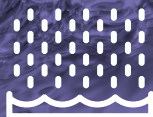


## Rainwater Systems





## Introduction to FloPlasts Rainwater Systems

**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 Certificate No. FM 501414

BS EN ISO 14001 Certificate No. EMS 538445

BS EN ISO 45001 Certificate No. OHS 593622

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.

All products comply with the material requirements of:

- BS EN 12200-1 and BS EN 1329-1
- BS 1453-1 and BS 4514 (downpipes and fittings)
- BS EN 607 (gutters and fittings)
- BS EN 1462 (eaves brackets)

FloPlast Rainwater Systems have been awarded the prestigious Kitemark. License No. KM 501316.



### System Features

- Cost effective solution.
- Practical rainwater handling.
- Consistent self-finish and colour.
- Tough and durable, yet lightweight.
- High gloss finish.
- Provides solutions to all installation requirements.
- Suitable for all types of buildings including domestic, commercial and industrial.



## 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.

## Product Guarantees

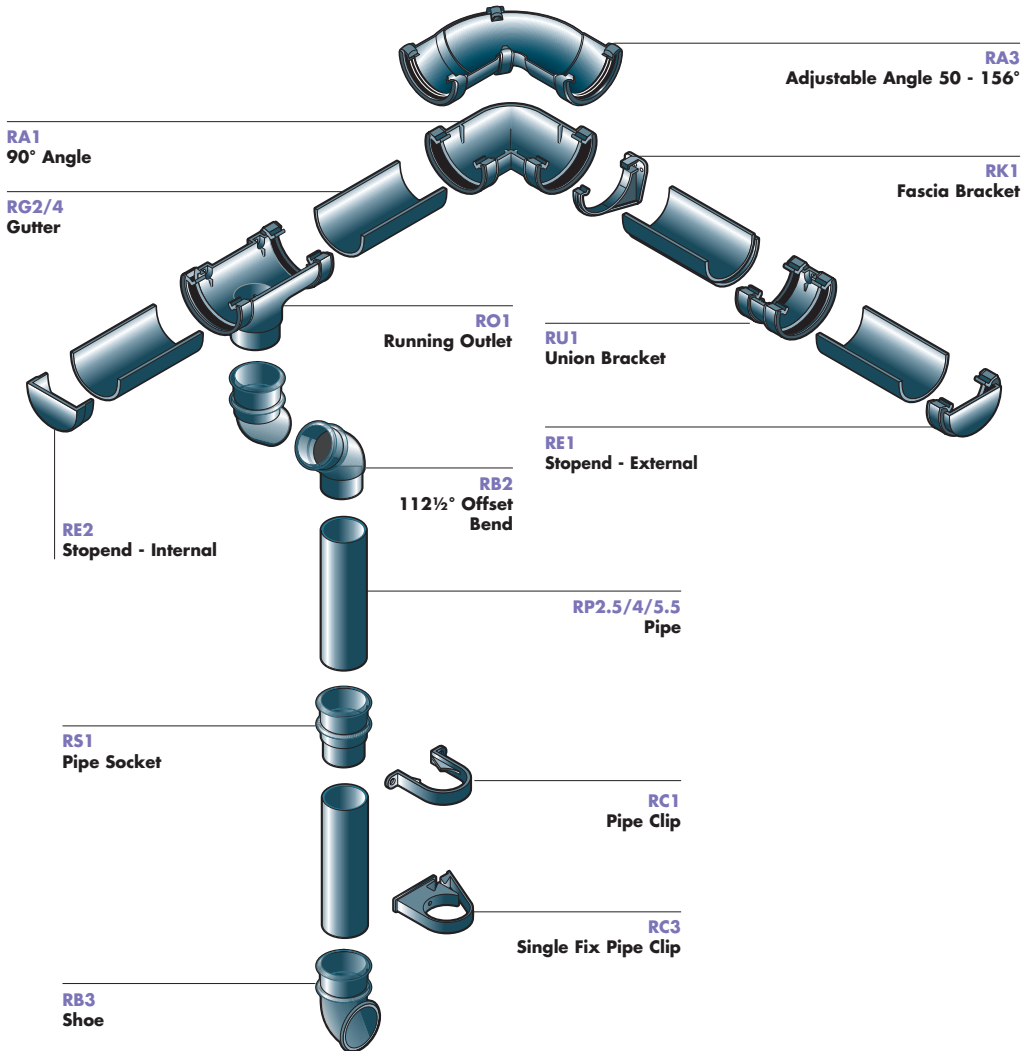
Rainwater systems come with a 10 year performance and colour guarantee for the black, white, brown, grey and anthracite grey ranges, and 20 years for the “Cast Iron” Styles.

Rainwater guarantees and installations can be registered on our website, look for *register your guarantee* in the drop down box under *You* in the banner heading.





## Half Round 112mm/68mm Rainwater System



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

Important when ordering: Please add colour reference to code: **B** Black **W** White **BR** Brown **G** Grey **AG** Anthracite Grey

# RAINWATER SYSTEMS



**Half Round 112mm** Standard: BS EN 607, BS EN 12200 -1, BS EN 1462



## Colours



## Dimensions



## 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 systems, using our extensive range of adaptors.

## Product Colours Code

### Gutter - 2m / 3m / 4m

	2m	<b>B</b> <b>W</b> <b>BR</b> <b>G</b>	RG2
	3m	<b>B</b> <b>W</b> <b>BR</b> <b>G</b>	RG3
	4m	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RG4

### Angle

	90°	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RA1
	135°	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RA2

### Adjustable Angle 50° - 156°

		<b>B</b> <b>W</b> <b>BR</b>	RA3
--	--	-----------------------------	-----

### Angle - Any Degree

		<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RA9
--	--	--	-----

FloPlast will fabricate any non-standard angle to special order. POA: Price on application.

### Running Outlet

		<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RO1
--	--	--	-----

### Stopend Outlet

		<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RO2
--	--	--	-----

## Product Colours Code

### Stopend

	External	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RE1
	Internal	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RE2

### Fascia Bracket

		<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RK1
--	--	--	-----

### Union Bracket

		<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RU1
--	--	--	-----

### To Cast Iron Ogee Gutter Adaptors

	R/H	<b>B</b> <b>W</b>	RD3
	L/H	<b>B</b> <b>W</b>	RD4

### To Half Round Cast Iron Adaptor

		<b>B</b> <b>W</b> <b>BR</b> <b>G</b>	RD5
--	--	--------------------------------------	-----

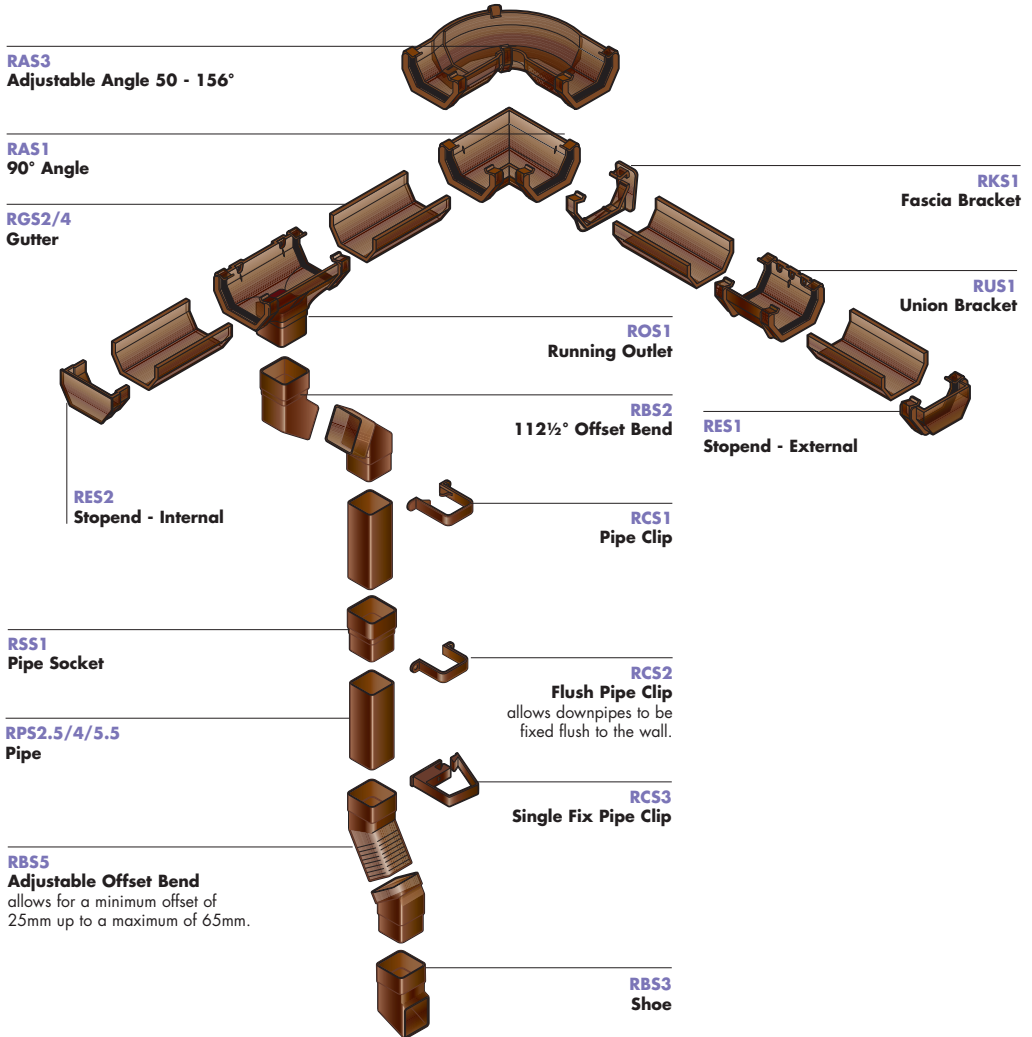
For 68mm Round Downpipe see page 12.

