

Terrain Underground



Product Guide

Terrain Underground

Using the latest plastics manufacturing technology to satisfy the requirements of today's installers, the Terrain underground range offers both rigid and foam core pipe and a comprehensive range of fittings to suit all applications. Terrain underground products represent the benchmark for quality, supported with outstanding service levels. Our comprehensive range of underground drainage products are suitable for commercial, industrial, housing and public sector developments.

- Industry leading
- Simple to install
- Flexible, to accommodate normal ground movement
- Adaptable, to connect to existing drainage systems
- Supported through extensive technical experience on all aspects of design and installation
- Fully accredited product system

Solid wall pipes and fittings

Available in 82, 110 and 160mm diameters.

110 and 160mm comply with BS EN 1401 (BS 4660).

Foamcore pipe

Manufactured using the latest tri-extrusion techniques to produce a three layer pipe that is 25% lighter than standard PVC-u pipe.

Available in 110 and 160mm diameters. Carries BBA certificate 95/3086.

As you would expect from a market leader our products come with all relevant standards including:

Manufacturing Standards

EN 1401:1998 Underground Drainage

EN 7158:2001 Plastic Inspection Chambers for Drains and Sewers

Quality Management Systems Standards

EN ISO 9001:2008 Management System

EN ISO14001:2004 Management System

BS OHSAS 18001:2007 Management System

PASS 99:2006 Integrated Management Registration



Larger pipework and fittings for 315mm diameter are available on request

Contents

Sustainable Materials

Plastics are among the most researched materials in the world and rapid technological and manufacturing developments made in recent years have allowed for continuous innovation.

Polypipe Terrain pioneered the development of PVC material for the manufacturing of drainage pipes and fittings; we remain at the forefront of the industry across the globe and are proud to be pioneering the industry with the development of our LEAD-FREE system.

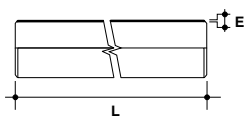
Utilising a lead-free material composition contributes significantly to an environmentally friendly manufacturing process and gives a finished product that is fully recyclable in accordance with British Standards.

For further information, please refer to www.polypipe.com

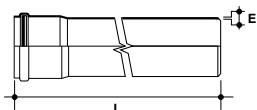
Terrain Underground

Terrain Pipes & Fittings	04 - 09
Terrain Gullies & Hoppers	10 - 11
Terrain Inspection Chambers	12 - 13
Terrain Adaptors	14 - 15
Flexicon Couplings & End Caps	16 - 17
Accessories	17
System Planning	18 - 26
Further Information	27
Non UK Basic Design Principles	28 - 29
Product Index	30 - 31

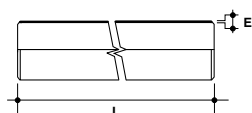
Terrain pipes & fittings



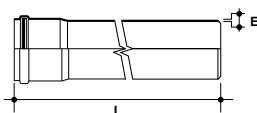
Size (mm)	L	E (min)	Code
SOLID WALL PIPE PLAIN ENDED			
82	3m	2.25	3DP3
♥ 110	3m	3.2	4DP3
♥ 160	3m	4.1	6DP3
82	5.8m	2.25	3DP58
♥ 110	5.8m	3.2	4DP58
♥ 160	5.8m	4.1	6DP58



Size (mm)	L	E (min)	Code
SOLID WALL PIPE SINGLE SOCKET			
♥ 110	3m	3.2	4DP3S
♥ 110	6m	3.2	4DP6S
♥ 160	6m	4.1	6DP6S



Size (mm)	L	E (min)	Code
FOAMCORE PIPE PLAIN ENDED			
110	3m	3.2	4EUP3
110	5.8m	3.2	4EUP58
160	5.8m	4.1	6EUP58



Size (mm)	L	E (min)	Code
FOAMCORE PIPE SINGLE SOCKET			
110	3m	3.2	4EUP3S
110	6m	3.2	4EUP6S
160	3m	4.1	6EUP3S
160	6m	4.1	6EUP6S

