



DESIGN & INSTALLATION GUIDE

Rainwater





Summerfield Homes Development, Weston-super-Mare

Marley Rainwater Systems

The Marley Plumbing & Drainage rainwater range consists of nine gutter profiles and seven downpipe options. Advanced Life4 technology on five of the key profiles, coupled with the benefits of the easyclip and notching capability combine to make the Marley rainwater range the most comprehensive available.



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INNOVATION
& EXPERTISE

Deepflow 110 x 75mm semi-elliptical system Page 8

Still the market leader, the Deepflow semi-elliptical profile produces self cleansing flow resulting in a very high capacity. Deepflow can be installed using a notched or notchless joint.

Ideal application for:

- Domestic houses
- Conservatories
- Apartments
- Commercial projects

Downpipe:

- 68mm ○ 82mm □ 65mm

Colours available:



Clip-master 112 x 49mm nominal half round system Page 9

Clip-master is a practical, easy to install PVCu nominal half round gutter system which is compatible with most other manufacturers' half round systems. Clip-master can be installed using a notched or notchless joint.

Ideal application for:

- Conservatories
- Domestic houses

Downpipe:

- 68mm □ 65mm

Colours available:



Flowline 112 x 60mm rectilinear system Page 12

Flowline is an attractive rectilinear profile PVCu gutter system, capable of carrying capacities in excess of standard half round gutters. Flowline is the aesthetic choice for larger roof areas. Flowline can be installed using a notched or notchless joint.

Ideal application for:

- Conservatories
- Domestic houses

Downpipe:

- 68mm □ 65mm

Colours available:



Regency 125 x 70mm profiled system Page 18

Regency is a bold, highly decorative profiled PVCu gutter system and is particularly suited to period style buildings. All Regency fittings are supplied complete with clips and seals.

Ideal application for:

- Conservatories
- Domestic houses
- Period properties
- Apartments
- Commercial projects

Downpipe:

- 68mm □ 74mm

Colours available:



Deepflow150 155 x 98mm semi-elliptical system Page 15

Deepflow150 is a larger version of the Deepflow profile and is ideal for small to medium commercial projects, flats and industrial applications. Capable of carrying up to 6.0 litres a second. Deepflow150 can be installed using a notched or notchless joint.

Ideal application for:

- Large domestic houses
- Apartments
- Commercial projects

Downpipe:

- 82mm

Colours available:



Foundry Finish 112mm half round and 125mm semi-elliptical system Page 20-22

Available in 112mm half round and a 125mm semi-elliptical, the Marley PVCu Foundry Finish system gives a cast iron look without the expense. It is the ideal solution for period buildings.

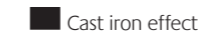
Ideal application for:

- Domestic houses
- Period properties
- Apartments
- Commercial projects

Downpipe:

- 68mm

Colours available:



Highflo 170 x 73mm nominal half round system Page 23-25

With a flow rate of up to 6l/s, Highflo is an ideal gutter profile for larger roofs and commercial buildings.

Ideal application for:

- Commercial projects

Downpipe:

- 110mm

Colours available:



Stormflo 200 x 133mm semi-elliptical system Page 26-28

As one of the largest gutter profiles on the market, the Stormflo system provides superior drainage for the largest roofs and commercial buildings with a flow rate of up to 14l/s.

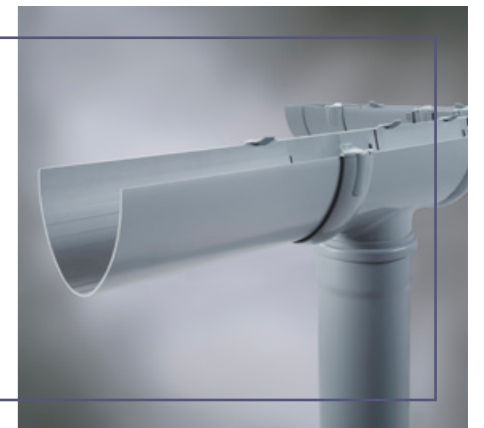
Ideal application for:

- Commercial projects

Downpipe:

- 110mm ○ 160mm

Colours available:





Rainwater systems that stay looking better for longer

We're all affected by the steady advance of time, as years of exposure affects how everything looks. To combat this Marley Plumbing & Drainage advanced their manufacturing process to create Life4.

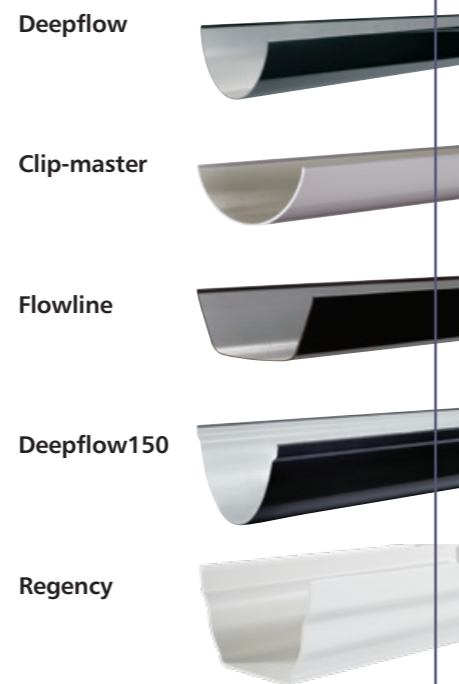
Looks better...

Life4 rainwater systems can withstand exposure for up to four times longer than standard PVCu rainwater gutters and downpipes and have high gloss levels that are consistent with the fittings, improving the overall aesthetic of the system.

...for longer

Not only do Life4 products look better, they last longer retaining colour far in excess of the required standard. Life4 products have been exposed to up to four times the European weathering test duration and performed admirably (see right).

Life4 systems



This...



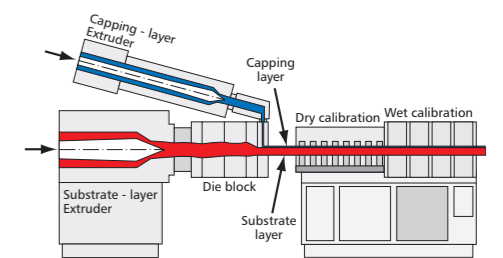
...not this

Life4 – the performance standard

The benchmark for weathering tests for rainwater systems is set out within the European standards*. The weathering test essentially mimics actual conditions, but also accelerates them in order that long term performance may be assessed. Life4 products have been assessed and can perform up to four times longer than standard PVCu.

Life4 – the science of production

Life4 uses a higher specification material to form a capping layer on the outside of the gutter or pipe. This material is by its very nature more durable and has a high gloss finish. The inside layer of the product is standard PVCu. The overall system contains a minimum 15% recycled material.



*BS EN 607: Eaves gutters and fittings – PVCu and EN 12200-1: Plastics rainwater piping systems for above ground external use – PVCu. (These standards replace the previous British Standard, BS4576.)



Easyclip

Deepflow, Clip-master, Flowline and Deepflow150 rainwater systems benefit from the Marley easyclip, which makes jointing both easy and reliable. The easyclip has twin compression tabs, which apply downward pressure onto the gutter seal, to ensure a watertight joint. A positive 'click' is made when the gutter is in place. The easyclip also makes life easy if you need to dismantle the joint.

Notch adaptor (RGNA1)


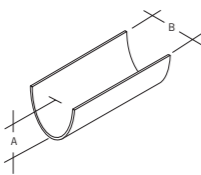





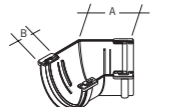

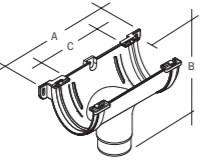

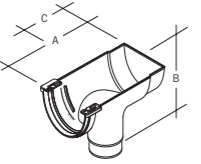

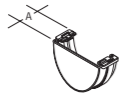


It is possible to adapt the easyclip to make fittings suitable for 'notch' jointing, by fitting a 'notch adaptor' into the centre of the easyclip. The adaptor will then fit into a notch cut into the back of the gutter.

This is an effective way of allowing gutter to expand and contract due to temperature change, without gutter and fitting pulling apart. There is also no need to anchor unions and outlets to the fascia, an ideal solution when using rafter arm brackets.


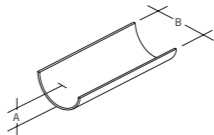

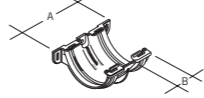

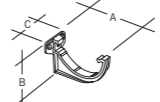

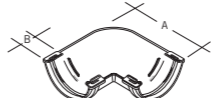

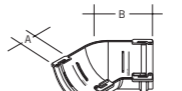

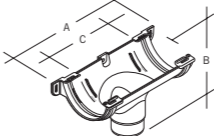

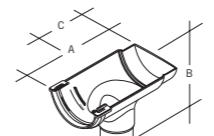



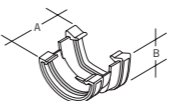


For further instructions, see page 37.