Important when ordering: Please add colour reference to code: **B** Black **W** White **BR** Brown **G** Grey **AG** Anthracite Grey

For more information visit [www.floplast.co.uk](http://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.

Important when ordering: Please add colour reference to code: **B** Black **W** White **G** Grey **AG** Anthracite Grey

# RAINWATER SYSTEMS



**Square Line 114mm** Standard: BS EN 607, BS EN 12200 -1, BS EN 1462



## Colours

**B** **W**

**BR** **AG**

## Dimensions

114


60

## Features & Benefits:



- Attractive rectilinear profile.
- Flow capacity in excess of Half Round.
- 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.

## Product Colours Code

### Gutter - 2m / 3m / 4m

	2m	<b>B</b> <b>W</b> <b>BR</b>	RGS2
	3m	<b>B</b> <b>W</b> <b>BR</b>	RGS3
	4m	<b>B</b> <b>W</b> <b>BR</b> <b>AG</b>	RGS4

### Angle

	90°	<b>B</b> <b>W</b> <b>BR</b> <b>AG</b>	RAS1
	135°	<b>B</b> <b>W</b> <b>BR</b> <b>AG</b>	RAS2

### Adjustable Angle 50° - 156°

	<b>B</b> <b>W</b> <b>BR</b>	RAS3
---	-----------------------------	------

### Angle - Any Degree

	<b>B</b> <b>W</b> <b>BR</b> <b>AG</b>	RAS9
--	---------------------------------------	------

FloPlast will fabricate any non-standard angle to special order. POA: Price on application

### Running Outlet



	<b>B</b> <b>W</b> <b>BR</b> <b>AG</b>	ROS1
--	---------------------------------------	------

### Stopend Outlet

	<b>B</b> <b>W</b> <b>BR</b> <b>AG</b>	ROS2
--	---------------------------------------	------

## Product Colours Code

### Stopends

	External	<b>B</b> <b>W</b> <b>BR</b> <b>AG</b>	RES1
	Internal	<b>B</b> <b>W</b> <b>BR</b> <b>AG</b>	RES2

### Fascia Bracket

	<b>B</b> <b>W</b> <b>BR</b> <b>AG</b>	RKS1
---	---------------------------------------	------




### Union Bracket

	<b>B</b> <b>W</b> <b>BR</b> <b>AG</b>	RUS1
---	---------------------------------------	------

### Square/Round Gutter Adaptor

	<b>B</b> <b>W</b> <b>BR</b>	RDS1
---	-----------------------------	------

### To Cast Iron Gutter Adaptors

	Ogee R/H	<b>B</b> <b>W</b> <b>BR</b>	RDS3
	Ogee L/H	<b>B</b> <b>W</b> <b>BR</b>	RDS4
	Half Round	<b>B</b> <b>W</b> <b>BR</b>	RDS5

For 65mm Square Downpipe see page 13.

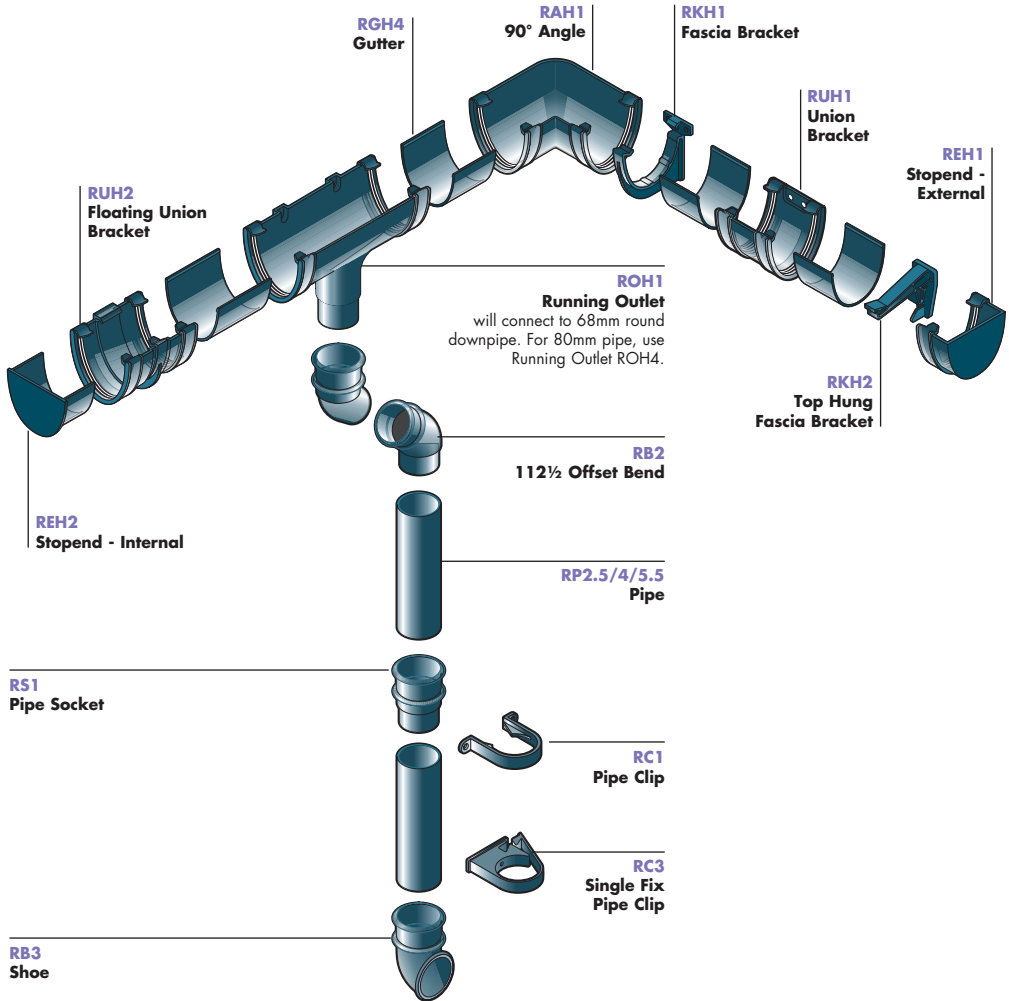
Important when ordering: Please add colour reference to code: **B** Black **W** White **G** Grey **AG** Anthracite Grey

For more information visit [www.floplast.co.uk](http://www.floplast.co.uk)

# RAINWATER SYSTEMS



## Hi-Cap 115mm/68mm/80mm Rainwater System



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

Important when ordering: Please add colour reference to code: **B** Black **W** White **BR** Brown **G** Grey **AG** Anthracite Grey



# RAINWATER SYSTEMS



**Hi-Cap 115mm** Standard: BS EN 607, BS EN 12200 -1, BS EN 1462



EN 102236  
BS EN 607

EN 102236  
BS EN 1462

EN 102236  
BS EN 12200-1

## Colours



## Dimensions



## Features & Benefits:




- A semi - elliptical profile.
- 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 RKH2 top hung bracket.

## Product Colours Code

### Gutter - 4m

	4m	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RGH4
--	----	--	------

### Angle

	90°	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RAH1
	135°	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RAH2
	Any Degree	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RAH9

FloPlast will fabricate any non-standard angle to special order. POA: Price on application.

### Running Outlet

	68mm	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	ROH1
	80mm	<b>B</b> <b>W</b> <b>BR</b> <b>G</b>	ROH4

### Union Bracket



		<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RUH1
--	--	--	------

### Floating Union Bracket



		<b>B</b> <b>W</b>	RUH2
--	--	-------------------	------

## Product Colours Code



### Stopend

	External	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	REH1
	Internal	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	REH2

### Fascia Bracket

		<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RKH1
	Top Hung	<b>B</b> <b>W</b>	RKH2

### Gutter Adaptors

	Half Round	<b>B</b> <b>W</b> <b>BR</b>	RHR3
	Square Line	<b>B</b> <b>W</b> <b>BR</b> <b>G</b>	RHS3

For 68mm Round Downpipe see page 12.

