
**Naprave za kontinuirni transport - Trakovi tračnih transporterjev - Natezni
preskus pri polni debelini traku – Specifikacije in metode preskušanja
(ISO/DIS 283:2005)**

Conveyor belts - Full thickness tensile strength and elongation - Specifications and
method of test (ISO/DIS 283:2005)

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February 2005

ICS

Will supersede EN ISO 283-1:2000

English version

Conveyor belts - Full thickness tensile strength and elongation - Specifications and method of test (ISO/DIS 283:2005)

Courroies transporteuses à carcasse textile - Résistance à
la traction, allongement à la rupture et allongement sous
charge de référence en pleine épaisseur - Méthode d'essai
(ISO/DIS 283:2005)

This draft European Standard is submitted to CEN members for parallel enquiry. It has been drawn up by the Technical Committee CEN/TC 188.

If this draft becomes a European Standard, 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.

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

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Foreword

This document (prEN ISO 283:2005) 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 document is currently submitted to the parallel Enquiry.

This document will supersede EN ISO 283-1:2000.

Endorsement notice

The text of ISO 283:2005 has been approved by CEN as prEN ISO 283:2005 without any modifications.

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DRAFT INTERNATIONAL STANDARD ISO/DIS 283

ISO/TC 41/SC 3

Secretariat: **BSI**

Voting begins on:
2005-02-17

Voting terminates on:
2005-07-17

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Conveyor belts — Full thickness tensile strength and elongation — Specifications and method of test

Courroies transporteuses à carcasse textile — Résistance à la traction, allongement à la rupture et allongement sous charge de référence en pleine épaisseur — Méthode d'essai

[Revision of second edition (ISO 283:1990) and ISO 283-1:2000]

ICS 53.040.20

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The CEN Secretary-General has advised the ISO Secretary-General that this ISO/DIS covers a subject of interest to European standardization. **In accordance with the ISO-lead mode of collaboration as defined in the Vienna Agreement, consultation on this ISO/DIS has the same effect for CEN members as would a CEN enquiry on a draft European Standard.** Should this draft be accepted, a final draft, established on the basis of comments received, will be submitted to a parallel two-month FDIS vote in ISO and formal vote in CEN.

To expedite distribution, this document is circulated as received from the committee secretariat. ISO Central Secretariat work of editing and text composition will be undertaken at publication stage.

Pour accélérer la distribution, le présent document est distribué tel qu'il est parvenu du secrétariat du comité. Le travail de rédaction et de composition de texte sera effectué au Secrétariat central de l'ISO au stade de publication.

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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.

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

This third edition of ISO 283 cancels and replaces ISO 283-1:2000, of which it constitutes a technical revision.

Conveyor belts — Full thickness tensile strength and elongation — Specifications and method of test

1 Scope

This International Standard specifies methods of test for the full thickness breaking strength in the longitudinal direction and the elongation at the reference load in the longitudinal direction of conveyor belts having a textile carcass. It also specifies methods for the determination of breaking strength in the transverse direction and elongation at break in the longitudinal direction, for use when the manufacturer is requested by the purchaser to state values for these properties.

This International Standard is not suitable or valid for light conveyor belts as described in ISO 21183-1^[1].

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 3, *Preferred numbers — Series of preferred numbers*

ISO 433, *Conveyor belts — Marking*

ISO 7500-1:1999, *Metallic materials — Verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Verification and calibration of the force-measuring system*

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

EN 10002-2:1991, *Metallic materials — Tensile testing — Part 2: Verification of the force measuring system of the tensile testing machines*

3 Terms and definitions

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

3.1

tensile strength

greatest measured force during the tensile test divided by the width of the test piece, expressed in N/mm

3.2

nominal tensile strength

specified minimum value of the tensile strength, expressed in N/mm

3.3

reference force (reference load)

one-tenth of the nominal tensile strength in the longitudinal direction multiplied by the width of the test piece in mm, expressed in Newtons

EXAMPLE Nominal tensile strength = 1600 N/mm
 Reference force = 160 N/mm
 Reference force for 25 mm test piece = 25 mm × 160 N/mm = 4000 N.

3.4

elongation at break

elongation at the greatest force (load), expressed as the percentage increase in the distance between two reference points

3.5

elongation at the reference force (load)

elongation at the reference force (load) in the longitudinal direction, expressed as the percentage increase in the distance between two reference points

4 Principle

A test piece, cut from the full thickness of the conveyor belt, is extended under standard conditions using a tensile testing machine, until rupture of the test piece occurs.

5 Apparatus

5.1.1 Dynamometer, of CRE or CRT type, calibrated to Grade 1 of ISO 7500-1:1999 or EN 10002-2:1991, and capable of extending the test piece at a constant rate, without interruption, of (100 ± 10) mm/min.

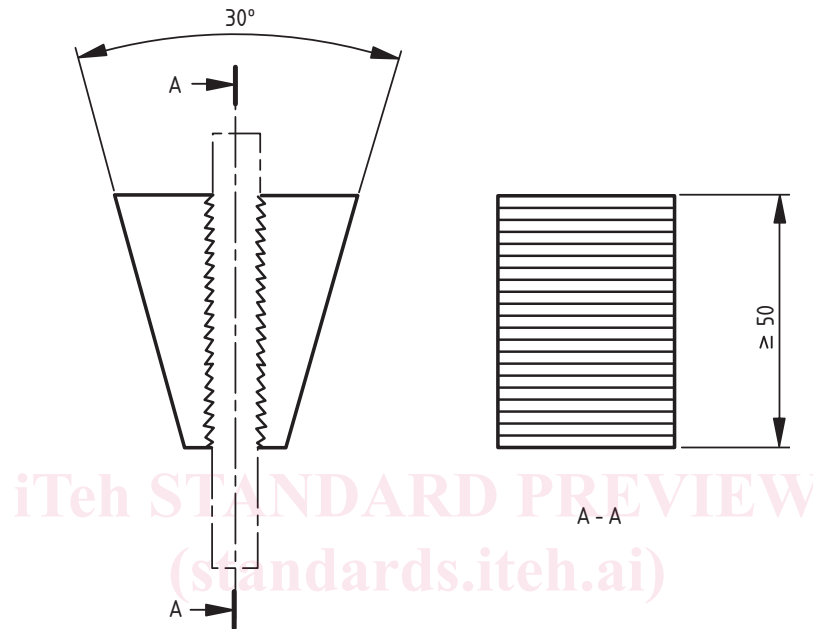
5.1.2 Device, such as an extensometer, with a measuring length of at least 100 mm and accurate to within 0,1 mm or better, capable of measuring the elongation of the gauge length marked on the test piece.

NOTE Use of a device that produces a graphical trace throughout the test is preferred.

5.1.3 Grips, the form of which should ensure perfect fixing of the test piece and eliminate any possibility of slip during the tensile test.

NOTE The use of grips with transverse serrations in accordance with Figure 1 is recommended.

Dimensions in millimetres



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<https://standards.it> **Figure 1 — Grip with transverse serrations** 30-40cb-96e8-96cd8808fe80/sist-en-iso-283-2008

5.1.4 Die cutter or power saw

Dies with wall profiles as shown in Figure 2 are suitable for cutting the test pieces shown in Figures 3, 4, and 5. Other profiles may be used but the critical feature is that the cut sides of the test piece are perpendicular to the test piece surfaces.