Deepflow 110 x 75mm semi-elliptical system

GUTTER		Size	Code	A	B	C	Colour	Qty
		3m	RGD3	75	110		W B G BR AG	5
		4m	RGD4	75	110		W B G BR AG	5
		CSA: 6043mm ²						
UNION BRACKET			RUD10	155	40		W B G BR AG	20
		Adaptors to join different gutter profiles are available to order						
FASCIA BRACKET			RKD1	131	100	50	W B G BR AG	80
		When used with 2 hole screw fixings, brackets meet the heavy class of BS EN 1462 Fix at 1m centres - max						
ANGLES		Angle						
		90°	RAD10	176	40		W B G BR AG	20
		Angle						
		45°	RAD20	108	80		W B G BR AG	15
		Special gutter angles are available to order. Please state angle required.						
			RFB21				W B G BR AG	1
		Special gutter angles are available to order. Please state angle required.						
RUNNING OUTLET			ROD10	275	164	153	W B G BR AG	12
		68mm circular spigot						
			ROD11	273	162	141	W B G BR AG	1
		82mm circular spigot						
STOPEND OUTLET			ROD20	227	164	107	W B G BR AG	15
		68mm circular spigot						
		EXTERNAL STOPEND			RED10	44		W B G BR AG
								
		NOTCH ADAPTOR			RGNA1	16	18	B
		To adapt fitting for notch jointing						

Clip-master 112 x 49mm nominal half round system

GUTTER		Size	Code	A	B	C	Colour	Qty
		3m	RGC3	49	112		B G BR	5
		4m	RGC4	49	112		W B G BR	5
		CSA: 3997mm ²						
UNION BRACKET			RUC1	155	40		W B G BR	15
								
		FASCIA BRACKET			RKC1	132	72	48
		When used with 2 hole screw fixings, brackets meet the heavy class of BS EN 1462 Fix at 1m centres - max						
		ANGLES		Angle				
		90°	RAC1	170	40		W B G BR	15
		Angle						
		45°	RAC2	110	80		W B G BR	10
		Special gutter angles are available to order. Please state angle required.						
			RFB104				W B G BR	1
		Special gutter angles are available to order. Please state angle required.						
RUNNING OUTLET			ROC1	275	138	155	W B G BR	15
		68mm circular spigot						
		STOPEND OUTLET			ROC2	228	138	105
		68mm circular spigot						
		EXTERNAL STOPEND			REC1	40		W B G BR
								
		CLIP-MASTER TO FLOWLINE ADAPTOR			RGAR2R	87	72	W B G BR
		Other gutter adaptors are available to order						
		NOTCH ADAPTOR			RGNA1	16	18	B
		To adapt fitting for notch jointing						

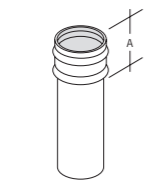
Circular downpipe 68mm system

PIPES

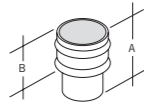
Size	Code	A	B	C	Colour	Qty
2.5m	RPH2525	52			B G BR AG	♥ 4
3m	RPH253	52			W B G BR AG	♥ 4
5.5m	RPH2555	52			W B G BR AG	♥ 4



4 life

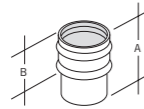


SOCKETS



Loose pipe socket

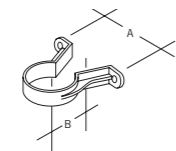
RL25	100	50			W B G BR AG	♥ 10
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Solvent weld pipe socket with push-fit seal

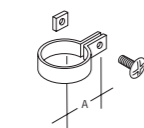
RLR25	92	50			W B AG	♥ 10
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CLIPS



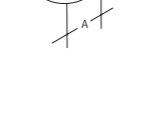
One piece 8mm screw fixing holes

RCZ253	94	72			W B G BR AG	♥ 30
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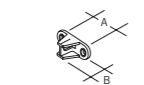
Socket clip including nut and bolt for use with RCB300 backplate

RC251	64				W B G BR AG	♥ 20
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Pipe clip including nut and bolt for use with RCB300 backplate

RC252	64				W B G BR AG	♥ 20
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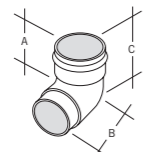
Backplate for use with RC251/RC252 clips

RCB300	48	30			W B G BR AG	♥ 20
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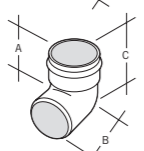
Spare nuts and bolts 20mm x 6mm

RNB11						20
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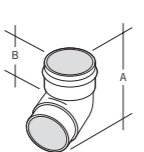
BENDS



87 1/2°	RB251	48	75	81	W B G BR AG	♥ 25
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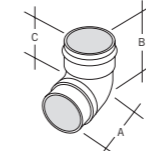
67 1/2°	RB252	38	60	66	W B G BR AG	♥ 25
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45°	RB253	48	53	63	W B G BR AG	♥ 25
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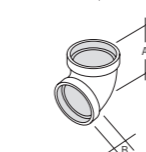
Socket/spigot

OFFSET BENDS



Angle	Code	A	B	C	D	Colour	Qty
67 1/2°	RNE255	66	66	37		W B G BR AG	♥ 25

Socket/push-fit spigot



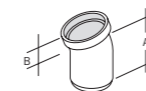
67 1/2°	RNA250	41	15			W B G BR AG	10
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Socket/socket. For deep fascias



20°	RNE252	51	15			W B G BR AG	10
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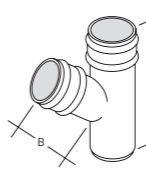
Socket/socket. For 25mm offset construction



20°	RNE253	56	15			W B G BR AG	10
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Socket/spigot. For 25mm offset construction

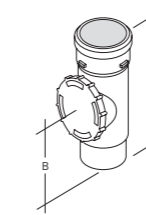
BRANCH



67 1/2°	RY252	196	90			W B G BR AG	♥ 10
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Socket/spigot

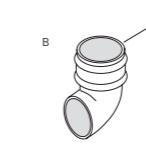
ACCESS PIPE



	RF25		185	96		W B G BR AG	♥ 15
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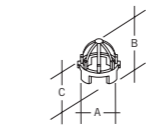
Socket/spigot

SHOE



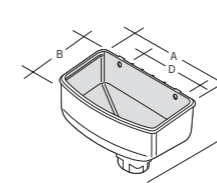
	RS25	137	48			W B G BR AG	♥ 15
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LEAF GUARD



	RV225	64	55	18		W B G BR	30
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HOPPER HEAD



	RH252	308	174	220	200	W B G BR AG	♥ 6
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Flow rate - 5.14 L/S

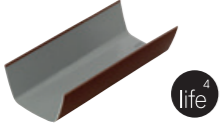
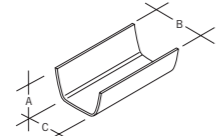

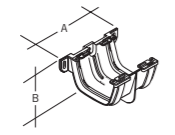

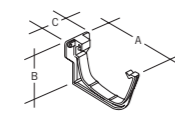

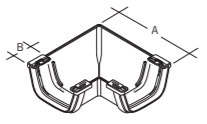

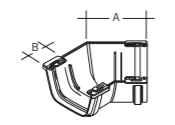

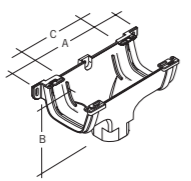

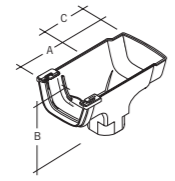

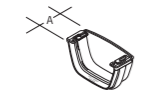

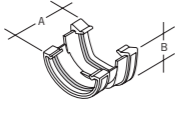

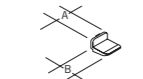
	RH25	425	298	238	190	B	1
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Flow rate - 7.56 L/S


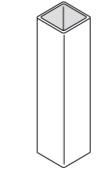

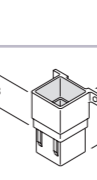

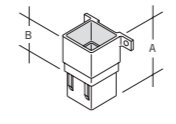

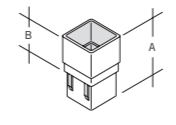

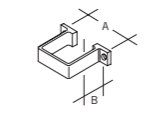

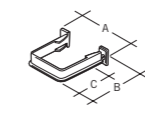
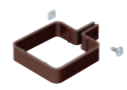
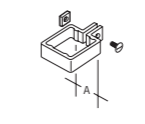

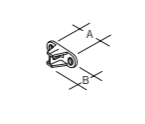

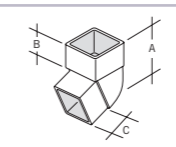

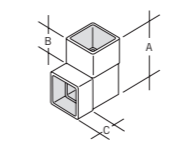

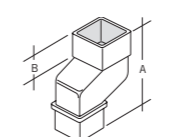
Suitable for use with 68mm circular and 65mm square downpipe, using appropriate socket

For further hopper heads please see page 32.

