

PVC-U Rainwater Systems



MiniFlo



Half Round



Square Line



Niagara



Hi-Cap



XtraFlo



FloPlast, 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.

FloPlast 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 **FloPlast** 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 9001:2008 Certificate No. FM 501414, BS EN ISO 14001:2004 Certificate No. EMS 538445, BS EN ISO 18001:2007 Certificate No. OHS 593622 501414 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 1:2000, BS EN 1329-1:2014 and BS 1453-1:2000 (downpipes and fittings)

BS EN 607:2004 (gutters and fittings)

BS EN 1462:2004 (eaves brackets)



KM 501316



KM 501316



KM 501316

FloPlast 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.





10 - Year Performance & Colour Guarantee*

Applies to our PVC Rainwater range.

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.



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

*excludes caramel, sand and grey rainwater colours

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.





SPARES/ANCILLARIES





Product	Code
Universal Rainwater Adaptor	
 Connects to 110mm drainage	D96

Universal Rise & Fall Bracket	
	RF1


Rafter Bracket Top Fix	
	RR1


Rafter Bracket Side Fix	
	RR2


GutterBrush (black)	
 Debris eliminator (4m)	GB4


GutterBrush (white)	
 Debris eliminator (4m)	GB4


NEW GutterBrush Clips	
	White  Black  Brown 
	GBC1


Product	Code
FloGuard: Leaf Protection System 5m Pack	
	FG1


Balloon: Leaf Protection System	
 (Outlet Guard)	OG1


DrainGuard (Black)	
 Fits round and square downpipe	DG1


Snow/Tile Guard - 2m	
	SG1





Snow / Tile Guard Bracket	
	SG2





8mm Downpipe Spacer Brackets	
 Only use with RS2, RC4 & RB4 (Black/white only)	RC9

For use with 68mm Round downpipe	
 Only use with RSS2, RCS4 & RBS4 (Black/white only)	RCS9
For use with 65mm Square downpipe	

Product	Code
40ml Compressed Silicone Lubricant Spray	
	SL40

8mm Universal Fascia Bracket Spacer	
 (Black/white only) Suitable for Half Round, Square Line, Hi-Cap and Niagara Ogee gutters only	RS9

Spare Gutter Seals	
	Round RRS1
	Square RRSS1
	Niagara RRNS1
	Hi-Cap RRHS1

Spare Gutter Clips	
	Round RRC1
	Square RRSC1
	Niagara RRNC1
	Hi-Cap RRHC1

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

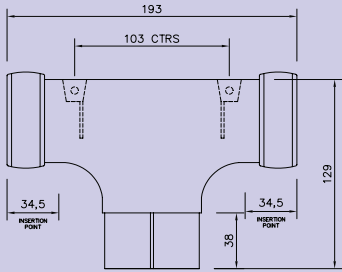
FloPlast CAD drawings

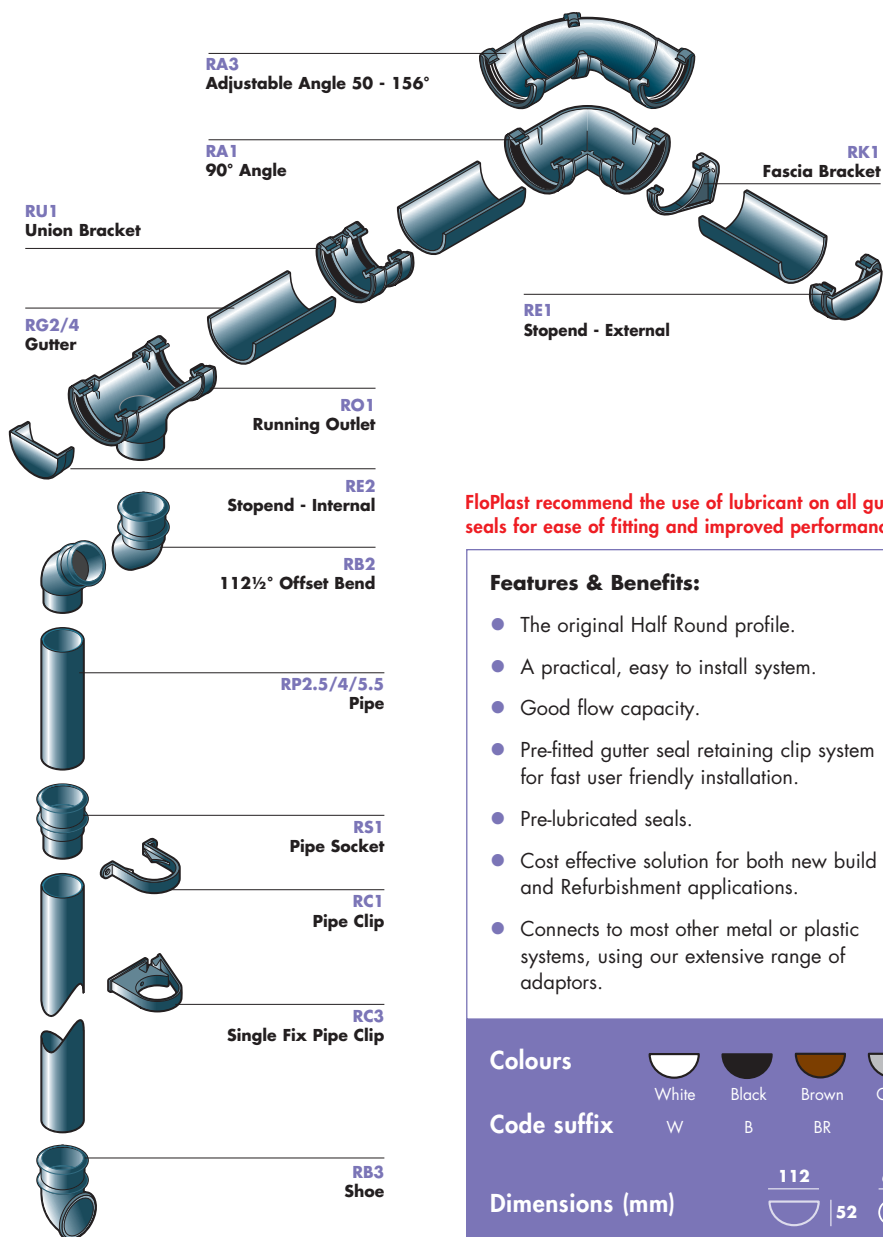
The benefits of CAD drawings are well known by the Architect/Specifier community. Drawings are available to download for each product that FloPlast manufacture.

Please visit www.floplast.co.uk and click on the 'links' section.

For your convenience, files are downloadable as either a .dwg (primarily for CAD programs) or as a PDF for easy viewing.

All files determine design lengths required by the Architect/Specifier to enable them to produce accurate drawings.















112MM GUTTERING & FITTINGS BS EN 607:2004, BS EN 1462:2004, BS EN 12200-1:2000



For optimum performance of Half Round gutter systems we recommend the use of FloPlast 68mm Round downpipe system. Gutter and pipe code reference numbers refer to length of run: 2 metres, 2.5 metres, 4 metres and 5.5 metres.

For Ancillaries and Spares see page 5.

