Fernco
CIVILS & DRAINAGE

Shear Banded Couplings



- Withstands internal pressure of up to 2.5 bar
- Stainless steel shear band helps prevent pipe displacement
- Less excavation compared to replacing a whole length of pipe
- Approved to WIS 4-41-01- (Flexible couplings for gravity sewerage and drainage pipes) and BS EN 295-4:2013
- Complies to BS EN 681-1:1996, BS EN 10088-2:1995 & BS EN 16397

UK CA CE 05

Fernco shear banded couplings are specifically designed to connect and repair pipes on adopted sewer and drainage applications, as required by the UK water companies. The stainless steel central band protects the joint under shear loads and helps to keep the joining pipes aligned, helping to prevent pipe displacement.

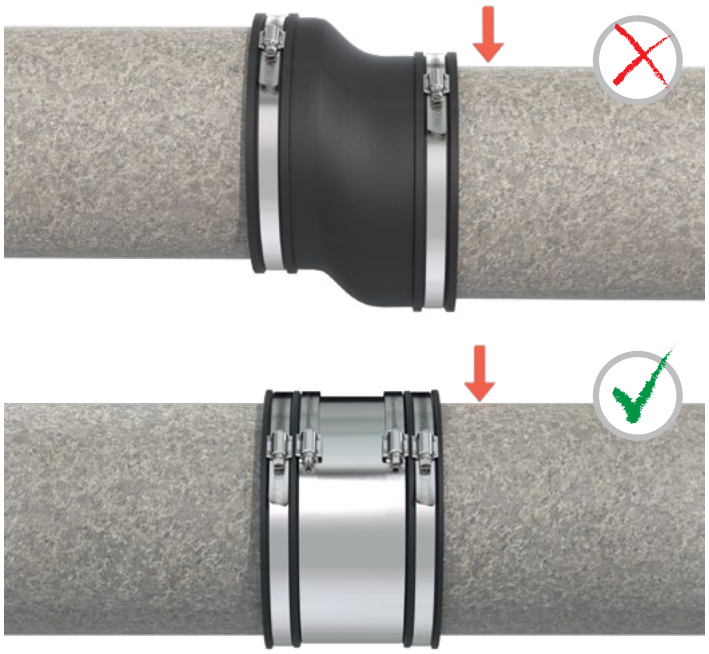
Fernco manufactures the most extensive range of Shear Banded Couplings available in the marketplace and has revolutionised traditional pipe repair methods over the years. Fernco shear banded couplings are specifically designed to connect and repair pipes on adopted sewer and drainage applications.

Shear banded couplings are a requirement of the UK water companies when connecting onto their assets. This requirement forms part of Water Industry Specification (WIS) 4-41-01, which outlines the requirements to connect pipes on adopted systems using only shear banded couplings.

The shear band on this range of couplings gives the connection added protection against shear loads that could cause the pipes to become mis-aligned.

Fit horizontally or vertically

for above or below ground applications



NOTE: Although Drain Couplings are available to connect unadopted drainage systems, Fernco would recommend the use of Shear Banded Couplings for any drainage connection underground for added reassurance of joint alignment over time and to follow best practice.

Shear Banded Coupling Variants



Standard Coupling | Extra Wide Standard Coupling | Large Coupling | Extra Wide Large Coupling | Magnum Coupling

