
**Thermoplastics piping systems for
non-pressure underground drainage
and sewerage — Thermoplastics
shafts or risers for inspection
chambers and manholes —
Determination of ring stiffness**

*Systèmes de canalisations thermoplastiques pour branchements
et collecteurs d'assainissement enterrés sans pression — Éléments
de réhausse thermoplastiques pour chambres d'inspection et de
branchement ou regards — Détermination de la rigidité annulaire*



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 1, *Plastics pipes and fittings for soil, waste and drainage (including land drainage)*.

This second edition cancels and replaces the first edition (ISO 13268:2010), which has been technically revised.

The main changes are as follows:

- normative references have been updated;
- definitions have been revised;
- in [8.2](#), the calculation of the shape factor, S_F , has been changed for irregular sections;
- this document has been editorially revised.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Thermoplastics piping systems for non-pressure underground drainage and sewerage — Thermoplastics shafts or risers for inspection chambers and manholes — Determination of ring stiffness

1 Scope

This document specifies a test method for assessing the initial (short-term) tangential ring stiffness of riser shafts for thermoplastics inspection chambers or manholes.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO 48-2, *Rubber, vulcanized or thermoplastic — Determination of hardness — Part 2: Hardness between 10 IRHD and 100 IRHD*

ISO 9969, *Thermoplastics pipes — Determination of ring stiffness*

3 Terms and definitions

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

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

regular cross-section shaft

circular riser shaft with a regular symmetrical design on their external surface

Note 1 to entry: These products can be either fabricated from plain pipe or from structured wall pipe or fittings.

3.2

irregular cross-section shaft

circular riser shaft with an irregular asymmetrical design on its external surface

Note 1 to entry: These products can include additional reinforcing rings or structures intended to strengthen the riser in specific areas.

4 Principle

4.1 General

The ring stiffness of a shaft with a regular cross-section is determined using the ISO 9969 test method.

Where a shaft has an irregular, square or rectangular cross-section, the ISO 9969 test shall be modified as described in this document to determine the ring stiffness (see [Table 1](#)).