Flowline 112 x 60mm rectilinear system


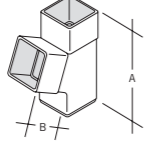

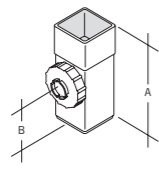

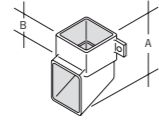

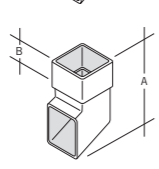

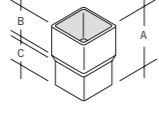

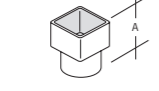

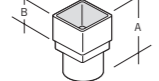
GUTTER	Size	Code	A	B	C	Colour	Qty
 	4m	RGF4	60	112	80	W B BR AG	5
CSA: 5412mm ²							
UNION BRACKET		RUF1	155	84		W B BR AG	12
 							
FASCIA BRACKET		RKF2	132	85	48	W B BR AG	40
 							
When used with 2 hole screw fixings, brackets meet the heavy class of BS EN 1462 Fix at 1m centres - max							
ANGLE							
	90°	RAF1	188	40		W B BR AG	20
 							
	45°	RAF2	110	40		W B BR AG	15
 							
Special gutter angles are available to order. Please state angle required.							
		RFB102				W B BR AG	1
RUNNING OUTLET		ROF1	275	134	155	W B BR AG	12
 							
Suitable for both 68mm circular or 65mm square downpipe							
STOPEND OUTLET		ROF11	225	134	110	W B BR AG	15
 							
Suitable for both 68mm circular or 65mm square downpipe							
EXTERNAL STOPEND		REF2	53			W B BR AG	20
 							
CLIP-MASTER TO FLOWLINE ADAPTOR		RGA2R	87	72		W B BR AG	1
 							
Other gutter adaptors are available to order							
NOTCH ADAPTOR		RGNA1	16	18		B	20
 							
To adapt fitting for notch jointing							

Square downpipe 65mm system


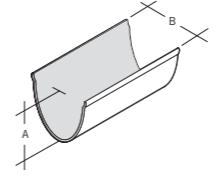

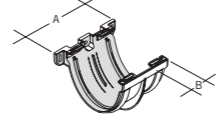



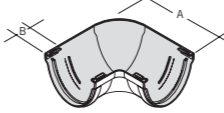

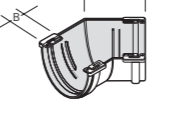

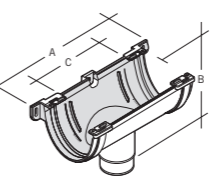

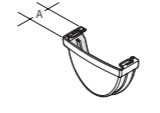

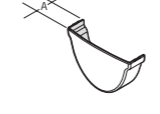

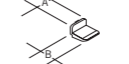
PIPES	Size	Code	A	B	C	Colour	Qty
 	3m	RPE3				W B BR AG	6
 	5.5m	RPE2555				W B BR AG	2
SOCKETS							
 		RLE1	82	42		W B BR AG	10
 		RLE11	82	42		W B BR AG	10
CLIPS							
 		RCE1	88	40		W B BR AG	30
 		RCE3	107	96	65	W B BR AG	5
 		RCE2	56			W B BR AG	10
 		RCB300	48	30		W B G BR AG	20
SPARE NUTS AND BOLTS 20mm x 6mm		RNB11					20
OFFSET BENDS							
 	67½°	RBE1	75	42	40	W B BR AG	15
Socket/spigot							
 	87½°	RBE3	104	40	28	W B BR AG	15
Socket/socket							
 		RNE1	142	42		W B BR AG	10
Socket/spigot 50mm projection							

Available from the Gutter Centre Tel: 0330 223 1731 or email: sales@guttercentre.co.uk

Square downpipe 65mm system


BRANCH	Angle	Code	A	B	C	Colour	Qty
	67½°	RYE1	158	75		W B BR AG	15
Socket/spigot							
							
ACCESS PIPE		RFB91	222	95		W B BR AG	30
Socket/spigot							
							
							
SHOES	With fixing lugs						
		RSE1	115	40		W B BR AG	15
							
Plain							
		RSE2	140	40		W B BR AG	15
							
OUTLET ADAPTOR		RLE3	96	51	41	W B BR AG	30
For use with RLE11 to adapt RH25 to suit 65mm square downpipe							
							
							
DRAIN ADAPTORS		RLE2	77			W B BR AG	1
Adapts 65mm square socket to 68mm socketed pipe							
							
							
		RLE4	98	40		W B BR AG	1
Adapts 65mm square socket to 68mm plain ended pipe							
							
							

Deepflow150 155 x 98mm high capacity system





GUTTER	Size	Code	A	B	C	Colour	Qty
	4m	RGJ4	98	155		W B BR AG	4
CSA: 10,060mm ²							
							
UNION BRACKET		RUJ1	166	40		W B BR AG	8
Adaptors to join different gutter profiles are available to order							
							
							
FASCIA BRACKET		RKJ1	174	125	49	W B BR AG	20
When used with 2 hole screw fixings, brackets meet the heavy class of BS EN 1462 Fix at 1m centres - max							
							
							
ANGLES	90°	RAJ1	241	40		W B BR AG	4
							
							
45°	RAJ2	140	40		W B BR AG	1	
Special gutter angles are available to order. Please state angle required							
	RFB150				W B BR AG	1	
							
							
RUNNING OUTLET		ROJ1	281	192	160	W B BR AG	20
82mm circular outlet							
							
							
STOPENDS	External						
	REJ1	55			W B BR AG	4	
							
							
Internal							
	REJ2	44			W B BR AG	4	
							
							
NOTCH ADAPTOR		RGNA1	16	18		B	20
To adapt fitting for notch jointing							
							
							

Available from the Gutter Centre Tel: 0330 223 1731 or email: sales@guttercentre.co.uk



Circular downpipe 82mm system


DOWNPIPE	Size	Code	A	B	C	Colour	Qty
	3m	RPH33	61			W B BR AG	4
	5.5m	RPH355	61			W B BR AG	4
	5.5m length available to order						

SOCKET	Code	A	B	Colour	Qty
	RL3	87	103	W B BR AG	4

CLIPS	Code	A	B	Colour	Qty
	RC3	125	93	W B BR AG	10
	RC32	70		W B BR AG	20
	RCB300	48	30	W B BR AG	20
	RNB11				20

OFFSET BEND	Code	A	B	C	Colour	Qty
	RNE3	43	78	76	W B BR AG	4

BENDS	Code	A	B	C	Colour	Qty
	RB31*	49	115	138	W B BR AG	4
	RB33*	49	78	70	W B BR AG	4

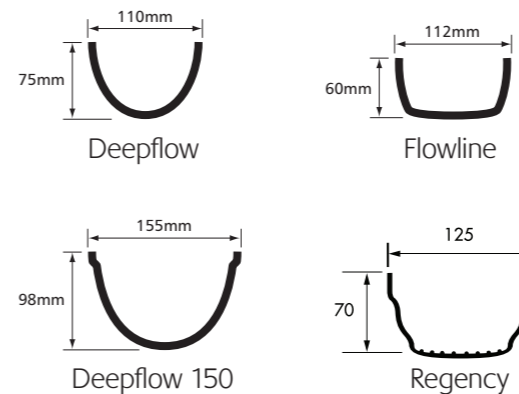
BRANCH	Code	A	B	C	Colour	Qty
	RY3*	229	130	55	W B BR AG	24

ACCESS PIPE	Code	A	B	C	Colour	Qty
	RF3*	205	101	52	W B BR AG	54

SHOE	Code	A	B	Colour	Qty
	RS3	118	22	W B BR AG	4



Profiles available in the range



Case Study Summerfield Homes, Weston Super Mare

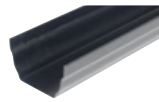
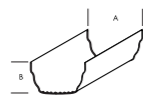

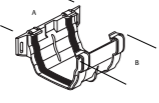

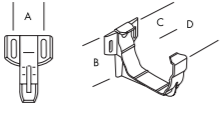

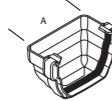

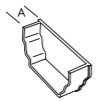

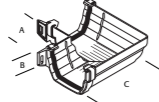
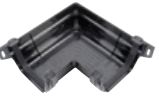
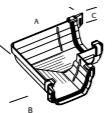

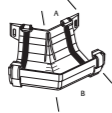

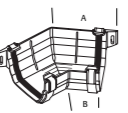

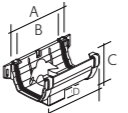
"We have used Marley products on previous projects so when we saw that the new anthracite grey colour had been released, we knew that it would be a great fit for the new development we were working on. It looks different to the average guttering and particularly compliments the windows on the homes because of their unique colour. As well as looking great, the gutters are still high quality and high performing; we're delighted with how the homes have turned out."

Nick Birch, Summerfield Homes



Available from the Gutter Centre Tel: 0330 223 1731 or email: sales@guttercentre.co.uk

Regency 125 x 70mm profiled system

GUTTER		Size	Code	A	B	C	D	Colour	Qty
		4m	R896	125	70			W B V AG	5
		CSA: 682mm ²							
UNION BRACKET			R908	146	121			W B V AG	5
									
FASCIA BRACKET			R910	54	99	80	135	W B V AG	20
		Fix at 1m centres - max							
STOPENDS									
External			R913	68				W B V AG	5
									
Internal			R902	28				W B V AG	5
									
ANGLES									
External		90°	R935	97	36	205		W B V AG	5
									
Internal		90°	R945	226	100	36		W B V AG	5
									
External		135°	R937	125	85	114		W B V AG	5
									
Internal		135°	R947	136	63			W B V AG	5
									
RUNNING OUTLET			R911	227	116	132	38	W B V AG	5
									

Available from the Gutter Centre Tel: 0330 223 1731 or email: sales@guttercentre.co.uk

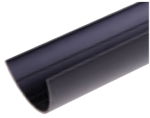
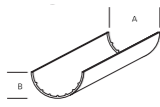

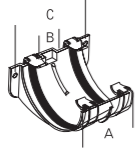

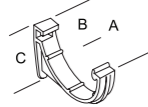

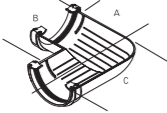

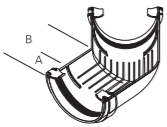


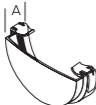
Regency 74mm profiled system

DOWNPIPE		Size	Code	A	B	C	D	Colour	Qty
		4m	R893	74				W B V AG	6
BRACKET			R919	130	102	88		W B V AG	10
									
5MM BRACKET SPACER			R927	140	104	5		W B V AG	50
									
CONNECTOR			R917	86	135	86		W B V AG	5
									
112½° BEND		112½°	R920	52	53			W B V AG	5
									
112½° BRANCH		112½°	R922	66	59	63		W B V AG	5
									
SHOE			R921	10	96	56		W B V AG	5
									
REGENCY TO 68MM REDUCER			R924	4	82			W B V AG	5
									
HOPPER HEAD			R014	254	140	150	230	W B V AG	1
									

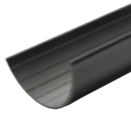
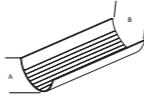

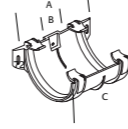

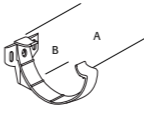

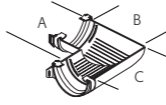

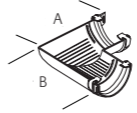

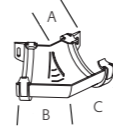

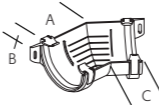

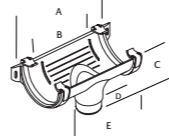

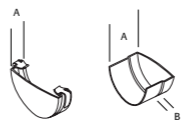
Regency downpipe is manufactured to BS EN 12200.

