

Cl/Sfb (52.6) In6
ALUTEC TRADITIONAL

March 2012



Product Guide





Prestige new build,
Hampshire



Menagerie, Coombe Deer
Park, Warwickshire



Oxney Grange, Peterborough



Temple Grove,
East Sussex



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Alutec is part of Aliaxis, a multi-national group of plumbing & drainage companies. Present in over 40 countries, the group is known for its market leading plumbing and drainage systems.

Alutec is the UK leader in innovative aluminium rainwater and eaves drainage solutions. Alutec prides itself in providing industry leading standards in technical support, customer service and sustainable product design.

Products

Alutec offers solutions for three distinct areas:

- Gutters and rainwater systems
- Soffit & fascia
- Roof and shower outlets

Gutters and rainwater systems

evolve



traditional



aligator



soffit & fascia



roof & shower



Life expectancy

The performance, quality and longevity of all product systems are backed by the knowledge that Alutec is a long established and financially sound company and part of a substantial international group ensuring complete peace of mind for specifiers and building owners.

Standards

All Alutec systems are manufactured to and in excess of the appropriate BS or EN Standards. For a full list, please see BS and EN Standards in the Design and Installation section.

ISO 14001: 2004

Alutec is committed to continually reducing its environmental impact across all its business activities and is accredited to ISO 14001: 2004.



Service

Alutec offers a fully integrated “turn key” project advisory service; from the initial design stages, right through to completion, ensuring deadlines and delivery dates are met.

Product availability

Alutec products are available through all major national or regional building, plumbing and roofing merchants and distributors. Call Alutec for your nearest merchant.



CPD Service

Alutec is a leading CPD provider for aluminium rainwater and soffit & fascia systems. Alutec's RIBA accredited CPD covers all aspects of eaves design, selection and correct installation. To date, it has been presented to over 5,000 construction industry professionals.

Alutec Trained Installers

To ensure our products are correctly installed and therefore fulfil their design objectives, Alutec recommends the use of independent trained installers, accredited at Alutec's training centre. A nationwide network of Trained Installers is available on request.

Technical support

Alutec Technical Services team has many years experience in helping specifiers with:

- Correct system choice
- Roof drainage design
- Flow rate calculations
- Installation advice

All Alutec technical or product specifications and brochures can be downloaded from the Alutec website marleyalutec.co.uk

For further technical queries, call the Technical Services Department: 01234 344108

Sales support

We offer a complete service from enquiry to order point and will deal with all types of enquiries, whether they are related to plans, bill of quantities, tenders or other material.

Sustainable product design

Alutec is committed to designing the most sustainable, durable and high performance rainwater systems possible.

Sustainable design creates products with a lower carbon footprint, longevity and low maintenance. Alutec eaves solutions lead the market, all have a life expectancy of 50 years or more and require little or no maintenance.



Aluminium, a sustainable material

For a material to be considered sustainable, it must be recyclable, have a long life expectancy and a low impact on the environment. Aluminium has all these qualities and more.

Lightweight, strong and long-lasting

Aluminium is a very light metal, about 65% lighter than steel or cast iron. It has a very high strength to weight ratio and excellent corrosion resistance. One of the oldest recorded uses of aluminium is the statue of Eros in London, cast in 1893.

Highly corrosion resistant

Aluminium naturally generates a protective oxide coating. Should the painted surface be damaged, the aluminium simply oxidises to protect itself. Furthermore, marine grade aluminium, used on all Alutec systems, is better still; used in combination with architectural grade polyester powder coating it provides an attractive, durable and maintenance free finish. This is in contrast to steel, where galvanising only offers limited protection and cast iron, which requires regular repainting.

Infinitely recyclable

Aluminium can be recycled again and again without loss of quality, in fact 75% of all aluminium ever produced is still in use today. The recycling of aluminium requires little energy. It saves up to 95% of the energy required for primary aluminium production.

Responsible sourcing

Aluminium is the world's third most abundant element. 97% of all bauxite mines in the world operate rehabilitation projects, returning the land to its original condition after mining is finished. The amount of electrical energy required to produce aluminium has dropped by 70% since the 1880's and 60% of that electricity is provided from renewable green energy.



Green production power

Hydro-electric or geo-thermal green energy accounts for 60% of global primary aluminium production, minimising aluminium's environmental impact.

For more information visit the European Aluminium Association:
www.eaa.net



Colour options

All Alutec eaves rainwater systems are available with a BS 6496 architectural grade polyester powder coat (PPC) paint finish carried out to BS EN 12206-1:2004.

Architectural grade PPC paint finishes are designed for exterior use and maintain their colour and gloss level for longer. The paint's life expectancy is enhanced further by Alutec's choice of aluminium. Alutec only uses the highest quality marine grade aluminium, which greatly increases its durability.

Alutec has 21 standard colours, including Heritage Black, with a textured surface, emulating the appearance of cast iron. For more bespoke projects an infinite number of non standard colours are available.

CAST 98 Heritage Black	RAL 9010 White	RAL 1013 Pearl White	
	RAL 9005 Black	RAL 7035 Light Grey	
RAL 7036 Platinum Grey	RAL 7037 Steel Grey	RAL 7015 Slate Grey	RAL 7016 Anthracite Grey
RAL 7021 Granite Grey	RAL 5010 Flower Blue	RAL 5002 Ultramarine	RAL 5003 Sapphire Blue
RAL 6002 Leaf Green	RAL 6005 Moss Green	RAL 1017 Saffron Yellow	RAL 3002 Signal Red
RAL 3003 Ruby Red	RAL 8016 Chestnut Brown	RAL 8014 Sepia Brown	RAL 8017 Chocolate

Colours are approximate and for general guidance only. For exact colour and finish reference, colour plates are available on request.

Hundreds of colours are available on request. For information on these and the gloss levels of the coating, please contact Alutec.

Main Image: Wichelstowe, Swindon, Wiltshire



Traditional Half Round



Traditional Victorian Ogee



Traditional Moulded Ogee

Using marine grade aluminium for ultimate longevity and low maintenance, three distinct bolted gutter systems manufactured to original British Standard cast iron dimensions.

Features of the Traditional range

Life expectancy of 50 years or more

Near-zero maintenance, only periodic aesthetic cleaning required

Marine grade aluminium – will outlast other grade aluminium systems

Manufactured to BS 8530:2010, a new standard for Traditional Half Round, Victorian Ogee and Moulded Ogee aluminium rainwater systems

Each profile available in **three different sizes**

Durable and strong, made from heavy grade aluminium


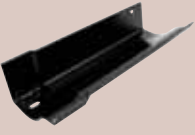
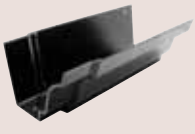
Fade resistant architectural grade polyester powder coat paint finish

21 standard colours

65% lighter than equivalent cast iron systems, making it easier and safer to handle and install



Product Selector

Profile	Size	Compatible downpipes	Maximum flow rate ³	Maximum roof area (per downpipe) ³
	100mm	63mm Ø	See page 24 for complete flow rate performance	See page 24 for maximum roof area
	113mm	76mm Ø		
	125mm	102mm Ø ¹		
		72x72mm		
		102x76mm ¹		
	100mm	63mm Ø	See page 24 for complete flow rate performance	See page 24 for maximum roof area
	113mm	76mm Ø		
	125mm	72x72mm		
		102x76mm ¹		
	100x75mm	63mm Ø	See page 24 for complete flow rate performance	See page 24 for maximum roof area
	125x100mm	76mm Ø		
	150x100mm	102mm Ø		
		72x72mm		
		102x102mm ²		
	102x76mm			