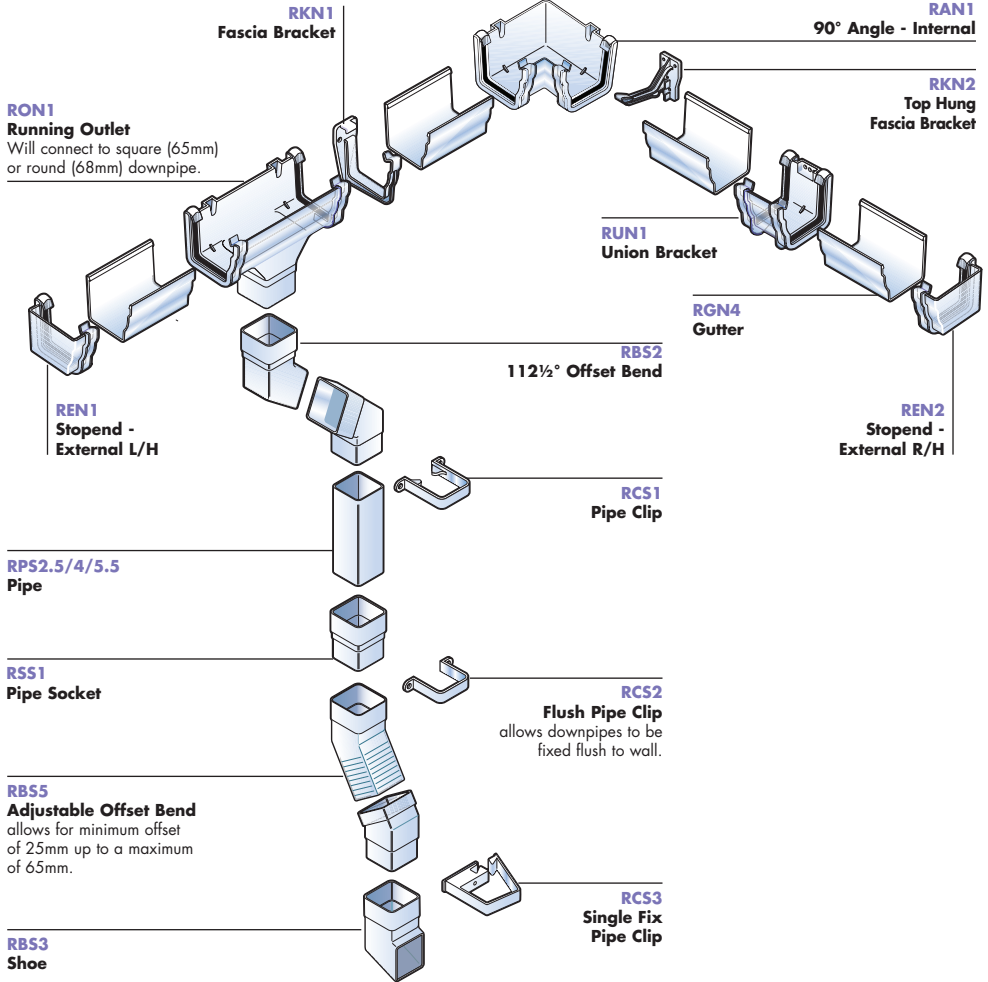
For 80mm Round Downpipe see page 14.

Important when ordering: Please add colour reference to code: **B** Black **W** White **BR** Brown **G** Grey **AG** Anthracite Grey

For more information visit [www.floplast.co.uk](http://www.floplast.co.uk)



## Niagara Ogee 119mm/65mm/68mm/80mm Rainwater System



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

Important when ordering: Please add colour reference to code: **B** Black **W** White **BR** Brown **G** Grey **AG** Anthracite Grey

# RAINWATER SYSTEMS



**Niagara Ogee 110mm** Standard: BS EN 607, BS EN 12200 -1, BS EN 1462



EN 607:2006  
BS EN 607

EN 12200  
BS EN 1462

EN 12200  
BS EN 12200-1

## Colours

**B** **W**

**BR** **AG**


## Dimensions



110  
80



## Features & Benefits:

- A traditional ogee style profile.
- One of the highest capacity PVC-U domestic rainwater systems.
- Pre-fitted seal and retaining clip.
- Suitable for all properties, old and new.
- Can be connected to either 65mm Square, 68mm and 80mm Round downpipes.
- For an improved aesthetic gutter line when viewed from below, use RKN2 top hung bracket.

## Product Colours Code


Product	Colours	Code
<b>Gutter - 4m</b>		
	4m <b>B</b> <b>W</b> <b>BR</b> <b>AG</b>	RGN4

90° Angle		
	Internal <b>B</b> <b>W</b> <b>BR</b> <b>AG</b>	RAN1
	External <b>B</b> <b>W</b> <b>BR</b> <b>AG</b>	RAN2


135° Angle		
	Internal <b>B</b> <b>W</b> <b>BR</b> <b>AG</b>	RAN3
	External <b>B</b> <b>W</b> <b>BR</b> <b>AG</b>	RAN4

Angle - Any Degree		
	<b>B</b> <b>W</b> <b>BR</b>	RAN9

FloPlast will fabricate any non-standard angle to special order


Running Outlet - Multi Fit		
	<b>B</b> <b>W</b> <b>BR</b> <b>AG</b>	RON1

Connects to 65mm Square and 68mm Round Downpipe


Stopend Outlets - 65mm Square			
	L/H	<b>B</b> <b>W</b> <b>BR</b> <b>AG</b>	RON2
	R/H	<b>B</b> <b>W</b> <b>BR</b> <b>AG</b>	RON3


For 68mm Round Downpipe see page 12.  
For 65mm Square Downpipe see page 13.  
For 80mm Round Downpipe see page 14.


## Product Colours Code

Product	Colours	Code
<b>Running Outlet - 80mm Round</b>		
	<b>B</b> <b>W</b> <b>BR</b>	RON4



Stopend Outlets - 80mm Round			
	L/H	<b>B</b> <b>W</b> <b>BR</b>	RON5
	R/H	<b>B</b> <b>W</b> <b>BR</b>	RON6

External Stopends			
	L/H	<b>B</b> <b>W</b> <b>BR</b> <b>AG</b>	REN1
	R/H	<b>B</b> <b>W</b> <b>BR</b> <b>AG</b>	REN2

Internal Stopends			
	L/H	<b>B</b> <b>W</b> <b>BR</b> <b>AG</b>	REN3
	R/H	<b>B</b> <b>W</b> <b>BR</b> <b>AG</b>	REN4

Fascia Bracket			
		<b>B</b> <b>W</b> <b>BR</b> <b>AG</b>	RKN1
	Top Hung	<b>B</b> <b>W</b> <b>BR</b>	RKN2

Union Bracket		
	<b>B</b> <b>W</b> <b>BR</b>	RUN1

Niagara Gutter Adaptors				
	Half Round	L/H	<b>B</b> <b>W</b> <b>BR</b>	RNR3
		R/H	<b>B</b> <b>W</b> <b>BR</b>	RNR4
	Square Line	L/H	<b>B</b> <b>W</b> <b>BR</b>	RNS3
		R/H	<b>B</b> <b>W</b> <b>BR</b>	RNS4

Important when ordering: Please add colour reference to code: **B** Black **W** White **G** Grey **AG** Anthracite Grey

# RAINWATER SYSTEMS



## 68mm Round Downpipe and Fittings Standard: BS EN 12200 -1



BS 50334  
BS EN 12200-1

### Colours



### Dimensions



### Features & Benefits:

- Traditional round profile.
- Can be used with Half Round, Hi-Cap and Niagara rainwater systems.
- Durable and lightweight.
- A practical, easy to install.
- Cost effective.
- Easy to cut using a fine toothed saw.
- Suitable for new build and refurbishment applications.

Product	Colour	Code
---------	--------	------

Pipe			
	2.5m	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RP2.5
	4m	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RP4
	5.5m	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RP5.5

### Offset Bends

	92½°	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RB1
	112½°	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RB2

### 67½° Branch

	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RY1
--	--	-----

### Shoes

	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RB3
	With fixing lugs <b>B</b> <b>W</b>	RB4

### Pipe Sockets

	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RS1
	With fixing lugs <b>B</b> <b>W</b>	RS2

Product	Colour	Code
---------	--------	------

Pipe Clips		
	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RC1
	Single Fix <b>B</b> <b>W</b> <b>BR</b> <b>G</b>	RC3
	With fixing lugs <b>B</b> <b>W</b>	RC4

### Access Pipe

	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b>	RX1
--	--	-----

**Hopper:** Connects to 65mm square & 68mm round downpipe

	<b>B</b> <b>W</b> <b>BR</b> <b>G</b>	RHS1
--	--------------------------------------	------



Important when ordering: Please add colour reference to code: **B** Black **W** White **BR** Brown **G** Grey **AG** Anthracite Grey

# RAINWATER SYSTEMS



## 65mm Square Downpipe and Fittings

Standard: BS EN 12200 -1



EN 50124  
BS EN 12200-1

### Colours







### Dimensions







### Features & Benefits:

- Attractive square profile.
- Can be used with Squareline and Niagara rainwater systems.
- Durable and lightweight.
- A practical, easy to install system.
- Cost effective.
- Easy to cut using a fine toothed saw.
- Suitable for new build and refurbishment applications.





