

Gas Industry Standard

GIS/RIS1: 2023

Specification for

**Press Fit Stainless Steel Network Riser System
Components**



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Foreword

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Comments and queries regarding the technical content of this document should be directed in the first instance to the contract department of the Gas Transporter responsible for the initial issue of their contract documentation.

This standard calls for the use of procedures that may be injurious to health if adequate precautions are not taken. It refers only to technical suitability and does not absolve the user from legal obligations relating to health and safety at any stage.

Compliance with this engineering document does not confer immunity from prosecution for breach of statutory or other legal obligations.

Mandatory and non-mandatory requirements

For the purposes of a GIS the following auxiliary verbs have the meanings indicated:

can indicates a physical possibility;

may indicates an option that is not mandatory;

shall indicates a GIS requirement;

should indicates best practice and is the preferred option. If an alternative method is used then a suitable and sufficient risk assessment needs to be completed to show that the alternative method delivers the same, or better, level of protection.

Disclaimer

This engineering document is provided for use by Gas Transporters and such of their contractors as are obliged by the terms of their contracts to comply with this engineering document. Where this engineering document is used by any other party, it is the responsibility of that party to ensure that the engineering document is correctly applied.

Brief history

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1. Scope

This Gas Industry Standard specifies requirements for the components used in external press fit stainless steel network riser systems supplying multiple occupancy premises with natural gas in accordance with IGEM/G/5 at pressures up to and including 75 mbar and diameters up to 108mm.

2. Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

2.1 European standards

BS EN 10312, *Welded stainless steel tubes for the conveyance of aqueous liquids including water for human consumption. Technical delivery conditions*

PP1741A, *Steel Plumbing Press Fittings – Part A: Stainless Steel. Product Requirements and Test Methods*

BS 6129-1, *Code of practice for the selection and application of bellows expansion joints for use in pressure systems. Metallic bellows expansion joints*

2.2 Institution of Gas Engineers and Managers Standards

IGEM/G/5, *Gas in multi-occupancy buildings*

3. Terms and Definitions

For the purposes of this document, the following definitions apply.

3.1 Press Fit Fittings

Components used to join sections of pipe which are assembled by hand or by using a crimping tool. These may take the form of couplers, bends, tees, valves, adaptors, etc.

3.2 Expansion Bellows

The flexible element of an expansion joint.

4. General requirements

These requirements are based on existing standards for the following components:

- Pipe
- Fittings
- Expansion Bellows

It shall not be necessary for these components to be coated or painted under normal operating conditions.

There may be circumstances where these components need to be coated or painted for aesthetic purposes or where they are installed in locations susceptible to higher rates of corrosion, such as coastal areas. To meet this requirement these components shall also be capable of being coated or painted.

5. Conformance

5.1 Pipe

5.1.1 Pipe shall conform to BS EN 10312:2002 and be CE / CA marked.

5.1.2 The purchaser is responsible for obtaining evidence that these requirements have been met.

5.2 Press fit fittings

5.2.1 Press fit fittings shall conform to the requirements specific to gas in PP1741A and have Kitemark certification confirming this.

5.2.2 Press fit fittings shall also be fire tested in accordance with BS1775 Annex A procedure A. The test pressure shall be 50 mbar and the maximum allowable leakage limit shall be 150 dm³ / hr.

5.2.3 The purchaser is responsible for obtaining evidence that these requirements have been met.

5.3 Expansion Bellows

5.3.1 Expansion Bellows shall conform to BS 6129-1.

5.3.2 Expansion bellows shall also be fire tested in accordance with BS1775 Annex A procedure A. The test pressure shall be 50 mbar and the maximum allowable leakage limit shall be 150 dm³ / hr.

5.3.3 The purchaser is responsible for obtaining evidence that these requirements have been met.