1: Only compatible with 125mm 2: Only compatible with 125x100mm and 150x100mm

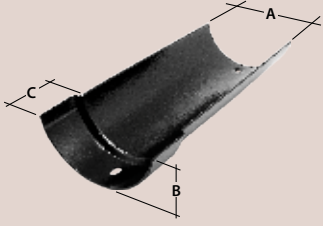

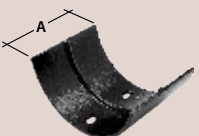
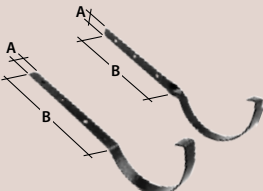
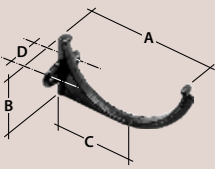
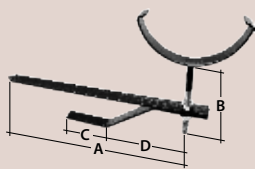

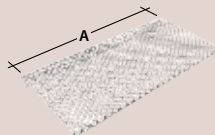
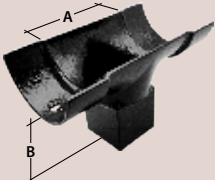





3: Please refer to page 24 for more information or contact Marley Alutec Technical Services department for a full roof drainage design.



Oxney Grange, Peterborough

Traditional Half Round

Compatible with Traditional circular, square and rectangular downpipes (pages 16 – 18).

	<h3>Gutter</h3> <table border="1"> <thead> <tr> <th>Code</th> <th>Size</th> <th>Nominal Length(m)</th> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>GC 406</td> <td>100</td> <td>1.83</td> <td>105</td> <td>46</td> <td>45</td> </tr> <tr> <td>GC 106</td> <td>113</td> <td>1.83</td> <td>119</td> <td>51</td> <td>45</td> </tr> <tr> <td>GC 506</td> <td>125</td> <td>1.83</td> <td>131</td> <td>56</td> <td>45</td> </tr> </tbody> </table>	Code	Size	Nominal Length(m)	A	B	C	GC 406	100	1.83	105	46	45	GC 106	113	1.83	119	51	45	GC 506	125	1.83	131	56	45		<h3>Stop end</h3> <table border="1"> <thead> <tr> <th>Code</th> <th>Size</th> <th></th> <th>A</th> </tr> </thead> <tbody> <tr> <td>GC 450</td> <td>100</td> <td>Internal</td> <td>45</td> </tr> <tr> <td>GC 455</td> <td>100</td> <td>External</td> <td>45</td> </tr> <tr> <td>GC 150</td> <td>113</td> <td>Internal</td> <td>45</td> </tr> <tr> <td>GC 155</td> <td>113</td> <td>External</td> <td>52</td> </tr> <tr> <td>GC 550</td> <td>125</td> <td>Internal</td> <td>52</td> </tr> <tr> <td>GC 555</td> <td>125</td> <td>External</td> <td>50</td> </tr> </tbody> </table>	Code	Size		A	GC 450	100	Internal	45	GC 455	100	External	45	GC 150	113	Internal	45	GC 155	113	External	52	GC 550	125	Internal	52	GC 555	125	External	50																												
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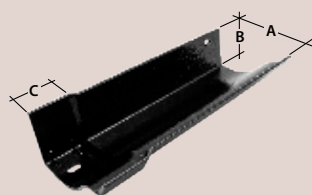
All dimensions are in mm. For colour range and finishes, see page 7.



Church of St. John
the Baptist, Midlands

Traditional Victorian Ogee

Compatible with Traditional circular, square and rectangular downpipes (pages 16 – 18).



Gutter

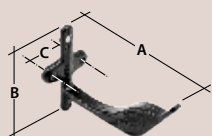
Code	Size	Nominal Length(m)	A	B	C
GV 406	100	1.83	109	54	45
GV 106	113	1.83	121	61	45
GV 506	125	1.83	134	68	45



Union

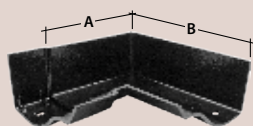
Code	Size	A
GV 420	100	96
GV 120	113	96
GV 520	125	96

External



Fascia bracket

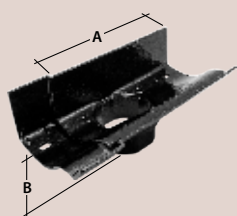
Code	Size	A	B	C
GV 480	100	115	97	38
GV 180	113	130	97	38
GV 580	125	150	105	45



Angle

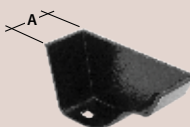
Code	Size	Angle	A	B
GV 430	100	90° in.	125	176
GV 431	100	90° ex.	68	16
GV 435	100	135° in.	75	16
GV 436	100	135° ex.	60	114
GV 439	100	Non standard	–	–
GV 130	113	90° in.	134	186
GV 131	113	90° ex.	63	14
GV 135	113	135° in.	124	67
GV 136	113	135° ex.	70	23
GV 139	113	Non standard	–	–
GV 530	125	90° in.	152	212
GV 531	125	90° ex.	77	18
GV 535	125	135° in.	69	125
GV 536	125	135° ex.	64	22
GV 539	125	Non standard	–	–

Internal angle illustrated



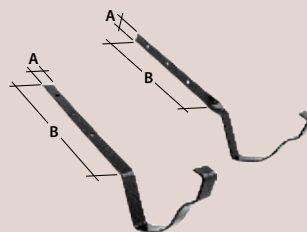
Outlet

Code	Size	Outlet	A	outlet centre Dr/fix	Brkt/fix	B
GV 422	100	63ø	195	54	63	27
GV 423	100	76ø	195	54	63	27
GV 425	100	72x72	195	54	63	58
GV 122	113	63ø	187	54	63	68
GV 123	113	76ø	187	54	63	68
GV 125	113	72x72	187	54	63	31
GV 522	125	63ø	190	54	63	27
GV 523	125	76ø	190	54	63	27
GV 525	125	72x72	190	54	63	68
GV 526	125	102x76	190	54	63	68



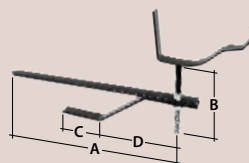
Stop end

Code	Size	A
GV 450	100	In. left hand 47
GV 455	100	Ex. right hand 47
GV 150	113	In. left hand 45
GV 155	113	Ex. right hand 45
GV 550	125	In. left hand 45
GV 555	125	Ex. right hand 45



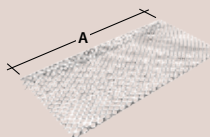
Fixed rafter arm

Code	Size	A	B
AV 71	100	Side	20 240
AV 72	113	Side	20 240
AV 73	125	Side	20 240
AV 74	100	Top	20 240
AV 75	113	Top	20 240
AV 76	125	Top	20 240



Rise & fall bracket

Code	Size	A	B	C	D
AV 91	100	360	125	80	168
AV 92	113	360	125	80	168
AV 93	125	360	125	80	168



Leafguard

Code	Size	A
SL 111	100	1220
SL 113	113	1220
SL 125	125	1220

Mill Finish



Installation sundries and accessories

Roundhead fascia bracket screw

Code	Description
SC201	30mm x No. 10 – Mill Finish



Polyester powder coated bolts

Code	Description
SC602	20mm x M6 bolt – PPC



Aluminium nuts, bolts and washers

Code	Description
SC502	20mm x M6 bolt – Mill Finish
SC511	M6 Nut
SC521	20mm x M6 Washer

Sealant

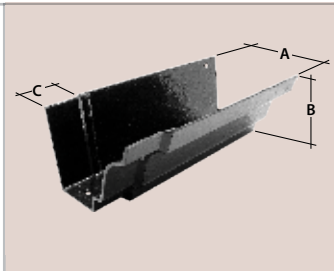
Code	Description
SC101	310ml clear

Refer to sealant usage table, page 27.
Please note sealant shelf life is 12 months.