Product	Code	
Gutter		
	2m	RG2
	3m	RG3
	4m	RG4
Angle		
	90°	RA1
	135°	RA2
	Adjustable Angle 50° - 156°	RA3*
	any degree	RA9#

Product	Code	
Running Outlet		
		RO1
Stopend Outlet		
		RO2
Stopend		
	External	RE1
	Internal	RE2
Fascia Bracket		
		RK1

Product	Code	
Union Bracket		
		RU1
To Cast Iron Ogee Gutter Adaptors:		
	R/H	RD3
	L/H	RD4**
To Half Round Cast Iron Adaptor		
		RD5





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






*Not available in grey

**Not available in brown

POA: Price on application

68MM ROUND DOWNPIPE & FITTINGS BS EN 12200-1:2000

Product	Code	
Pipe		
	2.5m	RP2.5
	4m	RP4
	5.5m	RP5.5
Offset Bends:		
	92½°	RB1
	112½°	RB2
67½° Branch		
		RY1

Product	Code	
Shoes		
		RB3
	(With fixing lugs)	RB4*
Pipe Clips:		
		RC1
	Single Fix	RC3*
	(With fixing Lugs)	RC4**

Product	Code	
Pipe Sockets		
		RS1
	(With fixing lugs)	RS2***
Access Pipe		
		RX1
Hopper		
		RHS1 ##

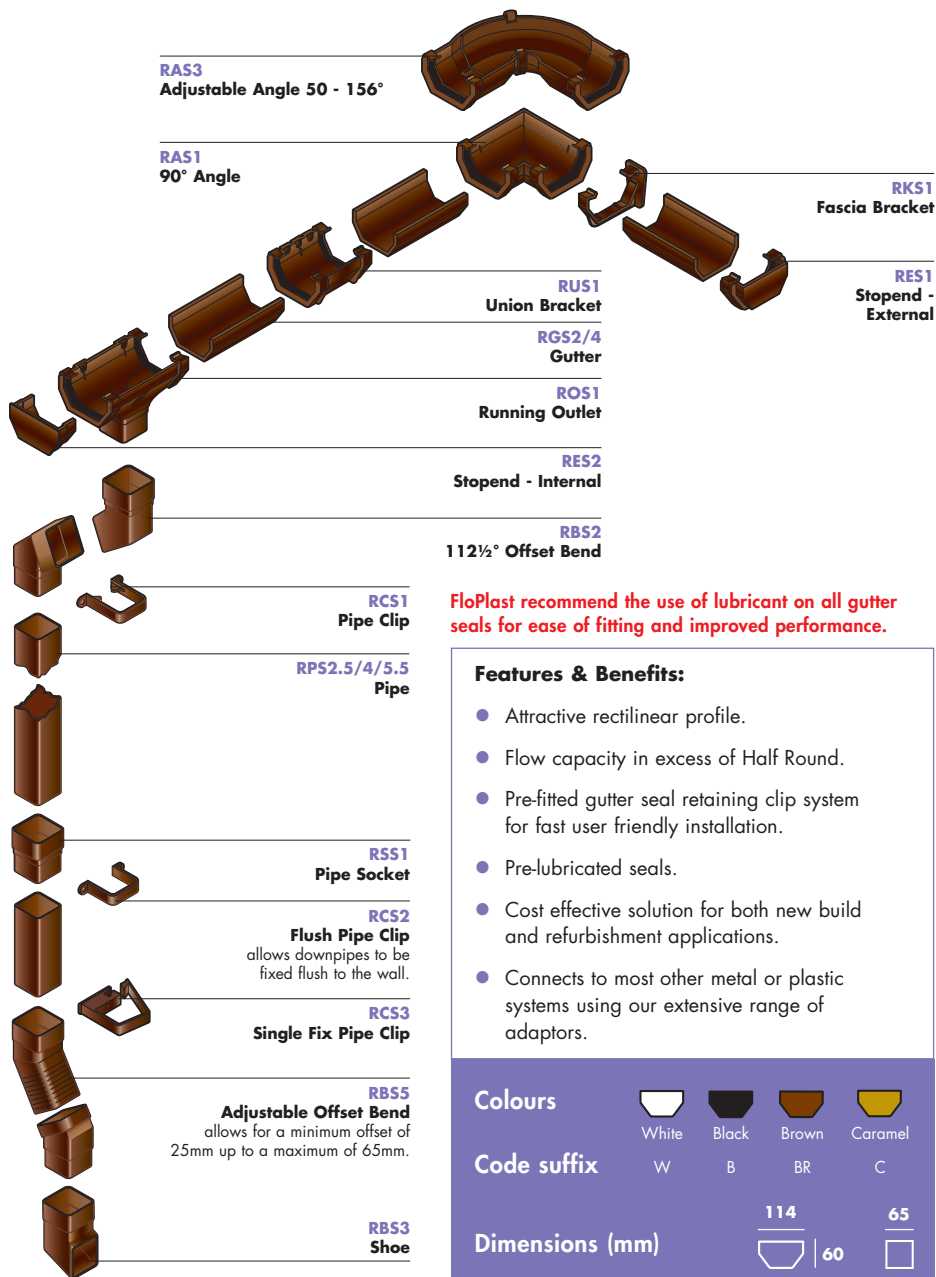
*Not available in caramel

#Connects to 65mm square & 68mm round downpipe.

*Must be used in conjunction with RC4 and RS2. (Black and white)

**Must be used in conjunction with RB4 and RS2. (Black and white)

***Must be used in conjunction with RC4 and RB4. (Black and white)













114MM GUTTER AND FITTINGS BS EN 607:2004, BS EN 1462:2004, BS EN 12200-1:2000



For optimum performance of Square Line gutter systems we recommend the use of FloPlast 65mm Square downpipe system. Gutter and pipe code reference numbers refer to length of run: 2 metres, 2.5 metres, 4 metres and 5.5 metres.







For Ancillaries and Spares see page 5.








Product	Code	
Gutter 2m / 3m / 4m		
	2m	RGS2*
	3m	RGS3*
	4m	RGS4
Angle		
	90°	RAS1
	135°	RAS2
	Adjustable Angle 50° - 156°	RAS3*
	any degree	RAS9*



Product	Code	
Running Outlet		
		ROS1
Stopend Outlet		
		ROS2
Stopends		
	External	RES1
	Internal	RES2
Fascia Bracket		
		RKS1

Product	Code	
Union Bracket		
		RUS1
Square/Round Gutter Adaptor		
		RDS1
To Cast Iron Ogee Gutter Adaptors		
	R/H	RDS3
	L/H	RDS4*
To Half Round Cast Iron Gutter Adaptor		
		RDS5

65MM SQUARE DOWNPIPE & FITTINGS BS EN 12200-1:2000

Product	Code	
Pipe		
	2.5m	RPS2.5
	4m	RPS4
	5.5m	RPS5.5
Offset Bend		
	92½°	RBS1
	112½°	RBS2
	Adj. Offset Bend	RBS5
Shoe		
		RBS3
	(With fixing lugs)	RBS4*

Product	Code	
Pipe Clips		
		RCS1
	Flush	RCS2*
	Single Fix	RCS3*
	(With fixing lugs)	RCS4**
Pipe Sockets		
		RSS1
	(With fixing lugs)	RSS2***
67½° Branch		
		RYS1

Product	Code	
Square Access Pipe		
		RXS1 #
Sq/Rd Downpipe Adaptor		
	Connects to 68mm round downpipe System.	RDS2*
Hopper		
		RHS1 ##

