

# Concrete Drainage

Keyline branches stock a comprehensive range of concrete drainage products including:

- Manhole and Soakaway Rings
- Manhole Cover Slabs and Seating Rings
- Domestic Inspection Chambers

No matter what the size of the project, we can provide a wide variety of competitively priced products from stock or direct from our manufacturers' works, including:

- Circular and Elliptical Concrete Pipes
- Box Culverts



## Concrete Manholes and Soakaways

Precast concrete manholes made to BS EN 5911-3 and BS EN 1917 are available in DN 900 - 3000 with metric depths of 1000, 750, 500 and 250mm, all with tongue and groove joints.

They are available plain or perforated with the option of mild or stainless steel plastic encapsulated double steps, or without steps for use with ladders or winches.

A wide variety of cover slabs and cover frame adjusting units with either standard access or special access is available.

Designers and users should take into account current requirements for manhole access as detailed in the Health and Safety Code of Practice Regulations and Guidance issued under the Confined Spaces Regulations 1997.



## Manhole Rings

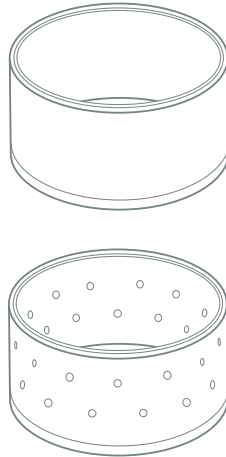
Chamber Ring DN	Available Depth of Section mm				Wall Thickness mm	Lifting Holes No. x Diameter	Approx Weight (inc. steps) kg/m	Metres per 24T Full Load m
	250	500	750	1000				
900**	•	•	•	•	70	2 x 40	520	42
1050	•	•	•	•	80	2 x 40	680	35
1200	•	•	•	•	90	2 x 40	875	27
1350*		•	•	•	95	2 x 40	1025	23
1500		•	•	•	100	2 x 40	1215	19
1800		•	•	•	115	3 x 45	1730	13
2100		•	•	•	125	4 x 45	2185	10
2400		•	•	•	140	3 x 50	2700	8
2700		•	•	•	175	4 x 50	3800	6
3000		•	•	•	210	4 x 50	5050	4

\*Not Kitemarked

\*\*No Steps in 900 Ring

## Soakaway Rings

Chamber rings have 75mm perforations built in during manufacture. In soakaway applications the aim is to disperse water into the sub-soil. The following tables indicate the diameter and depth required to draw a range of surface areas.



## Soakaway Rings

Soakaway Ring	Perforations per Section (75mm diameter)					
	500mm deep		750mm deep		1000mm deep	
DN	Rows	Perfs. per Row	Rows	Perfs. per Row	Rows	Perfs. per Row
900	2	3	3	3	4	3
1050	2	3	3	3	4	3
1200	2	4	3	4	4	4
1350*	2	4	3	4	4	4
1500	2	5	3	5	4	5
1800	2	6	3	6	4	6
2100	2	6	3	6	4	6
2400	2	7	3	7	4	7
2700	2	8	3	8	4	8
3000	2	9	3	9	4	9

\*Not Kitemarked

## Soakaway Rings

The following table gives the required depth in metres based on these parameters:

Area to be Covered m <sup>2</sup>	Nominal Internal Diameter mm									
	900	1050	1200	1350*	1500	1800	2100	2400	2700	3000
25	0.64	-	-	-	-	-	-	-	-	-
50	1.27	0.93	0.71	-	-	-	-	-	-	-
75	1.91	1.40	1.07	0.85	0.69	-	-	-	-	-
100	2.54	1.86	1.43	1.13	0.91	0.65	-	-	-	-
125	3.18	2.33	1.79	1.41	1.14	0.81	0.60	-	-	-
150	-	2.80	2.14	1.69	1.37	0.98	0.72	-	-	-
175	-	3.26	2.50	1.97	1.60	1.14	0.84	0.64	-	-
200	-	-	2.86	2.25	1.83	1.30	0.96	0.74	-	-
250	-	-	3.57	2.82	2.28	1.63	1.20	0.92	0.73	-

\*Not Kitemarked

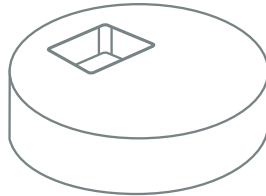
Area to be Covered m <sup>2</sup>	Nominal Internal Diameter mm									
	900	1050	1200	1350*	1500	1800	2100	2400	2700	3000
300	-	-	-	3.38	2.74	1.96	1.44	1.11	0.87	0.71
400	-	-	-	4.51	3.65	2.61	1.92	1.47	1.16	0.94
500	-	-	-	-	4.57	3.27	2.41	1.84	1.46	1.18
600	-	-	-	-	-	3.92	2.89	2.21	1.75	1.41
700	-	-	-	-	-	4.58	3.37	2.58	2.04	1.65
800	-	-	-	-	-	-	3.85	2.95	2.33	1.89
900	-	-	-	-	-	-	4.33	3.32	2.62	2.12
1000	-	-	-	-	-	-	-	3.68	2.91	2.36

The above table is only a guide. Products may vary by manufacturer.

## Manhole Cover Slabs

Concrete cover frame seating rings are available to seat a ductile cover and frame. Access hole sizes vary according to manhole diameter and depth. Heavy duty reinforced cover slabs can be supplied with a variety of standard and non-standard access hole sizes.

Designers and users should ensure that they have taken into account the current requirements for manhole access as detailed in the Health and Safety Code of Practice, Regulations and Guidance issued by the Health and Safety Executive under the Confined Spaces Regulations 1997 and other relevant requirements.



### Cover Slabs

Manhole DN	Overall Diameter mm	Effective Thickness mm	Approx Weight kg
900	1108	135	215
1050	1278	135	330
1200	1460	135	480
1350*	1629	160	740
1500	1789	160	925
1800	2130	200	1625
2100	2450	200	2250
2400	2870	200	2865
2700	3175	205	3800
3000	3350	200	4970

\*Not Kitemarked

## Adjusting Units (Seating Rings)

- Designed to replace engineering bricks to seat a ductile cover and frame
- Effective thickness is 65mm i.e. the thickness of a standard brick
- Average compressive strength similar to Class B engineering bricks
- Adjusting units can be supplied with access hole sizes as in the table opposite

### Corbel & Adjusting Units Data

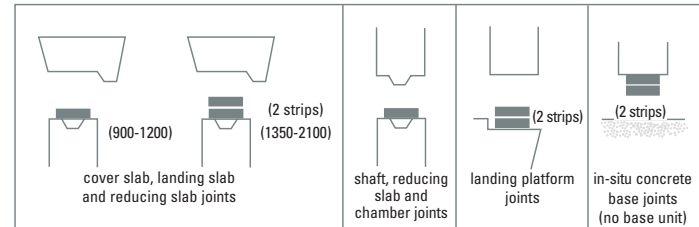
Manhole DN	Access Size and Position for Manhole Depth	
	<1.5m	≥1.5m
900	675 x 675 Central	675 x 675 Central
1050	750 x 750 Central	675 x 675 Central
1200	750 x 600 Central	675 x 675 Central 675 x 675 Eccentric
1350*	1200 x 675 Central	675 x 675 Central 675 x 675 Eccentric
1500 - 3000	1200 x 675 Central	675 x 675 Central 675 x 675 Eccentric

\*Not Kitemarked

## Manhole Jointing Compound (TOKSTRIP)

Manholes are designed and manufactured to provide accurate joint profiles with a high quality finish. When used in conjunction with flexible jointing compound, contractors can construct watertight manholes quickly, without the need for a concrete surround.

Chamber Ring	DN	900	1050	1200	1350	1500	1800	2100	2400	2700	3000
Jointing Compound	mm	12 x 60		12 x 80				12 x 120			
Metres per Carton	m	24		18				12			
Jointing Compound per Joint	m	3.1	3.6	4.1	4.6	5.1	6.1	7.0	8.0	9.0	10.0
Joints per Carton	no.	7.7	6.6	4.4	3.9	3.5	3.0	1.7	1.5	1.3	1.2
Primer per Carton	ltr	0.9	1.0	0.9	0.9	1.0	1.1	0.9	0.9	1.0	1.1

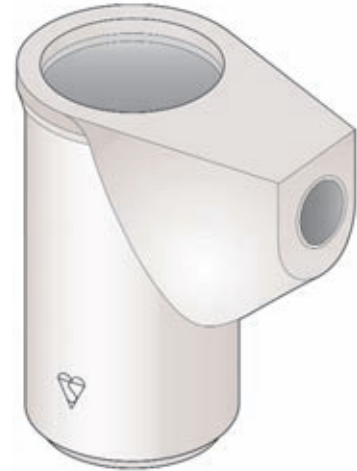


## Road Gullies

Kitemarked gullies made to BS EN 5911-6: 2004 may be supplied with adaptors for connection to clay or plastic pipes.

### Road Gullies

Nominal Diameter mm	Nominal Depth mm	Approx Weight kg
375	750	185
375	900	200
450	750	260
450	900	290
450	1050	320

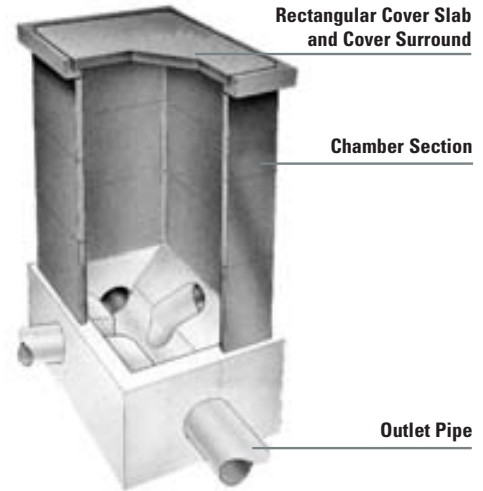


## Rectangular Inspection Chambers

Keyline's range of precast concrete rectangular inspection chambers offers suitable access to drainage and cable systems. Being made of high strength concrete in factory controlled conditions there is no necessity to surround units with in-situ concrete, thus making them an economic solution to the need for access to underground utilities.

A choice of top covers and surrounds to suit various loading conditions is available.

