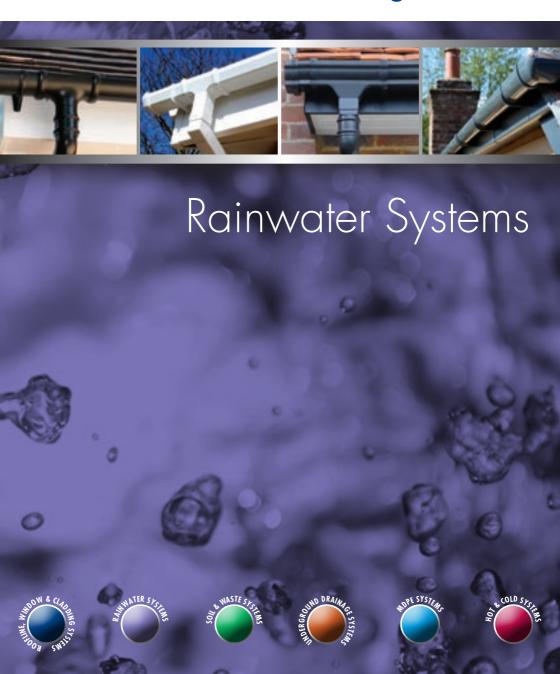
FloPlast building the future



FloPlast

HIGH QUALITY PVC-U RAINWATER SYSTEMS



FIOPLASE, a name synonymous with high quality PVC-U roofline products for new build and home improvement projects, with its wide range of rainwater systems, cellular foam and rigid PVC-U building profiles.

FIOPLASE Rainwater Systems offer a wide choice of profile design, both traditional and modern, in a range of colours to suit all tastes and applications.

The **FIOPlast** reputation for technical excellence, competitively priced and quality finished products have established the company as a leading supplier of PVC-U Plastic Building products.

Standards/Quality Control

FloPlast operations embrace Quality, Environment and Energy Management Systems which have been accredited by BSI to:

BS EN ISO 9001 Certificate No. FM 501414, BS EN ISO 14001 Certificate No. EMS 538445, BS EN ISO 145001 Certificate No. OHS 593622 and ISO 50001:2011 Certificate No. ENMS 638370.

All products are subject to continuous quality control



procedures and products manufactured to British Standard Specifications are marked accordingly.

System Features

 Gutters, pipes and fittings manufactured in PVC-U, a material which is not easily ignitable and will not support combustion. All products comply with the material requirements of: BS EN 12200-1, BS EN 1329-1 BS 1453-1 and BS 4514 (downpipes and fittings) BS EN 607 (gutters and fittings) BS EN 1462 (eaves brackets)







FIOPLAST Rainwater Systems have been rigorously tested by The British Standards Institute and have been awarded their prestigious Kitemark. License No. KM 501316.

Suitable for all types of buildings including domestic, commercial and industrial.

- Practical rainwater handling systems which, unlike metal systems, do not conduct lightning.
- Components have a consistent self-finish and colour and are essentially maintenance free.
- Tough and durable, yet lightweight for ease of installation, they will withstand normal ladder weight.
- High gloss finish with blemish free surface providing excellent all round weathering and colour fastness.
- Comprehensive range of systems, colours and fittings to provide solutions to all installation requirements.
- All large fittings are packaged individually to protect their surface from scratch marks.
- Cost effective solution to rainwater collection and drainage.
- Well defined stylish contours ensure a seamless match with the architecture of all properties, new or old.

INSTALLATION FEATURES



Specification, Technical Advice and Design

An advisory service is available to offer technical assistance regarding product selection and installation. Those associated with the building industry can take advantage of design services provided by the company for customers who have made a commitment to use or specify FloPlast products.

- Wrap around retaining clip on the majority of gutter fittings allows a fast positive joint to be made.
 Clips are easily removed should any adjustments be required during installation of the gutter system, making the system very user friendly. It also facilitates dismantling and re-assembly of the gutter system during any period of property maintenance.
- Extended gutter unions, with extra wide seals designed to eliminate the "roll-over" effect from gutter movement from thermal expansion and contraction, whilst still maintaining a watertight seal.





- All gutter fittings have positioning guide marks to allow for thermal expansion and contraction.
- Hoppers, running and stopend outlets are designed to accept sockets or plain-ended downpipe.
- Running and stopend outlets have twin fixing holes and fascia brackets offer a choice of single or twin screw fixing.

Colour Guide

B Black

W White

"Cast Iron" Style

G Grey

BR Brown

AG Anthracite Grey

FloPlast

PRODUCT GUARANTEES

10 - Year Performance & Colour Guarantee*

Applies to our PVC Rainwater range.





Register your installation today at www.floplast.co.uk

20 - "Cast Iron" Style Guarantee



FloPlast are pleased to announce that due to further research and development within our manufacturing process, we can now offer a 20 Year "Cast Iron" Colour Guarantee across all of our "Cast Iron" Style Rainwater products.

INSTALLATION VIDEOS

FloPlast Installation Videos

Our step-by-step installation videos (available online), make it clearer and easier to get to grips with the all the technical elements involved in what may be a complex process.

What's more there is also a downloadable pdf guide to help with your installation.







LEAF/WEATHER PROTECTION







A		No.	
Product		Colour	Code
Balloon:	Leaf Protection Syste	em	
4	(Outlet Guard)	В	OG1
DrainGu	ard		
	Fits round and square downpipe	В	DG1





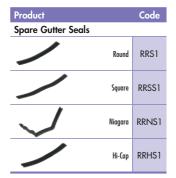
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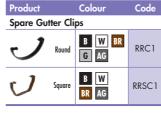






SPARES

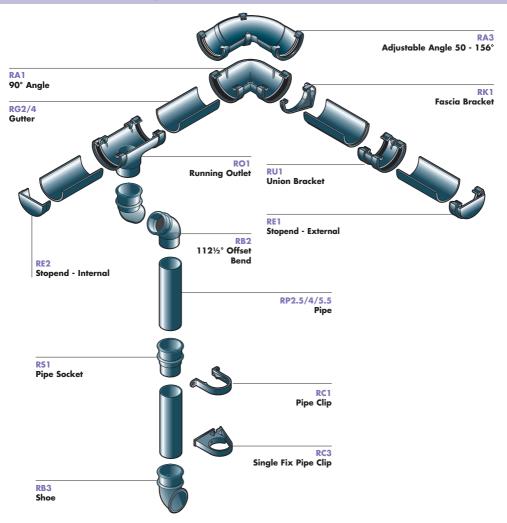




Product		Colour	Code	
Spare Gut	Spare Gutter Clips			
U	Niagara	B W BR AG	RRNC1	
J	Hi-Cap	B W BR	RRHC1	



Half Round 112MM/68MM RAINWATER SYSTEM



FloPlast recommend the use of lubricant on all gutter seals for ease of fitting and improved performance.



