Conveyor belts - Transverse flexibility (troughability) - Test method

Conveyor belts - Transverse flexibility (troughability) - Test method

EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN ISO 703:2007 sisaldab Euroopa standardi EN ISO 703:2007 ingliskeelset teksti. Käesolev dokument on jõustatud 27.07.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN ISO 703:2007 consists of the English text of the European standard EN ISO 703:2007. This document is endorsed on 27.07.2007 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This International Standard specifies a method of test for the ratio F/L for various angles of inclination of the side idler rollers in a troughed roller conveying system. It is not suitable or valid for light conveyor belts as described in ISO 21183-1[1].	**Scope:** This International Standard specifies a method of test for the ratio F/L for various angles of inclination of the side idler rollers in a troughed roller conveying system. It is not suitable or valid for light conveyor belts as described in ISO 21183-1[1].

ICS 53.040.20

Võtmesõnad:

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 703

June 2007

ICS 53.040.20

English Version

Conveyor belts - Transverse flexibility (troughability) - Test method (ISO 703:2007)

Courroies transporteuses - Flexibilité transversale (aptitude à la mise en auge) - Méthode d'essai (ISO 703:2007)

Fördergurte - Biegsamkeit in Querrichtung (Muldungsfähigkeit) - Prüfverfahren (ISO 703:2007)

This European Standard was approved by CEN on 23 May 2007.

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 CEN Management Centre 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 CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Ref. No. EN ISO 703:2007: E

Foreword

This document (EN ISO 703:2007) 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 December 2007, and conflicting national standards shall be withdrawn at the latest by December 2007.

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

Endorsement notice

The text of ISO 703:2007 has been approved by CEN as EN ISO 703:2007 without any modifications.

INTERNATIONAL STANDARD

ISO 703

Third edition
2007-06-15

Conveyor belts — Transverse flexibility (troughability) — Test method

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

Reference number
ISO 703:2007(E)

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

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 2.

The main task of technical committees is to prepare International Standards. 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 document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

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

This third edition of ISO 703 cancels and replaces ISO 703-1:1999, of which it constitutes a technical revision. It also incorporates the Technical Corrigendum, ISO 703-1:1999/Cor. 1:2006.

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

Conveyor belts — Transverse flexibility (troughability) — Test method

1 Scope

This International Standard 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[1].

NOTE The transverse "flexibility" determined by the method described in this International Standard is only indirectly associated with the inverse of flexural modulus as specified in ISO 178[2]. 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 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.

ISO 583[1)], *Conveyor belts with a textile carcass — Total belt thickness and thickness of constitutive elements — Test methods*

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

3 Symbols

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

F_1 vertical deflection in test piece, in millimetres (see Figures 1 and 2)

L length of test piece when laid flat, in millimetres (equivalent to full width of installed conveyor belt)

d thickness of the test piece, in millimetres (see Figure 2).

4 Principle

A test piece, consisting of a transverse section of belt of length L, is suspended at both ends with the carrying face uppermost, so that the upper edges of these ends are in the same horizontal plane.

The transverse flexibility (troughability) is determined by measuring the maximum deflection, F, of the test piece under its own weight. It is expressed as the ratio, F/L.

1) To be published. (Revision of ISO 583-1:1999)