	Standard Coupling	Extra Wide Standard Coupling	Large Coupling	Extra Wide Large Coupling	Magnum Coupling
Width	80-190mm varies depending on coupling diameter	300mm	190mm	300mm	345mm
Size Range	50-620mm	200-620mm	400mm +	400mm +	300mm +
Bolting System	8mm Worm Drive	8mm Worm Drive	M8 13mm Bolt	M8 13mm Bolt	M8 13mm Bolt
Pressure Rating	2.5bar	2.5bar	LC400-599: 2.5bar LC600-999: 1.5bar LC1000-1399: 1bar LC1400+: 0.5bar	LC400-599W: 2.5bar LC600-999W: 1.5bar LC1000-1399W: 1bar LC1400W+: 0.5bar	MAG300: 4bar MAG400-599: 2.5bar MAG600-999: 1.5bar MAG1000+: 1bar
Max gap between connecting pipe ends	Max: ≤ SC137: 20mm ≤ SC290: 45mm ≤ SC620: 50mm	Max: 150mm	Max: 50mm	Max: 150mm	Max: 160mm
	A minimum joint gap should be allowed to account for any pre-set angular deflection before tightening and practical angular deflection after installation				
Applications	Used to connect two plain ended pipes when additional pipe alignment protection is required, usually when a joint is subject to heavy shear loads. Shear banded couplings are advised for all connections made on adopted drainage systems to protect water company assets.	Used to connect two plain ended pipes when an extended sealing zone is required, such as, a connection to Twinwall pipe to create a seal on more ribs or when a greater pipe deflection is required than Standard Couplings can provide. Connections to Twinwall pipes between 225-600mm should use Extra Wide Standard Couplings as opposed to Standard Couplings.	Used to connect two plain ended pipes above 400mm, usually in cases when drainage lines are being extended and therefore socket connections are not present. Connections to concrete pipes above 400mm should use Large Couplings as opposed to Standard Couplings.	Used to connect two pipes where a cut section has left the pipe end uneven or not square to the axis of the pipe; this coupling will bridge the gap. Extra Wide Large Couplings are usually used as standard on pipes above 1000mm to compensate for this and for improved angular deflection. Extra Wide Large Couplings are to be used on Twinwall pipes from 600mm as the sealing zone covers more ribs that the narrower Large Coupling.	Used to connect two pipes where a cut section has left a pipe end severely uneven or not square to the axis of the pipe. Additional bolts with the Magnum Coupling provides extra strength.
	All shear banded couplings are specifically designed to help maintain joint alignment and joint stability.				

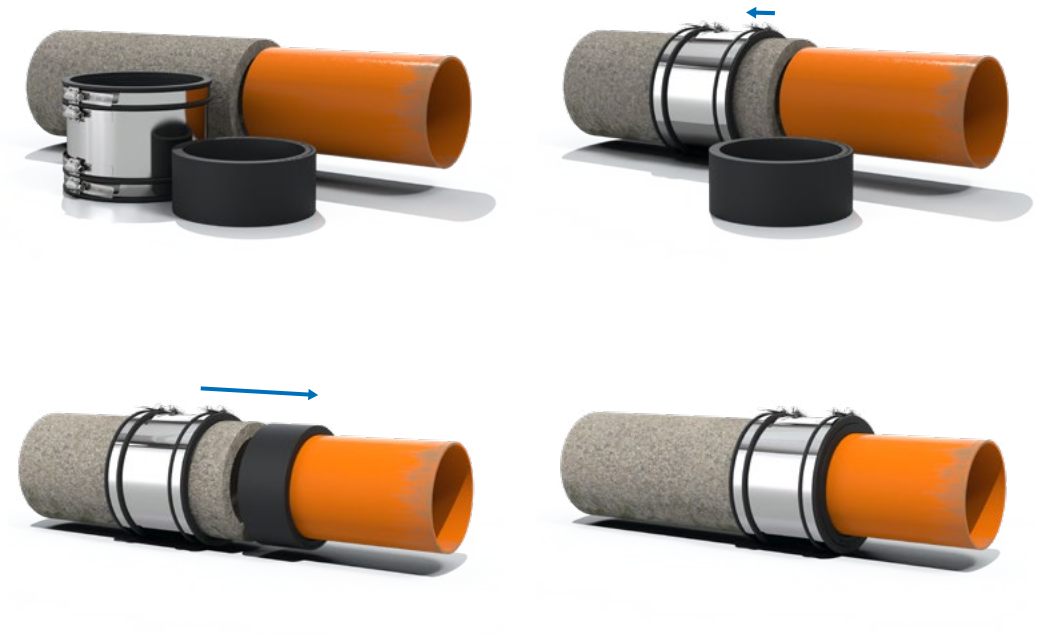
Note: Concrete pipes can sometimes have imperfections on their surface due to the casting process. Thus, when connections are made onto concrete pipes, it is recommended to apply a neat cement grout to the sealing area; this provides a smooth surface and ensures an airtight seal. Due to the variable nature of concrete, no pressure over 0.5 to 1.0 bar (dependent on size) can be guaranteed. The stated maximum pressure ratings are only achievable when couplings are fitted onto pipes with a good surface finish i.e. PVC, GRP, and Clay.



