
Naprave za kontinuirni transport - Trakovi tračnih transporterjev s tekstilnim vložkom - Debelina celotnega traku in debelina posameznih sestavnih elementov traku - Preskusne metode (ISO/DIS 583:2022)

Conveyor belts with a textile carcass - Total belt thickness and thickness of constitutive elements - Test methods (ISO/DIS 583:2022)

Textilfördergurte - Gesamtdicke und Dicke der Aufbauelemente - Prüfverfahren (ISO/DIS 583:2022)

Courroies transporteuses à carcasse textile - Épaisseur totale de la courroie et épaisseur des éléments constitutifs - Méthodes d'essai (ISO/DIS 583:2022)

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

Courroies transporteuses à carcasse textile — Épaisseur totale de la courroie et épaisseur des éléments constitutifs — Méthodes d'essai

ICS: 53.040.20

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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).

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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.

ISO 583 was prepared by Technical Committee ISO/TC 41, *Pulleys and belts (including veebelts)*, Subcommittee SC 3, *Conveyor belts*.

This fourth edition cancels and replaces the third edition (ISO 583:2007), which has been technically revised.

The main changes compared to the previous edition are as follows:

The sentence of “and the difference between the maximum thickness and the minimum thickness” is added at [Subclause 4.5](#).

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

1 Scope

This International Standard specifies test methods for the determination of total belt thickness and the thickness of constitutive elements of conveyor belts having a textile carcass. The constitutive elements include the covers, the carcass and interlayers, i.e. the material between adjoining plies.

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

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

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

— ISO Online browsing platform: available at <https://www.iso.org/obp>

4 Determination of total belt thickness

4.1 Apparatus

The apparatus shall consist of a flat, rigid baseplate, on which the test piece rests, and a gauge having a flat circular foot, 10 mm in diameter, by means of which a specified pressure is applied to the test piece.

The gauge shall be capable of measuring to at least 0,1 mm.

The pressure applied shall be (22 ± 5) kPa for materials with a hardness equal to or greater than 35 IRHD; otherwise, the pressure shall be (10 ± 2) kPa.

NOTE The masses needed to give these specified pressures using a 10 mm diameter foot are 176 g and 80 g, respectively.

4.2 Test piece

Either test piece 1 or test piece 2, according to the following, shall be used.

Test piece 1: cut a rectangular piece of full-width belt, designated as dimension L , with a length of 50 mm, as shown in [Figure 1](#).



Figure 1 — Test piece 1 (rectangular)

Test piece 2: cut a wedge-shaped piece of full-width belt, designated as dimension L , as shown in [Figure 2](#).

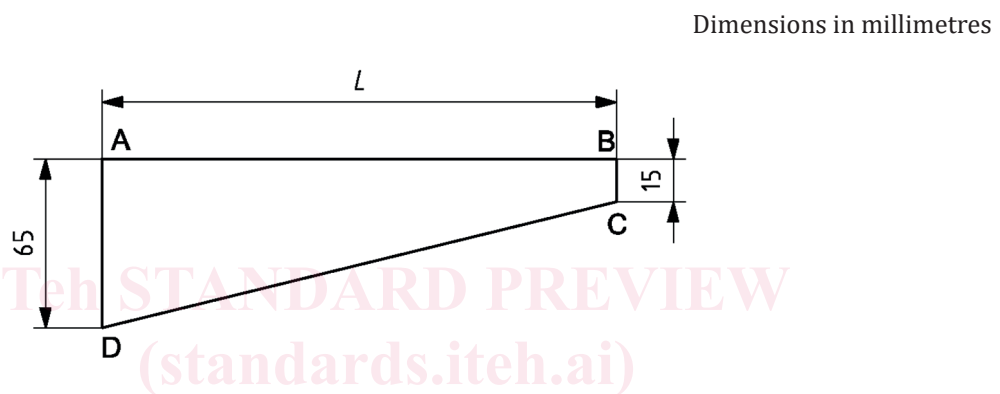


Figure 2 — Test piece 2 (wedge-shaped)

4.3 Measurement points

The measurement points shall be spaced equidistantly along the long axis of the test piece (i.e. the belt width), as shown in [Figure 3](#).