Terrain Drainage System

Terrain pipes & fittings D Range

Size (mm)	L	Z	Code
COUPLER DOUBLE SOCKET - with central stop			
82	136	3.5	3D20D
♥ 110	122	2	4D20D
♥ 160	154	4	6D20D

Size (mm)	L	Code
SLIP COUPLER - for inserting new fittings into existing pipework (e.g. refurbishment or repair)		
♥ 110	122	4D20DSC
♥ 160	154	6D20DSC

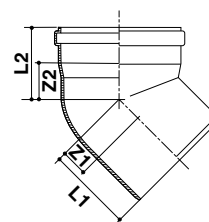
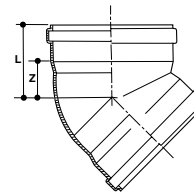
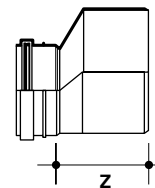
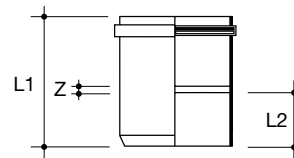
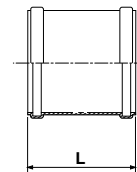
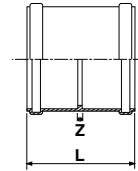
Size (mm)	L1	L2	L3	Code
PIPE END SOCKET				
♥ 110	121	48	3	4D69
♥ 160	167	68	3	6D69

Size (mm)	Z	Code
LEVEL INVERT TAPER - larger end spigot and smaller end socket		
♥ 110/82	104	43DT
♥ 160/110	143	64DT

Material: PVC-u

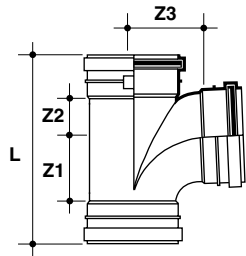
Size (mm)	Angle°	L	Z	Code
SHORT RADIUS BEND DOUBLE SOCKET - to change pipe direction: 87½°, 45°, 30° & 15° as standard				
82	87½	142	70	3D23D
82	45	97	25	3D25D
♥ 110	87½	120	70	4D23D
♥ 110	45	87	37	4D25D
♥ 110	30	83	27	4D27D
♥ 110	15	76	20	4D29D
♥ 160	87½	202	124	6D23D
♥ 160	45	122	49	6D25D
♥ 160	30	114	40	6D27D
♥ 160	15	101	28	6D29D

Size (mm)	Angle°	L1	L2	Z1	Z2	Code
SHORT RADIUS BEND SINGLE SOCKET - to change pipe direction: 87½°, 45°, 30° & 15° as standard						
♥ 110	87½	117	119	59	69	4D23
♥ 110	45	85	89	27	39	4D25
♥ 110	30	78	86	17	29	4D27
♥ 110	15	71	79	9	22	4D29
♥ 160	87½	164	166	84	100	6D23
♥ 160	45	117	116	37	50	6D25
♥ 160	30	107	112	25	40	6D27
♥ 160	15	96	100	14	28	6D29

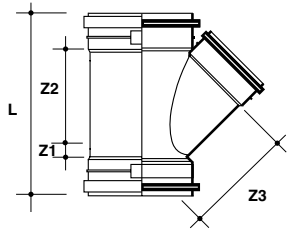


Pipes & Fittings

Terrain pipes & fittings D Range

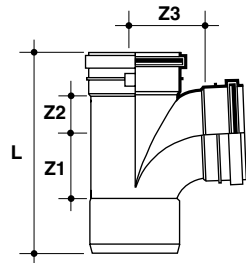


	Size (mm)	Angle°	L	Z1	Z2	Z3	Code
SINGLE EQUAL JUNCTION - to join 82mm main pipe at an angle: 45° as standard							
▽	110	87½	268	87	57	87	4D30D
▽	160	87½	338	95	99	99	6D30D
▽	82	45	265	19	108	102	3D33D
▽	110	45	294	37	137	137	4D33D
▽	160	45	399	52	203	203	6D33D



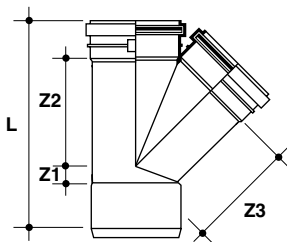
	Size (mm)	Angle°	L	Z1	Z2	Z3	Code
SINGLE UNEQUAL JUNCTION (all sockets) - to join 110mm branch pipe to 160mm main pipe at an angle							
▽	160/110	45	278	27	143	143	64D33D
▽	160/110	45	397	38	205	205	64D30D

45° and 87½° as standard.



