointing on site, concealed internal laps and profile specific bracketry for support. High capacity GX systems require the strength and support of internal top straps or “back fixing” directly to fascia boards. Installers should inspect fascia boards to ensure they are capable of carrying the full gutter load.



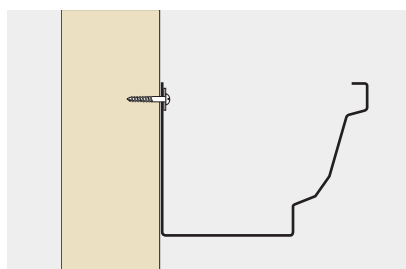
## GX Joggle (GXJ)

Screw fixes to the fascia incorporating a heavy gauge top strap.



## GX Smooth (GXS)

Fascia fixed using a one piece combined top and back strap.



## GX Moulded (GXM)

Direct back fix system with option for top strap where large sizes and heavy loads are anticipated.

### Note

If snow loads or high winds are anticipated insert two additional screws per length at the centre of each slot.

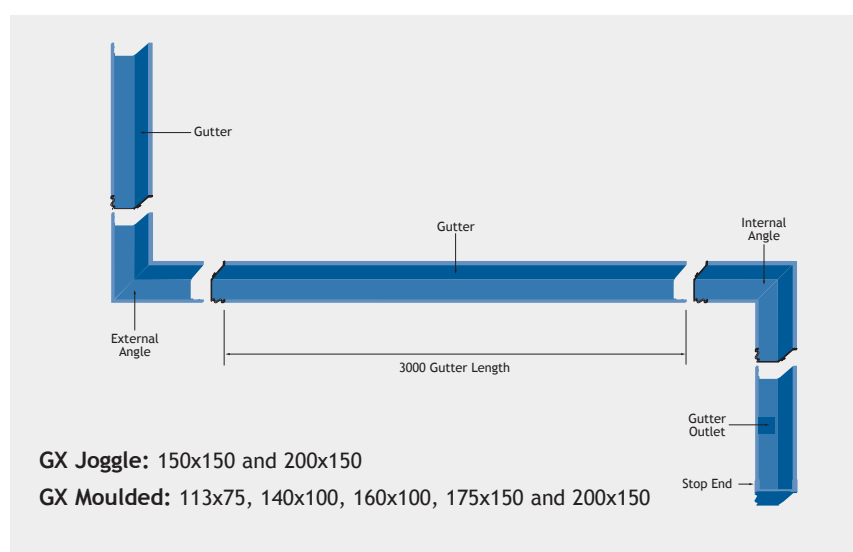
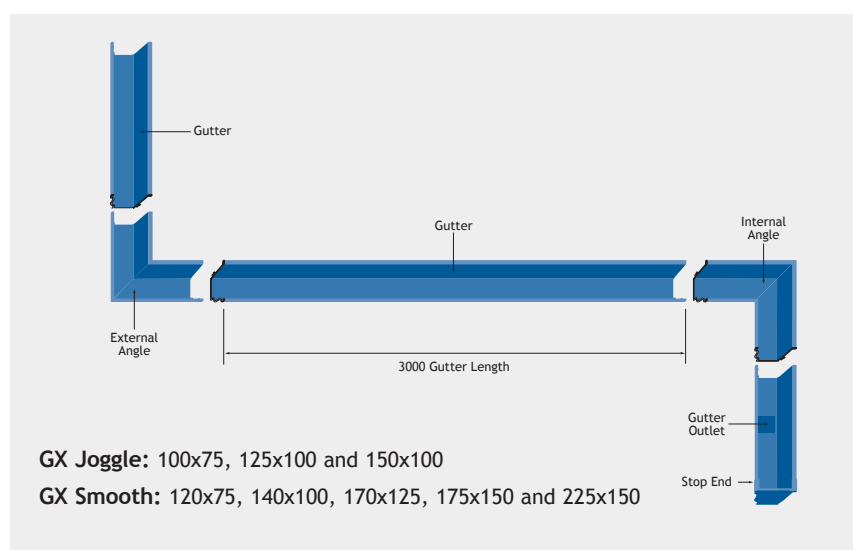
Alumasc recommend the use of aluminium washers to allow for thermal movement.

Sealing washers should be used if there is a risk of leakage during high flow conditions.

## Setting Out

Follow the guidelines below for setting out:

- GX Joggle - GXJ1, GXJ2, GXJ3 - Fix at 1000mm centres, GXJ4 and GXJ5 - Fix at 600mm centres using pre-drilled holes provided
- GX Smooth - Fix at 1000mm centres using pre-drilled holes provided
- GX Moulded - Fix at 600mm centres using pre-drilled holes provided
- 2no fixings per angle
- 1no fixing per running outlet



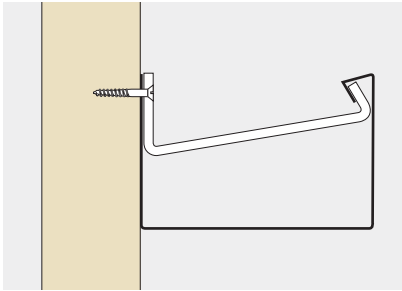
## Sealant

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

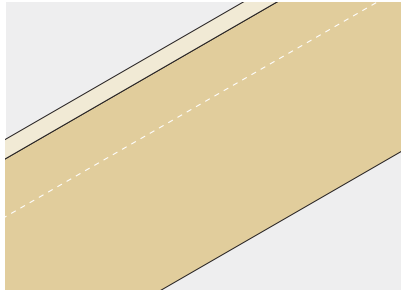


# Installation - GX Joggle Gutter

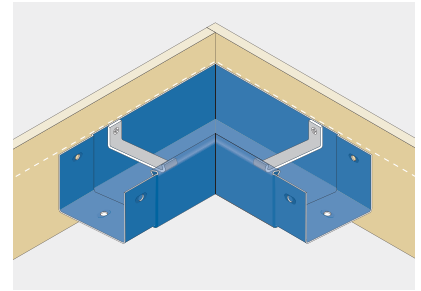
GX Joggle gutters are a press formed eaves drainage system with sharply defined box profile. Gutters are supported by internal top straps and directly fixed to the fascia board. The Joggle method of gutter jointing uses an integral internal union or formed spigot which is wet sealed using silicone sealant.



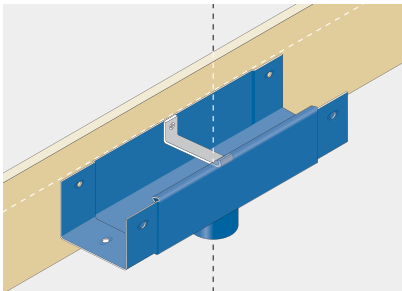
GX Joggle fixes to fascia using a heavy gauge top strap.



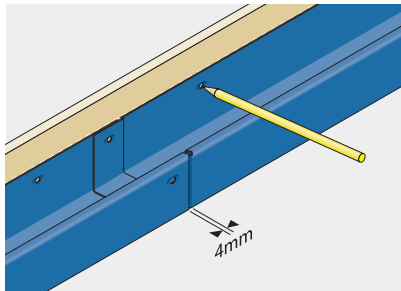
1. Use a string line or laser to set out gutter lines. (GX Joggle must be laid level).