### Product Colours Code

Product	Colours	Code
Pipe 	2.5m 	RPS2.5
	4m 	RPS4
	5.5m 	RPS5.5

### Offset Bend

	92° 	RBS1
	112° 	RBS2





### Shoe

		RBS3
	With fixing lugs 	RBS4









### Adjustable Offset Bend

		RBS5
--	---	------

### Pipe Sockets

		RSS1
	With fixing lugs 	RSS2

### Product Colours Code

Product	Colours	Code
Pipe Clips 		RCS1
	Flush 	RCS2
	Single Fix 	RCS3
	With fixing lugs 	RCS4 <sup>3</sup>

### Sq/Rd Downpipe Adaptor: Connects to 68mm round downpipe

		RDS2
--	---	------

### 67½° Branch

		RY51
---	---	------

### Square Access Pipe

 		RXS1
---	---	------

### Hopper: Connects to 65mm square & 68mm round downpipe

		RHS1
---	---	------

Important when ordering: Please add colour reference to code: **B** Black **W** White **BR** Brown **G** Grey **AG** Anthracite Grey

# RAINWATER SYSTEMS



## 80mm Round Downpipe and Fittings Standard: BS EN 12200 -1



EN 501334  
BS EN 12200-1

### Colours




### Dimensions





### Features & Benefits:

- Large round profile.
- Can be used with Hi-Cap and Niagara rainwater systems.
- Durable and lightweight.
- A practical, easy to install system.
- Cost effective.
- Easy to cut using a fine toothed saw.
- Suitable for new build and refurbishment applications.

Product	Colours	Code
---------	---------	------

<b>Pipe</b>		
	4m	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> RPH4

Product	Colours	Code
---------	---------	------

<b>Offset Bend</b>		
	92 1/2°	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> RBH1
	112 1/2°	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> RBH2

Product	Colours	Code
---------	---------	------

<b>Shoe</b>		
		<b>B</b> <b>W</b> <b>BR</b> <b>G</b> RBH3

Product	Colours	Code
---------	---------	------

<b>Pipe Clip</b>		
	Single Fix	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> RCH3

Product	Colours	Code
---------	---------	------

<b>67 1/2° Branch</b>		
		<b>B</b> <b>W</b> <b>BR</b> <b>G</b> RYH1


Product	Colours	Code
---------	---------	------

<b>Pipe Socket</b>		
		<b>B</b> <b>W</b> <b>BR</b> <b>G</b> RSH1

**80mm Rainwater Adaptor:** Connects 110mm Drainage

	<b>B</b>	D97
--	----------	-----

Product	Colours	Code
---------	---------	------






<b>Hopper</b>		
	<b>B</b> <b>W</b> <b>BR</b> <b>G</b>	RHH1



Important when ordering: Please add colour reference to code: **B** Black **W** White **BR** Brown **G** Grey **AG** Anthracite Grey









## Spares Gutter Clips

Product	Colours	Code
<b>Half Round Gutter Clip</b> 	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b> <b>CI</b>	RRC1
<b>Square Line Gutter Clip</b> 	<b>B</b> <b>W</b> <b>BR</b> <b>AG</b>	RRSC1
<b>Hi-Cap Gutter Clip</b> 	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b> <b>CI</b>	RRHC1
<b>Niagara Ogee Gutter Clip</b> 	<b>B</b> <b>W</b> <b>BR</b> <b>AG</b> <b>CI</b>	RRNC1
<b>XtraFlo Gutter Clip</b> 	<b>B</b> <b>W</b> <b>G</b>	RRXC1



## Spares Gutter Seals

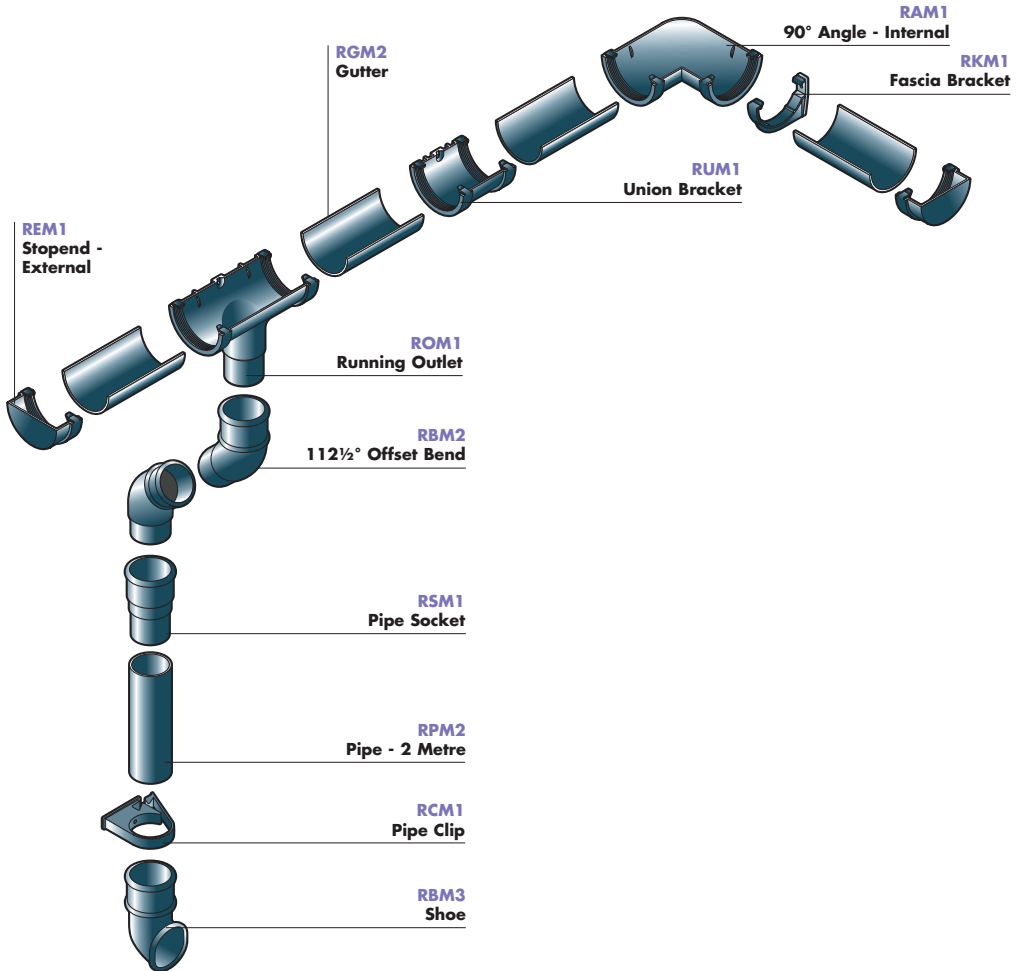
Product	Code
<b>Half Round Gutter Seal</b> 	RRS1
<b>Square Line Gutter Seal</b> 	RRSS1
<b>Hi-Cap Gutter Seal</b> 	RRHS1

Product	Code
<b>Niagara Ogee Gutter Seal</b> 	RRNS1
<b>MiniFlo Gutter Seal</b> 	RRMS1
<b>XtraFlo Gutter Seal</b> 	RRXS1

Important when ordering: Please add colour reference to code: **B** Black **W** White **BR** Brown **G** Grey **AG** Anthracite Grey **CI** "Cast Iron" Style



## MiniFlo 76mm/50mm Rainwater System



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

Important when ordering: Please add colour reference to code: **B** Black **W** White **BR** Brown **G** Grey



# RAINWATER SYSTEMS



## MiniFlo 76mm Standard: BS EN 607, BS EN 12200 -1, BS EN 1462

### Colours



### Dimensions



### Features & Benefits:

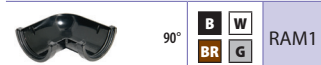
- A smaller system based on the original Half Round profile.
- A practical, easy to install system.
- Pre-fitted gutter seal retaining clip system for fast user friendly installation.
- An ideal solution for garages, sheds, summer houses and most garden buildings.
- Pre-lubricated seals.