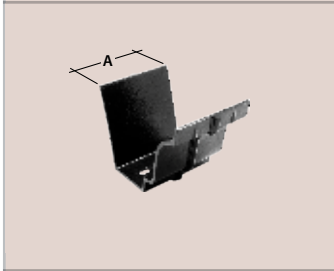
All dimensions are in mm. For colour range and finishes, see page 7.

Compatible with Traditional circular, square and rectangular downpipes (pages 16 – 18).



Gutter

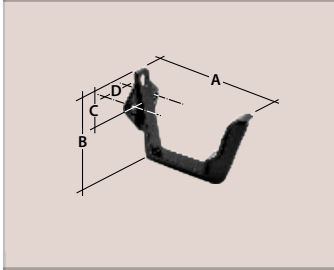
Code	Size	Nominal Length(m)	A	B	C
GM 406	100	1.83	107	76	60
GM 506	125	1.83	139	102	40
GM 606	150	1.83	161	102	51



Union

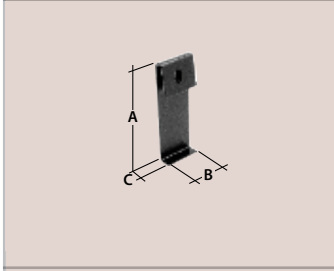
Code	Size	A
GM 420	100	92
GM 520	125	85
GM 620	150	90

Internal



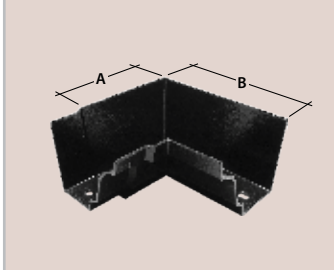
Fascia bracket

Code	Size	A	B	C	D
GM 480	100	117	99	30	38
GM 580	125	137	115	38	36
GM 680	150	155	121	38	38



Direct fix bracket

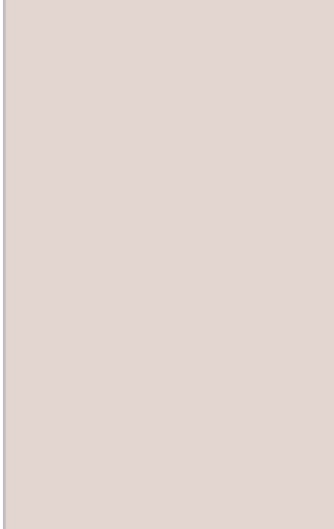
Code	Size	A	B	C
GM 481	100	69	24	9
GM 581	125	70	35	11
GM 681	150	92	35	12



Angle

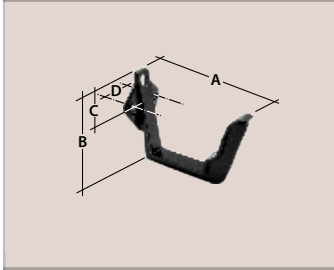
Code	Size	Angle	A	B
GM 430	100	90° in.	127	183
GM 431	100	90° ex.	75	19
GM 435	100	135° in.	60	119
GM 436	100	135° ex.	75	18
GM 439	100	Non standard	—	—
GM 530	125	90° in.	160	205
GM 531	125	90° ex.	68	23
GM 535	125	135° in.	80	135
GM 536	125	135° ex.	85	27
GM 539	125	Non standard	—	—
GM 630	150	90° in.	183	235
GM 631	150	90° ex.	77	24
GM 635	150	135° in.	88	140
GM 636	150	135° ex.	75	24
GM 639	150	Non standard	—	—

Internal angle illustrated
in. internal ex. external



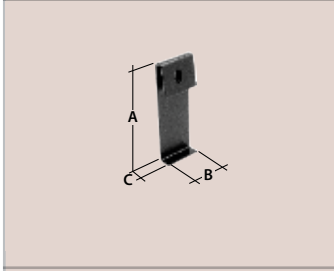
Outlet

Code	Size	Outlet	A	B	Fascia to Outlet Centre
GM 422	100	63ø	192	50	50
GM 423	100	76ø	192	50	64
GM 425	100	72x72	192	58	41
GM 426	100	102x76	192	58	41
GM 522	125	63ø	190	57	55
GM 523	125	76ø	190	57	55
GM 524	125	102ø	190	57	72
GM 525	125	72x72	190	125	65
GM 526	125	102x76	190	125	65
GM 527	125	102x102	190	56	72
GM 622	150	63ø	190	58	52
GM 623	150	76ø	190	58	67
GM 624	150	102ø	190	58	87
GM 625	150	72x72	190	58	42
GM 626	150	102x76	190	58	46
GM 627	150	102x102	190	58	46



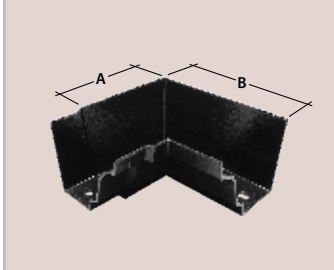
Stop end

Code	Size	A
GM 450	100	Ex. left handed 47
GM 455	100	In. right handed 47
GM 550	125	Ex. left handed 46
GM 555	125	In. right handed 46
GM 650	150	Ex. left handed 47
GM 655	150	In. right handed 47



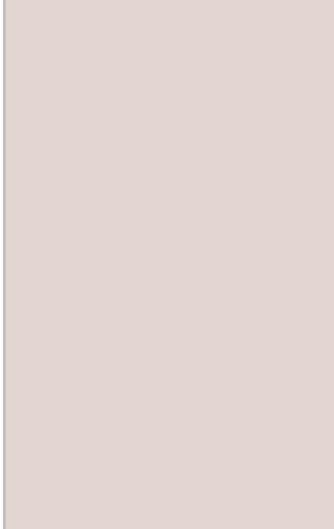
Fixed rafter arm

Code	Size	A	B
AM71	100x75	Side	20 240
AM73	125x100	Side	20 240
AM75	150x100	Side	20 240
AM74	100x75	Top	20 240
AM76	125x100	Top	20 240
AM77	50x100	Top	20 240



Rise & fall bracket

Code	Size	A	B	C	D
AM 91	100	360	125	80	168
AM 92	125	360	125	80	168
AM 93	150	360	125	80	168



Leafguard

Code	Size	A
SL 114	100x75	1220
SL 115	125x100	1220
SL 116	150x100	1220

Mill Finish

Traditional Moulded Ogee gutter

Compatible with Traditional circular, square and rectangular downpipes (pages 16 – 18).



