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Conveyor belts - Transverse flexibility (troughability) - Test method (ISO 703:2025)

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This standard includes the English version of the European Standard.

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English Version

Conveyor belts - Transverse flexibility (troughability) - Test method (ISO 703:2025)

Courroies transporteuses - Flexibilité transversale (aptitude à la mise en auge) - Méthode d'essai (ISO 703:2025)

Fördergurte - Biegsamkeit in Querrichtung (Muldungsfähigkeit) - Prüfverfahren (ISO 703:2025)

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European foreword

This document (EN ISO 703:2025) has been prepared by Technical Committee ISO/TC 41 "Pulleys and belts (including veebelts)" in collaboration with Technical Committee CEN/TC 188 “Conveyor belts” the secretariat of which is held by SNV.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2026, and conflicting national standards shall be withdrawn at the latest by February 2026.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 703:2017.

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The text of ISO 703:2025 has been approved by CEN as EN ISO 703:2025 without any modification.

International Standard

ISO 703

Conveyor belts — Transverse flexibility (troughability) — Test method

Courroies transporteuses — Flexibilité transversale (aptitude à la mise en auge) — Méthode d'essai

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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 document 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).

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This document was prepared by Technical Committee ISO/TC 41, *Pulleys and belts (including veebelts)*, Subcommittee SC 3, *Conveyor belts*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 188, *Conveyor belts*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fifth edition cancels and replaces the fourth edition (ISO 703:2017), which has been technically revised.

The main change is as follows: the conditioning atmospheres have been revised in 7.2.

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Introduction

A large number of conveyor belts work in the shape of a trough. If a conveyor belt is too stiff transversely, it does not rest on the central idler roller when unloaded. Its balance is then unstable and it is subject to lateral travel, which can cause its destruction.

It is possible to make a section of the conveyor belt take on the shape of a trough under its own mass, by suspending the section by its edges. However, this does not necessarily indicate what happens when the conveyor belt is not carrying a load.

The results obtained from the test method specified in this document will, however, allow an assessment to be made as to whether the troughing characteristics of the conveyor belt are suitable for the intended application.

International Standard **ISO 703:2025(en)**

Conveyor belts — Transverse flexibility (troughability) — Test method

1 Scope

This document specifies a test method for determining the transverse flexibility (troughability) of a conveyor belt, expressed as a ratio, *F*/*L*. The method is not suitable or valid for light conveyor belts as described in ISO 21183-1.

NOTE The transverse "flexibility" determined by the method described in this document is only indirectly associated with the inverse of flexural modulus as specified in ISO 178. Nor does it take into consideration the differences in "flexibility" as exhibited by three-point and four-point bending, which takes account of the flexural strain and the thickness of the test piece.

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 583, *Conveyor belts with a textile carcass — Total belt thickness and thickness of constitutive elements — Test methods*

ISO 7590, *Steel cord conveyor belts — Methods for the determination of total thickness and cover thickness*

ISO 18573, *Conveyor belts — Test atmospheres and conditioning periods*