* Each Regency product code is prefixed with a colour (Example VR896, where 'V' is brown)

Foundry Finish, Cast iron effect rainwater 112mm half round system

GUTTER		Size	Code	A	B	C	Colour	Qty		
		4m	CBR512	112	52		FF	5		
		CSA: 100mm ²								
UNION BRACKET			CBR008	105	20		FF	10		
										
FASCIA BRACKET			CBR010	124	64	76	FF	20		
		Fix at 1m centres – max 1 screw fixing								
ANGLES										
		90°	CBR005	43	151	194	FF	5		
										
		135°	CBR007	43	67		FF	5		
										
RUNNING OUTLET			CBR011	A	B	C	D	E	Qty	
				260	240	41	132	155	FF	5
EXTERNAL STOPEND			CBR013	37					FF	5
										

Foundry Finish, Cast iron effect rainwater 125x75mm semi-elliptical system

GUTTER		Size	Code	A	B	C	D	Colour	Qty
		4m	CBR640	72	124			FF	5
		CSA: 680mm ²							
UNION BRACKET			CBR608	145	26	121		FF	10
									
FASCIA BRACKET			CBR610	139	72			FF	20
		Fix at 1m centres – max 1 screw fixing							
ANGLES									
		External							
		90°	CBR605	160	94	208		FF	5
		Internal							
		90°	CBR615	229	179			FF	5
		External							
		135°	CBR607	84	138	138		FF	5
		Internal							
		135°	CBR617	86	51	60		FF	5
RUNNING OUTLET			CBR611	275	157	159	40	FF	5
		Fits 68mm pipe							
STOPEND									
		Internal							
			CBR602	42				FF	10
		External							
			CBR613	86	38			FF	10

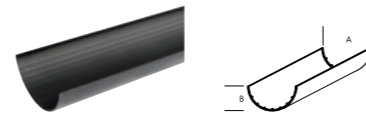





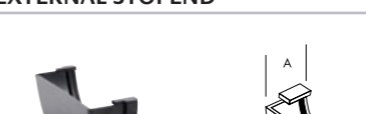
NB: Internal Stopend shown

Available from the Gutter Centre Tel: 0330 223 1731 or email: sales@guttercentre.co.uk


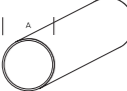







Foundry Finish, Cast iron effect rainwater 68mm circular downpipe system

DOWNPIPE	Size	Code	A	B	C	D	Colour	Qty
	2.75m	CBR519	2750				FF	5
Deep Profile								
EARED PIPE CONNECTOR		CBR017	140	89	101	108	FF	10
								
EARED PIPE BRACKET		CBR043	140	89	49	108	FF	10
	Fix at 2m centres – max 2 screw fixing							
92½° BEND	92½°	CBR577	119	40			FF	10
								
112½° BEND	112½°	CBR020	134	40			FF	10
								
112½° BRANCH	112½°	CBR022	190	107	40		FF	10
								
EARED SHOE		CBR021	140	94	152	108	FF	5
								
CURVED HOPPER HEAD		CBR044	270	190	253	244	FF	1
								
COACH BOLTS FIXINGS		CBF001					FF	10
								










Highflo 170x73mm half-round system

GUTTER	Size	Code	A	B	C	D	Colour	Qty
	4m	R515	170	73			G B W	5
CSA: 883mm ²								
JOINT BRACKET		R042	170	11	93		G B W	10
								
SUPPORT BRACKET		R452	91	178			G B W	20
	Fix at 1m centres – max 2/3 screw fixing							
90° ANGLE	90°	R451	199	111	145		G B W	1
								
RUNNING OUTLET		R454	115	250	203	330	G B W	1
	Fits 110mm pipe							
STOPEND OUTLET		R455	257	218	90	200	G B	1
	Fits 110mm pipe							
EXTERNAL STOPEND		R402	53				G B W	10
								


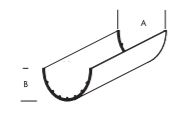

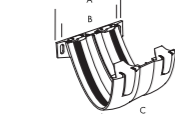

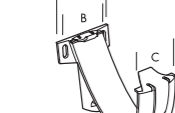

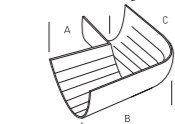
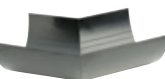
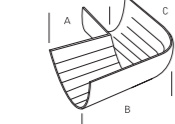

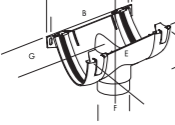

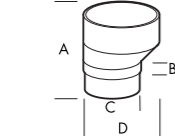

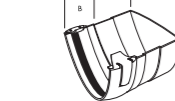
Circular downpipe 110mm system

DOWNPIPE	Size	Code	A	B	C	Colour	Qty
	3m	S505	110			B G W	1
	4m	S506	110			B G W	1
SOCKETED DOWNPIPE	Size	Code	A	B	C	Colour	Qty
	3m	S508	128	70		B G W	1
PIPE CONNECTOR	Code	A	B	C	Colour	Qty	
	S208	109	61	48	B G W	1	
DRAIN CONNECTOR	Code	A	B	C	Colour	Qty	
	S121	130	65	130	B G	1	
BRACKET - PIPE	Code	A	B	C	Colour	Qty	
	S217	50	36	90	B G W	1	
Fix at 2m centres - max 1 screw fixing							
BRACKET - PIPE	Code	A	B	C	Colour	Qty	
	S219	9	150		B G W	1	
Fix at 2m centres - max 2 screw fixing							
BRACKET - SOCKET	Code	A	B	C	Colour	Qty	
	S220	158	90	31	B G W	1	
Fix at 2m centres - max 2 screw fixing							
BRACKET - PIPE/SOCKET	Code	A	B	C	Colour	Qty	
	GS570	146	90	30	Galvanised	1	


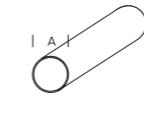

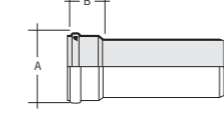

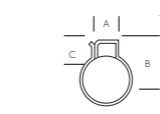

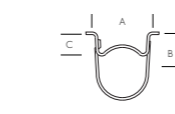

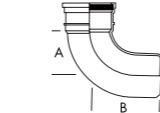

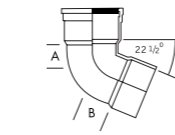

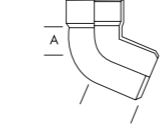

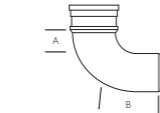

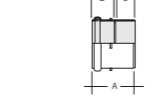


Circular downpipe 110mm system

SHOE	Angle	Code	A	B	C	D	E	F	Colour	Qty
		SS41	24	246	57				B G W	1
HOPPER HEAD	Code	A	B	C	D	E	F	Colour	Qty	
	R465	316	184	203	223	45	11	B G W	1	
ACCESS PIPE	Code	A	B	C	Colour	Qty				
	S309	68	80	155	B G	1				
92½° BEND	Angle	Code	A	B	Colour	Qty				
	92½°	S322	145	210	B G W	1				
112½° TOP OFFSET BEND	Angle	Code	A	B	Colour	Qty				
	112½°	S270	95	95	B G W	1				
112½° BOTTOM OFFSET BEND	Angle	Code	A	B	Colour	Qty				
	112½°	S271	89	89	B G W	1				
135° BEND	Angle	Code	A	B	Colour	Qty				
	135°	S331	38	95	B G W	1				
112½° BRANCH	Angle	Code	A	B	C	Colour	Qty			
	112½°	S336	105	145	95	B G	1			
92½° BRANCH	Angle	Code	A	B	C	Colour	Qty			
	112½°	S334	60	155	85	B G	1			