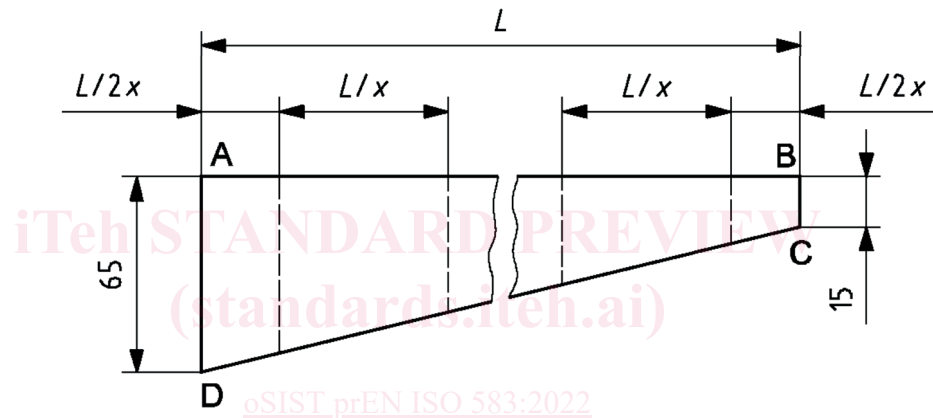
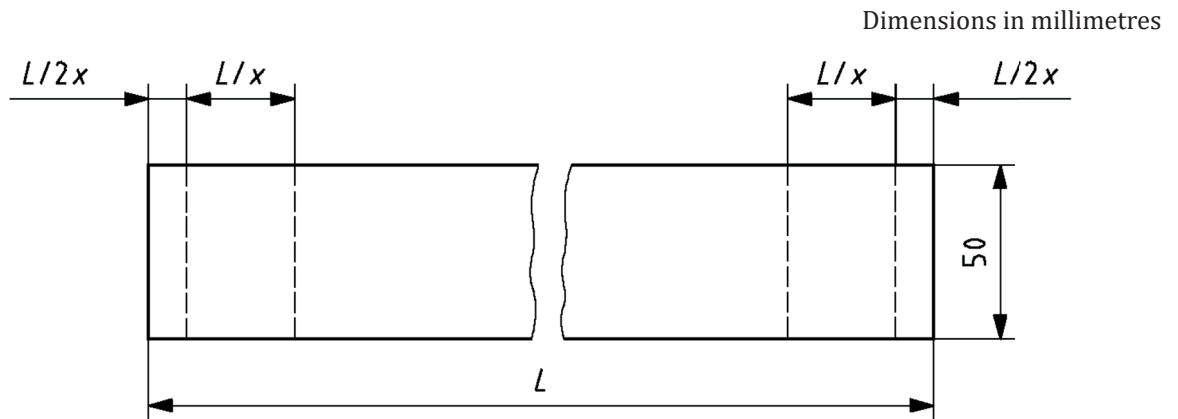


Figure 3 — Measurement points

Determine the minimum number of measurement points, x , according to the width of the belt, L , in accordance with [Table 1](#).

Table 1 — Minimum number of measurement points

Belt width L mm	Minimum number of measurement points x
$L \leq 650$	3
$650 < L \leq 1\,200$	5
$L > 1\,200$	8

4.4 Procedure

Measure the total thickness, d , of the test piece at each of the measurement points specified in [4.3](#), using the pressure specified in [4.1](#).

4.5 Expression of results

Calculate the arithmetic mean and the difference between the maximum thickness and the minimum thickness of the individual measurements taken according to [4.4](#).

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Express the arithmetic mean as the total belt thickness in millimetres, to the nearest 0,1 mm.

5 Determination of thickness of covers

5.1 General

The thickness of the covers can be obtained by two methods, the choice of one or the other method depending on whether or not the covers can be removed completely from the carcass.

5.2 Method used when covers can be removed completely from carcass

5.2.1 Principle

The thickness of a test piece is measured at a number of points, according to belt width, both before and after each of the covers has been removed. The cover thickness is calculated by subtraction.

5.2.2 Apparatus

The apparatus shall be in accordance with [4.1](#).

5.2.3 Test piece

Test piece 1, in accordance with [4.2](#) and [Figure 1](#), shall be used.

5.2.4 Measurement points

The measurement points shall be in accordance with [4.3](#).

5.2.5 Procedure

Measure the total thickness, d , of the test piece at each of the measurement points, in accordance with [4.4](#).

Remove the top cover completely, then remeasure the thickness of the test piece, d_1 , at the same measurement points.

Then remove the bottom cover completely and measure the thickness of the test piece, d_2 , at the same measurement points.

See [Figure 4](#).