BS ISO 11749:2014

BSI Standards Publication

Belt drive — V-ribbed belts for the automotive industry — Fatigue test

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National foreword

This British Standard is the UK implementation of ISO 11749:2014.

The UK participation in its preparation was entrusted to Technical Committee MCE/10, Belts & Pulley Drive.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

ISBN 978 0 580 75358 9

ICS 21.220.10; 43.060.10

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 28 February 2014.

Amendments issued since publication

Date	Text affected

BS ISO 11749:2014

INTERNATIONAL STANDARD

ISO 11749

Second edition
2014-01-15

Belt drive — V-ribbed belts for the automotive industry — Fatigue test

Transmissions par courroies — Courroies striées pour la construction automobile — Essai de fatigue

Reference number
ISO 11749:2014(E)

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Published in Switzerland

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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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 41, *Pulleys and belts (including veebelts)*, Subcommittee SC 1, *Friction*.

This second edition cancels and replaces the first edition (ISO 11749:1995), which has been technically revised. It also incorporates Amendment ISO 11749:1995/Amd.1:2003.

Belt drive — V-ribbed belts for the automotive industry — Fatigue test

1 Scope

This International Standard specifies a dynamic test method for the quality control of V-ribbed belts (PK profile) which are used predominantly for accessory drive applications in the automotive industry.

The dimensional characteristics of the belts and of corresponding pulleys are the subject of ISO 9981.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 683-1, *Heat-treatable steels, alloy steels and free-cutting steels — Part 1: Non-alloy steels for quenching and tempering*

ISO 6508-1, *Metallic materials — Rockwell hardness test — Part 1: Test method (scales A, B, C, D, E, F, G, H, K, N, T)*

ISO 9981:1998, *Belt drives — Pulleys and V-ribbed belts for the automotive industry — PK profile: Dimensions*

3 Principle

Determination of the performance of a belt under specified conditions on a two-, three-, or four-pulley test machine as described in Clause 4.

The shortest V-ribbed belt which can be tested on the four-pulley test machine (see Figure 1) is approximately 1 000 mm. Belts with lengths between 800 mm and 1 000 mm inclusive can be tested on the three-pulley test machine (see Figure 2). Shorter belts should be tested on the two-pulley test machine (see Figure 3) as described in 6.2.1.2.

A number of conditions shall be agreed between the manufacturer and user, including the power to be transmitted, the minimum acceptable life, in hours, and the number of times the belt can be retensioned.

Belt failure occurs when the belt no longer satisfies the agreed conditions.

4 Apparatus

4.1 Dynamic test machine, of robust design so that all components withstand, with virtually no deflection, the stress to which they are subjected.

The test machine shall consist of the following (see Figures 1, 2, and 3).

4.1.1 Driving pulley, and suitable mechanism for driving it.

4.1.2 Driven pulley, to which a suitable power-absorption unit is connected (4.1.3).

4.1.3 Power-absorption unit, accurate and capable of calibration.