Connecting Different Size Pipes

Shear Banded Couplings have the ability to connect two pipes with the same or similar outside diameter (OD), and also have the flexibility to accommodate small differences in pipe OD's.

When the pipe OD's are outside of the limitations of a Shear Banded Coupling, 'Bushes' can be used to make up the annual space between the smaller pipe OD and the Shear Banded Coupling.



See 'Bushes' datasheet for technical information.

Standard Couplings

50-620mm



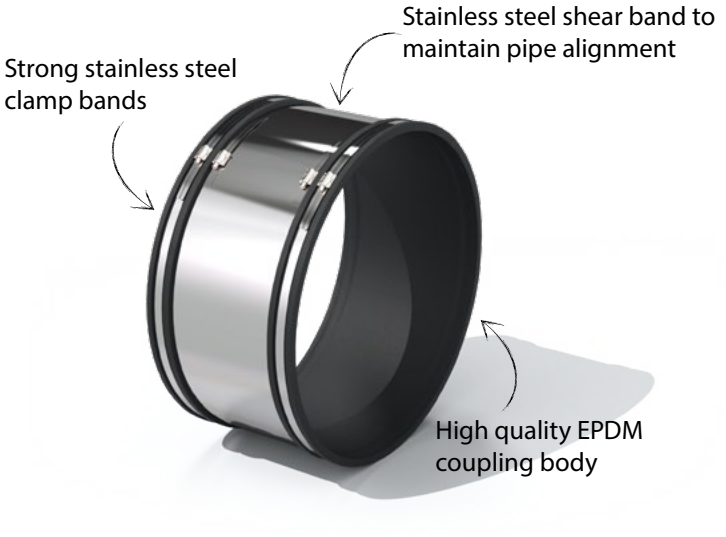
Product Code	SCXXX
Description	Fernco Standard Coupling
Width	190mm
Size Range	50 - 620mm
Material	EPDM 1.4301 (304) Stainless Steel *Couplings with a different material makeup are available on request.*
Pressure Rating	2.5bar, 36.25psi
Temperature Range	-50°c to 80°c constant, 100°c intermittent
Jetting Resistance	180 bar
Standards	WIS 4-41-01 (SC100+) BS EN 681-1:1996 BS EN 295-4:2013 (SC100+) BS EN 10088-2:1995 BS EN 16397 (SC100+)

Product Code	Size Range (mm)	Tightening Torque	Width	Maximum difference between pipes OD's (mm)
SC65	50 - 65	6Nm	90mm	6
SC75	60 - 75	6Nm	108mm	6
SC85	70 - 85	6Nm	80mm	6
SC95	80 - 95	6Nm	110mm	6
SC100	85-100	6Nm	120mm	6
SC115	100 - 115	6Nm	120mm	6
SC120	105 - 120	6Nm	120mm	6
SC125	110 - 125	6Nm	120mm	6
SC137	122 - 137	6Nm	120mm	6
SC150	125 - 150	6Nm	136mm	6
SC165	140 - 165	6Nm	136mm	6
SC175	150 - 175	6Nm	136mm	6
SC185	160 - 185	6Nm	136mm	6
SC200	175 - 200	6Nm	150mm	6
SC215	190 - 215	13Nm	150mm	6
SC225	200 - 225	13Nm	150mm	6
SC250	225 - 250	13Nm	150mm	6
SC265	240 - 265	13Nm	150mm	6
SC275	250 - 275	13Nm	150mm	6
SC290	265 - 290	13Nm	150mm	6
SC305	280 - 305	13Nm	190mm	8
SC310	285 - 310	13Nm	190mm	8
SC320	295 - 320	13Nm	190mm	8
SC335	310 - 335	13Nm	190mm	8
SC345	320 - 345	13Nm	190mm	8
SC360	335 - 360	13Nm	190mm	8
SC370	345 - 370	13Nm	190mm	8
SC385	360 - 385	13Nm	190mm	8
SC395	370 - 395	13Nm	190mm	8
SC410	385 - 410	13Nm	190mm	8
SC425	400 - 425	13Nm	190mm	8
SC430	405 - 430	13Nm	190mm	8
SC445	420 - 445	13Nm	190mm	10
SC450	425 - 450	13Nm	190mm	10
SC465	440 - 465	13Nm	190mm	10
SC470	445 - 470	13Nm	190mm	10
SC490	465 - 490	13Nm	190mm	10
SC510	485 - 510	13Nm	190mm	10
SC525	500 - 525	13Nm	190mm	10
SC540	515 - 540	13Nm	190mm	10
SC550	525 - 550	13Nm	190mm	10
SC560	535 - 560	13Nm	190mm	10
SC570	545 - 570	13Nm	190mm	10
SC580	555 - 580	13Nm	190mm	10
SC600	575 - 600	13Nm	190mm	10
SC620	595 - 620	13Nm	190mm	10