- For use in highway and domestic situations
- No need for concrete surround
- Comprehensive range of concrete cover slabs and surrounds
- Manufactured to BS Kitemark Scheme BS EN 5911-200 Part 2



## Inspection Chambers supplied by Marshalls (BS EN 5911-200)

### Chamber Section

Type	Order Ref	Depth mm	Internal Length mm	Internal Width mm	Wall Thickness mm	Approx Weight kg	Keyline Code
A	A150	150	600	450	50	44	751824
	A225	225				58	763610
B	B150	150	750	600	60	67	763611
	B225	225				100	763612
C	C150	150	1000	675	65	83	763613
D	D150	150	1200	750	75	115	763614
	D225	225				173	763615

### Reducers and Closer Slabs

Type	Order Ref	Overall Size	Internal Dimension Reduce from mm	Internal Dimension Reduce to mm	Depth mm	Approx Weight kg	Keyline Code
B to A reducer	BAR	730 x 315	750 x 600	600 x 450	50	26	763616
D to B reducer	DBR	910 x 620	1200 x 750	750 x 600	75	97	763617

### Cover Slabs

Type	Clear Opening	Order Ref	Length mm	Width mm	Thickness mm	Approx Weight kg	Keyline Code
For B section	600 x 600	BCS	870	870	70	55	763624
For C section	600 x 450	CCS	1150	825	60	89	763625
For D section	600 x 600	DCS	1366	916	90	150	763626
For D section	600 x 600	SDCS	1380	930	150	300	763627

## Covers

Type	Clear Opening mm	Order Ref	Length mm	Width mm	Thickness mm	Approx Weight kg	Keyline Code
Regular <small>(Handhole)</small>	600 x 450	HC1	700	545	60	55	763622
Regular <small>(Keyhole)</small>	600 x 450	KC1	700	545	60	55	763623
Regular <small>(Handhole)</small>	600 x 600	HC2	695	695	75	93	763618
Regular <small>(Keyhole)</small>	600 x 600	KC2	695	695	75	93	763619

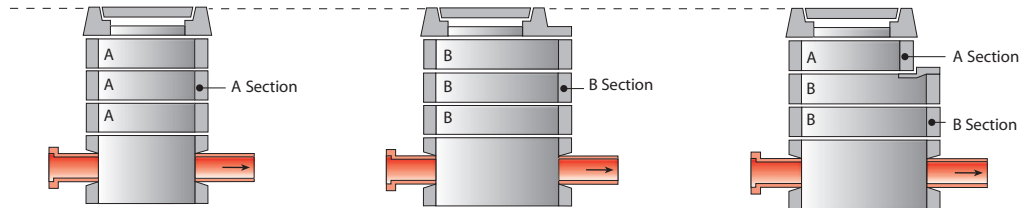
## Frames

Type	Order Ref	Length mm	Width mm	Thickness mm	Approx Weight kg	Keyline Code
For use with "A" Section						
Standard Frame	F1	850	700	123	46	763620
For use with "D" Section						
Standard Frame	F2	865	865	138	80	763621

## Typical Inspection Chambers

Less than 0.6m deep.

Cover Level

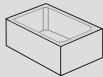


For Inspection Chambers in excess of 1.2m deep a 450 x 600mm opening can be used providing it is restricted in size to 300 x 300mm maximum (a section of A96 or A192 mesh can easily be used to achieve this).



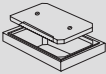
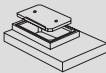
## Inspection Chambers supplied by Milton Precast (BS EN 5911-200)

### Chamber Section

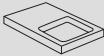
	Size mm	Effective Depth mm	Wall Thickness mm	Nominal Weight of Unit kg	Number of Units per Pallet	Approx Total Weight of Product & Pallet kg	Supplier Code	Keyline Code
	600 x 450	152	51	45	32	1445	D604515P	770340
		229	51	65	20	1315	D604522P	770324
		305	51	85	16	1365	D604530P	770325
	750 x 600	152	60	65	18	1205	D756015P	751858
		229	60	100	12	1200	D756022P	751859
	1000 x 675	152	64	85	16	1380	D106715P	751863
		229	64	125	10	1290	D106722P	751864
	1200 x 750	150	75	115	8	955	D127515P	802244
		500	75	390	*	*	D127550P	924456
1475 x 1025	250	100	335	*	*	-	-	

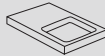
\* Sizes supplied individually

### Rectangular Cover and Cover Surround

	Chamber Size mm	Access mm	Effective Thickness mm	Approx Weight of Unit kg	Number of Units per Pallet	Approx Total Weight of Product & Pallet kg	Supplier Code	Keyline Code
	600 x 450 (Light Duty)	600 x 450	104	80	16	1335	D6045NCCSP	770326
	750 x 600 (Light Duty)	600 x 450 (central)	116	100	12	1235	D7560NCCSP	751861
	1000 x 675 (Light Duty)	600 x 450 (offset)	134	140	12	1710	D1067NCCSP	751866
	Cover	To suit 600 x 450 (access)	51	40	-	-	-	-

## Cover Slabs

	Chamber Size mm	Access mm	Effective Thickness mm	Approx Weight of Unit kg	Number of Units per Pallet	Approx Total Weight of Product & Pallet kg
	600 x 450 (Light Duty)	600 x 450*	64	41	24	995
	750 x 600 (Light Duty)	600 x 450*	70	58	24	1430
	1000 x 675 (Light Duty)	750 x 600* (offset)	75	70	20	1475
	1000 x 750 (Light Duty)	600 x 450* (offset)	76	105	20	2175
	1200 x 750 (Light Duty)	600 x 600* (offset)	69	150	5	765

	Chamber Size mm	Access mm	Effective Thickness mm	Approx Weight of Unit kg	Number of Units per Pallet	Approx Total Weight of Product & Pallet kg
	1200 x 750 (Heavy Duty)	600 x 600* (offset)	144	310	5	1565
	1475 x 1025 (Heavy Duty)	600 x 600*	144	640	-	-

\* Other accesses available

## Box Culverts

Concrete box culverts are specified and used regularly for culverting highways, storm and foul sewers, sea outfalls, tunnels and subways, underpasses, stream crossings, vertical chambers and in modified form as channels with removable slabs or as portals. In addition they may be used as tanks for attenuation of storm or foul water.

Box culverts provide high flow capacities even where the gradient is low or headroom is restricted. They are individually designed to cater for a wide range of external loading conditions from shallow to deep fill.

The table below shows a sample range of the box culverts available through Keyline. **We can also offer a free design service.**

For general enquiries please contact your local Keyline branch for more information.



## Box Culverts - Guide to Sizes Available

Type	Internal Dimensions			Flow Rate at Fall 1:1000-m <sup>3</sup> /s	Normal Weight of Standard Units T
	Width m	Height m	Length m		
MC10.05*	1.00	0.50	2.0	0.58	2.25
MC12.05	1.25	0.50	2.0	0.74	2.66
MC13.05	1.375	0.50	2.0	0.84	2.81
MC13.10	1.375	1.00	2.0	2.25	3.44
MC15.07	1.50	0.75	2.0	1.62	3.84
MC15.15	1.50	1.50	2.0	4.20	4.80
MC17.07	1.75	0.75	2.0	2.03	4.22
MC17.15	1.75	1.50	2.0	5.28	5.63
MC18.10	1.875	1.00	2.0	3.37	5.09
MC20.10*	2.00	1.00	2.0	3.69	5.79
MC20.20	2.00	2.00	2.0	9.31	7.30
MC22.12	2.25	1.25	2.0	5.94	6.60

Type	Internal Dimensions			Flow Rate at Fall 1:1000-m <sup>3</sup> /s	Normal Weight of Standard Units T
	Width m	Height m	Length m		
MC22.17	2.25	1.75	2.0	9.31	7.35
MC25.10	2.50	1.00	2.0	5.03	8.78
MC25.17	2.50	1.75	1.5	10.83	7.70
MC27.12	2.75	1.25	1.5	7.84	8.34
MC27.20	2.75	2.00	1.5	14.78	9.60
MC30.20	3.00	2.00	1.0	16.72	7.54
MC30.27	3.00	2.75	1.0	25.19	8.43
MC35.15	3.50	1.50	1.0	14.00	7.73
MC40.25	4.00	2.50	1.0	33.53	9.97

This is not a complete range - contact your local Keyline branch for additional sizes.

\* NB: units MC10.05 and MC20.10 are available from manufacturers stock (subject to availability).

## Concrete Pipes

Keyline offers an extensive range of precast flexible joint pipes from DN 300 to DN 2400, including bends, junctions and shorter lengths for rocker and butt pipes.

Pipes are supplied with rolling gasket, sliding gasket or captive gasket joints, dependent upon contractors' needs and manufacturers' production processes. Contractors should refer to our manufacturers' installation recommendations, in addition to relevant regulations, as there are lifting and handling systems and specific jointing procedures available.

All products are available to meet classes of exposure to sulphate attack. Concrete pipes are vertically cast using vibration to compact a semi-dry concrete mix into the mould. Pipes are manufactured to BS EN 1916 and Kitemarked as appropriate.

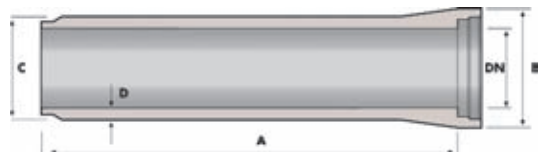


## Concrete Pipes

Nominal Size	Pipe Dimensions				Delivery Details			Minimum Crushing Load Class 120
	Effective Length	External Diameter		Wall Thickness	Approx. Weight of Pipe		Pipes Per Normal 24T Full Load	
		Socket	Barrel		Full Length	Rocker		
DN	'A' mm	'B' mm	'C' mm	'D' mm	kg	kg	kN/m	
300	2500	487	410	55	425	135	53	36
375	2500	562	485	55	505	155	46	45
450	2500	670	578	64	710	225	33	54
525	2500	792	669	72	950	300	25	63
600	2500	876	768	84	1215	375	19	72
675	2500	968	825	75	1275	650	19	81
750	2500	1056	910	80	1500	750	16	90
800	2500	1130	975	85	1650	775	14	96
900	2500	1248	1080	90	2025	925	12	108
1050	2500	1436	1260	105	2700	1250	9	126
1200	2500	1616	1440	120	3500	1550	7	144
1400	2500	1740	1680	150	4550	2275	5	168
1500	2500	1950	1800	150	5300	2700	4	180

All dimensions and weights are approximate. Customers should ensure that lifting equipment has sufficient capacity to allow for variations. Products may vary by manufacturer.

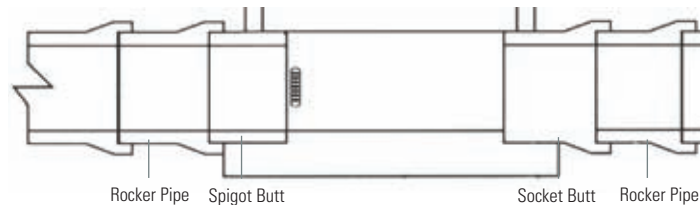
Nominal Size	Pipe Dimensions				Delivery Details			Minimum Crushing Load Class 120
	Effective Length	External Diameter		Wall Thickness	Approx. Weight of Pipe		Pipes Per Normal 24T Full Load	
		Socket	Barrel		Full Length	Rocker		
DN	'A' mm	'B' mm	'C' mm	'D' mm	kg	kg	kN/m	
1600	2500	1980	1920	160	5580	2830	4	192
1800	2500	2220	2160	180	7100	3600	3	216
2000	2400	2460	2400	200	8700	-	3	240
2200	2320	2640	2640	220	10400	-	2	264
2400	2400	2840	2840	220	11200	-	2	288



## Rocker and Butt Pipes

There may be ground settlement after construction. This is commonly known as ‘differential settlement’ and can result in the shear fracture of pipes joining a manhole. To ensure this does not occur, the pipes are rigidly jointed at the manhole with a short length butt pipe, followed by a further flexible jointed short length rocker pipe.

Although this is particularly important with circular manholes, it is also relevant to inspection chambers where differential settlement is anticipated.



## Rocker and Butt Pipes

Nominal Size of Pipe DN	Effective Length	
	Rocker Pipe m	Butt Pipe m
300-600	0.6	0.6
675-1200	1.0	1.25
1350-1800	1.25	1.25

All dimensions are approximate. Rocker pipes above DN 1800 are not recommended due to potential over-deflection of the pipe joint under settlement.

## Concrete Pipe Junctions

Junctions can be supplied either as a fixed clay or concrete branch junction at 45° or 90°, on full length pipes or as a half length or full length universal junction.

- Fixed branch junctions are provided with DN 100, 150 and 225 clay branches to BS EN 295 or with concrete socket or spigot branches for DN 300 and above
- Branches are fitted to full length pipes using cementitious or resin mortars

An alternative to full length fixed branch junction pipes, the universal junction provides users with 3 major benefits:

- Easier installation
- Increased damage resistance
- Greater flexibility

With the universal junction, SuperSleve DN 150 clay branches fit directly. Densleeve DN 150 clay branches and branches in other materials can be fitted with a suitable adaptor. The universal seal can accommodate either straight pipes or a full range of fittings.