Stormflo 200x133mm semi-elliptical system




GUTTER	Size	Code	A	B	C	D	Colour	Qty
 	4m	R740	200	133			B G	2
CSA: 1928mm ²								
UNION BRACKET		R708	235	211	192		B G	6
 	3 Screw Fixing							
FASCIA BRACKET		R710	106	84	65		B G	5
 	Fix at 800mm centres – max 3 screw fixing							
90° ANGLE		R705	170	362	358		B G	1
 	Two union brackets are required per angle							
135° ANGLE		R707	86	151	194		B G	1
 	Two union brackets are required per angle							
RUNNING OUTLET		R711	445	424	248	405	B G	1
 	4 Screw Fixing Spigot fits 160mm pipe							
OUTLET ADAPTOR		R716	202	30	102	160	B G	2
 	For use with a R711 to convert to 110mm Highflo downpipe							
EXTERNAL STOPEND		R713	255	80			B G	2
 	One fascia bracket is required for external stopend							

Circular downpipe 160mm system

DOWNPIPE	Size	Code	A	B	C	Colour	Qty
 	3m	S534	160			B G	1
	4m	GS535	160			G	1
SOCKETED DOWNPIPE		S533	182	107		B G	1
 	3m						
BRACKET - PIPE		S412	83	120	38	B G	2
 	Fix at 2m centres – max 1 screw fixing						
BRACKET - PIPE/SOCKET		GS571	200	120	27	B	2
 	Fix at 2m centres – max 2 screw fixing Galvanised						
92½° BEND		S403	145	210		B G	2
 	92½°						
112½° TOP OFFSET BEND		S424	95	95		B G	2
 	112½°						
112½° BOTTOM OFFSET BEND		S425	95	165		B G	2
 	112½°						
135° BEND		S404	123	70		B G	1
 	135°						
PIPE CONNECTOR		S406	190	107	77	B G	1
 	S406						
ACCESS PIPE		S472	105	55	140	B G	1
 	S472						

Available from the Gutter Centre Tel: 0330 223 1731 or email: sales@guttercentre.co.uk

Circular downpipe 160mm system

92½° BRANCH	Angle	Code	A	B	C	D	Colour	Qty
	92½°	S427	438	245	96	260	B G	1
		S436	185	175	95		B G	1
		S420	110	160	68		B	1

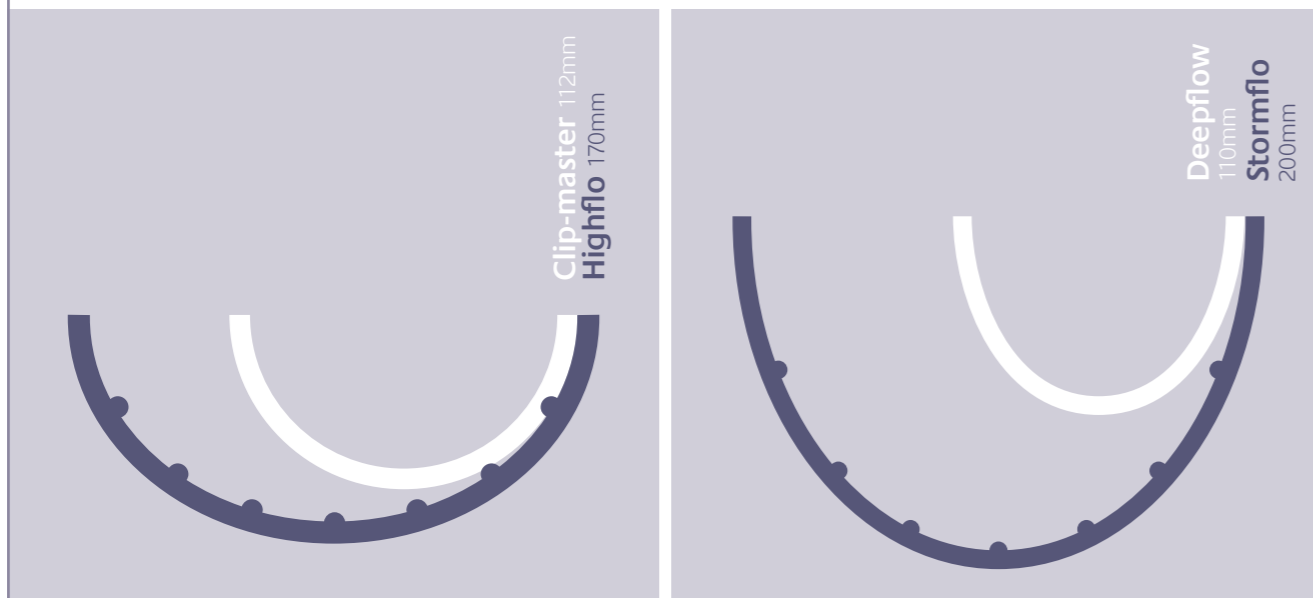


Stormflo bottom fixing










Stormflo fittings have been designed to ensure strength and stability, even in the most adverse weather conditions. The toughened bottom fixing point offers increased protection from wind updrafts on remote and exposed buildings.

For more information, visit marleypd.co.uk

Large capacity comparison



Ancillary items

RAIN DIVERTER	Angle	Code	A	B	C	Colour	Qty	
		RD25R	105	500		W B G BR	20	
Suitable for use with 68mm circular or 65mm square PVCu downpipes								
WATER BUTT CONNECTOR		RDC26R	500			B	10	
		RGS1	94	48	17	17	W B	45
FASCIA BRACKET SPACER/HEIGHT ADJUSTER								
								
Includes nut and bolt. Suitable for use with Deepflow, Clip-master, Flowline, Regency and Foundry Finish fascia brackets. 25mm height adjustment								
ANGLED FASCIA BRACKET ADAPTOR								
	22½°	RKA1					50	
	30°	RKA2					100	
Galvanised mild steel								
WEDGE SPACER		GR002				G	50	
	Not for use with Highflo or Stormflo							
EXTENSION BRACKET		RT250	243	114		B G	20	
		RT2501	111	35		B G	1	
COVER PLATE								
		RPC1	137	111		B G	20	
PIPE CLIP								
		RSC1	141	119		B G	1	
SOCKET CLIP								
								

Ancillary items

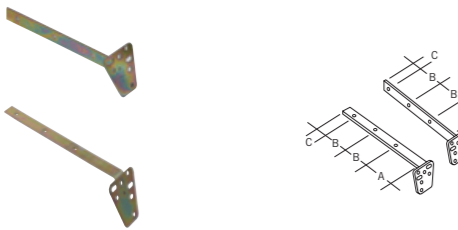
EXTENSION BACKPLATE



Angle	Code	A	B	C	Colour	Qty
	RT200	104	45		W B G BR	50

PVCu
For use with RC251/2, RCE2 and RC32 pipe clips

FIXED RAFTER ARMS



Side	Code	A	B	C	Qty
22½°	RSA1	50	75	25	50

Top	Code	A	B	C	Qty
22½°	RTA1	100	75	25	50

Electroplated mild steel
Includes 2 cadmium plated nuts and bolts

ADJUSTABLE RAFTER ARMS



Side	Code	A	B	C	Qty
	RSA1A	123	75	25	1

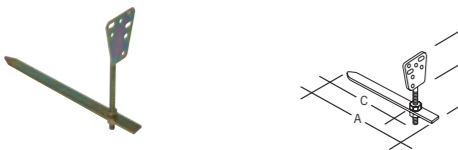
Top	Code	A	B	C	Qty
	RTA1A	65	75	25	1

Galvanised steel
Including nut, bolt and antislip washer.

SPARE NUTS AND BOLTS

12x5mm	RNB21	10
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RISE AND FALL EXTENSION ARM



	RKF1	290	100	235	50
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Electroplated mild steel
Including 2 cadmium plated nuts and bolts

RISE AND FALL BRACKETS



Regency	GR909
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Foundry Finish 112mm half round	GR018
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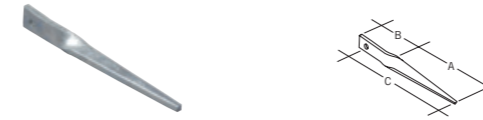
Foundry Finish 125mm semi-elliptical	GR601
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LONG RISE AND FALL BRACKETS



Foundry Finish 112mm half round	GR009
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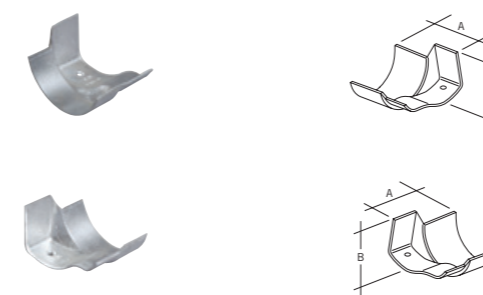
DRIVE-IN SPIKE



Size	Code	A	B	C	Colour	Qty
	RSS1°	115	58	154		50

Galvanised mild steel

CLIP-MASTER TO OGEE GUTTER ADAPTORS



Right hand	RG44	94	66	50
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Left hand	RG45	94	66	50
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Cast aluminium

HALF ROUND TO CAST IRON GUTTER ADAPTOR



	RG41R	29	B	25
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Suitable for adapting 100mm to 112mm half round

Other gutter adaptors are available to order

UNIVERSAL GUTTER NOTCHING TOOL



	RGN1	1
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Suitable for use with Deepflow, Clip-master, Flowline, and Deepflow150 gutter systems

DRAIN ADAPTORS




	RA42	31	104	B	100
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Can be cut to fit all shapes and sizes of downpipe


	RRM425	40	25	W B G BR	10
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110mm socket to 68mm socket

