



# SLOVENSKI STANDARD

## SIST ISO 5290:2012

01-oktober-2012

Nadomešča:  
SIST ISO 5290:1997

---

**Jermenski pogoni - Profil žleba jermenice za vzporedno vezane ozke klinaste jermene - Sekcije žlebov vrste 9N/J, 15N/J in 25N/J (osnovni sistem)**

Belt drives - Grooved pulleys for joined narrow V-belts - Groove sections 9N/J, 15N/J and 25N/J (effective system)

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

Transmissions par courroies - Poulies à gorges pour courroies trapézoïdales étroites - Sections de gorge 9N/J, 15N/J et 25N/J (système effectif)

<https://standards.iteh.ai/catalog/standards/sist/9f283dea-54af-4cf0-989d-7c6ff5ac85e5/sist-iso-5290-2012>

**Ta slovenski standard je istoveten z: ISO 5290:2001**

---

**ICS:**

21.220.10	Jermenski pogoni in njihovi deli	Belt drives and their components
-----------	----------------------------------	----------------------------------

**SIST ISO 5290:2012**

**en**

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST ISO 5290:2012

<https://standards.iteh.ai/catalog/standards/sist/9f283dea-54af-4cf0-989d-7c6ff5ac85e5/sist-iso-5290-2012>

# INTERNATIONAL STANDARD

# ISO 5290

Fourth edition  
2001-09-01

---

---

## **Belt drives — Grooved pulleys for narrow V-belts — Groove sections 9N/J, 15N/J and 25N/J (effective system)**

*Transmissions par courroies — Poulies à gorges pour courroies  
trapézoïdales étroites — Sections de gorge 9N/J, 15N/J et 25N/J (système  
effectif)*

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST ISO 5290:2012](https://standards.iteh.ai/catalog/standards/sist/9f283dea-54af-4cf0-989d-7c6ff5ac85e5/sist-iso-5290-2012)

<https://standards.iteh.ai/catalog/standards/sist/9f283dea-54af-4cf0-989d-7c6ff5ac85e5/sist-iso-5290-2012>



Reference number  
ISO 5290:2001(E)

© ISO 2001

## ISO 5290:2001(E)

**PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

## iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST ISO 5290:2012](https://standards.iteh.ai/catalog/standards/sist/9f283dea-54af-4cf0-989d-7c6ff5ac85e5/sist-iso-5290-2012)

<https://standards.iteh.ai/catalog/standards/sist/9f283dea-54af-4cf0-989d-7c6ff5ac85e5/sist-iso-5290-2012>

© ISO 2001

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.ch](mailto:copyright@iso.ch)  
Web [www.iso.ch](http://www.iso.ch)

Printed in Switzerland

## Contents

Page

Foreword .....	iv
1 Scope .....	1
2 Normative references .....	1
3 Terms and definitions .....	1
4 Specifications .....	1
4.1 Groove profiles .....	1
4.1.1 Groove angle, $\alpha$ .....	1
4.1.2 Profile dimensions .....	2
4.2 Effective diameter, $d_e$ .....	2
4.2.1 Series of effective diameters .....	2
4.2.2 Groove angles in relation to given effective diameters .....	2
4.2.3 Smallest effective diameters in relation to given groove sections .....	2
5 Geometrical inspection of grooves .....	6
5.1 Groove profile .....	6
5.2 Groove spacing .....	6
5.3 Effective diameter .....	6
5.4 Run-out tolerances .....	6
6 Quality, surface finish and balancing of pulleys .....	6
Annex A (informative) Background information .....	9
Bibliography .....	10

**ISO 5290:2001(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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 5290 was prepared by Technical Committee ISO/TC 41, *Pulleys and belts (including veebelts)*, Subcommittee SC 1, *Friction belt drives*.

This fourth edition cancels and replaces the third edition (ISO 5290:1993), which has been technically revised.

Annex A of this International Standard is for information only.

SIST ISO 5290:2012  
<https://standards.iteh.ai/catalog/standards/sist/9f283dea-54af-4cf0-989d-7c6ff5ac85e5/sist-iso-5290-2012>

# Belt drives — Grooved pulleys for narrow V-belts — Groove sections 9N/J, 15N/J and 25N/J (effective system)

## 1 Scope

This International Standard specifies the principal characteristics of grooved pulleys (for groove sections 9N/J, 15N/J and 25N/J) intended to take both single and joined narrow V-belts for industrial power transmission drives.

Some background information on the series of effective diameters is given in annex A.

NOTE The effective width of a groove is regarded as the basic dimension of standardization in the effective system for grooves and for the corresponding narrow V-belts considered as a whole.

## 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 254:1998, *Belt drives — Pulleys — Quality, finish and balance*

ISO 1081:1995, *Belt drives — V-belts and V-ribbed belts, and corresponding grooved pulleys — Vocabulary*

ISO 9980:1990, *Belt drives — Grooved pulleys for V-belts (system based on effective width) — Geometrical inspection of grooves*

## 3 Terms and definitions

For the purposes of this International Standard, the terms, definitions and symbols relating to drives using V-belts (i.e. belts and grooved pulleys) given in ISO 1081 apply.

