

# Saddles for Concrete & Clay Pipe

- No adhesives, sealant or concrete required
- Eliminates need to pre-order a factory made junction
- Reduces material and labour costs
- Increases positioning flexibility
- Can be combined with a product 'add-on' to connect different size laterals
- Small and lightweight, easy to transport and handle for quick installation
- Installation unaffected by weather conditions
- Robust and should not be damaged under normal site conditions
- WRc Approved™



Fernco's range of saddles for Concrete and Clay pipes are an approved and more flexible option than pipe junctions when connecting lateral (or branch) pipes into main drain pipelines.

Fernco have designed a dedicated range of saddles for connecting lateral pipes into larger concrete or clay pipelines. The products are designed to be as universal as possible, covering multiple sizes and brands of pipes to create permanent, reliable watertight seals.

To ensure Fernco offers its customers piece of mind, all saddles for Concrete and Clay pipes hold WRc Approval, which is recognised by the UK Water Authorities.

Saddles offer the same solution as pipe junctions, for example, lateral pipes from new build houses, road gullies etc, need to be connected into the system mains. Both saddles and junctions offer this connection but with clear differences in the installation methods.

## Junction method

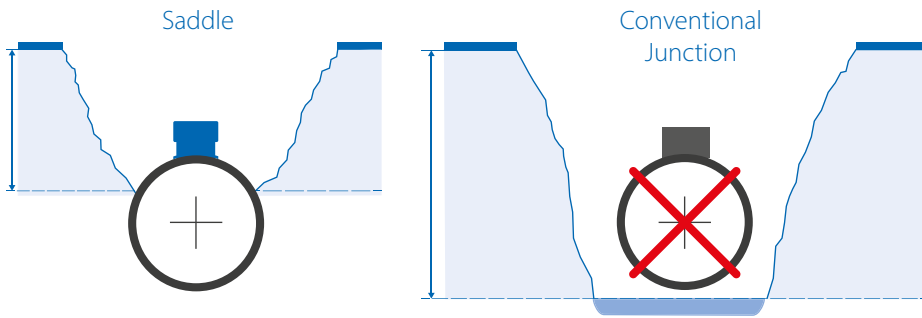
Excavate around the entire external surface of the main pipeline.....Excavate a small top section of the main pipeline

Cut and remove an entire section of the pipeline.....Core a hole into the main pipeline

Using appropriate mechanical lifting equipment, lift out the old pipe and lift in and fit a new junction.....Connect a lightweight saddle into the cored hole



## Main Benefits of using a saddle over a junction



- Lower materials cost – the larger the pipes the greater the savings become
- Significantly reduced excavation requirements
- Savings in fitting time and cost
- No heavy lifting equipment required
- Improved health & safety

## Lateral Connection Saddle Variants

			
	Unisaddle FA150U	Unisaddle FA150B	Unisaddle FA200B
Main Pipe Application	Concrete*/Clay DN250-450**	Concrete* DN450 and above	
Main Pipe Wall Thickness	27.5mm Minimum	50mm Minimum	
Lateral Application	All DN150 pipes when used with a Fernco Multibush	All DN150 pipes when used with a Fernco Multibush	All DN200 pipes and selected DN225 pipes
Shear load protection	25N per mm of nominal pipe diameter	25N per mm of nominal pipe diameter	
Lateral pipe deflection	Max: 7°	Max: 15°	
WRc Cert Number	PT/399/0517	PT/382/0415	

\*If rebar is present, Fernco advise that cut sections are given additional protection against water ingress before installing the saddle.

\*\*FA150U can connect to larger pipes as an alternative to FA150B if required.

### Quick Tip

The Unisaddle range can be made even more universal with the addition of a Fernco Multibush. DN150 lateral pipes are available in many different materials, the thickness of these materials means that the outside diameters differ from pipe to pipe. The FA150U and FA150B saddle has been designed to accept the thickest DN150 pipe on the UK market, with an outside diameter between 180-190mm. To connect a DN150 lateral pipe with a smaller outside diameter, a Fernco Multibush can be used – the foldable bush can be used to fill the gap with 3 thickness configurations: 12mm, 8mm and 4mm.

Using an FA150U or FA150B saddle in conjunction with a Fernco Multibush means that any DN150 lateral pipe material can be installed.



