

Rainwater Underground & Soil Systems







soil

rainwater

www.kayflow.co.uk

contents



Standard Gutters



- Easy to fit with a complete range of colour matched fittings
- Choice of 4 designs
- 10 year guarantee*
- · High gloss finish with a choice of up to 5 colours
- Lightweight for ease of storage and transportation
- Low maintenance
- · Durable and tough
- Kitemarked

P4 - 9

SuperDeep 170



- Exceptionally strong components
- · High capacity super deep system for commercial application
- Designed for high volume capture
- Market leading flow capacity
- Choice of downpipe sizes
- 10 year guarantee*
- · High gloss finish in black and grey

P 10 - 11

- Cast Iron Effect Gutters Authentic cast iron look without the weight or cost
 - Choice of 3 designs
 - Square or round downpipes
 - Unique pipe fittings with built in saddle strap
 - Durable and tough
 - 10 year guarantee

P 12 - 14

Underground Drainage



- User friendly easy fit system
- · Lightweight, easy to handle
- Impact resistant and extremely durable in use
- A wide range of products and ancillary fittings
- Tested to BS EN 1401-1: 2009 PVC-U Underground Drainage Systems*

P 16 - 21

Soil



- A wide range of profiles and fittings manufactured from PVC-U.
- High gloss PVC-U for low maintenance
- Lightweight, durable and easy to install
- Compatible with most other UK systems
- Choice of 3 colours
- Tested to BS EN 1329-1: 2014 Plastics piping systems for soil and waste discharge**

P 22 - 23

^{*}Excludes Caramel. **For scope refer to the manufacturer.

Kayflow is a comprehensive range of Rainwater, Soil and Underground drainage products.

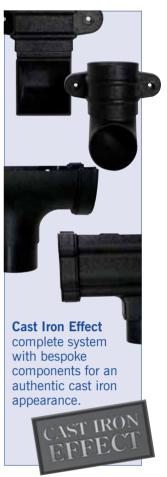
The Kayflow range is ideal for builders merchants and PVC stockists. Kayflow is easy to deal with having a straight forward pricing structure, and a national delivery service with low minimum order levels.

Kayflow can be specified with confidence. The technical team are there to help with questions concerning flow rates and installation procedures.

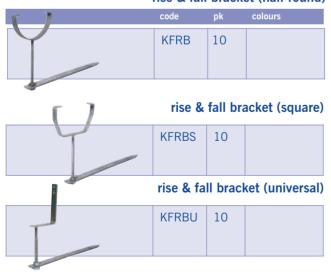
Kayflow installers have a wide choice of rainwater products and the quality and fit of the clipping system is widely regarded as excellent.







rise & fall bracket (half round)



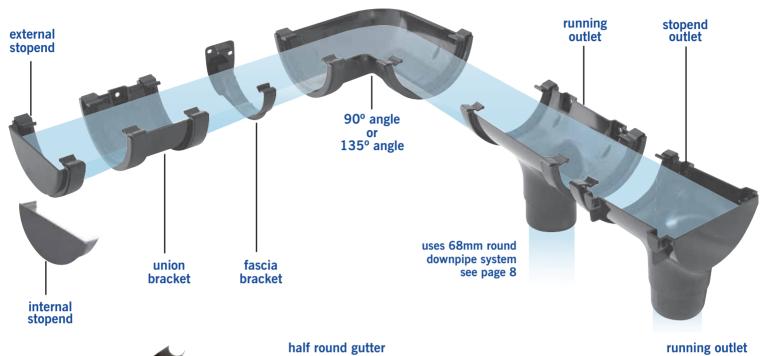
Metal brackets are galvanised or zinc plated for excellent water resistance.

accessories





Height	Width	Flow Rate	Area Drained	Down Pipe
50mm	112mm	0.9 l/s	43m ²	Round (P8)



	nai	t rouna gutter
code	pk	colours
KFG4	6x4m	W, BL, BR, GY,
KFG5	6x5m	W, BL



135° angle

KFA2	20	W, BL, BR, GY

external/internal stopends

ext	KFE1	100	W. BL. BR.
int	KFE2	20	W, BL, BR, GY

fascia bracket

	KFK1	100	W, BL, BR, GY
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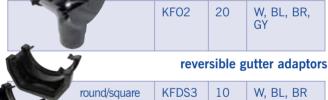
union bracket

