FloPlast

building the future

Underground Drainage Systems

www.floplast.co.uk

UNDERGROUND DRAINAGE SYSTEMS

Introduction to FloPlast's Underground Drainage Systems

FloPlast are an established market leader in the manufacture and supply of Plastic Building and Plumbing systems in the UK. The Company's specialises in the following:

- PVC-UE Roofline, Window & Cladding Systems
- Rainwater Systems
- Soil & Waste Systems
- Underground Drainage Systems.
- MDPE Pipe and Fittings
- Hot & Cold Plumbing Systems

FloPlast Underground Drainage Systems comply where applicable with the requirements of the following British Standards.

bsi. PVC-U, PP, PE Piping Drainage & Sewerage BS EN 13476-2 KITEMARK™ KM 563462

bsi. PVC-U Piping Systems Drainage & Sewerage BS EN 1401-1 KITEMARK™ KM 563461

bsi. PVC-U Piping Systems Drainage & Sewerage BS EN 1401-1 KITEMARK™ KM 544332

BS EN 1401-1 PVC-U
Underground Drainage Systems (SN4)

BS EN 13476-2
Structured Wall Piping Systems (SN8)

BS EN 124
Access Covers, Gratings and Frames.

BS EN 13598 - 1
Plastic Inspection Chamber for Drainage.

"Plastic piping systems for non-pressure underground drainage and sewerage. Unplasticised polyvinyl chloride (PVC-U). Polypropylene (PP) and Polyethylene (PE)."

Part 1: Specification for ancillary fittings including shallow inspection chambers.

For CE DOP's (Declaration of Performance), please refer to our website at www.floplast.co.uk.

Drainage Pipe has a British Standard Kitemark.

Standards/Quality Control
FloPlast operations embrace quality, environment and energy management systems which have been accredited by BSI to BS EN ISO 9001:2015 Certificate No. FM 501414, BS EN ISO 14001:2015 Certificate No. EMS 538445, BS EN ISO 18001:2007 Certificate No. OHS 593622 501414 and ISO 50001:2011 Certificate No. ENMS 638370.

bsi. ISO 9001 Quality Management FM 501414 | ISO 14001 Environmental Management EMS 538445 | ISO 45001 Occupational Health and Safety Management OHS 593622 | ISO 50001 Energy Management ENMS 638370

All products are subject to continuous quality control procedures and products manufactured to British Standard Specifications are marked accordingly.

Transport, Handling & Storage

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

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.

Application
FloPlast Underground Drainage Systems are designed for use in gravity drainage and sewerage installations, at depths of up to ten metres.

Composition
All drainage pipes and the majority of fittings are manufactured from unplasticised Polyvinyl Chloride (PVC-U).

Inspection chambers, 0 - 90° adjustable bends, gully traps and gully grids are manufactured from polypropylene.

Colour
Pipes and fittings are manufactured in golden brown (terracotta) with exceptions as indicated in the product guide.

Terms & 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.

110mm Pipe & Fittings

Material: PVC-U Standard: BS EN 1401-1, BS EN 13476-2

FloPlast socketed underground pipe incorporates the latest blown end technology. The easy fit rubber seal is held in place via a circular plastic insert allowing a retention of the seal in transit and a perfect connection for jointing.

All Push-Fit underground fittings have a captive seal and snap cap which are designed to be user-friendly with no sharp edges, and with space restrictions in mind, will facilitate an easy fit connection. The seal is double ribbed, and the sockets incorporate a recessed area to provide space for the rubber seal to locate as the pipe is inserted, forming a high-capacity pressure point.

Manufacturers that produce to these standards: BS EN 1401/BS 4660/BS 7158/ BS EN 124

Brand	110mm	160mm
Hepworth	✓	✓
Brett Martin	✓	✓
Osma/Wavin	✓	✓
Polypipe	✓	✓
Polypipe Terrain	✓	✓
Marley	✓	✓
Hunter	✓	✓

FloPlast Installation Videos

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

Visit www.floplast.co.uk and download a pdf step by step guide to help with your installation.