Colours

Features & Benefits:

- The original Half Round profile.
- A practical, easy to install system.
- Good flow capacity.
- Pre-fitted gutter seal retaining clip system for fast user friendly installation.
- Pre-lubricated seals.
- Cost effective solution for both new build and Refurbishment applications.
- Connects to most other metal or plastic systems, using our extensive range of adaptors.





RK1





112MM GUTTERING & FITTINGS BS EN 607, BS EN 1462, BS EN 12200-1



B W BR

G AG FloPlast will fabricate any non-standard angle to special order.

Angle - Any degree



G AG



68MM ROUND DOWNPIPE & FITTINGS BS EN 12200-1

RA9



Product	Colour	Code	
Pipe Clips:			
~	B W BR	RC1	
Single Fix	B W	RC3	
With fixing lugs	B W	RC4**	
671/2° Branch			
4	B W BR	RY1	
Access Pipe			
PART	B W BR	RX1	

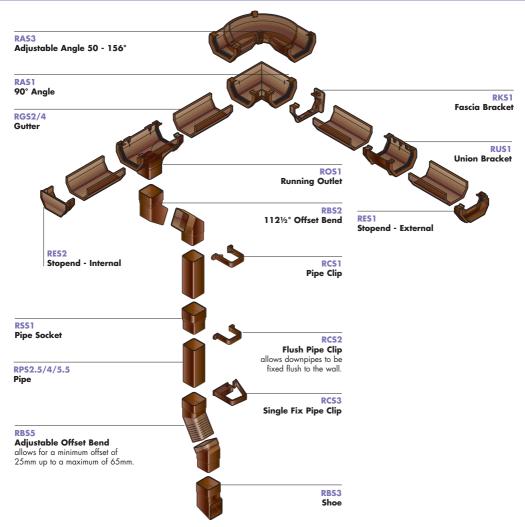
Product	Colour	Code	
Pipe Sockets			
	B W BR	RS1	
With fixing lugs	B W	RS2***	
Hopper			
	B W BR	RHS1	
Connects to 65mm square & 68mm round downpipe.			

- *Must be used in conjunction with RC4 and RS2.
- **Must be used in conjunction with RB4 and RS2.

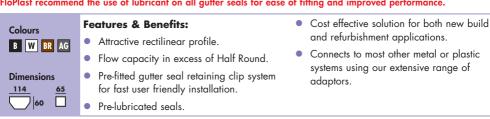
Rainwater Systems 7 www.floplast.co.uk



Square Line 114MM/65MM RAINWATER SYSTEM



FloPlast recommend the use of lubricant on all gutter seals for ease of fitting and improved performance.











114MM GUTTER AND FITTINGS BS EN 607, BS EN 1462, BS EN 12200-1



Product	Colour	Code		
Gutter 2/3/4m				
2m	B W	RGS2		
3m	BR	RGS3		
4m	B W	RGS4		
Angle				
90°	B W	RAS1		
135°	B W	RAS2		
Adjustable Angle 50° - 156°				
100	B W	RAS3		
Angle - Any degree				
	B W	RAS9		

FloPlast will fabricate any non-standard angle to special order.







65MM SQUARE DOWNPIPE & FITTINGS BS EN 12200-1

Product

Shoe



¹Must be used in conjunction with RCS4 and RSS2.

		B W BR AG
*	With fixing lugs	B W
Pipe Clips		
~		B W BR AG
<	Flush	B W
	Single Fix	B W
-	With fixing lugs	B W

		BR AG	
*	With fixing lugs	B W	RBS4 ¹
Pipe Clips			
5		B W BR AG	RCS1
✓	Flush	B W	RCS2
	Single Fix	B W	RCS3
*	With fixing lugs	B W	RCS4 ²

Colour

Code

RBS3

Product	Colour	Code		
Pipe Sockets				
	B W BR AG	RSS1		
With fixing lugs	B W	RSS2 ³		
Square Access Pipe				
PART	B W BR AG	RXS1		
68mm Round Downpipe Adaptor				

T	BR AG	RDS2
Hopper Connects to 65mm	Sq and 68mm R	and Downpi
	R W	

R W

RHS1 BR AG

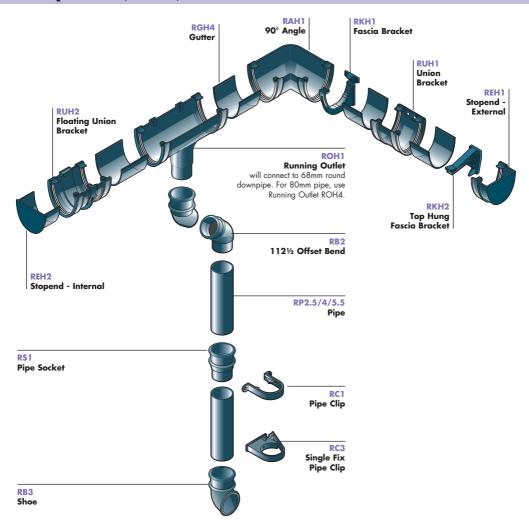
²Must be used in conjunction with RBS4 and RSS2.

Rainwater Systems 9 www.floplast.co.uk

3Must be used in conjunction with RCS4 and RBS4.



Hi-Cap 115MM/68MM/80MM RAINWATER SYSTEM



FloPlast recommend the use of lubricant on all gutter seals for ease of fitting and improved performance.

B W BR G AG Dimensions 115 68 80 75 0

Colours

Features & Benefits:

- A semi elliptical profile.
- High capacity ideal for large roof areas.
- Pre-fitted gutter seal retaining clip system for fast user friendly installation.
- The high flow rate could result in less outlets and reduced drainage runs.
- Both 68mm and 80mm round downpipes can be connected to the gutter system.
- For an improved aesthetic gutter line when viewed from below, use RKN2 top hung bracket.









115MM GUTTER AND FITTINGS BS EN 607, BS EN 1462, BS EN 12200-1



Product		Colour	Code
Gutter - 4m	1		
	4m	B W BR	RGH4
Running O	utlet		
4	68mm	B W BR	ROH1
4	80mm	B W G	ROH4
Union Bracket			

B W BR

G AG

Floating B W







Product	Colour	Code	
Fascia Bracket			
U	B W BR	RKH1	
Top Hung	B W	RKH2	
Hi-Cap to Half Ro	und Gutter A	daptors	
*	B W BR	RHR3	
Hi-Cap to Square Line Gutter Adaptors			
1	B W BR	RHS3	

80MM ROUND DOWNPIPE & FITTINGS BS EN 12200-1

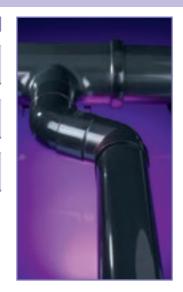
RUH1

RUH2



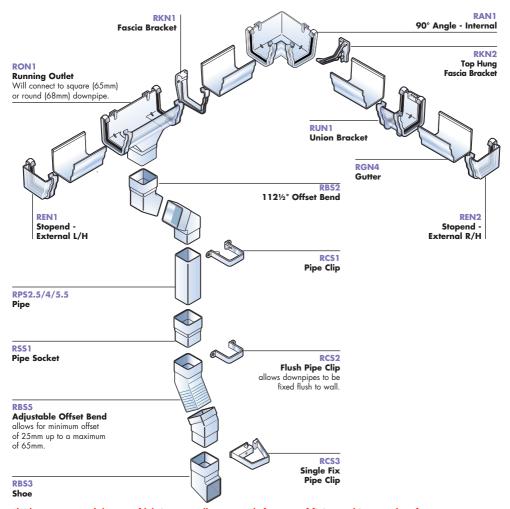


For Anthracite Grey 68mm round downpipe, see page 7.





