



RIDGISEWER and POLYSEWER

The full Ridgisewer and Polysewer range runs from page 24 - 41

Ridgisewer & Polysewer is Polypipe's innovative system for adoptable surface, foul and combined sewers. Ridgisewer & Polysewer meet all of the demanding requirements of WIS 4-35-01, the new water industry specification for sewer pipes, including new tests for resistance to maintenance operations.

Ridgisewer & Polysewer offer benefits including

- Full compliance with WIS 4-35-01
- Reduced health and safety risks in handling, storage and installation with a weight approximately 6% of equivalent sizes of concrete pipe
- Resistance to high pressure water jetting in accordance with the WRc code of practice
- Longer lengths and with integral sockets for reduced jointing operations
- Jointing systems that remain intact even under extreme site conditions
- Inbuilt robustness for installation and maintenance operations
- Flexible construction to resist differential settlement
- Superior chemical, impact and abrasion resistance
- Immunity from sulphate attack or corrosion due to sewer gases
- Durable long-life material



Integrally socketed pipes
from 150 - 900mm

Ridgisewer and Polysewer Introduction 2.1

Ridgisewer and Polysewer... first to be certified to WIS 4-35-01

Polypipe Civils was a key player in the industry-wide project to achieve a generic specification for structured wall sewer pipe systems. Polypipe continues to lead the way, with Ridgisewer and Polysewer the first systems to achieve prestigious British Standards Institution kitemark status.

WIS 4-35-01 is the UK specification for thermoplastic structured wall pipes for gravity sewer applications. The specification, developed by Water UK in conjunction with participating members of the British Plastics Federation, British Standards Institution, British Board of Agrément and the Water Research Centre, follows extensive research and investigation and sets out a

comprehensive range of performance based tests including

- Long-term structural performance
- Joint integrity under extreme conditions
- Resistance to the effects of routine maintenance operations, including internal impact and high pressure water jetting
- External impact

• Material tests to ensure long-term durability
WIS 4-35-01 replaces all existing certifications for structured wall plastic sewer pipes.



Certificate No.
KM55702 & KM 55698



Note: BBA certificates cover Ridgisewer and Polysewer pipes and fittings excluding couplers.

Ridgisewer and Polysewer... the most versatile system in the market

Ridgisewer and Polysewer are the largest structured wall range in the industry (featuring sizes from 150 to 900mm).

Polysewer pipes are manufactured in uPVC in diameters from 150 to 300mm. uPVC is the most commonly used material for both single wall and structured wall pipes in diameters up to 300mm.

Ridgisewer pipes are manufactured in high stiffness polypropylene in sizes 400 to 900mm, offering stiffness well in excess of other plastic products combined with exceptional durability.

The ranges include complete systems of couplings, seals, bends junctions and specialist fabrications. The ease with which

these products can be cut and welded allows them to be used to manufacture a vast range of standard and made to measure fittings, manholes, catchpits and soakaways.

Applications

Ridgisewer and Polysewer are suitable for gravity flow foul, surface water and combined sewers. Applications include private sewers, capital projects and systems installed by developers and subsequently adopted by a statutory authority. Sewer adoption is the process whereby responsibility for the maintenance and operation of sewers constructed by Developers is transferred to a Sewerage Undertaker or Sewerage Agent Council. Within England, Wales and Northern

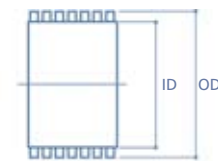
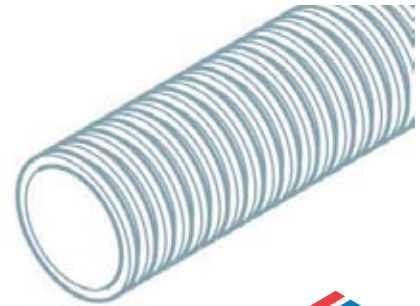
Ireland such adoption is carried out under Section 104 of The Water Industry Act 1991. It should be noted that adoptions of surface water sewers may also take place under the Highways Act 1980 and the Ridgidrain range is normally specified for these applications. Polypipe is actively seeking formal approval for Ridgisewer and Polysewer from all UK Water Companies. For up to the minute advice contact our Technical Department or visit our website.



Polys sewer Pipe Dimensions 2.2

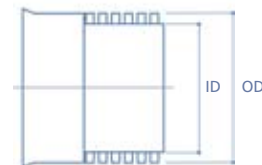
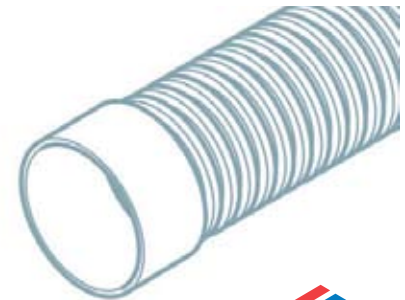
Plain ended pipes

NOMINAL SIZE	CODE	ID mm	OD mm	LENGTH m	WEIGHT kg/m
150	PS630	146	160	3	1.7
225	PS1030	229	250	3	3.8
300	PS1230	301	330	3	6.3
150	PS660	146	160	6	1.7
225	PS1060	229	250	6	3.8
300	PS1260	301	330	6	6.3



Integrally socketed pipes

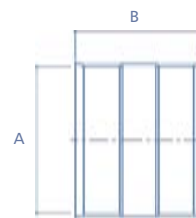
NOMINAL SIZE	CODE	ID mm	OD mm	LENGTH m	WEIGHT kg/m
150	PS632	146	160	3	1.7
225	PS1032	229	250	3	3.8
300	PS1232	301	330	3	6.3
150	PS662	146	160	6	1.7
225	PS1062	229	250	6	3.8
300	PS1262	301	330	6	6.3