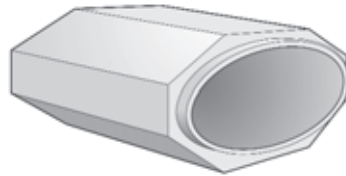
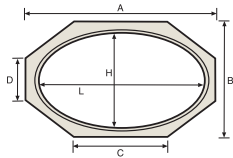
Fixed branch junctions and universal junctions are not designed as load bearing structures and should be encased in a suitably designed in-situ concrete surround.

## Elliptical Pipes

Elliptical pipes are used for foul and surface water drainage applications, stream diversions, culverting and attenuation storage tanks.

The pipe's elliptical internal profile is hydraulically efficient and the external polygonal profile is structurally efficient. Together they provide a unique and highly cost-effective reinforced concrete drainage product.

This system may offer advantages over others by providing superior hydraulic performance and a fully watertight elastomeric captive gasket joint.



### Elliptical Pipes

Internal Dimensions 'L x H' mm	External Dimensions 'A x B' mm	End Face Lengths		Effective Length mm	Approx Product Weight kg
		'C' mm	'D' mm		
1000 x 650	1250 x 900	520	370	2.40	2600
1150 x 750	1400 x 1000	600	430	2.40	3000
1650 x 1000	1930 x 1280	850	500	2.40	4600
1950 x 1150	2270 x 1470	1020	570	2.40	6300
2350 x 1350	2710 x 1710	1230	670	2.40	8600
2650 x 1500	3050 x 1900	1450	740	2.40	10800

All dimensions and weights are approximate, customers should ensure that lifting equipment has sufficient capacity to allow for variations.

# Delivering Outstanding Service

Keyline is known for its civils and drainage expertise, offering you a total solution to all your requirements. With branches across the country, Keyline will provide the specialist civils products you need directly from stock.

- Branches nationwide
- A huge range and depth of materials always in stock
- Our staff are helpful, friendly and knowledgeable
- We provide a speedy, efficient and accurate service
- We get it right first time



# Clay Drainage

At Keyline we maintain extensive stocks of Hepworth clay pipe systems. In addition to the standard stock range, non-stock items can be obtained to special order.

These systems comply with BS EN 295-1:1991




## Clay Pipe Systems

### Pipe

		SuperSleve HouseDrain 100mm	SuperSleve 150mm	SuperSleve 225mm	SuperSleve 300mm
	1.6m Plain Ended	SP1 *711543	- -	- -	- -
	1.75m	- -	SP2 *712058	- -	- -
	1.75m Single Socket	- -	- -	SP175/4S *505653	- -
	2.0m	- -	- -	- -	SP7S *552795





\*Keyline Code

### Fittings






		SuperSleve HouseDrain 100mm	SuperSleve 150mm	SuperSleve 225mm	SuperSleve 300mm
	Coupling (polypropylene) with Standard Sealing Rings (EPDM)	SC1/1 *711544	SC1/2 *711238	SC1/5 *505659	SC1/7 *532802
	90° Bends Plain Ended	SB1/1 *711546	SB1/2 *711220	-	-
	Single Socket	SDB1/1S *837226	-	SB1/5S *505663	SB1/7S *552807
	45° Bends Plain Ended	SB2/1 *711547	SB2/2 *711222	-	-
	Single Socket	SDB2/1S *837228	-	SB2/5S *505664	SB2/7S *552808

\*Keyline Code




## Fittings cont.

Product Description		SuperSleve HouseDrain 100mm	SuperSleve 150mm	SuperSleve 225mm	SuperSleve 300mm
	<b>30° Bends</b> Plain Ended	SB3/1 *712022	SB3/2 *712009	- -	- -
	Single Socket	SDB3/1S *837230	- -	SB3/5S *505666	SB3/7S *552809
	<b>15° Bends</b> Plain Ended	SB4/1 *712023	SB4/2 *712010	- -	- -
	Single Socket	SDB4/1S *837246	- -	SB4/5S *505667	SB4/7S *552810






Product Description		SuperSleve HouseDrain 100mm	SuperSleve 150mm	SuperSleve 225mm	SuperSleve 300mm
	<b>45° Oblique Junction (Plain)</b> 100 x 100mm	SJ1/1 *711550	- -	- -	- -
	150 x 100mm	- -	SJ1/2 *711235	- -	- -
	150 x 150mm	- -	SJ1/3 *711236	- -	- -
	<b>Flexible Bend</b> Single Socket	SFB1/1 *837247	- -	- -	- -
	<b>45° Oblique Junction (double socket)</b> 100 x 100mm	SDJ1/1D *837249	- -	- -	- -

## Fittings cont.








Product Description		SuperSleve HouseDrain 100mm	SuperSleve 150mm	SuperSleve 225mm	SuperSleve 300mm	Product Description		SuperSleve HouseDrain 100mm	SuperSleve 150mm	SuperSleve 225mm	SuperSleve 300mm	
	45° Oblique Junction (single & double socket)	Suffix S indicates single socket & Suffix D indicates double socket.					90° Curved Square (Plain)		Suffix S indicates single socket & Suffix D indicates double socket.			
	225 x 100mm	-	-	SJ1/7S	-		100 x 100mm		SJ2/1	-	-	-
		-	-	*505668	-		150 x 100mm		*711551	-	-	-
	225 x 150mm	-	-	SJ1/8S	-		150 x 150mm		-	SJ2/2	-	-
		-	-	*505669	-				-	*711240	-	-
225 x 225mm	-	-	SJ1/9D	-		-	SJ2/3	-	-			
	-	-	*505670	-		-	*711241	-	-			
300 x 150mm	-	-	-	SJ1/15S		90° Curved Square (double socket)	SDJ2/1D	-	-	-		
	-	-	-	*532812		100 x 100mm	*837252	-	-	-		
						90° Curved Square Junction (single socket)	Suffix S indicates single socket & Suffix D indicates double socket.					
						225 x 100mm	-	-	SJ3/7S	-		
							-	-	*505671	-		
						225 x 150mm	-	-	SJ3/8S	-		
							-	-	*505672	-		

\*Keyline Code

## Fittings cont.

Product Description		SuperSleve HouseDrain 100mm	SuperSleve 150mm	SuperSleve 225mm	SuperSleve 300mm
	90° Curved Square Junction (double socket) 225 x 225mm	-	-	SJ2/9D *505674	-
	300 x 150mm	-	-	-	SJ3/15S *552816
	Rest Bend Plain Ended	SBR1 *711552	SBR2 *711227	-	-
	Single Socket	SDBR1 *837253	-	-	-
	Single Socket	-	-	SBR5S *505681	-
	Single Socket	-	-	-	SBR7S *552806

Product Description		SuperSleve HouseDrain 100mm	SuperSleve 150mm	SuperSleve 225mm	SuperSleve 300mm
	Taper Pipe Plain 100 x 150mm	ST2/1 *711281	-	-	-
	Single Socket 100 x 150mm	SDT2/1 *837255	-	-	-
	Socket Adaptor - for connection to traditional pipes, channel fittings	SA1/1 *711553	SA1/2 *711270	-	SA1/7 *552825
	Hopper, square	SH1 *718181	-	-	-
	Hopper, square with 100mm horizontal inlet	SH2 *718184	-	-	-
	Low-back P-trap Plain Ended	SG1/1 *711554	SG1/2 *710029	-	-
	Single Socket	SDG1/1 *837256	-	-	-




## Fittings cont.

Product Description		SuperSleve HouseDrain 100mm
	<b>Inlet Gully</b> Supplied complete with Front Grid	SDG3/1 *837258
	<b>Paved Area Gully</b> Supplied complete with Grid and Frame	SDG2/1 *852517
	<b>Square Top Rodding Point</b> Sealed c/w Coupling	SRPS1/1 *858526

## Lubricant







Product Description		All Clay Drainage Systems
	1 Kilo	SL1 *711281
	2.5 Kilo	SL2 *711280

## Drain Connectors



Product Description		SuperSleve HouseDrain 100mm	SuperSleve 150mm	SuperSleve 225mm
	<b>Internal Drain Connector - to 32/40 waste</b>	S/S460 *877774	-	-
	<b>Internal Drain Connector - to 50mm waste</b>	S/S462 *867756	-	-
	<b>Internal Drain Connector - to rainwater, round</b>	S/4A06B *877782	-	-
	<b>Internal Drain Connector - to rainwater, square</b>	S/4A06C *877782	-	-
	<b>Adaptor Coupling - HepSleve</b>	SA3/1 *711566	SA3/2 *712237	SA3/4 *505650

\*Keyline Code



## Adaptors (Polypropylene)

Product Description			SuperSleve HouseDrain 100mm	SuperSleve HouseDrain 100mm	SuperSleve 150mm	
	Adaptors to Waste Pipes					
	Nominal Waste Pipe Size					
		Grommet ID				
	32mm	33.5	SA4 *711569			
	40mm	39.25	SA5 *711570			
	50mm	52.25	SA6 *711571			
68mm	66.75	SA7 *711572				
82mm	80.25	SA8 *711573				
	Adaptors to Soil Pipes					
	SuperSleve					
				SA9 *711574	SA10 *753067	
		Rainwater Adaptor				
		to round or square rainwater pipes up to 76mm			SA11 *711553	- -
		Sliding Couplings				
				SC4/1 *712026	SC4/2 *712020	
	Adaptors to Cast Iron Pipes					
	made to BS 437			SA14/1 *712223	SA14/2 *712224	
	Stopper					
				SS1/1 *711567	SS1/2 *711287	

## Channel Pipe

		Channels			
		100mm	150mm	225mm	300mm
	<b>Pipe</b>				
	Plain Ended 1.0m	CPP3/1 *752466	CPP3/2 *753078	CPP3/3 *961518	- -
	Socketed 0.3m	CP1/1 *710639	CP1/2 *710643	- -	- -
	0.6m	CP2/1 *710640	CP2/2 *710645	CP2/3 *791947	- -
	1.0m	CP3/1 *710642	CP3/2 *710647	CP3/3 *710649	CP3/4 *791540

## Channel Fittings Socketed

		Channels		
		100mm	150mm	225mm
	<b>Enlarger</b>			
	100 x 150mm	CT2/1 *710651	- -	- -
	150 x 225mm	- -	CT2/2 *860574	- -
	<b>Reducer</b>			
	150 x 100mm	CT1/1 *791950	- -	- -
	225 x 150mm	- -	CT1/2 *791949	- -

\*Keyline Code

## Channel Bends Socketed

	Product Description	Channels	
		100mm	150mm
	90° Bend Medium left-hand	CB1/1L *710657	CB1/2L *710658
	right-hand	CB1/1R *710674	CB1/2R *710675
	45° Bend Medium left-hand	CB2/1L *710664	CB2/2L *710665
	right-hand	CB2/1R *791453	CB2/2R *710680
	30° Bend Medium left-hand	CB3/1L *710668	CB3/2L *710669
	right-hand	CB3/1R *710683	CB3/2R *710684

	Product Description	Channels	
		100mm	150mm
	15° Bend Medium left-hand	CB4/1L *710004	CB4/2L *711500
	right-hand	CB4/1R *711493	CB4/2R *711502