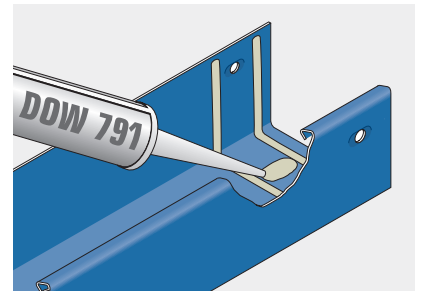
2. Position angles, mark fixing positions and pilot 3.5mm diameter holes, fit top strap and loosely fix using No12 x 38mm roundhead screws.



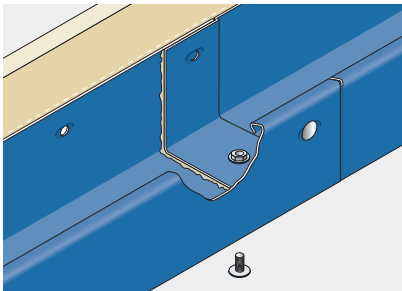
3. Plumb line outlet position with gullies at ground level, pilot 3.5mm diameter holes, fit top strap and loosely fix using No12 x 38mm roundhead screws.



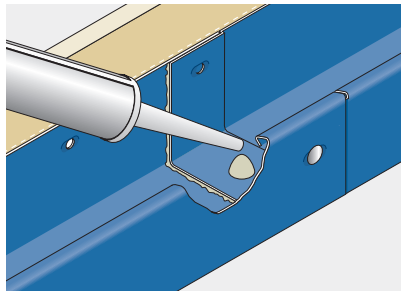
4. Position gutter lengths allowing for 4mm expansion joints. Mark fixing positions and pilot 3.5mm diameter holes.



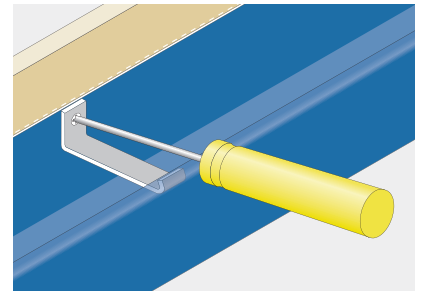
5. Thoroughly degrease all jointing surfaces and apply two 6mm beads of DOW 791 silicone sealant either side of and around the slotted fixing holes.



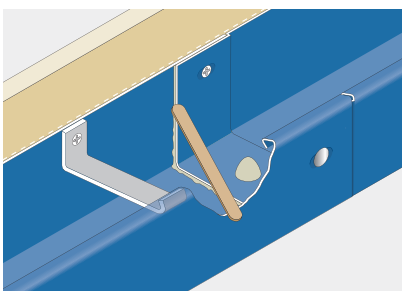
6. Secure joints with aluminium M6 x 12mm nuts, bolts and washers provided taking care not to over tighten or displace sealant from within the joint.



7. Cone-off the exposed bolts, studs and nuts inside the gutter with a generous application of silicone sealant.



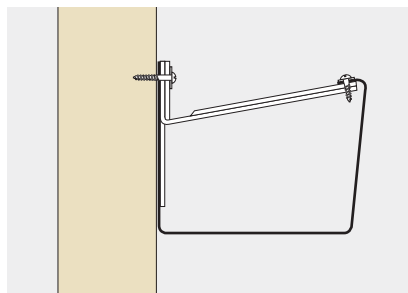
8. Align gutter lengths correctly for final positioning. Engage top straps and fix back securely to fascia.



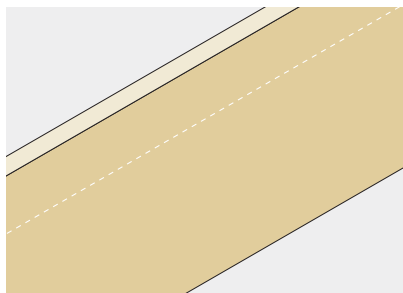
9. Tool off excess silicone around the union joint and from visible external surfaces.

# Installation - GX Smooth Gutter

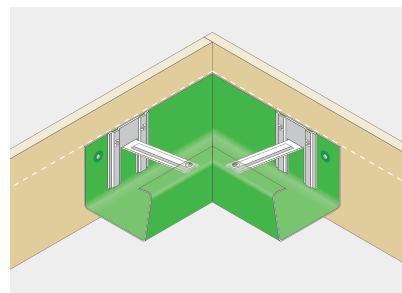
GX Smooth is a press formed rectangular profile with inclined front face. Gutters are supported using a one piece top strap combined with a back strap to accommodate increased weight load. Gutters and fittings are butt jointed with an overlapping union which is wet sealed using silicone sealant and back fixed to the fascia.



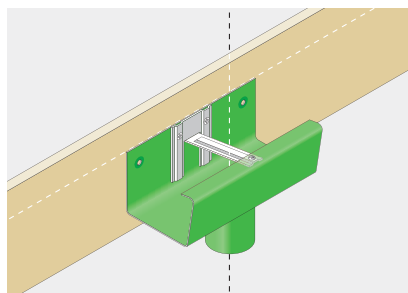
GX Smooth fixes using a one piece combined top and back strap.



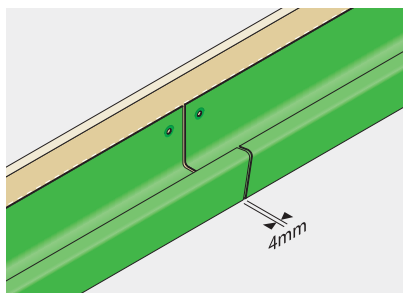
1. Use a string line or laser to set out gutter lines. (GX Smooth must be laid level).



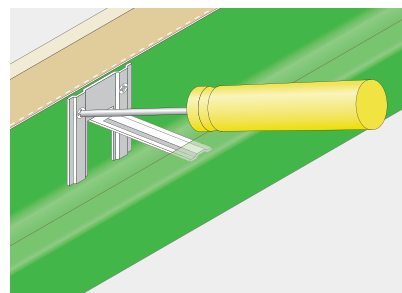
2. Position angles, mark fixing positions and pilot 3.5mm diameter holes. Loosely fit using No12 x 38mm round head wood screws and washers provided.



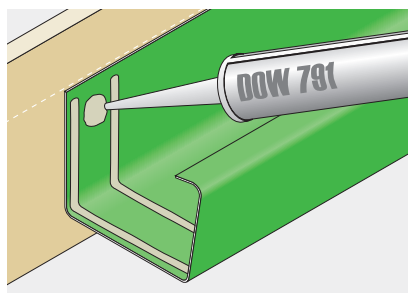
3. Plumb line outlet positions with gullies at ground level and mark fixing positions. Pilot 3.5mm diameter holes and loosely fit using No12 x 38mm round head wood screws and washers.



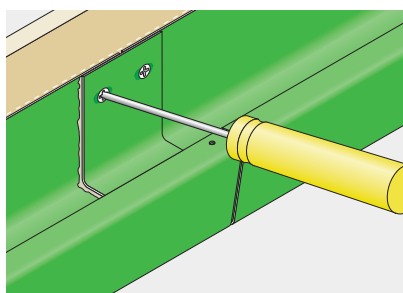
4. Line and level gutter lengths allowing 4mm expansion gap at joints.