### Product Colours Code

#### Gutter - 2m



#### Angle



#### Running Outlet



### Product Colours Code

#### Stopend Outlet



#### Stopend



#### Bracket



### Product Code

#### Half Shed Pack - Black Only



## 50mm Round Downpipe and Fittings Standard: BS EN 12200 -1

### Product Colours Code

#### Pipe - 2m



#### Offset Bend 92½°



#### Offset Bend 112½°



### Product Colours Code

#### Shoe



#### 67½° Branch



#### Pipe Clip



### Product Colours Code

#### Pipe Socket



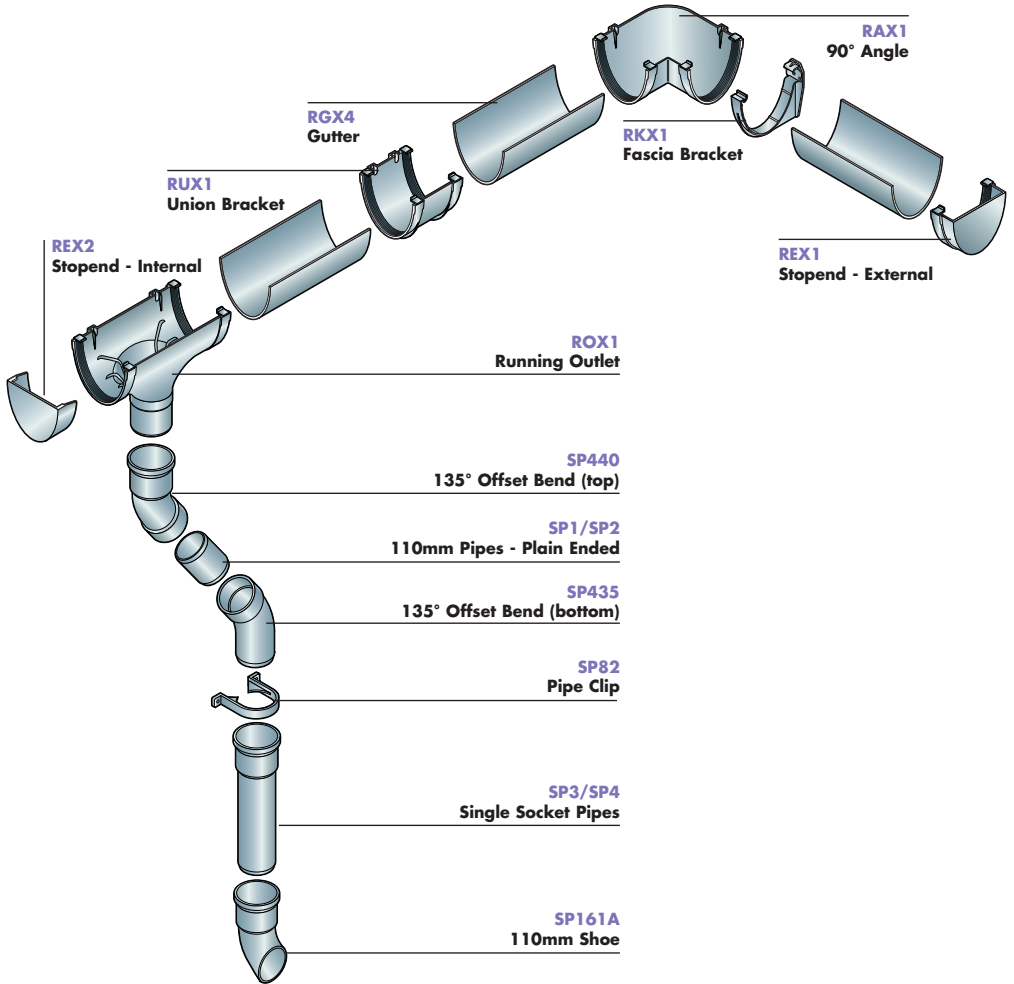
#### MiniFlo Rainwater Diverter



Important when ordering: Please add colour reference to code: **B** Black **W** White **BR** Brown **G** Grey



## XtraFlo 170mm/110mm Rainwater System



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

Important when ordering: Please add colour reference to code: **B** Black **W** White **G** Grey

# RAINWATER SYSTEMS



**XtraFlo 170mm** Standard: BS EN 607, BS EN 12200 -1, BS EN 1462



## Colours



## Dimensions



## 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.

Product	Colours	Code
<b>Gutter - 4m</b>		RGX4

Product	Colours	Code
<b>Angle 90°</b>		RAX1

Product	Colours	Code
<b>Running Outlet</b>		ROX1

Product	Colours	Code
<b>Fascia Bracket</b>		RKX1

Product	Colours	Code
<b>Union Bracket</b>		RUX1

Product	Colours	Code
<b>Extrenal Stopend</b>		REX1

Product	Colours	Code
<b>Internal Stopend</b>		REX2

## 110mm Round Downpipe and Fittings

Standard: BS EN 1329, BS EN 1453



Product	Colours	Code
<b>Pipe - Plain Ended</b>		SP1
3m		
4m		SP2

Product	Colours	Code
<b>Pipe - Single Socket</b>		SP3
3m		
4m		SP4

Product	Colours	Code
<b>Shoe</b>		SP161A

Product	Colours	Code
<b>Pipe Clip</b>		SP82

Product	Colours	Code
<b>Offset Bend 135° (45°)</b>		SP440
Ring Seal Top/ Solvent Bottom		

Product	Colours	Code
<b>Spigot/ Solvent Socket</b>		SP435

Product	Colours	Code
<b>Hopper</b>		RHX1

Product	Colours	Code
<b>92½° Soil Pipe Branch</b>		SP190

Product	Colours	Code
<b>92½° Soil Pipe Access Bend</b>		SP169

Product	Colours	Code
<b>Access Pipe</b>		SP274
Socket/ Spigot		

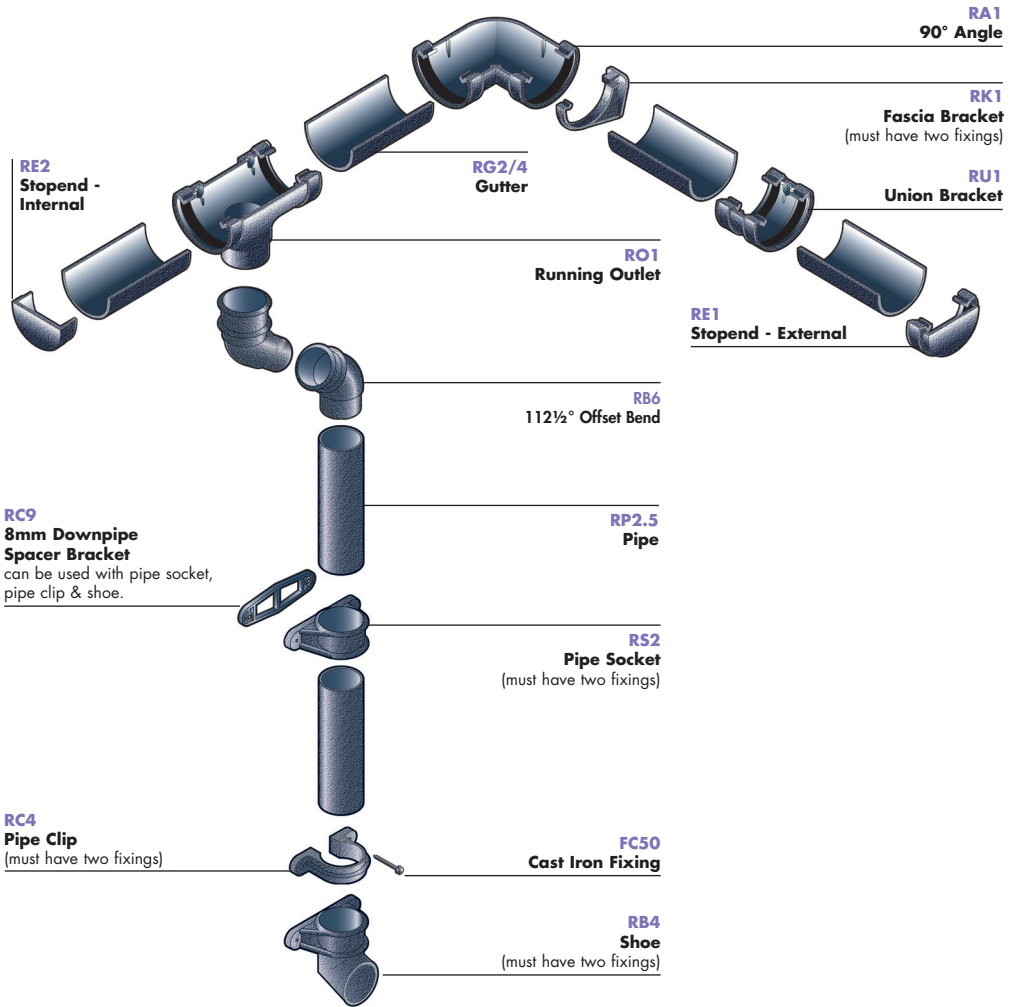
Important when ordering: Please add colour reference to code: **B** Black **W** White **G** Grey

# "CAST IRON" STYLE RAINWATER SYSTEMS



20 YEAR  
CAST IRON  
GUARANTEE

## Half Round 112mm/68mm Rainwater



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

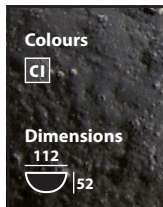
Important when ordering: Please add colour reference to code: **CI** "Cast Iron" Style

# "CAST IRON" STYLE RAINWATER SYSTEMS



20 YEAR  
CAST IRON  
GUARANTEE




**Half Round 112mm** Standard: BS EN 607, BS EN 12200 -1, BS EN 1462







## 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.
- Cost effective.
- Can be used on grade 1 listed properties.
- All the benefits of PVC for quick and easy installation.

## Product Colours Code

Product	Colours	Code
<b>Gutter - 2m / 4m</b> 	2m 	RG2
	4m 	RG4

Angle	Colours	Code
 90°		RA1
 135°		RA2



Angle - Any Degree	Colours	Code
		RA9*



FloPlast will fabricate any non-standard angle to special order





For 68mm Round Downpipe see page 26.