Ancillary items


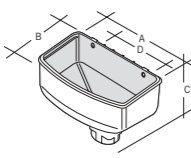

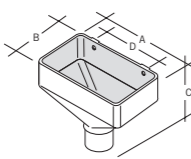

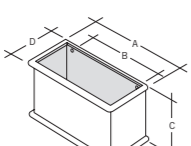
GUTTER SEAL	Size	Code	A	B	C	D	Colour	Qty
		RNG50						1
Suitable for use with Deepflow, Clip-master, Flowline, and Deepflow150 gutter systems. Length 235mm - cut to required length								

FLAT RAINWATER SEALS	Size	Code	A	B	C	D	Colour	Qty
		RNG60					B	5
Suitable for use with RGA1R and old (pre-1985) rainwater systems which used flat seals. Cut to required length								

RAINWATER SEALS	Size	Code	A	B	C	D	Colour	Qty
	Regency							
		3SR1122A					W	1
Foundry Finish 112mm half round								
		3SSI200					W	1
Foundry Finish 125mm semi elliptical								
		3SRI125					W	1
Highflo								
		3SR1520					W	1
Stormflo								
		3SR5355					W	1
Cut to required length								


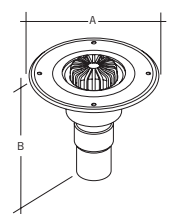
SPARE RING SEALS	Size	Code	A	B	C	D	Colour	Qty
	'T' ring							
	82	SR82T					B	1
To BS EN 681/1 82mm seal for use with RB31, RB33, RY3 and RF3 fittings								

Hopper heads


Hopper heads	Size	Code	A	B	C	D	Colour	Qty
	68/65	RH252	308	174	220	200	W B G BR AG	6
	Dual spigot outlet Flow rate - 5.14 L/S							
	82	SH30	280	155	230	177	W B G BR	6
	Circular spigot outlet Flow rate - 4.11 L/S							
	68	RH25	425	298	238	190	B	1
	110	SH40	425	298	238	190	B G	1
Circular spigot outlet Flow rate - 7.56 L/S Flow rate - 15.12 L/S								

PVCu Flat roof outlets


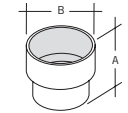
FLAT ROOF OUTLET	Size	Code	A	B	C	Colour	Qty
	68	ROF25	343	506		G	3
	Items are supplied bagged loose for site assembly						


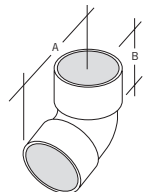
BALCONY OUTLET	Size	Code	A	B	C	Colour	Qty
	68	ROB25	343	506		G	3
	Items are supplied bagged loose for site assembly						

UNIVERSAL FLANGE	Size	Code	A	B	C	Colour	Qty
		SOF1	343	180	55	G	5
	Flange is 3mm thick						

FLAT ROOF OUTLET GRATING	Size	Code	A	B	C	Colour	Qty
		SOF12				G	25
	For use with SOF1						

BALCONY OUTLET GRATING	Size	Code	A	B	C	Colour	Qty
		SOB1				G	35
	For use with SOF1						

STRAIGHT FLANGE CONNECTOR	Size	Code	A	B	C	Colour	Qty
	82	SGS31G	133	137		G	20
	110	SGS41W	139	134		W	20

BENT FLANGE CONNECTOR	Size	Code	A	B	C	Colour	Qty
	110	STS41W	104	156		W	45
	Socket/socket						

To assess the suitability of a gutter system to drain the roof of a building the following factors need to be taken into consideration:

1. The effective roof area to be drained.
2. Rainfall intensity.
3. The flow characteristics of the gutter system.
4. The number and position of downpipes.

1. Effective roof area

The effective roof area can be determined by calculation in accordance with the following:

- BS EN 12056-3: Roof drainage layout and calculations.
- The Building Regulations 2002 Approved Document H, Part H3.

The formula and example shown below reflects the method used in the above standard to calculate effective roof area.

Multiplication factors

An alternative approach to that described left is the use of multiplication factors to establish effective roof area. From plan area the appropriate factor for the roof slope can be applied to determine the effective area.

This method is similar to that shown in Approved Document H of the Building Regulations. The table opposite provides a wider range of factors to enable accurate assessment of effective roof area to be determined.

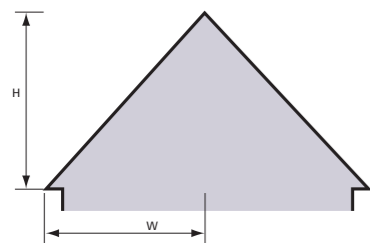
Roof pitch	Factor	Roof pitch	Factor
10°	1.088	30°	1.288
12.5°	1.111	32.5°	1.319
15°	1.134	35°	1.350
17.5°	1.158	37.5°	1.384
20°	1.182	40°	1.419
22.5°	1.207	42.5°	1.459
25°	1.233	45°	1.500
27.5°	1.260	47.5°	1.547

Vertical surfaces

Where pitched roofs abut vertical walls the catchment area is likely to be increased as a result of wind driven rain. To allow for this half the vertical surface area of the wall should be added to the effective area of the sloping roof.

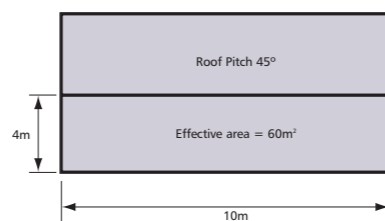
Flat roofs

For roofs with a pitch of less than 10°, the effective area is taken as the plan area.

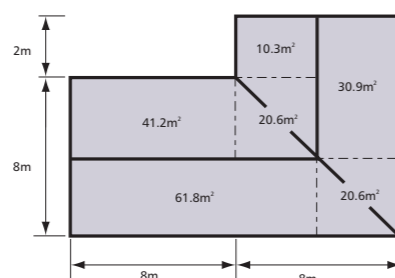


$$\left(\frac{H}{2} + W\right) \times L = m^2$$

For example a roof 4m high x 4m wide x 10m long
 $(2 + 4) \times 10 = 60m^2$



Using the same roof dimensions as the example above with a 45° roof pitch.
 4m wide x 10m long x 1.5 = 60m²



2. Rainfall intensity

The Building Regulations 2002 Approved Document H and BS EN 12056-3: 2000 provide detailed information on rainfall throughout the UK by geographical location and frequency of occurrence. The flow rates shown below for Marley PVCu gutter systems have been determined from tests carried out in accordance with the test procedure in BS EN 12056-3.

Gutter selection

Although aesthetic appearance is an important aspect in the selection of a particular gutter system, the following factors also need to be taken into consideration as they could influence the final choice of system.

- The size of gutter and its flow capacity.
- Whether the gutter is fitted level or to a fall.
- If end or centre outlet position for downpipes are adopted.
- The length of gutter to an outlet/downpipe.

3. Flow capacity

Gutter length

On long runs frictional resistance can reduce gutter capacity and efficiency. To allow for this, reduction factors can be applied or gutters sized to allow freeboard in accordance with BS EN 12056-3: recommendations.

Effect of valleys

Where valleys occur it is good practice to position an outlet adjacent to the internal angle to deal with the concentrated discharge that is likely at such points during peak flow conditions. Depending on the size of roof it may also be beneficial to fit a corner hopper where the flow is considerable.

Long roofs

The spread of water as it leaves the roof edge varies considerably depending on the roof surface and pitch. On long roofs it may be necessary to select a wider gutter than capacity calculations would normally dictate. This is particularly important with sheet metal or similar profiled roofs where there is a tendency for the discharge to follow the roof angle and overshoot the gutter.

4. Hopper Heads

The flow capacities of different size hopper heads are shown in the table below and are based on a rainfall intensity of 0.021 l/s per square metre of roof area.

Product Code	Pipe Size	Roof Area m²	Flow rate litres/second
RH252	68mm	247m²	5.14l/s
RH25	68mm	360m²	7.56l/s
SH30	82mm	196m²	4.11l/s
SH40	110mm	720m²	15.12l/s

Flow capacity

The maximum flow capacity of different Marley gutter systems can be compared from the tables shown opposite. The capacity of each system varies depending on profile, size and whether the gutter is fitted level or to a fall. For design purposes eaves gutters are normally sized to ensure the calculated run-off does not exceed 90% of the gutter capacity. It is also recommended that gutters are fixed level as this enables the gutter to be fitted as high as possible to ensure the correct relationship is maintained at the roof edge.

Gutter system	Outlet at one end		Outlet in centre		Outlet at one end with an angle within 2m of outlet**							
	level	fall 1:600	level	fall 1:600	level	fall 1:600						
	m²	l/s	m²	l/s	m²	l/s						
Clip-master	43	0.90	48	1.00	84	1.75	92	1.92	39	0.81	43	0.95
Flowline	70	1.46	84	1.75	135	2.84	170	3.40	63	1.31	76	1.58
Deepflow	90	1.90	110	2.31	185	3.90	226	4.75	81	1.70	99	2.07
Deepflow150	133	2.80	-	-	286	6.00	-	-	-	-	-	-
Regency	101	2.10	110	2.30*	202	4.20	226	4.70*	-	-	-	-
Foundry Finish Half round	43	0.90	62	1.30*	86	1.80	125	2.60*	-	-	-	-
Foundry Finish 125	101	2.10	115	2.40*	182	3.80	221	4.60*	-	-	-	-
Highflo	136	2.80	137	2.90*	258	5.40	289	6.00*	-	-	-	-
Stormflo	318	6.70	320	6.70*	601	12.50	673	14.0*	-	-	-	-

*Gutter fixed at 1:350 **or gutters with angles further than 2m from the outlet increase the below figures by 5%

CAD drawings

CAD drawing are available to download from our website.