Niagara Ogee 110MM/65MM/68MM/80MM RAINWATER SYSTEM



FloPlast recommend the use of lubricant on all gutter seals for ease of fitting and improved performance.

B W BR AG Dimensions 110 80

Colours

Features & Benefits:

- A traditional ogee style profile.
- One of the highest capacity PVC-U domestic rainwater systems.
- Water-tight seal and retaining clip pre-fitted for fast user friendly installation.
- Suitable for all properties, old and new.
- Running Outlet (RON1) can be connected to either 65mm Square or 68mm Round downpipes.
- Running outlet designed to cope with above average rainfall.
- For an improved aesthetic gutter line when viewed from below, use RKN2 top hung bracket.





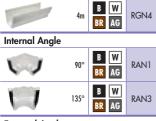




110MM GUTTER AND FITTINGS BS EN 607, BS EN 12200-1, BS EN 1462

Product









B W

BR

Connects to 65mm Square and 68mm Round downpipe



Colour

Code

REN1

AG

Running Outlet			
		B W	RON4*
Connects to 80mm Round do	wnpip	ie .	
Stopend Outlets -	65ı	mm Squa	re
F	L/H	B W	RON2
	R/H	B W BR AG	RON3
Stopend Outlets - 80mm Round			
	L/H	B W	RON5
	R/H	B W	RON6



Stopends - External



Product		Colour	Code		
Stopends - Interi	nal				
	L/H	B W	REN3		
	R/H	B W	REN4		
Union Bracket					
W.		B W	RUN1		

		BK AG	
Fascia Bracket	+		
U		B W	RKN1
	Top	B W	DIA 10







80MM ROUND DOWNPIPE & FITTINGS BS EN 12200-1

RAN9#





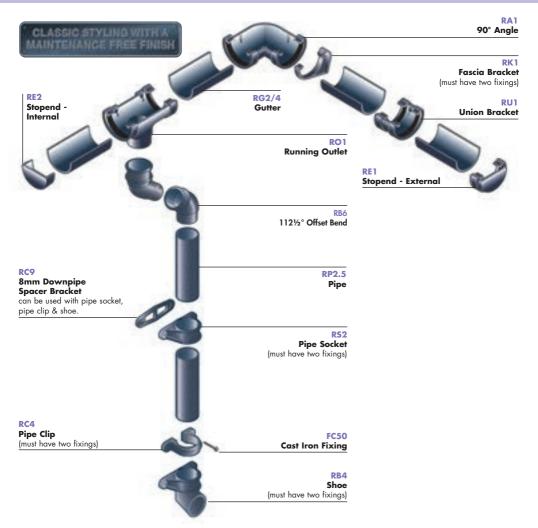


For Anthracite Grey 6 downpipe, see page	squ	are

RYH1



Half Round "CAST IRON" STYLE 112MM/68MM RAINWATER SYSTEM



FloPlast recommend the use of lubricant on all gutter seals for ease of fitting and improved performance.



Features & Benefits:

- The original Half Round profile.
- 20 year "Cast Iron" colour guarantee
- Good flow capacity.
- Pre-fitted gutter seal retaining clip system for fast user friendly installation
- Pre-lubricated seals.
- Significant cost saving over traditional Cast Iron.
- All the benefits of PVC for quick and easy installation.



112MM GUTTER & FITTINGS BS EN 607, BS EN 12200-1, BS EN 1462



SECTION AND AND		dist.79	28820
Product	3.39	Colour	Code
Gutter			
	2m 4m	CI	RG2 RG4
Angle			
*	90°	CI	RA1
	135°	CI	RA2
Angle - any de	gree		
		CI	RA9#
#FloPlast will fabricate an	y non-stand	ard angle to	special order



Product		Colour	Code
Running Outl	et - 68mı	m round	ł
-		CI	RO1
Stopend Outl	et - 68mı	m round	1
4		CI	RO2
Stopend			
•	External	CI	RE1
-	Internal	CI	RE2



	Ш	
100	Colour	Code
Fascia	CI	RK1
Union	CI	RU1
gutter ad	aptors	
ogee R/H	CI	RD3
ogee L/H	CI	RD4
Half Round	CI	RD5
	Union gutter ad ogee R/H ogee L/H	Fascia CI Union CI gutter adaptors ogee R/H CI ogee L/H CI

68MM ROUND DOWNPIPE & FITTINGS BS EN 12200-1

Product		Colour	Code
Pipe			
	2.5m	CI	RP2.5
Offset Bend			
3	92 ½°	CI	RB8
J	11 2 ½°	CI	RB6
Shoe			
r		CI	RB4#
Pipe Clip			
ên.		CI	RC4#
Pipe Socket			
-		CI	RS2#
67½° Branch			
•fi		CI	RY1

Product	Colour	Code
Access Pipe		
	CI	RX1
Square/Round Downpi	pe Ado	ptor
•	CI	RDS2
Universal Hopper		
Connects to 65mm square & 68mm round downpipe	CI	RH1
Ogee Hopper		
Connects to 68mm round and 65mm square downpipes	CI	RH4#
Rectangular Hopper**	1	
Connects to 68mm round and 65mm square downpipes	CI	RH5#
Cast Iron Fixings*		
-	CI	FC50
12 gauge x 50mm stainless steel fixings f	or "Cast Iro	n" Range