KFU1	30	W, BL, BR, GY

^{*}Gutter adaptors - description denotes which side each section is on when looking at the building.

code	pk	colours
KF01	20	W, BL, BR, GY

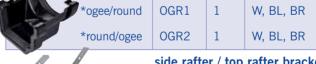
stopend outlet



KFD9

handed round/ogee gutter adaptors

W, BL, BR

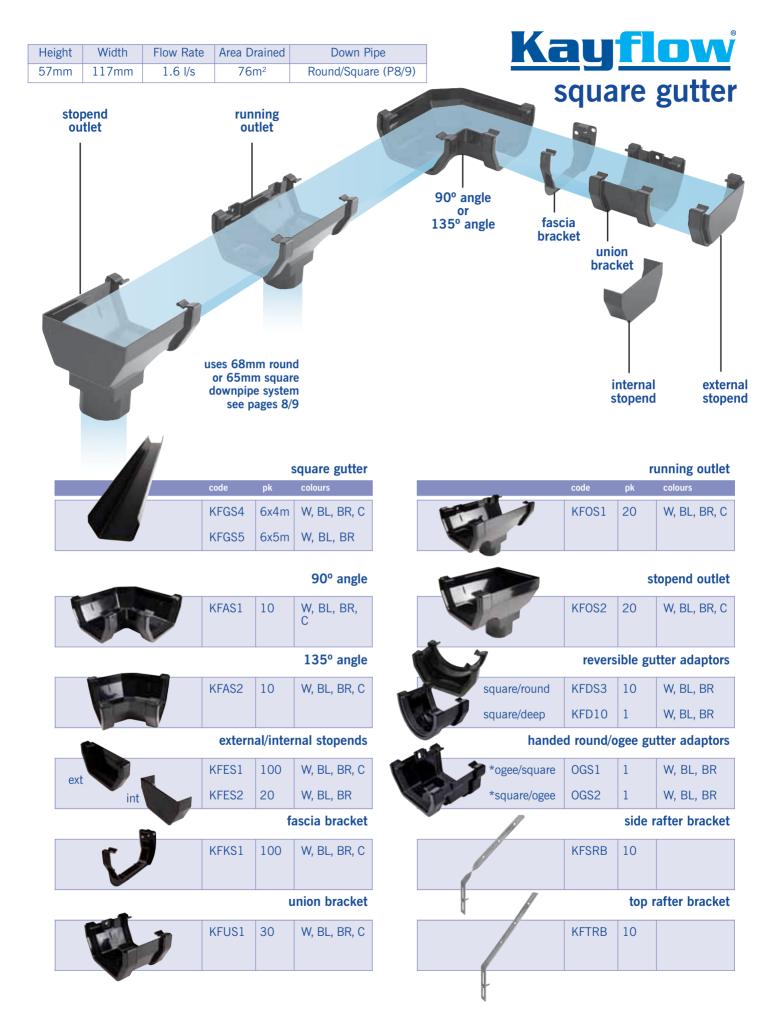


side rafter / top rafter bracket KFSRB 10 KFTRB 10 hopper (square/round)

KFHS1 10	W, BL, BR, C, GY, AG

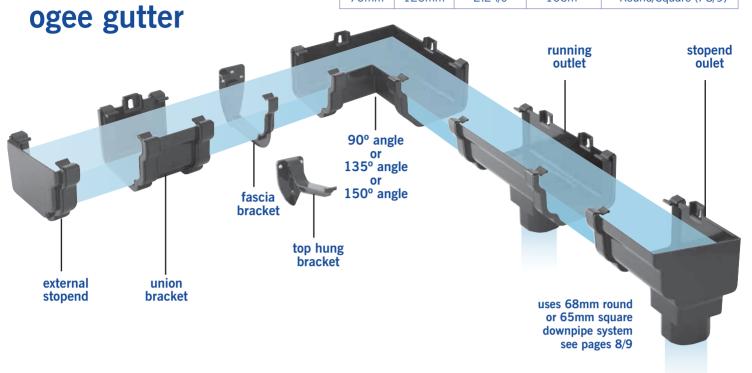
h 150 x w 247 x d 165mm

round/deep





Height	Width	Flow Rate	Area Drained	Down Pipe
70mm	120mm	2.2 l/s	105m ²	Round/Square (P8/9)