	Size (mm)	Angle°	L	Z1	Z2	Z3	Code
SINGLE EQUAL JUNCTION SPIGOT OUTLET - to join 110 or 160mm branch to 110 or 160mm main pipe at an angle							
▽	110	87½	239	59	69	69	4D30
▽	110	45	278	27	143	143	4D33
▽	160	45	397	38	205	205	6D33

(110mm) 87½° and 45° as standard. (160mm) 45° as standard.




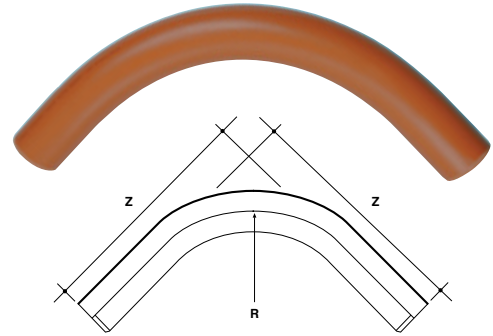
	Size (mm)	Angle°	L	Z1	Z2	Z3	Code
SPIGOT OUTLET - to join 110mm branch pipe to 110 or 160mm main pipe at an angle							
▽	160/110	45	326	2	168	176	64D33

45° as standard.

Terrain Drainage System

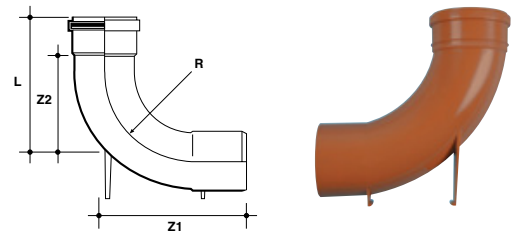
Terrain pipes & fittings

Size (mm)	Angle°	R	Z	Code
LONG RADIUS BENDS (plain ended) - 90° and 45° as standard				
110	90	455	539	4D22
 110	45	455	368	4D28



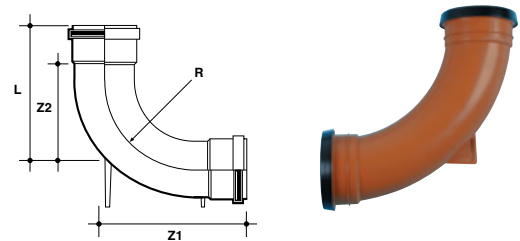
Size (mm)	Angle°	L	R	Z1	Z2	Code
REST BEND SINGLE SOCKET - to change 110mm at base of soil stack: 87½° as standard						
110	87½	230	200	245	170	4D21


Satisfies recommendations of BS 5772: 1994.



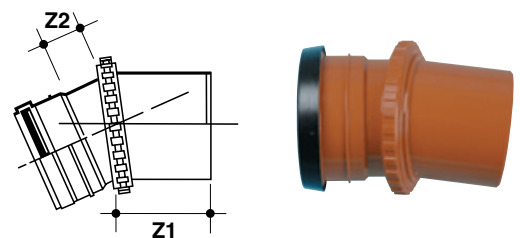
Size (mm)	Angle°	L	R	Z1	Z2	Code
REST BEND DOUBLE SOCKET - to change 110mm at base of soil stack: 87½° as standard						
110	87½	205	200	245	170	4D21D

Satisfies recommendations of BS 5772: 1994.



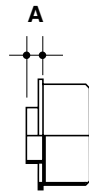
Size (mm)	Angle°	Z1	Z2	Code
VARIABLE BEND SINGLE SOCKET - to change 110mm pipe direction by 0-25°				
 110	0-25	86	45	4DV40

Z dimensions are constant whichever angle is selected.
Any non-standard angle can be achieved if used in conjunction with a standard fitting.