Installation sundries and accessories

Roundhead fascia bracket screw

Code	Description
SC201	30mm x No. 10 – Mill Finish

Polyester powder coated bolts

Code	Description
SC602	20mm x M6 bolt – PPC

Aluminium nuts, bolts and washers

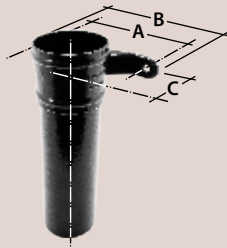
Code	Description
SC502	20mm x M6 bolt – Mill Finish
SC511	M6 Nut
SC521	20mm x M6 Washer

Sealant

Code	Description
SC101	310ml clear

Refer to sealant usage table, page 27.
Please note sealant shelf life is 12 months.

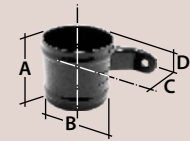




Downpipe

Code	Size	Nominal Length(m)	A	B	C
RR 211	63	1	110	143	59
RR 212	63	2	110	143	59
RR 213	63	3	110	143	59
RR 311	76	1	109	160	70
RR 312	76	2	109	160	70
RR 313	76	3	109	160	70
RR 411	102	1	153	185	91
RR 412	102	2	153	185	91
RR 413	102	3	153	185	91

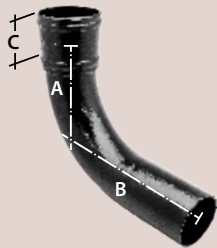
Add suffix 'N.E.' for non-eared pipes



Pipe socket

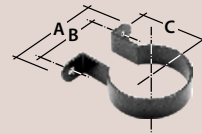
Code	Size	A	B	C	D
RR 220	63	74	72	59	37
RR 320	76	83	85	70	37
RR 420	102	99	110	91	48

Add suffix 'N.E.' for non-eared socket



Bend

Code	Size	Angle	A	B	C	Socket Depth
RR 230	63	92.5°	105	200	37	
RR 232	63	112.5°	100	220	37	
RR 235	63	135°	100	210	37	
RR 330	76	92.5°	110	220	42	
RR 332	76	112.5°	110	230	42	
RR 335	76	135°	90	245	42	
RR 430	102	92.5°	50	170	80	
RR 432	102	112.5°	50	235	80	
RR 435	102	135°	50	290	80	



Pipe clip

Code	Size	A	B	C
RR 280	63	100	75	59
RR 380	76	98	72	70
RR 480	102	130	104	91



Fixed offset

Code	Size	Angle	A	B	C	D
RR 2903	63	154°	75	65	300	160
RR 2904	63	149°	100	45	330	120
RR 2906	63	140°	150	60	360	120
RR 2909	63	126°	225	50	345	85
RR 2912	63	120°	300	35	365	90
RR 3903	76	154°	75	55	345	115
RR 3904	76	149°	100	55	365	115
RR 3906	76	140°	150	55	395	115
RR 3909	76	126°	225	45	410	115
RR 3912	76	120°	300	45	420	110
RR 4903	102	112.5°	75	15	255	64
RR 4904	102	112.5°	100	15	265	64
RR 4906	102	112.5°	150	15	280	64
RR 4909	102	112.5°	225	15	305	64
RR 4912	102	112.5°	300	15	330	64

Other projection offsets available on request



Adjustable offset

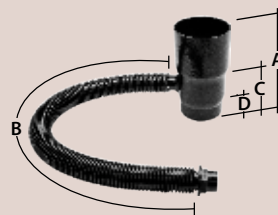
Code	Size	Angle	A min	A max	B	C
RR 2945	63	112.5°	150	450	50	90
RR 2990	63	112.5°	150	900	50	90
RR 3945	76	112.5°	200	450	48	163
RR 3990	76	112.5°	200	900	48	163
RR 4945	102	112.5°	110	450	15	64
RR 4990	102	112.5°	110	900	15	64

Other projection offsets available on request



Branch

Code	Size	Angle	A	B	C
RR 240	63	92.5°	210	112	112
RR 242	63	112.5°	210	90	140
RR 245	63	135°	210	70	160
RR 340	76	92.5°	250	138	112
RR 342	76	112.5°	250	119	130
RR 345	76	135°	250	65	180
RR 440	102	92.5°	310	174	121
RR 442	102	112.5°	310	150	150
RR 445	102	135°	310	105	195



Rainwater diverter

Code	Size	A	B	C	D
RRD25	63	150	500	79	25
RRD35	76	150	500	79	25



Shoe

Code	Size	Angle	A	B
RR 250	63	112.5°	95	100
RR 350	76	112.5°	103	124
RR 450	102	112.5°	125	140

Add suffix 'N.E.' for non-eared shoe



Access pipe

Code	Size	A	B	C
RR 260	63	300	140	105
RR 360	76	300	140	105
RR 460	102	300	140	105

Add suffix 'N.E.' for non-eared access pipe



Installation sundries and accessories

Compatible fixing screw

Code	Description
SC603	50mm x No.16 Domehead – PPC (for use with downpipe and hopper)
SC221	50mm x No.16 Domehead – Mill Finish (for use with downpipe and hopper)

Pipe socket filler

Code	Description
SC911	10m roll foam (for use with traditional circular sockets)

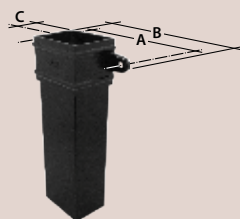
Sealant

Code	Description
SC101	310ml clear

Refer to sealant usage table, page 27. Please note sealant shelf life is 12 months.

Traditional square and rectangular

Compatible with Traditional Half Round, Victorian Ogee and Moulded Ogee (pages 11 – 15).



Downpipe

Code	Size	Nominal Length(m)	A	B	C
RSR 311	72x72	1	125	151	42
RSR 312	72x72	2	125	151	42
RSR 313	72x72	3	125	151	42
RSR 111	102x76	1	154	182	44
RSR 112	102x76	2	154	182	44
RSR 113	102x76	3	154	182	44
RSR 411	102x102	1	154	182	56
RSR 412	102x102	2	154	182	56
RSR 413	102x102	3	154	182	56

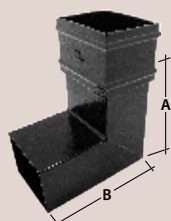
Add suffix 'N.E.' for non-eared pipes



Pipe socket

Code	Size	A	B	C	D
RSR 320	72x72	80	83	83	40
RSR 120	102x76	80	87	112	40
RSR 420	102x102	80	112	112	40

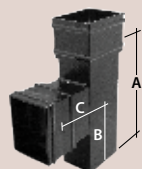
Add suffix 'N.E.' for non-eared socket



Bend

Code	Size	Angle	A	B
RSR 330	72x72	92.5°	150	150
RSR 332	72x72	112.5°	60	135
RSR 335	72x72	135°	43	110
RSR 130	102x76	92.5°	175	175
RSR 132	102x76	112.5°	63	140
RSR 135	102x76	135°	55	132
RSR 430	102x102	92.5°	198	198
RSR 432	102x102	112.5°	75	155
RSR 435	102x102	135°	55	140

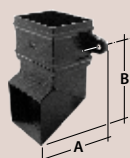
For 102x76mm state if left/right handed or front/rear projection is required