ogee gutter code pk colours OGG4 4x4m W, BL, BR, C



OGA2 10 W, BL, BR, C

135° & 150° external angles

135°	OGA4	10	W, BL,
150°	OGA5	4	BR, C

union bracket

90° external angle

OGU1	8	W, BL, BR, C

external stopend OGE1 (L) 10 W, BL, BR, C

gutter brackets

		code	pk	colours
U	fascia top hung	OGK1 OGK2	100 20	W, BL, BR, C

	rui	nning outle
OGO1	10	W, BL, BR, C



handed ogee/deep gutter adaptors

ristal .				
	*ogee/deep	OGD1	1	W, BL,
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	*deep/ogee	OGD2	1	BŔ

handed square/ogee gutter adaptors

*ogee/square	OGS1	1	W, BL,
*square/ogee	OGS2	1	BR

handed round/ogee gutter adaptors

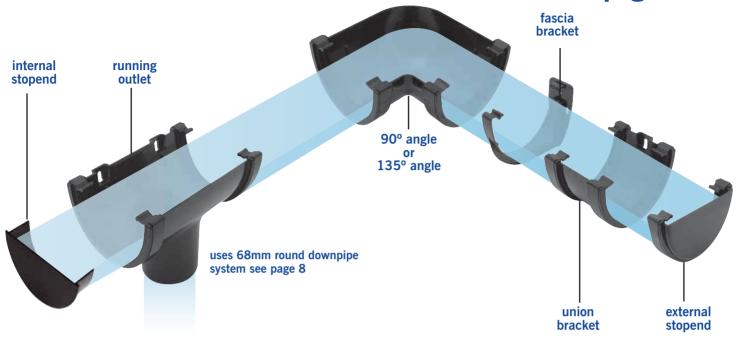
*ogee/round	OGR1	1	W, BL,
*round/ogee	OGR2	1	BR

^{*}Gutter adaptors - description denotes which side each section is on when looking at the building.

HeightWidthFlow RateArea DrainedDown Pipe71mm114mm1.8 l/s86m²Round (P8)

Kayflow

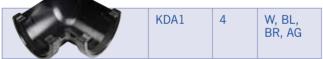
deep gutter



deep gutter

code	pk	colours
KDG4	6x4m	W, BL, BR, AG

90° angle



135° angle



reversible gutter adaptors

deep/round	KFD9	1	W, BL,
deep/square	KFD10	1	BŔ

handed ogee/deep gutter adaptors

*	*ogee/deep	OGD1	1	W. BL.
	*deep/ogee	OGD2	1	BŔ ´

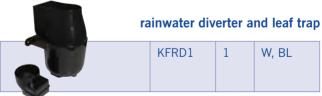
fascia bracket

	code	pk	colours
U	KDK1	100	W, BL, BR, AG
The state of		rui	nning outlet

union bracket

KDU1	10	W, BL, BR, AG

accessories



hopper (square/round)

