
INTERNATIONAL STANDARD



5290

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

**Grooved pulleys for joined narrow V-belts —
Groove sections 9J, 15J, 20J and 25J**

*Poulies à gorges pour courroies trapézoïdales jumelées étroites — Sections
de gorge 9J, 15J, 20J et 25J*

iTeh STANDARD PREVIEW

First edition — 1978-05-01

(standards.iteh.ai)

[ISO 5290:1978](#)

[https://standards.iteh.ai/catalog/standards/sist/e0315100-3eb9-4896-bb82-
da24d00ae313/iso-5290-1978](https://standards.iteh.ai/catalog/standards/sist/e0315100-3eb9-4896-bb82-da24d00ae313/iso-5290-1978)

UDC 621.851 : 621.852.13

Ref. No. ISO 5290-1978 (E)

Descriptors : belt drives, grooved pulleys, V-belts, specifications, dimensions, pulleys.

FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 5290 was developed by Technical Committee ISO/TC 41, *Pulleys and belts (including veebelts)*, and was circulated to the member bodies in September 1976.

ITEH STANDARD PREVIEW
(standards.iteh.ai)

It has been approved by the member bodies of the following countries :

Austria	India	ISO 5290:1978	Sweden
Belgium	Italy	http://standards.iteh.ai/catalog/standards/sist/e0315100-3eb9-4896-bb82-da24d00a1110/iso-5290-1978	Turkey
Canada	Korea, Rep. of		United Kingdom
Chile	Mexico		U.S.A.
Denmark	Netherlands		Yugoslavia
France	Romania		
Germany	South Africa, Rep. of		

The member body of the following country expressed disapproval of the document on technical grounds :

Bulgaria

Grooved pulleys for joined narrow V-belts – Groove sections 9J, 15J, 20J and 25J

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the principal characteristics of grooved pulleys (for the groove sections 9J, 15J, 20J and 25J) intended to take joined narrow V-belts for industrial power transmission drives.

NOTES

1 The groove effective width is regarded as the basic dimension of standardization for the grooves and for the corresponding joined V-belts considered as a whole.

2 The pitch line position can only be given approximately. The approximate pulley pitch diameter can be calculated by the formula :

$$d_p \approx d_{eff} - 2 b \text{ nom.}$$

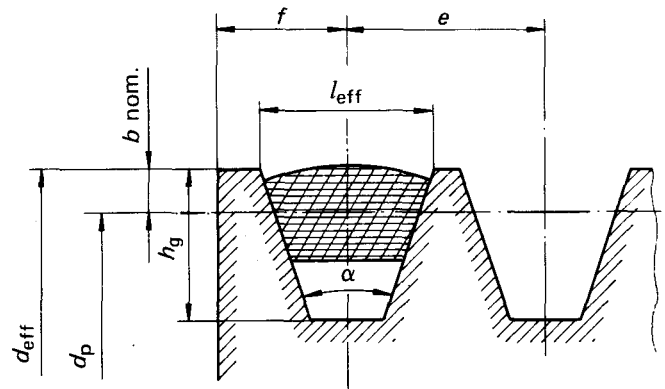


FIGURE 1

2 SPECIFICATIONS

2.1 Groove profiles

iTeh STANDARD PREVIEW
(standards.iteh.ai)

2.1.1 Groove angles

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

- $\alpha = 36^\circ$ (for groove section 9J only)
- $\alpha = 38^\circ$
- $\alpha = 40^\circ$
- $\alpha = 42^\circ$

The relationship of groove angle to minimum effective diameter which should be used is given in table 3.

2.1.2 Dimensions of the profiles

The dimensions shown in figures 1 and 2 shall have the values specified in table 1.

NOTE – The straight sides of the groove must be at least as high as $d_{eff} - 2 \delta h_2$.

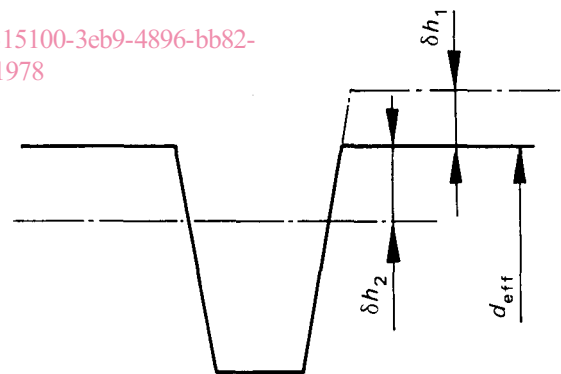


FIGURE 2

TABLE 1

Dimensions in millimetres

Groove section ¹⁾	l_{eff}	δh_1	δh_2	b nom.	h_g min.	e	Tolerance on e ²⁾	Summation of deviation of e ³⁾	f min.
9J	8,9	0,20	0,30	0,6	8,9	10,3	$\pm 0,25$	$\pm 0,5$	9
15J	15,2	0,25	0,40	1,3	15,2	17,5	$\pm 0,25$	$\pm 0,5$	13
20J	20,9	0,30	0,45	1,8	20,9	24,4	$\pm 0,30$	$\pm 0,6$	17
25J	25,4	0,30	0,50	2,5	25,4	28,6	$\pm 0,40$	$\pm 0,8$	19

1) It will be left to the discretion of the individual national standards organization whether either groove section 20J or groove section 25J will be taken into their national standards.

2) These tolerances apply to the distance between the axes of two consecutive groove profiles.

3) Summation of all deviations from the nominal value e for all grooves in any one pulley should not exceed the value stated in table 1.

2.2 Effective diameters

2.2.1 Series of effective diameters

[Under study.]

2.2.2 Effective diameters in relation to given groove angles

See table 2.

2.2.3 Minimum effective diameters

See table 3.

TABLE 2

Dimensions in millimetres

Groove section	Effective diameters			
	When $\alpha = 36^\circ$	When $\alpha = 38^\circ$	When $\alpha = 40^\circ$	When $\alpha = 42^\circ$
9J	≤ 90	$> 90 \leq 150$	$> 150 \leq 300$	> 300
15J		≤ 250	$> 250 \leq 400$	> 400
20J		≤ 335	$> 335 \leq 500$	> 500
25J		≤ 400	$> 400 \leq 560$	> 560

iTeh STANDARD PREVIEW
(standards.iteh.ai)

TABLE 3

<https://standards.iteh.ai/catalog/standards/sist/e0315100-3eb9-4896-bb82-da24d00ae315/iso-5290-1978>

Groove section	Minimum effective diameter
	mm
9J	67
15J	180
20J	265
25J	315