SLOVENSKI STANDARD
SIST ISO 9010:1998

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Jermenski pogoni - Avtomobilski zobati jermeni

Synchronous belt drives -- Automotive belts

Transmissions synchrones par courroies -- Courroies pour la construction automobile

Ta slovenski standard je istoveten z: **ISO 9010:1997**

ICS:

21.220.10	Jermenski pogoni in njihovi deli	Belt drives and their components
43.060.10	Blok motorja in notranji deli motorja	Engine block and internal components

SIST ISO 9010:1998 **en**

INTERNATIONAL STANDARD

ISO 9010

Second edition
1997-04-01

Synchronous belt drives — Automotive belts

Transmissions synchrones par courroies — Courroies pour la construction automobile

Reference number
ISO 9010:1997(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 9010 was prepared by Technical Committee ISO/TC 41, *Pulleys and belts (including veebelts)*, Subcommittee SC 4, *Synchronous belt drives*.

This second edition cancels and replaces the first edition (ISO 9010:1987), which has been technically revised.

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Synchronous belt drives — Automotive belts

1 Scope

This International Standard specifies the characteristics of synchronous endless belts for use in automotive applications such as engine camshaft drives.

The characteristics include

— nominal tooth dimensions;

— pitch spacing;

— width and width tolerance;

— pitch length and pitch length tolerance.

Test methods for measuring pitch length and lateral runout are also included.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was 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 edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 9011:1997, *Synchronous belt drives — Automotive pulleys.*

3 Belt types

The following types of synchronous belts for automotive application are standardized:

— type ZA: trapezoidal tooth;

— type ZB: trapezoidal tooth;

— type ZH: curvilinear tooth, "H" system;

— type YH: curvilinear tooth, "H" system;
— type ZR: curvilinear tooth, "R" system;
— type YR: curvilinear tooth, "R" system;
— type ZS: curvilinear tooth, "S" system;
— type YS: curvilinear tooth, "S" system.

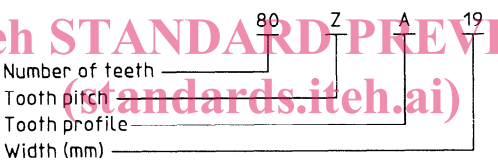
Corresponding pulleys are standardized in ISO 9011.

4 Designation

A belt is designated by a series of numbers and letters as follows:

a) the first set of numbers indicates the number of teeth;
b) the first letter indicates tooth pitch;
c) the second letter indicates tooth profile;
d) the second set of numbers indicates the width in millimetres.

EXAMPLE



5 Dimensions and tolerances

5.1 Belt tooth dimensions — Trapezoidal tooth belts of types ZA and ZB

The nominal belt tooth dimensions for trapezoidal tooth belts of types ZA and ZB are shown in figure 1 and given in table 1.

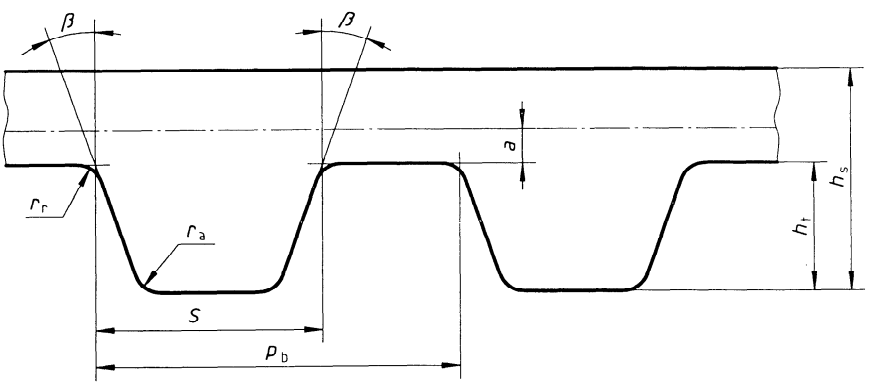


Figure 1 — Nominal tooth dimensions (profile) for types ZA and ZB

Table 1 — Nominal tooth dimensions for types ZA and ZB

Dimensions in millimetres, angles in degrees

Term	Symbol	Nominal profile	
		Type ZA	Type ZB
Tooth pitch	p_b	9,525	9,525
Tooth angle	2β	40	40
Height	h_s	4,1	4,5
Pitch line differential	a	0,686	0,686
Root radius	r_r	0,51	1,02
Tip radius	r_a	0,51	1,02
Tooth height	h_t	1,91	2,29
Tooth width	S	4,65	6,12

5.2 Belt tooth dimensions — Curvilinear tooth belts of types ZH and YH

The nominal belt tooth dimensions for curvilinear tooth belts of types ZH and YH are shown in figure 2 and given in table 2.