## Channel Junctions Socketed

Product Description		Channels	
		100mm	150mm
	<b>90° Curved Square Junction</b>		
	left-hand 100 x 100mm	CJ2/1L <b>*710755</b>	-
	right-hand 100 x 100mm	CJ2/1R <b>*710750</b>	-
	left-hand 150 x 100mm	-	CJ2/2L <b>*710756</b>
	right-hand 150 x 100mm	-	CJ2/2R <b>*710751</b>
	left-hand 150 x 150mm	-	CJ2/3L <b>*710757</b>
	right-hand 150 x 150mm	-	CJ2/3R <b>*710752</b>

Product Description		Channels	
		100mm	150mm
	<b>45° Oblique Junction</b>		
	left-hand 100 x 100mm	CJ1/1L <b>*710764</b>	-
	right-hand 100 x 100mm	CJ1/1R <b>*710760</b>	-
	left-hand 150 x 100mm	-	CJ1/2L <b>*710756</b>
	right-hand 150 x 100mm	-	CJ1/2R <b>*710761</b>

\*Keyline Code



## Branch Channel Bends Socketed



Product Description		Channel
		100mm
	Three Quarter Section 10° left-hand	CX1AL *710718
	10° right-hand	CX1AR *710719
	30° left-hand	CX1BL *710720
	30° right-hand	CX1BR *710721
	50° left-hand	CX1CL *710722
	50° right-hand	CX1CR *710723

Product Description		Channel
		100mm
	70° left-hand	CX1DL *710724
	70° right-hand	CX1DR *710725
	90° left-hand	CX1EL *710726
	90° right-hand	CX1ER *710727
	115° left-hand	CX1FL *710728
	115° right-hand	CX1FR *710729
	140° left-hand	CX1GL *710730
	140° right-hand	CX1GR *710731



## Universal Manhole Systems


### Access Chambers

Product Description	Diameter mm	Supplier Code	Keyline Code
Universal Range - all products fit SuperSleve & plastics (EN1401-1 drainage systems)			
 <p><b>Polypropylene Mini Access Chamber</b> 300mm diameter, depth 600mm, three 100/110mm inlets. Conversion adaptors supplied. <b>Complete Unit</b> including base unit, 2 raising pieces and cover frame</p>	100 110	SDAC1/1	837262
 <p><b>Polymer Cover and Frame</b> (airtight) 345 x 345 square. Effective height 85mm</p>		SDC3	837263

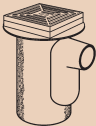

Product Description	Diameter mm	Supplier Code	Keyline Code
Universal Range - all products fit SuperSleve & plastics (EN1401-1 drainage systems)			
 <p><b>Raising Piece</b>, with rubber sealing ring effective height 150mm</p>		SDC4	837264
 <p><b>Base Unit</b> 215mm deep with two 100/110mm flexible inlets allowing 10° of movement. Conversion adaptors supplied</p>	100 110	SDC5	837265


## Inspection Chambers

	Product Description	Diameter mm	Supplier Code	Keyline Code
	<b>100/110mm PPIC Polypropylene Inspection Chambers</b> 475 diameter. Supplied with stoppers in inlets (4 only). 940mm deep five 100/110mm inlets	100 110	SPIC1/1	711846
	595mm deep five 100/110mm inlets conversion adaptors supplied for both chambers	100 110	SPIC2/1	711847
	<b>150/160mm PPIC Polypropylene Inspection Chamber</b> 475 diameter, 1030mm deep. 150/160 straight through main channel with 2 x 150/160 branches at 90° and 2 x 100/110 branches at 45°. Supplied with inlet stoppers and adaptors	150 160	SPIC1/2	602780

	Product Description	Diameter mm	Supplier Code	Keyline Code
	<b>Raising Piece</b> 175mm deep		SPIC4	752445
	<b>Sealing Ring</b> for raising piece		SPIC5	752463
	<b>Base</b> 225mm deep five 100/110mm inlets. Conversion adaptors supplied	100 110	SPIC6/1	712236
	<b>Mixed Base</b> 315mm deep, 150/160 straight through main channel with 2 x 150/160 branches at 90° and 2 x 100/110 branches at 45°. Supplied with inlet stoppers and adaptors	150 160	SPIC6/2	602781

## Gullies

	Product Description	Internal Diameter mm	Internal Depth mm	Outlet Diameter mm	Supplier Code	Keyline Code
	Yard Gully supplied complete with domestic duty grating and frame (up to 1T)	225	585	100	RGP5	852519
		225	585	150	RGP7	852521
	With medium duty grating and frame (up to 5T)	225	585	100	RGP6	852520
		225	585	150	RGP8	852522
	Gully Extras Silt bucket	225	-	-	IBP3	852523

	Product Description	Internal Diameter mm	Internal Depth mm	Outlet Diameter mm	Supplier Code	Keyline Code
	Road Gully round with rodding eye and stopper	300	600	100	RGR1	711189
		300	600	150	RGR2	791468

## Clay Drainage Pipes

	Diameter mm	Length m	No. Per Pack	Weight Per Pack T
SuperSleve HouseDrain	100	1.6	102	1.10
SuperSleve 150	150	1.75	55	1.13
SuperSleve 225	225	1.75	24	1.47
SuperSleve 300	300	2.0	15	2.10

## Diameter Selector

	Nominal Internal Diameters mm								
	75	100	150	225	300	400	450	500	600
SuperSleve		•	•	•	•				
Universals		•	•						
HepSeal						•	•	•	•
SuperSeal			•	•	•				
HepLine		•	•	•	•	•	•		
HepDuct		•	•	•	•				
Gullies				•					
Unjointed		•	•	•	•				
Channels		•	•	•	•	•	•	•	•
Land Drain	•	•	•	•					

# Delivering Outstanding Service

Keyline is known for its civils and drainage expertise, offering you a total solution to all your requirements. With branches across the country, Keyline will provide specialist civils products you need directly from stock.

- Branches nationwide
- A huge range and depth of materials always in stock
- Our staff are helpful, friendly and knowledgeable
- We provide a speedy, efficient and accurate service
- We get it right first time



# Plastic Drainage

Keyline offers a comprehensive range of products suitable for all building, foul, surface water and land drainage applications - including new innovative, cost-effective systems for compliance with the amended Building Regulations Part H (England and Wales) and the Scottish Building Standards technical handbooks.



## Dimensions and Availability

Product	Nominal Diameter mm									Pipe Length m
	82*	110*	150/160*	225	300	375	450	500	600	

### 1. OsmaDrain

Solid	yes	yes	yes	no	no	no	no	no	no	3 & 6
Slotted	no	yes	yes	no	no	no	no	no	no	6

### 2. UltraRib

no	no	yes	yes	yes	no	no	no	no	no	3 & 6
----	----	-----	-----	-----	----	----	----	----	----	-------

### 3. TwinWall

Solid	no	yes	yes	yes	yes	yes	yes	yes	yes	6
Perforated	no	yes	yes	yes	yes	yes	yes	yes	yes	6
Half Perforated	no	no	yes	yes	yes	yes	yes	yes	yes	6

\* 82, 110 and 160mm OsmaDrain pipes are described by the outside diameter; all other pipes are described by the inside diameter.

### 1. OsmaDrain: building drainage connections to main sewers

The OsmaDrain system includes a wide range of bends, junctions, and other fittings, including inspection chambers and adaptors, allowing connection to traditional cast iron and clayware drains.

### 2. UltraRib: foul and surface water drainage

The pipe is available socketed and plain ended in a choice of lengths. There is a full range of bends, junctions, and other fittings, including adaptors allowing connection to, for example, cast iron and clayware drains.

### 3. TwinWall: surface and sub-surface water drainage

It may be supplied either solid for use as a carrier drain, or half or fully perforated for use as filter drains.

## OsmaDrain: building drainage connections to main sewers

The OsmaDrain system is designed for use in gravity drainage installations at depths of up to 10m, with outfalls into Local Authority sewers, private treatment plants, and cesspools, and for surface water drainage into soakaways or watercourses.


Available in diameters of 82, 110 and 160mm the OsmaDrain system, includes a comprehensive range of fittings to accommodate all installation requirements.

**PVC-U provides superior self-cleansing properties at low velocities and this can often help to reduce excavation depths and permit the use of smaller diameter pipes, as well as possibly obviating the need for a pumped system.**




### OsmaDrain 82mm System

Supplier Code	Description	Keyline Code
3D073	P/E Pipe - 3m	794981
3D076	P/E Pipe - 6m	712034
3D105	D/S Slip Coupler	712035
3D116	Snap Cap (spare)	794983
3D124	S/SW Coupler	712036
3D130	'T' Ring (spare)	794985
3D161	S/S Bend - 87½°	712038
3D163	S/S Bend - 45°	712039
3D190	S/S Junction - 87½°	712040
3D205	D/S Pipe Coupler	794986
3D209	P/E Adaptor 68mm RW Pipe	712037
3D561	D/S Bend - 87½°	794987


## OsmaDrain 110mm System

Supplier Code	Description	Keyline Code	Supplier Code	Description	Keyline Code	
4D066	P/E Slotted Pipe - 6m	712245	4D131	Protection Sleeve	710586	
4D073	P/E Pipe - 3m	710578	4D149	Rainwater Adaptor x 68mm	710582	
4D076	P/E Pipe - 6m	710579	4D159	Universal Drain Adaptor	816358	
4S085	Socket Bracket Brace Assembly	813564	4D161	S/S Bend - 87½°	710587	
4S086	Pipe Bracket Assembly	818101	4D162	S/S Bend - 67½°	710588	
4D095	S/S Reducer - 110mm x 82mm	710032	4D163	S/S Bend - 45°	710589	
4D104	D/S Coupler (for slotted pipe)	758730	4D166	S/S Bend - 30°	710590	
4D105	D/S Slip Coupler	710580	4D167	S/S Bend - 15°	710591	
4D107	S/S Adaptor - to clay socket	710581	4D168	S/S Bend - 11¼°	712006	
4D115	S/S Settlement Socket	758733	4D169	S/S Access Bend - 87½°	710592	
4D116	Snap Cap and Seal	710583		4D173	S/S Adjustable Bend - 30° - for variable angles up to 30°, rotate segments to achieve required angle	712242
4D124	S/SW Coupler	710585		4D181	S/S LR Bend - 87½°	711861
4D128	S/S Adaptor - to clay spigot	710584				
4D129	D/S Adaptor - to thinwall clay	712046				


## OsmaDrain 110mm System cont.

	Supplier Code	Description	Keyline Code		Supplier Code	Description	Keyline Code
	4D183	S/S LR Bend - 45°	710593				
	4D190	S/S Equal Junction - 87½°	710594				
	4D193	D/S Equal Junction - 87½°	710595				
	4D205	D/S Pipe Coupler	710596				
	4D210	S/S Equal Junction - 45°	710597				
	4D213	D/S Equal Junction - 45°	710598				
	4D274	S/S Access Pipe	710599				
	4D281	P/E LR Bend - 87½°	758751				
	4D283	P/E LR Bend - 45°	890955				
	4D290	S/S Screwed Access Cover	711862				
	4D292	P/E Screwed Access Cover - allows full bore access to the drainage system for cleaning, fits into standard OsmaDrain ring seal socket	710600				
	4D295	Temporary Site Cap	935063				
					4D296	P/E Socket Plug - incorporates one closed boss socket position, will form either a 32mm, 40mm or 50mm waste pipe connection when fitted with the appropriate boss socket adaptor	710601
					4D297	P/E Socket Plug (open)	758731
					4D298	Internal Drain Connector - 32/40mm	870066
					4D299	Internal Drain Connector - 50mm	870067
					4D314	Ring Seal for 4D325 (spare)	711900
					4D317	Rodding Eye Gasket - oval (spare)	758734
					4D318	Rodding Eye Screws - new style (pkt 4)	838181
					4D325	S/S Cover & Frame - 250mm diameter - suitable for use in situations requiring a maximum loading of up to 10kN (1T), where the frame of the cover is supported in service by a concrete plinth	710039


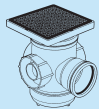
## OsmaDrain 110mm System cont.