Double socket couplings

NOMINAL SIZE	CODE	A	B
150	PS601	150	183
225	PS1001	225	260
300	PS1201	300	280

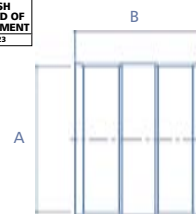
All dimensions in mm



Double socket slip couplings

NOMINAL SIZE	CODE	A	B
150	PS600	150	183
225	PS1000	225	260
300	PS1200	300	280

All dimensions in mm



Polysewer Pipe Dimensions 2.2

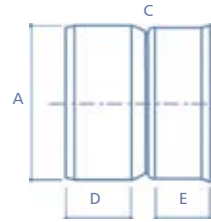
Sealing rings

NOMINAL SIZE	CODE
150	PSSP1
225	PSSP2
300	PSSP3



Spigot adaptors to EN1401-1

NOMINAL SIZE	CODE	A	B	C	D	E
225	PS10102	250	225	241	134	92.5
300	PS12102	315	300	265	144	114



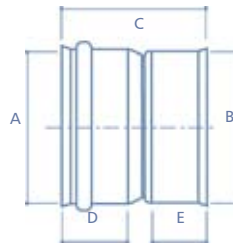
All dimensions in mm

Each adaptor is supplied with one seal



Socket adaptors to EN1401-1

NOMINAL SIZE	CODE	A	B	C	D	E
150	PS689	160	150	147	70	77
225	PS1089	250	225	240	110	92.5
300	PS1289	315	300	286	125	114



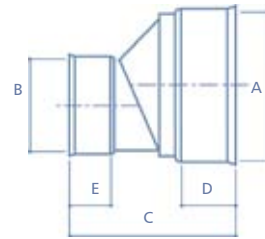
All dimensions in mm

Each adaptor is supplied with two seals



Level invert reducers

NOMINAL SIZE	CODE	A	B	C	D	E
225x150	PS1021	225	150	287	92.5	72.5
300x225	PS1221	300	220	345	114	92.5



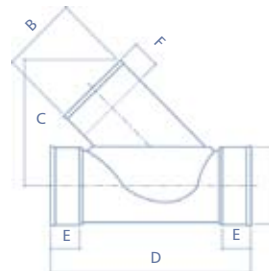
All dimensions in mm

Each reducer is supplied with two seals



45° equal junctions

CODE	A	B	C	D	E	F
PS605	150	150	285	445	95	95
PS1005	225	225	408	647	92.5	92.5
PS1205	300	300	508	812	114	114



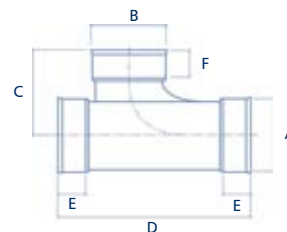
All dimensions in mm

Each junction is supplied with three seals



90° equal junctions

CODE	A	B	C	D	E	F
PS623	150	150	186	400	69	69



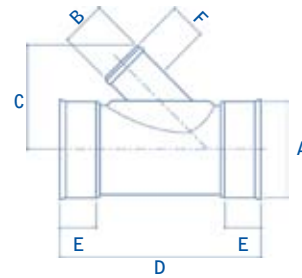
All dimensions in mm

Each junction is supplied with three seals

Polys sewer Pipe Dimensions 2.2

45° unequal junctions

CODE	A	B	C	D	E	F
PS635RS	150	110	242.5	400	62	57
PS1035RS	225	110	280.5	517	92.5	67.5
PS1031	225	150	324	537	92.5	82.5
PS1031RS	225	160	328	567	92.5	82.5
PS1235RS	300	110	311	523	114	67.5
PS1231	300	150	348	586	114	82.5
P21231RS	300	160	356	573	114	82.5
PS12100	300	225	458	704	114	100



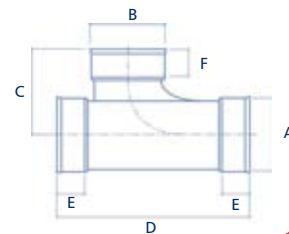
All dimensions in mm

Each junction is supplied with three seals



90° unequal junctions

CODE	A	B	C	D	E	F
PS643RS	150	110	182	301	69	65



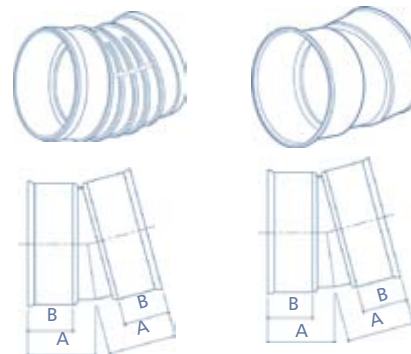
All dimensions in mm

Each junction is supplied with three seals



15° bends

NOMINAL SIZE	CODE	A	B
150	PS609	115	95
225	PS1009	123.5	92.5
300	PS1209	152	114



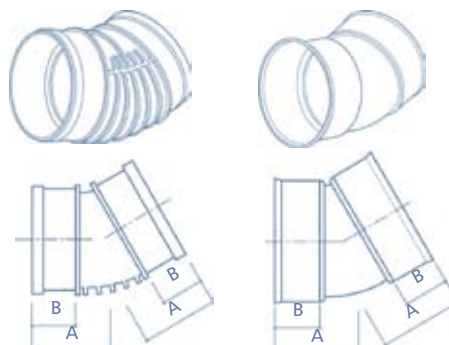
All dimensions in mm

Each bend is supplied with two seals



30° bends

NOMINAL SIZE	CODE	A	B
150	PS667	115	95
225	PS1067	143.5	92.5
300	PS1267	177	114



All dimensions in mm

Each bend is supplied with two seals



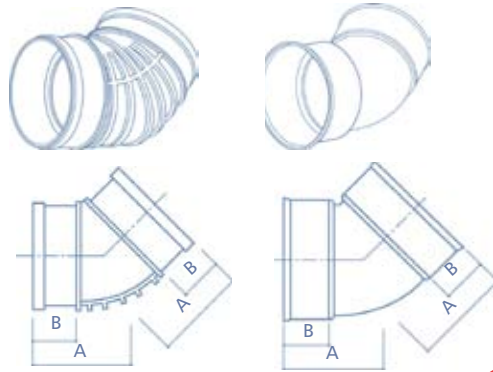
Polys sewer Pipe Dimensions 2.2

45° bends

NOMINAL SIZE	CODE	A	B
150	PS603	135	95
225	PS1003	164.5	92.5
300	PS1203	203	114

All dimensions in mm

Each bend is supplied with two seals

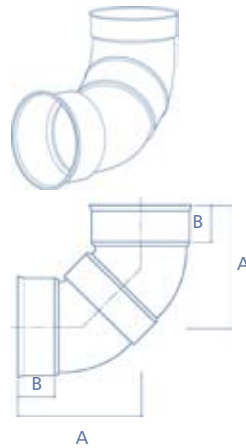


90° bends

NOM SIZE	CODE	A	B
150	PS611	190	63
225	PS1011	316.5	92.5
300	PS1211	385	114

All dimensions in mm

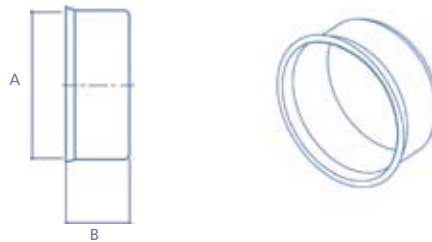
Each bend is supplied with two seals



End caps

NOMINAL SIZE	CODE	A	B
150	PS6101	150	150
225	PS10101	225	98
300	PS12101	300	121

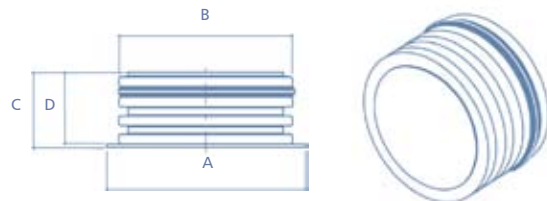
All dimensions in mm



Socket plugs

NOMINAL SIZE	CODE	A	B	C	D
150	PS620	215	178	85	76
225	PS1020	308	248	101	92
300	PS1220	395	329	110	101

All dimensions in mm



Polys sewer Pipe Dimensions 2.2

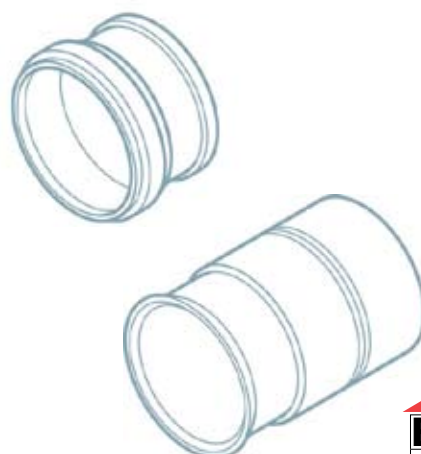
Adaptors to other pipe systems

NOMINAL SIZE	CODE	DESCRIPTION
150	PS634	Double socket to super clayware pipe
150	PS696	Double socket to thick clayware pipe
150	PS6105	Double socket to Ultrarib adapter
225	PS10105	Double socket to Ultrarib adapter
300	PS12105	Double socket to Ultrarib adapter

Each adaptor is supplied with two seals.