*Not available in caramel

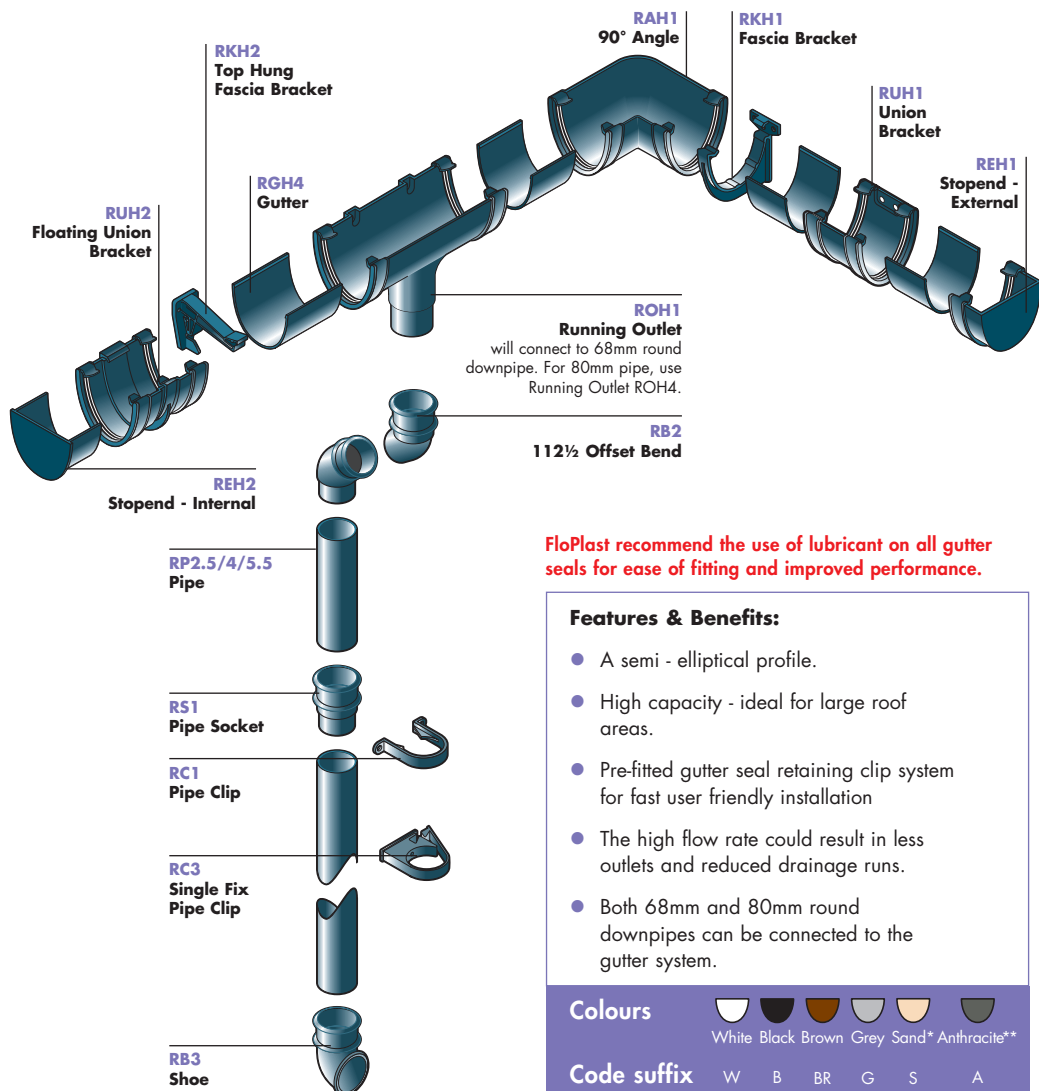
**Connects to 65mm square & 68mm round downpipe.

*Must be used in conjunction with RCS4 and RSS2. (Black and white)

**Must be used in conjunction with RBS4 and RSS2. (Black and white)

***Must be used in conjunction with RCS4 and RBS4. (Black and white)

HI-CAP 115MM/68MM/80MM 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.
- 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.

Colours



Code suffix

W B BR G S A

*68mm Round downpipe not available in Sand

**80mm Round downpipe not available in Anthracite






Dimensions (mm)






115MM GUTTER AND FITTINGS BS EN 607:2004, BS EN 1462:2004, BS EN 12200-1:2000



Gutter and pipe code reference numbers refer to length of run: 4 metres.

Product	Code
Gutter - 4m	
	4m RGH4
Running Outlet	
	68mm ROH1*
	80mm ROH4**
Union Bracket	
	RUH1
	Floating RUH2***

Product	Code
Angle	
	90° RAH1
	135° RAH2
	any degree RAH9#
*FloPlast will fabricate any non-standard angle to special order.	
Stopend	
	External REH1
	Internal REH2

For Ancillaries and Spares see page 5.

Product	Code
Fascia Bracket	
	RKH1
	Top Hung RKH2***
Hi-Cap to Half Round Gutter Adaptors	
	RHR3****
Hi-Cap to Square Line Gutter Adaptors	
	RHS3****

*Not available in sand






**Not available in anthracite




***Not available in anthracite, brown or grey

****Products not available in anthracite, sand or grey

80MM ROUND DOWNPIPE & FITTINGS






BS EN 12200-1:2000

Product	Code
Pipe	
	4m RPH4
Offset Bend	
	92½° RBH1
	112½° RBH2
Shoe	
	RBH3
Pipe Clip	
	(Single fix) RCH3




Product	Code
Pipe Socket	
	RSH1
Hopper	
	RHH1
Connects to 65mm square & 68mm round downpipe.	
67½° Branch	
	RYH1