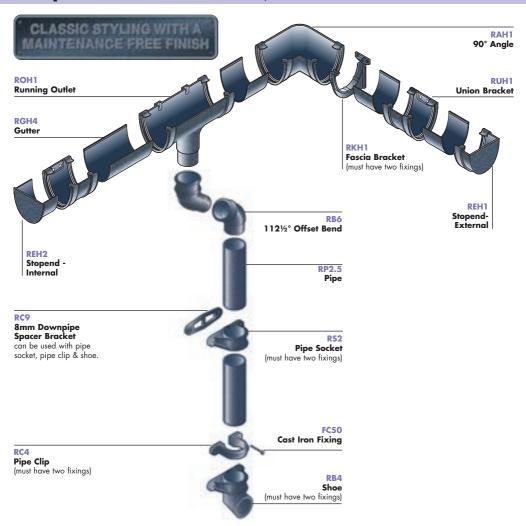
ode	Product		Colour	Code
	Fleur-de-Lis			
RX1	A	40mm	CI	FL55
W1	יאר	52mm	CI	FL70
or	Tudor Rose			
DS2		40mm	CI	TR55
DSZ	- The Control of the	52mm	CI	FL70 TR55 TR70 DS55 DS70 LH55 LH70
	Decorative Squar	е		
	202	40mm	CI	DS55
RH1	200	52mm	CI	DS70
	Lion's Head			
		40mm	CI	LH55
H4#		52mm	CI	LH70
	Motifs can be applied to hoppers proprietary adhesive such as Sir			g a
	**This product is rotationally mo its length up to +/-4%.	ulded and	subject to bo	wing along
H5#	*With fixing lugs (Requires 2 x F	C50 fixing	s)	

*With fixing lugs (Kequires 2 x FC50 fixings)

*Fixing instructions for the FC50 (Cast Iron fixing bolts)
The FC50 is a 12 gauge x 50mm Stainless Steel bolt, that requires
a 12mm socket to tighten it. When using these fixings on Ogee and
Rectangular Hoppers we recommend that a 3/4" rup worsher is used.
When fixing product to concrete, brick, block etc fix FC50 in the same
way as any other screw by using a plug type fixing, and into fimber by
pilot drilling a starter hole first.

FloPlast

Hi-Cap "CAST IRON" STYLE 115MM/68MM RAINWATER SYSTEM



FloPlast recommend the use of lubricant on all gutter seals for ease of fitting and improved performance.



Features & Benefits:

- 20 year "Cast Iron" colour guarantee.
- A semi-elliptical profile.
- High capacity ideal for large roof areas.
- Significant saving over traditional cast iron systems.
- No painting required.
- Pre-fitted gutter seal retaining clip system for fast user friendly installation.
- Pre-lubricated seals.
- All the benefits of PVC for quick and easy installation.



115MM GUTTER & FITTINGS BS EN 607, BS EN 12200-1, BS EN 1462



		1
Product	Colour	Code
Gutter		
4m	CI	RGH4
Union Bracket		
4	CI	RUH1
Running Outlet - 68mn	n round	
*	CI	ROH1



NOT BUILD	-	100	*1843
Product		Colour	Code
Angle			
60	90°	CI	RAH1
	135°	CI	RAH2
60	any degree	CI	RAH9#
#FloPlast will fabricate any	non-standa	rd angle to sp	oecial order



Product	100	Colour	Code
Stopend			
-	External	CI	REH1
•	External	CI	REH2
Fascia Bracket			
		CI	RKH1

68MM ROUND DOWNPIPE & FITTINGS BS EN 12200-1

Product		Colour	Code
Pipe			
	2.5m	CI	RP2.5
Offset Bend			
3	92½°	CI	RB8
F	11 2 ½°	CI	RB6
Shoe			
3		CI	RB4#
Pipe Clip			
20		CI	RC4#
Pipe Socket			
-		CI	RS2#
671/2° Branch			
• i]		CI	RY1

Product		Colour	Code
Access Pip	ре		
PART		CI	RX1
Square/R	ound Downpij	oe Ado	ptor
T		CI	RDS2
Universal	Hopper		
T	Connects to 65mm square & 68mm round downpipe	CI	RH1
Ogee Hop	per		
F	Connects to 68mm round and 65mm square downpipes	CI	RH4#
Rectangul	ar Hopper**		
-	Connects to 68mm round and 65mm square downpipes	CI	RH5#
Cast Iron	Fixings*		
_	•	CI	FC50
12 gauge x 50mi	n stainless steel fixings f	or "Cast Iro	n" Range

Product	100	Colour	Code
Fleur-de-Lis			
A	40mm	CI	FL55
AL.	52mm	ÇÎ.	FL70
Tudor Rose			
AREA.	40mm	CI.	TR55
	52mm	CI	TR70
Decorative S	Square		
100	40mm	CI.	DS55
	52mm	CI	DS70

Lion's Head			
	40mm 52mm	CI	LH55 LH70

Motifs can be applied to hoppers or running outlets using a proprietary adhesive such as Siroflex MS Polymer.

 ** This product is rotationally moulded and subject to bowing along its length up to $+\!/\!\!\cdot\!4\%.$

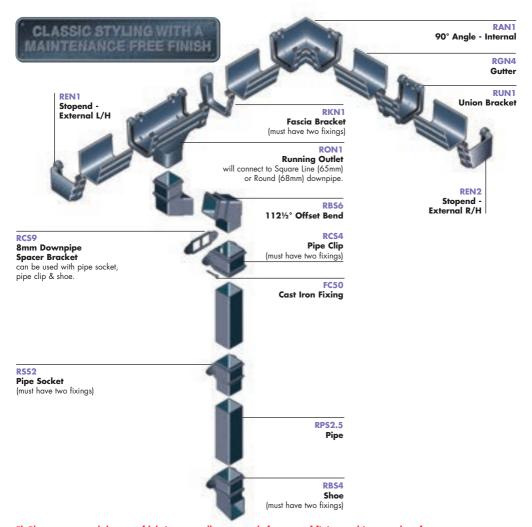
*With fixing lugs (Requires 2 x FC50 fixings)

*Fixing instructions for the FC50 (Cast Iron fixing bolts)

The FCSO is a 12 gauge x SOmm Stainless Steel bolt, that requires a 12mm socket to tighten it. When using these fixings on Ogee and Rectangular Hoppers we recommend that a 3/4" top washer is used. When fixing product to concrete, brick, block etc fix FCSO in the same way as any other screw by using a plug type fixing, and into timber by pilot drilling a starter hole first.



Niagara "CAST IRON" STYLE 110MM/65MM/68MM RAINWATER SYSTEM



FloPlast recommend the use of lubricant on all gutter seals for ease of fitting and improved performance.



Features & Benefits:

- Traditional style ogee Hopper available.
- One of the highest capacity PVC-U domestic rainwater systems on the market.
- Water-tight seal and retaining clip pre-fitted for fast user friendly installation.
- Extremely cost effective solution for old style building refurbishment and new build installations.
- Running Outlet can be connected to 65mm or 68mm Round downpipes.
- Black fixing bolts available.