Product			Code
Pipe - 3/6m			
	Plain Ended (Bale quantity 50)	3m	D043
		6m	D046
	Perforated Plain Ended (Bale quantity 50)	6m	D046P
	Single Socket (Bale quantity 50)	3m	D143
		6m	D146
Pipe Coupling			
	Single Socket Coupling		D124
	Double Socket Coupling Removable centre stop for use as slip coupling		D105
Single Socket Bends			
	87½° Bend (Socket/Spigot)		D161
	45° Bend (Socket/Spigot)		D163
	30° Bend (Socket/Spigot)		D164
	15° Bend (Socket/Spigot)		D167
Double Socket Bends			
	87½° Bend		D561
	45° Bend		D563
	30° Bend		D564
	15° Bend		D567

110mm Pipe & Fittings

Material: PVC-U Standard: BS EN 1401-1, BS EN 13476-2

Product	Code
Rest Bends	
 87½° Rest Bend	D571
 87½° Settlement Rest Bend	D570
Adjustable Bends	
 0-90° Adjustable Bend	D560
Large Radius Bends	
 87½° Plain End	D281
 45° Plain End	D283
 87½° Plain End with Channel Access	D581
 45° PE with Channel Access	D583
Equal Junctions Double Socket	
 87½° Junction	D190
 45° Junction	D210
Equal Junctions Triple Socket	
 87½° Junction	D191
 45° Junction	D211

Product	Code
Access Fittings	
 87½° Access Bend (Socket/spigot)	D169
 Access Pipe (Socket/spigot)	D274
 Screwed Access Cap	D292
 Channel Access Pipe PE 1mtr	D870
Rodding Points	
 PVC Oval Rodding Point (Spigot)	D881
 PVC Oval Rodding Point (Socketed)	D882
 PVC Square Rodding Point (Spigot)	D883
 PVC Square Rodding Point (Socketed)	D884
(45° rodding point with sealed access cover suitable for loading up to 10kN (1 tonne) where the frame of the cover is supported by a concrete plinth)	
110mm Non-Return Valve CE	
 110mm Non-Return Valve-Single Flap	D550
DrainGuard	
 Fits round and square downpipe	DG1

110mm Fittings

Material: PVC-U Standard: BS EN 1401-1, BS EN 124

Product		Code
Universal Traps		
	Universal Gully Trap (Socket/Spigot 45°)	D500
	Low Back 'P' Trap	D501
	Leaf/Debris Interceptor Gully	D94
	Spare Square Grid	D502
	Square Blank Cover Grid	D508
	Square Hopper Including Polypropylene Grid	D504
	Rectangle Blank Cover Grid	D507
	Rectangular Hopper Including Polypropylene Grid	D506
Bottle Gully Traps		
	Bottle Gully Circular Grid	D510
	Bottle Gully Square Grid	D515
	Bottle Gully Rectangular Grid	D520
	Back Inlet Bottle Gully Rectangular Grid	D530
	Back Inlet Bottle Gully Circular Grid	D540
	200mm Riser	D505

Product		Code
Hopper and Grid		
	Round Hopper and Grid	D514
	Square Hopper and Grid	D518
	Rectangular Hopper and Grid	D524
Adaptors		
	110mm Waste Available in B W G	SP95*
	110x68mm Rainwater Available in B W G	SP96
	Universal Waste (32/40/50mm)	D95
	Universal Rainwater (Square/Round)	D96
	80x110mm	D97
	160x110mm Level Invert (Socket/Spigot)	D99
	Supersleve Clay DS	D100
	Hepsleve Clay DS	D101

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

110mm Fittings

Material: PVC-U Standard: BS EN 1401-1, BS EN 124

Product	Code
Drain Connector	
 Available in B G	SP107
Connects directly into socket of a cast iron clay or plastic pipe system to provide a socket for plastic pipe.	
Flexible Couplings, Connectors and Adaptors	
 Coupling 98mm-115mm	D102
 Adaptor A: 98mm-115mm B: 120mm-136mm	D103
Socket Plug	
	D296

Features & Benefits

- Provides an efficient means of waste water drainage and foul discharge from above ground drainage systems.
- Manufactured in PVC-U to give a strong durable product which is lightweight and easy to work with.
- Suitable for high temperature waste discharge.
- Fittings have an aesthetic modern look, are compact in size, yet remain within the British Standard specification.
- Push-Fit joint through an innovatively designed seal and snap cap system.
- Comprehensive range of fittings to suit most installations and which integrate with all FloPlast above and below ground drainage systems.

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

110mm Fittings

Material: Polypropylene Standard: BS EN 1401-1, BS EN 124, BS EN 13598-1 & 2

Product	Code
Large Inspection Chamber - 450mm Diameter (LIC)	
 270mm Deep Chamber Base **5x110mm flexible inlets** Supplied with 4 socket plugs (Allows for 0-20° of movement)	D900
 270mm Deep Chamber Base **5x110mm fixed inlets** Supplied with 4 socket plugs	D910
 235mm Extension Riser (Can be cut to size)	D915
 235mm Extension Riser and Seal (Can be cut to size)	D916
 Riser Sealing Ring (Use with each riser)	D935
 450mm Plastic Cover and Frame (A15 rating)	D930
 450mm Plastic Cover and Frame with 350mm restricted access (A15 rating) (For use with I.C. over 1.2mtr deep up to 3mtr)	D931
 Cast Iron Cover and Plastic Frame (A15 rating) (For replacement purposes only)	D923
 Block Paving Cover 450mm Square/Round	D933
 450mm Ductile Iron Cover/Frame (B125 rating) (Conforms to the requirements of SfA7)	D934
 **NEW** 450mm Plastic Cover and Square Frame (A15 rating)	D940
 **NEW** 450mm Plastic Cover and Square Frame (A15 rating) restricted access (For use with I.C. over 1.2mtr deep up to 3mtr)	D941