## 4 Specifications

### 4.1 Groove profiles

#### 4.1.1 Groove angle, $\alpha$

The groove angle (see Figure 1) shall have one of the following values:

- $\alpha = 36^\circ$  (for groove section 9N/J only);
- $\alpha = 38^\circ$ ;

**ISO 5290:2001(E)**

—  $\alpha = 40^\circ$ ;

—  $\alpha = 42^\circ$ .

NOTE The relationship between the groove angle and the range of effective diameters is given in Table 4.

**4.1.2 Profile dimensions**

The dimensions given in Table 1 and shown in Figures 1 and 2 shall have the values specified in Table 2.

NOTE The straight sides of the groove should be at least as high as  $d_e - 2\delta h_2$ .

**4.2 Effective diameter,  $d_e$** **4.2.1 Series of effective diameters**

See Table 3.

**4.2.2 Groove angles in relation to given effective diameters**

See Table 4.

**4.2.3 Smallest effective diameters in relation to given groove sections**

See Table 5.

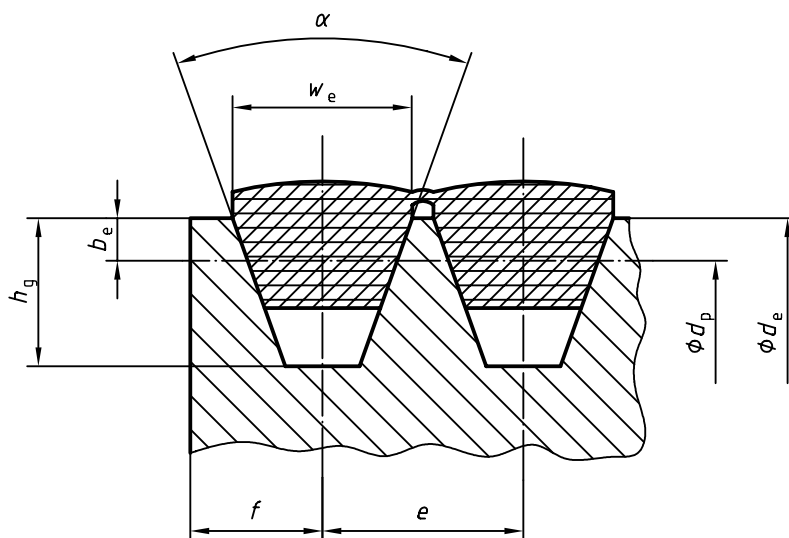
iTech STANDARD PREVIEW  
(standards.iteh.ai)

SIST ISO 5290:2012  
<https://standards.iteh.ai/catalog/standards/sist/9f283dea-54af-4cf0-989d-7c685ac85e5/sist-iso-5290-2012>

**Table 1 — Groove profile specifications**

Dimension	Symbol
Effective width	$w_e$
Groove depth	$h_g$
Sidewall bevel depth	$\delta h_2$
Groove land height	$\delta h_1$
Effective diameter	$d_e$
Effective line differential	$b_e$
Groove spacing	$e$
Distance between edge of pulley and first groove centre	$f$





NOTE The pitch line position can only be given approximately. The approximate pitch diameter,  $d_p$ , of a pulley can be calculated by the formula:

$$d_p = d_e - 2b_e$$

Figure 1 — Groove profile

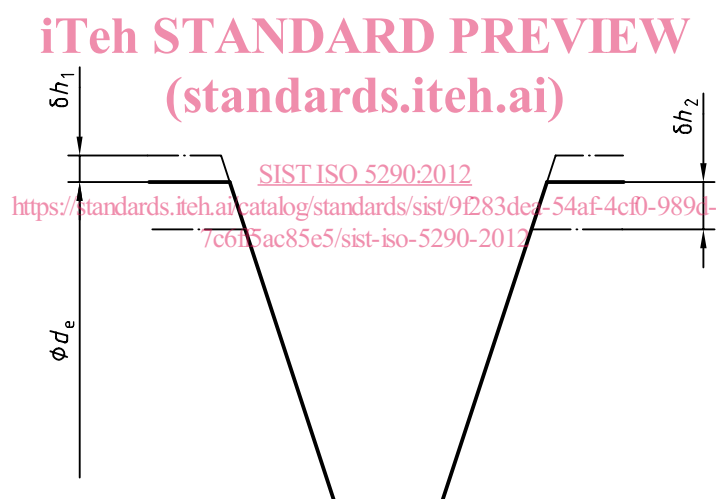


Figure 2 — Groove profile — Sidewall bevel depth — Groove land height

Table 2 — Profile dimensions

Dimensions and tolerances in millimetres

Groove section	$w_e$	$\delta h_1$	$\delta h_2$	$b_e^a$	$h_g$ min	$e$	Tolerance on $e^b$	Sum of deviations of $e^c$	$f$ min.
9N/J	8,9	0,2	0,3	0,6	8,9	10,3	± 0,25	± 0,5	9
15N/J	15,2	0,25	0,4	1,3	15,2	17,5	± 0,25	± 0,5	13
25N/J	25,4	0,3	0,5	2,5	25,4	28,6	± 0,4	± 0,8	19

<sup>a</sup> This differential can tend to zero.

<sup>b</sup> This tolerance applies to the distance between the axes of two consecutive groove profiles.

<sup>c</sup> The sum of all deviations from the nominal value,  $e$ , for all grooves in any one pulley shall not exceed the value stated in this table.