Pipes & Fittings

Terrain pipes & fittings

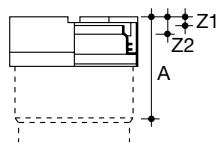


Size (mm)	A	Code
SOCKET PLUG - to blank off any ring seal socket		
110	18	4D68
160	16	4D68

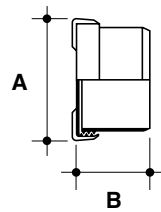


Size (mm)	A	Code
TEMPORARY SITE CAP - for temporary capping of system		
110	30	4D65

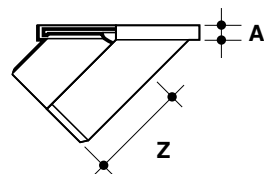
Versions for external and internal use.



Size (mm)	A	Z1	Z2	Code
ACCESS CAP - Solvent Skt				
83	83	16	32	3D63
110	97	21	46	4D63
160	122	22	42	6D63



Size (mm)	A	B	Code
ACCESS CAP - to allow full bore access to 82, 110 or 160mm pipework for inspection or rodding			
82	101	85	3D64
110	118	103	4D64
160	186	107	6D64



Size (mm)	A	Z	Code
RODDING EYE - elliptical rodding eye with 110mm pipe size spigot			
110	13	95	4DRE

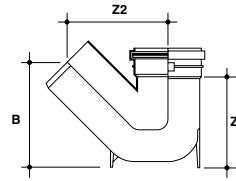
Material: Aluminium. Access aperture size: 118 x 90mm.

Terrain Drainage System

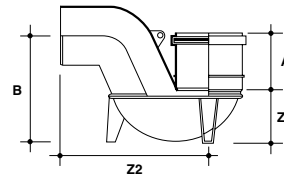
Terrain gullies & hoppers

Size (mm)	A	B	Z1	Z2	Code
GULLY TRAP - to obtain 'P' trap, add 45° bend					
110	50	190	120	210	4DG90

Material: Polypropylene

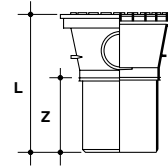


Size (mm)	A	B	Z1	Z2	Code
'P' TRAP - to obtain 'Q' or 'S' trap, add 45° or 87½° bend					
110	104	193	92	265	4DG91



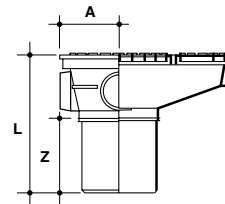
Size (mm)	L	Z	Code
SQUARE HOPPER HEAD - Spigot outlet may be cut off to reveal socket which can accept solvent-welded pipe as extended spigot			
110	203	105	4DG92

Material: PVC-u and Polypropylene. Terracotta body with black grid.



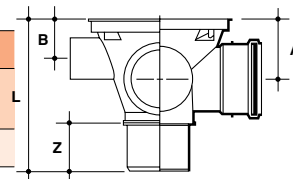
Size (mm)	A	L	Z	Code
RECTANGULAR HOPPER HEAD - Back inlet plate incorporates two easily removable discs to create apertures for insertion of 40mm waste pipes				
110	85	203	105	4DG93

Material: PVC-u and Polypropylene. Terracotta body with black grid.



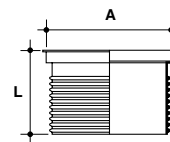
Size (mm)	A	B	L	Z	Code
CIRCULAR GULLY - Incorporates plugged horizontal pipe entries: 2 x 110mm spigots, 1 x 110mm ring seal socket and 1 x 68mm rainwater pipe socket					
110	104	193	92	265	4DG80

Material: PVC-u. Spigot outlet may be cut off to reveal socket which can accept solvent-welded pipe as extended spigot.



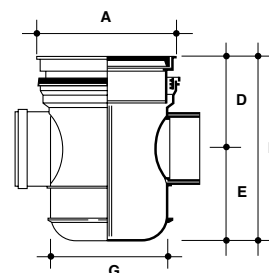
A	L	Code
EXTENSION PIECE - to extend upper aperture of 4DG80 Circular Gully to surface level or to lower horizontal pipe entries beneath surface level		
213	150	4DG81

Requires mastic sealant for forming airtight/watertight seal.