110MM GUTTER & FITTINGS BS EN 607, BS EN 12200-1, BS EN 1462



Product		Colour	Code	
Gutter				
	3m 4m	CI	RGN3 RGN4	
Union Bracket				
1		CI	RUN1	
Running Outlet - Multi Outlet				
Running Outlet	- Multi C	Outlet		
Running Outlet	- Multi C	CI	RON1	
Running Outlet Stopend Outlet -		_	RON1	
4		_	RON1	



Product		Colour	Code		
Angle					
-	90° Internal	CI	RAN1		
W	90° External	CI	RAN2		
	135° Internal	CI	RAN3		
M	135° External	CI	RAN4		
1	Any Degree	CI	RAN9#		
Fascia Brac	Fascia Bracket				
U		CI	RKN1		



Product	100	Colour	Code
Stopend - External			
•	L/H	CI	REN1
•	R/H	CI	REN2
Stopend - Internal			
	L/H	CI	REN3
W 7	R/H	CI	REN4

Please note: Round downpipe can also be used, please see page 17

65MM SQUARE DOWNPIPE & FITTINGS BS EN 12200-1

Product		Colour	Code
Pipe			
	2.5m	CI	RPS2.5
Offset Bend			
3	92 ½°	CI	RBS8
\$	11 2 ½°	CI	RBS6
Shoe#			
*		CI	RBS4
Pipe Clip#			
		CI	RCS4
Pipe Socket#			
		CI	RSS2

Product		Colour	Code
67½° Bran	nch		
1		CI	RYS2
Square/Ro	ound Downpi	oe Ado	ptor
T		CI	RDS2
Universal	Hopper		
West of the last	Connects to 65mm square & 68mm round downpipe	CI	RH1
Ogee Hop	per#		
F	Connects to 68mm round and 65mm square downpipes	CI	RH4
Rectangula	ır Hopper#		
-	Connects to 68mm round and 65mm square downpipes	CI	RH5
This product is roto its length up to +/	ntionally moulded and so '-4%.	ubject to bo	wing along

Product		Colour	Code
Fleur-de-Lis			
A	40mm	CI	FL55
AL.	52mm	CI	FL70
Tudor Rose			
4	40mm	CI	TR55
4	52mm	CI .	TR70
Decorative Sq	uare		
100	40mm	CI	DS55
ACC.	52mm	CI	DS70
Lion's Head			
	40mm	CI	LH55
	52mm	CI	LH70

Motifs can be applied to hoppers or running outlets using a proprietary adhesive such as Siroflex MS Polymer.

*With fixing lugs (Requires 2 x FC50 fixings)

*Fixing instructions for the FC50 (Cast Iron fixing bolts)
The FC50 is a 12 gauge x 50mm Sainless Steel bolt, that requires
a 12mm socket to fighten it. When using these fixings on Ogee and
Rectangular Hoppers we recommend that a 3/4" tup washer is used.
When fixing product to concrete, brick, block etc fix FC50 in the same
way as any other screw by using a plug type fixing, and into timber by
pilot drilling a starter hole first.

www.floplast.co.uk Rainwater Systems 19

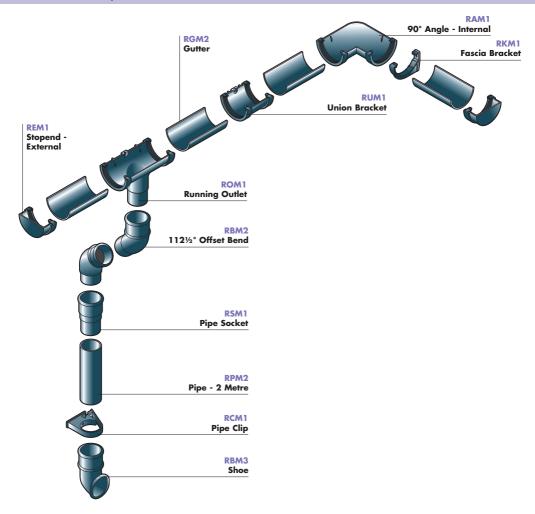
CI

FC50

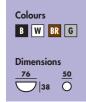
Cast Iron Fixings*



MiniFlo 76MM/50MM RAINWATER SYSTEM



FloPlast recommend the use of lubricant on all gutter seals for ease of fitting and improved performance.



Features & Benefits:

- A smaller system based on the original Half Round profile.
- Pre-fitted gutter seal retaining clip system for fast user friendly installation.
- Pre-lubricated seals.
- Practical, and easy to install.
- An ideal solution for garages, sheds, summer houses and most garden buildings.



76MM GUTTER AND FITTINGS BS EN 607, BS EN 12200-1, BS EN 1462



BW

Stopend Outlet



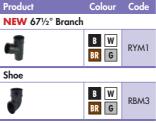


50MM ROUND DOWNPIPE & FITTINGS BS EN 12200-1

ROM2











MiniFlo Half Shed Pack





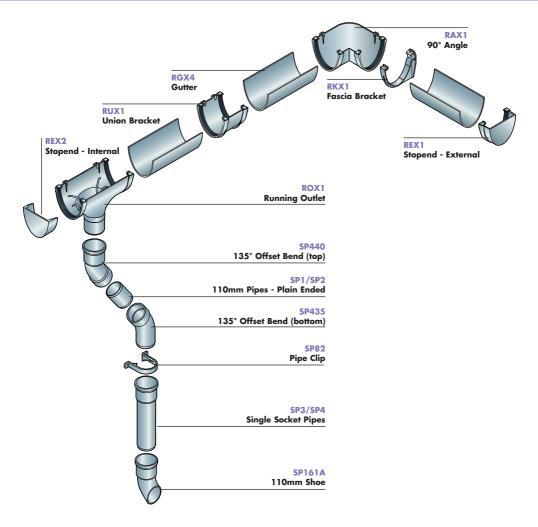
Rainwater Systems, such as Miniflo when used as an associated product with a water butt for the collection of rainwater, can lead to the award of credits under the Code for Sustainable Homes.

Miniflo 50mm downpipe would normally be installed, terminating directly into the top of a water butt. For an alternative solution fit a

RVM1 Rainwater Diverter.



XtraFlo 170MM/110MM RAINWATER SYSTEM



FloPlast recommend the use of lubricant on all gutter seals for ease of fitting and improved performance.



Features & Benefits:

- A semi elliptical profile designed to enhance water flow.
- Ideal for large domestic/commercial buildings/warehouses/offices/apartment blocks and schools.
- Vortex outlet designed to promote a vacuum effect to increase the flow rate.
- Pre-fitted gutter seal for fast user-friendly installation.
- Utilises our 110mm soil system for downpipes.