For adaption to 225mm and 30mm clay pipe, flexible couplings to

WIS 4-41-01 should be used.



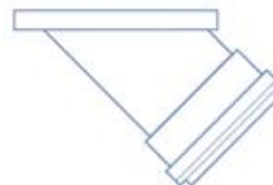
Snap cap & seals

NOMINAL SIZE	CODE	DESCRIPTION
150	PS6103	To adapt 87.5° bends and 45° unequal junctions to EN1401 pipes
150	PS6104	To adapt 87.5° junctions to EN1401 pipes



Rodding eye

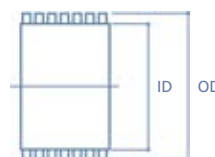
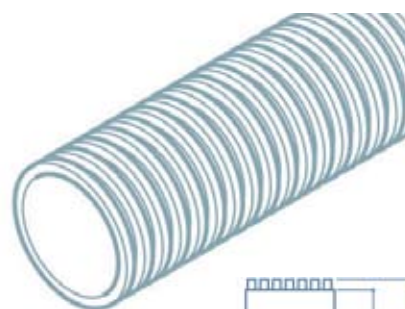
NOMINAL SIZE	CODE	DESCRIPTION
150	PS6225	Sealed oval top in aluminium



Ridgisewer Pipe Dimensions 2.2

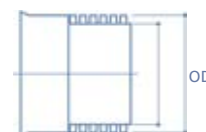
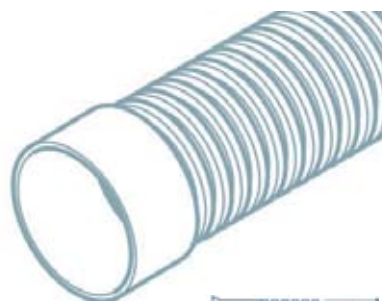
Plain ended pipes

NOMINAL SIZE	CODE	ID mm	OD mm	LENGTH m	WEIGHT kg/m
400	RSW400X6PE4	400	457	6	9.4
450	RSW450X6PE4	450	511	6	11.8
500	RSW500X6PE4	500	568	6	13.3
600	RSW600X6PE4	587	672	6	15.3
400	RSW400X3PE4	400	457	3	9.4
450	RSW450X3PE4	450	511	3	11.8
500	RSW500X3PE4	500	568	3	13.3
600	RSW600X3PE4	587	672	3	15.3



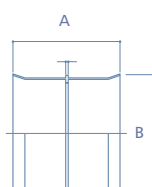
Integrally socketed pipes

NOMINAL SIZE	CODE	ID mm	OD mm	LENGTH m	WEIGHT kg/m
400	RSW400X6IS4	400	457	6	9.4
450	RSW450X6IS4	450	511	6	11.8
500	RSW500X6IS4	500	568	6	13.3
600	RSW600X6IS4	587	672	6	15.3
400	RSW400X3IS4	400	457	3	9.4
450	RSW450X3IS4	450	511	3	11.8
500	RSW500X3IS4	500	568	3	13.3
600	RSW600X3IS4	587	672	3	15.3
750	RSW750X3IS4	765	880	3	35
900	RSW900X3IS4	909	1032	3	38



Double socket couplings

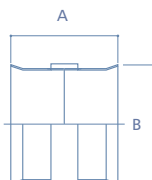
NOMINAL SIZE	CODE	A	B
400	RSWC400	410	490
450	RSWC450	440	548
500	RSWC500	490	605
600	RSWC600	560	713



All dimensions in mm

Double socket slip couplings

NOMINAL SIZE	CODE	A	B
400	RSWSC400	392	490
450	RSWSC450	420	548
500	RSWSC500	470	605
600	RSWSC600	540	713



All dimensions in mm

Sealing rings

NOMINAL SIZE	CODE
400	SRDS400
450	SRDS450
500	SRDS500
600	SRDS600
750	SRDS750
900	SRDS900



Ridgisewer Pipe Dimensions 2.2

45° unequal junctions

A	B	CODE	C	D	E	F
400	110	RSWJ400110Y	395	750	196	46
400	160	RSWJ400160Y	435	750	196	51
450	110	RSWJ450110Y	422	815	215	46
450	160	RSWJ450160Y	462	815	215	51
500	110	RSWJ500110Y	450	920	240	46
500	160	RSWJ500160Y	490	920	240	51
600	110	RSWJ600110Y	503	1060	275	46
600	160	RSWJ600160Y	543	1060	275	51

750	110	RSWJ750110Y*	545	1330	440	46
750	160	RSWJ750160Y*	584	1330	440	51
900	110	RSWJ900110Y*	629	1332	440	46
900	160	RSWJ900160Y*	668	1332	440	51

A	B	Code	C	D	E	F
400	150	RSWPSJ400150Y	435	750	196	51
450	150	RSWPSJ450150Y	462	815	215	51
500	150	RSWPSJ500150Y	490	920	240	51
600	150	RSWPSJ600150Y	543	1060	275	51

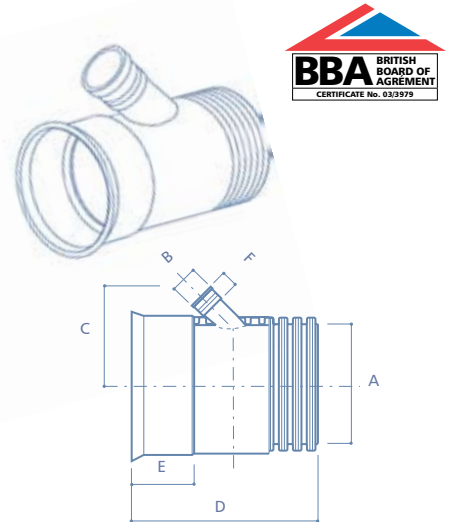
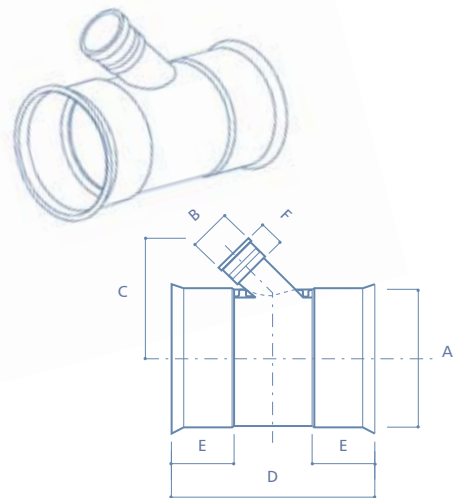
750	150	RSWPSJ750150Y*	584	1330	440	51
900	150	RSWPSJ900150Y*	668	1332	440	51

- 110 & 160mm branches are for EN1401 pipes
- 150mm branches are for Polysewer

All dimensions in mm

Order seals separately

*These junctions are made to order and are subject to lead times.