To conform with document H Building Regulations H2015 use D930/D931/D940/D941 as required. 450mm inspection chamber covers are compatible with the 160mm Inspection Chamber base.

Product	Code
Mini Access Chamber - 300mm Diameter (MAC)	
 270mm Deep Chamber Base **5x110mm flexible inlets** Supplied with 4 socket plugs (Allows for 0-20° of movement)	D800
 270mm 45° Inlet Chamber Base **3x110mm flexible inlets** Supplied with 2 socket plugs (Allows for 0-20° of movement)	D801
 270mm 90° Inlet Chamber Base **3x110mm flexible inlets** Supplied with 2 socket plugs (Allows for 0-20° of movement)	D802
 270mm 45° Inlet Chamber Base **3x110mm fixed inlets** Supplied with 2 socket plugs	D810
 100mm Chamber Riser With integral rubber ring (60mm cut down facility)	D820
 200mm Chamber Riser With integral rubber ring (60/100/150mm cut down facility)	D822
 Square 340mm Sealed Plastic Screw Down Cover and Frame (A15 rating)	D830
 Round 300mm Sealed Plastic Screw Down Cover and Frame (A15 rating)	D831
 Block Paving Cover 300mm Square/Round	D932
800g Lubricant Gel	
	SG800

Inspection Chambers (Polypropylene)

FloPlast 300mm Mini Access Chamber and 450mm Large Inspection Chamber offer an alternative to traditional manholes and may be used in depths of up to 600mm for the MAC, 1200mm and 3000mm for the Large Inspection Chamber.

300mm Mini Access Chamber (MAC)
FloPlast innovative design for the MAC, brings unrivalled flexibility to the underground drainage market.

The MAC has flexible connections for all inlets, allowing a 10° movement in any direction. This is of great assistance to the installer where the connecting pipes are not perfectly aligned with the MAC inlets. In many instances it will eliminate the need to install an extra bend and provide a saving on the cost of the installation.

In addition, the variety of inlet combinations available on the FloPlast Mini Access Chamber and the choice 100mm and 200mm chamber risers, provide installers with a significant advance in the ease of which they can plan and install their drainage system. The MAC base is designed to facilitate the stacking of bases on top of one another to give a space saving storage solution for the merchant stockist.

In summary, the FloPlast Mini Access Chamber design and flexibility provides a practical, innovative and cost effective solution for the provision of access in a drainage system.

BS EN 13598 - 1: 2010 Plastic Inspection Chamber for drainage.

UK Patent No. GB2357127.

450mm Diameter Large Inspection Chamber (LIC)
FloPlast product innovation is again demonstrated with its 450mm Diameter Large Inspection Chamber.

To comply with the changes to Approved Document H of The Building Regulations 2000, significant research and development has gone into the design of this unique product. The chamber base incorporates five 110mm flexible inlets, which allow 10° of movement in any direction.

The plastic cover and frame can take loadings of up to a maximum of 35kN. Should the connection of D930/ D931 cover and frame be required directly to the base D900/D910, then riser D915 must be used and cut to suit, by cutting just above the bottom most large flange/rib.

(Please ensure sealing rings are used in conjunction with each riser section).

FloPlast installation details are concise, however they are provided for general guidance only.

FloPlast recommend that reference should be made to the appropriate Codes of Practice for Underground Drainage Systems.

European Standards BS EN 752:2008 Drain and sewer systems outside buildings and BS EN 1610:2015 Construction and testing of drains and sewers, have been introduced. These have replaced British Standards BS8301 (Code of Practice for Building Drainage).

Meets with the requirements of Sewers for Adoption - 7th Edition (SfA7), type 3 and 4 typical inspection chamber detail.

