



**SLOVENSKI STANDARD**  
**SIST EN ISO 703-1:2001**

01-februar-2001

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Conveyor belts - Transverse flexibility and troughability - Part 1: Test method (ISO 703-1:1999)

Fördergurte - Biegsamkeit in Querrichtung und Muldungsfähigkeit - Teil 1: Prüfverfahren (ISO 703-1:1999)

Courroies transporteuses - Flexibilité transversale et aptitude a la mise en auge - Partie 1: Méthode d'essai (ISO 703-1:1999)

**Ta slovenski standard je istoveten z: EN ISO 703-1:1999**

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**ICS:**

53.040.20      Deli za transporterje      Components for conveyors

**SIST EN ISO 703-1:2001**      en

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EUROPEAN STANDARD

EN ISO 703-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 1999

ICS 53.040.00

English version

## Conveyor belts - Transverse flexibility and troughability - Part 1: Test method (ISO 703-1:1999)

Courroies transporteuses - Flexibilité transversale et aptitude à la mise en auge - Partie 1: Méthode d'essai (ISO 703-1:1999)

Fördergurte - Biegsamkeit in Querrichtung und Muldungsfähigkeit - Teil 1: Prüfverfahren (ISO 703-1:1999)

This European Standard was approved by CEN on 15 December 1999.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

**Foreword**

The text of the International Standard ISO 703-1:1999 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 BSI.

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 June 2000, and conflicting national standards shall be withdrawn at the latest by June 2000.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

**NOTE FROM CEN/CS:** The foreword is susceptible to be amended on reception of the German language version. The confirmed or amended foreword, and when appropriate, the normative annex ZA for the references to international publications with their relevant European publications will be circulated with the German version.

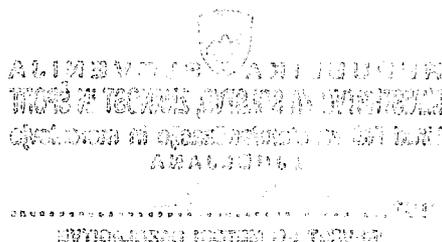
**Endorsement notice**

The text of the International Standard ISO 703-1:1999 was approved by CEN as a European Standard without any modification.

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# INTERNATIONAL STANDARD

**ISO  
703-1**

First edition  
1999-12-15

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## Conveyor belts — Transverse flexibility and troughability —

### Part 1: Test method

*Courroies transporteuses — Flexibilité transversale et aptitude à la mise en  
auge —  
Partie 1: Méthode d'essai*

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Reference number  
ISO 703-1:1999(E)

**ISO 703-1:1999(E)****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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this part of ISO 703 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 703-1 was prepared by Technical Committee ISO/TC 41, *Pulleys and belts (including veebelts)*, Subcommittee SC 3, *Conveyor belts*.

This first edition of ISO 703-1, together with ISO 703-2, cancel and replace ISO 703:1988, of which they constitute a technical revision.

ISO 703 consists of the following parts, under the general title *Conveyor belts — Transverse flexibility and troughability*:

- *Part 1: Test method* [SIST EN ISO 703-1:2001](https://standards.iteh.ai/catalog/standards/sist/f88026e7-b55b-4c84-aeb2-dc25a9e42fd8/sist-en-iso-703-1-2001)
- *Part 2: Performance requirements* <https://standards.iteh.ai/catalog/standards/sist/f88026e7-b55b-4c84-aeb2-dc25a9e42fd8/sist-en-iso-703-1-2001>

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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 may 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 this method of test will however allow an assessment to be made as to whether the troughing characteristics of the conveyor belt are suitable for the angle of inclination of the side idler rolls of the installation on which the belt is to be installed.

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# Conveyor belts — Transverse flexibility and troughability —

## Part 1: Test method

### 1 Scope

This part of ISO 703 specifies a method for determining the transverse flexibility (in terms of troughing ability) of conveyor belts. This method is not suitable or valid for light conveyor belts as described in EN 873.

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

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### 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 703. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 703 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 583-1:—<sup>1)</sup>, *Conveyor belts with a textile carcass — Total thickness and thickness of elements — Part 1: Methods of test*.

EN 873, *Light conveyor belts — Principal characteristics and applications*.

### 3 Symbols

$F_1$  vertical deflection in the test piece, in millimetres (see Figure 1 and Figure 2)

$F$  vertical deflection in the test piece corrected for the belt thickness, in millimetres

$L$  length of the test piece when laid flat, in millimetres

NOTE It is equivalent to the full width of the installed conveyor belt.

$e$  thickness of the test piece, in millimetres (see Figure 2)

<sup>1)</sup> To be published. (Revision of ISO 583:1990)