170MM GUTTER AND FITTINGS BS EN 607, BS EN 12200-1, BS EN 1462



		1
Product	Colour	Code
Gutter		
	B W	RGX4
90° Angle		
	B W	RAX1
Running Outlet		
	B W	ROX1



Product		Colour	Code
Stopend			
	External	B W	REX1
	Internal		REX2
Fascia Bracket			
U		B W	RKX1



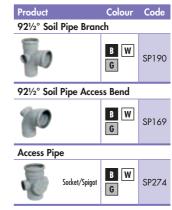
Product	Colour	Code
Union Bracket		
1	B W	RUX1
40	G	



110MM ROUND DOWNPIPE & FITTINGS BS EN 1329-1, BS EN 1453

Product		Colour	Code					
Pipe - Plain Ended								
	3m	B W	SP1					
	4m	В С	SP2					
Pipe - Single Soc	ket							
Section 11 de	3m	B W	SP3					
	4m	G	SP4					
Shoe								
€.		B W	SP161A					

Product	Colour	Code							
Pipe Clip									
25	B W	SP82							
Offset Bends									
Ring Seal Top Solvent Bottom	B W	SP440							
Spigot/ Solvent Socket	B W	SP435							
Hopper									
1	B W	RHX1							







ECOFIO RAINWATER DIVERTERS BS EN 12200-1

Product	Colour	Code						
Rainwater Diverter Connects to 65mm square and 68mm round downpipe								
19	B W BR	RVS1						
Connector Kit								
ॐ	B W	RVS2						

Product	Colour	Code					
Rainwater Diverter Connects to 80mm Round Downpipe							
ţ	B W BR	RVH1					
MiniFlo Rainwater Diverter Connects to 50mm Round Downpipe							
(B W BR	RVM1					

EcoFlo WATER STORAGE SYSTEMS

Product	Code
100L Slim Water Butt	
	WB100
100L Slim Water Butt Stand	
	ST100



100L SLIM WATER BUTT

- 100L capacity.
- Space saving water butt ideal where space is at a premium.
- Supplied with tap and lid.
- Manufactured in the UK from recycled materials.

Dimensions

 Water Butt:
 Stand:

 32cm (12½") Length
 33cm (13") Length

 36cm (14") Width
 33cm (13") Width

 95.2cm (37½") Height
 30.5cm (12") Height

210L SLIM WATER BUTT

- 210L capacity
- Traditional shape water butt with a large capacity.
- Supplied with tap and childproof lid.
- Manufactured in the UK from recycled materials.

Dimensions

 Water Butt:
 Stand:

 57cm (22½") Diameter
 53cm (21") Diameter

 97cm (38") Height
 31cm (12") Height

StormSaver RAINWATER HARVESTING SYSTEM BS8515

Product

Pedestrian Duty Lid



With the average home owner using around 150 litres of water per day, the **StormSaver** rainwater harvesting system will enable the metered home owner to recycle rainwater and potentially reduce their bills by up to 50%, whilst remaining kinder to the environment. StormSaver can also alleviate pressure on local drainage in line with Sustainable Drainage Schemes (SuDS), to help prevent flood risk

Benefits of using StormSaver:

- Uses over 75% less energy than other traditionally pumped Rainwater Harvesting systems, by using clever suction technology.
- Low decibel rating.

Size

Code

PDL1

- Flow Rate of 10 litres per minute (same as mains pressure).
- Compact control unit, which can easily fit into either a kitchen cupboard, or be located in a utility room or garage.
- Cost effective solution to reuse rainwater effectively.
- The shallow dig tank is robust and comes with all the necessary components such as integral filtration, overflow siphon and inlet calmer pre-fitted for ease of installation.
- Ideal for new build properties and homes with up to 6 bedrooms.

	100	
Product	Size (L)	Code
StormSaver Pack		Codo
	1500 3000 5000 7500	\$1500 \$3000 \$5000 \$7500
Package includes: • Underground sto • 235mm Entrance • Pedestrian duty I • Control panel • ½" Boosted float • 20m ½" Flexible	shaft id for tank ing suction	
	W.	

Also availbale as a garden only system.

Entrance Shaft								
8	235 (mm)	ES235						
	635 (mm)	ES635						
Control Panel								
10.0		CP1						
1/2" Boosted Float	ting Suctio	on Filter Kit						
2		FK1						

Product	oduct Size								
1/2" Flexible Suction Hose									
	20 (mm)	H20							
	40 (mm)	H40							
Level Sensor									
17		LS1							
Identification Tap	e and Lal	oel Pack							
Cardina Tap Or Cardina Tap	ID1								
110mm Non-Return Valve - Single Flap									
%		D550							
Required for the system to comply with BS 8515									



FLOPLAST PVC-U RAINWATER SYSTEMS

Applications

FloPlast Rainwater Systems are suitable for all applications and types of building, including domestic, commercial and industrial.

Composition

All products are manufactured from unplasticised polyvinyl chloride (PVC-U) and comply with the material requirements of either BS EN 12200-1, BS EN 607, BS EN 1462, BS EN 1453 or BS EN 1329-1 as relevant

Rainwater gutters and pipes are manufactured by a continuous extrusion process. Fittings are produced on high-pressure injection moulding machines. All fittings are manufactured to close tolerances allowing accurate incorporation of design features.

Accreditation

All of our profiles are manufactured to BS EN 607 (Gutters and fittings), BS EN 12200-1, and BS EN 1329-1(Downpipes and fittings), BS EN 1462 (Gutter brackets) within a quality management system assessed and registered by British Standards as meeting the requirements of BS EN ISO 9001 (Certificate Number FM:501414).

Supply

Products are available from a national network of distributors and stockists. For details of your local stockist contact our Sales Office.

Specification, Technical Advice and Design Guidance

A free advisory service is available to offer technical assistance regarding product and installation details. Those involved with the building industry may take advantage of design services provided by the company for customers who have made a commitment to use or specify FloPlast products.

Installation

- Plan your installation using the component diagrams to assist you in selecting the correct type and quantity of products required.
 - Fascia brackets should be spaced at a maximum of one metre apart on straight gutter runs. (800mm in the case of the Niagara system, 600mm in the case of the Xtraflo system). When using 80mm Round Downpipe with Hi-Cap and Niagara Systems, fascia brackets should be spaced at a maximum of 800mm intervals. In areas where there is the possibility of high levels of snowfall, fascia brackets should be spaced at a maximum of 400mm centres. For further information, view our snow loading statement on page 27.

- Angles and stopends should have a fascia bracket within 150mm of the fitting.
- A supporting pipe clip should be used on shoes, sockets, branches and bends where necessary.
- Support downpipes below any offset and at maximum intervals of 1.8 metres.
- Where necessary remove the old gutter and replace old fascia board with FloPlast low maintenance PVC-UE co-extruded fascia board.
- Establish the position of the running outlet, usually over an existing drain, and fix securely to the fascia board.
- Fix a fascia bracket 100mm short of furthest point from the outlet. Allow for a fall to the outlet (1:350 is recommended) using a string line.
- 5. Fixings:
 - Fix fascia and union brackets at required intervals.
 Fascia brackets should be positioned so as to avoid the fixing screws splitting the top edge of any timber fascia board. All brackets should be secured to the fascia board with two 25mm x 5mm (1" x 10) screws or one 40mm x 5mm (1½" x 10) screw. The "Cast Iron" fascia brackets must have two fixings.
 - Unions should be fixed using two 25mm x 5mm (1" x 10) screw or one usewith 40mm x 5mm (1½" x 10) screw.
 - Outlets and Angles should be fixed using two 25mm x 5mm (1" x 10) screws.
 - In areas of heavy snowfall it is recommended that each fascia bracket is secured using two 25mm x 5mm (1" x 10) screws.
 - Rainwater downpipe clips should be fixed using two 40mm x 6mm (1½" x 12) screws as a minimum.
 - Round head screws are the recommended style of screw, however counter sunk can be used as long as care is taken not to overtighten, particularly when using power tools.
- Lubricate all gutter seals with FloPlast silicone spray lubricant to ensure an easy fit and to allow for movement caused by expansion and contraction.
- 7. Working from the running outlet insert the back edge of the gutter under the retaining lip of the wrap around clip. Using slight downward pressure on the gutter snap the front edge of the retaining clip over the front of the gutter. (Ensure that the marked expansion allowance is kept.)