KFHS1	10	W, BL, BR, C, GY, AG
		GI, AG

h 150 x w 247 x d 165mm

Kayflow round down pipe

- 68mm diameter
- use with half round, square, ogee & deep



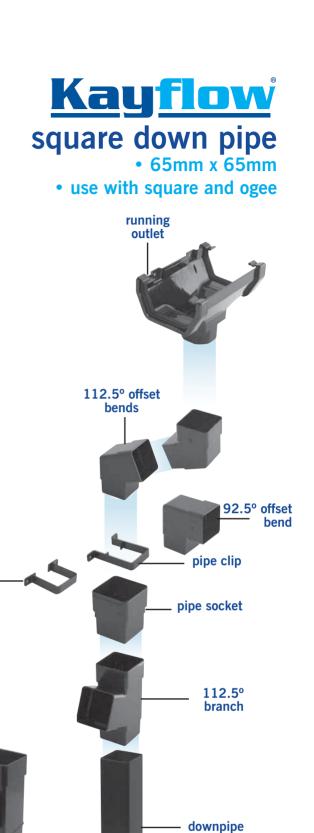
	1		rou	nd down pipe
		code	pk	colours
	2.5m	KFP25	6	W, BL, BR, GY, AG
	4m	KFP4	6	W, BL, BR, AG
	5.5m	KFP55	6	W, BL, BR, GY, AG
			92.	5° offset bend
		KFB1	20	W, BL, BR, GY, AG
			112.	5° offset bend
		KFB2	30	W, BL, BR, GY, AG
				shoe
		KFB3	30	W, BL, BR, GY, AG
				pipe clip
2		KFC1	100	W, BL, BR, GY, AG
		conc	∟ ealed f	ixing pipe clip
C		OGC3	10	W, BL, BR
		!	square	/round hopper
		KFHS1	10	W, BL, BR, C, GY, AG
				pipe socket
		KFS1	20	W, BL, BR, GY, AG
			1	12.5° branch
		KFY1	10	W, BL, BR, GY, AG
	sq	uare/roun	d dow	n pipe adaptor
		KFDS2	10	W, BL, BR,
			rour	nd access pipe
		KFAP	1	W, BL, BR
3				



pipe clip (flush)

square

access pipe





shoe

Kayflow SuperDeep 170

Kayflow SuperDeep 170 is a super tough, high capacity gutter for use on commercial buildings, hotels, flats and any structure that has a large roof area.

Tough Construction

SuperDeep 170 has a high material content that ensures it can easily contain the weight of water that could potentially flow into its huge gutter profile. Each fascia bracket is capable of supporting over 125kg and the union can take over half as much again.

The gutter angles have been produced as individual internal and external versions. This allows positive fixing of each unit to the fascia board.

High Capacity

SuperDeep 170 is one of the largest and toughest commercial rainwater systems available.

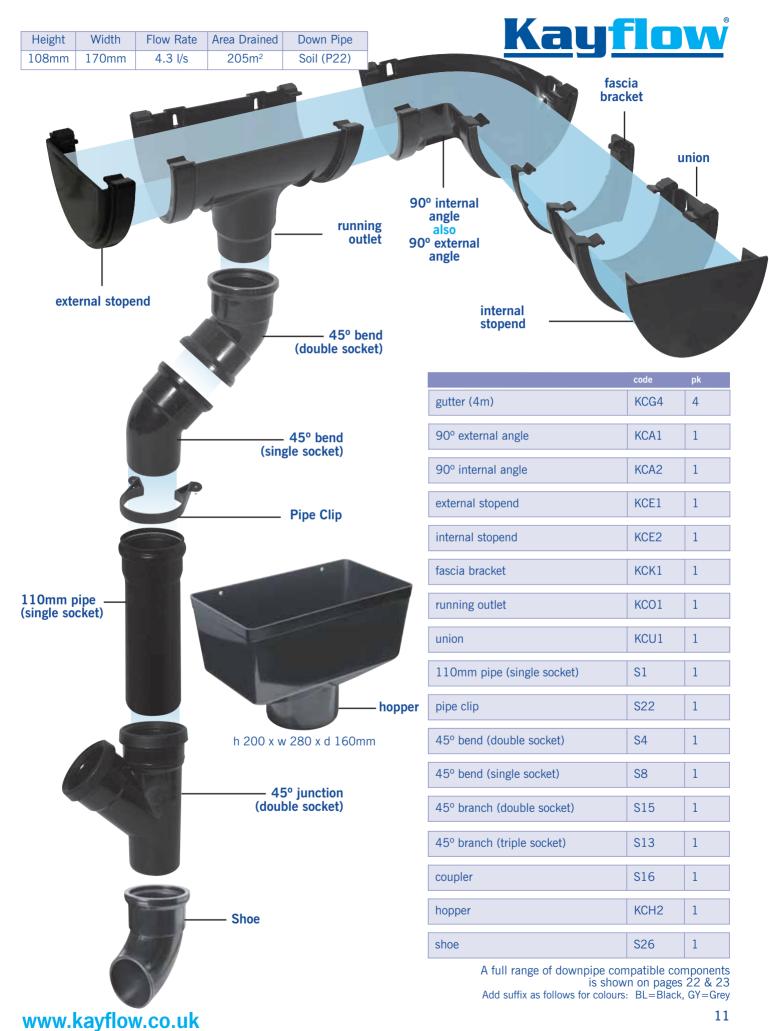
At 170mm from rim to rim SuperDeep 170 has a huge reservoir and is designed to move water rapidly into and down a 100mm or 110mm down pipe.