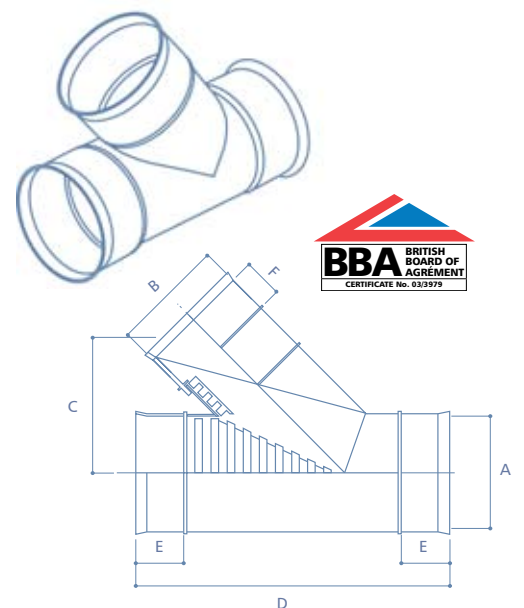
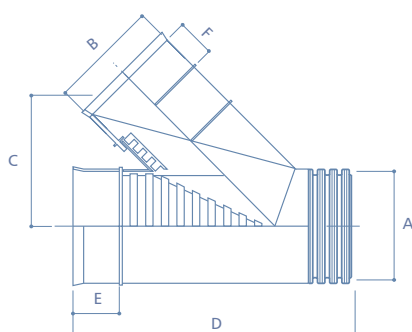
45° equal junctions

A	B	CODE	C	D	E	F
400	400	RSWEJ400Y	1000	1737	205	205
450	450	RSWEJ450Y	1050	1780	220	220
500	500	RSWEJ500Y	1100	1930	245	245
600	600	RSWEJ600Y	1309	2175	280	280

750	750	RSWEJ750Y*	1000	2100	440	440
900	900	RSWEJ900Y*	820	2300	440	440

All dimensions in mm

*These junctions are made to order and are subject to lead times.



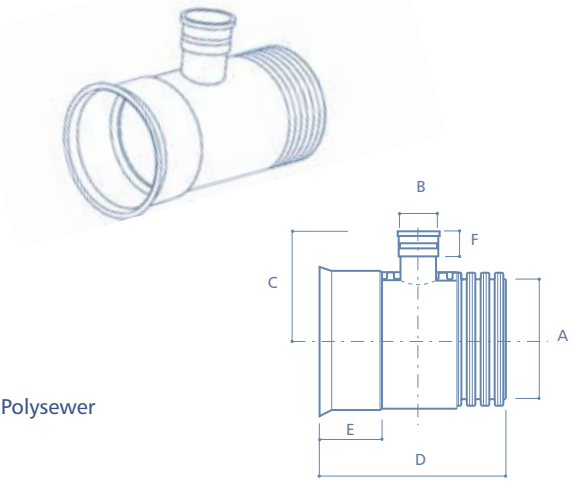
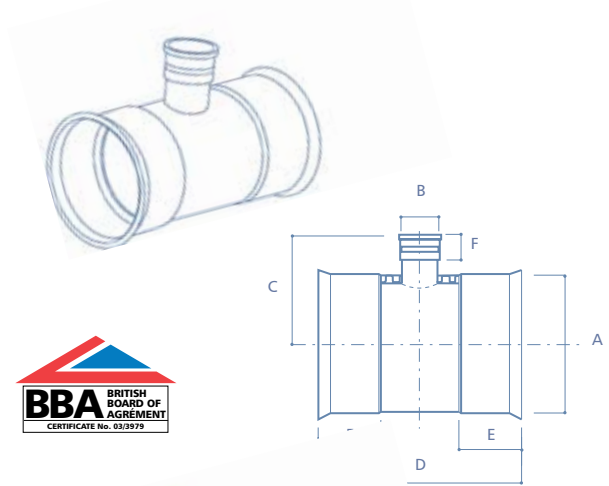
Ridgisewer Pipe Dimensions 2.2

90° unequal junctions

A	B	CODE	C	D	E	F
400	110	RSWJ400110T	360	750	196	46
400	160	RSWJ400160T	375	750	196	51
450	110	RSWJ450110T	385	815	215	46
450	160	RSWJ450160T	400	815	215	51
500	110	RSWJ500110T	415	920	240	46
500	160	RSWJ500160T	430	920	240	51
600	110	RSWJ600110T	465	1060	275	46
600	160	RSWJ600160T	480	1060	275	51
750	110	RSWJ750110T*	563	1330	440	46
750	160	RSWJ750160T*	581	1330	440	51
900	110	RSWJ900110T*	639	1332	440	46
900	160	RSWJ900160T*	657	1332	440	51

A	B	CODE	C	D	E	F
400	150	RSWPSJ400150T	375	750	196	51
450	150	RSWPSJ450150T	400	815	215	51
500	150	RSWPSJ500150T	430	920	240	51
600	150	RSWPSJ600150T	480	1060	275	51
750	150	RSWPSJ750150T*	581	1330	440	51
900	150	RSWPSJ900150T*	657	1332	440	51

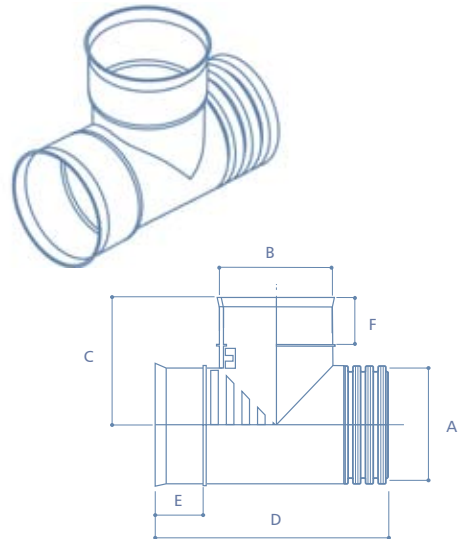
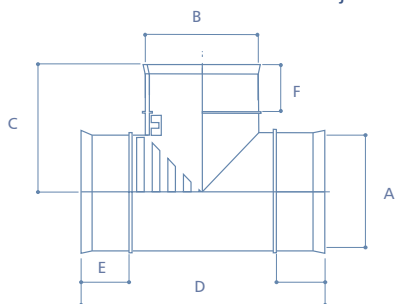
• 110 & 160mm branches are for EN1401 pipes • 150mm branches are for Polysewer
 All dimensions in mm
 Order seals separately
 *These junctions are made to order and are subject to lead times.



90° equal junctions

A	B	CODE	C	D	E	F
400	400	RSWEJ400T	700	1380	205	205
450	450	RSWEJ450T	850	1792	245	245
500	500	RSWEJ500T	850	1792	245	245
600	600	RSWEJ600T	1350	1975	280	280
750	750	RSWEJ750T*	1000	1700	440	440
900	900	RSWEJ900T*	1200	1900	440	440

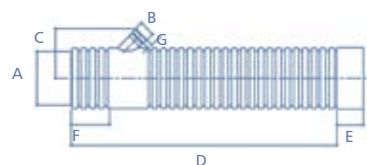
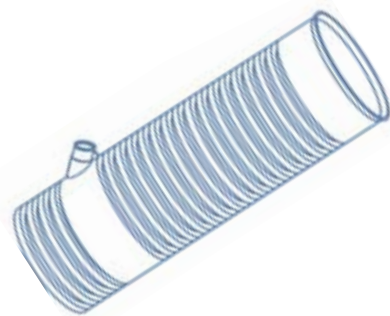
All dimensions in mm
 *These junctions are made to order and are subject to lead times.