Branch

Code	Size	Angle	A	B	C
RSR 340	72x72	92.5°	260	140	114
RSR 342	72x72	112.5°	260	127	130
RSR 345	72x72	135°	260	95	160
RSR 140	102x76	92.5°	280	130	140
RSR 142	102x76	112.5°	280	112	156
RSR 145	102x76	135°	280	72	164
RSR 440	102x102	92.5°	280	130	140
RSR 442	102x102	112.5°	280	112	156
RSR 445	102x102	135°	280	72	164

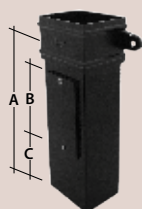
For 102x76mm state if left/right handed or front/rear projection is required



Shoe

Code	Size	Angle	A	B
RSR 350	72x72	120°	96	100
RSR 150	102x76	120°	108	170
RSR 450	102x102	120°	132	198

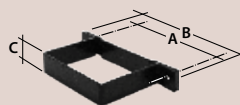
Add suffix 'N.E.' for non-eared shoe



Access pipe

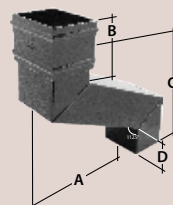
Code	Size	A	B	C
RSR 360	72x72	300	140	105
RSR 160	102x76	300	140	105
RSR 460	102x102	300	140	105

Add suffix 'N.E.' for non-eared access pipe



Pipe clip

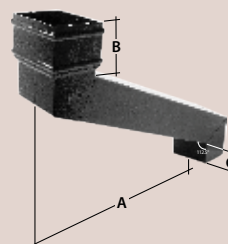
Code	Size	A	B	C
RSR 380	72x72	103	128	25
RSR 180	102x76	134	159	25
RSR 480	102x102	134	159	25



Fixed offset

Code	Size	A	B	C	D
RSR 3903	72x72	75	80	160	60
RSR 3904	72x72	100	80	173	60
RSR 3906	72x72	150	80	193	60
RSR 3909	72x72	225	80	223	60
RSR 3912	72x72	300	80	255	60
RSR 1903	102x76	75	82	160	60
RSR 1904	102x76	100	82	175	60
RSR 1906	102x76	150	82	185	60
RSR 1909	102x76	225	82	210	60
RSR 1912	102x76	300	82	245	60
RSR 4903	102x102	75	82	180	60
RSR 4904	102x102	100	82	188	60
RSR 4906	102x102	150	82	220	60
RSR 4909	102x102	225	82	250	60
RSR 4912	102x102	300	82	258	60

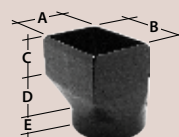
For 102x76mm state if left/right handed or front/rear projection is required



Adjustable offset

Code	Size	A _{min}	A _{max}	B	C
RSR 3945	72x72	75	450	82	60
RSR 3990	72x72	75	900	82	60
RSR 1945	102x76	75	450	82	60
RSR 1990	102x76	75	900	82	60
RSR 4945	102x102	100	450	82	60
RSR 4990	102x102	100	900	82	60

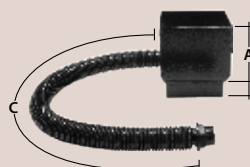
For 102x76mm state if left/right handed or front/rear projection is required



Drain connector (slip socket)

Code	Size	A	B	C	D	E
RSR 370	72x72	85	85	65	41	30
RSR 170	102x76	90	116	65	41	30
RSR 470	102x102	115	115	65	41	30

70mm from wall to centre of 110mm drain connection. Adapts to 110mm Ø drain.



Rainwater diverter

Code	Size	A	B	C
RSRD35	72x72	98	30	500
RSRD15	102x76	98	30	500



Installation sundries and accessories

Compatible fixing screw

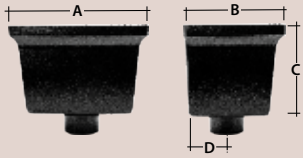
Code	Description
SC603	50mm x No.16 Domehead – PPC (for use with downpipe and hopper)
SC221	50mm x No.16 Domehead – Mill Finish (for use with downpipe and hopper)

Sealant

Code	Description
SC101	310ml clear

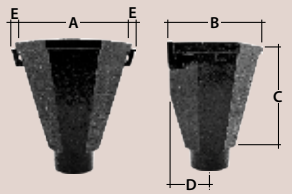
Refer to sealant usage table, page 27. Please note sealant shelf life is 12 months.

All dimensions are in mm. For colour range and finishes, see page 7.



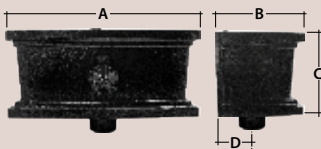
Hopper head (standard)

Code	Size	A	B	C	D
RH 100	62 x 62	250	180	180	36
RH 101	63 \emptyset	250	180	180	58
RH 102	76 \emptyset	250	180	180	70
RH 103	102 \emptyset	250	180	180	91
RH 104	72x72	250	180	180	42
RH 105	102x76	250	180	180	44
RH 106	102x102	250	180	180	56



Hopper head (triangular flat back)

Code	Size	A	B	C	D	E
RH 200	62x62	210	164	185	36	20
RH 201	63 \emptyset	210	164	185	59	20
RH 202	76 \emptyset	210	164	185	70	20
RH 204	72x72	210	164	185	42	20



Hopper head (ornamental)

Code	Size	A	B	C	D
RH 300	62x62	410	190	185	36
RH 301	63 \emptyset	410	190	185	59
RH 302	76 \emptyset	410	190	185	70
RH 303	102 \emptyset	410	190	185	91
RH 304	72x72	410	190	185	42
RH 305	102x76	410	190	185	43
RH 306	102x102	410	190	185	56



Compatible fixing screws

Code	Description
SC603	50mm x No. 16 domehead – PPC for use with downpipe & hopper
SC221	50mm x No. 16 domehead – Mill finish for use with downpipe & hopper
SC604	75mm x No. 16 hexagonal – PPC for use with Cast spacer bobbin
SC244	75mm x No. 16 hexagonal – Mill finish for use with Cast spacer bobbin



Cast bobbin spacer

Code	Description
SC701	Mill finish 30mm spacer used to increase pipe distance from wall
SC711	PPC finish 30mm spacer used to increase pipe distance from wall



Alutec sealant

Code	Description
SC101	310ml clear

Refer to sealant usage table, page 27.
Please note sealant shelf life is 12 months.



Sealant gun

Code	Description
SC105	Required to apply jointing sealant



Solvent Cleaner

Code	Description
SC108	1 litre

For cleaning joint surfaces or removing visible sealant marks



Touch up paint

Code	Description
SC880	250ml

Standard colours
For making good cut ends and scratches



Lightning conductor

Code	Description
SC401	Universal link assembly

For use with all gutter types, where required



Oxide inhibitor

Code	Description
SC402	225cc

Applied to joint surfaces of all lightning bonding



Prestige new build,
Hampshire



Housing development,
Whitstable, Kent



Prince's Foundation Natural House,
BRE, Watford

Design basis

Alutec gutter flow capacities shown on page 24 in the flow rates table are calculated with the gutters being fixed nominally level. Most metal gutters are installed level for aesthetic purposes. However, if installed to a fall of 1:600 the flow capacity will be marginally improved.

Factors to be considered when designing an eaves drainage system.