68MM ROUND DOWNPIPE & FITTING

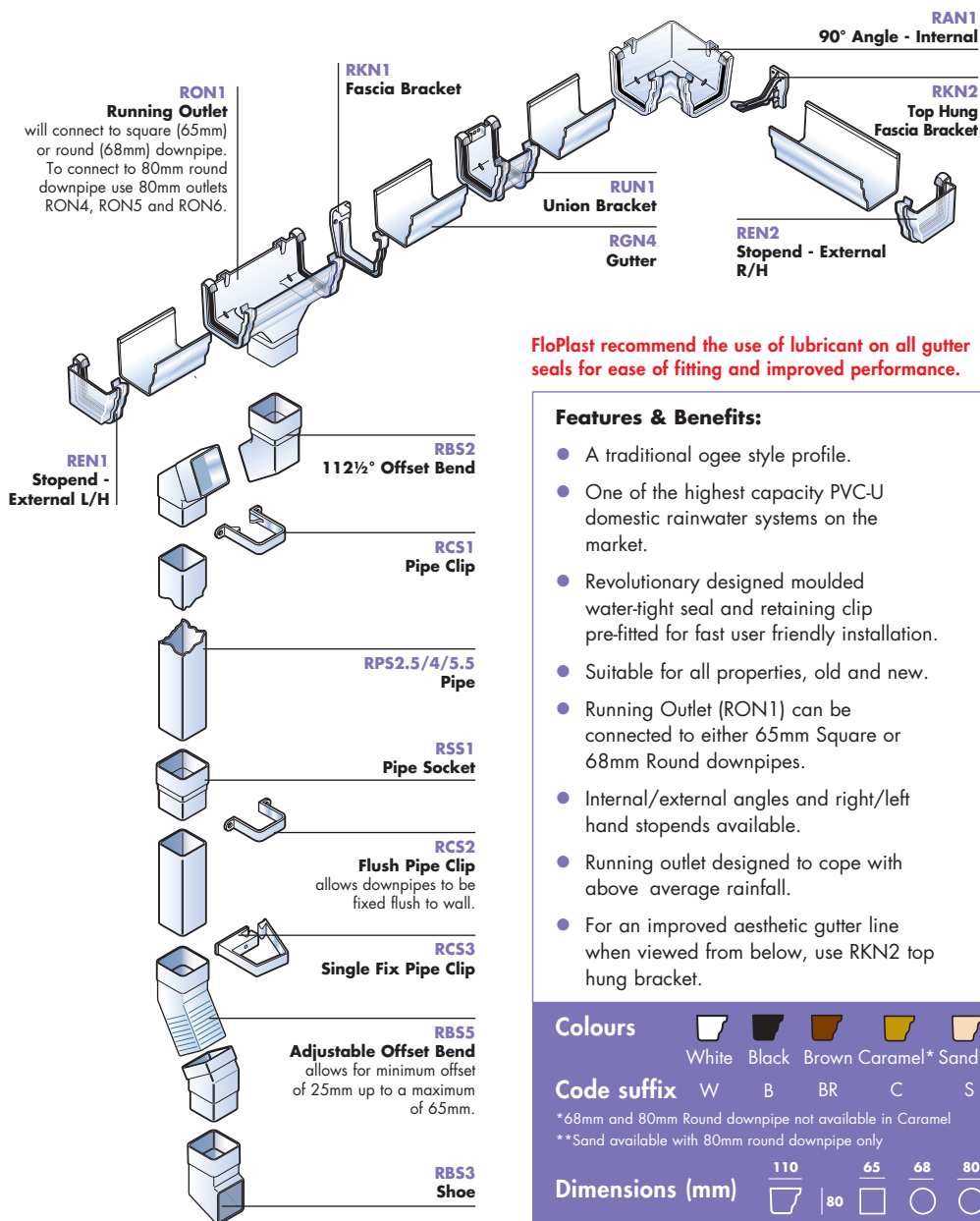
ANTHRACITE RANGE

Product	Code
Pipe	
	2.5m RP2.5 4m RP4 5.5m RP5.5
Offset Bend	
	92½° RB1
	112½° RB2
Shoe	
	RB3
Pipe Clip	
	RC1

BS EN 12200-1:2000

Product	Code
Pipe Socket	
	RS1
Hopper	
	RHS1
Connects to 65mm square & 68mm round downpipe.	
67½° Branch	
	RY1

See page 7 for the full range of 68mm round downpipe and fittings.












110MM GUTTER AND FITTINGS BS EN 607:2004, BS EN 12200-1:2000, BS EN 1462:2004








For optimum performance of Niagara gutter systems we recommend the use of FloPlast 65mm Square & 80mm Round downpipe systems. Gutter and pipe code reference numbers refer to length of run: 4 metres.

For Ancillaries and Spares see page 5.




Product	Code	
Gutter		
	4m	RGN4
Angle		
	90° Internal	RAN1
	90° External	RAN2
	135° Internal	RAN3
	135° External	RAN4
	Any Degree	RAN9*
Running Outlet		
	Multi Outlet	RON1*
Connects to 65mm Square and 68mm Round downpipe		
		RON4**
Connects to 80mm Round downpipe		




Product	Code	
Stopend Outlets - 65mm Square		
	L/H	RON2*
	R/H	RON3*
Stopend Outlets - 80mm Round		
	L/H	RON5**
	R/H	RON6**
Stopends - External:		
	L/H	REN1
	R/H	REN2
Stopends - Internal:		
	L/H	REN3
	R/H	REN4




Product	Code	
Union Bracket		
		RUN1
Fascia Bracket		
	Top	RKN1
	Hung	RKN2
Gutter Adaptors		
	Niagara to Half Round	R/H RNR3*** R/H RNR4***
	Niagara to Square Line	R/H RNS3*** R/H RNS4***

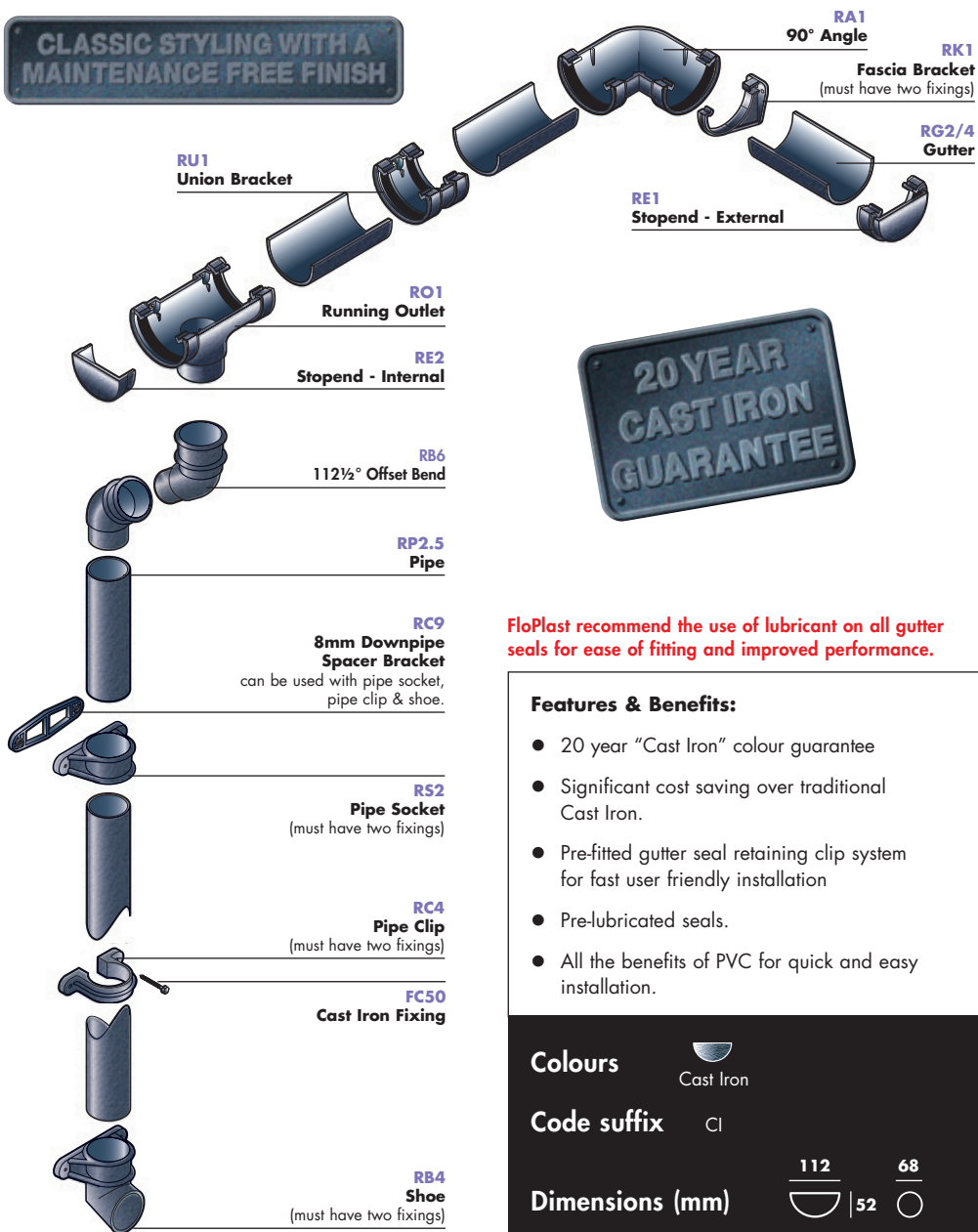
*FloPlast will fabricate any non-standard angle to special order.
 *Not available in sand.
 **Not available in caramel.
 ***Products not available in caramel or sand.
 POA: Price on application

80MM ROUND DOWNPIPE & FITTINGS BS EN 12200-1:2000

Product	Code	
Pipe		
	4m	RPH4
Offset Bend		
	92½°	RBH1
	112½°	RBH2

Product	Code	
Shoe		
		RBH3
Pipe Clip		
	(Single fix)	RCH3
Pipe Socket		
		RSH1

Product	Code	
Hopper		
		RHH1
67½° Branch		
		RYH1
Universal Rainwater Adaptor		
	Connects 110mm Drainage	D97



112MM GUTTER & FITTINGS BS EN 607:2004, BS EN 12200-1:2000, BS EN 1462:2004



Gutter and pipe code reference numbers refer to length of run: 2 metres, 2.5 metres and 4 metres.