Ridgisewer Pipe Dimensions 2.2

3m junction (single) - made to order

A	B	CODE	C	D	E	F	G
400	160	RSWJ400160Yx3S	440	3000	205	230	50
450	160	RSWJ450160Yx3S	467	3000	220	250	50
500	160	RSWJ500160Yx3S	496	3000	245	280	50
600	160	RSWJ600160Yx3S	548	3000	280	325	50
750	160	RSWJ750160Yx3S	652	3000	440	450	50
900	160	RSWJ900160Yx3S	728	3000	440	435	50
400	150	RSWPSJ400150Yx3S	440	3000	205	230	50
450	150	RSWPSJ450150Yx3S	467	3000	220	250	50
500	150	RSWPSJ500150Yx3S	496	3000	245	280	50
600	150	RSWPSJ600150Yx3S	548	3000	280	325	50
750	150	RSWPSJ750150Yx3S	652	3000	440	450	50
900	150	RSWPSJ900150Yx3S	728	3000	440	435	50



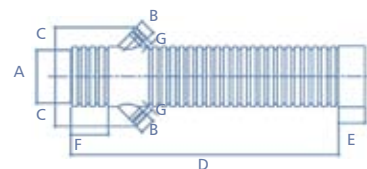
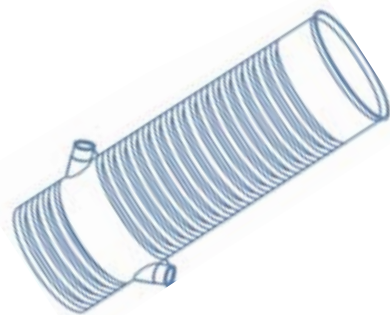
- 160mm branches are for EN1401 pipes
- 150mm branches are for Polysewer

All dimensions in mm

Order seals separately if required

3m junction (double) - made to order

A	B	CODE	C	D	E	F	G
400	160	RSWJ400160Yx3D	440	3000	205	230	50
450	160	RSWJ450160Yx3D	467	3000	220	250	50
500	160	RSWJ500160Yx3D	496	3000	245	280	50
600	160	RSWJ600160Yx3D	548	3000	280	325	50
750	160	RSWJ750160Yx3D	652	3000	440	450	50
900	160	RSWJ900160Yx3D	728	3000	440	435	50
400	150	RSWPSJ400150Yx3D	440	3000	205	230	50
450	150	RSWPSJ450150Yx3D	467	3000	220	250	50
500	150	RSWPSJ500150Yx3D	496	3000	245	280	50
600	150	RSWPSJ600150Yx3D	548	3000	280	325	50
750	150	RSWPSJ750150Yx3D	652	3000	440	450	50
900	150	RSWPSJ900150Yx3D	728	3000	440	435	50



- 160mm branches are for EN1401 pipes
- 150mm branches are for Polysewer

All dimensions in mm

Order seals separately if required

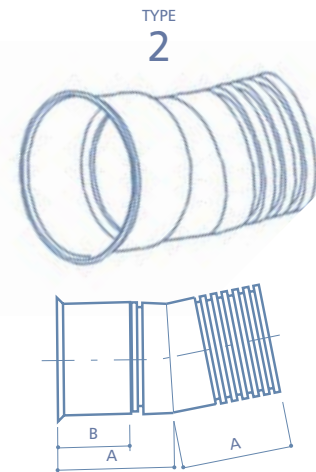
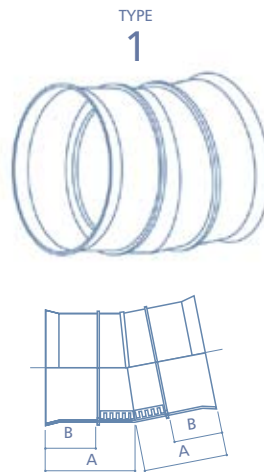
Ridgisewer Pipe Dimensions 2.2

11.25° bends

	NOMINAL SIZE	CODE	A	B
TYPE 1	400	RSWB40011.25	375	205
	450	RSWB45011.25	415	220
	500	RSWB50011.25	490	245
	600	RSWB60011.25	535	280
TYPE 2	*750	RSWB75011.25	600	440
	*900	RSWB90011.25	800	440

All dimensions in mm

*These bands are made to order and are subject to lead times

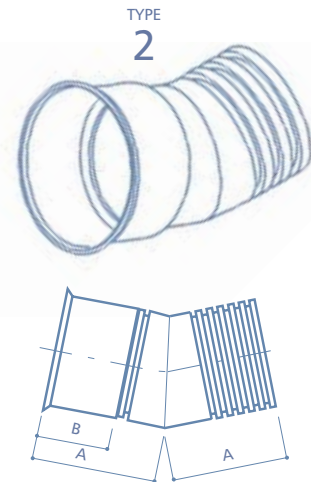
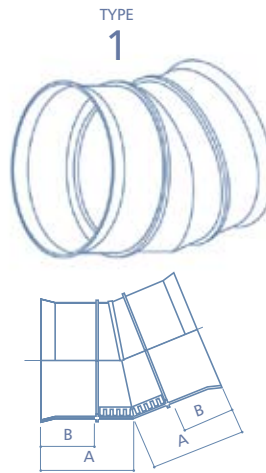


22.2° bends

	NOMINAL SIZE	CODE	A	B
TYPE 1	400	RSWB40022.5	375	205
	450	RSWB45022.5	415	220
	500	RSWB50022.5	490	245
	600	RSWB60022.5	535	280
TYPE 2	*750	RSWB75022.5	700	440
	*900	RSWB90022.5	900	440

All dimensions in mm

*These bands are made to order and are subject to lead times

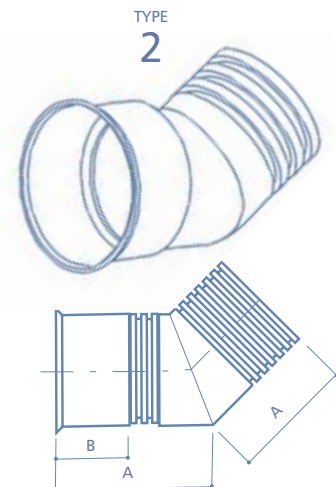
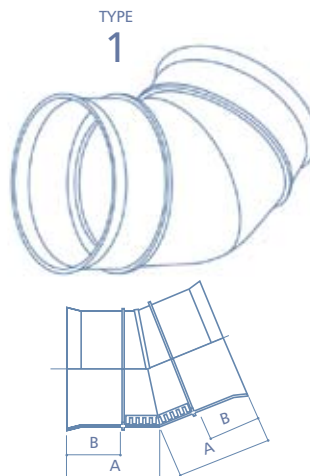


45° bends

	NOMINAL SIZE	CODE	A	B
TYPE 1	400	RSWB40045	375	205
	450	RSWB45045	415	220
	500	RSWB50045	490	245
	600	RSWB60045	535	280
TYPE 2	*750	RSWB75045	800	440
	*900	RSWB90045	1000	440