Supplier Code	Description	Keyline Code	Supplier Code	Description	Keyline Code	
4D328	S.I.C. Cover (spare)	794988	4D421	Inspection Junction Gasket (spare)	758741	
4D360	P/E Square Rodding Eye	988730	4D492	S/S Equal Double Inspection Junction	869436	
4S380	Cleaner - 250ml can	860838	4D494	Inspection Junction Plug (spare)	869437	
4S383	Solvent No. 2 - 125ml can	860839	4D500	S/S Universal Gully Trap	710606	
4S384	Solvent No. 2 - 250ml can	860840	4D503	SW/S Plain Hopper	710607	
4D391	Soluble Lubricant - 0.5kg tub	712044	4D504	SW/S Vertical Inlet Hopper	710608	
4S391	Silicone Lubricant - 50g tube	519235	4D505	Vertical Inlet Cover (spare)	710609	
4D392	Silicone Lubricant - 0.5kg tub	758767	4D506	Universal Gully Grating (spare)	710610	
4S392	Silicone Lubricant Spray - 400ml	523524	4D507	P/E Plain Hopper	710612	
4S394	Solvent Cement Filler - 200g tube	792362	4D508	P/E Vertical Inlet Hopper - with 150mm long spigot	710613	
4D395	Soluble Lubricant - 2.5kg tub	794989		4D526	Sealed Access Plate	710616
4D398	S/S Boss Adaptor - 1¼/32	794990		4D527	P/E Sealed Access Hopper	710615
4D399	S/S Boss Adaptor - 1½/40	711860				
4D418	Inspection Junction Washers (pkt 4)	758736				
4D420	S/S Inspection Pipe	869435				

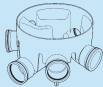
## OsmaDrain 110mm System cont.

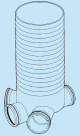
	Supplier Code	Description	Keyline Code		Supplier Code	Description	Keyline Code
	4D561	D/S Bend - 87½°	710618		4D589	S/S Bossed Pipe	710626
	4D562	D/S Bend - 67½°	710619		4D593	D/S Access Junction - 87½°	710627
	4D563	D/S Bend - 45°	710620		4D700	S/S Bottle Gully	943614
	4D566	D/S Bend - 30°	710621		4D701	S/S Yard Gully	943615
	4D567	D/S Bend - 15°	710622		4D702	Sealed Access Cover	943616
	4D568	D/S Bend - 11¼°	712007		4D706	Vertical Inlet Grating & Frame	846302
	4D569	D/S Access Bend - 87½°	710623		4D708	Square Grating and Frame	525075
	4D573	D/S Adjustable Bend - 30°	712241		4D720	Vertical Inlet Grating	-
	4D581	D/S LR Bend - 87½° - satisfies recommendations of BS 5572: 1994 for base of soil stack applications. Manufactured with cut out marks to convert to a Channel Bend for use within traditional manholes	710624		4D722	Square Inlet Grating	-
	4D583	D/S LR Bend - 45°	710625		4D782	S/S Channel Branch Bend - short - LH	711866
	4D585	D/S LR Channel Bend - 90°	711878		4D783	S/S Channel Branch Bend - short - RH	711867
	4D587	D/S LR Channel Bend - 45°	794991		4D787	S/S Channel Branch Bend - long - LH	758752
					4D788	S/S Channel Branch Bend - long - RH	758753
					4D792	SW/½S Channel Junction - 87½° - LH	710631
					4D793	SW/½S Channel Junction - 87½° - RH	710632

## OsmaDrain 110mm System cont.

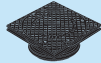
	Supplier Code	Description	Keyline Code		Supplier Code	Description	Keyline Code
	4D794	SW/½S Channel Junction - 45° - LH	710633		4D901	S/S Bottle Gully - 87½° (open)	712242
	4D795	SW/½S Channel Junction - 45° - RH	710634		4D902	Access Liner for 593 (spare)	712246
	4D800	P/E Trapped Yard Gully - 600mm overall depth, supplied complete with removable rubber bung for rodding access	817733		4D904	Screwed Access Cap (spare)	758743
	4D810	DI Grating/Frame - B125	817734		4D906	Bottle Gully Grating (spare)	758761
	4D815	Perforated Catchment Bucket	817735		4D908	Bottle Gully Cover and Frame (spare)	758754
	4D864	SW/½S Half Connector	711868		4D909	Access Liner for Bends (spare)	758744
	4D868	SW/½S Access Pipe	711869		4D910	D/S Multi-base IC Base - straight	813825
	4D874	P/E Channel Access Pipe	711870		4D911	D/S Multi-base IC Base - single 90° - LH	813831
	4D900	S/S Bottle Gully - 87½° - provides access to the drainage system for cleaning, supplied with all bosses closed	711865		4D912	D/S Multi-base IC Base - single 90° - RH	813832
					4D913	D/S Multi-base IC Base - single 45° - LH	813833
					4D914	D/S Multi-base IC Base - single 45° - RH	813834
					4D915	Sealed Access Cover	758762
					4D916	Bottle Gully Riser	860966
					4D917	D/S Multi-Base IC Base - double 45°	813835
					4D918	D/S Multi-Base IC Base - bend 90°	813836

## OsmaDrain 110mm System cont.

	Supplier Code	Description	Keyline Code
	4D919	DI Grating for 4D900/901	845564
	4D922	D/S Universal IC Base - 270mm invert - 110mm straight main channel with four 110mm (2 x 45° and 2 x 90°) right/left hand branch entries. Supplied with 3 blank-off plugs for use in unused side entries	712243
	4D923	D/S Equal NIC Base 110mm x 110mm	538723
	4D925	Universal IC Shaft - 230mm - for use with 4D922, 6D928 and 6D929	712244
	4D926	Universal IC Plug (spare)	710637
	4D930	Inspection Junction Cover - small (spare)	758745
	4D932	Universal IC Sealant (spare)	758764
	4D933	D/S Multi-Base IC Base - twin LH	813837
	4D934	D/S Multi-Base IC Base - twin RH	813838
	4D935	D/S Multi-Base IC Base - double 90°	813840

	Supplier Code	Description	Keyline Code
	4D937	P/E Multi-Base IC Shaft - 150mm	813849
	4D942	DI Cover/Frame - B125	878277
	4D943	P/E PP, Square Cover/Frame	982048
	4D945	Square Recessed Steel Cover/PP Frame	878280
	4D946	Square Recessed Steel Cover/PP Frame - sealed	878284
	4D947	UIC 450mm PP Round Cover and Frame	538399
	4D948	Chamber Channel Cover - LH	758755
	4D949	Chamber Channel Cover - RH	758756
	4D955	Lifting Keys	878294
	4D957	MB Shaft Seal (spare)	838183
	4D960	D/S Shallow IC - 600mm - 600mm invert depth, supplied with 2 profiled, blank-off plugs for use in unused side entries	758749






## OsmaDrain 110mm System cont.

	Supplier Code	Description	Keyline Code
	4D961	P/E Sealed Cover/Adjacent Frame - 250mm diameter - suitable for use in situations requiring a maximum loading of up to 10kN (1T) where the frame is supported in service by a concrete plinth	870068
	4D964	Shallow IC Plug (spare)	758750
	4D969	P/E Multi-Base Cover/Frame	813851
	4D992	Access Cap Gasket (spare)	758748
	4D993	Bottle Gully Plug - new style (spare)	838184



## OsmaDrain 160mm System


Supplier Code	Description	Keyline Code	Supplier Code	Description	Keyline Code
6D066	P/E Slotted Pipe - 6m	758501	6D161	S/S Bend - 87½°	710053
6D073	P/E Pipe - 3m	712008	6D163	S/S Bend - 45°	710054
6D076	P/E Pipe - 6m	711892	6D166	S/S Bend - 30°	710055
6S085	Socket Bracket Brace Assembly	757995	6D167	S/S Bend - 15°	710056
6S086	Pipe Bracket Assembly	757996	6D190	S/S Equal Junction - 87½°	710058
6D099	S/S Reducer - 160mm x 110mm	711893	6D193	D/S Equal Junction - 87½°	711894
6D104	D/S Coupler (for slotted pipe)	758502	6D198	S/S Unequal Junction - 87½°	710059
6D105	D/S Slip Coupler	758499	6D199	D/S Unequal Junction - 87½°	758496
6D116	Snap Cap (spare)	758504	6D205	D/S Pipe Coupler	710060
6D124	S/SW Coupler	710049	6D210	S/S Equal Junction - 45°	710061
6D128	S/S Adaptor - to clay spigot	710050	6D213	D/S Equal Junction - 45°	711895
6D129	D/S Adaptor - to thinwall clay. Connector to BS EN 295 thin wall clay spigot	794993	6D218	S/S Unequal Junction - 45°	710062
6D130	'T' Ring (spare)	710051	6D219	D/S Unequal Junction - 45°	711901
6D131	Protection Sleeve	710052	6D274	S/S Access Pipe	710063
			6D281	P/E LR Bend - 87½°	710122

## OsmaDrain 160mm System cont.

	Supplier Code	Description	Keyline Code		Supplier Code	Description	Keyline Code	
	6D283	P/E LR Bend - 45°	794994		6D784	S/S Channel Branch Bend - 87½° - LH	758505	
	6D290	S/S Screwed Access Cover	711896		6D785	S/S Channel Branch Bend - 87½° - RH	758506	
	6D292	P/E Screwed Access Cover - allows full bore access to the drainage system for cleaning, fits into a standard OsmaDrain ring seal socket	710064		6D874	P/E Channel Access Pipe	711897	
	6D296	P/E Socket Plug	710065	6D875	P/E Manhole Base - 160mm x 110mm	758510		
	6D360	P/E Square Rodding Eye	988729	6D876	P/E Manhole Base - 160mm x 160mm - 160mm straight main channel with four 160mm (2 x 45° and 2 x 90°) right/left hand branch entries. Supplied with all inlets and outlets sealed	711899		
	6D561	D/S Bend - 87½°	710073		6D917	NIC Ring Seal (spare)	995456	
	6D563	D/S Bend - 45°	710074		6D928	D/S Equal Inspection Base - 160mm x 160mm	857459	
	6D566	D/S Bend - 30°	710075		6D929	D/S Unequal Inspection Base - 160mm x 110mm - 160mm straight main channel with four 110mm (2 x 45° and 2 x 90°) right/left hand branch entries. Supplied with 3 blank-off plugs for use in unused side entries	857460	
	6D567	D/S Bend - 15°	710076		6D931	P/E Polypropylene Square Cover and Frame 350mm	717783	
	6D585	D/S LR Channel Bend - 90°	710078					
	6D587	D/S LR Channel Bend - 45°	710079					
	6D780	S/S Channel Branch Bend - 45° - LH	710081					
	6D781	S/S Channel Branch Bend - 45° - RH	710082					

## OsmaDrain 160mm System cont.

	Supplier Code	Description	Keyline Code
	6D932	350mm Restrictor Ring (spare)	717790
	6D936	D/S Equal NIC Base - 160mm x 160mm - 160mm straight main channel with two 160mm x 90° right/left hand branch entries. Supplied complete with sealing ring and one blank-off plug for use in unused side entries	995429
	6D937	D/S Unequal NIC Base - 160mm x 110mm - 160mm straight main channel with four 110mm (2 x 90° and 2 x 45°) right/left hand branch entries. Supplied complete with sealing ring and three blank-off plugs for use in unused side entries	995430

	Supplier Code	Description	Keyline Code
	6D938	NIC Inspection Chamber Shaft - 3m length - for use with 4D923, 6D936 and 6D937 NIC bases	995435
	6D934	NIC Shaft 1.5m length	507163
	6D940	NIC Telescopic Adaptor	848035


## UltraRib: foul and surface water drainage

UltraRib is a PVC-U pipe system designed for adoptable sewer installations. The pipe has a smooth inner surface and is reinforced externally with a pattern of integral, concentric ribs which provide exceptional axial rigidity and enhanced radial strength without a significant increase in weight.




