GB

NATIONAL STANDARD OF

THE PEOPLE'S REPUBLIC OF CHINA

ICS 21.220.10

G 42

GB/T 33513-2017

Belt drives - Pulleys and V-ribbed belts for the automotive industry - PK profile: Dimensions

(ISO 9981:1998, MOD)

带传动 汽车多楔带与带轮 PK 型:尺寸

Issued on: February 28, 2017 **Implemented on: September 1, 2017**

Issued by: General Administration of Quality Supervision, Inspection and Quarantine;

Standardization Administration Committee.

Table of Contents

Foreword

This Standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This Standard uses redrafting method to modify and adopt ISO 9981:1998 *Belt drives - Pulleys and V-ribbed belts for the automotive industry - PK profile: Dimensions*.

Compared with ISO 9981:1998, there are many modifications in this Standard in structure. Annex A lists the contracts on sub-clause number between this Standard and ISO 9981:1998.

There are technical differences between this Standard and ISO 9981:1998. The sub-clauses covered by these differences have been identified by the vertical single line (｜) at the margin of the outer margin. Annex B gives a list of the corresponding technical differences and reasons.

This Standard also made the following editorial modification:

- deleted the descriptions of pulleys and V-ribbed belts used for industry in the scope.

This Standard was proposed by China Petroleum and Chemical Industry Federation.

This Standard shall be under the jurisdiction of Subcommittee on Friction Type Belt Drive of National Technical Committee on Pulleys and Belts of Standardization Administration of China (SAC/TC 428 / SC 3).

The drafting organizations of this Standard: Qingdao Institute of product quality inspection technology, Ningbo Kai Chi Tape Co., Ltd., Hubei Maoxin Special Tape Co., Ltd., Laiwu Yong Chi Rubber Co., Ltd., Zhejiang Zijin Port Tape Co., Ltd., Henan Golden Jiulong Industrial Co., Ltd.

Main drafters of this Standard: Wu Guiqing, Hao Yongliang, Ying Jianli, Xiong Lijun, Chen Yuezeng, Pang Changzhi, Zhang Liujie.

Belt drives - Pulleys and V-ribbed belts for the automotive industry - PK profile: Dimensions

1 Scope

This Standard specifies the main dimensions of PK profile ring V-ribbed belts and pulley grooves for automobile auxiliary transmission.

This Standard is applicable to ring V-ribbed belts and pulleys for PK profile automobile auxiliary transmission.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 1184-1996, *Geometrical tolerancing - Geometrical tolerance for features without individual tolerance indications* (egv ISO2768-2:1989)

GB/T 3505, *Geometrical product specifications (GPS) - Surface texture: Profile method - Terms definitions and surface texture parameters* (GB/T 3505-2009, ISO4287:1997, IDT)

GB/T 11357, *Quality roughness and balance of transmission pulleys* (GB/T 11357-2008, ISO 254:1998, MOD)

GB/T 17516.2, *V-and ribbed belts drive - Dynamic test to determine pitch zone location - Part 2: V-ribbed belts* (GB/T 17516.2-1998, idt ISO 8370-2:1993)

3 Pulley

3.1 Groove size and tolerance

The groove size shall comply with Table 1 (see Figure 1, Figure 2).

4.2.1.1 Two measuring pulleys of equal diameter, one of which is stationary, and the other is movable along the track. Its recommended effective diameter is determined by the value in Table 4. See Figure 1 and Table 1 for pulley groove sizes.

4.2.1.2 Measuring force application device: used for applying a measuring force on a movable pulley.

4.2.1.3 Center distance measuring device: used to measure the distance between the two pulley centers.

4.2.2 Measuring force

See Table 4 for the measuring force used to measure the effective length of the belt.

Table 4 -- Measuring pulley parameters and measuring force

Item	Value
Pulley effective circumference (at effective diameter) C_e / mm	300
Pulley diameter at outer edge of testing ball or column K / mm	96.48 ± 0.13
Measuring force per wedge F / N	100

4.2.3 Measurement procedures

When measuring the effective length of the belt, it shall mount the pulley to the measuring device first. After applying the specified measuring force, the belt is rotated over at least two turns so that it wedges well into the pulley and evenly distributes the total measuring force across the two straight sections of the belt. Then measure the center distance between the two pulleys. Calculate the effective length of the belt according to formula (1), exposed height of the belt according to formula (2).

$$L_e = a_{min} + a_{max} + C_e \qquad \cdots\cdots(1)$$

where,

L_e - effective length of belt, in millimeters (mm);

C_e - effective circumference of testing pulley, in millimeters (mm);

a_{max} - maximum measured value of pulley center distance, in millimeters (mm);

a_{min} - minimum measured value of pulley center distance, in millimeters (mm).

This is an excerpt of the PDF (Some pages are marked off intentionally)

------ The End ------