International Standard 4183

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

Grooved pulleys for classical and narrow V-belts

Poulies à gorges pour courroies trapézoïdales classiques et étroites

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Foreword

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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 4183 was developed by Technical Committee ISO/TC 41, *Pulleys and belts (including veebelts)*, and was circulated to the member bodies in October 1978.

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

Australia	Finland	Romania
Austria	France	South Africa, Rep. of
Belgium	Germany, F. R.	Sweden
Bulgaria	India	United Kingdom
Chile	Ireland	USSR
Czechoslovakia	Netherlands	

The member bodies of the following countries expressed disapproval of the document on technical grounds :

Canada
Italy
USA

This International Standard cancels and replaces ISO Recommendations R 52, 253 and 459.

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0 Introduction

This International Standard cancels and supersedes the Recommendations ISO/R 52, 253 and 459 which are regrouped here.

1 Scope and field of application

This International Standard specifies the principal dimensions of grooved pulleys for classical V-belts (sections Y, Z, A, B, C, D and E) and narrow V-belts (sections SPZ, SPA, SPB and SPC).

It is important that narrow belts are not used with pulleys uniquely designed for classical belts.

2 Preliminary notes

2.1 The datum width is regarded as the basic dimension of standardization for the groove and for the corresponding classical and narrow V-belts considered as a whole.

2.2 Knowledge of the datum line position and of the datum width is essential in defining the groove profile, the datum diameter of the pulley and the location of the belt in the pulley groove.

3 Reference

ISO 1081, *Terms and definitions relating to drives using V-belts and grooved pulleys.*

4 Datum widths of profiles

Table 1

Groove profiles		Datum widths mm
Classical V-belts	Narrow V-belts	
Y		5,3
Z	SPZ	8,5
A	SPA	11
B	SPB	14
C	SPC	19
D		27
E		32

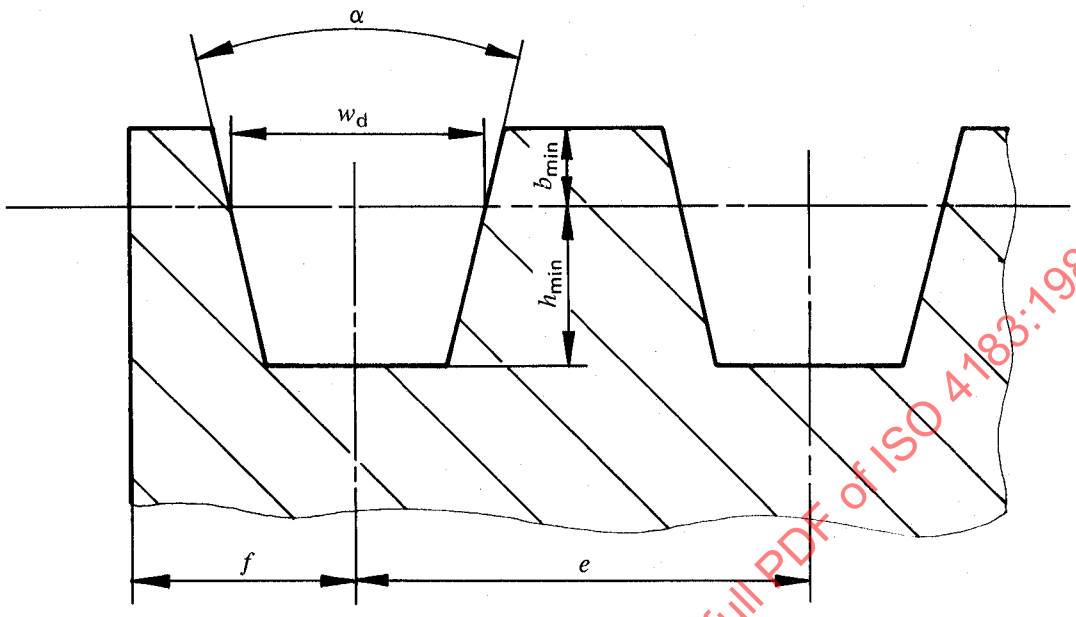
5 Groove angles

The groove angle α (see the figure) shall be one of the following angles :

32°, 34°, 36°, 38°

The relationship of groove angle to datum diameter is given in table 4.

6 Dimensions of the groove profiles



Figure

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Table 2

Values in millimetres

Groove profiles		w_d	b_{min}	h_{min}	e[1]	Tolerance on e[2]	f	Tolerance on f[3]
Classical V-belts	Narrow V-belts							
Y		5,3	1,6	4,7	8	± 0,3	7	± 1
Z	SPZ	8,5	2	7 9	12	± 0,3	8	± 1
A	SPA	11	2,75	8,7 11	15	± 0,3	10	+ 2 − 1
B	SPB	14	3,5	10,8 14	19	± 0,4	12,5	+ 2 − 1
C	SPC	19	4,8	14,3 19	25,5	± 0,5	17	+ 2 − 1
D		27	8,1	19,9	37	± 0,6	24	+ 3 − 1
E		32	9,6	23,4	44,5	± 0,7	29	+ 4 − 1

1) The use of higher values for dimension e can be justified in certain special cases, for instance in the case of pressed sheet pulleys. Whenever certain types of pulleys include values of dimension e not in conformity with the present International Standard, their use with a standardized pulley may require caution.

2) The tolerances apply to the distance between the axes of any two grooves whether adjacent or not.

3) These tolerances or any other deviations of the value f shall be taken into consideration in the alignment of the pulleys.