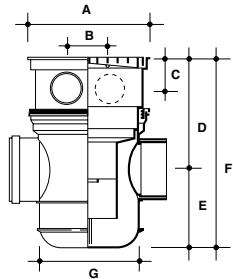
Size (mm)	A	D	E	F	G	Code
BOTTLE GULLY WITH ROUND COVER - removable dip tube provides 50mm deep trap						
110	213	150	154	304	190	4DG97

Material: PVC-u and Polypropylene. Incorporates 110mm back inlet connection. Terracotta body with black cover.



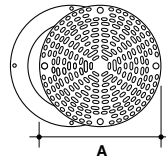
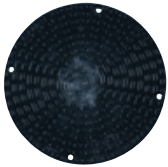
Gullies & Hoppers

Terrain gullies & hoppers

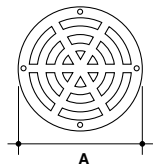


Size (mm)	A	B	C	D	E	F	G	Code
BOTTLE GULLY WITH SQUARE COVER - removable dip tube provides 50mm deep trap								
110	232	76	60	212	154	366	190	4DG89

Material: PVC-u and Polypropylene. Incorporates 2 x waste back inlet connections, can also accept up to 6 different pipes either direct or via adaptors. Terracotta body with black grid.

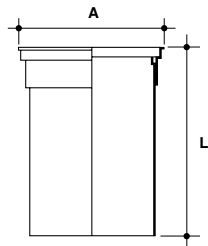


A	Code
SEALED COVER - to cap 4DG80 Circular Gully or 4DG81 extension	
211	4DG82



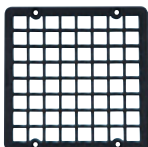
A	Code
CIRCULAR GRATING - to provide an open grating for surface water drainage for 4DG80 Circular Gully or 4DG81 Extension Piece	
211	4DG83

Also: spare grating for 4DG97 Bottle Gully.



Size (mm)	A	L	Code
RAISING PIECE - to extend upper aperture of 4DG97 Bottle Gully to surface level or to lower horizontal pipe entries beneath surface level			
200	213	470	4DG96

Material: PVC-u and Polypropylene. Terracotta body with black grid.



Depth (mm)	Width (mm)	Height (mm)	Code
SQUARE HOPPER HEAD - spare grid for 4DG92 Hopper Head			
13	155	155	4DG92G

Material: Polypropylene.



Width (mm)	Height (mm)	Code
SQUARE SEALED COVER - converts 4DG92 Square Hopper Head from open grid to sealed cover		
155	155	4DG92GS

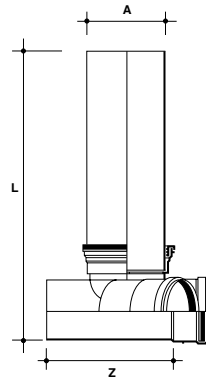
Material: Polypropylene.

Terrain Drainage System

Terrain inspection chambers

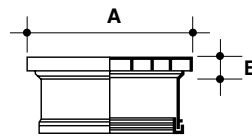
Size (mm)	A	L	Z	Code
SHALLOW INSPECTION CHAMBER - to allow inspection of drainage system				
110	200	586	261	4DI600

Supplied with 2 plugs for unused entries 200mm socket has angular tolerance of $\pm 7^\circ$ allowing up to 14° adjustment to accommodate pipe variation and ground fall.
9163.4 Access Door may be fitted to the lower opening to achieve double seal.
Access aperture size: 162 x 100mm.



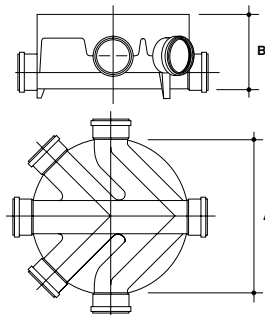
Size (mm)	A	B	Code
SEALED COVER AND FRAME - to cap 4DI600 Shallow Inspection Chamber			
110	211	43	4DIFC1

Ring seal joint to shaft.