Useful Measurements for Installation of MAC & LIC

	Mac	inc' Lid
Base only	270	300
Base + one riser (100mm)	370	400
Base + one riser (200mm)	470	500
Base + (1 x 100 x 1 x 200) risers	570	600

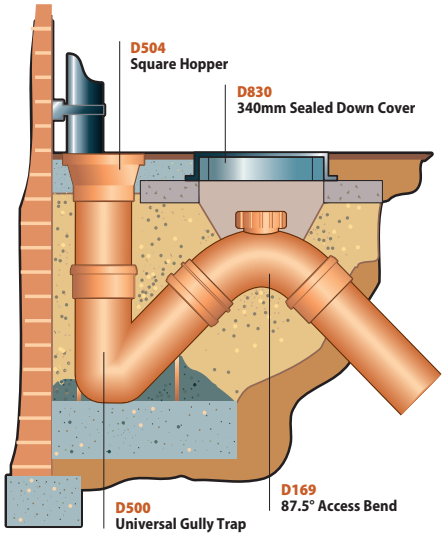
LIC Invert Depth (mm)	270	505	740	975	1210	1445	1680	1915	2150	2385	2620	2855	3090
Number of Riser Required	Base only	1	2	3	4	5	6	7	8	9	10	11	12
Cover Required	(D930) 450mm opening up to a maximum of 1200mm					(D931) 350mm opening up to a maximum of 3000mm							

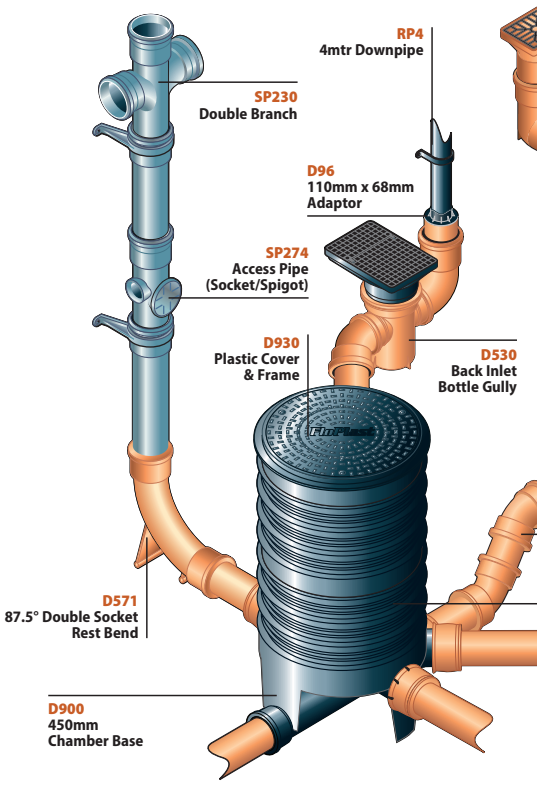
Underground Drainage

Installation guide - Universal gully trap with access facility

- The gully should be assembled out of the ground.
- Place the gully on a substantial base e.g. Pre-cast concrete slab, bricks etc and stabilise by concreting base up to the level where the supporting feet meet the gully body. Ensure that concrete does not enter the ring seal joint.
- Connect the Access Bend (D169) onto the 45° spigot end of the gully using FloPlast Silicone lubricant to assist with easy insertion.
- Make connection to drainage run using socketed pipe (D146).
- Backfill with suitable material to the required level.
- To complete the access installation, set in concrete an airtight 340mm Sealed PVC Cover and Frame (D830).

D560
0-90° Adjustable Bend



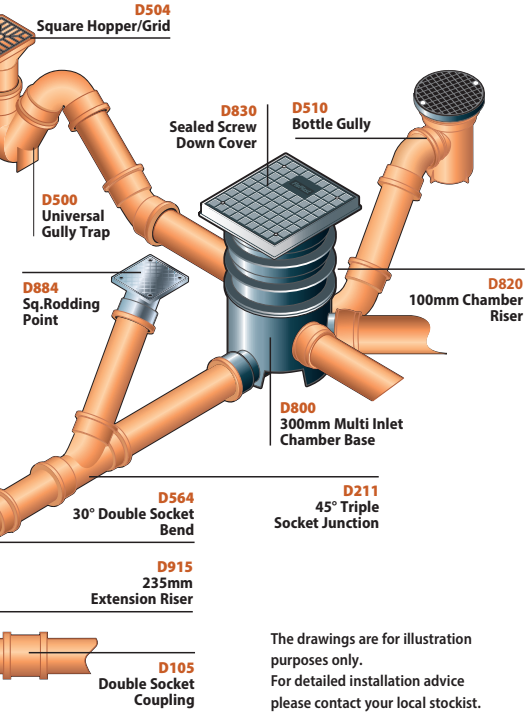


Underground Drainage

Back Inlet Bottle Gully (BIG)

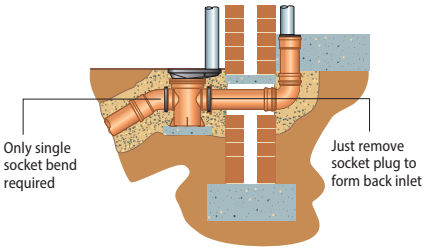
- Screw down, hinged rectangular heavy duty hopper.
- Heavy duty circular hopper available (D540).
- Both hoppers allow for height adjustment of 32mm.
- Sealed dip tube easily removed for rodding purposes.
- Gully riser allows an increase of invert depth up to 200mm (D505). Maximum of one riser only.
- Back inlet socket plug easily removed. No need to drill.