SuperDeep 170 has an independently tested, market leading flow rate of 4.3 litres per second.

- Ultra tough, thick-wall system
- 170mm high capacity commercial system
- White core reduces heat absorbtion
- Uses 100mm or 110mm downpipe
- Internal and external versions of angles
- Fix fascia brackets at maximum 600mm centres
- Kitemark KM508760 to BS EN 607:2004 and BS EN 1462:2004

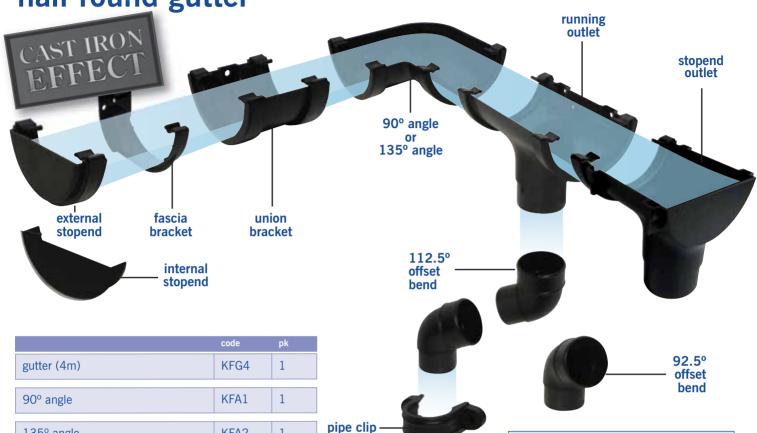








Height	Width	Flow Rate	Area Drained	Down Pipe
50mm	112mm	0.9 l/s	43m ²	Round



KFA2 1 135° angle external stopend KFE1 KFE2 internal stopend 1 fascia bracket KFK1 1 KF01 1 running outlet KF02 1 stopend outlet union bracket KFU1 1 round downpipe (2.5m) KFP25 1 92.5° offset bend KFB1 1 112.5° offset bend KFB2 1 KFB4 1 shoe with lugs pipe clip with lugs KFC2 1 KFHS2 hopper with lugs 1 KFS2 pipe socket with lugs KFY1 112.5° branch 1











Complete system with bespoke components for an authentic cast iron appearance.