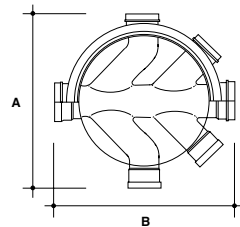
Size (mm)	A	B	Code
INSPECTION CHAMBER BASE (470mm diameter) - to allow inspection of drainage system, incorporating 110mm main channel and 4 x 110mm branch inlets			
110	470	240	4DI240B

Material: Polypropylene. Supplied with 4 x blanking plugs.



Size (mm)	A	B	C	Code
UNEQUAL INSPECTION CHAMBER BASE (475mm diameter) - to allow inspection of drainage system, incorporating 160mm main channel, 2 x 160mm and 2 x 110mm branch inlets				
160/110	610	610	250	64DI240B

Material: Polyethylene. Supplied with 4 x blanking plugs.



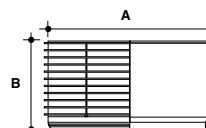
Diameter	Code
SEAL RING	
470	4DI235S



A	B	Code
RAISING PIECE - to extend height of Marscar Access Bowl (4DMB) or Inspection Chamber Base (4DI240B) or Unequal Inspection Chamber Base (64DI240B) to surface level		
470	240	4DI235R

Material: Polypropylene.

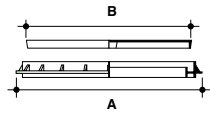
Please Note: Purchased as individual items according to final installation depth requirements.



Note: When using the 64DI240B base unit with raising pieces, the seal ring on the first raising piece (4DI235R) must be replaced with a 4DI235S.

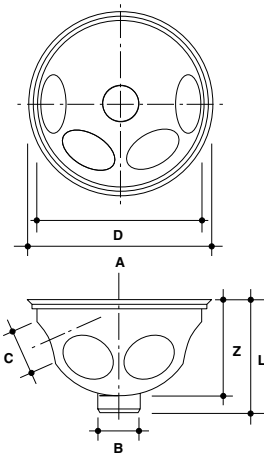
Terrain Adaptors

Terrain inspection chambers



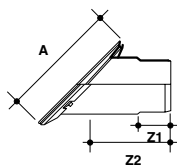
	A	B	Code
COVER AND FRAME - BS EN 124: 1994 - Group 1, Class A15 (formerly BS497: 1976 Class C+)			
	579	454	4DIFC4

Material: Polypropylene cover and frame. For domestic drive-ways accessible to vehicles up to one tonne maximum wheel load.



Size (mm)	A	B	C	D	L	Z	Code
MARSCAR ACCESS BOWL - Unique design access chamber enabling up to 4 inlet connections from shallow drains							
	110	213	150	154	304	190	4DMB

Material: UPVC. Single outlet at centre of base of bowl enables connection to underlying drain run up to 10 metres deep without need for manholes. Bowl shape and inlet angles create self-cleaning swirl action.



Size (mm)	A	Z1	Z2	Code
PRE-CUT INLET HOLE FOR CONNECTION OF 110MM PIPE - 2-part component: connector with seal and locking cap				
110	180	90	162	4DM1

Material: Polypropylene



Size (ml)	Code
TERRAIN ACCESSORIES - CLEANING FLUID - for cleaning PVC-u pipe and fittings before applying Liquid Weld	
125	9101.125
250	9101.250

Material: Acetone. Screw top cans.



Size (ml)	Code
TERRAIN ACCESSORIES - LUBRICANT - for lubricating seal rings on expansion fittings	
250	Tub (Silicone) 9136.250
500	Tub (Soluble) 9136.500

Material: Silicone grease or Soluble lubricant.