D530
Back Inlet Bottle Gully with Rectangular Lid

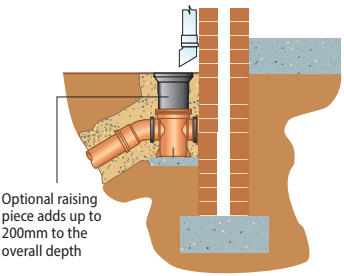


The drawings are for illustration purposes only.
For detailed installation advice please contact your local stockist.

Bottle Gully with rectangular hopper



Bottle Gully with circular hopper



160mm Pipe & Fittings

Material: Polypropylene/PVC-U Standard: BS EN 1401-1, BS EN 13598-1&2, BS EN 13476-2, BS EN 124

Product		Code
Pipe - 3/6m		
 Plain Ended (Bale quantity 35)	6m	6D046
 Single Socket (Bale quantity 35)	3m	6D143
	6m	6D146
Pipe Coupling		
	Double Socket	6D105
Single Socket Bends		
	87½° Bend (Socket/spigot)	6D161
	45° Bend (Socket/spigot)	6D163
	30° Bend (Socket/spigot)	6D164
	15° Bend (Socket/spigot)	6D167
Double Socket Bends		
	87½° Bend	6D561
	45° Bend	6D563
	30° Bend	6D564
	15° Bend	6D567
Adaptors		
	160x110mm Level Invert (Socket/spigot)	D99
	Flexi-Adaptor Cast iron/160mm	6D102
	Clay Adaptor A: 160mm-180mm B: 180mm-200mm	6D104
Socket Plug		
		6D900P

Product		Code
Equal Junctions		
	87½° Junction (Double Socket)	6D190
	45° Junction (Double Socket)	6D210
	87½° Junction (Triple Socket)	6D191
	45° Junction (Triple Socket)	6D211
160/110mm Unequal Junctions		
	87½° Junction (Double socket)	6D198
	45° Junction (Double socket)	6D218
160mm Large Inspection Chamber - 450 Diameter (LIC)		
	160mm x 160mm 90° Chamber Base with two 45° 110mm Inlets	6D900
	235mm Extension Riser (Can be cut to size)	D915
	235mm Extension Riser and Seal (Can be cut to size)	D916
	Riser Sealing Ring (Use with each riser)	D935
	450mm Plastic Cover and Frame (A15 rating)	D930
	450mm Plastic Cover and Frame with 350mm restricted access (A15 rating) (For use with I.C. over 1.2mtr deep up to 3mtr)	D931
	Cast Iron cover and Plastic Frame (A15 rating)	D923
	**NEW** 450mm Plastic Cover and Square Frame (A15 rating)	D940
	**NEW** 450mm Plastic Cover and Square Frame (A15 rating) restricted access (For use with I.C. over 1.2mtr deep up to 3mtr)	D941

To conform with document H Building Regulations H2015 use D930/D931/D940/D941 as required. 450mm inspection chamber covers are compatible with the 160mm Inspection Chamber base.

Pipe Weights

Single socket pipe

Size	Length	Weight (kg/m)	Code
110mm	3m	1.63	D143
	6m	1.63	D146
160mm	3m	3.03	6D143
	6m	3.21	6D146

Plain ended pipe

Size	Length	Weight (kg/m)	Code
110mm	3m	1.6	D043
	6m	1.26	D046
160mm	6m	3.03	6D046

Plain ended perforated pipe

Size	Length	Weight (kg/m)	Hole size	Hole Centres	No. of Holes	Code
110mm	6m	1.72	7mm	20mm	210	D046P