Visit marleypd.co.uk



Clip-jointed gutter systems

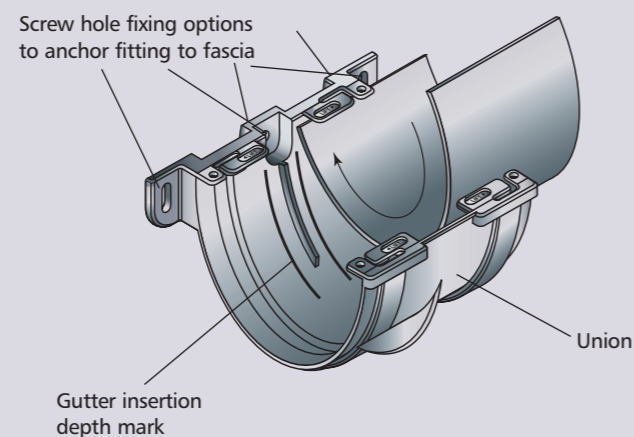
Each joint is made by inserting the plain edge of gutter into the fitting and locating under the rear clip. At the same time ease the front edge of fitting forward and up until the gutter clips under the front edge. Care must be taken to ensure that each length of gutter is fitted to the insertion mark on each fitting. This is particularly important and attention to this will ensure trouble free performance for many years.

Unions and outlets incorporate fixing holes in the rear edge which must be used to secure the fitting to the fascia board. This is essential for the control of thermal movement that occurs with temperature variations. The length of gutter to a stopend from a fitting must not exceed 300mm. Where this is exceeded a union must be fitted and secured as previously described with a short piece of gutter to the stopend.

With Deepflow, Deepflow150, Clip-master and Flowline the length of gutter to a stopend can be retained using the notch technique and adaptor RGNA1 to eliminate this particular restriction.

Easyclip

Deepflow, Deepflow150, Clip-master and Flowline systems are jointed via the innovative easyclip which makes it simple to joint the gutter and fitting, but it is also very easy to take apart if necessary.



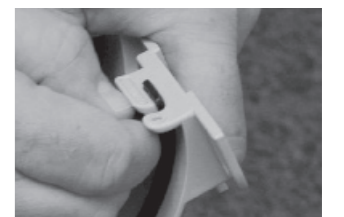
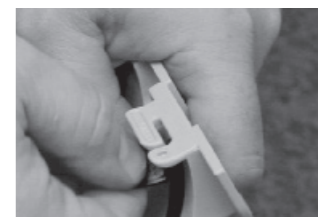
Notched gutter systems

It is possible to adapt the easyclip to make fittings suitable for 'notch' jointing, by fitting a 'notch adaptor' into the centre of the easyclip. The adaptor will then fit into a notch cut into the back of the gutter.

This is an effective way of allowing gutter to expand and contract due to temperature change without gutter and fitting pulling apart. There is also no need to anchor fittings to the fascia. This method is ideal to anchor the last joint of a gutter run which ends with a stopend.



Deepflow, Deepflow150, Clip-master and Flowline can be installed as notched systems.



Using a notching tool, RGN1 (see page 31), notch the rear of the gutter. Notches must be made to both ends of a length of gutter.

A notch adaptor RGNA1 is then inserted into the easyclip from the underside, between the gap in the body of the fitting and the clip arm. Insert one end of the short side of the adaptor into the open end of the easyclip. Twist the other side of the adaptor into place. The adaptor is necessarily a tight fit to ensure it stays in place.



The notched gutter end is located under the notch adaptor and the joint completed by clipping the gutter under the easyclip on the front of the fitting.

When correctly assembled, a notched joint cannot pull apart and will absorb expansion and contraction associated with variations in temperature, while maintaining a watertight seal.

Gutter position & bracketry

Gutter position

The spread of water as it leaves the roof edge can vary considerably depending on the rainfall intensity, type of roof surface and the pitch of the roof. BS EN 12056-3: recommends that eaves gutters should be fitted in such a position that they intercept the flow at the roof edge and that gutters are fitted centrally under the roof tile and close beneath it.

Gutters can be installed level or with a nominated gradient of 1:600 or 1:350. If fitted to a fall, care should be taken to ensure the top of the gutter does not fall below the roof tile to such an extent that the water will pass over the front edge of the gutter. It is also important that the eaves course of the tile or slate should not project too far over the fascia board and a maximum of 50mm is recommended for 112-125mm nominal size gutters.

Fascia brackets

All Marley PVCu gutter fascia brackets have been tested to the loading requirements as detailed in BS EN 1462 and perform in excess of the highest classification, Class H heavy duty, which requires brackets to support a dead weight load of 75kg, to simulate snow load.

However, in areas where particularly high snow falls and severe icing might be expected, it is recommended that snow boards be fitted to the eaves of the pitched roofs. This precaution should also be considered wherever sliding snow might cause damage or injury to structures or persons below.

It is recommended that brackets are fixed with the aid of a string line to

maintain alignment and bracket centres must not exceed 1m maximum centres (800mm for Stormflo). When fixing to cellular fascia boards the two outer most fixing holes must be used and 1¼" x 10g (32mmx5mm) pan or round head non-ferrous screws must be used. The use of countersunk screws is not recommended.

When fixing to cellular fascia boards of less than 16mm thick, a timber support batten should be fitted behind to ensure a secure fixing is obtained. To improve the loading characteristics of the gutter system, fascia bracket centres can be reduced but in areas of the country that experience frequent heavy snow fall, the use of snow boards is recommended as advised in BS EN 12056-3.

Gutter brackets

Gutter unions, outlets and stopends must have a fascia bracket fitted within 150mm of one side of the fitting for support.

Internal and external angles require supporting brackets positioned on both sides within 150mm.

The use of the gutter bracket centre fixing hole is not recommended and is provided to facilitate the adjustable rafter arm brackets RSA1A and RTA1A.



Rafter arm brackets

Rafter arm brackets can be used with all Marley gutter systems. Additional structural fixings should be provided when used with a clip-jointed gutter system, to enable key fittings to be anchored and supported for the control of thermal movement.

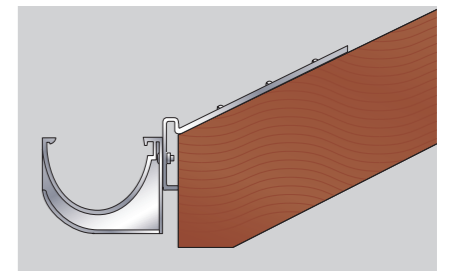
It is recommended that notched gutters are used on buildings without fascia boards as key fittings such as unions and outlets do not need to be secured and can be positioned adjacent to structural fixing points. Top rafter brackets, RTA1 or RTA1A, will need to be fitted before the roof is tiled. Side rafter brackets, RSA1 or RSTA1A, may be fitted afterwards and are easily adjusted to accommodate minor variations in line and level. Nuts and bolts are supplied to secure fascia brackets to the rafter arm. Although fixings are controlled by rafter centres it is important to meet gutter support recommendations previously described.

Rise and fall brackets

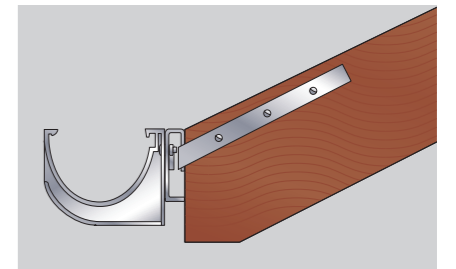
Rise and fall brackets, can be used with clip-jointed gutters although a notched system is recommended as described for rafter arm fixing above. Nuts and bolts are supplied to secure fascia brackets to the multi-fit face plate. It is recommended that pilot holes are drilled in mortar joints before the spike is driven in to avoid cracking the brickwork bond. Bracket centres should not exceed 600mm.

Angle fascia bracket

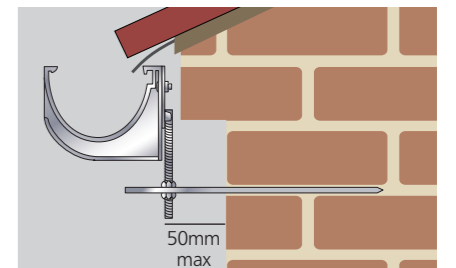
Angle fascia bracket adaptors, are required when a sloping fascia board is employed at the eaves. The galvanised mild steel adaptor is fitted behind the fascia bracket with two 1¼" x 10g (45x5mm) non-ferrous round head screws passing through both bracket and adaptor.



RTA1A adjustable top rafter arm, RTA1 also available



RSA1A adjustable side rafter arm, RSA1 also available

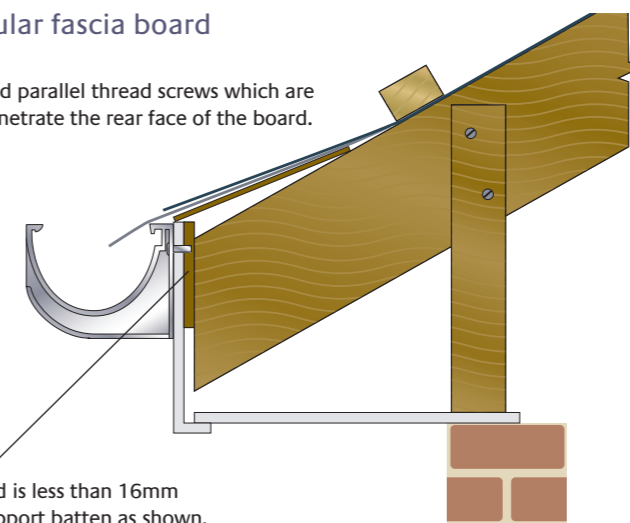


RKF1 rise and fall bracket



Fixing to cellular fascia board

Use two round head parallel thread screws which are long enough to penetrate the rear face of the board.