Product	Code	
Gutter		
	2m	RG2
	4m	RG4
Angle		
	90°	RA1
	135°	RA2
	any degree	RA9 [#]








[#]FloPlast will fabricate any non-standard angle to special order







Product	Code	
Running Outlet - 68mm round		
		RO1
Stopend Outlet - 68mm round		
		RO2
Stopend		
	External	RE1
	Internal	RE2

For Ancillaries and Spares see page 5.





Product	Code	
Fascia Bracket		
		RK1
Union Bracket		
		RU1
To Cast Iron Ogee gutter adaptors		
	R/H	RD3
	L/H	RD4
To Half Round Cast Iron gutter adaptors		
		RD5

68MM ROUND DOWNPIPE & FITTINGS BS EN 12200-1:2000

Product	Code	
Pipe		
	2.5m	RP2.5
Offset Bend		
	92½°	RB8
	112½°	RB6
Shoe		
		RB4 [#]
Pipe Clip		
		RC4 [#]
Pipe Socket		
		RS2 [#]
67½° Branch		
		RY1

Product	Code	
Access Pipe		
		RX1
Square/Round Downpipe Adaptor		
		RDS2
Universal Hopper		
	Connects to 65mm square & 68mm round downpipe	RH1
Ogee Hopper		
	Connects to 68mm round and 65mm square downpipes.	RH4 [#]
Rectangular Hopper**		
	Connects to 68mm round and 65mm square downpipes.	RH5 [#]
Cast Iron Fixings*		
		FC50

1/2 gauge x 50mm stainless steel fixings for "Cast Iron" Range

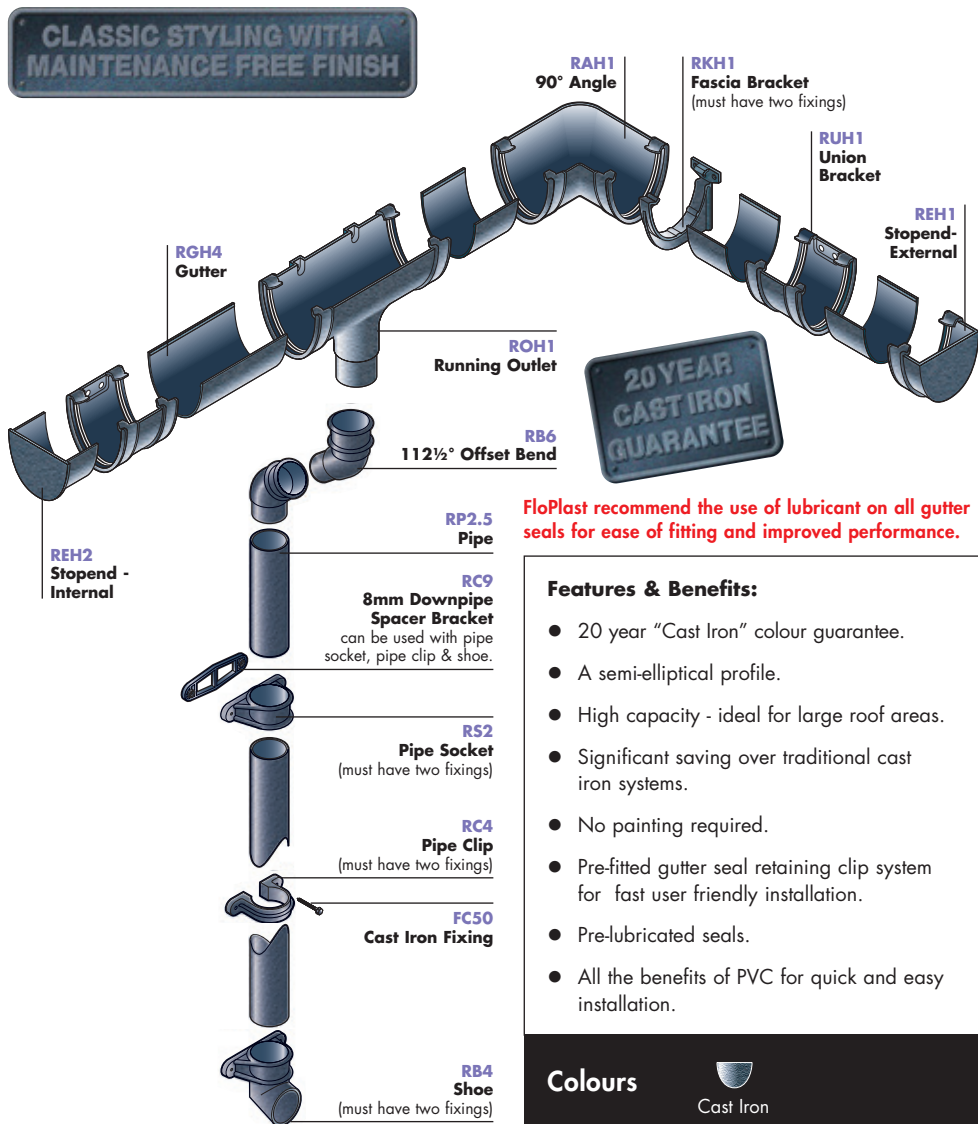
Product	Code	
Fleur-de-Lis		
	40mm	FL55
	52mm	FL70
Tudor Rose		
	40mm	TR55
	52mm	TR70
Decorative Square		
	40mm	DS55
	52mm	DS70
Lion's Head		
	40mm	LH55
	52mm	LH70

Mofits 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 +/- 4%.

*With fixing lugs (Requires 2 x FC50 fixings)

***Fixing instructions for the FC50 (Cast Iron fixing bolts)**
The FC50 is a 1/2 gauge x 50mm Stainless Steel bolt, that requires a 12mm, 12 point star head socket to tighten it. When using these fixings on Ogee and Rectangular Hoppers we recommend that a 3/4" tap 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.



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.

Colours



Code suffix

CI

Dimensions (mm)



115MM GUTTER & FITTINGS BS EN 607:2004, BS EN 12200-1:2000, BS EN 1462:2004





Gutter and pipe code reference numbers refer to length of run: 2.5 metres and 4 metres.

Product	Code
Gutter	
	4m RGH4
Union Bracket	
	RUH1
Running Outlet - 68mm round	
	ROH1








Product	Code
Angle	
	90° RAH1
	135° RAH2
	any degree RAH9*







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

For Ancillaries and Spares see page 5.





Product	Code
Stopend	
	External REH1
	Internal REH2
Fascia Bracket	
	RKH1

68MM ROUND DOWNPIPE & FITTINGS BS EN 12200-1:2000

Product	Code
Pipe	
	2.5m RP2.5
Offset Bend	
	92½° RB8
	112½° RB6
Shoe	
	RB4*
Pipe Clip	
	RC4*
Pipe Socket	
	RS2*
67½° Branch	
	RY1

Product	Code
Access Pipe	
	RX1
Square/Round Downpipe Adaptor	
	RDS2
Universal Hopper	
	Connects to 65mm square & 68mm round downpipe RH1
Ogee Hopper	
	Connects to 68mm round and 65mm square downpipes. RH4*
Rectangular Hopper**	
	Connects to 68mm round and 65mm square downpipes. RH5*
Cast Iron Fixings*	
	FC50