All dimensions in mm

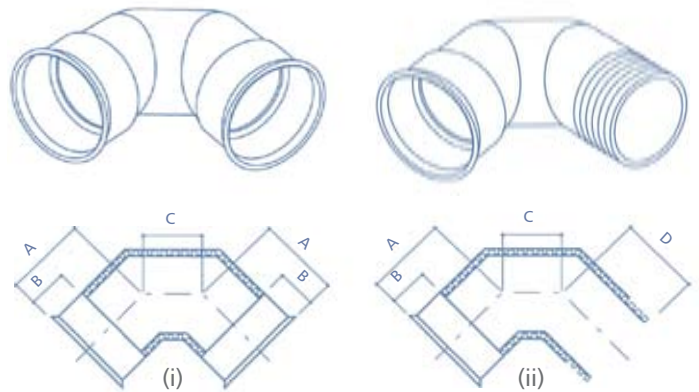
*These bands are made to order and are subject to lead times



Ridgisewer Pipe Dimensions 2.2

90° bends

NOMINAL SIZE	CODE	A	B	C	D
400	RSWB40090	411	196	646	Spigot
450	RSWB45090	441	215	667	Spigot
500	RSWB50090	488	250	687	Spigot
600	RSWB60090	533	275	728	Spigot
750*	RSWB75090	738	440	818	658
900*	RSWB90090	770	440	882	690



All dimensions in mm
These bends are made to order
and subject to lead times



End caps

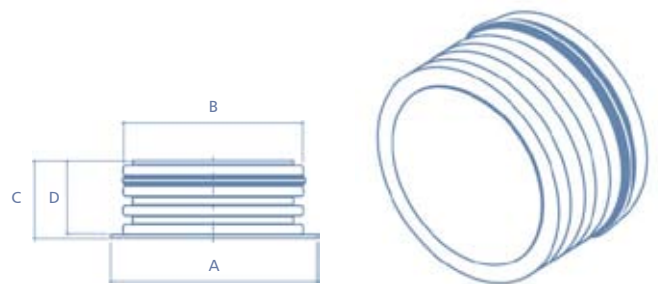
NOMINAL SIZE	CODE
400	RSWEC400
450	RSWEC450
500	RSWEC500
600	RSWEC600
750	RSWEC750
900	RSWEC900



All dimensions in mm

Socket plugs

NOMINAL SIZE	CODE	A	B	C	D
400	RSWSP400	520	457	204	195
450	RSWSP450	578	511	188	197
500	RSWSP500	635	568	225	216
600	RSWSP600	741	672	261	252
750	RSWSP750	979	880	395	386
900	RSWSP900	1136	1032	399	390



All dimensions in mm



Ridgisewer Pipe Dimensions 2.2

Rocker pipes

NOMINAL SIZE	CODE	ID	OD	LENGTH (m)
750	RSWRP750	765	880	1
900	RSWRP900	909	1032	1

Order seals seperately



Stub pipes

NOMINAL SIZE	CODE	ID	OD	LENGTH (m)
750	RSWST750	765	880	1
900	RSWST900	909	1032	1

Order seals seperately



Ridgitite saddles

CARRIER PIPE DIAMETER	CODE	PIPE CLASSIFICATION	CORRUGATION HEIGHT
300	SLDPS300	Polys sewer	15-18
400/450	SLD375450	Ridgisewer	29-33
500	SLD500	Ridgisewer	35-38
600	SLD600	Ridgisewer	41-44
177	HOL177	Hole saw	



WRC Approved
PT/193/1102



Ridgisewer Pipe Specification 2.3

WIS 4-35-01 is the UK specification for thermoplastic structured wall pipes for gravity sewer applications. Developed by Water UK, in conjunction with participating members of the British Plastics Federation, British Standards Institution, British Board of Agrément and Water Research Centre; following extensive research and investigation.

It sets out a comprehensive range of performance based tests, summarised in the table below:

PROPERTY	STANDARD
Ring flexibility	BS EN 1446
Short term ring stiffness	BS EN ISO 9969
Long term ring stiffness (Creep ratio)	BS EN ISO 9967
Impact resistance	BS EN 1411
Leaktightness of seals - Distortion	BS EN ISO 1277
Leaktightness of seals - Deflection	BS EN ISO 1277
Long term strength and heat resistance (Box Load Test)	BS EN 1437 (150 - 375mm ø only)
Internal puncture	WIS 4-35-01, Appendix B
Water Jetting	WIS 4-35-01, Appendix C
Longitudinal bending	WIS 4-35-01, Appendix D
Heat test	BS EN 742
Stress relief of injection moulded Couplers	BS 2782

Refer to WIS 4-35-01 for specific details of individual tests

Stiffness Classification

Ridgisewer pipes are offered in stiffness class SN4 as standard.

In accordance with WIS 4-35-01 pipes may be manufactured in two stiffness classifications. In order to satisfy the relevant stiffness classification, when tested in accordance with BS EN ISO 9969:1995, the pipe must have a nominal short term ring stiffness not less than either:

- The stated nominal short term ring stiffness (WIS 4-35-01, Table 6), or
- The stated creep ratio (WIS 4-35-01, Table 3) multiplied by a stated 2 year stiffness (WIS 4-35-01, Table 3).

Consequently, in order to comply with WIS 4-35-01, Class SN4 Ridgisewer does in fact have a short term ring stiffness no less than 8 kN/m²

A comparison may be drawn with flexible highway drainage systems which are required to have a short term ring stiffness of 6kN/m²

In addition to being manufactured under a BS EN ISO 9001:2000 quality management system, Ridgisewer has undergone extensive testing by independent third parties, resulting in the following certification:

- BSI Kite Mark Certificate No KM55701
- BBA Certificate No 03/3979



Ridgisewer Pipe Design Properties 2.4

Deformation Figures

Table 2.4.1 Short-term pipe design properties

NOMINAL SIZE (mm)	MEAN DIAMETER (m)	I (m ⁴ /m x 10 ⁻⁹)	E (kN/m ² x 10 ³)	EI/D ³ (kN/m ²)
Polys sewer				
150	0.151	18.2	2800	14.65
225	0.237	55.1	2800	11.52
300	0.311	110.0	2800	10.19
Ridgisewer				
400	0.422	604.7	1500	12.06
450	0.474	760.0	1500	10.65
500	0.527	972.9	1500	9.96
600	0.619	1375.9	1500	8.70
750	0.808	4071.0	1500	11.58
900	0.952	4081.0	1500	7.09

Table 2.4.2 Long-term pipe design properties

NOMINAL SIZE (mm)	MEAN DIAMETER (m)	I (m ⁴ /m x 10 ⁻⁹)	E (kN/m ² x 10 ³)	EI/D ³ (kN/m ²)
Polys sewer				
150	0.151	18.2	500	2.62
225	0.237	55.1	500	2.06
300	0.311	110.0	500	1.82
Ridgisewer				
400	0.422	604.7	300	2.41
450	0.474	760.0	300	2.13
500	0.527	972.9	300	1.99
600	0.619	1375.9	300	1.74
750	0.808	4071.0	300	2.32
900	0.952	4081.0	300	1.42

Flotation

Although unlikely to occur, the potential for flotation should be checked in installations where the water table is above the pipe invert level. Table 3.3 details uplift forces for the following conditions:

Pipe bore empty

This is applicable to empty carrier drainage systems. The uplift forces are due to air trapped within the corrugations and the pipe bore.

Pipe bore full

This is applicable to filter drainage pipes and filled carrier drainage pipes. The uplift forces are due to air trapped within the corrugations.