1. Rainfall intensity design rate (l/s/m²).
2. Effective roof area (ERA) to be drained (m²).
3. Gutter flow capacity (l/s).
4. Size, number and position of outlets.
5. Frictional resistances in long gutter runs and the number of corners.

Rainfall intensity design rate

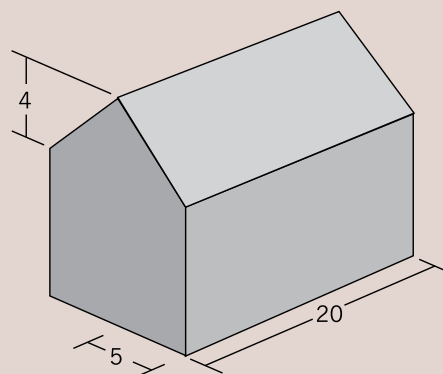
Building Regulations 2000 Document H3 recommend a general design rate of 0.021 l/s/m² (which is virtually the same as the traditional design rate of 75mm/hour) for eaves gutters where if overflowing occurs, water overspill will discharge clear of the building without risk of water ingress. If required, alternative rainfall intensity design rates can also be considered. Meteorological data published in the National Annex to EN12056 and Building Regulations 2000 Document H3, show varying rainfall intensities throughout the UK depending on geographical location.

The flow rates table (page 24) indicates maximum flow, the gutter being full to the brim, however EN12056 states the design rate run-off from the roof should not exceed 90% of the gutter capacity. Also shown are the differences between outlet capacities when positioned centrally or at the end of a gutter run.

Effective roof area

Effective roof area can be determined by calculation as set out in EN12056-3.

The following example shows a basic calculation method that can be used as a guide in establishing the effective roof area (ERA).



$$ERA = \left(\frac{4}{2} + 5\right) \times 20 = 140m^2$$



New build, Clathmore, Perthshire

Gutter capacity

Assuming the recommended rainfall intensity of 0.021 l/s/m² is acceptable, determine if the gutter outlet is to be positioned centrally, or at the end of the gutter run. Refer to the flow rates table (page 24) and find the nearest roof area m² in either the 'central' or 'end outlet' options to determine the size/type of gutter/rainwater pipes required.

Should a different rainfall intensity design rate be required, multiply the alternative design rate by the ERA to establish the required gutter capacity (l/s). Then refer to the flow capacities table and select the nearest gutter flow capacity (l/s). Ensure that appropriate proportional allowances for central or end of gutter outlets are made.

Example:

Alternative design rate
0.025 l/s/m² × 140m² = 3.5 l/s

3.5 l/s into centre outlet =
Traditional Moulded Ogee
with 72 x 72mm outlet



Prestige new build, Hampshire

Frictional resistances

Gutter Angles: EN12056-3 recommends that the gutter capacity should be reduced by a factor of 0.85 if the gutter run includes one or more angles greater than 10 degrees and that positioning of outlets adjacent to angles should be avoided.

Long Gutters: Frictional resistance in very long gutter runs will effectively reduce the flow capacity hence reduction factors should be applied in accordance with recommendations detailed in EN12056-3.

Valley Discharges: Where a discharge from long valley occurs, it is prudent to consider a corner hopper or purpose made gutter angle with larger catchment area, to cope with the concentrated volume of rainwater during storm conditions.

Compatibility

To avoid bi-metallic corrosion, ensure electrolytically incompatible materials do not come in direct contact with un-insulated plain aluminium surfaces. In particular ensure that the recommended compatible screws and fixings are used. Polyester powder coated surfaces will give limited protection, but should not be solely relied upon. If in doubt, please contact the Alutec Technical Services department.

Durability

Under normal UK atmospheric conditions, Alutec systems, if correctly installed, have a minimum life expectancy of 50 years or more. This may be marginally reduced in highly polluted or coastal areas.

Chemical

All products are naturally corrosion resistant under normal atmospheric conditions. Not to be used for chemical drainage or in conjunction with foul waste drainage.

Fire

In general Alutec rainwater products do not aid combustion and are rated as follows:

Finish rating	Test standard
Plain finish – non combustibility	BS 476: Part 4
PPC – 0.1 fire propagation index	BS 476: Part 6
PPC class 1, flame surface spread	BS 476: Part 7

Thermal

Coefficient for thermal expansion – 0.000026 deg C for cast aluminium and 0.000023 deg C for sheet and extruded aluminium. Melting point approximately 660 deg C.

To accommodate unusual curves or angles, roofs which intersect at different levels or any other feature of an installation not covered by the standard ranges, Alutec offer a bespoke product service to complement any non standard requirements.

An indication of the most common non standard items are shown below, however other items may be possible. For further advice, contact the Technical Services Department.



Menagerie,
Coombe Deer Park, Coventry

True radiused gutters

True radiused gutters can be sand cast to simulate all profiles in the Alutec range. Sand casting involves making a wooden pattern of the gutter profile, to the given radius, from which the sand moulds are made. In view of the pattern cost, this method can be costly for small quantities.

Due to building and foundry tolerances, it is recommended that radiused gutters are made in approximately 1m lengths.



True Radius

Segmented radiused gutters

Achieved by internally welding together segments of machine mitred gutter to achieve a given radius. Dependent on the radius, the more segments introduced the better the appearance.

This method is less expensive than sand casting and in general the segmentation is not easily noticeable on two storey buildings and above.



Segmented Radius

Site dimensions

As theoretical radius dimensions are often subject to extreme building tolerances, we recommend that a rigid 1m long radiused template be cut or marked on site. The template should be offered up to the fascia at 1m intervals to check the fascia has been constructed to a uniform radius. The template should be sent to Alutec Technical Services department for use as a master template.

Bespoke hopper heads

Alutec offers a variety of traditional hopper designs. Further designs are available to special order; contact Alutec Technical Services department for more information.



Detached house,
East Sussex

Rise and fall gutter angles

Any reasonable degree of angle can be fabricated. However, care must be taken in establishing accurate site dimensions and degrees of angle. Experience has proved that theoretical geometry may not be accurate, hence each angle should be site checked and location referenced.

Special gutter adaptors

Adaptors between different sized rainwater pipes or drain connections can be fabricated to customer requirements, subject to design criteria. Accurate dimensional details are required.

Special gutter outlets

Standard gutter outlets can be modified to customer requirements subject to design criteria. However it should be noted that this may be detrimental to the flow performance of that outlet.

Special pipe and gutter brackets

Special support brackets for use in conjunction with standard or bespoke products are available to order subject to design criteria.

Lightning conductor links

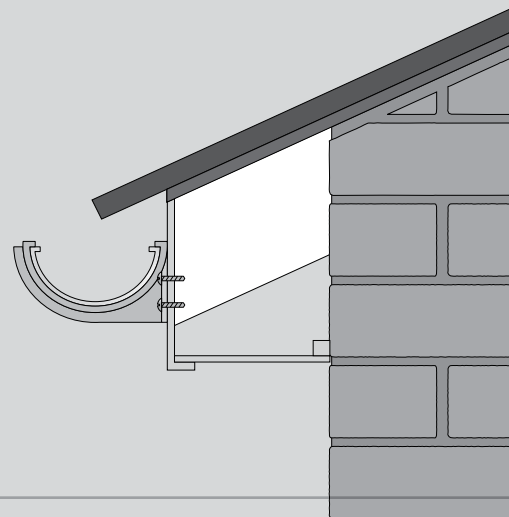
If gutters are to be bonded to a lightning conductor system, a positive electrical continuity bridge across all gutter joints will be necessary. Gutter

sealant acts as an insulator between joint union and gutter, hence electrical continuity through the gutter system cannot be guaranteed. A universal electrical continuity link assembly conforming to BS 6651: 1985 is available as standard, SC401.




