Quick Installation Guide

StormFLO® Rural

Vinidex by aliaxis

Flexible pipe information

StormFLO® Rural are flexible pipes. This means that as vertical loads are applied, the pipe will deflect and take advantage of horizontal soil pressure to provide additional support to the system. The interaction of the pipe and the embedment material means that both play an important role in the structural performance of the pipeline.

Properly installed pipes, in which the specified embedment material is placed and compacted to the required level, have characteristically low deflections because the pipe deflection follows the soil settlement.

Where StormFLO® Rural pipes are installed at depths between 0.8m and 6m in normal soils and recommended installation practices are followed there is generally no need for structural design calculations. In these typical installations, deflection can be reliably predicted from a design chart based on the compaction level of the embedment, or using our design guide on the Vinidex website.

For installation conditions at greater depths or in poor soils, a design methodology for flexible pipes is clearly set out in AS/NZS 2566.1 “Buried flexible pipelines. Part 1: Design”. This Standard uses the pipe characteristics and material properties, installation conditions and external loads to predict pipe deflection, strain in the pipe wall and resistance to buckling which are compared against conservative allowable limits.

Note: This is a quick reference guide for StormFLO® Rural installation. For more details around complex installations please refer to the StormFLO® Civil installation guide on the Vinidex website or reference AS/NZS 2566.2 “Buried flexible pipelines. Part 2: Installation”

StormFLO® Rural

Vinidex Code	Nominal Diameter (mm)	SN	Length (m)
29535	225	6	5.96m
29536	300	6	5.88m
29537	375	6	5.79m
29538	450	6	5.78m

StormFLO® Civil

Vinidex Code	Nominal Diameter (mm)	SN	Length (m)
29520	225	8	5.96m
29521	300	8	5.88m
29522	375	8	5.78m
29523	450	8	5.77m
29524	525	8	5.69m
29525	600	8	5.56m

Stages of Installation

1. Trench preparation
2. Joint installation in trench
3. Backfill, haunch, compaction and overlay
4. Trench-fill to finished level

Trench requirements

StormFLO® Rural requires minimum trench widths to allow for correct compaction for pipe side support as per below table.

Nominal Diameter (mm)	225	300	375	450	525	600
Minimum Trench Width (mm)	560	745	830	1115	1200	1280
Minimum Depth of Bedding Zone (mm)	100	100	100	150	150	150
Minimum Depth of Overlay Zone (mm)	150	150	150	150	150	150

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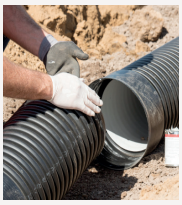
Jointing Instructions

The following procedure is recommended when jointing StormFLO® Rural rubber ring jointed pipes:

1. Clean the pipe socket and spigot end, making sure both are free of any dirt and grit. Any foreign matter trapped in the joint will compromise joint performance and leak-tightness of the system.

2. Install the rubber ring by stretching it over the spigot so that it seats between the first and second corrugations from pipe spigot end.

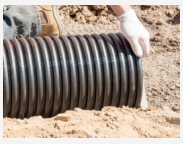
3. Ensure rubber rings are evenly fitted by running fingers around the full circumference of the pipe.



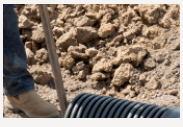
4. Apply a generous quantity of Vinidex jointing lubricant to the inside of the receiving socket. Do not lubricate the rubber ring or the valley under the rubber ring. Avoid getting lubricant under the rubber ring. This will ensure that the ring does not pick up dirt and introduce contaminants to the joint or become displaced during jointing.

HINT: To further minimize the risk of introducing grit from the embedment material into the joint, a small piece of rubber mat, poly tarp or equivalent can be temporarily placed under the socket/spigot during joint assembly.

5. Insert the leading edge of the spigot into the receiving socket. It is essential that pipes are in a straight line before attempting to make the joint. Double check that the ring and spigot is free from any grit or embedment material so as not to compromise the joint.



6. Do not apply jointing force directly to the socket. Insert a short stub of pipe in the opposite socket. The short stub can be an off-cut, 50mm longer than the socket, and can be re-used.

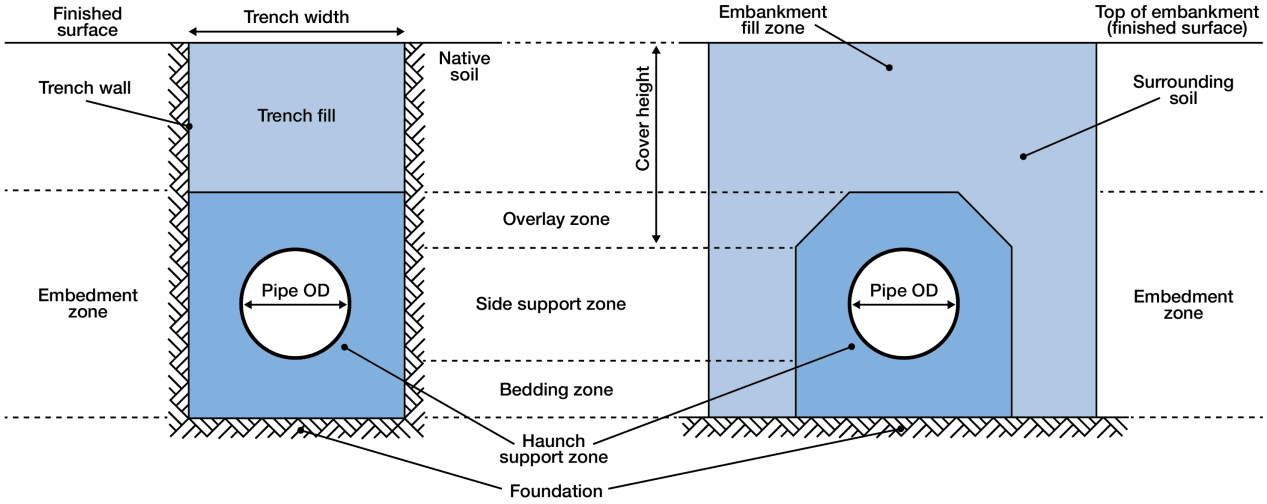


7. Apply even jointing force. Subject to pipe diameter and local conditions, use a crowbar (see Note) to push on a timber block on the end of the short pipe.

8. Push home the pipe until the spigot end comes into contact with the inner wall of the socket.

NOTE: The jointing force required increases with the nominal diameter of the pipe. A leverage tool such as a crowbar is generally sufficient for StormFLO® Rural pipes up to 375mm nominal diameter. For larger sizes, mechanical assistance is required. Where applying a jointing force is not practical, consideration should be given to the use of come-along or winch and rope devices.

Trench and embankment examples



Minimum depth of cover over pipe with finished surface levels - as per AS3500.3

Loading Condition	Minimum Cover (m)
Not subject to vehicular loading:	
a) Without pavement -	
i. for single dwellings; or	100
ii. for other than single dwellings	300
b) With pavement of brick or unreinforced concrete	100*
Subject to vehicular loading:	
a) Other than roads:	
i. Without pavement	450
ii. With pavement of -	
A. reinforced concrete for heavy vehicular loading	100*
B. brick or unreinforced concrete for light vehicular loading	75*
b) Roads-	
i. sealed; or	600
ii. unsealed	750
Subject to construction equipment loading or in embankment conditions	750
Land zone for agricultural use	600

*Below the underside of the pavement