12 gauge x 50mm stainless steel fixings for "cast iron" Range

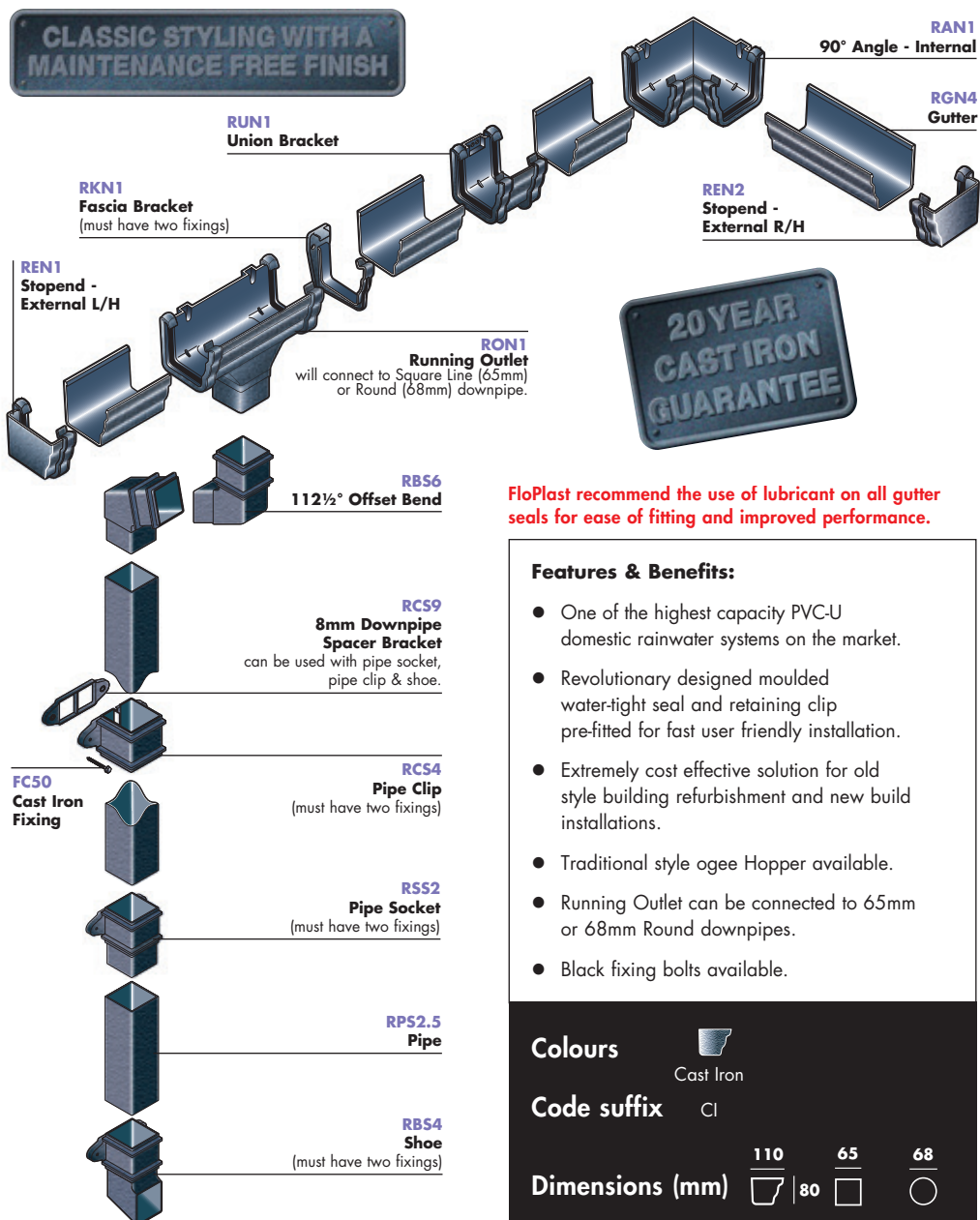
Product	Code
Fleur-de-Lis	
	40mm FL55
	52mm FL70
Tudor Rose	
	40mm TR55
	52mm TR70
Decorative Square	
	40mm DS55
	52mm DS70
Lion's Head	
	40mm LH55
	52mm LH70

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 +/-4%.

*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 Stainless Steel bolt, that requires a 12mm, 12 point star head 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 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.



110MM GUTTER & FITTINGS BS EN 607:2004, BS EN 12200-1:2000, BS EN 1462:2004



Gutter and pipe code reference numbers refer to length of run: 2.5 metres, 3 metres and 4 metres.

For Ancillaries and Spares see page 5.

Product	Code	
Gutter	3m 4m	RGN3
		RGN4
Running Outlet - Multi Outlet	RON1	
Stopend Outlet - 65mm	L/H RON2	
	R/H RON3	

Product	Code	
Angle	90° Internal RAN1	
	90° External RAN2	
	135° Internal RAN3	
	135° External RAN4	
	Any Degree RAN9#	
Union Bracket	RUN1	

Product	Code	
Stopend - External	L/H	REN1
		R/H REN2
Stopend - Internal	L/H	REN3
		R/H REN4
Fascia Bracket	RKN1	

65MM SQUARE DOWNPIPE & FITTINGS BS EN 12200-1:2000

Product	Code	
Pipe	2.5m	RPS2.5
Offset Bend	92½°	RBS8
	112½°	RBS6
Shoe	RBS4#	
Pipe Clip	RCS4#	
Pipe Socket	RSS2#	

Product	Code	
67½° Branch	RYS2	
Square/Round Downpipe Adaptor	RDS2	
Universal Hopper	Connects to 65mm square & 68mm round downpipe RH1	
Ogee Hopper	Connects to 68mm round and 65mm square downpipes. RH4#	
Rectangular Hopper**	Connects to 68mm round and 65mm square downpipes. RH5#	
Cast Iron Fixings*	FC50	

Product	Code	
Fleur-de-Lis	40mm 52mm	FL55 FL70
Tudor Rose	40mm 52mm	TR55 TR70
Decorative Square	40mm 52mm	DS55 DS70
Lion's Head	40mm 52mm	LH55 LH70

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

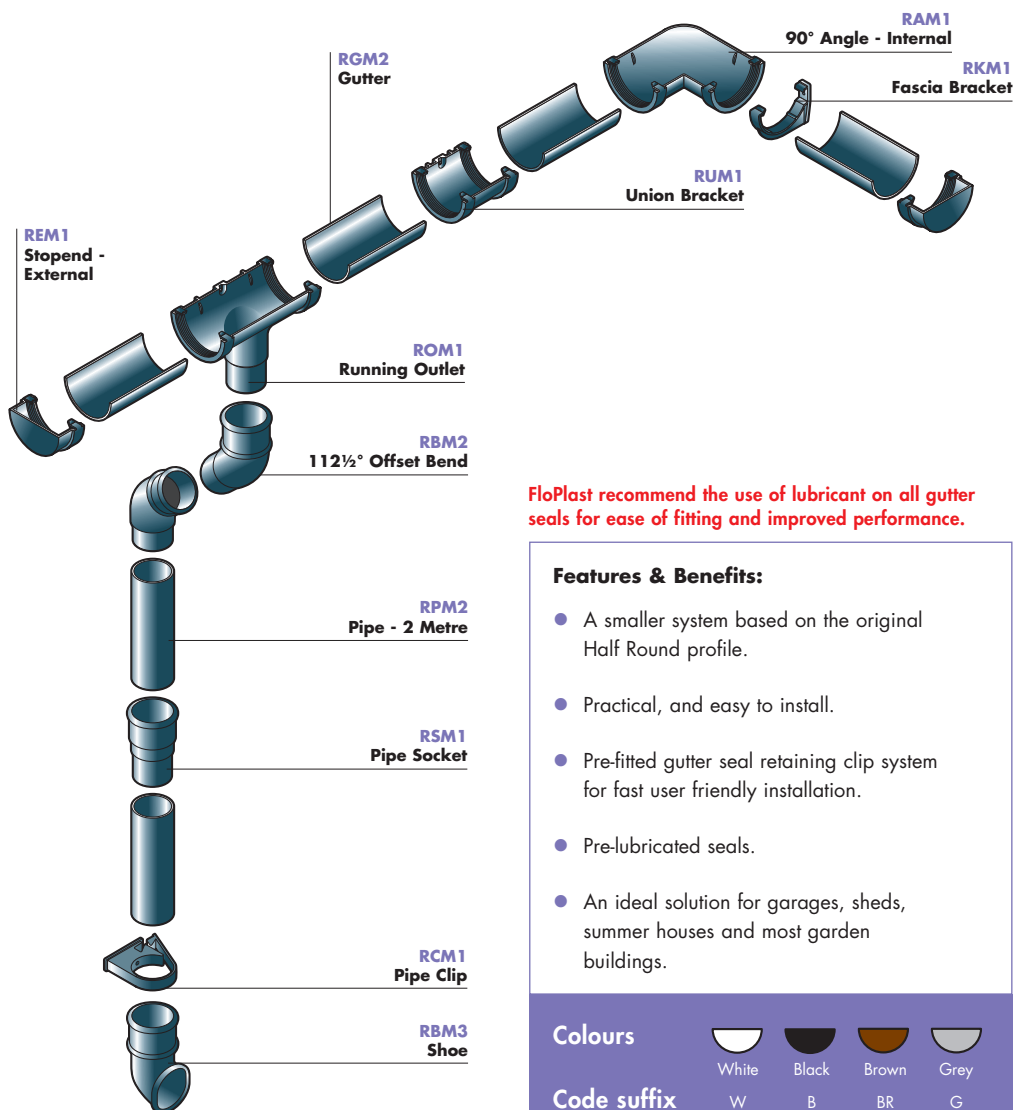
** This product is rotationally moulded and subject to bowing along its length up to +/-4%.