If the cellular board is less than 16mm thick, fit timber support batten as shown.



Installation

As rainwater pipes are generally fitted externally, joints between each spigot and socket length do not need to be sealed. However offset fittings are sized to allow for push fit or solvent weld where suitable.

Gutter outlets are normally positioned directly above drain connections but on occasions it may be necessary to rotate the offset to avoid obstructions below. However when using the square downpipe system, the gutter outlet should be positioned directly above the rainwater drain connection, as square offsets cannot be rotated.

Where a RH25 hopper head is used, the RLE3 outlet adaptor with a pipe socket are required to provide the necessary transition from circular to square.

Offset assembly

Offsets can be easily constructed on site from a range of bends depending on the roof overhang at the eaves.

Where offsets exceed 600mm it is recommended that bends are solvent welded to gutter outlet spigots to ensure a positive connection. When two 87½° bends are used to construct an offset the horizontal section of pipe should be supported with a pipe clip from the soffit.

Small offsets can be achieved using offset bends RNE252 and RNE253 where a minimum projection of 25mm is obtainable.

Location of pipe clips

Every rainwater pipe should have a clip located round the top socket to support the downpipe system. Intermediate clips should then be located at a maximum of 1.8m centres or in the middle of each length to maintain alignment. A gap of 10mm should be left between the end of each pipe and the bottom of the socket to allow for thermal movement.

Two different pipe clip fixing methods are available. A one piece clip for flush fixing or a two piece clip to fit both the downpipe and pipe socket. These are used with backplate RCB300 and allow for adjustment.

Each should be secured with two 32 x 6.5mm non-ferrous round head screws. An extension backplate RT200 can also be used for greater adjustment of the downpipe from the wall.

Drain connections

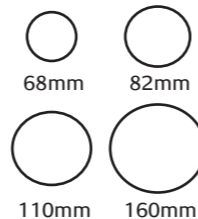
External rainwater pipes usually connect direct to the surface water drain. Where a direct connection is made a reducer and a short section of pipe is used to provide the transition between different pipe sizes. A gully trap will be required to both arrangements where the drain connects to a combined foul and surface water drainage system.

Roof and balcony outlets

Marley provide a range of roof outlets, sized to suit various applications shown on page 32. Aluminium outlets, sized 50-150mm are shown in the Alutec Roof Outlet Systems Guide.

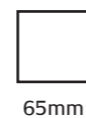
Circular downpipe systems

Marley Deepflow, Flowline, Clip-master, Regency and Foundry Finish gutters all have outlets designed to suit 68mm circular downpipe, which has sufficient capacity to accommodate the maximum flow from the above rainwater systems. Deepflow150 (82mm downpipe), Highflo (110mm downpipe) and Stormflo (110 & 160mm downpipe) have outlets and downpipes suited to their larger profiles, making them the ideal application for commercial projects.



Square downpipe systems

For aesthetic reasons, the 65mm square system is usually paired with the Flowline gutter profile, however it can also be used with Deepflow or Clip-master. Square downpipe has sufficient capacity to accommodate the maximum flow from the systems.

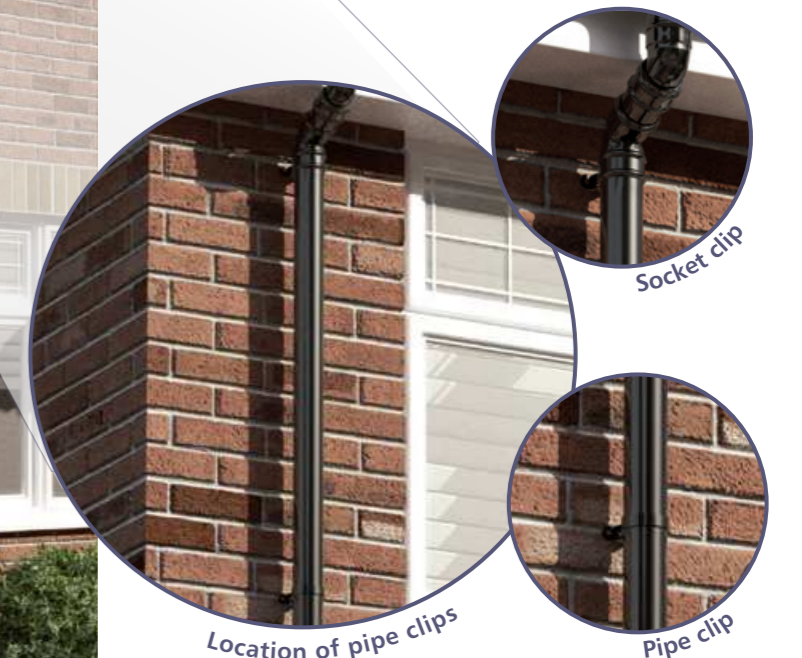


Regency

Unique to the Regency gutter is a profiled 74mm downpipe to accommodate the maximum flow of the system.



Offset assembly



Location of pipe clips

Socket clip

Pipe clip

British & European Standards

BS EN 12056-3: 2000

Gravity drainage inside buildings: Roof drainage, layout and calculation.

BS EN 607

Eaves gutters & fittings - PVCu. Definitions, requirements and testing.

BS EN 12200-1

Plastics rainwater piping systems for above ground external use - PVCu.

BS EN 1462

Gutter brackets. Classification, requirements & testing.

BS EN 681-1

Elastomeric seals. Material requirements for pipe joint seals used in water and drainage applications. Part 1 vulcanised rubber.

BS 4255-1

Specification for non-cellular gaskets for buildings.

BS EN ISO 9001 2008

Quality management system. Model for Quality Assurance in Design, Development, Production, Installation and Servicing.

BS EN ISO 14001 2004

Environmental management systems. Requirements with guidance for use.

General Information

Inspection and testing

All newly installed gutters and pipework should be tested in accordance with the appropriate standards. These requirements may vary according to locality of installation and, for guidance, attention is drawn to BS EN 12056-3: 2000, Gravity drainage inside buildings.

Handling

PVCu gutters and pipes are strong, though lightweight, and are therefore easily handled. However reasonable care should be exercised whilst handling in extremely cold conditions.

To protect the high gloss level of Life4 gutter and downpipes, they are packed into plastic sleeving to prevent accidental damage. When removing from sleeving, ensure that the external face is uppermost and handle with care to ensure that the profiles do not rub against each other.

To preserve the appearance of the self-coloured material, when products are delivered to site, they should preferably be placed inside a storage building.

Storage

Gutters and pipes should be well supported on suitable racks. Dividing the framework or shelves into sections helps to segregate different products and prevents overloading and possible distortion of bottom layers.

Pipes and gutter bundles should be stacked no more than seven high. If it is necessary to store in the open for long periods, or if products are to be exposed to strong sunlight, they should be covered with an opaque sheet. Fittings supplied in cardboard boxes or polythene bags should be stored under cover and kept packed until required.

Solvent cement must be securely stored in a cool place out of direct sunlight and away from any heat source.

Safety

The relevant regulations are outlined in the Health and Safety at Work Act 1974 and should be followed. Hazard sheets, dealing with the potential hazards of working with solvent cement and silicone lubricant are available from Marley Plumbing & Drainage.

Refer to C.D.M. regulations (Code of Practice and Designing for Health and Safety in Construction 1995).

Maintenance

Marley PVCu Rainwater systems are corrosion resistant and self coloured, the material therefore does not require painting. If, however, at any time painting is required, a paint specific for use with PVC is recommended.

Timber fascias that have been treated with timber preservatives.



PVCu push-fit and solvent weld systems, ideal for domestic and commercial applications. Innovative fittings include the 8-way collar boss with top and side entries which allow for multiple inlet connections.



Certified to BS EN 1519, the Marley HDPE system offers an alternative solution to cast iron. The combination of the excellent material properties of HDPE with homogenous welded joints provide greater installation flexibility with a range of jointing options.



Used in conjunction with the acoustic pipe brackets, Marley dBlue is designed to reduce noise and acoustic vibrations to a level of 16dB at 4/s, making it perfect for multi-occupancy developments.



The Marley rainwater range comprises advanced Life4 technology, textured Foundry Finish, and profiles up to heavy industrial to make it the most comprehensive available.



Solid wall for round the house drainage with a range of adoptable inspection chambers. Quantum structured wall with smooth bore for good hydraulic performance in sewer and highway drainage applications.



Studor P.A.P.A. (Positive Air Pressure Attenuator) and Studor air admittance valves provide a complete active drainage ventilation system solution which is particularly suited to high-rise applications.



Multikwik sanitary frames and concealed cisterns deliver behind the wall reliability for wall hung toilets and basins. Glass, metal and plastic flush plates offer client choice for modern bathroom designs.



Equator is a hot & cold water system manufactured from cross-linked polyethylene (PE-X) and stainless steel. Fittings are tamperproof, but fully demountable and reusable with the use of the demounting tool.



Flowloc is a Vortex flow control unit, which is used as part of an attenuation scheme. It controls the rate at which water is discharged to a drainage system or watercourse.

Accreditations