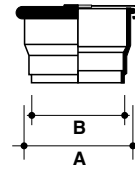


Size (ml)	Code
TERRAIN ACCESSORIES - LIQUID WELD - for solvent jointing of PVC-u pipes and fittings cap, incorporates integral brush	
	125 Tube 9100125
	250 Tub 9100.250
	500 Tub 9100.500

Terrain Drainage System

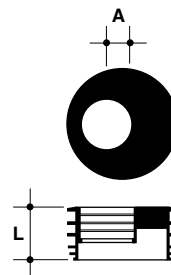
Terrain adaptors

Size (mm)	A	B	Code
UNIVERSAL RAINWATER ADAPTOR - for connecting round and square PVC-u rainwater downpipe (up to 68mm) to underground drainpipe			
110	110	102	4D76



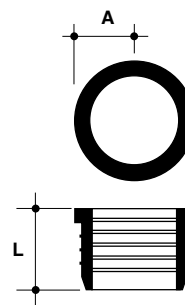
Size (mm)	A	L	Code
UNIVERSAL RAINWATER ADAPTOR - for connecting round and square PVC-u rainwater downpipe (up to 68mm) to underground drainpipe			
110	8	40	4DW200

Material: EPDM



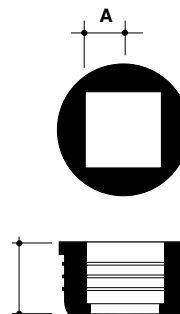
Size (mm)	A	L	Code
ADAPTOR TO ABOVE GROUND DRAIN - for connecting 68mm downpipes and 82mm underground drain			
82/68	41	54	3DW25
110/68	56	54	4DW25
110/82	56	54	4DW3

Material: Flex PVC. For round downpipe.



Size (mm)	A	L	Code
ADAPTOR TO ABOVE GROUND DRAIN - for connecting 62mm or 75mm downpipes and 82mm underground drain			
110/62	56	54	4DW23
110/75	37	58	4DW33

Material: Flex PVC. For square downpipe.



Flexicon Couplings & End Caps

Flexicon adaptors



	Range AB mm	Length (min)	Code	Driver
FLEXICON UNIVERSAL ADAPTORS (XAC)				
▽	120 - 135/100 - 115	100	XAC400	7mm/8mm



	Range AB mm	Length (min)	Code	Driver
FLEXICON DRAINAGE ADAPTORS (XAC)				
▽	100 - 115/75 - 85	100	XAC85/115	7mm/7mm
▽	100 - 115/85 - 95	100	XAC95/115	7mm/7mm
▽	130 - 145/110 - 125	120	XAC125/145	7mm/7mm
▽	145 - 160/110 - 125	120	XAC125/160	7mm/7mm
▽	150 - 165/110 - 115	120	XAC115/165	7mm/7mm
▽	160 - 175/110 - 125	120	XAC125/175	7mm/7mm



	Range AB mm	Length (min)	Code	Driver
FLEXICON PLUMBING ADAPTORS (XPA)				
▽	50 - 65/30 - 45	80	XPA45/65	7mm/7mm
▽	80 - 95/45 - 50	100	XPA50/95	7mm/7mm



	Range AB mm	Length (min)	Code	Driver
FLEXICON DRAIN COUPLINGS (XDR)				
▽	50 - 65	95	XDR65	7mm
▽	80 - 95	110	XDR95	7mm
▽	100 - 115	110	XDR115	7mm
▽	110 - 125	120	XDR125	7mm
▽	150 - 165	120	XDR165	7mm
▽	150 - 175	120	XDR175	7mm
▽	175 - 200	150	XDR200	8mm

Flexicon couplings

	Range AB mm	Length (min)	Code	Driver
FLEXICON SHEAR BAND STANDARD COUPLINGS (XSB)				
▽	100 - 115	120	XSB115	8mm
▽	110 - 120	120	XSB120	8mm



	Range AB mm	Code	Driver
FLEXICON END CAPS (XST)			
▽	50 - 65	XST65	7mm
▽	80 - 95	XST95	7mm
▽	100 - 115	XST115	7mm



Terrain Underground



Polypipe Gulf FZE

Dubai Airport Free Zone (DAFZA)
PO BOX 54897
Building 4E-A
Office 213
Dubai
United Arab Emirates
Tel: +971 (0)4 609 1371
Fax: +971 (0)4 609 1372

Polypipe Terrain

New Hythe Business Park
College Road
Aylesford
Kent
ME20 7PJ
United Kingdom
Tel: +44 (0)1622 795200
Fax: +44 (0)1622 716796



international@polypipe.com
www.terraindrainage.com
www.polypipegulf.com