

INTERNATIONAL STANDARD

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V-belts — Uniformity of belts — Test method for determination of centre distance variation

*Courroies trapézoïdales — Uniformité des courroies — Méthode d'essai
permettant de déterminer les variations d'entraxe*



Reference number
ISO 9608:1994(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.

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.

International Standard ISO 9608 was prepared by Technical Committee ISO/TC 41, *Pulleys and belts (including veebelts)*, Subcommittee SC 1, *Veebelts and grooved pulleys*.

This second edition cancels and replaces the first edition (ISO 9608:1988), which has been technically revised. In particular, the values for the centre distance variations in relation to the belt top width have been deleted.

Annex A of this International Standard is for information only.

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Introduction

An irregular running of V-belt drives can arise from non-uniformities in the V-belt sections because force variations induced by the non-uniformities add to the initial force at constant centre distance.

When testing the V-belt length under constant measuring force, these force variations appear as centre distance variations.

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V-belts — Uniformity of belts — Test method for determination of centre distance variation

1 Scope

This International Standard specifies a test method for determining the centre distance variation of V-belt drives as a criterion for the uniformity of V-belts.

2 Definition

For the purposes of this International Standard, the following definition applies.

2.1 centre distance variation, ΔE : Difference between maximum and minimum centre distance measured on a standardized measuring fixture.

3 Test method

3.1 Measurement principle

The device recommended (see figure 1) consists essentially of two grooved pulleys of the same dimensions, one of which is movable by a force F .

The specifications of the measuring pulley and the measuring force corresponding to types of V-belts such as classical, wide, narrow, narrow joined, etc. are given in appropriate International Standards (see annex A).

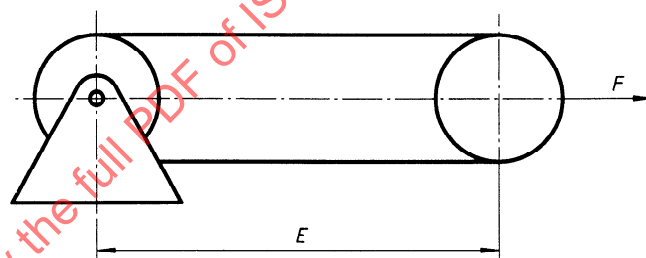


Figure 1 — Measuring device

3.2 Procedure

Seat the V-belt properly in the grooves of the two pulleys and apply the measuring force F on the movable pulley. To divide the total force equally between the two lengths of the belt, make at least two complete revolutions of the V-belt by rotating the pulleys.

During a subsequent complete revolution of the V-belt, observe the variation of the distance between the axes of the measuring pulleys. Record the maximum and minimum values of the centre distance in the course of one revolution of the V-belt.

The belt speed shall never exceed 1 m/s.

4 Results

Calculate the variation ΔE of the distance between the axes of the pulleys from the equation:

$$\Delta E = E_{\max} - E_{\min}$$

Annex A

(informative)

Bibliography

- [1] ISO 1604:1989, *Belt drives — Endless wide V-belts for industrial speed-changers and groove profiles for corresponding pulleys.*
- [2] ISO 2790:1989, *Belt drives — Narrow V-belts for the automotive industry and corresponding pulleys — Dimensions.*
- [3] ISO 3410:1989, *Agricultural machinery — Endless variable-speed V-belts and groove sections of corresponding pulleys.*
- [4] ISO 4184:1992, *Belt drives — Classical and narrow V-belts — Lengths in datum system.*
- [5] ISO 8419:1994, *Belt drives — Narrow joined V-belts — Lengths in effective system.*

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