# Unisaddle (FA150U)

For concrete and clay DN300-450

Removable shims make the product universal by giving the user the option of connecting to different pipe sizes with only one lateral connection product



Product Code	FA150U
Description	Fernco Unisaddle Lateral Connection
Size	Main pipe: DN250-600 Lateral Pipe: 160mm PVC
Material	EPDM ABS plastic 1.4301 (304) Stainless Steel
Lateral Pipe Deflection	Max: 7°
Pressure Rating	1 bar / 14.50 psi
Vacuum	-0.25 (-0.3) bar
Vertical Load	20Kn / approx 2 tonne
Deformation	5%
Jetting Resistance	180 bar
Temperature Range	-50°C to 80°C constant, 100°C intermittent
Tightening Torque	6Nm
Standards	BS EN 681-1 BS EN 295-3 BS EN 295-4 BS EN 10088-2 WIS 4-35-01 WRc Approved™ - PT/399/0517
<b>Main Pipe Requirements</b>	
Pipe Size	DN250mm-450mm
Wall Thickness	Minimum: 27.5mm
Drilled Hole Size	172mm (+1mm/-0mm)

## Main Pipe Shim Configuration

Main Pipe	Shims Required	Sealing Range	Lateral Pipe	Illustration
Clay DN300 & 375	2	27.5mm - 40mm	Any DN150 pipe (may require multibush dependent on material)	
Clay DN400, 450 & 500	1	40.5mm - 53mm	Any DN150 pipe (may require multibush dependent on material)	
Clay DN600 Concrete DN300 - 600	None	53.5mm +	Any DN150 pipe (may require multibush dependent on material)	

Unisaddle component parts



## Lateral Pipe Multibush Configuration

Lateral Pipe	Multibush Configuration	Lateral Pipe Material	Illustration
160-166mm	12mm Folded	DN150 Quantum, Cast Iron (SMU, SML, Ensign), 160mm PVC	
170-177mm	8mm Large End	DN150 Ductile Iron, Ultra-Rib. Cast Iron (Drain)	
178mm	4mm Small End	Supersleve, Twinwall Plastic	
180-190mm	None	Salt Glazed Clay	No bush required

Multibush 4mm (left) - 8mm (right)



Product Code: **MB150**



# Installation



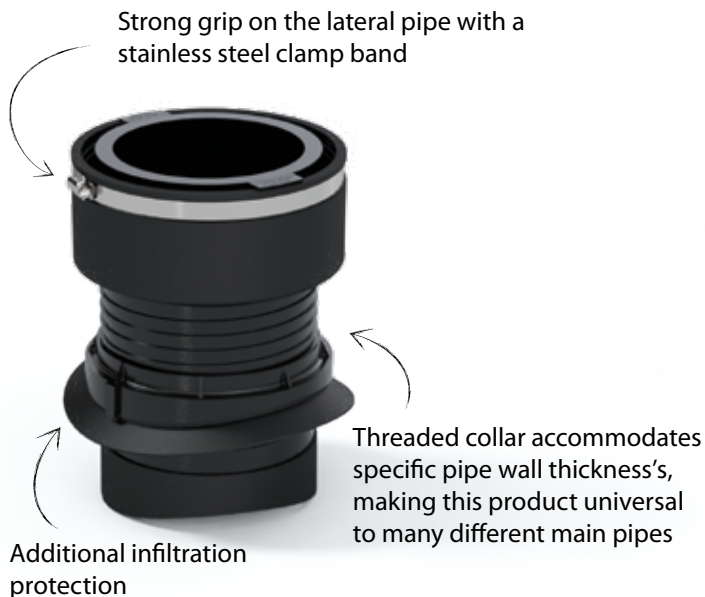
## 6 easy steps

1. Diamond core a 172mm hole at the selected position into the main pipe. Ensure the pipe wall and surrounding area is clean and free from slurry/debris.
2. Use the correct number of shims based on the wall thickness of the main pipe. Refer to table for shim configuration.
3. Position the saddle in the hole ensuring the contours of the saddle are aligned with the main pipe and the arrows on the rubber body and plastic sleeve line up.
4. Break off the tabs from the locking sleeve and push the sleeve into the bore of the saddle.
5. Drive the locking sleeve evenly around the circumference until fully locked. It is recommended that a wooden block is used when using a hammer to lock the saddle into position. Add water to ease the locking sleeve into the saddle if required.
6. Insert the lateral pipe into the fitted saddle (along with a Fernco Multibush if required) and tighten the clamp band to the recommended torque.