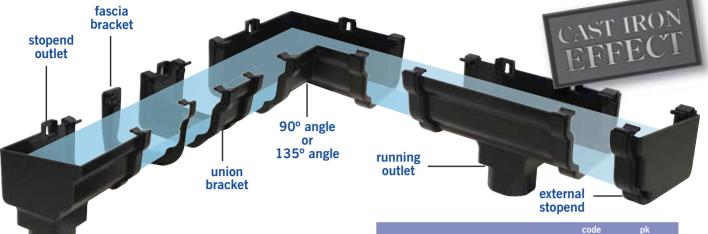


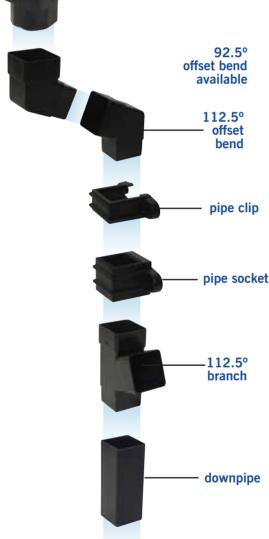


HeightWidthFlow RateArea DrainedDown Pipe70mm120mm2.2 l/s105m²Round/Square



ogee gutter





shoe

•			
	code	pk	
gutter (4m)	OGG4	1	
90° external angle	OGA2	1	
90° internal angle	OGA1	1	
135° external angle	OGA4	1	
135° internal angle	OGA3	1	
external stopend (R/H)	OGE2	1	
external stopend (L/H)	OGE1	1	
fascia bracket	OGK1	1	
running outlet	0G01	1	
stopend outlet (R/H)	0G02	1	
stopend outlet (L/H)	0G03	1	
union bracket	OGU1	1	
square downpipe (2.5m)	KFPS25	1	
112.5° offset bend	KFBS2	1	
92.5° offset bend	KFBS1	1	
shoe with lugs	KFBS5	1	
pipe clip with lugs	KFCS4	1	
pipe socket with lugs	KFSS2	1	
112.5° branch	KFYS1	1	
hopper with lugs	KFHS2	1	





Specification & Installation Guide for Guttering

How much water?

The gutter system must be able to drain the roof during an unusually heavy rainfall event which lasts at least two minutes.

BS12056 shows how to work out the amount of rainwater (in litres per second) that could run off a roof.

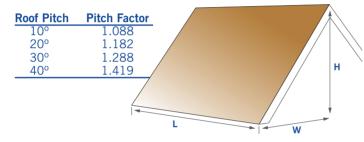
The roof area is multiplied by the amount of water running off each square metre of the roof area in litres per second.

Volume of water coming off a roof $= A \times B$ where:

A = 0.021 litres per second.

B = the effective roof area, calculated as follows:

(W+H/2) x L or L x W x Pitch factor (see table)



W = eaves to below the ridge

H = vertical height from eaves to ridge

L = length of roof section

Which Gutter to Choose

Compare the result of the calculation (AxB) with the flow capacity of the Kayflow systems available. Please note the following:

- 1. Reduce flow rates of gutters with angles by 15%.
- 2. Gutter sections longer than 50 x the height of water when the gutter is full have a reduced flow rate.
- 3. Gutters are laid level this can be up to 3mm fall per metre.
- 4. Centrally placed outlets drain a much larger volume of water.

Installation

- Fascia brackets must be used within 150mm of any gutter fitting.
- Use all fixing positions on all unions, angles and outlets for all systems.
- Whilst it is best practice to make use of all available fixing holes for gutter brackets, the specification in the table (below) may be adopted. Ensure the fixings are long enough to penetrate the rear face of the board. If the cellular PVC fascia board is less than 16mm thick, install a backing board to accept gutter bracket fixings. The gutter should be fitted as high as possible but not such that the outer edge projects above the line of the roof.
- For all gutters, the tile overhang from the fascia board should not be more than 50mm.
- Where over fascia ventilation is used, it may be necessary to use a gutter spacer and height adjuster bracket in conjunction with fascia brackets to ensure the gutter is fitted in the optimum position.

Specifications for gutter bracket fixings

Gutter Type	Normal / Sheltered Areas	Snowfall / Exposed Areas	Max distance between brackets
Round	2 x 25 x 4mm or 1 x 32 x 5mm	2 x 25 x 5mm	1m
Square	2 x 25 x 4mm or 1 x 32 x 5mm	2 x 25 x 5mm	1m
Deepflow	2 x 25 x 4mm or 1 x 32 x 5mm	2 x 25 x 5mm	800mm
Ogee	2 x 25 x 4mm or 1 x 32 x 5mm	2 x 25 x 5mm	800mm
SuperDeep 170	2 x 25 x 4mm or 1 x 32 x 6.5mm	3 x 32 x 6.5mm	600mm
Cast Effect	2 x 25 x 4mm	3 x 25 x 5mm	1m

(4mm = 8 gauge, 5mm = 10 gauge, 6.5mm = 12 gauge stainless steel pan head screw)

System Specifications (All flow rates have been independently established through physical testing to BS 12056-3:2000)

Gutter Type	Flow rate End Outlet (gutter laid level)	Area Drained	'Short' length gutter	Downpipe
Round	0.9l/s	43m²	2.4m	68mm Round
Square	1.6l/s	76m²	2.7m	68mm Round, 65mm Square
Deepflow	1.8l/s	86m²	3.4m	68mm Round
Ogee	2.2l/s	105m ²	3.4m	68mm Round, 65mm Square
SuperDeep 170	4.3l/s	205m ²	5.45m	100/110mm Round
Cast Effect Round	0.9l/s	43m²	2.4m	68mm Round
Cast Effect Ogee	2.2l/s	105m ²	3.4m	68mm Round, 65mm Square
Cast Effect Deep	1.8l/s	86m²	3.4m	68mm Round

