



SLOVENSKI STANDARD
SIST EN ISO 15147:1999
01-december-1999

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Light conveyor belts - Tolerances on widths and lengths of cut light conveyor belts (ISO 15147:1999)

Leichte Fördergurte - Toleranzen für Breite und Länge von geschnittenen leichten Fördergurten (ISO 15147:1999)

Courroies transporteuses légères - Tolérances sur largeurs et longueurs des courroies transporteuses légères a bords tranchés (ISO 15147:1999)

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Ta slovenski standard je istoveten z: EN ISO 15147:1999

ICS:

53.040.20 Deli za transporterje Components for conveyors

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 15147

July 1999

ICS 53.040.20

English version

Light conveyor belts - Tolerances on widths and lengths of cut light conveyor belts (ISO 15147:1999)

Courroies transporteuses légères - Tolérances sur largeurs
et longueurs des courroies transporteuses légères à bords
tranchés (ISO 15147:1999)

Leichte Fördergurte - Toleranzen für Breite und Länge von
geschnittenen leichten Fördergurten (ISO 15147:1999)

This European Standard was approved by CEN on 20 November 1998.

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

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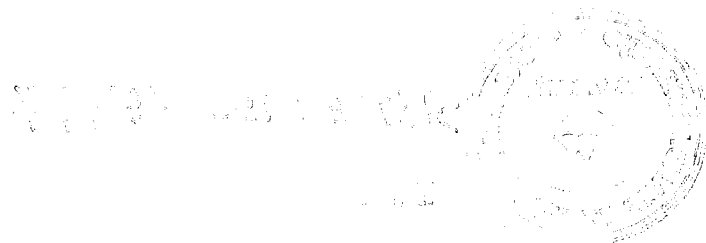
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Foreword

The text of EN ISO 15147:1999 has been prepared by Technical Committee CEN/TC 188 "Conveyor belts", the secretariat of which is held by BSI, in collaboration with Technical Committee ISO/TC 41 "Pulleys and belts (including veebelts)".

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 January 2000, and conflicting national standards shall be withdrawn at the latest by January 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

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1 Scope

This standard specifies methods for the measurement of widths and lengths of cut light conveyor belts as described in EN 873 and specifies the tolerances on the dimensions.

NOTE The widths and lengths of light conveyor belts are not standardized.

2 Normative reference

This European Standard incorporates by dated or undated references, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 873: Light conveyor belts - Principal characteristics and applications

3 Widths

When measured in accordance with 5.1, the difference between the measured width and the specified cut width shall not vary by more than the tolerance specified in table 1.

NOTE It is recommended that actual cut widths of belt should be specified in incremental steps of 50 mm for cut widths up to 1 m, and in incremental steps of 100 mm for cut widths over 1 m.

Table 1: Tolerances on cut widths of light conveyor belts

Width in millimetres		For belts containing materials with low moisture absorption (e.g. polyester)	For belts with higher moisture absorption (e.g. cotton or polyamide)
over	Up to and including		
-	200	± 1 mm	± 2 mm
200	600	± 2 mm	± 3 mm
600	1000	± 4 mm	± 5 mm
1000	2000	± 6 mm	± 6 mm
2000	4000	± 7 mm	± 0,3 % of width
4000	-	± 8 mm	± 0,3 % of width

4 Lengths

4.1 Endless belts and open-ended belts with ends prepared for splicing

When measured in accordance with 5.2, the difference between the measured endless-length and the specified endless-length shall not vary by more than the tolerance specified in table 2.

Table 2: Tolerances on lengths of endless belts and of open-ended belts with ends prepared for splicing

Length m		Tolerance
over	up to and including	
-	2	±10 mm
2	7	±20 mm
7	-	± 0,3 %

4.2 Open-ended belts with ends not prepared for splicing (slab belting)

When measured in accordance with 5.3, the difference between the measured length and the manufacturers stated length shall not vary by more than $0^{+2,5\%}$.

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5 Methods of measurement and verification of dimensions

5.1 Determination of the cut width

NOTE The measurements at 5.2 or 5.3 may be taken at the same time as the measurements at 5.1.

5.1.1 Unroll the conveyor belt on a flat hard surface free from tension.

5.1.2 Measure at three equidistant locations, throughout the length of the belt and at right angles to the cut edges, the width of the conveyor belt to the nearest 0,5 mm, using a suitable linear measure (e.g. a steel tape).

5.2 Determination of the length of an endless light conveyor belt

5.2.1 Lay the conveyor belt flat, free from tension.

5.2.2 Mark the inside edge of the belt with an appropriate marker to indicate the point at which measurements begin.

Using a steel tape measure, make individual measurements along the flat part of the belt only (see figure 1)

Rotate the belt and make consecutive measurements along the flat part of the belt (\overline{BC} ; \overline{CD} ; etc.) (see Figure 1), continuing until the last measurement can be taken e.g. \overline{XA}

5.2.3 Calculate the endless length of the belt as the sum of all the individual measurements minus the product of π and the belt thickness,

$$\text{i.e. } \left[\overline{AB} + \overline{BC} + \overline{CD} \dots + \overline{XA} \right] - [\pi \cdot a];$$

where a is the belt thickness.

NOTE 1 The calculation with the subtraction sum $[\pi \cdot a]$ is strictly correct only for conveyor belts with a symmetrical construction, i.e. with the neutral line in the belt middle. It will in most cases be sufficiently exact also for conveyor belts with an asymmetrical construction. However, short or thick conveyor belts with asymmetrical constructions may need a more precise calculation. The subtraction sum then becomes $2[\pi a_i]$ where a_i is the distance between the neutral line and the inner belt surface (running surface). The value of a_i has to be inquired of the belt manufacturer.

(For symmetrical belt constructions $a_i = \frac{a}{2}$ and $2 [\pi a_i]$ becomes πa .

This value is the internal endless-length of the belt.

NOTE 2 In cases where the method of measurement described above is not applicable, e.g. when the endless belt is very short, another suitable method of measurement should be agreed between belt user and supplier.

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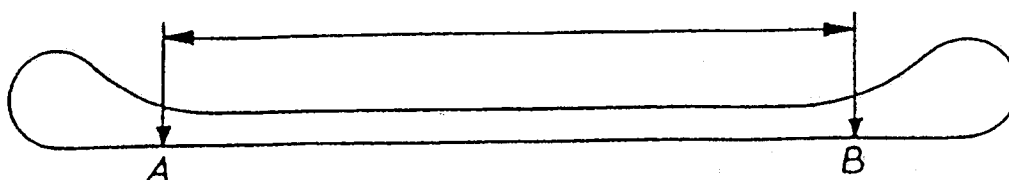


Figure 1 - Measurement of the length of an endless light conveyor belt

5.3 Determination of the length of an open-ended light conveyor belt and of slab belting

Determine the length of an open-ended light conveyor belt and of slab belting by employing any suitable mechanical, electromechanical or photoelectric means of linear measurement which does not exert any tension in to the conveyor belt and which is accurate to $0^{+1\%}$ of the recorded or designated length.