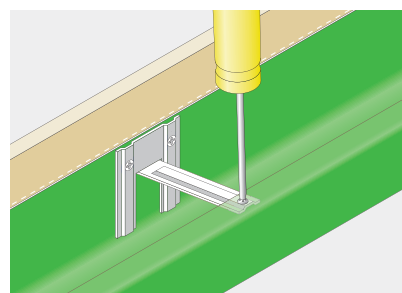
5. Fix gutters to fascia using combined top/back straps and No12 x 38mm round head wood screws and washers provided.



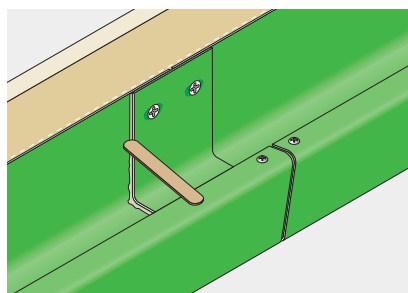
6. Thoroughly degrease all jointing surfaces and apply two 6mm beads of DOW 791 silicone sealant across back/sole/front surfaces.



7. Slide in union joints and back fix to fascia board using No12 x 38mm round head wood screws and washers. Slide in next gutter and repeat process.



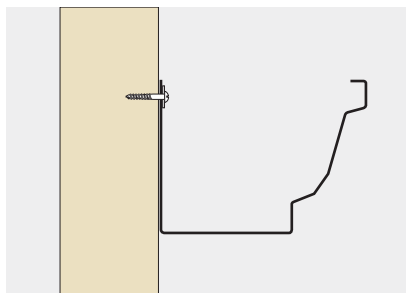
8. Screw the front end of the top straps to the preformed holes in the top lip of the gutter. Use the pan head fixing screw provided.



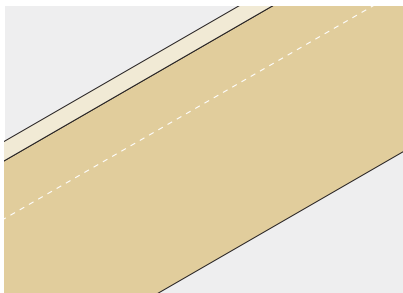
9. Tool off excess silicone around the union joint and from visible external surfaces.

# Installation - GX Moulded Gutter

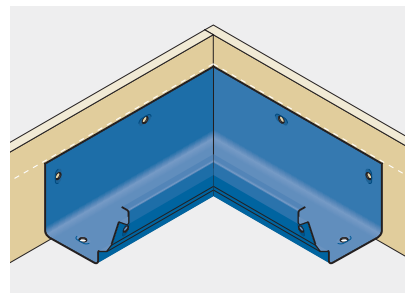
GX Moulded gutters are press formed to provide a seamless moulded profile. GX Moulded gutter systems are generally back fixed directly to the building fascia although the largest profiles also employ top straps. Gutter lengths and fittings are butt jointed with bolted overlapping unions which are wet sealed using silicone sealant.



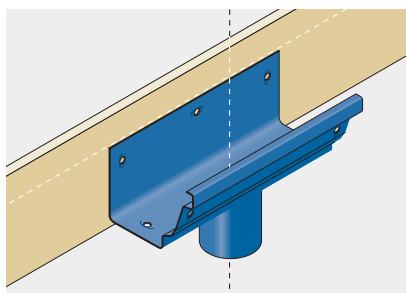
GX Moulded direct fixes to fascia. Top strap options are available where large sizes and heavy loads are anticipated.



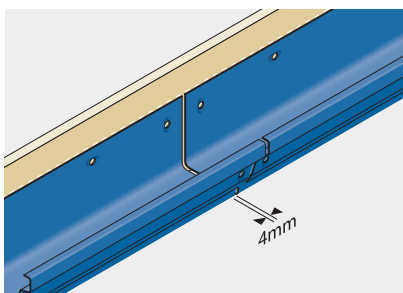
1. Use a string line or laser to set out gutter lines. (GX Moulded must be laid level).



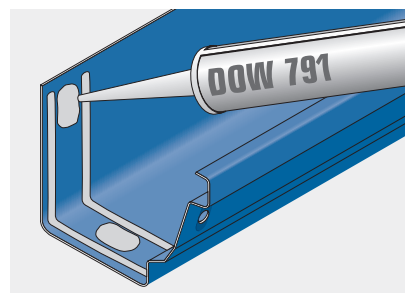
2. Position angles, mark fixing positions and pilot 3.5mm diameter holes and loosely fit using No12 x 38mm round head wood screws and washers provided.



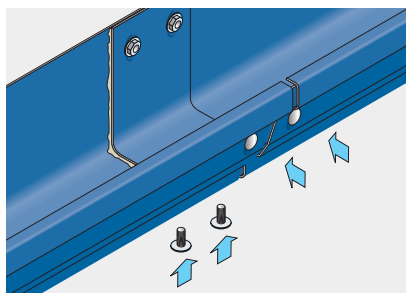
3. Plumb line outlet positions with gullies at ground level and mark fixing positions. Pilot 3.5mm diameter holes and loosely fit using No12 x 38mm round head wood screws and washers provided.



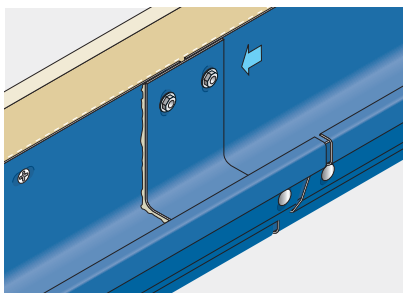
4. Line and level gutter lengths allowing for 4mm expansion gaps at joints.



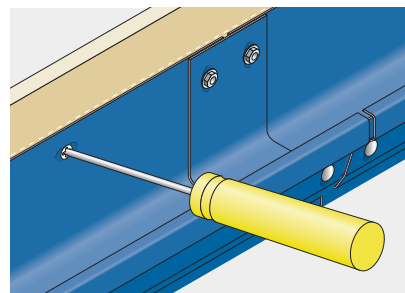
5. Thoroughly degrease all jointing surfaces and apply two 6mm beads of DOW 791 silicone sealant either side of and around the slotted fixing holes to inside back/sole/front surfaces.



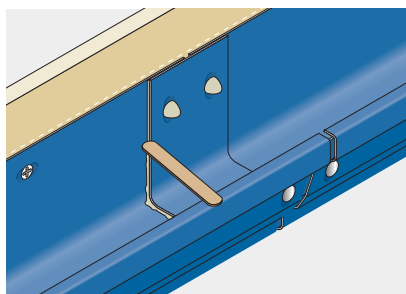
6. Slide in union joint and insert gutter bolts (heads outside). Secure joint with nuts and washers taking care not over tighten or displace sealant from within the joint.



7. Slide in next gutter length and repeat process.



8. Tighten all fascia fixing screws and fit top straps if required otherwise screw back securely to the fascia using No12 x 38mm round head wood screws and washers provided.



