PT/426/0518 (Updated - December 2021)

Assessment Schedule for the PA Saddle fittings for the connection of laterals to structured wall sewers and drains system as manufactured by Fernco Group.

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1. SCOPE

This schedule specifies the requirements for the PA saddle as manufactured by Fernco Group. It is applicable to installing 150mm nominal bore lateral connections, for the in situ connection of laterals to structured wall gravity sewers and drains. The different variations are applicable to allow connection to structured wall gravity sewers and drains from DN300 up to and including DN600.

The PA saddle is not applicable to pipes above DN600.

2. PRODUCT DESCRIPTION

2.1 Introduction

The PA Saddle may be used for connecting laterals made of solid wall Polyvinyl chloride (PVC) to BS EN 1401-1 (DN160). Through the use of an optional ABS shim to artificially increase the wall thickness, the PA saddle is approved for use on:

- Polysewer
- Quantum
- UltraRib
- Smooth, thin walled PVC

The body of the PA Saddle comprises an inner sleeve of black Acrylonitrile Butadiene Styrene (ABS), a bolt ring and top flange (both glass filled nylon). A tool is used to tighten 4 bolts between the bolt ring and the top flange to draw the elastomeric ring into the annular space between the saddle body and the hole. The seal is made on the edge of the hole around the inner skin of the pipe.

2.2 Applicable standards

The following relevant standards were identified for gravity sewerage and drainage pipe couplings:

- BS EN 295-3:2012[(1)]
- BS EN 13259:2018[(2)]
- BS EN 681-1:1996[(3)]
- WIS 4-35-01[(4)]

2.3 Approval History

The PA Saddle fitting system was originally awarded WRc Approved™ certification in September 2009:

- PT/290/1009
- PT/426/0518

The approval was revised in December 2021 for use of solid and structured wall pipe.

3. REQUIREMENTS AND TESTING

3.1 Materials and components

Elastomeric components shall comply with the requirements of BS EN 681-1:1996[(5)].

ABS components shall comply with the manufacturer's specification.

Glass filled nylon shall comply with the manufacturer's specification.

All metal components shall be stainless steel: Grade 316.

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3.2 Type Testing

Water tightness and structural integrity:

Each category of lateral pipe will be tested in accordance with BS EN 13259:2018, at the test pressures -0.3 Bar, 0.05 Bar and 0.5 Bar, under the conditions described in Table 1.

Table 1 Test conditions for lateral pipes

Condition	Deflection	
	Diametric	Angular
A	N/A	N/A
B	5% Socket 10% Pipe	N/A
C	N/A	8.5°

The structural integrity of the saddle connected to the host pipe will be tested in accordance to BS EN 13259:2018 at the test pressures -0.3 Bar, 0.05 Bar and 0.5 Bar, under the conditions described in Table 2:

Table 2 Test conditions for host pipe

Condition	Deflection	
	Diametric	Angular
A	N/A	N/A
B	10% Host pipe	N/A

Thermal Cycling:

When tested in accordance with BS EN 295-3:2012, 24.2, the joint assemblies shall withstand a long term thermal stability test for 7 days at 45°C, followed by a leak tightness test applying 0.5 bar internal pressure for 15 minutes, there shall be no visible leakage.

Resistance to High Pressure Water Jetting:

When tested in accordance with WIS 4-35-01[4], Appendix B, the PA Saddle shall meet the requirements in clause 3.3.

3.3 Manufacture

To ensure the quality and performance of the PA Saddle range the manufacturing process shall include appropriate systems for the:

- Specification of component materials
- Verification component materials received are to specification
- Handling and storage of all component materials and finished units
- Detailed drawing / schedule for manufacture
- Manufacture / assembly of the PA Saddle and
- Fabrication and quality control of workmanship.

The production of the PA Saddle and related quality control procedures shall comply with requirements to ensure the stated performance of the product is reliably achieved.

3.4 Installation

When installed in accordance with the installation documentation[5], the PA Saddle shall be reasonably expected to perform as described.

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4. APPROVAL

The PA Saddle has been audited and successfully met all the requirements stated within this assessment schedule

Signed:

Valid until 30 May 2023

5. REFERENCES

1. BS EN 295-3 Vitrified clay pipe systems for drains and sewers. Requirements for pipes, fittings and joints. 2013.

2. Flexseal PA Saddle installation instructions (Updated Dec 2021).

3. BS EN ISO 13259:2018 Thermoplastics piping systems for underground non-pressure applications - test method for leaktightness of elastomeric sealing ring type joints

4. WIS 4-35-01: Specification for Thermoplastic Structured Wall Pipes -Supplementary Test Requirements.

5. BS EN 681-1: 1996 Elastomeric seals. Material requirements for pipe joint seals used in water and drainage applications. Vulcanized rubber.

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