UltraRib is manufactured to comply with the requirements of Water Industry Standard WIS 4-35-01 and is Kitemarked under the BSI Product Certification Scheme. The system has been awarded Agrément Certificates number 98/3472 and 89/R046 covering all foul and surface water applications.

**The system employs fully socketed joints for security and ease of installation. The design of the socket prevents accidental displacement of the O ring during installation, and the resulting joint provides a flush fit between the internal bore of the pipe and the fitting. The assembled joint provides built-in accommodation for differential movement without damage.**

## UltraRib 150mm System

	Supplier Code	Description	Keyline Code
	6UR043	S/S Pipe - 3m	800813
	6UR046	S/S Pipe - 6m	800814
	6UR073	P/E Pipe - 3m	800808
	6UR099	S/S Reducer - 150mm x 110mm - level invert reducer to BS EN 1401 OsmaDrain spigot	800831
	6UR105	D/S Slip Coupler	800816
	6UR106	D/S Adaptor - to clay or concrete spigot	800820
	6UR117	Ring Seal (spare)	800902
	6UR118	Ring Seal - channel fittings (spare)	800903
	6UR128	S/S Adaptor - connector to BS 1211 or BS 437 cast iron spigot or BS EN 245 clay spigot	800818
	6UR129	D/S Adaptor - to thinwall clay spigot	800822



## UltraRib 150mm System cont.

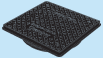
	Supplier Code	Description	Keyline Code		Supplier Code	Description	Keyline Code
	6UR141	S/S Adaptor - to BS EN 1401 spigot	800828		6UR296	P/E Socket Plug	806542
	6UR142	D/S Adaptor - to BS EN 1401 socket	800829		6UR395	Soluble Lubricant - 2.5kg tub	833443
	6UR143	S/S Adaptor - to BS EN 1401 socket	800830		6UR396	Soluble Lubricant - 5kg tub	833444
	6UR163	S/S Bend - 45°	-		6UR560	D/S Bend - 87½° - to BS EN 1401 spigot	800832
	6UR193	D/S Equal Junction - 87½°	800843		6UR561	D/S Bend - 87½°	800839
	6UR199	D/S Junction (150 x 110) - 87½°	800845		6UR563	D/S Bend - 45°	800840
	6UR205	D/S Pipe Coupler - for jointing UltraRib pipe	800817		6UR566	D/S Bend - 30°	800841
	6UR213	D/S Equal Junction - 45°	800844		6UR567	D/S Bend - 15°	800842
	6UR219	D/S Junction (150 x 110) - 45°	800846		6UR590	S/S Road Gully - 350mm diameter	995278
	6UR290	S/S Screwed Access Cover	800879		6UR600	S/S Road Gully - 450mm diameter x 900mm overall depth trapped road gully	816362
	6UR292	P/E Screwed Access Cover - fits into an UltraRib socket to allow full access to the sewerage system for cleaning	800878		6UR780	S/S Channel Branch Bend - 45° - LH	800883

## UltraRib 150mm System cont.




Supplier Code	Description	Keyline Code	Supplier Code	Description	Keyline Code
6UR781	S/S Channel Branch Bend - 45° - RH	800884	6UR869	S/S Rocker Pipe	806543
6UR784	S/S Channel Branch Bend - 87½° - LH	870944	6UR874	P/E Channel Access Pipe	800882
6UR785	S/S Channel Branch Bend - 87½° - RH	870948	6UR875	P/E Manhole Base - 150mm x 110mm	800855
6UR794	SW/½S Channel Junction - 45° - LH	800892	6UR876	P/E Manhole Base - 150mm x 150mm	800856
6UR795	SW/½S Channel Junction - 45° - RH	800893	6D917	NIC Ring Seal (spare)	995456
6UR796	SW/½S Channel Junction - 45° LH (150 x 110)	800894	4D925	IC Shaft - 230mm effective length - for use with 6UR928 and 6UR929	712244
6UR797	SW/½S Channel Junction - 45° RH (150 x 110)	800896	6UR928	D/S Equal Inspection Chamber Base 450mm diameter - 150mm x 150mm - 150mm straight main channel with two 150mm x 90° right/left hand branch entries. Supplied with one blank-off plug for use in unused side entry	857470
6UR798	SW/½S Channel Bend - 45° - LH	800897	6UR929	D/S Unequal Insp Base - 150mm x 110mm	857481
6UR799	SW/½S Channel Bend - 45° - RH	800898	6D934	NIC Shaft 1.5m length	507163
6UR861	SW/½S Channel Bend - 87½°	870950			
6UR863	SW/½S Channel Bend - 45°	800885			
6UR866	SW/½S Channel Bend - 30°	800886			
6UR867	SW/½S Channel Bend - 15°	800887			
6UR868	SW/½S Channel Access Pipe	800881			

## UltraRib 150mm System cont.


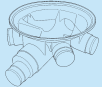
	Supplier Code	Description	Keyline Code
	6D931	P/E Polypropylene Square Cover and Frame	717783
	6D932	350mm Restrictor Ring (spare)	717790
	6UR936	D/S Equal NIC Base 150mm x 150mm	995432
	6UR937	D/S Unequal NIC Base 150mm x 110mm - 150mm straight main channel with four 110mm (2 x 90° and 2 x 45°) right/left hand branch entries. Supplied complete with sealing ring and three blank-off plugs for use in unused side entries	995433
	6D938	NIC Inspection Chamber Shaft - 3m length - for use with 6UR936 and 6UR937 NIC bases	995435
	6D940	NIC Telescopic Adaptor	848035

	Supplier Code	Description	Keyline Code
	4D942	DI Cover/Frame - B125	878277
	4D943	PP Sealed Square Cover/Frame - suitable for use with foot traffic only. When surrounded by a concrete plinth, can be used in situations with loading up to 50kN (5T) i.e. domestic driveways	982048
	4D947	450mm Polypropylene Round Cover and Frame	538377
	4D955	Lifting Keys	878294
	6UR993	Testing Plug	800901

## UltraRib 225mm System

	Supplier Code	Description	Keyline Code		Supplier Code	Description	Keyline Code	
	9UR043	S/S Pipe - 3m	833450		9UR296	P/E Socket Plug	833464	
	9UR046	S/S Pipe - 6m	833451		9UR561	D/S Bend - 90°	833467	
	9UR073	P/E Pipe - 3m	833448			9UR563	D/S Bend - 45°	833468
	9UR095	S/S Reducer - 225mm x 150mm - level invert reducer	833453			9UR566	D/S Bend - 30°	833470
	9UR105	D/S Slip Coupler	833454		9UR567	D/S Bend - 15°	833472	
	9UR109	D/S Adaptor - to clay spigot	833455		9UR853	SW/½S Channel Access Bend - 45°	833488	
	9UR117	Ring Seal (spare)	833456		9UR861	SW/½S Channel Bend - 87½°	870940	
	9UR205	D/S Pipe Coupler	833457		9UR863	SW/½S Channel Bend - 45°	833489	
	9UR213	D/S Equal Junction - 45°	833458		9UR866	SW/½S Channel Bend - 30°	833491	
	9UR224	D/S Junction (225 x 110) - 45°	833459			9UR867	SW/½S Channel Bend - 15°	833492
	9UR226	D/S Junction (225 x 160) - 45°	833461		9UR868	SW/½S Channel Access Pipe	961724	
	9UR227	D/S Junction (225 x 150) - 45°	833462					
	9UR229	D/S Slip Junction (225 x 150) - 45°	844978					






## UltraRib 225mm System cont.

	Supplier Code	Description	Keyline Code
	9UR869	S/S Rocker Pipe - 600mm effective length	833494
	9UR874	P/E Channel Access Pipe	833495
	9UR877	P/E Manhole Base - 225mm x 225mm	833496
	9UR878	P/E Manhole Base - 225mm x 150mm - 225mm straight main channel with four 150mm (2 x 45° and 2 x 90°), right/left hand branch entries. Supplied with inlets and outlets sealed	833498



UltraRib Range

## UltraRib 300mm System

	Supplier Code	Description	Keyline Code		Supplier Code	Description	Keyline Code	
	12UR043	S/S Pipe - 3m	833516		12UR240	D/S Junction (300 x 225) - 45°	833532	
	12UR073	P/E Pipe - 3m	833511			12UR296	P/E Socket Plug - allows full bore access into the sewerage system for cleaning	833534
	12UR093	S/S Reducer - 300mm x 225mm - level invert reducer	833518			12UR561	D/S Bend - 90°	833536
	12UR105	D/S Slip Coupler - for new branch connections and repairs	833520		12UR563	D/S Bend - 45°	833537	
	12UR112	D/S Adaptor - to concrete spigot	833523		12UR566	D/S Bend - 30°	833541	
	12UR117	Ring Seal (spare)	833526		12UR567	D/S Bend - 15°	833543	
	12UR205	D/S Pipe Coupler	833528		12UR869	S/S Rocker Pipe - 600mm effective length	833546	
	12UR213	D/S Equal Junction - 45°	833529			12UR874	P/E Channel Access Pipe - accommodates 6 x 150mm side branch entries, three per side	833547
	12UR236	D/S Junction (300 x 160) - 45°	833530					
	12UR237	D/S Junction (300 x 150) - 45°	833531					
	12UR239	D/S Slip Junction (300 x 150) - 45°	838179					



## Tegra 600: non-entry inspection chamber

Safer, cost-effective access for pipe inspection and maintenance

### Key Benefits

- Significantly lighter than traditional concrete ring manholes
- Easily manoeuvred on site by hand: no heavy machinery required for lifting and placing
- Can be installed and backfilled within one day (typical concrete manhole takes up to three days): significant saving of time and costs
- Reduced Health and Safety risks to personnel during installation and service
- Prevents personnel access to a potentially hazardous environment: pipe inspection and maintenance carried out from ground level
- Sockets allow up to 7.5° pipe movement in any direction: extra flexibility for successful, secure connection to pipe line and level

### Applications

- For maintenance inspection of buried pipework more than 1.2 metres deep (where restricted access is required)
- Non-adoptable domestic and industrial/commercial drainage applications
- Connects to Wavin UltraRib and TwinWall\* drainage systems 150mm, 225mm and 300mm pipe

\*with adaptors

## Advantages

- Strong polypropylene construction
- Lightweight and easy to handle
- Safer on site and in service
- Faster, lower-cost installation
- Flexible sockets: allowing up to 7.5° of movement in any direction

Straight base.  
30°, 90° and equal  
cross base  
configurations are  
also available

Moveable socket:  
up to 7.5° in  
any direction



Tegra 600

## Tegra 600

Supplier Code	Description
6NE100	150mm UltraRib Straight Tegra Base
6NE200	150mm UltraRib 90° Tegra Base
6NE300	150mm UltraRib 30° Tegra Base
6NE400	150mm UltraRib Cross Tegra Base
9NE100	225mm UltraRib Straight Tegra Base
9NE200	225mm UltraRib 90° Tegra Base
9NE300	225mm UltraRib 30° Tegra Base
9NE400	225mm UltraRib Cross Tegra Base
12NE100	300mm UltraRib Straight Tegra Base
12NE200	300mm UltraRib 90° Tegra Base
12NE300	300mm UltraRib 30° Tegra Base
12NE400	300mm UltraRib Cross Tegra Base
9NE930	Tegra Restrictor Cap
600TW076	6m Shaft of Unperforated 600mm dia TwinWall

## TwinWall: surface and sub-surface water drainage

Wavin TwinWall is a cost-effective pipe system intended for use as a direct alternative to all non-pressurised gravity drain systems other than where Local Authority adoption is necessary. Typical applications include highway filter and carrier drains, rail track drainage, and unadoptable surface water drains, for example on industrial or commercial developments.