9. Tool off excess silicone and cone-off the exposed washers and nuts inside the gutter with a generous application of silicone sealant.

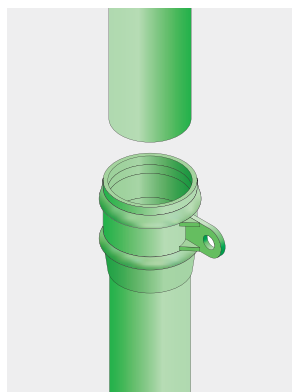
# Installation - Aluminium Rainwater Pipe Preparation

Alumasc offer three rainwater pipe systems according to the architectural style of the eaves gutters. Heritage pipes are traditional in character, Flushjoint pipes offer clean lines and discreet jointing whilst Guardian pipes are designed for security conscious environments. Assembly and installation of each pipe system must be considered individually although general aspects of preparation are common to all.

## Tools Required

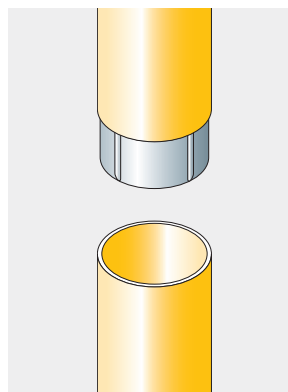
- String or plumb line
- Tape measure
- Drill
- File
- Masonry bit
- Wall Fixing (e.g raw plug)
- Cleaning rags
- Marker pen
- Solvent cleaner
- Posi and Plain screwdriver
- Paintbrush
- Hacksaw
- Masking tape
- Mastic gun
- Spirit level
- Protective gloves
- Adjustable spanner

## Heritage Pipe



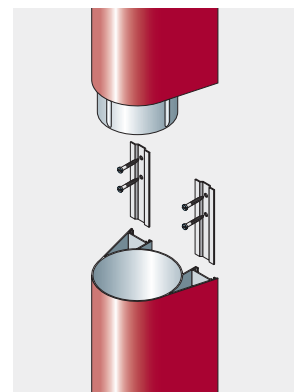
Eared pipe sockets and fittings (uneared socket available)

## Flushjoint Pipe



Internal pipe spigots with bracket fixings

## Guardian Pipe



Flush to wall pipe with hidden fixings

## General Installation Sequence

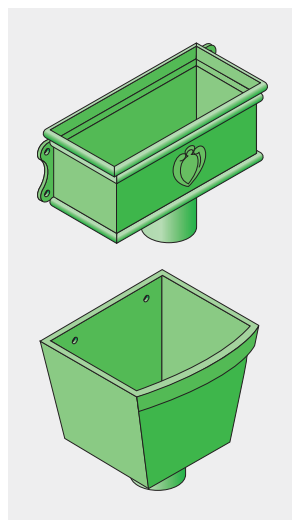
- Complete installation of gutters
  - Position offsets, bends and branches
  - Fit pipes and brackets
  - Fit plinth offsets
  - Fit access doors and shoes
- (see pages 89 to 91 for details)

## Sealant

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

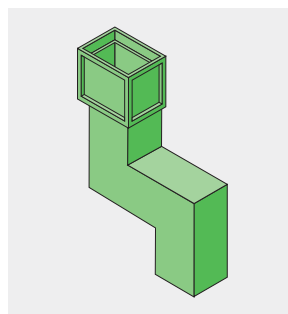
## Rainwater Heads

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



## Bespoke Fabrication

Where special conditions or tricky detailing is required, Alumasc have the equipment and skills to cast, cut, fold and weld aluminium into special configurations.



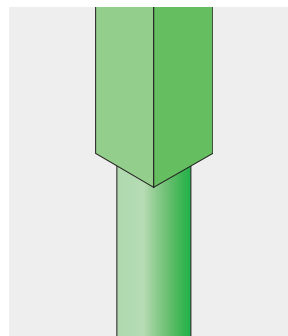
Special offset

## Rainwater Shoes and Access Doors

A rainwater shoe is used when pipes discharge onto an open gully. An access door is fitted where the connection is direct.



Shoe



Pipe size changes



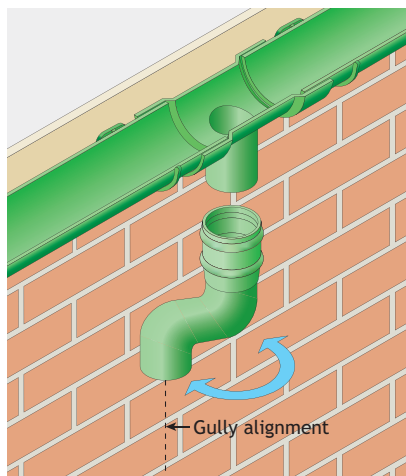
Access door

# 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.

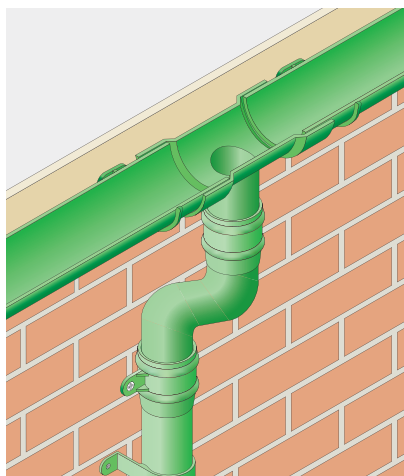
## Pipe Alignment



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.

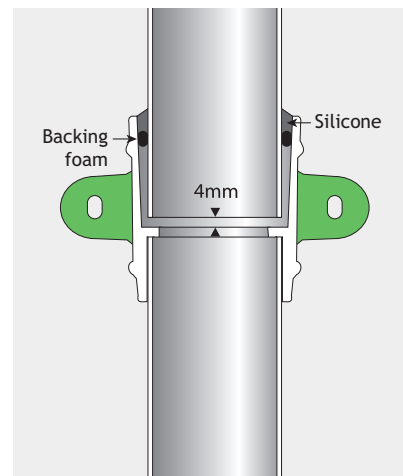
## Outlets and Offsets



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.

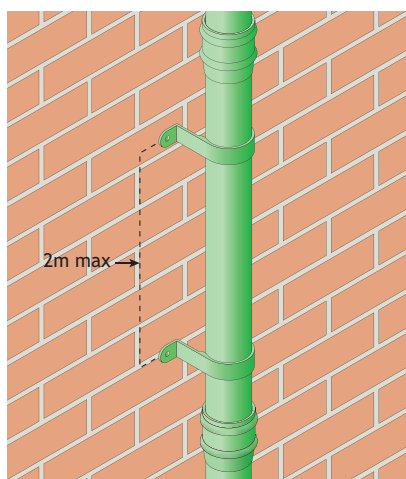
## Pipe Jointing and Fixing



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.

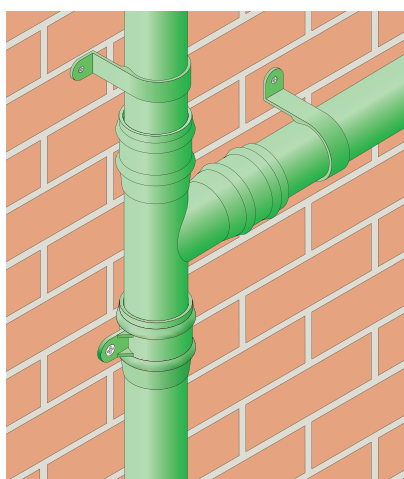
Fix to wall at 2m centres using No12 x 50mm screws. Eared sockets have elongated fixing holes to permit the use of pipe nails.