Bushes can be used to accommodate differences between pipe OD's which fall outside the limitations of the coupling.

Extra Wide Standard Couplings

200-620mm



Product Code	SCXXXW
Description	Fernco Extra Wide Standard Coupling
Width	300mm
Size Range	200 - 620mm
Material	EPDM 1.4301 (304) Stainless Steel *Couplings with a different material makeup are available on request.*
Pressure Rating	2.5bar, 36.25psi
Temperature Range	-50°c to 80°c constant, 100°c intermittent
Jetting Resistance	180 bar
Standards	WIS 4-41-01 BS EN 681-1:1996 BS EN 295-4:2013 BS EN 10088-2:1995 BS EN 16397

Product Code	Size Range (mm)	Tightening Torque	Maximum difference between pipes OD's (mm)
SC225W	200 - 225	13Nm	8
SC290W	265 - 290	13Nm	8
SC310W	285 - 310	13Nm	10
SC320W	295 - 320	13Nm	10
SC335W	310 - 335	13Nm	10
SC345W	320 - 345	13Nm	10
SC360W	335 - 360	13Nm	10
SC370W	345 - 370	13Nm	10
SC385W	360 - 385	13Nm	10
SC395W	370 - 395	13Nm	10
SC410W	385 - 410	13Nm	10
SC425W	400 - 425	13Nm	10
SC430W	405 - 430	13Nm	10
SC445W	420 - 445	13Nm	12
SC450W	425 - 450	13Nm	12
SC465W	440 - 465	13Nm	12
SC470W	445 - 470	13Nm	12
SC490W	465 - 490	13Nm	12
SC510W	485 - 510	13Nm	12
SC525W	500 - 525	13Nm	12
SC540W	515 - 540	13Nm	12
SC550W	525 - 550	13Nm	12
SC560W	535 - 560	13Nm	12
SC570W	545 - 570	13Nm	12
SC580W	555 - 580	13Nm	12
SC600W	575 - 600	13Nm	12
SC620W	595 - 620	13Nm	12

Bushes can be used to accommodate differences between pipe OD's which fall outside the limitations of the coupling.

Large Couplings

600mm +



Product Code	LCXXX
Description	Fernco Large Coupling
Width	190mm
Size Range	400mm +
Material	EPDM 1.4301 (304) Stainless Steel *Couplings with a different material makeup are available on request.*
Pressure Rating	LC400 - LC500: 2.5bar, 36.25psi LC600 - LC900: 1.5bar, 21.75psi LC1000 - LC1300: 1bar, 14.5psi LC1400+: 0.5bar, 7.25psi
Temperature Range	-50°c to 80°c constant, 100°c intermittent
Jetting Resistance	180bar
Standards	WIS 4-41-01 (LC400-LC600) BS EN 681-1:1996 BS EN 295-4:2013 (LC400-LC1000) BS EN 10088-2:1995 BS EN 16397

Product Code	Size Manufactured Within (mm)	Tightening Torque	Maximum difference between pipes OD's (mm)
LC400	400 - 499	20Nm	12
LC500	500 - 599	20Nm	12
LC600	600 - 699	20Nm	12
LC700	700 - 799	20Nm	12
LC800	800 - 899	20Nm	12
LC900	900 - 999	20Nm	12
LC1000	1000 - 1099	25Nm	12
LC1100	1100 - 1199	25Nm	12
LC1200	1200 - 1299	25Nm	12
LC1300	1300 - 1399	25Nm	12
LC1400	1400 - 1499	25Nm	12
LC1500	1500 - 1599	25Nm	12
LC1600	1600 - 1699	25Nm	12
LC1700	1700 - 1799	25Nm	12
LC1800	1800 - 1899	25Nm	12
LC1900	1900 - 1999	25Nm	12
LC2000	2000 - 2099	25Nm	12

Bushes can be used to accommodate differences between pipe OD's which fall outside the limitations of the coupling.