*Note: A diamond cored hole of 172mm (+1 / -0mm) should be cored using the correct equipment. Should rebar be exposed, it is recommended that the rebar is sealed prior to installation of the saddle.*

# Unisaddle (FA150B / FA200B)

For concrete DN450 and above



Product Code	FA150B / FA200B
Description	Fernco Unisaddle Lateral Connection
Size	Main pipe: DN450 and above Lateral Pipe: DN150
Material	EPDM ABS plastic 1.4301 (304) Stainless Steel
Lateral Pipe Deflection	Max: 15°
Pressure Rating	1 bar / 14.50 psi
Vacuum	-0.25 (-0.3) bar
Vertical Load	20Kn / approx 2 tonne
Deformation	5%
Jetting Resistance	180 bar
Temperature Range	-50°C to 80°C constant, 100°C intermittent
Tightening Torque	6Nm
Standards	BS EN 681-1 BS EN 295-3 BS EN 295-4 BS EN 10088-2 WIS 4-35-01 WRc Approved™ - PT/382/0415
<b>Main Pipe Requirements</b>	
Pipe Size	DN450 and above
Wall Thickness	Minimum: 50mm
Drilled Hole Size	FA150B: 172mm (+1mm/-0mm) FA200B: 232mm (+1mm/-0mm)



## FA150B: Lateral Pipe Multibush Configuration

The Fernco Multibush (MB150), which is manufactured to the requirements of BS EN295-4: 1995, is recommended.

Pipe Outside Diameter	Multibush (MB150)	Pipe Material	Illustration
160-166mm	12mm Folded	DN150 Quantum, Cast Iron (SMU, SML, Ensign), 160mm PVC	
170-177mm	8mm Large End	DN150 Ductile Iron, Ultra-Rib. Cast Iron (Drain)	
178mm	4mm Small End	Supersleve, Twinwall Plastic	
180-190mm	No Bush	Salt Glazed Clay	



## FA200B: Lateral Pipe Bush Configuration

The Fernco Bushes, which are manufactured to the requirements of BS EN295-4: 1995, is recommended.

Pipe Outside Diameter	Bush	Pipe Material	Illustration
200-208mm	BC21/205	200mm PVC	
210-220mm	BC08/232	DN200 Cast Iron (SMU, SML, Ensign)	
222-250mm	No Bush	DN200 Vitrified Clay, DN200 Ductile Iron, DN225 Quantum, DN225 Ultra-rib, DN225 Polysewer Twinwall, DN225 Polyethylene, DN225 Vulcathene	

# Installation



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## 6 easy steps

1. Diamond core a hole at the selected position (FA150B: 172mm / FA200B 232mm) into the concrete pipe. Ensure the pipe wall and surrounding area is clean and free from slurry/debris and measure the wall thickness.
2. Remove the internal locking sleeve from the saddle body. Adjust the threaded collar on the outer sleeve so that it measures 10mm less than the thickness of the pipe.
3. Position the saddle in the hole ensuring it sits 10mm away from the internal wall of the pipe. This is achieved by placing your hand inside and feeling the inside of the pipe wall.
4. Break off the tabs from the locking sleeve and lubricate using Fernco Pipe Lubricant. Place the locking sleeve into the saddle body and line up the arrows. Push the sleeve into the bore of the saddle.
5. Drive the locking sleeve evenly around the circumference until fully locked. It is recommended that a wooden block is used when using a hammer to lock the saddle into position.
6. Insert the pipe into the fitted saddle and tighten the clamp band to the recommended torque.

*Note: A diamond cored hole of 172mm or 232mm (+1 / -0mm) should be cored using the correct equipment.*

# 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 the Fernco Group, 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.

Fernco saddles for concrete and clay pipes (FA150U, FA150B and FA200B) hold WRC Approved™ status.



The WRC Approved™ scheme is recognised and established within the construction industry; providing suppliers, buyers and end-users confidence that the products are fit for purpose. The scheme reduces risks in procurement by ensuring quality, performance and installation processes have been tested with the most stringent of requirements, in conformance with BS EN 295 and BS EN 16397.

Fernco can offer a range of Concrete/Clay lateral connection products which carry the assurance of WRC approval. Saddles, when compared with factory made junctions, can offer a multitude of benefits both in procurement and on-site in areas such as H&S, labour, installation time, flexibility and cost.

## 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 344 100

Email: [technical@fernco.co.uk](mailto:technical@fernco.co.uk)

## Enquiries

UK Sales:

Tel: +44 (0) 1226 340 888

Email: [sales@fernco.co.uk](mailto:sales@fernco.co.uk)

International Sales:

Tel: +44 (0) 1226 344 105

Email: [export.dept@fernco.co.uk](mailto:export.dept@fernco.co.uk)