## Pipe Clips



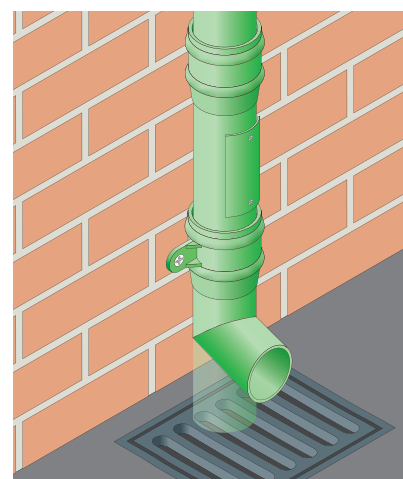
Where uneared pipework is being used it must be secured at maximum 2m centres. Pipe clips should be chosen according to visual or practical considerations and comprise Standard Base, Small Base and Extended Base options.

## 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.

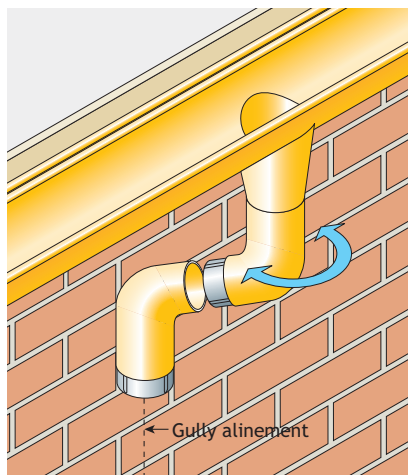
In the case of direct connections it is recommended that an access pipe fitting is included within 750mm of ground level.



# Installation - Flushjoint Rainwater Pipe

Flushjoint rainwater pipes consist of circular, square and rectangular pipes with factory fitted internal spigot joints between pipes and fittings. Pipes are bracket fixed and generally assembled from the eaves downward. Loose-fit pipe clips are used to secure Flushjoint pipes and can be positioned to allow pipe joints to be completely concealed.

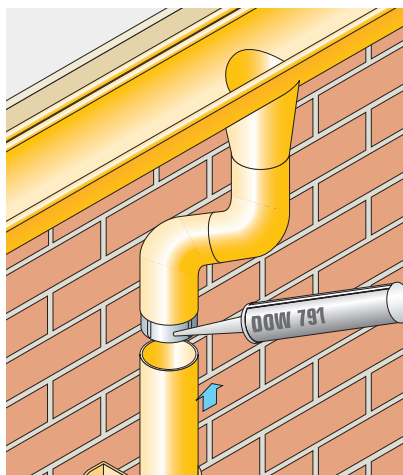
## Pipe Alignment



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

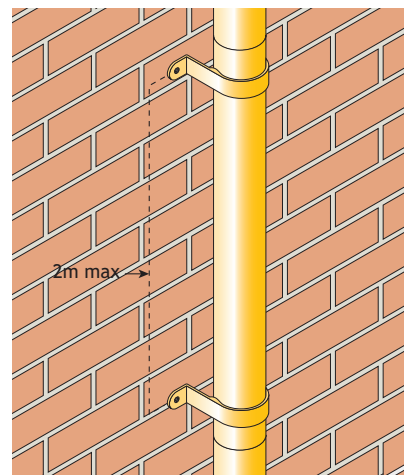
Round pipe systems are more flexible to install as offsets can be adjusted and “swung” into alignment with the gully position.

## Outlets and Offsets



Commence installation from the gutter outlet by fitting and adjusting the two part offsets. Check vertical plumb line and assemble internal spigot joints using DOW 791 silicone sealant then fit first pipe clip.

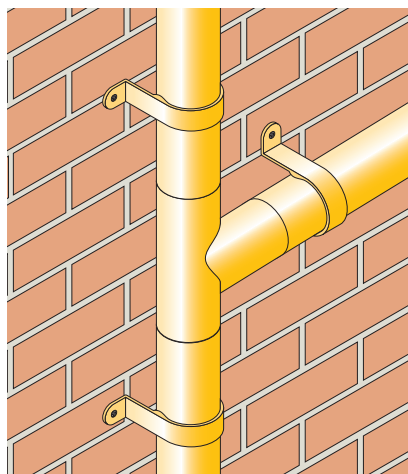
## Pipe Clips



Pipe clips support and hold the rainwater pipe to the structure. All three types of pipe clip, Standard, Small Base and Extended Base can be used to conceal the pipe joints.

Fix to wall using No12 x 50mm screws provided. Allow two pipe clips per pipe length (maximum 2m centres) and fix with screws, placing a washer beneath the screw head.

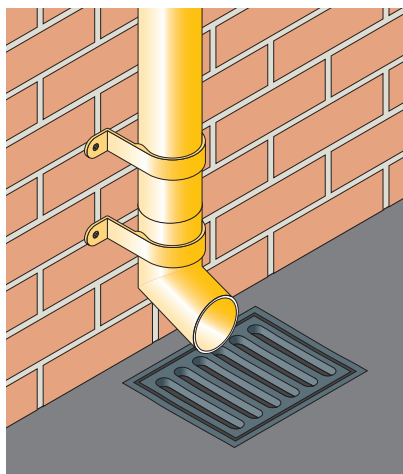
## Pipes, Bends and Branches



Continue to assemble the stack taking care not to scratch the pipe coating whilst sliding pipe clips into position.

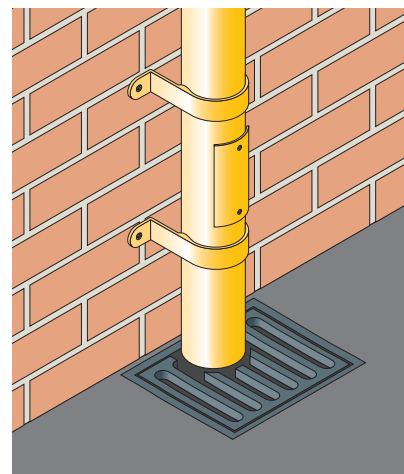
Bends and branches are normally secured between pipe ends. Where additional fixing is required e.g a change of direction at a bend, use additional pipe clips.

## Shoes



At ground level if the rainwater pipe does not connect directly to the gully, pipes can terminate with a shoe fitting for free discharge over the gully.

## Access Pipes

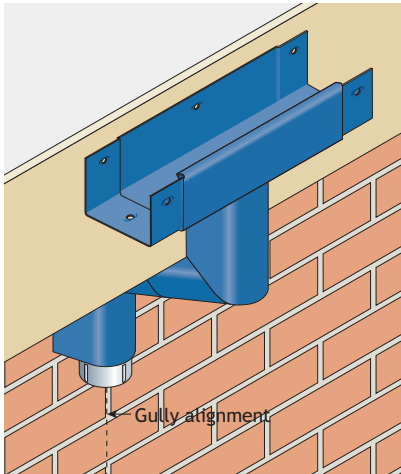


Where rainwater pipes directly connect to the gully it is recommended that an access pipe is fitted no more than 750mm above ground level.