Table 3.3 Uplift forces for fully submerged pipes

DIAMETER (mm)	Flotation Force Pipe Bore Full (kN/m)	Flotation Force Pipe Bore Empty (kN/m)
Polys sewer		
150	0.006	0.170
225	0.013	0.417
300	0.036	0.734
Ridgisewer		
400	0.190	1.422
450	0.244	1.804
500	0.314	2.240
600	0.443	3.098
750	0.734	5.243
900	0.867	7.233

N.B. Fluid Density of 1000kg/m³ assumed

The difference in flotation forces between Ridgisewer SN4 and SN8 pipes is negligible. The worst case figure is used. An appropriate factor of safety should be used to ensure prevention of flotation after installation. Please note that Ridgisewer and Polys sewers pipes may float if a substantial depth of water is in the trench during installation.

Ridgisewer Installation 2.5

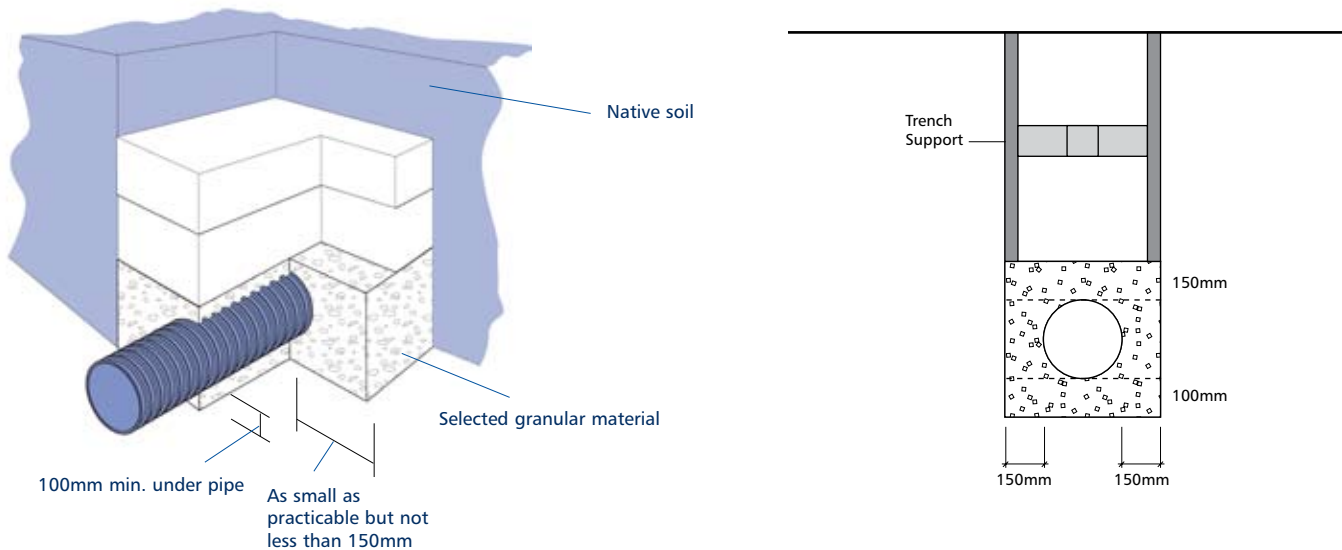
Structural properties.

Where a detailed structural design check is required, values from tables 2.4.1 & 2.4.2 may be used for design purposes.
Please refer to Section 3.2 for structural design methodology of flexible pipe systems.

Installation

Installation of the Polysewer / Ridgisewer system is typically carried out in accordance with Sewers for Adoption 6th Edition. Sewerage undertakers approving Polysewer / Ridgisewer have adopted the following installation detail.

Granular Bed & Surround



Extract from Table A2 WIS 4-08-02

PIPE NOMINAL BORE (MM) (mm) see note (4)	NOMINAL MAXIMUM PARTICLE SIZE (mm)	MATERIALS SPECIFIED IN BRITISH STANDARDS, SEE NOTE (2)
100	10	10mm nominal single-size
Over 100 to 500	15	10 or 14mm nominal single-size or 14mm to 5mm graded
Over 150 to 300	20	10, 14 or 20mm nominal single-size or 14mm to 5mm graded or 20mm to 5mm graded
Over 300 to 550	20	14 or 20mm nominal single-size or 14mm to 5mm graded or 20mm to 5mm graded
Over 550	40	14, 20 or 40mm nominal single-size or 14mm to 5mm graded or 20mm to 5mm graded or 40mm to 5mm graded

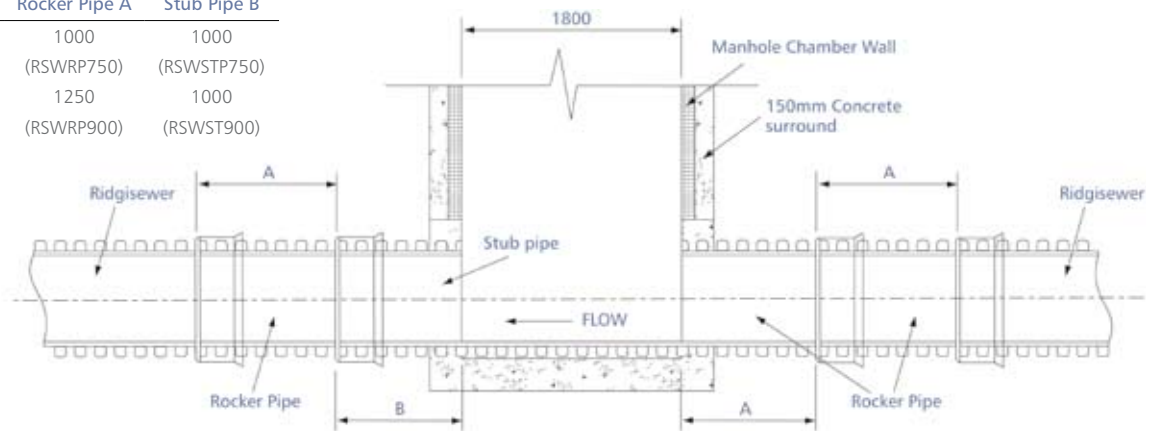
Notes

1. Nominal bore is used in preference to DN because of the different nominal size classifications for flexible pipes
2. Processed granular materials to include aggregates to BS 882, air-cooled blast furnace slag to BS 1047 and lightweight aggregates to BS 3797
3. All temporary and enabling works are by others
4. Nominal bore is used in the preference to DN because of the different nominal size classifications for flexible pipes
5. The constructor should check with the adopting authority for local variations to this detail
6. This document is uncontrolled and updates will not be issued automatically