The TwinWall construction helps to maintain flexibility and reduce the possibility of impact damage on site.



TwinWall Range

## TwinWall 100mm System

Supplier Code	Description	Keyline Code
4TW076	P/E Pipe - 6m unperforated	554550
4TW117	Ring Seal	554553
4TW176	P/E Pipe - 6m perforated	554551
4TW205	D/S Pipe Coupler	554552
4TW750	TwinWall End Cap	554554

## TwinWall 150mm System

Supplier Code	Description	Keyline Code	Supplier Code	Description	Keyline Code	
6TW076	P/E Pipe - 6m	885279	6TW176	P/E Pipe - 6m perforated	885280	
6TW097	D/S Reducer - 6TW x 4TW	554555	6TW193	D/S Junction 87.5°	554556	
6TW099	D/S Level Invert Reducer	885370	6TW205	D/S Pipe Coupler	885282	
6TW117	Ring Seal	885283	6TW213	D/S Junction 45°	885369	
6TW128	S/S Adaptor to Cast Iron or Clay Spigot	958333	6TW276	P/E Pipe - 6m half perforated	923631	
6TW129	D/S Adaptor Connector to Thin Wall Clay Spigot	-	6TW560	D/S Adaptor Bend - 87½ OD x TW	958470	
6TW141	S/S Adaptor 6TW Socket x 160mm BS EN 1401 Spigot	924181	6TW561	D/S Bend - 87½°	885288	
6TW142	D/S Adaptor 6TW Socket x 160mm BS EN1401 Socket	924168	6TW563	D/S Bend - 45°	885289	
6TW144	S/S Adaptor 6UR Spigot x 160mm Flexible Pipe Socket	885285	6TW566	D/S Bend - 30°	923851	
6TW145	S/S Adaptor 6UR Spigot x 6TW Socket	885286	6TW567	D/S Bend - 15°	923892	
6TW146	S/S Adaptor 6TW Spigot x 160 Flexible Pipe Socket	885287		6TW650	P/E Road Gully - 450mm diameter x 900mm deep	947550
6TW147	S/S Adaptor Bend 6UR Spigot x 6TW Socket	958451		6TW651	P/E Road Gully - 450mm diameter x 750mm deep	947551
6TW148	D/S Adaptor UR x TW Socket	988760	6TW750	TwinWall End Cap	554557	

## TwinWall 225mm System

Supplier Code	Description	Keyline Code
9TW076	P/E Pipe - 6m unperforated	885292
9TW095	D/S Level Invert Reducer	885302
9TW117	Ring Seal	885298
9TW148	D/S Adaptor UR x TW Socket	988759
9TW176	P/E Pipe - 6m perforated	885293
9TW205	D/S Pipe Coupler	885294
9TW213	D/S Junction 45°	885300
9TW227	D/S Junction 45° 225 x 150	885301
9TW276	P/E Pipe - 6m half perforated	924323
9TW561	D/S Bend - 87½°	885299
9TW563	D/S Bend - 45°	885297
9TW566	D/S Bend - 30°	924453
9TW567	D/S Bend - 15°	924481
9TW750	TwinWall End Cap	554558

## TwinWall 300mm System

Supplier Code	Description	Keyline Code
12TW076	P/E Pipe - 6m unperforated	885303
12TW093	D/S Level Invert Reducer	885311
12TW117	Ring Seal	885306
12TW176	P/E Pipe - 6m perforated	885304
12TW205	D/S Pipe Coupler	885305
12TW213	D/S Junction 45°	897809
12TW237	D/S Junction 45° 300 x 150	885309
12TW240	D/S Junction 45° 300 x 225	885310
12TW276	P/E Pipe - 6m half perforated	897584
12TW561	D/S Bend - 87½°	885307
12TW563	D/S Bend - 45°	885371
12TW566	D/S Bend - 30°	897739
12TW567	D/S Bend - 15°	897774
12TW750	TwinWall End Cap	554559

## TwinWall 375mm System

Supplier Code	Description	Keyline Code	Supplier Code	Description	Keyline Code
375TW046	S/S Pipe - 6m unperforated	505716	375TW205	D/S Pipe Coupler	505735
375TW056	S/S Pipe - 6m half perforated	505717	375TW225x45	S/S Unequal Junction - 45° - 375mm x 225mm	505744
375TW066	S/S Pipe - 6m perforated	505718	375TW225x90	S/S Unequal Junction - 90° - 375mm x 225mm	505749
375TW076	P/E Pipe - 6m unperforated	505720	375TW300x45	S/S Unequal Junction - 45° - 375mm x 300mm	505745
375TW086	P/E Pipe - 6m perforated	505722	375TW375x45	S/S Equal Junction - 45° - 375mm x 375mm	505737
375TW096	P/E Pipe - 6m half perforated	505724	375TW375x90	S/S Equal Junction - 90° - 375mm x 375mm	505736
375TW099	S/S Reducer - 300mm x 375mm	505725	375TW750	TwinWall End Cap	554560
375TW117	Ring Seal	505726			
375TW150x45	S/S Unequal Junction - 45° - 375mm x 150mm	505739			
375TW150x90	S/S Unequal Junction - 90° - 375mm x 150mm	505747			
375TW161	S/S Bend - 87.5°	505729			
375TW163	S/S Bend - 45°	505731			
375TW166	S/S Bend - 30°	505732			
375TW167	S/S Bend - 15°	505733			

## TwinWall 450mm System

Supplier Code	Description	Keyline Code	Supplier Code	Description	Keyline Code
450TW046	S/S Pipe - 6m unperforated	505756	450TW205	D/S Pipe Coupler	505776
450TW056	S/S Pipe - 6m half perforated	505757	450TW225x45	S/S Unequal Junction - 45° - 450mm x 225mm	505781
450TW066	S/S Pipe - 6m perforated	505759	450TW225x90	S/S Unequal Junction - 90° - 450mm x 225mm	505785
450TW076	P/E Pipe - 6m unperforated	505760	450TW300x45	S/S Unequal Junction - 45° - 450mm x 300mm	505782
450TW086	P/E Pipe - 6m perforated	505762	450TW375x45	S/S Unequal Junction - 45° - 450mm x 375mm	505783
450TW096	P/E Pipe - 6m half perforated	505764	450TW450x45	S/S Equal Junction - 45° - 450mm x 450mm	505779
450TW099	S/S Reducer - 450mm x 375mm	505766	450TW450x90	S/S Equal Junction - 90° - 450mm x 450mm	505778
450TW117	Ring Seal	505768	450TW750	TwinWall End Cap	554561
450TW150x45	S/S Unequal Junction - 45° - 450mm x 150mm	505780			
450TW150x90	S/S Unequal Junction - 90° - 450mm x 150mm	505784			
450TW161	S/S Bend - 87.5°	505769			
450TW163	S/S Bend - 45°	505771			
450TW166	S/S Bend - 30°	505773			
450TW167	S/S Bend - 15°	505775			

## TwinWall 500mm System

Supplier Code	Description	Keyline Code	Supplier Code	Description	Keyline Code
500TW046	S/S Pipe - 6m unperforated	505786	500TW205	D/S Pipe Coupler	505803
500TW056	S/S Pipe - 6m half perforated	505787	500TW225x45	S/S Unequal Junction - 45° - 500mm x 225mm	505808
500TW066	S/S Pipe - 6m perforated	505788	500TW300x45	S/S Unequal Junction - 45° - 500mm x 300mm	505809
500TW076	P/E Pipe - 6m unperforated	505789	500TW375x45	S/S Unequal Junction - 45° - 500mm x 375mm	505812
500TW086	P/E Pipe - 6m perforated	505790	500TW450x45	S/S Unequal Junction - 45° - 500mm x 450mm	505814
500TW096	P/E Pipe - 6m half perforated	505791	500TW500x45	S/S Equal Junction - 45° - 500mm x 500mm	505806
500TW099	S/S Reducer - 500mm x 450mm	505792	500TW500x90	S/S Equal Junction - 90° - 500mm x 500mm	505805
500TW117	Ring Seal	505793	500TW750	TwinWall End Cap	554562
500TW150x45	S/S Unequal Junction - 45° - 500mm x 150mm	505807			
500TW150x90	S/S Unequal Junction - 90° - 500mm x 150mm	505815			
500TW161	S/S Bend - 87.5°	505795			
500TW163	S/S Bend - 45°	505797			
500TW166	S/S Bend - 30°	505800			
500TW167	S/S Bend - 15°	505801			

## TwinWall 600mm System


Supplier Code	Description	Keyline Code	Supplier Code	Description	Keyline Code
600TW046	S/S Pipe - 6m unperforated	505817	600TW205	D/S Pipe Coupler	505833
600TW056	S/S Pipe - 6m half perforated	505820	600TW225x45	S/S Unequal Junction - 45° - 600mm x 225mm	505840
600TW066	S/S Pipe - 6m perforated	505822	600TW300x45	S/S Unequal Junction - 45° - 600mm x 300mm	505842
600TW076	P/E Pipe - 6m unperforated	505823	600TW375x45	S/S Unequal Junction - 45° - 600mm x 375mm	505843
600TW086	P/E Pipe - 6m perforated	505824	600TW450x45	S/S Unequal Junction - 45° - 600mm x 450mm	505844
600TW096	P/E Pipe - 6m half perforated	505825	600TW500x45	S/S Unequal Junction - 45° - 600mm x 500mm	505846
600TW099	S/S Reducer - 600mm x 500mm	505826	600TW600x45	S/S Equal Junction - 45° - 600mm x 600mm	505836
600TW117	Ring Seal	505827	600TW600x90	S/S Equal Junction - 90° - 600mm x 600mm	505834
600TW150x45	S/S Unequal Junction - 45° - 600mm x 150mm	505838	600TW750	TwinWall End Cap	554563
600TW150x90	S/S Unequal Junction - 90° - 600mm x 150mm	505847			
600TW161	S/S Bend - 87.5°	505828			
600TW163	S/S Bend - 45°	505829			
600TW166	S/S Bend - 30°	505830			
600TW167	S/S Bend - 15°	505831			

## Land Drainage: surface and sub-surface water drainage

A corrugated PVC-U pipe system which has been designed to provide cost effective land drainage. It is quickly and easily installed using either open cut or trenchless methods.

Land Drainage can be used in a variety of civil engineering and agricultural situations where its use will improve the condition, traffickability and workability of soils.

It complies with the requirements of BS 4962 and carries the BSI Kitemark.