# Installation - Guardian Rainwater Pipe

Guardian is a range of flush fitting architectural feature pipes in round, square and rectangular pipe section with factory fitted internal spigots and fully concealed bracketry. Pipe systems are assembled from ground upwards and are designed to be unrippable, providing a high level of security.

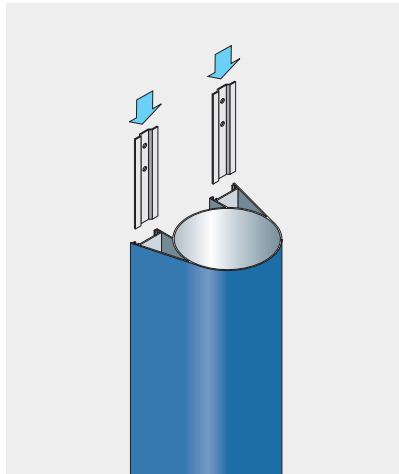
## Pipe Alignment



Guardian pipes are assembled from ground upwards.

Use a plumb line to ensure correct alignment between gully at ground level and the gutter outlet.

## Pipe Fixing Plates

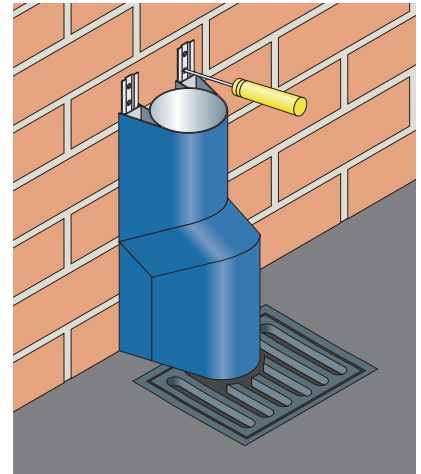


When joining pipe lengths tap two fixing plates per pipe connection into the pipe receiver rails using a block of wood to prevent damage.

The fixing plates have "stops" to limit insertion.

Fix to the wall using No12 x 38mm pan head screws.

## Gully Connection

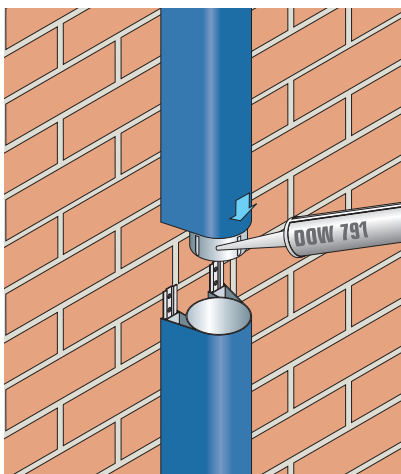


Commence installation by fitting fixing plates to the drain connector component and then fixing to the wall.

This component may be either a plain pipe section or include a rodding access.

Where the gully position is away from the wall, a shroud is available in order to eliminate gap. (Full site dimensions required).

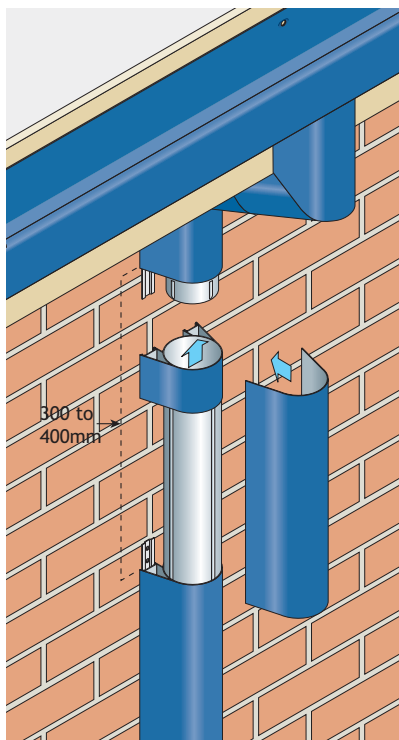
## Pipe Assembly



Pipe lengths are connected by sliding new pipe sections down over the fixing plates of the pipe below.

Seal spigot joints by applying DOW 791 silicone sealant to spigot and receiving pipe end.

## Make Up Piece, Offsets and Gutter Connections



Build up and trim stack to within 300/400mm of underside of gutter and secure with fixing plates.

Insert telescopic section into stack below offset position, (if there is no offset use a straight make-up piece of equal length).

Fit the offset into the make up piece then lift up offset and make up piece to test the fit to the gutter spigot.

Cut a cover piece to fit gap created by the make up piece.

Apply DOW 791 silicone sealant to gutter spigot and adhere cover piece into position.

# Skyline System - Introduction

The interface between walls and roof at the building eaves is one of the most crucial facets of design - both functionally and aesthetically. The sharpness and vibrancy of Alumasc's Skyline range of Fascias, Soffits and Copings provides dramatic engineered solutions over a wide range of buildings for both public and commercial sectors.

## The Skyline Range

Skyline is a stylish and functional aluminium fascia, soffit and coping range offering solutions for use at roofing and gutter interfaces. Standard and fully bespoke designs from the Skyline range are available in high quality, in-house powder coated aluminium.

Skyline fascia and soffit components are designed to be used in conjunction with Alumasc's aluminium rainwater systems, in particular the GX range of folded aluminium gutters, providing a complete eaves and roof drainage solution.

Alumasc Technical Services can assist in the design of a fixing and support framework to suit individual project requirements. A design and fabrication service is also available for bespoke fascia profiles to suit special project requirements.

Skyline is not a rigid set of standard components, but a product rationale, developed to exploit the potential of Alumasc's wide ranging production capability in pressed and folded aluminium.



### Skyline Fascias and Soffits

Skyline's range of four generic fascia profiles in aluminium, complemented by interlocking soffit planks, provides a wide choice of building eaves solutions.

Fascia profiles combine with soffit panels to create a range of fascia configurations which may be projected direct from the elevation or they may be combined with Alumasc soffit planks to produce varying eaves overhangs.

### Skyline Copings

Skyline Copings provide an economical and easily installed capping to upstanding parapets, in conjunction with flat or pitched roofs. The strap fixing method avoids penetration of the capping, whilst allowing ventilation over the top of the wall. Skyline Copings are maintenance free, available in a wide range of colours and are equally suited to retrofit and new build projects.

### Skyline Anti-Climb

Skyline Anti-Climb is designed with security in mind, preventing unauthorised access to the building roofscape. Skyline Anti-Climb barriers comprise support brackets and preformed curved barrier sections. They can be fitted in front of virtually any gutter profile, resulting in a bold architectural feature.





# Skyline Fascias and Soffits

Alumasc's Skyline Fascia and Soffit configurations offer top of the range roof edge details to suit all designs and budgets.