Pipe & Fitting Dimensions

Wall Thickness

Product	Min/Max	110mm	160mm
Pipes	min	3.2	4
Fittings	min	3.2	4

Mean outside diameter pipe and fittings spigot

Min/Max	110mm	160mm
Min	3.2	4
Max	3.8	4.6

Size of bales

Product	No. of 3m/6m lengths per bale	Dimensions height	width	Weight per bale
D043 (PE)	50	3m	1.2m	245kg
D143 (SS)	50	3m	1.2m	245kg
D046 (PE)	50	6m	1.2m	490kg
D046P (PE)	50	6m	1.2m	516kg
D146 (SS)	50	6m	1.2m	490kg
6D143 (SS)	35	3m	1.2m	337kg
6D046 (PE)	35	6m	1.2m	657kg
6D146 (SS)	35	6m	1.2m	674kg

(PE): Plain ended pipe (SS):Single socket pipe

Installation Guide - Pipe & Fittings

Trench Detail and Backfill Material

The trench should be constructed 300mm wider than the outside diameter of the pipe to be installed. Where the "as dug" material is suitable, the bottom of the trenches may be trimmed to form a pipe bed. The material can also be used as a sidefill and backfill. Imported granular backfill materials such as pea shingle, used in accordance with the recommendations of BS5955 Part 6: 1980 Appendix A, having a nominal particle size not exceeding 10mm, should be used as required up to and over the crown of the pipe. When this has been achieved the "as dug" material can be replaced into the trench. Once 300mm of material has been replaced, mechanical compaction can commence.

Testing

Testing of all drainage installations should be carried out in accordance with the requirements of the appropriate approving authority, using either air or water testing. References should be made to current editions of Building Regulations (Approved Document 'H') BS EN 752:2008 and BS EN 1610:2015. Where drainage appears inside buildings BS EN 12056 should also be consulted.

Jointing

Pipe End Preparation

When cutting pipes ensure that all ends are chamfered and are free from swarf, grit and dirt.

Ring Seal Joints

The FloPlast Ring Seal Joint acts as both a seal and expansion joint. The following sequence should be adhered to:

- Check that all ring seal sockets are properly located in their recessed position.
- Ensure spigots and ring seal sockets are dry, clean and free from grit and dirt.
- Lubricate all ring seal fittings. This will allow for a fast and efficient connection.
- Ensure all pipes and fittings are in the correct position.
- Insert pipe fully into the socket, then withdraw pipe by a minimum of 12mm. This will allow for expansion.

Adaptors

External rainwater downpipes can be connected directly to a surface water drain or, depending on the design, via a gully trap to the underground drainage system. The diameter of FloPlast's 110mm PVC- U above and below ground drainage systems are the same and therefore a direct connection may be achieved without the use of an adaptor. Where rainwater pipes connect directly to a drain, a suitable reducer will be required as follows:

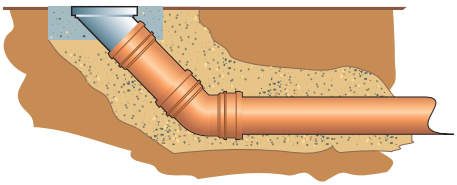
- **SP96**: 110mm x 68mm Rainwater Adaptor for round downpipe. RDS2 should be used with SP96 for connection to 65mm square downpipe.
- **D96**: Universal Rainwater Adaptor for square and round downpipe.
- **D95**: Universal Waste Adaptor for 32mm, 40mm and 50mm waste pipe connection to 110mm Soil/ Drainage.

Connection to other materials such as Cast Iron, Supersleve and Hepsleve, is achieved by the use of a range of rigid and flexible couplings and adaptors.

Access and Rodding Points

Access is very important on all installations for testing, inspection, and removal of any blockage or debris. Rodding in both directions can be achieved by using a Mini Access Chamber (MAC) or 450mm Large Inspection Chamber (LIC) in conjunction with access fittings.

Rodding points are more commonly used in storm water drainage systems where the rodding point is located at the head of the drain run connection to a chamber, and being no further than 22 metres away from the chamber. The rodding point should be enclosed in a concrete surround to provide support and to ensure that it does not become mislaid at ground level.



Installation Guide - Mini Access Chamber (MAC)

A mini access chamber has a relatively narrow riser shaft, and is used for inspecting, clearing, and rodding a drain line.

The narrowness of the riser shaft permits limited clearing and rodding to a maximum depth to invert of 600mm.

For SfA7 installations this chamber can be installed up to 2000mm.

Any unused side connections should be sealed with a plain socket plug.

Should bends be required to change direction, these should be sited at the point of entry to the chamber.

Side branches of the chamber should not be used to change direction of the main flow, as a self-cleansing flow through the chamber cannot be guaranteed.

Intermediate depths can be achieved by cutting a riser at the indicated points.

The frame and cover should also be adjusted to suit the level of the adjacent ground and surrounded in a minimum of 50mm of concrete.