- Use a union bracket or angle to join to the next gutter length in order to build up a gutter run. Use a stopend to complete the run.
- Downpipe installation starts at the outlet. If an offset is required use two offset bends with or without a short piece of pipe, alternatively if installing square downpipe use an adjustable offset bend. Ensure a 6mm gap is left at the top of the downpipe for expansion.

Pipe sockets if required should be secured to the wall with a pipe clip.

At the base of the pipe, fit a shoe secured with a pipe clip or connect downpipe to the underground drainage system using a 110mm x 68mm or 50mm reducer (SP96/D96 or D97).

Capacity of Drainage

To select the gutter size appropriate to your requirements, two factors must be taken into consideration.

- Roof Area
- Gutter Flow Capacity

For further reference refer to BS EN 12056-3 "Roof Drainage Layout and Calculation".

The capacity of a drainage system should be large enough to carry the expected flow at any point in the system. The flow of 'run-off' depends upon the area to be drained, (the 'effective roof area'), and the intensity of rainfall. It is accepted that 75mm an hour is the intensity of rainfall in the United Kingdom. For further information, see the FloPlast "Gutter calculator" at: www.floplast.co.uk

Cleaning and Maintenance

Although PVCu rainwater systems are considered to be relatively low maintenance it is important to clear gutter systems of fallen leaves and other debris at least once per year.

More frequent inspections may be necessary in areas of high pollution and where there are trees in the vicinity.

Inspection of the gutter and brackets is also advisable during and after periods of ice formation in the guttering system.

In some cases lighter coloured systems may require cleaning. Wash down with a solution of soapy warm water, in severe cases a non-abrasive kitchen cream cleaner should be used.

SNOW LOADING STATEMENT

Snow slippage is particularly evident where smooth roofing materials such as slate have been installed. For additional security FloPlast strongly recommend the installation of Snow Guard (see page 5) which facilitates the retention of snow, allowing slow melt, rather than slippage. In areas where there is the possibility of high levels of snowfall, fascia brackets should be spaced at a maximum of 400mm centres.

Several factors can come into play with the performance of rainwater systems, installation, overhang and style of the roof system (tiles/slates), pitch of roof, North or South facing, above or below 100 metres above sea level.

Roof Area

The effective roof area can be calculated by using the following formula:

 $(B + \underline{C}) \times \text{length of Roof (A)= Area in M2}$

B = Half width of gable end or hip

C = Vertical measurement from eaves to apex

An alternative to the above method is the use of multiplication factors to establish effective roof cover.

Approved Document H of the Building Regulations shows the same method, although the options given below allow for greater accuracy of the effective roof area in m2.

Calculate the above using the following method: A x B x factors dependant on the angle of the roof pitch.

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

For roofs of 50° or more and walls, the factor of 1.600 should be used.



FLOPLAST PVC-U RAINWATER SYSTEMS

OUTLET AT END OF GUTTER RUN											
		Gutter Fi	xed Level		Gu	ıtter Fixed	at 1:350 fa	II			
	Gutter (litres/	r Flow /sec)	Roof A		Gutter (litres)	r Flow /sec)	Roof Area (m²)				
System	Max flow rate	BS 12056	Max flow rate	BS 12056	Max flow rate	BS 12056	Max flow rate	BS 12056			
Half Round 68mm Circular Downpipe	0.92	0.82	44	40	1.17	1.05	56	50			
Square Line 65mm Square Downpipe	1.70	1.53	81	73	2.00	1.80	96	86			
Hi-Cap 68mm Circular Downpipe	2.05	1.84	98	88	2.56	2.30	123	111			
Hi-Cap 80mm Circular Downpipe	2.25	2.02	108	97	2.79	2.51	134	121			
<i>Niagara</i> ® 65mm Square Downpipe	2.40	2.16	115	104	2.90	2.61	139	125			
<i>Niagara</i> ® 80mm Circular Downpipe	2.64	2.37	127	114	3.19	2.87	153	138			
Xtrafto 110mm Circular Downpipe	4.30	3.87	206	185	6.20	5.58	297	267			

OUTLET AT CENTRE OF GUTTER RUN										
		Gu	ıtter Fixed	at 1:350 fa	II					
	Gutter (litres/	r Flow /sec)	Roof A	Area	Gutte (litres)	r Flow /sec)	Roof Area (m²)			
System	Max flow rate	BS 12056	Max flow rate	BS 12056	Max flow rate	BS 12056	Max flow rate	BS 12056		
Half Round 68mm Circular Downpipe	1.80	1.62	86	77	2.60	2.34	125	113		
Square Line 65mm Square Downpipe	3.41	3.06	163	147	3.95	3.55	189	170		
Hi-Cap 68mm Circular Downpipe	3.80	3.42	182	164	5.00	4.05	240	216		
Hi-Cap 80mm Circular Downpipe	4.18	3.76	200	180	5.50	4.95	264	238		
<i>Niagara</i> ° 65mm Square Downpipe	4.50	4.05	216	194	5.30	4.77	254	229		
<i>Niagara</i> ® 80mm Circular Downpipe	4.95	4.45	237	213	5.83	5.24	279	251		
Xtrafto 110mm Circular Downpipe	8.20	7.38	393	354	11.80	10.62	566	509		

The flow rates in the columns BS 12056 have been calculated in accordance with BS EN 12056-3: 2000 where 90% of full flow is used as a safety factor (freeboard).

A rainwater system is suitable in terms of performance as long as the carrying capacity of the chosen configuration exceeds the calculated run-off of rainwater from the roof.

HOPPERS								
Code	Hopper Flow (litres/sec) Max flow rate	Roof Area (m²) Max flow rate						
RH1/RHS1	1.14	54.5						
RH4	2.18	104.5						
RH5	2.18	104.5						
RHH1	1.66	79.5						

Design Factors

Building Regulations (Approved Document H) requirements. The provisions to meet the requirements of the Building regulations 2000 (2002) are set out in Approved document H part H3.

An alternative to this requirement, is to follow the relevant recommendations of BS EN 12056-3 Roof Drainage, Layout and Calculation.