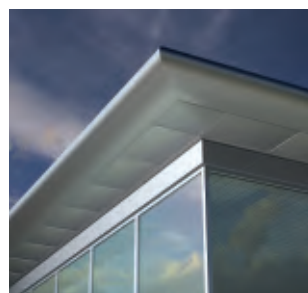
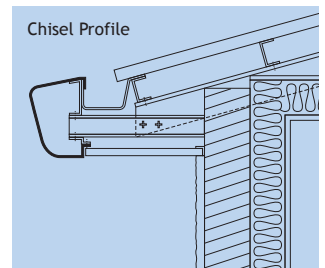
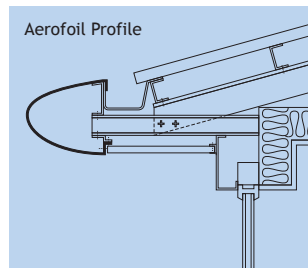
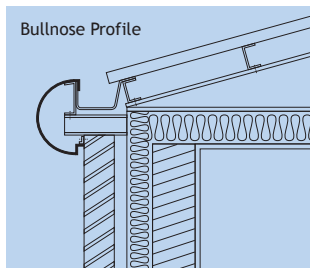
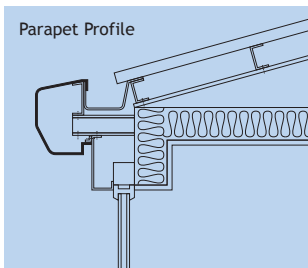
## Standard Skyline Profiles

Skyline Fascias and Soffits are manufactured from high quality, polyester powder coated aluminium and are available in four bold generic shapes with bespoke designs available to order. Skyline can be fully integrated with Alumasc's aluminium rainwater systems.

## Skyline Designer

Skyline Designer is not a defined product range, but a collection of ideas which provide the architect with an opportunity to create highly distinctive fascias, soffit panels and cassettes that can be detailed and fabricated in a multitude of shapes and sizes to suit project requirements. If it can be made, we can make it.

Alumasc Technical Services can offer advice from the first pencil sketches right up to site installation. Once the architectural details are agreed, full working drawings are produced with client approval requested prior to fabrication.



# Skyline Anti-Climb Barrier

The Skyline Anti-Climb Barrier is designed with security in mind, preventing unauthorised access to the roofscape. Robustly engineered and visually striking, this simply detailed system comprises support brackets and pre-formed curved barrier sections that can be fitted in front of virtually any gutter profile, providing a bold architectural feature.

## Applications

- Provides maximum security in high risk areas
- Suitable for new buildings and retrofit
- Can be used with all types of Alumasc gutter systems

## Performance

- Lightweight, durable and non-corrodible
- Entirely weatherproof and easy to handle and fix
- Coefficient of linear thermal expansion is  $23 \times 10^{-6} \text{mm/m/}^{\circ}\text{C}$
- Where butt joints occur over an internal union bracing clip, a 2-3mm expansion gap must be provided between sections of the Anti-Climb Barrier
- All metal gutters should be cross bonded into Skyline Anti-Climb Barrier
- Life expectancy of aluminium: 40 years (rural/suburban areas); up to 25 years (industrial/marine areas)
- Aluminium is 100% recyclable

## Components and Manufacture

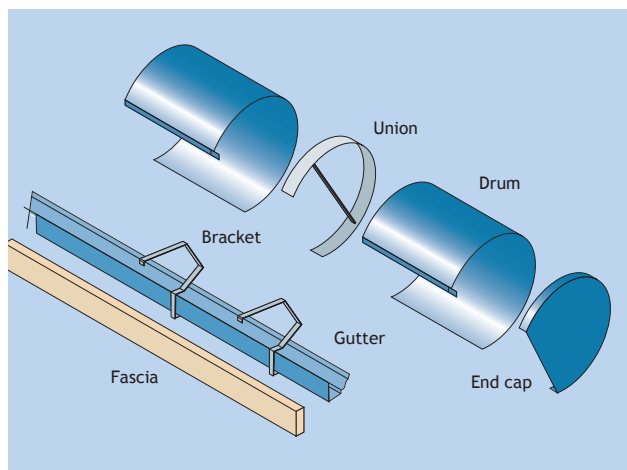
- UK manufactured
- Two main components - support brackets and barrier sections
- Barrier sections are delivered to site preformed to shape, with loose union bracing clips
- Barriers are made from rolled 2mm heavy grade aluminium sheet to BS 1470: 1972 fixed to loose union bracing clips located at 625mm centres.
- Brackets are made from 40mm x 6mm galvanised mild steel bar, bent and predrilled for fixing to the building fascia

## Colours & Finishes

- In-house polyester powder coating facility with 16 BBA approved standard colours
- Additional BS or RAL colours available to special order; also available in plain mill finish for on-site painting

## Installation & Fixing

- Simple to install. Contact Alumasc Technical Services for further information
- Minimal maintenance requirements





# Skyline Coping System

The Skyline Coping system provides an economical and easily installed capping to upstand parapets, in conjunction with flat or pitched roofs. The strap fixing method avoids penetration of the capping, whilst allowing ventilation over the top of the wall. Skyline Copings are equally suited to retrofit and new build projects.

## Applications

- Provides a totally weatherproof covering to upstand parapets as fixing method does not penetrate the Skyline Coping
- Suitable for new buildings and retrofit

## Performance

- Attractive, clean lines are maintained as fixings are not visible on the surface of the Skyline Coping
- The fixing strap profile allows ventilation over the top of the wall whilst remaining weatherproof
- Material thickness and fixing mechanism gives excellent rigidity
- Lightweight, durable and non-corrodible
- Coefficient of linear thermal expansion is  $23 \times 10^{-6} \text{mm/m/}^{\circ}\text{C}$
- A gap of 3-4mm should be left between Skyline Coping sections to accommodate thermal expansion
- Life expectancy of aluminium: 40 years (rural/suburban areas); up to 25 years (industrial/marine areas)
- Aluminium is 100% recyclable

## Components and Manufacture

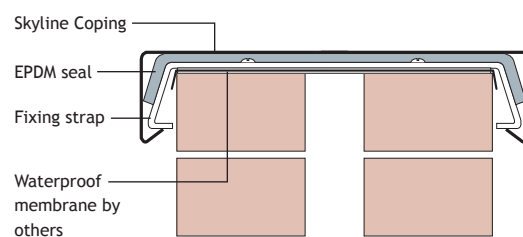
- UK manufactured
- Skyline Coping are fabricated from 2mm or 3mm thick aluminium alloy sheet, depending on width
- Fixing straps are pressed 3mm aluminium with extruded EPDM seals bonded to the top surface
- All fabricated fittings (90° corners, irregular corners, stop ends, closed ends, upstands, 90° tee junctions) are mitred, welded and have a smooth finish on the front face
- A waterproof membrane will be required beneath the Skyline Coping to provide an effective seal

## Colours & Finishes

- In-house polyester powder coating facility with 16 BBA approved standard colours
- Additional BS or RAL colours available to special order; also available in plain mill finish for on-site painting

## Installation & Fixing

- Simple and quick to install
- In most cases fixing can be carried out from the roof so no external access is required making it particularly suitable for renovation work
- Minimal maintenance requirements



# Apex Heritage Cast Iron Rainwater Systems

In addition to its market leading Aluminium Rainwater Systems, Alumasc also offers the traditional Apex Heritage Cast Iron Rainwater System for use in historic and building restoration projects, with bespoke designs available to match or replace existing installations.