Installation Guide - Large Inspection Chamber (LIC)

The large diameter of the riser shafts of inspection chambers enables them to be installed to a maximum depth to invert of 1200mm when used in conjunction with a 450mm opening cover and frame. The chamber complies with Approved Document H of the Building Regulations 2000 by using the 350mm reduced opening cover and frame for installations over 1200mm up to a maximum of 3000mm invert depth. For SfA7 installations the invert depths are 1000mm and 3000mm.

The chamber is installed on a suitable bed dependent on the quality of the trench and backfill materials.

Backfilling is continued up to approximately 50mm of the finished ground level.

The frame and cover are placed on a bed of concrete around the top of the uppermost shaft, and adjusted to the finished level.

The frame is securely fixed through the wall of the chamber at the set location points using self-tapping screws. The cover is then secured to the frame with the captive screws. It is impossible for the cover to be removed without undoing the screws.

Intermediate depths can be achieved by cutting the riser at 60mm intervals; the frame also has 55mm of telescopic adjustment.

Any unused side connections should be sealed with a plain socket plug.

Should bends be required to change direction, these should be sited at the point of entry to the chamber.

Side branches of the chamber should not be used to change the direction of the main flow, as a self-cleansing flow through the chamber cannot be guaranteed.

Should the connection of D930/D931/D940/D941 cover and frame be required directly to the base D900/D910, then riser D915 must be used and cut to suit, by cutting just above the bottom most large flange/rib.

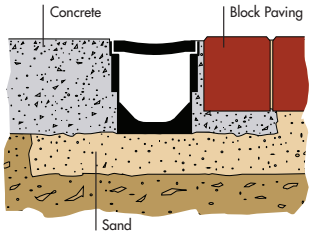
FloDrain 110mm Domestic Channel Drainage

Material: Polypropylene/Galvanised steel Standard: BS EN 1433 Attestation level 3

Product	Code
Channel Drain with Plastic Grate - 1mtr (Pallet qty 90) CE	
	D700
Drain Corner with Plastic Grate CE	
	D710
Garage Pack with Plastic Grate (Pallet quantity 16) CE	
	D750
(Consists of 3x1m Channel lengths plus 1x End cap & 1x End outlet)	
Sump/Trap Unit and Basket with Plastic Grate CE	
	D732
End Cap CE	
	D711
End Outlet CE	
	D712
Balloon Guard	
	D714

Product	Code
Channel Drain with Galvanised Grate - 1mtr (Pallet qty 90) CE	
	D701
Drain Corner with Galvanised Grate CE	
	D720
Garage Pack with Galvanised Grate (Pallet quantity 16) CE	
	D751
(Consists of 3x1m Channel lengths plus 1x End cap & 1x End outlet)	
Sump/Trap Unit and Basket with Galvanised Grate CE	
	D733
Threshold Channel Drain - 1mtr CE	
	D730
Channel Drain Jointing Clip	
	D734
Corner Spacer CE	
	D715

- Quality domestic surface Channel Drainage 110mm x 100mm (Internal channel dimensions).
- Anti-slip heel guard grating.
- Garage Pack available (3 x 1m length, end cap and outlet).
- 5 tonne spread load. 1.5 tonne point load.
- 4 outlets per length for maximum flexibility.
- Quad section for corners and junctions.
- Concave grid for maximum flow.



Installation Guide - FloDrain 110mm Domestic Channel Drainage

Domestic Channel Drainage
Easy to install with concrete or paving

1. Dig trench for FloDrain, allowing for 50mm deep compacted sand base and wide enough for a minimum of 100mm backfill of concrete on each side.
2. Fix a string line to finishing height of grate 2mm below final surface level.
3. Allow a fall of approx. 5mm for every 1m length (1:200).
4. Start installation at lowest point of the run to accommodate any cut lengths which should be installed at the point furthest from the outlet.
5. FloDrain joints and end caps to be sealed with silicone sealant.
6. Use an end cap at highest point of FloDrain.
7. Connect the lowest end of FloDrain to 110mm PVC- U BS EN 1401 drainage pipe using either an end outlet or the preformed channel bottom outlet to allow water to drain away. Contact FloPlast for additional coupling details for other connections e.g. clay pipes etc.
8. FloDrain can be cut to length with a hacksaw. Install with grate fitted.
9. Protect grate with tape before concrete is poured.
10. Finish concrete 2mm above level of grate.
11. Allow 72 hours to cure before vehicle use or removing grates.
12. To remove grate, simply run a screwdriver along the edge of the grate to dislodge.
13. If installing block paving or paving slabs, haunch around channel with concrete to a height which allows the depth of the block or slab to finish 2mm above the level of grate.

All FloDrain installations must be set in concrete.