Note: Large Diameter Couplings are made bespoke to the exact requirements of the connection. 'Size Manufactured Within' in the table above is an indication of what size each coupling can be manufactured within. If a connection over 1000mm is required, Fernco would always recommend an Extra Wide Large Coupling or Magnum Coupling.

Extra Wide Large Couplings

600mm +



Product Code	LCXXXW
Description	Fernco Extra Wide Large Coupling
Width	300mm
Size Range	400mm +
Material	EPDM 1.4301 (304) Stainless Steel *Couplings with a different material makeup are available on request.*
Pressure Rating	LC400W - LC500W: 2.5bar, 36.25psi LC600W - LC900W: 1.5bar, 21.75psi LC1000W - LC1300W: 1bar, 14.5psi LC1400W+: 0.5bar, 7.25psi
Temperature Range	-50°c to 80°c constant, 100°c intermittent
Jetting Resistance	180bar
Standards	WIS 4-41-01 BS EN 681-1:1996 BS EN 295-4:2013 BS EN 10088-2:1995 BS EN 16397

Product Code	Size Manufactured Within (mm)	Tightening Torque	Maximum difference between pipes OD's (mm)
LC400W	400 - 499	20Nm	12
LC500W	500 - 599	20Nm	12
LC600W	600 - 699	20Nm	12
LC700W	700 - 799	20Nm	12
LC800W	800 - 899	20Nm	12
LC900W	900 - 999	20Nm	12
LC1000W	1000 - 1099	25Nm	12
LC1100W	1100 - 1199	25Nm	12
LC1200W	1200 - 1299	25Nm	12
LC1300W	1300 - 1399	25Nm	12
LC1400W	1400 - 1499	25Nm	12
LC1500W	1500 - 1599	25Nm	12
LC1600W	1600 - 1699	25Nm	12
LC1700W	1700 - 1799	25Nm	12
LC1800W	1800 - 1899	25Nm	12
LC1900W	1900 - 1999	25Nm	12
LC2000W	2000 - 2099	25Nm	12
LC2100W	2100 - 2199	25Nm	12
LC2200W	2200 - 2299	25Nm	12
LC2300W	2300 - 2399	25Nm	12
LC2400W	2400 - 2499	25Nm	12
LC2500W	2500 - 2599	25Nm	12
LC2600W	2600 - 2699	25Nm	12
LC2700W	2700 - 2799	25Nm	12
LC2800W	2800 - 2899	25Nm	12
LC2900W	2900 - 2999	25Nm	12
LC3000W	3000 - 3099	25Nm	12
Larger sizes available on request.			

Bushes can be used to accommodate differences between pipe OD's which fall outside the limitations of the coupling.

Note: Extra Wide Large Diameter Couplings are made bespoke to the exact requirements of the connection. 'Size Manufactured Within' in the table above is an indication of what size each coupling can be manufactured within.

Magnum Couplings

300mm +



Product Code	MAGXXX
Description	Fernco Magnum Coupling
Width	345mm
Size Range	300mm +
Material	EPDM 1.4301 (304) Stainless Steel *Couplings with a different material makeup are available on request.*
Pressure Rating	MAG300: 4.0bar MAG400 - MAG500: 2.5bar MAG600 - MAG900: 1.5bar MAG1000+: 1.0bar
Temperature Range	-50°c to 80°c constant, 100°c intermittent
Jetting Resistance	180bar
Standards	BS EN 681-1:1996 BS EN 10088-2:1995 BS EN 16397