Alumasc has taken the traditional process of casting, and by combination with modern quality control and finishing techniques, has produced a product range that is in keeping with traditional architecture whilst being fully in tune with contemporary performance requirements.

The Apex Heritage cast iron rainwater range is produced by the traditional sandcast method, in which the sand not only imparts the authentic cast iron texture and appearance but also allows for example, pipe collars and ears to be cast in one piece with downpipes.



## Colours & Finishes



### Primed Finish

Alumasc supplies Apex Heritage cast iron rainwater products factory primed with one coat of protective red oxide primer. This primer will give protection against corrosion during transportation and short-term undercover storage, and will provide a suitable surface for final painting. On site handling and painting are the responsibility of the contractor.



### Painted Finish

The renowned quality of Apex Heritage cast iron is also available in a high performance satin pre-finish black. The finish is a three coat system which is factory applied under controlled conditions and has been specifically developed for cast iron to provide a uniform and long lasting finish.

The satin, black pre-finish is independently tested and provides excellent resistance to salt, heat and frost conditions. Up to 60% can be saved on installation time.





# Apex Heritage Cast Iron Rainwater Systems

The Apex Heritage Cast Iron Rainwater range is ideally suited to traditional craft-based contracts, closely replicating historic styles where required. Authentic sand castings combine traditional manufacture with modern quality control to create a high quality range of traditional cast iron gutters, downpipes and hopper heads.

## Key Features

- Authentic sand castings
- Range of standard sizes available along with a made-to-order range
- Pre-finished cast iron can cut costs by 30% and installation time by 60%
- Extremely strong, durable and vandal resistant
- Dimensionally accurate and stable
- Silent in operation
- Life expectancy in excess of 40 years
- Minimal maintenance
- Complies with BS 460: 1964 Cast Iron Rainwater Goods
- Cast iron is 100% recyclable



## Apex Heritage Gutters

Available in four standard profiles, in a choice of sizes — Half Round, Beaded Half Round, Victorian Ogee and Moulded, in both primed and painted finishes.

## Apex Heritage Downpipes

Available in a choice of round, square and rectangular pipe profiles with authentic socketed joints.

## Apex Heritage Rainwater Heads

Available from stock in a choice of two styles — ornamental (flat back and corner installation) and plain rectangular. A more extensive choice of rainwater head designs is available from our made-to-order range.

## Apex Heritage Made-to-Order

The Apex Heritage Made to Order range offers the specifier a considerable choice of readily available plain and ornamental pipes, rainwater heads and gutter profiles, including radius gutters. A variety of different designs are possible for decorative earbells and additional enrichments that can be added onto rainwater heads. Where an existing installation has to be replaced, in particular on listed buildings, Alumasc can provide new castings to match existing designs.



# Alumasc Premium Products - All Brands

Alumasc provides an unrivalled range of premium products for building exteriors and drainage, along with high levels of technical expertise and project support. Our wealth of experience combined with networks of approved installers, merchant stockists and a choice of warranty options ensures we provide appropriate product and system solutions for all types of buildings.



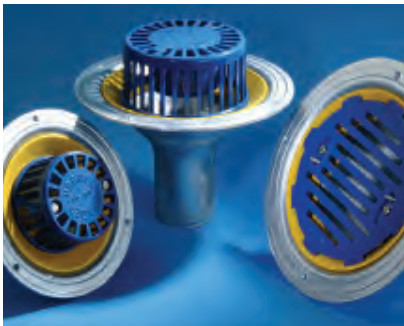
Alumasc is the UK's leading manufacturer of aluminium rainwater systems and offers a complete range of gutters, downpipes and fascia/soffits for both contemporary and traditional architecture.

Alumasc's cast iron rainwater system is for historic and restoration sites, with bespoke designs available to match or replace existing installations.

## Rainwater

- Aluminium Rainwater Systems
- Aluminium Fascias, Soffits and Copings
- Cast Iron Rainwater Systems

[www.alumascrainwater.co.uk](http://www.alumascrainwater.co.uk)



Alumasc's Harmer brand provides market leading solutions for rainwater handling and building drainage.

Aluminium roof, floor and shower drains are complemented by specialist drainage ranges in plastic. A choice of cast iron pipework systems is available for internal and rainwater drainage. Specialist rainwater management systems and paving and deck supports are also available.

## Drainage

- Roof, Floor and Shower Drains
- Cast Iron Soil & Waste Systems
- Rainwater Management Systems
- Paving and Decking Supports

[www.alumascdrainage.co.uk](http://www.alumascdrainage.co.uk)



Alumasc is a specialist provider of world class waterproofing and green roof systems.

The range includes Derbigum high performance flat roof membranes, Firestone TPO and EPDM single ply membranes, Hydrotech structural waterproofing and ZinCo Extensive, Biodiverse, Semi-intensive and Intensive green roofs.

## Waterproofing

- Flat Roof Membranes
- Single Ply Membranes
- Structural Waterproofing
- Green Roof Systems

[www.alumascwaterproofing.co.uk](http://www.alumascwaterproofing.co.uk)



Alumasc is a specialist in the design and development of thermally efficient insulated render systems. Alumasc's external wall insulation systems are available with a choice of insulating material and silicone, mineral or polymer-modified decorative render finishes.

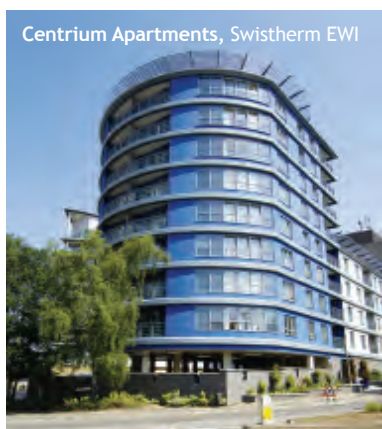
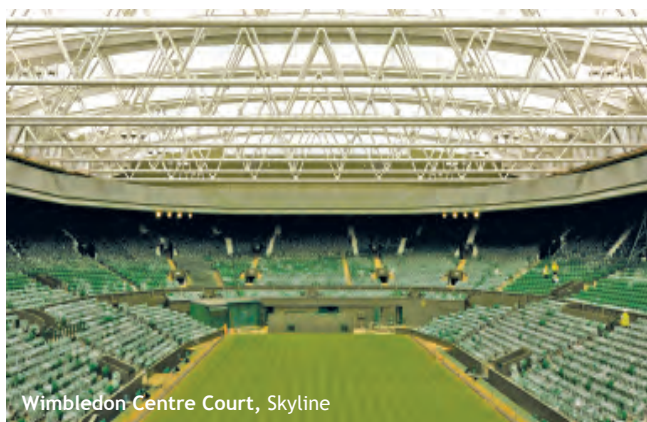
## Facades

- External Wall Insulation
- Render Only Systems
- Brick Slips & Specialist Systems
- Decorative Coatings

[www.alumascfacades.co.uk](http://www.alumascfacades.co.uk)



# Alumasc Project Gallery - All Brands





# ALUMASC

## RAINWATER SYSTEMS

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Drainage

Waterproofing

Façades

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