Snow Loading

In locations where heavy snowfall is common, fixing centres for gutter brackets should be reduced to 600mm for all Kayflow systems. In addition all fixing holes should be used on all brackets and the use of snowboards is recommended where appropriate. For further advice on the specification and installation of Kayflow gutters please email:info@kayflow.co.uk or call 01827 317200





110mm underground pipe & fittings



1x3m

1x6m

1

1

1

1

1

1

0° to 90°

110mm underground fittings



inii diideigie	a i	id iitti	1183
	45°	junction (triple	e socket)
		code	pk
4		UG38	1
	90°	junction (triple	e socket)
		UG39	1
		with	twin boss
Mille		squar	e hopper
C		UG103	1
		UG105 Grid ONLY	1
ADDRESS.			

HIIIII	rectangu	lar hopper
	UG104	1
	UG105 Grid ONLY	1

	rodding eye
UG1012	1

	level invert reducer		
No.		UG115	1
		160	x 110mm

	rainwater	adaptor
0	UG1010	1

110mm	straight rubbe	r coupler
	UG1011	1

for use with bottle gully

plastic to cla	y adaptor
UG1009	1

160mm underground pipe & fittings



Kayflow inspection chambers

320 inspection chamber

450 inspection chamber



1 x Main Entry 2 x 90° Entries 2 x 45° Entries 4 x Blanking Plugs Max. Depth 1200mm All Sockets 110mm



320 square lid adaptor UG1013

UG2000





430 111a	450 manhole cover and frame		
	code	pk	
	UG1001	1	
	UG2001(35kN)	1	

UG2001 450 raising piece UG1003 riser seals for 450 base UG1007 10



450 manhole base

UG1005

UG1014

450 manhole base (160mm main run and side inlets)



	320 manh	ole base
	UG1004	1

UG1000

UG1002

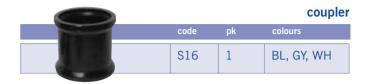
UG2000 (35kN)

UG1000

Kayflow 110mm soil

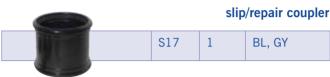
pipe (single socket)

	h-h-	(congression,
code	pk	colours
S1	1x3m	GY



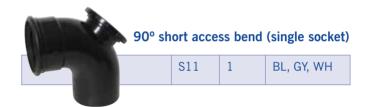


S1 1x3m BL



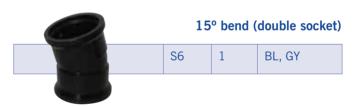


S1 1x3m WH





S10 1 BL, GY





30° bend (single socket)

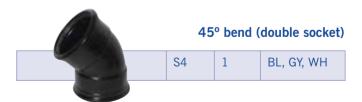
S9 1 BL, GY





45° bend (single socket)

S8 1 BL, GY, WH





90° bend (single socket)

S7 1 BL, GY, WH



110mm soil



code	pk	colours
S15	1	BL, GY, WH



	45°	branch	(triple	socket)
code		pk	colours	
S13		1	BL, GY	, WH



90° branch (double socket)

S14	1	BL, GY, WH
-----	---	------------



90° branch (triple socket)

S12 1	BL, GY, WH
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access junction (double socket)

S18	1	BL, GY, WH



air admittance valve

	S24	1	BL, GY, WH
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straight access pipe (single socket)

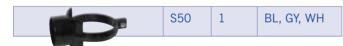
S25	1	BL, GY, WH
323	1	DL, GI, WII



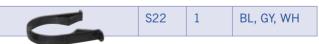
cowl

S21 BL, GY, WH





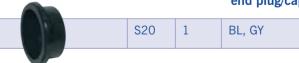




40mm adaptor

	S40	1	BL
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end plug/cap



32mm adaptor

9	S32	1	BL



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