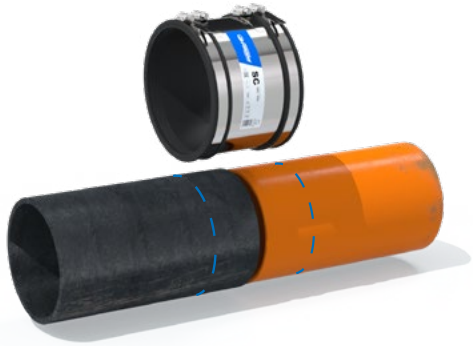
Product Code	Size Manufactured Within (mm)	Tightening Torque	Maximum difference between pipes OD's (mm)
MAG300	300 - 399	25Nm	12
MAG400	400 - 499	25Nm	12
MAG500	500 - 599	25Nm	12
MAG600	600 - 699	25Nm	12
MAG700	700 - 799	25Nm	12
MAG800	800 - 899	25Nm	12
MAG900	900 - 999	25Nm	12
MAG1000	1000 - 1099	25Nm	12
MAG1100	1100 - 1199	25Nm	12
MAG1200	1200 - 1299	25Nm	12
MAG1300	1300 - 1399	25Nm	12
MAG1400	1400 - 1499	25Nm	12
MAG1500	1500 - 1599	25Nm	12
MAG1600	1600 - 1699	25Nm	12
MAG1700	1700 - 1799	25Nm	12
MAG1800	1800 - 1899	25Nm	12
MAG1900	1900 - 1999	25Nm	12
MAG2000	2000 - 2099	25Nm	12
MAG2100	2100 - 2199	25Nm	12
MAG2200	2200 - 2299	25Nm	12
MAG2300	2300 - 2399	25Nm	12
MAG2400	2400 - 2499	25Nm	12
MAG2500	2500 - 2599	25Nm	12
MAG2600	2600 - 2699	25Nm	12
MAG2700	2700 - 2799	25Nm	12
MAG2800	2800 - 2899	25Nm	12
MAG2900	2900 - 2999	25Nm	12
MAG3000	3000 - 3099	25Nm	12
Larger sizes available on request.			

Bushes can be used to accommodate differences between pipe OD's which fall outside the limitations of the coupling.

Note: Magnum Couplings are made bespoke to the exact requirements of the connection. 'Size Manufactured Within' in the table above is an indication of what size each coupling can be manufactured within.



Installation



1. Mark both pipes, from the end to be connected, half the width of the coupling, less the required joint gap, which is usually 10mm.



2a. Slide the coupling fully over one of the pipes.



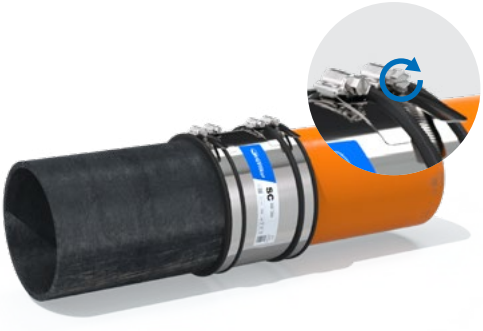
2b. If replacing a cut section of pipe, slide both couplings over each of the existing drain pipes.



3. Align the pipes and slide the coupling onto the other pipe, ensuring the coupling face and marked line are flush. Tighten this clamp band.



4. Position the second pipe, ensuring the coupling face and marked line are flush. Tighten this clamp band.

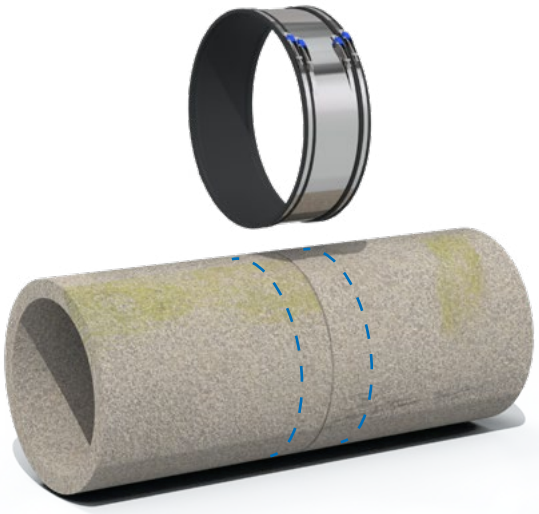


5. Tighten all clamp bands to the recommended torque in sequence across the width of the coupling starting with the central shear band.