To determine if lightning links are required, it is recommended you consult with a specialist Lightning Protection Consultant or Installer.

Gutter / fascia / soffit assemblies


Non standard gutter profiles made from sheet aluminium are available to order. Fascia and soffit systems are made to a standard design concept which can be adapted to suit most applications; see the Alutec soffit and fascia brochure for further information. Customer designed systems will also be considered subject to design criteria.



Gutter flow rates

Gutter Profile	Downpipe system	End Outlet		Centre Outlet	
		Capacity l/s	Effective Roof Area m ²	Capacity l/s	Effective Roof Area m ²
100mm Half Round 113mm 125mm 	All	0.70	33	1.40	66
	All	0.85	40	1.70	80
	All	1.27	60	2.54	120
100mm Victorian Ogee 113mm 125mm 	All	0.54	25	1.08	51
	63mm Ø	0.62	29	1.20	57
	76mm Ø, 72x72mm	0.62	29	1.24	59
	63mm Ø	0.75	35	1.60	76
	76mm Ø, 72x72mm, 102x76mm	0.80	38	1.70	80
100mm Moulded Ogee 125mm 150mm 	All	1.15	55	2.25	108
	63mm Ø	2.21	105	3.77	179
	76mm Ø	2.21	105	3.77	179
	102mm Ø	2.21	105	4.48	213
	72x72mm	2.21	105	3.53	168
	102x76mm	2.21	105	4.49	213
	102x102mm	2.21	105	4.51	214
	63mm Ø	2.75	131	4.90	236
	76mm Ø	2.75	131	4.90	236
	102mm Ø	2.75	131	5.50	263
	72x72mm	2.75	131	3.60	174
102x76mm	2.75	131	5.47	263	
102x102mm	2.75	131	5.47	263	

Hopper head flow rates

	Outlet size mm	Capacity l/s Effective Roof Area m ²	
		Capacity l/s	Effective Roof Area m ²
	63mm Ø	3.01	114.7
	76mm Ø	4.46	214.4
	102mm Ø	7.94	381.7
	72x72mm	4.37	210.1
	102x76mm	7.17	344.7
	102x102mm	9.49	456.3

Figures based on a design rainfall intensity of 0.021 l/s/m²

Alutec specification clauses

NBSPlus

Alutec have a full list of NBS clauses for rainwater gutter and downpipe systems. Below is an example of a typical specification. More detailed specifications are also available online marleyalutec.co.uk.



R10 rainwater drainage systems

Manufacturer

Marley Alutec, Unit 1 (G – H),
Hudson Road,
Elms Farm Industrial Estate,
Bedford MK41 0LZ
Tel: 01234 359438
Fax: 01234 357199
Email: enquiries@marleyalutec.co.uk
Web address: marleyalutec.co.uk

Product reference

Marley Alutec Aluminium
Gutter system

Type/Grade

Traditional Moulded Ogee 100mm,
150mm
Cast/Extruded

Profile

Moulded Ogee

Nominal size

Traditional Moulded Ogee 100x75mm,
125x100mm, 150x100mm

Joining

Traditional spigot and socket bolted
joints with silicone sealant

Fixing

Traditional Moulded Ogee Fascia
brackets / Direct fix brackets

Product reference

Alutec Aluminium Rainwater
Downpipe system

Profile

Circular

Nominal size

Traditional 63mm Ø,
76mm Ø, 102mm Ø

Fixings

Traditional circular
Eared pipe sockets / Pipe clips

Accessories

Hopper heads: rectangular, flat back
& ornamental
Branch, Adjustable offset, Fixed offset,
Shoe, Access pipe, Rainwater diverter,
Bend, Outlet, Angle, Stop end

Finish

Polyester Powder Coated to
BS EN 12206:2004

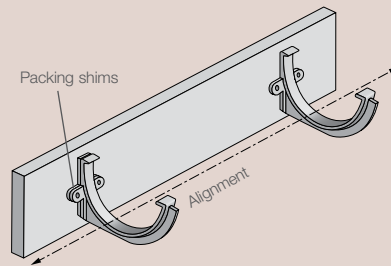
Colour gutter and downpipe

RAL 1013 Pearl White/ RAL 1017
Saffron Yellow/ RAL 3002 Signal
Red/ RAL 3003 Ruby Red/ RAL 5002
Ultramarine/ RAL 5003 Sapphire Blue/
RAL 5010 Flower Blue/ RAL 6002
Leaf Green/ RAL 6005 Moss Green/
RAL 7015 Slate Grey/ RAL 7016
Anthracite Grey/ RAL 7021 Granite
Grey/ RAL 7035 Light Grey/ RAL
7036 Platinum Grey/ RAL 7037 Steel
Grey/ RAL 8014 Sepia Brown/ RAL
8016 Chestnut Brown/ RAL 8017
Chocolate/ RAL 9010 White/ RAL 9005
Black/ Cast 98 Heritage Black

Preparation

Fascia boards should be in good condition, level and in linear alignment. If required, lead packing shim plates can be fabricated on site and fixed behind gutter brackets to achieve good alignment. Brackets which are misaligned will cause joint fatigue resulting in eventual joint failure. Where gutter is fixed to cellular fascia board, it is recommended that a timber backing board less than 20mm thick is installed behind the fascia to provide a straight and secure fixing surface.

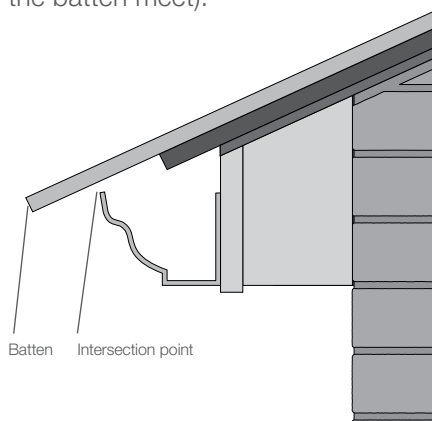
Use standard metal work tools to cut or drill aluminium gutters. Angle grinders are not recommended. Where gutter or fittings are polyester powder coated, cut edges should be deburred and repainted with touch up paint, SC880.



Gutter position

Gutters must be installed level or to a fall of 1:600. The gutter should not be positioned at a level which causes rainfall to overshoot the gutter, i.e. too low, or where it is damaged by the high velocity impact of sliding snow, i.e. too high.

To establish the recommended gutter position, place a straight batten on the lowest profile of the roof covering, overhanging the eaves. The gutter can then be offered not higher than the intersection point, (where the top front edge of the gutter and the batten meet).



Bracket centres

To ensure system durability, fascia brackets must be installed at 915mm centres. In areas of heavy snow fall, fascia bracket centres must be reduced. Direct fix option is only available on Moulded Ogee gutter with fixings at 620mm centres.

Snow loading

Heavy snow fall coupled with highly insulated roofs is causing accumulation of snow on roofs. A sudden thaw will then cause the snow to slide down the roof and rest against the gutters if they are fixed too high. Greater care must be taken to make sure the gutters will not impede sliding snow. However, for the ultimate protection, snow guards should be installed.