Easy to use channel to channel locking system

Certified to Load Class A15 BS EN 1433 = 1.5 tonne

Built in heel guard and anti slip system

90° Tee

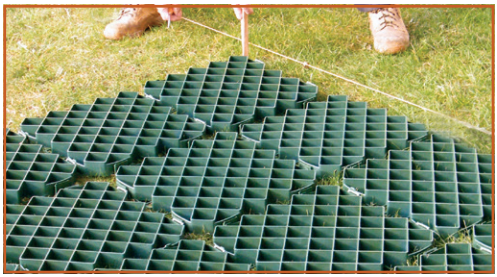
4 Way Junction

90° Bend

GroundGuard

Lightweight ground reinforcement system suitable for pedestrian areas and light vehicle access

Ground Guard is a linked paving system, manufactured from Polyethylene, that provides a durable safe and eco-friendly surface for grass reinforcement, ground stabilisation and gravel retention for pedestrian and vehicle access areas.



Suitable for:

- Additional/overflow grass car parks.
- Walkways and disabled access routes.
- Golf buggy paths.
- Driveways and residential lawn parking.

Please visit www.floplast.co.uk for installation instructions.

Product		Code
GroundGuard Tiles		
	Pack of 20 = 3 square metres 1 Tile = 390 x 390 x 40mm Tested in excess of 200 tonnes per square metre spread load	G40

Land Drainage

Standard: BS 4962, Licence No: KM557607

Land Drainage is used to remove excess water from fields and gardens, in fact any area where excessive water is a problem.

The perforations allow seeping water to ingress the pipe, capillary action then maintains the water within the pipe allowing it to flow to its destination i.e. Stormwater Attenuation Tanks, also known as Modular Plastic Geo Cellular Units (egg crates) or a watercourse (stream, lake etc).

System Features:

- Perforated and coiled land drainage pipe is manufactured in HDPE.
- Normally used in agriculture and in building construction sites.
- Particularly beneficial in areas with heavy ground conditions i.e. clay.
- Relieves hydrostatic pressure.

Product			Code
Pipe			
	Perforated Plain Ended (Bale quantity 50)	6m	D046P

Product	No Size O.D	Code
Couplings		
	80mm	LC80
	100mm	LC100
Multi-Junction Branch		
	60/80/100mm	LJ100
Land Drainage - 25m Coil		
	80mm x 25m	L8025
	100mm x 25m	L10025

Ancillaries

Product	Code
40ml Compressed Silicone Lubricant Spray	
	SL40
100g Silicone Grease	
	SG100
800g Lubricant Gel	
	SG800

Product	Code
125ml Solvent Cement CE	
	SC125
250ml Solvent Cement CE	
	SC250

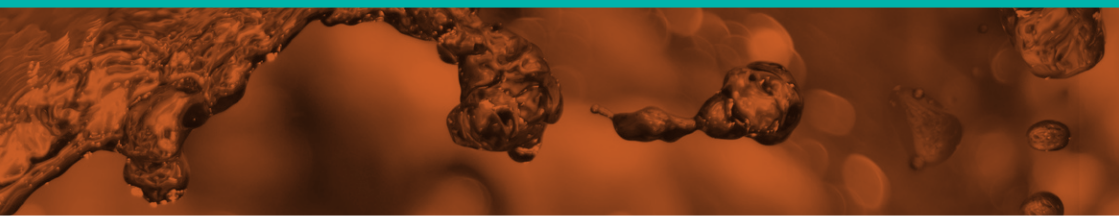
Number of joints achievable (for guidance only)

Lubricant	32mm	40mm	50mm	110mm
100g Silicone Grease	160	120	100	60
800g Lubricant Gel	1200	950	800	450
40ml Silicone Spray	600	420	400	225

Number of joints achievable (for guidance only)

Solvent Cement	32mm	40mm	50mm	110mm
125ml	27	27	27	7
250ml	55	55	55	15

FloPlast
building the future



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Brochures available:

bsi. ISO 9001 Quality Management | ISO 14001 Environmental Management | ISO 50001 Energy Management | BS OHSAS 18001 Occupational Health and Safety Management

bsi. BS EN 607 BS EN 1329 BS EN 1462 BS EN 12380 BS EN 1401-1 BS EN 1455 BS EN 12200-1 BS 7291-1, 2 & 3 KITEMARK

20 YEAR CAST IRON GUARANTEE

10 | 20 | 10

nssPlus

PART H

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BBA BRITISH BOARD OF AGREMENT CERTIFICATE No.00/3776

CE www.floplast.co.uk

WRAS APPROVED PRODUCT

NMBS STRENGTHENING INDEPENDENTS

April 2020

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