## Product Colours Code

Product	Colours	Code
<b>Running Outlet - 68mm round</b> 		RO1

Stopend Outlet - 68mm round	Colours	Code
		RO2

Stopend	Colours	Code
 External		RE1
 Internal		RE2

Bracket	Colours	Code
 Fascia		RK1
 Union		RU1

To Ogee Cast Iron adaptors	Colours	Code
 R/H		RD3
 L/H		RD4

To Half Round Cast Iron adaptors	Colours	Code
		RD5

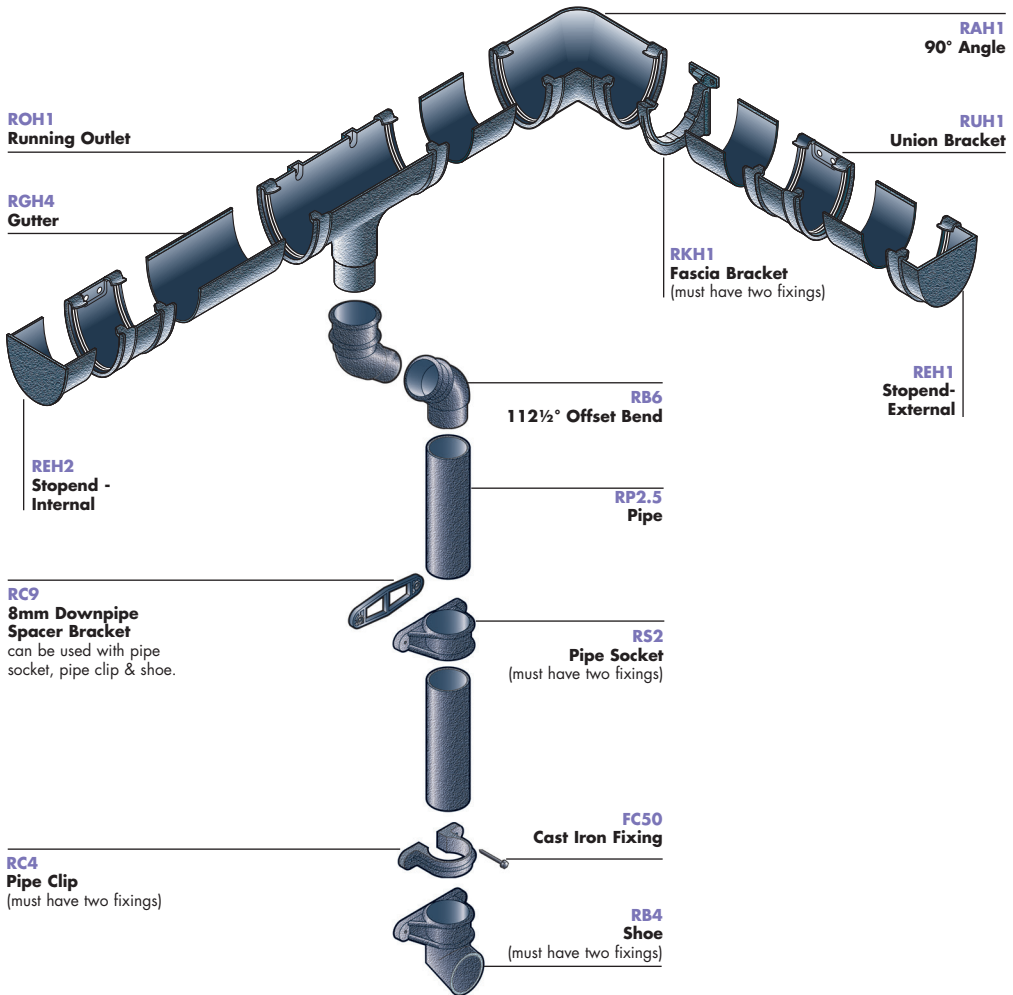
Important when ordering: Please add colour reference to code:  "Cast Iron" Style

# "CAST IRON" STYLE RAINWATER SYSTEMS



20 YEAR  
CAST IRON  
GUARANTEE

## Hi-Cap 115mm/68mm Rainwater



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

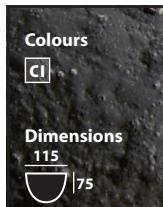
Important when ordering: Please add colour reference to code: **CI** "Cast Iron" Style

# "CAST IRON" STYLE RAINWATER SYSTEMS



20 YEAR  
CAST IRON  
GUARANTEE

**Hi-Cap 115mm** Standard: BS EN 607, BS EN 12200 -1, BS EN 1462



## Colours

CI


## Dimensions




115  
75

## Features & Benefits:


- 20 year "Cast Iron" colour guarantee.
- A semi-elliptical profile .
- High capacity - ideal for large roof areas.
- Pre-fitted gutter seal retaining clip system for fast user friendly installation.
- Cost effective.
- Pre-lubricated seals.
- Can be used on grade 1 listed properties .
- All the benefits of PVC for quick and easy installation.


Product	Colours	Price
---------	---------	-------


<b>Gutter - 4m</b>		
	4m	CI RGH4

Angle	Colours	Price
	90°	CI RAH1
	135°	CI RAH2
	any degree	CI RAH9*

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

Running Outlet - 68mm round	Colours	Price
	CI	32.04


External Stopend	Colours	Price
 External	CI	REH1

Internal Stopend	Colours	Price
 Internal	CI	REH2

Fascia Bracket	Colours	Price
	CI	RKH1

For 68mm "Cast Iron" Style Round Downpipe, see page 26.

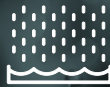
Product	Colours	Price
---------	---------	-------

<b>Union Bracket</b>		
	CI	RUH1



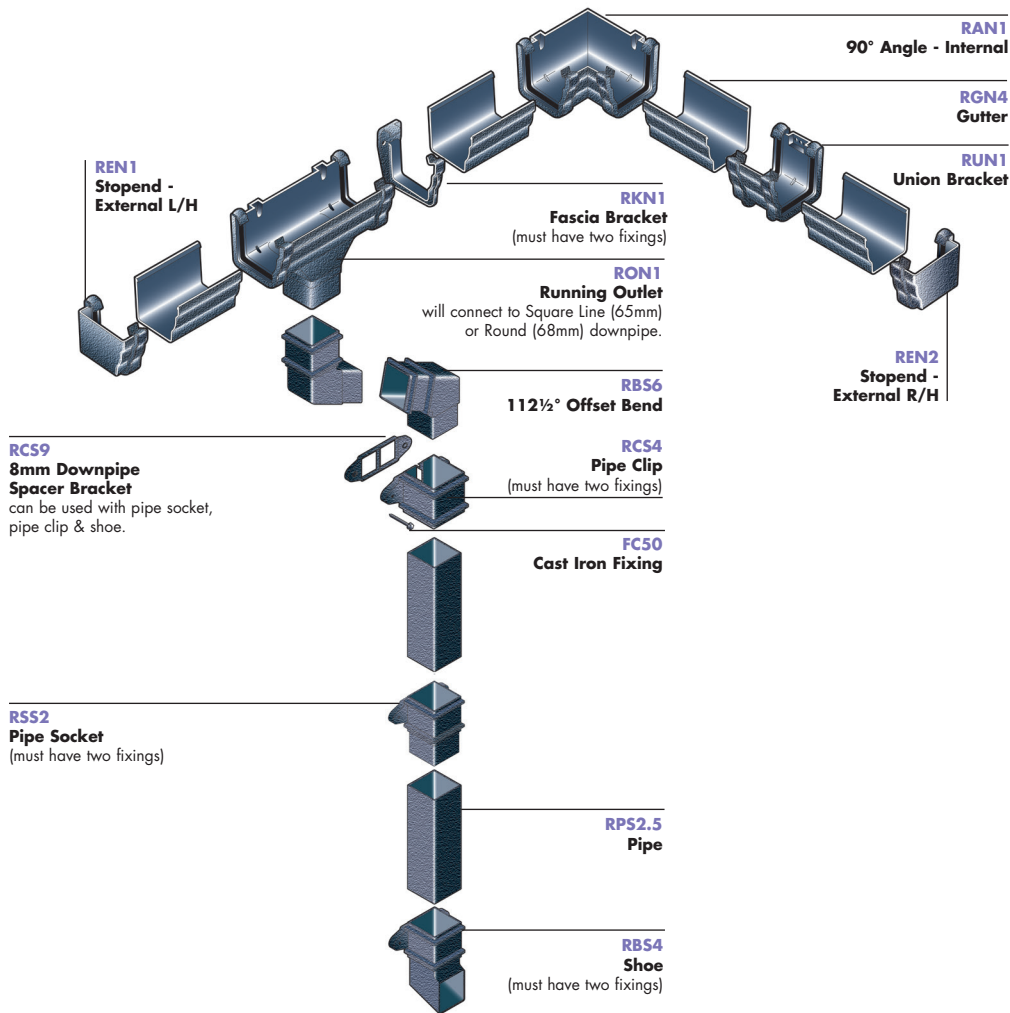
Important when ordering: Please add colour reference to code: CI "Cast Iron" Style

# "CAST IRON" STYLE RAINWATER SYSTEMS



20 YEAR  
CAST IRON  
GUARANTEE

## Niagara Ogee 110mm/65mm Rainwater



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

Important when ordering: Please add colour reference to code: **CI** "Cast Iron" Style

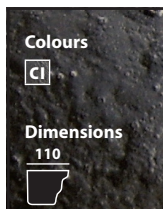


# "CAST IRON" STYLE RAINWATER SYSTEMS



20 YEAR  
CAST IRON  
GUARANTEE


**Niagara Ogee 110mm** Standard: BS EN 607, BS EN 12200 -1, BS EN 1462





## Features & Benefits:


- Traditional style ogee Hopper available.
- High capacity system.
- Water-tight seal and retaining clip pre-fitted for fast user friendly installation.
- Black fixing bolts available.
- Extremely cost effective solution for old style refurbishment and new build installations.
- Running Outlet can be connected to 68mm or 65mm Round downpipes.
- Can be used on grade 1 listed properties.