This document gives very comprehensive information on the calculations/design of systems in a variety of situations, and should be referred to whenever large industrial type installations are envisaged or whenever particularly severe weather conditions are expected.

Expansion

Tests have shown that expansion and contraction of gutter occurs during normal usage, and expansion tolerances are allowed for within our fittings.

Tests were conducted between -8°C and +40°C where an expansion of 14.63mm was experienced over a 4 metre length.

These are obvious extremes, and under normal daily temperature fluctuations expansion and contraction will be in the region of 10mm per 4 metre length.

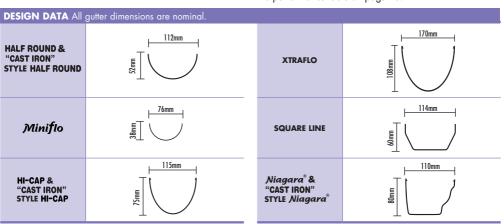
Pipe Dimensions	Normal Size	Actual OD			
Circular	50mm (2½")	50.3mm			
	68mm (2½")	68.48mm			
	80mm (3")	80.15mm			
	110mm (4")	110.2mm			
Square	65mm (2½")	65mm			

Carrying Capacities for Gutter

The carrying capacity of gutters varies under differing conditions. The main variables are whether or not the gutter is fitted to a fall or level and whether the outlet is placed in the centre or at one end of the gutter run.

Gutter flow rates will vary according to the type and configuration of downpipe system being used, however downpipe sizing is not a normal design consideration, as the downpipe systems manufactured by FloPlast have flow capacities approximately ten times greater than the gutter systems they drain.

The carrying capacities in litres per second for gutters, taking into account the major variables, are specified in the performance table on page 28.





FLOPLAST PVC-U RAINWATER SYSTEMS

RAINWATER SYSTEM COMPATIBILITY CHART												
FloPlast System	X	(traflo	N	iagara	H	li-Cap	Hal	lf Round	S	quare	٨	Ainiflo .
Competitor	Gutter	110mm Pipe	Gutter	65mm Square Pipe	Gutter	68mm Round Pipe	Gutter	68mm Round Pipe	Gutter	65mm Square Pipe	Gutter	50mm Round Pipe
Brett Martin	×	~	×	~	~	~	~	~	×	~	×	×
Osma	×	V	×	×	V	~	V	~	×	×	×	×
Polypipe	×	~	×	V	V	~	V	~	~	~	×	×
Terrain	×	V	×	×	×	×	×	×	×	×	×	×
Marley	×	~	×	~	~	~	~	~	×	~	×	×
Hunter	×	~	×	V	×	✓ (Tight fit)	~	✓ (Tight fit)	~	V	×	×
Swish	×	~	×	~	×	~	~	~	V	~	×	×
Kalsi	×	V	×	V	V	~	V	~	V	~	×	×
Freefoam	×	~	×	V	~	~	~	~	~	~	×	×
Key: ✓: Fully C	Compa	tible 🗸	: Comp	atible in one	e direct	tion only	x: No	ot Compatib	le			

The above is a guide only for connection to existing fitted product.

We recommend that you do not mix systems if at all possible.

TRANSPORT, HANDLING AND STORAGE

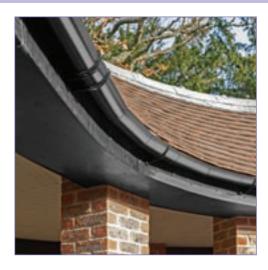
FloPlast PVC-U pipes and gutters are supplied in secure bales bound with straps within timber frames, **FloPlast** recommend that movement of bales is carried out by fork lift or other mechanical device using webbing or rope strings.

The bales may be stacked up to a maximum of three high, providing that the timber frames are placed on each other

Fittings are generally supplied in plastic bags and should be stored away from direct sunlight. If they have to be stored outside, the bags should be opened to prevent temperature build-up.

Terms and Conditions of Sale

Goods are sold subject to our Standard Terms and Conditions of Sale, copies of which are available upon request. FloPlast Limited reserve the right to modify or extend any product range or published information without prior notice.



FREQUENTLY ASKED QUESTIONS

Do I need to fit my gutter with a gradient?

FloPlast's domestic eaves gutters, especially when fixed with a rafter bracket, should be fitted at a gradient no greater than 1:350 fall. The gradient should not be too steep, as this will cause an excessive gap between the lowest edge of the roof and the top of the gutter. Gutters fitted with a fall will have a higher drainage capacity, please refer to our flow rate calculator at:

www.floplast.co.uk or page 27/28 of this brochure.

How do I work out what flow rate is required?

A flow rate calculator is available on our website at www.floplast.co.uk, alternatively please contact 01795 431731 to speak to our technical department.

How can I prevent leaves blocking my gutters?

Use FloPlast GutterBrush. FloPlast also manufactures FloGuard, a non restrictive system which prevents both debris and leaves collecting on the inside of the gutters. Balloons are available, for added protection in the outlets.

Can FloPlast gutters be painted?

FloPlast's gutters are produced from PVC-U and are considered low or relatively maintenance free. It may be necessary from time to time to clean our lighter gutter systems. We recommend that a soapy warm water solution is used when cleaning - in severe cases a non-abrasive kitchen cream cleaner can be used.

If the gutter needs to be painted, the system should be cleaned, with a degreasing agent such as sugar soap. Once cleaned 2 coats of a good quality gloss paint should be applied. Avoid scouring or roughing the surface of the plastic as this will affect the final appearance of the painted product.

What capacity of water do your gutters hold?

Please refer to our section on Flow Rates on page 28 for more information.

What are the maximum centres for gutter fascia brackets?

In general, maximum centres should be 1 m. However, different profiles and downpipe configurations present other design considerations. Please refer to our Installation Guide on page 26 or view our video installation guide at www.floplast.co.uk

Which screws should be used to secure fascia brackets to fascia boards?

For 2 hole fixing use 25mm x 5mm non-ferrous round head screws. 1 hole fixing use 40mm x 5mm non-ferrous round head screws.

How can "Cast Iron" Style gutters be connected to traditional cast iron?

FloPlast have an extensive range of adaptors. Use the 2 piece adaptor RD5.

Where and how far apart should downpipe clips be?

Downpipe clips should be placed below the sockets of offset bends, sockets, branches and shoes, and at maximum intervals of 1.8 mtrs

Do I need to allow for expansion on offsets?

It is not necessary to make any allowance for expansion between offset bends

How do I fit my downpipe into Underground Drainage? Please refer to our section on downpipe adaptors.

What brackets do I use when installing gutter directly to the rafters?

The standard gutter bracket, bolts to the galvanised top, side and universal rise & fall rafter brackets.

How do I connect to a neighbour's different gutter?

FloPlast have a range of adaptors for most applications, please refer to our section on rainwater adaptors and compatibility table on page 30.



FloPlast building the future



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Brochures available:















April 2019



















BS EN 12200-1 BS 7291-1, 2 6 3









