

FloPlast PVC-U Rainwater Systems

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
Half round 68mm Circular Downpipe	0.92	44	1.17	56
Square Line 65mm Square Downpipe	1.70	81	2.00	96
Hi-Cap 68mm Circular Downpipe	2.05	98	2.56	123
Hi-Cap 80mm Circular Downpipe	2.25	108	2.79	134
Niagara 65mm Square Downpipe	2.40	115	2.90	139
Niagara 80mm Circular Downpipe	2.64	127	3.19	153
Xtraflo 110mm Circular Downpipe	4.30	206	6.20	297

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
Half round 68mm Circular Downpipe	1.80	86	2.60	125
Square Line 65mm Square Downpipe	3.41	163	3.95	189
Hi-Cap 68mm Circular Downpipe	3.80	182	5.00	240
Hi-Cap 80mm Circular Downpipe	4.18	200	5.50	264
Niagara 65mm Square Downpipe	4.50	216	5.30	254
Niagara 80mm Circular Downpipe	4.95	237	5.83	279
Xtraflo 110mm Circular Downpipe	8.20	393	11.80	566

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.

Carrying Capacities for Gutter

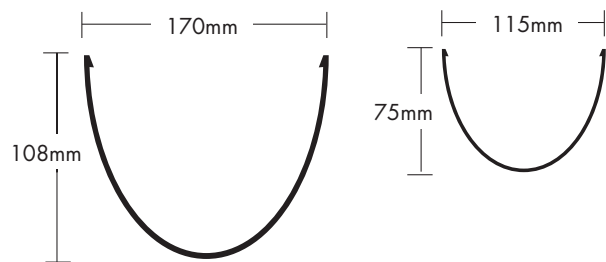
The carrying capacity of gutters varies under differing conditions. The main variables are whether or not the gutter is fitted to a fall and whether the outlet is placed in the centre or at one end of the gutter run.

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 22.

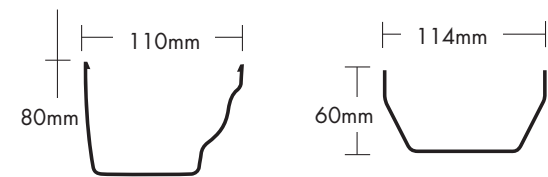
Design Data

All Gutter Dimensions are nominal.



Xtraflo

Hi-Cap



**Niagara®
& "CAST IRON"
Niagara®**

Square Line



**Half Round
& "CAST IRON"
HALF ROUND**

Miniflo

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.

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

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.