## Product Colours Code

Product	Colours	Code
<b>Gutter - 3m / 4m</b> 	3m	CI RGN3
	4m	CI RGN4


Product	Colours	Code
<b>90° Angle</b> 	Internal	CI RAN1
	External	CI RAN2


Product	Colours	Code
<b>135° Angle</b> 	Internal	CI RAN3
	External	CI RAN4

Product	Colours	Code
<b>Angle - Any Degree</b> 	Internal	CI RAN9
	External	CI RAN4


Product	Colours	Code
<b>Running Outlet - Multi Outlet</b> 	CI	RON1

FloPlast will fabricate any non-standard angle to special order. POA: Price on application.

Product	Colours	Code
<b>Stopend Outlet - 65mm Square</b> 	L/H	CI RON2
	R/H	CI RON3

Product	Colours	Code
<b>Bracket</b> 	Fascia	CI RKN1
	Union	CI RUN1


## Product Colours Code

Product	Colours	Code
<b>Stopend - External</b> 	L/H	CI REN1
	R/H	CI REN2

Product	Colours	Code
<b>Stopend - Internal</b> 	L/H	CI REN3
	R/H	CI REN4

Product	Colours	Code
<b>Bracket</b> 	Fascia	CI RKN1
	Union	CI RUN1

Product	Colours	Code
<b>Bracket</b> 	Fascia	CI RKN1
	Union	CI RUN1

Product	Colours	Code
<b>Bracket</b> 	Fascia	CI RKN1
	Union	CI RUN1

For 68mm "Cast Iron" Style Round Downpipe, see page 26.  
For 65mm "Cast Iron" Style Square Downpipe see page 27.





Important when ordering: Please add colour reference to code: **CI** "Cast Iron" Style











# "CAST IRON" STYLE RAINWATER SYSTEMS











20 YEAR  
CAST IRON  
GUARANTEE

## 68mm Round Downpipe and Fittings Standard: BS EN 607, BS EN 12200 -1, BS EN 1462

<b>Colours</b>  CI	<b>Dimensions</b> 68 	<b>Features &amp; Benefits:</b>	
		<ul style="list-style-type: none"> <li>Traditional round profile.</li> <li>Can be used with Half Round, Hi-Cap and Niagara rainwater systems.</li> <li>Durable and lightweight.</li> <li>A practical, easy to install system.</li> </ul>	<ul style="list-style-type: none"> <li>Cost effective.</li> <li>Easy to cut using a fine toothed saw.</li> <li>Suitable for new build and refurbishment applications.</li> <li>Can be used on grade 1 listed properties.</li> </ul>

Product	Colours	Code
<b>Pipe - 2.5m</b> 	CI	RP2.5
<b>Offset Bend</b> 	92½° CI	RB8
	112½° CI	RB6
<b>Shoe</b> 	With fixing lugs Requires 2 x FC50 fixings	CI RB4 <sup>1</sup>
<b>Pipe Clip</b> 	With fixing lugs Requires 2 x FC50 fixings	CI RC4 <sup>1</sup>
<b>Pipe Socket</b> 	With fixing lugs Requires 2 x FC50 fixings	CI RS2 <sup>1</sup>
<b>67½° Branch</b> 	CI	RY1
<b>Access Pipe</b> 	 CI	RX1
<b>Square/Round Downpipe Adaptor</b> 	CI	RDS2

Important when ordering: Please add colour reference to code: **CI** "Cast Iron" Style



Product	Colours	Code
<b>Universal Hopper:</b> Connects to 65mm square and 68mm round downpipe 	CI	RH1
<b>Ogee Hopper:</b> Connects to 65mm square and 68mm round downpipe 	With fixing lugs Requires 2 x FC50 fixings	CI RH4
<b>Rectangular Hopper:</b> Connects to 65mm square and 68mm round downpipe 	With fixing lugs Requires 2 x FC50 fixings	CI RH5
This product is rotationally moulded and subject to bowing along its length up to +/-4%.		
<b>Cast Iron Fixings</b> CE		
	CI	FC50
12 gauge x 50mm stainless steel fixings for "Cast Iron" Range (Socket fixings).		
<b>Fleur-de-Lis</b>		
	55mm CI	FL55
	75mm CI	FL70
<b>Tudor Rose</b>		
	40mm CI	TR55
	55mm CI	TR70
<b>Decorative Square</b>		
	40mm CI	DS55
	70mm CI	DS70
<b>Lion's Head</b>		
	75mm CI	LH55
	90mm CI	LH70

# "CAST IRON" STYLE RAINWATER SYSTEMS





20 YEAR  
CAST IRON  
GUARANTEE





## 65mm Square Downpipe and Fittings Standard: BS EN 607, BS EN 12200 -1, BS EN 1462

<b>Colours</b>  CI	<b>Features &amp; Benefits:</b>	
	<b>Dimensions</b> 65 	<ul style="list-style-type: none"> <li>■ Attractive square profile.</li> <li>■ Can be used with Squareline and Niagara rainwater systems.</li> <li>■ Durable and lightweight.</li> <li>■ A practical, easy to install system.</li> <li>■ Cost effective.</li> <li>■ Easy to cut using a fine toothed saw.</li> <li>■ Suitable for new build and refurbishment applications.</li> <li>■ Can be used on grade 1 listed properties.</li> </ul>



### Product Colours Code

<b>Pipe - 2.5m</b>			
			RPS2.5



### Offset Bend

	92½°		RBS8
	112½°		RBS6



### Shoe

	With fixing lugs Requires 2 x FC50 fixings		RBS4
--	---	---	------

### Pipe Clip

	With fixing lugs Requires 2 x FC50 fixings		RCS4
--	---	---	------

### Pipe Socket

	With fixing lugs Requires 2 x FC50 fixings		RSS2
--	---	---	------



### 67½° Branch

			RYS2
--	--	---	------



### Universal Hopper: Connects to 65mm square and 68mm round downpipe

			RH1
--	--	---	-----

### Product Colours Code

<b>Ogee Hopper:</b> Connects to 65mm square and 68mm round downpipe			
	With fixing lugs Requires 2 x FC50 fixings		RH4

### Rectangular Hopper: Connects to 65mm square and 68mm round downpipe

	With fixing lugs Requires 2 x FC50 fixings		RH5
---	---	---	-----

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

### Cast Iron Fixings €€

			FC50
---	--	---	------

12 gauge x 50mm stainless steel fixings for "Cast Iron" Range (Socket fixings).

### Fleur-de-Lis

	55mm		FL55
	75mm		FL70

### Tudor Rose

	40mm		TR55
	55mm		TR70

### Decorative Square

	40mm		DS55
	70mm		DS70

### Lion's Head


	75mm		LH55
	90mm		LH70

Important when ordering: Please add colour reference to code:  "Cast Iron" Style


# RAINWATER HARVESTING




## EcoFlo Rainwater Diverters Standard: BS EN 12200 -1

Product	Colour	Code
<b>Rainwater Diverter</b>		
	<b>B</b> <b>W</b> <b>BR</b> <b>G</b> <b>AG</b> <b>CI</b>	RVS1


Connects to 65mm square and 68mm round downpipe

<b>Rainwater Diverter</b>		
	<b>B</b> <b>W</b> <b>BR</b> <b>G</b>	RVH1

Connects to 80mm Round Downpipe


Product	Colour	Code
<b>MiniFlo Rainwater Diverter</b>		
	<b>B</b> <b>W</b> <b>BR</b> <b>G</b>	RVM1


Connects to 50mm Round Downpipe

<b>Connector Kit</b>		
	<b>B</b> <b>W</b>	RVS2


Not kitemarked


## EcoFlo Water Storage Systems

Product	Code
<b>100L Slim Water Butt</b>	
	WB100

<b>100L Slim Water Butt Stand</b>	
	ST100

100L SLIM WATER BUTT	
<ul style="list-style-type: none"> <li>● 100L capacity.</li> <li>● Space saving water butt ideal where space is at a premium.</li> <li>● Supplied with tap and lid.</li> <li>● Manufactured in the UK from recycled materials.</li> </ul>	
<b>Dimensions</b>	
<b>Water Butt:</b>	<b>Stand:</b>
32cm (12½") Length	33cm (13") Length
36cm (14") Width	33cm (13") Width
95.2cm (37½") Height	30.5cm (12") Height

Product	Code
<b>210L Water Butt</b>	
	WB200

<b>200L Water Butt Stand</b>	
	ST200

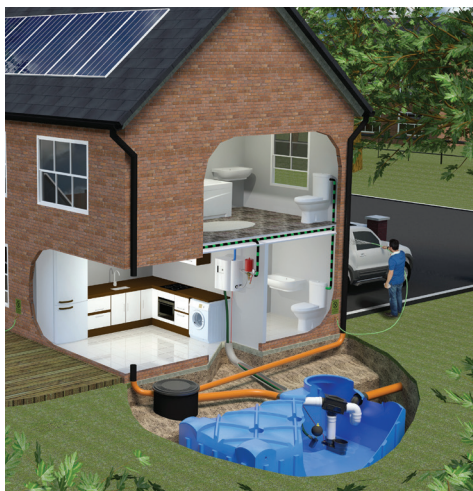
200L WATER BUTT	
<ul style="list-style-type: none"> <li>● 210L capacity</li> <li>● Traditional shape water butt with a large capacity.</li> <li>● Supplied with tap and lockable lid.</li> <li>● Manufactured in the UK from recycled materials.</li> </ul>	
<b>Dimensions</b>	
<b>Water Butt:</b>	<b>Stand:</b>
57cm (25½") Diameter	53cm (21") Diameter
97cm (39½") Height	31cm (12") Height

Important when ordering: Please add colour reference to code: **B** Black **W** White **BR** Brown **G** Grey **AG** Anthracite Grey **CI** "Cast Iron" Style

# RAINWATER HARVESTING



## StormSaver Rainwater Harvesting system Standard: BS 8515



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.
- Low decibel rating.
- Flow Rate of 10 litres per minute (same as mains pressure).
- Compact control unit.
- Cost effective.
- The shallow dig tank is robust and comes with all the necessary components.
- Ideal for new build properties and homes with up to 6 bedrooms.