***Fixing instructions for the FC50 (Cast Iron fixing bolts)**
The FC50 is a 12 gauge x 50mm Stainless Steel bolt, that requires a 12mm, 12 point star head socket to tighten it. When using these fixings on Ogee and Rectangular Hoppers we recommend that a 3/4" tap 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.

*With fixing lugs (Requires 2 x FC50 fixings)

Please note: Round downpipe can also be used, please see page 15

12 gauge x 50mm stainless steel fixings for "cast Iron" Range



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

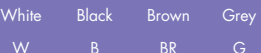
Features & Benefits:

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

Colours



Code suffix



Dimensions (mm)






76MM GUTTER AND FITTINGS BS EN 607:2004, BS EN 12200-1:2000, BS EN 1462:2004






Gutter and pipe code reference numbers refer to length of run: 2 metres.



Product	Code	
Gutter	2m	RGM2
		
Angle	90°	RAM1
		
	135°	RAM2

Product	Code	
Running Outlet		ROM1
Stopend Outlet		
		ROM2

Product	Code	
Stopend		REM1
Fascia Bracket		
		RKM1
Union Bracket		RUM1

50MM ROUND DOWNPIPE & FITTINGS BS EN 12200-1:2000

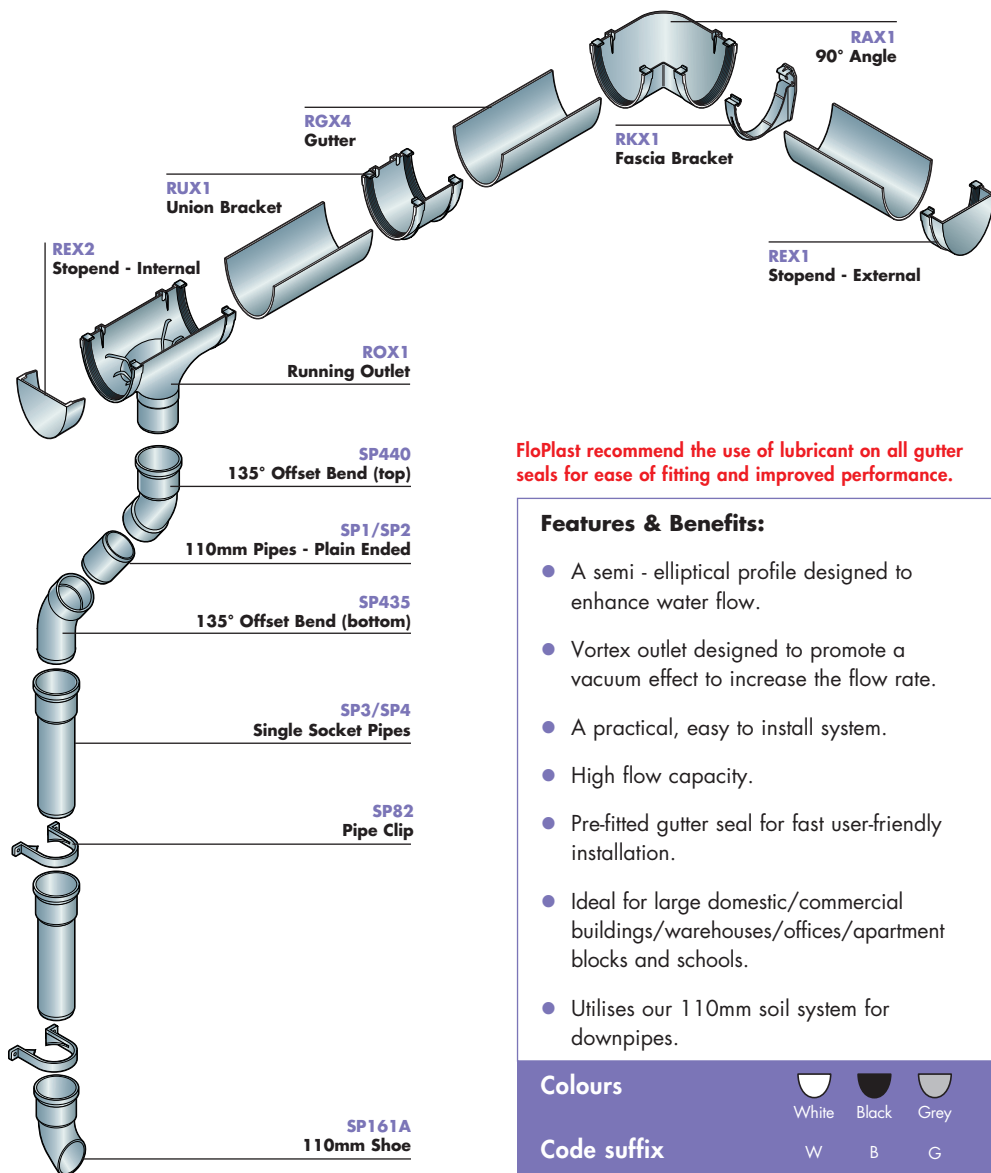
Product	Code	
Pipe	2m	RPM2
		
Offset Bend	112½°	RBM2
		
Shoe		RBM3

Product	Code	
Pipe Clip		RCM1
Pipe Socket		
		RSM1



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.



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.
- Vortex outlet designed to promote a vacuum effect to increase the flow rate.
- A practical, easy to install system.
- High flow capacity.
- Pre-fitted gutter seal for fast user-friendly installation.
- Ideal for large domestic/commercial buildings/warehouses/offices/apartment blocks and schools.
- Utilises our 110mm soil system for downpipes.

Colours



Code suffix

W B G





Dimensions (mm)






170MM GUTTER AND FITTINGS BS EN 607:2004, BS EN 1462:2004







Gutter and pipe code reference numbers refer to length of run: 3 or 4 metres.

