
**Agricultural machinery — Endless
hexagonal belts and groove sections of
corresponding pulleys**

*Machines agricoles — Courroies hexagonales sans fin et profils de
gorges des poulies correspondantes*



This document is a preview generated by EMS



COPYRIGHT PROTECTED DOCUMENT

© ISO 2018

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols and abbreviated terms	1
5 Dimensions and tolerances	2
5.1 Belts	2
5.1.1 General	2
5.1.2 Cross-sections	2
5.1.3 Lengths	3
5.2 Grooved pulleys	4
5.2.1 Pulleys having parallel axes of rotation	4
5.2.2 Pulleys having axes of rotation which are not parallel	4
6 Measurement of lengths of belts	4
6.1 Measuring device	4
6.2 Procedure	5
6.3 Groove section of measuring pulleys	5
7 Calculation of speed ratio, R	6
7.1 General	6
7.2 Correction factor for the datum diameter, d_d , for pulley grooves according to ISO 4183 (datum system)	6
7.3 Correction factor for the effective diameter, d_e , for pulley grooves according to ISO 5291 (effective system)	7
Bibliography	8

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 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.

This document was prepared by Technical Committee ISO/TC 41, *Pulleys and belts (including veebelts)*, Subcommittee SC 1, *Friction*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

This third edition cancels and replaces the second edition (ISO 5289:1992), which has been technically revised. The main changes compared to the previous edition are as follows:

- in [5.1.3](#), the length tolerance and range of belts have been changed based on ISO 24035;
- in [Table 1](#), the dimensions of measuring pulleys and measuring forces have been changed based on ISO 24035;
- in [6.2](#), the length measuring procedure and formula has been changed.

Agricultural machinery — Endless hexagonal belts and groove sections of corresponding pulleys

1 Scope

This document specifies the main dimensions of endless hexagonal belts intended for use on agricultural machinery (and, in particular, harvester-thresher machines), together with the groove section of the corresponding fixed-diameter pulleys.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1081, *Belt drives — V-belts and V-ribbed belts, and corresponding grooved pulleys — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1081 apply.

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>
- IEC Electropedia: available at <http://www.electropedia.org/>

4 Symbols and abbreviated terms

For the purpose of this document, the symbols and abbreviated terms given in ISO 1081 and the following apply. (see [Table 1](#))

Table 1 — Symbols and abbreviated terms

Symbol	Designation	Unit
b_d	Correction factor	—
b_e	Effective line differential	—
C_e	Effective circumference of the measuring pulleys	mm
d_e	Effective diameter	mm
d_d	Datum diameter	mm
d_p	Pitch diameter	mm
E_{\min}	Minimum centre distance measured during the measuring cycle	mm
E_{\max}	Maximum centre distance measured during the measuring cycle	mm
F	Measuring force	N
h	Minimum groove depth	mm
L_e	Nominal effective length	mm
R	Speed ratio	—
T	Height	mm
w	Width	mm