Product	Size	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
- 1/2" Boosted floating suction filter kit
- 20m 1/2" Flexible suction hose



Size is in litres

### Pedestrian Duty Lid

	PDL1
--	------

Product	Size	Code
---------	------	------

### Entrance Shaft

	235mm	ES235
	635mm	ES635


### Control Panel

	CP1
---	-----

### 1/2" Boosted Floating Suction Filter Kit

	FK1
---	-----

### 1/2" Flexible Suction Hose

	20mm	H20
	40mm	H40

Product	Size	Code
---------	------	------

### 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







## Leaf/Weather Protection

Product	Colour	Code
<b>4m GutterBrush:</b> Debris eliminator	<b>B</b> <b>W</b>	GB4
		
<b>FloGuard:</b> Leaf Protection System 5m Pack	<b>B</b>	FG1
		
<b>Balloon:</b> Leaf Protection System		
 Outlet Guard <b>B</b>	<b>B</b>	OG1
<b>DrainGuard:</b> Fits round and square downpipe	<b>B</b>	DG1
		

Product	Colour	Code
<b>Snow/Tile Guard - 2m</b>	N/A	SG1
		
<b>Snow/Tile Guard Bracket</b>	N/A	SG2
		
		
		

## Ancilleries

Product	Colour	Code
<b>40ml Compressed Silicone Lubricant Spray</b>	N/A	SL40
		
<b>8mm Round Spacer Brackets</b>	<b>B</b> <b>W</b>	RC9
		
For 68mm round downpipe, only use with RS2, RC4 and RB4		
<b>8mm Square Spacer Brackets</b>	<b>B</b> <b>W</b>	RCS9
		
For 65mm square downpipe, only use with RSS2, RCS4 and RBS4		
<b>8mm Universal Fascia Bracket Spacer</b>	<b>B</b> <b>W</b>	RS9
		
Suitable for Half Round, Square Line, Niagara Ogee and Hi-Cap gutters only		

Product	Colour	Code
<b>Universal Rise &amp; Fall Bracket</b>	N/A	RF1
		
Not suitable for XtraFlo		
<b>Rafter Bracket Top Fix</b>	N/A	RR1
		
<b>Rafter Bracket Side Fix</b>	N/A	RR2
		
<b>Universal Rainwater Adaptor</b>	<b>B</b>	D96
		
Connects to 110mm Drainage		

Important when ordering: Please add colour reference to code: **B** Black **W** White



## Rainwater System Application

### 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.

### 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](http://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.

### Roof Area

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

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

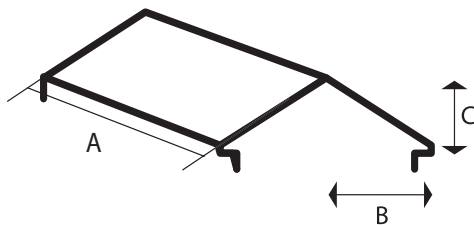
B = Half width of gable end or hip

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 m<sup>2</sup>.

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.



## Rainwater System 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 400mm centres. For further information, view our snow loading statement below.
    - 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.
  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 the 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 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.
  6. 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.)
  8. 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.
  9. 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).

### 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.





## Gutter Flow rates

OUTLET AT END OF GUTTER RUN								
System	Gutter Fixed Level				Gutter Fixed at 1:350 fall			
	Gutter Flow (litres/sec)		Roof Area (m <sup>2</sup> )		Gutter Flow (litres/sec)		Roof Area (m <sup>2</sup> )	
	Max flow rate	BS 12056	Max flow rate	BS 12056	Max flow rate	BS 12056	Max flow rate	BS 12056
<b>Half Round</b> 68mm Circular Downpipe	0.92	0.82	44	40	1.17	1.05	56	50
<b>Square Line</b> 65mm Square Downpipe	1.70	1.53	81	73	2.00	1.80	96	86
<b>Hi-Cap</b> 68mm Circular Downpipe	2.05	1.84	98	88	2.56	2.30	123	111
<b>Hi-Cap</b> 80mm Circular Downpipe	2.25	2.02	108	97	2.79	2.51	134	121
<b>Niagara Ogee</b> 65mm Square Downpipe	2.40	2.16	115	104	2.90	2.61	139	125
<b>Niagara Ogee</b> 80mm Circular Downpipe	2.64	2.37	127	114	3.19	2.87	153	138
<b>XtraFlo</b> 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 <sup>2</sup> )		Gutter Flow (litres/sec)		Roof Area (m <sup>2</sup> )	
	Max flow rate	BS 12056	Max flow rate	BS 12056	Max flow rate	BS 12056	Max flow rate	BS 12056
<b>Half Round</b> 68mm Circular Downpipe	1.80	1.62	86	77	2.60	2.34	125	113
<b>Square Line</b> 65mm Square Downpipe	3.41	3.06	163	147	3.95	3.55	189	170
<b>Hi-Cap</b> 68mm Circular Downpipe	3.80	3.42	182	164	5.00	4.05	240	216
<b>Hi-Cap</b> 80mm Circular Downpipe	4.18	3.76	200	180	5.50	4.95	264	238
<b>Niagara Ogee</b> 65mm Square Downpipe	4.50	4.05	216	194	5.30	4.77	254	229
<b>Niagara Ogee</b> 80mm Circular Downpipe	4.95	4.45	237	213	5.83	5.24	279	251
<b>XtraFlo</b> 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.



## Hopper Flow and System Design

HOPPERS		
Code	Hopper Flow (litres/sec) Max flow rate	Roof Area (m <sup>2</sup> ) 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 33.

## Design Data All gutter dimensions are nominal.

<p><b>Half Round</b> and "Cast Iron" Style <b>Half Round</b></p>	<p><b>Hi-Cap</b> and "Cast Iron" Style <b>Hi-Cap</b></p>	<p><b>MiniFlo</b></p>
<p><b>Square Line</b></p>	<p><b>Niagara Ogee</b> and "Cast Iron" Style <b>Niagara Ogee</b></p>	<p><b>XtraFlo</b></p>



## Rainwater System Compatibility

FloPlast System:	Xtraflo		Niagara		Hi-Cap		Half Round		Square		Miniflo	
	Gutter	110mm Pipe	Gutter	65mm Square Pipe	Gutter	68mm Round Pipe	Gutter	68mm Round Pipe	Gutter	65mm Square Pipe	Gutter	50mm Round Pipe
<b>Brett Martin</b>	✗	✓	✗	✓	✓	✓	✓	✓	✗	✓	✗	✗
<b>Osma</b>	✗	✓	✗	✗	✓	✓	✓	✓	✗	✗	✗	✗
<b>Polypipe</b>	✗	✓	✗	✓	✓	✓	✓	✓	✓	✓	✗	✗
<b>Terrain</b>	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
<b>Marley</b>	✗	✓	✗	✓	✓	✓	✓	✓	✗	✓	✗	✗
<b>Hunter</b>	✗	✓	✗	✓	✗	✓ (Tight fit)	✓	✓ (Tight fit)	✓	✓	✗	✗
<b>Swish</b>	✗	✓	✗	✓	✗	✓	✓	✓	✓	✓	✗	✗
<b>Kalsi</b>	✗	✓	✗	✓	✓	✓	✓	✓	✓	✓	✗	✗
<b>Freefoam</b>	✗	✓	✗	✓	✓	✓	✓	✓	✓	✓	✗	✗

Key: ✓: Fully Compatible    ✓: Compatible in one direction only    ✗: Not Compatible

The above is a guide only for connection to existing fitted product. We recommend that you do not mix systems if at all possible.

## Transportation, 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.



# FloPlast

building the future

## Contact Details:

FloPlast Limited  
 Castle Road  
 Eurolink Business Park  
 Sittingbourne  
 Kent ME10 3FP  
 UK

**Tel**  
 01795 431731

**Sales Office Direct Line**  
 01795 421422

**Fax**  
 01795 431188

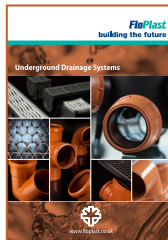
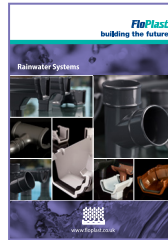
**E-mail**  
 sales@floplast.co.uk

**Website**  
 www.floplast.co.uk



April 2020

## Brochures available:



www.floplast.co.uk



Roofline, Window and Cladding Systems



Rainwater Systems



Soil & Waste Systems



Underground Drainage Systems



MDPE Systems



Hot & Cold Plumbing Systems