Joining

Joint sealing must not be carried out in wet weather or in temperatures below 5°C or above 40°C. Joint surfaces must be perfectly clean and dry. Use a clean cloth and solvent cleaner SC108 to remove all traces of dirt or grease, which may not be visible.

Only Alutec high performance low modulus sealant SC101 must be used. Use of other sealants may result in early joint failure. Sealant over nine months old must not be used.



Fixing

To ensure the secure support of aluminium gutter systems, it is vitally important to ensure that the fixing components are equally durable and capable of providing the necessary support. They must therefore be non corrosive, of a compatible material to ensure no electrolytic corrosion occurs and of the appropriate size. Only the recommended austenitic stainless steel screws must be used to fix gutters, whether direct, fascia or rafter bracket.

SC201	32mm x No.10 Roundhead
SC221	50mm x No.16 Domehead
SC244	75mm x No.16 Hexagonal head
SC203	15mm x No.10 Roundhead Pozi fixing for fixing gutter brackets to Alutec aluminium composite fascia

If fixing to fascia boards made of materials other than wood or Alutec aluminium composite, please contact the Alutec Technical Service Department.

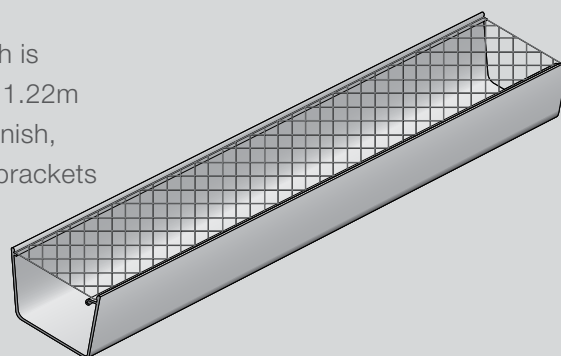
Sealant usage table

Approximate number of joints per tube of Alutec sealant.

Gutter system	Joints per tube of sealant	Downpipe system	Joints per tube of sealant
Half Round 100mm gutter	18	Traditional 63mm Ø downpipe	25
Half Round 113mm gutter	16	Traditional 76mm Ø downpipe	20
Half Round 125mm gutter	14	Traditional 102mm Ø downpipe	15
Victorian Ogee 100mm gutter	14	Traditional 72x72mm downpipe	17
Victorian Ogee 113mm gutter	12	Traditional 102x76mm downpipe	13
Victorian Ogee 125mm gutter	11	Traditional 102x102mm downpipe	12
Moulded Ogee 100mm gutter	11		
Moulded Ogee 125mm gutter	9		
Moulded Ogee 150mm gutter	7		

Leafguards

Aluminium leafguard mesh is available for all profiles in 1.22m lengths. Supplied in mill finish, leafguards either require brackets (supplied) or simply sit inside the gutter.



Detailed installation instructions are supplied with every consignment of goods and are available separately on request or at marleyalutec.co.uk.



Site painting

When site painting rainwater systems, it is recommended that all components are individually painted prior to installation to make sure all surfaces are uniformly coated.

Prior to painting either unpainted (mill finish) or polyester powder coated surfaces, clean components using a clean cloth and solvent cleaner, SC108. Prime mill finish surfaces with an "aluminium etch primer" or zinc phosphate; rub down polyester powder coated components with a light abrasive scotch (not steel) wool to achieve a good key.

Two-part synthetic or polyurethane paints are recommended for maximum durability. Ensure the paint is fully dry prior to contact with joint sealant. Partially dry paint may react with sealant, affecting reliability of gutter joint.

Handling & storage

Gutters and pipes should be handled with care and should preferably be stored under cover on racks to prevent scratching or denting. All polyester powder coated gutter and pipe lengths are supplied in protective polythene sleeving and components packed in cardboard boxes.

If polyester powder coated products are stored outside, cover with a tarpaulin to guard against water ingress into the protective polythene tubing. If water becomes trapped within the polythene wrapping and left exposed to warm sunlight, it may leave permanent water stains on the paint finish.

Sealants should not be stored in temperatures below 0°C and kept away from any direct heat source. Solvent cleaners must be stored away from any direct heat or combustible source, preferably in an appropriate fire resistant storage cabinet.

Mill finished goods to be installed in their natural state should also be stored undercover, to prevent uneven oxidization to visible surfaces. Once installed the surface will mature uniformly.

Safety

The relevant safety regulations are outlined in the Health and Safety at Work Act 1974 and should be followed. Refer to the Approved Code of Practice (ACOP) Construction (Design and Communications) Regulations 2007.

Handling mill finished or polyester powder coated aluminium products does not pose any known health hazard, however it is recommended to wear protective gloves when handling mill finish aluminium.

Hazard instructions relating to sealant, solvent cleaner and touch up paint are printed on their respective containers and COSHH sheets are supplied with each consignment of goods and are available on request.

Maintenance

Gutters should be periodically cleaned out to maintain the design flow rate and to prevent build up of debris blocking downpipes. Check all fixings are secure and take any remedial action to rectify if necessary.

Leafguards are available as standard to fit each gutter system and are recommended for buildings close to trees, with restricted access, or areas susceptible to airborne debris.

Installed gutters and pipes with polyester powder coated finishes should be periodically washed down with water and non-toxic detergent, this will remove built up grime to reveal the true colour. Under no circumstances should abrasive cleaners be used.



Standards

All Alutec systems are manufactured in accordance with the appropriate British or European Standard, including:

BS 8530:2010

Traditional-style half round, beaded half round, Victorian ogee and moulded ogee aluminium rainwater systems.

BS EN ISO 9227:2006

Corrosion tests in artificial atmospheres – salt spray tests.

BS EN 12056-3:2000

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

BS EN 755-2:2008

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 1559-2:2000

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.

traditional



Prestige new build,
Hampshire



Social Housing refurbishment,
Manchester



Church of St. John the Baptist,
Midlands

Alutec range overview



Evolve

Specifically developed to meet the demands of both the building owner and installer. Evolve systems combine high flow rate performance with fast and easy installation. Evolve systems use the latest manufacturing technologies to reduce its carbon footprint.



Aligator®

Two distinctive design solutions:

Aligator Classic, a domestic size ogee style gutter system with external unions and brackets; ideal for community or local authority housing.

Deepflow, Ogee, Boxer and Giant profiles with internal joints and concealed brackets, offering a sleek and unobtrusive solution for modern building design.



Traditional

A range of BS 8530:2010 traditional style bolted gutter systems for replacement of cast iron on period, listed or traditional style new builds, combining aluminium's inherent benefits of longevity and low maintenance. Manufactured to original British Standard cast iron dimensions; available in Half Round, Victorian Ogee and Moulded Ogee profiles with matching round, square and rectangular downpipe options.



Soffit, fascia and coping systems

A new and innovative concept in roofline solutions, Alutec soffit, fascia and coping systems are manufactured from composite aluminium, a material used on some of the world's most prestigious developments, including high rise buildings, where exceptional durability and aesthetic appearance are key. Alutec composite aluminium systems have a life expectancy of 50 years or more.



Roof and shower outlets

A comprehensive range of aluminium roof and shower outlets for a wide range of applications. Each component has been engineered to achieve design flexibility and the highest performance specification to give complete confidence to the specifier.



Head office

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