Product	Code
Gutter	
	RGX4
90° Angle	
	RAX1
Running Outlet	
	ROX1
Fascia Bracket	
	RKX1



Product	Code
Union Bracket	
	RUX1
Stopend	
	External REX1
	Internal REX2



110MM ROUND DOWNPIPE & FITTINGS BS EN 1329-1:2014, BS 4514:2000

Product	Code
Pipe - Plain Ended	
	3m SP1 *4m SP2
Pipe - Single Socket	
	3m SP3 4m SP4
Shoe	
	SP161A
Pipe Clip	
	SP82

Product	Code
Offset Bends:	
	(Ring Seal Top) (Solvent Bottom) SP440
	(Spigot/Solvent Socket) SP435
Hopper	
	RHX1
92½° Soil Pipe Branch	
	SP190



Product	Code
92½° Soil Pipe Access Bend	
	SP169
Access Pipe	
	Socket/Spigot SP274



*Not available in White

Gutter & pipe code reference numbers refer to length of run: 3 or 4 metres.

Important when ordering: - To indicate the product colour(s) required, the following code suffixes should be used: B-Black, BR-Brown, G-Grey, W-White, C-Caramel, S-Sand.

Black White Brown Grey Sand Cast Iron

Product	Code
Rainwater Diverter Connects to 65mm square and 68mm round downpipe	
 Not available in sand.	RVS1
Connector Kit	
 Not available in brown, grey, sand or "Cast Iron" Style.	RVS2

Product	Code
Rainwater Diverter Connects to 80mm Round Downpipe	
 Not available in "Cast Iron" Style.	RVH1
MiniFlo Rainwater Diverter Connects to 50mm Round Downpipe	
 Not available in sand or "Cast Iron" Style.	RVM1

Important when ordering: - To indicate the product colour(s) required, the following code suffixes should be used: B-Black, W-White, BR-Brown, G-Grey, S-Sand and CI-"Cast Iron" style.

EcoFlo WATER STORAGE SYSTEMS

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

Product	Code
210L Slim Water Butt	
	WB200
210L Slim Water Butt Stand	
	ST200

100L SLIM WATER BUTT	
<ul style="list-style-type: none">• 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	
<ul style="list-style-type: none">• 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



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.
- 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.

Product	Size (L)	Code
StormSaver Packages		
	1500	S1500
	3000	S3000
	5000	S5000
	7500	S7500
Package includes:		
• Underground storage tank		
• 235mm Entrance shaft		
• Pedestrian duty lid for tank		
• Control panel		
• ½" Boosted floating suction filter kit		
• 20m ½" Flexible suction hose		
		

Also available as a garden only system.

Product	Size	Code
Pedestrian Duty Lid		
		PDL1
Entrance Shaft		
	235 (mm)	ES235
	635 (mm)	ES635
Control Panel		
		CP1
½" Boosted Floating Suction Filter Kit		
		FK1

Product	Size	Code
½" Flexible Suction Hose		
	20 (mm)	H20
	40 (mm)	H40
Level Sensor		
		LS1
Identification Tape and Label Pack		
		ID1
110mm Non-Return Valve - Single Flap		
		D550
Required for the system to comply with BS 8515		

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 12200-1:2000, BS EN 607:2004, BS EN 1462:2004 or BS EN 1329-1:2014 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 607:2004 (Gutters and fittings), BS EN 12200-1:2000, and BS EN 1329-1:2014 (Downpipes and fittings), BS EN 1462:2004 (Gutter brackets) within a quality management system assessed and registered by British Standards as meeting the requirements of BS EN ISO 9001:2000 (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

1. 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
2. Where necessary remove the old gutter and replace old fascia board with FloPlast low maintenance PVC-UE co-extruded fascia board.
3. Establish the position of the running outlet, usually over an existing drain, and fix securely to fascia board.
4. 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 a 25mm x 5mm (1" 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.
 - 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.
6. 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.)

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 offset and at maximum intervals of 1.8 metres.

- Use a union bracket or angle to join to 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 underground drainage system using a 110mm x 68mm 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 12056-3:2000 "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

Roof Area

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

$$(B + \frac{C}{2}) \times \text{length of Roof (A)} = \text{Area in M}^2$$

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.

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.

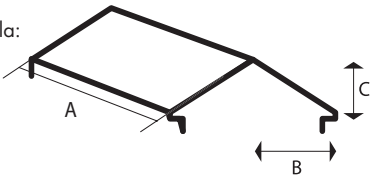
Inspection of the gutter and brackets is also advisable during and after periods of ice formation in the guttering system.

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.



OUTLET AT END OF GUTTER RUN

System	Gutter Fixed Level				Gutter Fixed at 1:350 fall			
	Gutter Flow (litres/sec)		Roof Area (m ²)		Gutter Flow (litres/sec)		Roof Area (m ²)	
	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
Niagara® 65mm Square Downpipe	2.40	2.16	115	104	2.90	2.61	139	125
Niagara® 80mm Circular Downpipe	2.64	2.37	127	114	3.19	2.87	153	138
Xtraflo 110mm Circular Downpipe	4.30	3.87	206	185	6.20	5.58	297	267

OUTLET AT CENTRE OF GUTTER RUN

System	Gutter Fixed Level				Gutter Fixed at 1:350 fall			
	Gutter Flow (litres/sec)		Roof Area (m ²)		Gutter Flow (litres/sec)		Roof Area (m ²)	
	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
Niagara® 65mm Square Downpipe	4.50	4.05	216	194	5.30	4.77	254	229
Niagara® 80mm Circular Downpipe	4.95	4.45	237	213	5.83	5.24	279	251
Xtraflo 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 (m ²) 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 EN12056-3:2000 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 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 27.

DESIGN DATA All gutter dimensions are nominal.

HALF ROUND & "CAST IRON" STYLE HALF ROUND		XTRAFLO	
Miniflo		SQUARE LINE	
HI-CAP & "CAST IRON" STYLE HI-CAP		Niagara® & "CAST IRON" STYLE Niagara®	

RAINWATER SYSTEM COMPATIBILITY CHART						
	<i>Xtraflo</i>	<i>Niagara</i> ®				
Manufacturer	170mm	Ogee	Hi-Cap	Half Round 112mm	Square Line	MiniFlo
Brett Martin	✗ (Deepstyle 170)	✗ (Prostyle)	✓ (Deepstyle)	✓ (Roundstyle)	✓ (Squarestyle)	✗ (No equivalent)
Osma	✗ (No equivalent)	✗ (Stormline)	✓ (Deepline)	✓ (Roundline)	✗ (Squareline)	✗ (No equivalent)
Polypipe	✗ (No equivalent)	✗ (Sovereign)	✓ (Polyflow)	✓	✓	✗ (Half Round)
Polypipe Terrain	✗ (No equivalent)	✗ (Omega)	✗ (Rapidflow)	✗ (Crescent)	✗ (Corniche)	✗ (No equivalent)
Marley	✗ (No equivalent)	✗ (Classic)	✓ (Deepflow)	✓ (Clipmaster)	✗ (Flowline)	✗ (Miniline)
Hunter	✗ (No equivalent)	✗ (Regency)	✓ (125)	✓	✓ (Squareflo)	✗ (Half Round)
Swish	✗ (No equivalent)	✗ (Ogee)	✗ (Deepflow)	✓	✓	✗ (No equivalent)

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 26/27 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 1m. 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 32mm x 6.5mm 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 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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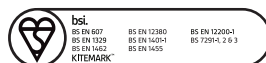
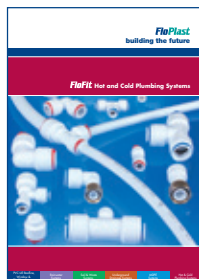
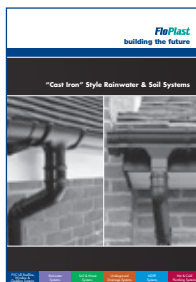
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Other systems available:



7/07/16

PVC-UE Roofline,
Window &
Cladding Systems

Rainwater
Systems

Soil & Waste
Systems

Underground
Drainage Systems

MDPE
Systems

Hot & Cold
Plumbing Systems