Ridgisewer Installation 2.5

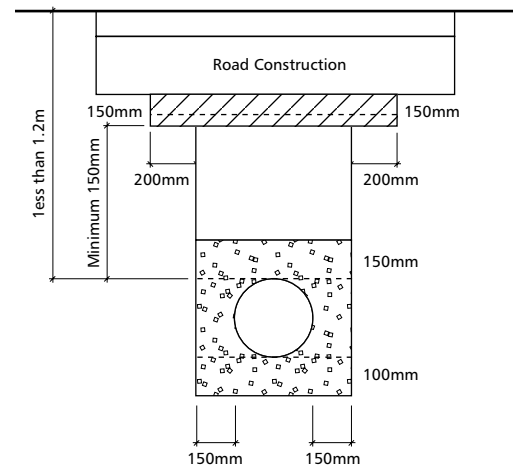
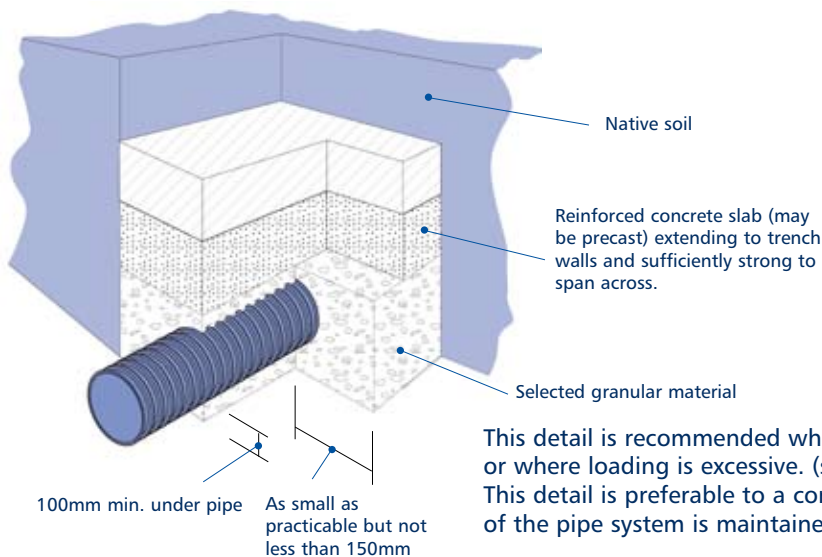
Rocker Pipe Detail

	Rocker Pipe A	Stub Pipe B
750mm Ridgisewer (Product Code)	1000 (RSWRP750)	1000 (RSWSTP750)
900mm Ridgisewer (Product Code)	1250 (RSWRP900)	1000 (RSWST900)



Where the minimum depth of cover can not be achieved, protective measures should be undertaken. This may take the form of one of the following. However, it should be noted that Sewer undertakers may have a particular protection method preference.

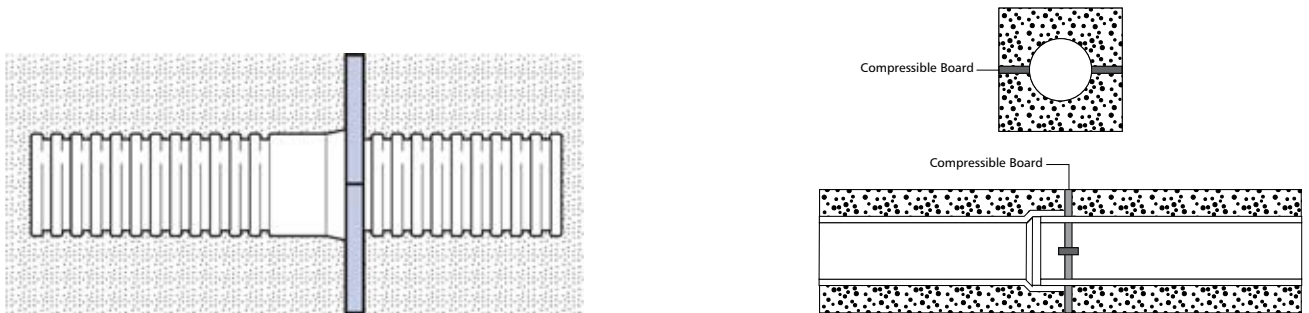
Concrete Protection Slab



This detail is recommended where depths of cover are less than recommended or where loading is excessive. (see section 3.1)

This detail is preferable to a concrete bed and surround because the flexibility of the pipe system is maintained.

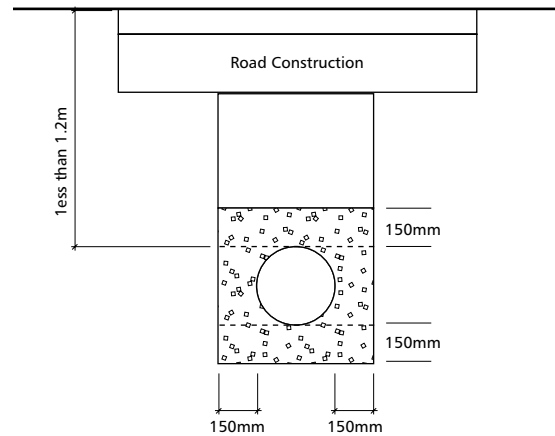
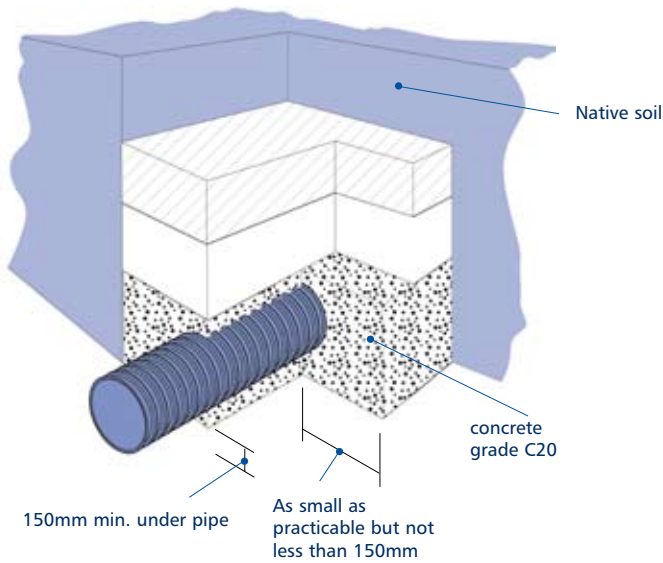
Flexible Joint in Concrete Bed and Surround



Joint filler board should be placed in contact with the end of the socket at a pipe joint and should extend through the full thickness of the concrete in contact with the pipe. Flexible joints shall be at intervals of 5m or at each joint, whichever is the greater.

Ridgisewer Installation 2.5

Concrete Bed and Surround



Concrete (where necessary - e.g. pipe depth <1.2m; under roads):

- MINIMUM 150mm below pipe base (Diagram B)
- C20 grade concrete (Diagram B)
- Incorporate flexible joints through concrete surround at mouth of pipe sockets

Polysewer and Ridgisewer Gravity Sewer Pipes

For applications subject to design and installation in accordance with 'Sewers for Adoption - a design and construction guide for developers'; 6th Edition" The pipes shall be thermoplastic structured wall pipes and shall comply with the relevant provisions of WIS 4-35-01.

Polysewer and Ridgisewer Gravity Sewer Pipes

For applications subject to 'Civil engineering specification for the water industry'; 6th Edition The pipes shall be thermoplastic structured wall pipes and shall comply with the relevant provisions of WIS 4-35-01.

Ridgigully

The surface water gullies shall be single piece gullies moulded in HDPE and shall have a current British Board of Agrément Roads and Bridges certificate. The outlet shall be trapped as standard and capable of being converted to an untrapped gully by removal of the factory installed stopper. The gully shall be corrugated for enhanced stiffness and to key into the concrete surround. Gullies shall be installed in accordance with the Manual of Contract Documents for Highway Works.

Ridgisewer Model Specification 2.6