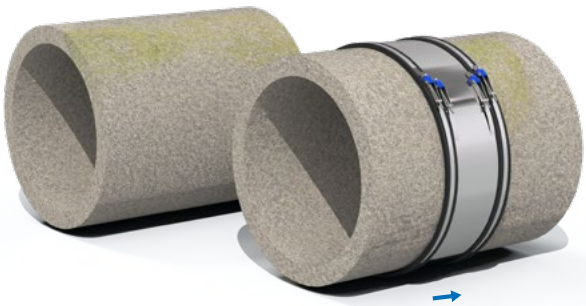
Tamp the bedding under the pipe and re-tighten prior to backfilling.



Installation

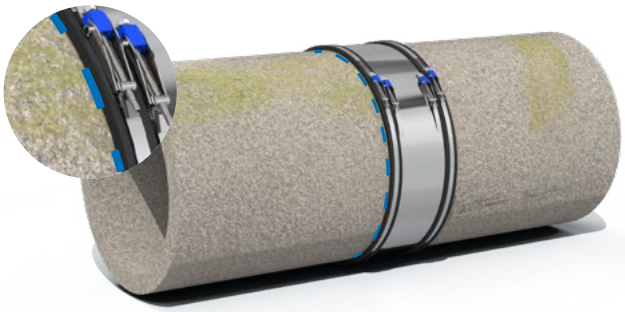


1. Mark both pipes, from the end to be connected, half the width of the coupling, less the required joint gap, which is usually 10mm.

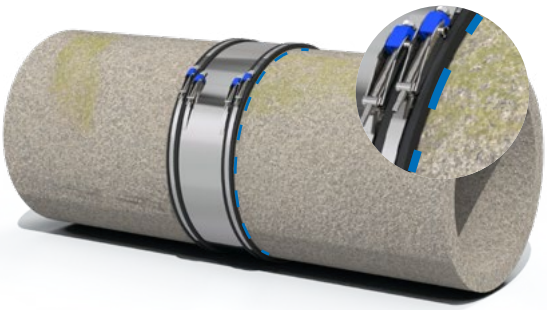


2a. Slide the coupling fully over one of the pipes.

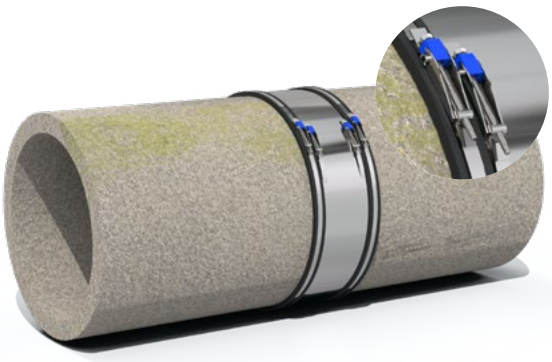
2b. If replacing a cut section of pipe, slide both couplings over each of the existing drain pipes.



3. Align the pipes and slide the coupling onto the other pipe, ensuring the coupling face and marked line are flush. Tighten this clamp band.



4. Position the second pipe, ensuring the coupling face and marked line are flush. Tighten this clamp band.



5. Tighten all clamp bands to the recommended torque in sequence across the width of the coupling starting with the central shear band.

Tamp the bedding under the pipe and re-tighten prior to backfilling.

General Information

Quality, Standards and Approvals

Fernco has been certified by the British Standards Institution (BSI) as a company of assessed capability, with a quality management system which meets the requirements of BS EN ISO 9001:2015

Fernco UK, part of a global group of companies, are the leaders in wastewater connection innovation; utilising the most advanced methods and techniques for precision-manufactured products, all of which comply with or exceed relevant British and European standards to ensure reliability and sustainability.

Environment

Fernco operate Environmental Management Systems which are certified to ISO 14001: 2015.

Supply

Fernco are proud members of the Builders Merchants Federation (BMF). All Fernco products are supplied through a national and global network of distribution and merchant partners. For stockist details, contact Fernco.

Technical Support

Fernco have a team of product experts on hand to support all customers with technical support and advice.

Contact Fernco Technical Department:

Tel: +44 (0) 1226 344100

Email: technical@fernco.co.uk

Enquiries

UK Sales:

Tel: +44 (0) 1226 340 888

Email: sales@fernco.co.uk

International Sales:

Tel: +44 (0) 1226 344 105

Email: export.dept@fernco.co.uk