Land Drainage 80mm System			
	Supplier Code	Description	Keyline Code
	80D025	S/S Coil - 25m	711880
	80D050	S/S Coil - 50m	897450
	80D100	S/S Coil - 100m	885312
	80D104	D/S Coupler - for jointing Land Drainage pipe	711883
	80D200	D/S Junction - 67½°	711885
	80D297	S/S End Cap	711888

## Land Drainage 100mm System

	Supplier Code	Description	Keyline Code
	100D025	S/S Coil - 25m	711879
	100D050	S/S Coil - 50m	897467
	100D098	D/S Reducer - 100mm x 80mm	711882
	100D100	S/S Coil - 100m	885313
	100D104	D/S Coupler	711884
	100D200	D/S Junction - 67½°	711886
	100D208	D/S Junction (100 x 80) - 67½°	711887
	100D297	S/S End Cap	711889
	100D600	Type 8 FinDrain 100mm x 100m	355758

# Flexible Couplings

Keyline offers couplings in many variants to suit pipes of outside diameters in the range 50mm - 275mm. These consist of a moulded elastomeric sleeve with stainless steel clamping bands at each end.

Applications include:

- As a joint for plain ended pipes
- To join short and cut lengths of pipe
- To adapt between pipes of different sizes/materials (when used with bushes)
- Repair of existing pipelines by replacing short section
- Connection to existing sewers when using a factory made junction
- To provide a flexible joint when pipe passes through solid structure



## Standard Couplings

Available to suit pipes of outside diameters in the range 100mm - 2100mm+. Principally used to join pipes in sewerage and drainage applications, they are approved for use by the water industry. The stainless steel band around the centre of the elastomeric rubber sleeve provides resistance against heavy earth loads and shear forces and aids pipe alignment.

## Drain Couplings

Drain couplings are used to connect, repair and maintain drainage systems and other small diameter non-pressure pipelines.

Drain couplings are designed for use in drainage systems where resistance to earth loads is not required.

## Standard and Drain Couplings

	Supplier Code	Size Range mm	Width mm	Thickness mm	Keyline Code
	Standard Couplings				
	SC120	110-121	120	7	837286
	SC137	120-137	120	7	795067
	SC175	150-175	120	7	837287
	SC200	175-200	150	7.5	795068
	SC225	200-225	150	7.5	898410
	SC290	265-290	150	7.5	795069
SC385	355-385	185	9	795070	
	Drain Couplings				
	DC115	100-115	100	7	813761
	DC135	120-135	120	7	813762
	DC165	150-165	120	7	873916
DC195	180-195	120	7	813763	


## Adaptor Couplings

Available to suit pipes of outside diameters in the range 35mm - 420mm. Adaptor Couplings are stepped moulded elastomeric sleeves with different diameters at each end to enable pipes of differing outside diameters to be joined quickly and economically. The sleeve is fitted with two stainless steel clamping bands used to secure the coupling to the pipe.

Applications include:

- Pipe construction where resistance to earth load is not required
- To join pipes of differing materials and/or outside diameters
- To connect laterals to sewers


## Adaptor Couplings

	Supplier Code	Size Range mm	Width mm		Keyline Code
	AC1221	110-122/80-95	100		898549
	AC1362	121-136/100-115	100		858565
	AC1922	170-192/110-122	120		864369
	AC4000	121-136/110-121	100	(UNIVERSAL)	795071
	AC5144	110-125/100-115	100		795073
	AC6000	180-200/160-180	150	(UNIVERSAL)	898305
	AC2908	265-290/235-260	150		898493

## Fernco Flex-Seal Couplings - TA Saddle

- Connect lateral 45° and 90° pipes to plain wall sewer systems
- Watertight connection
- Versatile and flexible fit
- Quick and easy to install
- Minimal excavation required


### TA Saddle

	Product Ref	Pipe Diameter mm	Width mm	Thickness mm	Keyline Code
	TA Saddle				
	TA11090	152-395	305	9.5	-
	TA16090	200-395	380	9.5	329166
	TA11045	152-395	305	9.5	329194
	TA16045	200-395	380	9.5	329214

## Flex-Seal Couplings - Uni-T

- Junction for plastic to clay pipe connections
- Quick and easy to install
- Connect a PVC-U lateral pipe into an existing clay system

### Uni-T

	Product Ref	Size Range mm	Width mm	Thickness mm	Keyline Code
	Uni-T				
	UT1010	DN100 Clay x DN100 Clay x 110 ODPVC	500	5	757663
	UT1510	DN100 Clay x DN100 Clay x 110 ODPVC	500	5	757664
	UT1515	DN100 Clay x DN100 Clay x 110 ODPVC	500	5	757665

## Fernco Pipe Doctor

- No dig pipe repair system
- Quick and easy to use
- Permanent pipe repair
- Unique ready to mix resin bag
- Convenient kit format



## Gully Seal (Ref GS200/GS210)

Designed to fit monolithic concrete road gullies with Nominal 200mm or 210mm socket. They can be used with the following types of pipe:

- 150mm SuperSleve
- 150mm TwinWall UPVC
- 150mm UltraRib



## Special Couplings (available on request)

- **Wrap Around Couplings** - repair of cracked pipes without removing a section of pipe
- **Extra Wide Couplings** - for jointing large diameter concrete pipes
- **Chemical Resistant Couplings**
- **Flexible Saddle** - for connecting lateral pipes into existing or new pipelines



# PE Pipe Systems

Keyline offers a comprehensive choice of Polyethylene [PE] and PVC pipe and fittings for the transportation and distribution of:

- Potable Water
- Non-Potable Water

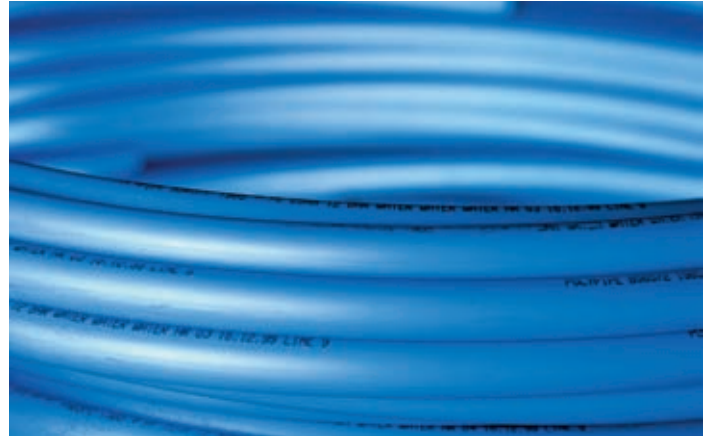
A wide selection of sizes and performance specification options for each of these applications ensures that the right solution for specific projects is available. Barrier pipes are also available.

These systems comply fully with all relevant Industry Approvals and Quality Standards.



## Blue MDPE Service Coils

Blue MDPE pipes from 20mm to 63mm are manufactured to BS EN 6572, and used for potable water underground as service connections, from distribution mains to individual properties, they are connected using Polypipe push-fit, Polyfast compression fittings or electrofusion fittings. Blue pipes may also be used for above ground services if they are installed within protective ducts.



## Polypipe MDPE Piping

Supplier Code	Description
2058BU	20mm x 5.8m Blue
2025BU	20mm x 25m Blue
2050BU	20mm x 50m Blue
20100BU	20mm x 100m Blue
20150BU	20mm x 150m Blue
20272BU	20mm x 272m Blue
2558BU	25mm x 5.8m Blue PE80
2525BU	25mm x 25m Blue
2550BU	25mm x 50m Blue
25100BU	25mm x 100m Blue
25150BU	25mm x 150m Blue
25182BU	25mm x 182m Blue

Supplier Code	Description
25200BU	25mm x 200m Blue
25202BU	25mm x 202m Blue
25212BU	25mm x 212m Blue
25222BU	25mm x 222m Blue
25237BU	25mm x 237m Blue
25252BU	25mm x 252m Blue
25300BU	25mm x 300m Blue
25400BU	25mm x 400m Blue 12 BAR
25500BU	25mm x 500m Blue
3258BU	32mm x 5.8m Blue 12 BAR PE80
3225BU	32mm x 25m Blue
3250BU	32mm x 50m Blue

Supplier Code	Description
32100B	32mm x 100m Black
32100BU	32mm x 100m Blue
32150BU	32mm x 150m Blue
32200BU	32mm x 200m Blue
32250BU	32mm x 250m Blue
32300BU	32mm x 300m Blue
32350BU	32mm x 350m Blue
5058BU	50mm x 5.8m Blue 12 BAR PE80
5006BU	50mm x 6m Blue 12 BAR
5025BU	50mm x 25m Blue
5050BU	50mm x 50m Blue

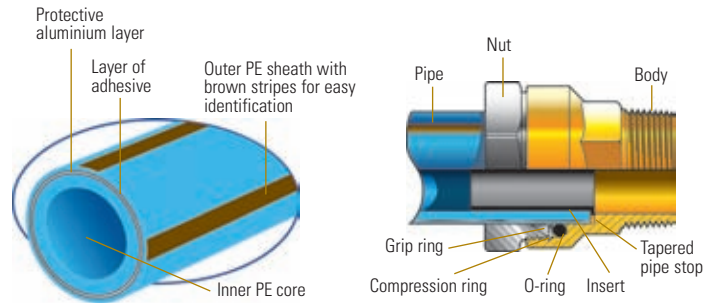
Supplier Code	Description
50100BU	50mm x 100m Blue 12 BAR
50150BU	50mm x 150m Blue
50200BU	50mm x 200m Blue
6358BU	63mm x 5.8m Blue 12 BAR PE80
6306BU	63mm x 6m Blue 12 BAR
6325BU	63mm x 25m Blue
6350BU	63mm x 50m Blue
63100BU	63mm x 100m Blue
63150BU	63mm x 150m Blue

## Trigon Barrier Pipe System: Transporting water safely through contaminated land

Trigon is an innovative, multi-layered polyethylene and aluminium barrier pipe system. It provides a reliable, cost effective solution for delivering drinking water through contaminated environments.

- **Impermeable barrier** - Protects potable drinking water from organic and inorganic contamination
- **Flexible** - Easy to handle and install
- **Cost effective** - Enables the development of brownfield sites with a flexible, corrosion resistant plastic pipe system
- **Corrosion resistant** - Long term, reliable solution
- **Engineered joint fittings** - Offering no path for the ingress of contaminants

Trigon pipes and fittings are available in 25, 32 and 63mm sizes. They have been extensively tested by independent academic and industry research bodies. Trigon core pipe is Kitemarked to BS 6572, Trigon pipe is approved under regulation 31 and Trigon fittings are WRc, DVGW and KIWA approved. Trigon has full system approval under WRAS – Certificate no. 0409106.



## Trigon Barrier Pipe System

Supplier Code	Description	Keyline Code
71902500	25mm Coupling	529856
71902700	25mm Equal Tee	529864
71902590	25mm 90° Elbow	529862
71902580	25mm x 3/4" FI Coupling	529860
71902570	25mm x 3/4" MI Coupling	529858
71021050	25mm x 50m 12.5 BAR	529854
71902515	25mm to 15mm Copper Transition Coupling	628672
71902522	25mm to 22mm Copper Transition Coupling	628575
71902525	25mm to 25mm PE Transition Coupling	645406
71903500	32mm Coupling	529857
71903700	32mm Equal Tee	529865
71903590	32mm 90° Elbow	529863
71903580	32mm x 1" Coupling	529861

Supplier Code	Description	Keyline Code
71903570	32mm x 1" Male Coupling	529859
71031050	32mm x 50m 12.5 BAR	529855
71906500	63mm Coupling	228254
71906700	63mm Equal Tee	228260
71906595	63mm 45° Elbow	228258
71906590	63mm 90° Elbow	228259
71906580	63mm x 2" Female Coupling	228257
71906570	63mm x 2" Male Coupling	228256
71906525	63mm to 63mm PE Coupling	228255
71061006	63mm x 6m 12.5 BAR	228251
71061025	63mm x 25m 12.5 BAR	228252
71061050	63mm x 50m 12.5 BAR	228253