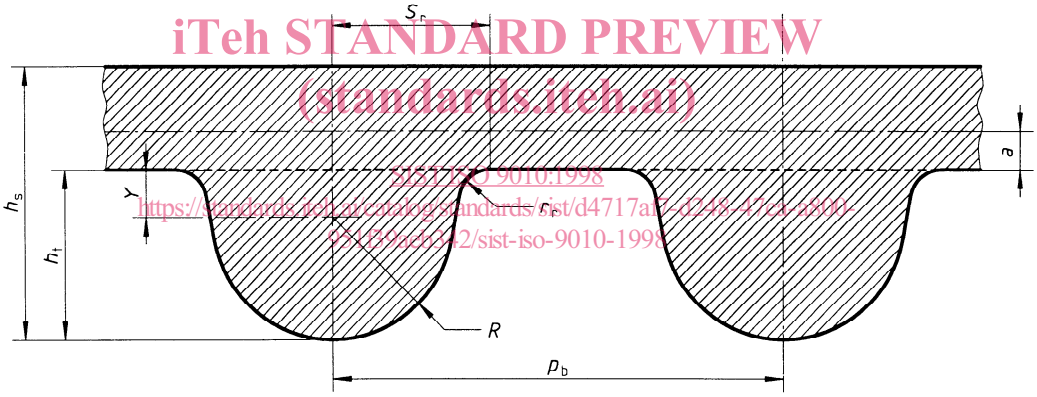


Figure 2 — Nominal tooth dimensions (profile) for types ZH and YH

Table 2 — Nominal tooth dimensions for types ZH and YH

Dimensions in millimetres

Term	Symbol	Nominal profile	
		Type ZH	Type YH
Tooth pitch	p_b	9,525	8
Height	h_s	5,5	5,2
Pitch line differential	a	0,686	0,686
Root radius	r_r	0,76	0,64
Tooth height	h_t	3,5	3,04
Tooth radius	R	2,45	2,11
Vertical offset	Y	1,05	0,93
Root radius distance	S_r	3,27	2,84

5.3 Belt tooth dimensions — Curvilinear tooth belts of types ZR and YR

The nominal tooth dimensions for curvilinear tooth belts of types ZR and YR are shown in figure 3 and given in table 3.

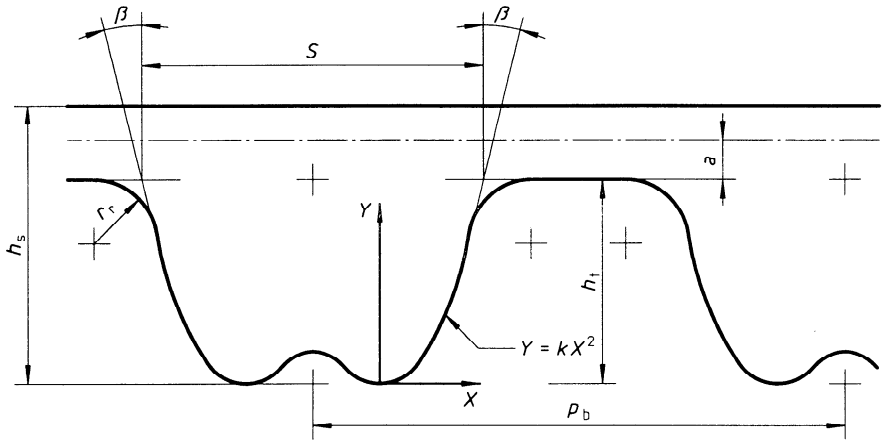


Figure 3 — Nominal tooth dimensions (profile) for types ZR and YR

Table 3 — Nominal tooth dimensions for types ZR and YR

Dimensions in millimetres, angles in degrees

Term	Symbol	Nominal profile	
		Type ZR	Type YR
Tooth pitch	p_b	9,525	8
Tooth angle	2β	32	30
Height	h_s	5,4	5,1
Pitch line differential	a	0,75	0,75
Root radius	r_r	1	0,8
Tooth height	h_t	3,2	2,8
Tooth width	S	5,5	5,3
Tooth form parameter	k	1,228	1,692

5.4 Belt tooth dimensions — Curvilinear tooth belts of types ZS and YS

The nominal tooth dimensions for curvilinear tooth belts of types ZS and YS are shown in figure 4 and given in table 4.

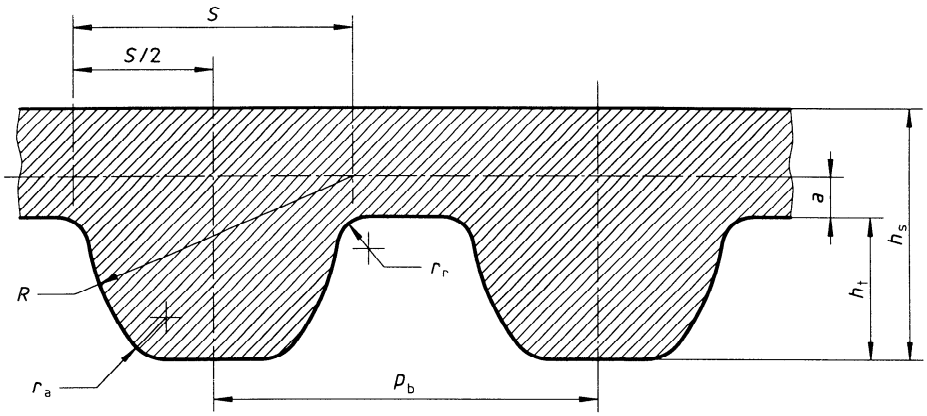


Figure 4 — Nominal tooth dimensions (profile) for types ZS and YS

Table 4 — Nominal tooth dimensions for types ZS and YS

Dimensions in millimetres

Term	Symbol	Nominal profile	
		Type ZS	Type YS
Tooth pitch	p_b	9,525	8
Height	h_s	5,7	5,2
Pitch line differential	a	0,686	0,686
Root radius	r_r	0,95	0,8
Tip radius	r_a	0,95	0,8
Tooth height	h_t	3,53	2,95
Tooth width	S	6,19	5,2
Tooth radius	R	6,19	5,2