INTERNATIONAL STANDARD

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Belt drives — Classical and narrow V-belts — Lengths in datum system

Transmissions par courroies — Courroies trapézoïdales classiques et étroites — Longueurs dans le système de référence

Reference number
ISO 4184:1992(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.

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.

International Standard ISO 4184 was prepared by Technical Committee ISO/TC 41, *Pulleys and belts (including veebelts)*, Sub-Committee SC 1, *Veebelts and grooved pulleys*.

This second edition cancels and replaces the first edition (ISO 4184:1980), which has been technically revised.

Annex A of this International Standard is for information only.

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Belt drives — Classical and narrow V-belts — Lengths in datum system

1 Scope

This International Standard specifies, for classical and narrow V-belts of sections

Y (for groove profile with datum width 5,3 mm),

Z (for groove profile with datum width 8,5 mm),

A (for groove profile with datum width 11 mm),

B (for groove profile with datum width 14 mm),

C (for groove profile with datum width 19 mm),

D (for groove profile with datum width 27 mm),

E (for groove profile with datum width 32 mm),

SPZ (for groove profile with datum width 8,5 mm),

SPA (for groove profile with datum width 11 mm),

SPB (for groove profile with datum width 14 mm),

SPC (for groove profile with datum width 19 mm):

— the recommended datum lengths;

— the tolerances for datum lengths;

— the centre distance variations;

— the conditions for measuring the datum length and the centre distance variation.

The V-belts of sections Y, Z, A, B, C, D, E are called classical V-belts and those of sections SPZ, SPA, SPB and SPC are called narrow V-belts.

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

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 3:1973, *Preferred numbers — Series of preferred numbers.*

ISO 1081:1980, *Drives using V-belts and grooved pulleys — Terminology.*

ISO 4183:1989, *Belt drives — Classical and narrow V-belts — Grooved pulleys (system based on datum width).*

ISO 9608:1988, *V-belts — Uniformity of belts — Centre distance variation — Specifications and test method.*

3 Definitions

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

4 Datum length, L_d

4.1 The standard datum lengths are the datum lengths under tension measured under the conditions specified in 7.1.

4.2 The nominal values of the standard datum lengths of V-belts, expressed in millimetres, have been selected from the R 20 series of preferred numbers, in accordance with ISO 3.

a) **Classical V-belts — Sections Y, Z, A, B, C, D, E**

Datum lengths of V-belts of section Y are given in table A.1.

Datum lengths of V-belts of sections Z, A, B, C, D and E, corresponding to the R 20 series of preferred numbers, are only applicable if the stock of moulds of the manufacturer conforms to this series. Otherwise, the datum lengths of these V-belts shall be those given in table A.1.

b) **Narrow V-belts — Sections SPZ, SPA, SPB, SPC**

Standard datum lengths of V-belts of narrow sections SPZ, SPA, SPB and SPC are given in table 1.

Table 1 — Standard datum lengths of narrow V-belts

Dimensions in millimetres

L_d	Distribution according to the sections			
	SPZ	SPA	SPB	SPC
630	+			
710	+			
800	+	+		
900	+	+		
1 000	+	+		
1 120	+	+		
1 250	+	+	+	
1 400	+	+	+	
1 600	+	+	+	
1 800	+	+	+	
2 000	+	+	+	+
2 240	+	+	+	+
2 500	+	+	+	+
2 800	+	+	+	+
3 150	+	+	+	+
3 550	+	+	+	+
4 000		+	+	+
4 500		+	+	+
5 000			+	+
5 600			+	+
6 300			+	+
7 100			+	+
8 000			+	+
9 000				+
10 000				+
11 200				+
12 500				+

5 Tolerances on datum lengths

5.1 Manufacturing tolerances

The permissible manufacturing tolerances for datum lengths of V-belts are given in table 2.