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Replacing GB/T 1171-2006

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**Classical V-belt for general drive**

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## Foreword

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

This Standard replaces GB/T 1171-2006 "Classical V-belt for general drive". Compared with GB/T 1171-2006, the main technical changes except editorial modification are as follows:

- DELETE the requirements for adapting the rope structure in the scope (see Clause 1 of this Standard, Clause 1 of 2006 edition);
- MODIFY the representation method for the mark (see 4.2 of this Standard, 3.3 of the 2006 version);
- DELETE the requirements for the adhesion strength of ropes in physical properties and its test methods (see 5.3 of this Standard, 5.3 and 7.3 of 2006 edition);
- MODIFY the inspection of the dimensions in the sampling (see 6.1 of this Standard, 6.1 of 2006 edition);
- ADD the tables of reference rated power  $P_1$  and power increment  $\Delta P_1$  of a single piece of V-belt (see Annex A).

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).

Drafting organizations of this Standard: Sanlux Co., Ltd., Zhejiang Sanwei Rubber Item Co., Ltd., Zhejiang Hongda Rubber Co., Ltd., Wuxi Zhonghui Rubber Technology Co., Ltd., Ningbo Kaichi Rubber Belts Co., Ltd., Qingdao Product Quality Supervision and Testing Research Center.

Main drafters of this Standard: Shi Shuixiang, Liu Youliang, Dai Jianqiu, Zhu Shusheng, Ying Jianli, Li Xiaodong.

The previous released versions replaced by this Standard are as follows:

- GB 1171-1974, GB 1171-1989, GB/T 1171-1996, GB/T 1171-2006.

# Classical V-belt for general drive

## 1 Scope

This Standard specifies the structure, types and marks, requirements, sampling, test methods and marking, labeling, packaging, transportation and storage of classical V-belts (hereinafter referred to as V-belts) for general drive.

This Standard applies to classical V-belts used for general mechanical drive devices.

This Standard does not apply to mechanical drive devices such as automobiles and motorcycles.

## 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 3686 Belt drives - V-belts and V-ribbed belts - Tensile strength and elongation test method

GB/T 11544 Belt drives - Classical and narrow V-belts - Dimensions (system based on datum width)

GB/T 12833 Rubber and plastics - Analysis of multippeak traces obtained in determinations of tear strength and adhesion strength

GB/T 15328 Classical V-belts - Fatigue test - Non-loading method

## 3 Structures

**3.1** V-belts are divided into two types according to the structure: wrap-edge V-belt, cut-edge V-belts (classical cut-edge V-belts, grooved cut-edge V-belts and bottom-rubber-embedded-cloth cut-edge V-belts).

**3.2** The V-belt consists of rubber canvas (top cloth), top rubber, cushion rubber, tensile member, bottom rubber, bottom cloth (bottom rubber-embedded cloth), etc. (see Figure 1).

item, two additional samples shall be taken in the batch. If the test result is still unqualified, this batch of products are determined as unqualified products. The V-belt fatigue test shall not be less than once per season.

**6.5** In the event of changing the line of production, transferring the factory, resumption of production after production stoppage, or a major change in structure, material or process, the V-belts shall be subjected to the type inspection. For the type inspection of V-belts, the entire contents of Clause 5 shall be inspected.

## 7 Test methods

**7.1** For the appearance quality of V belts, the damage of the angled canvas and the length of the flash are measured with a tape or a caliper, and the rest are checked by visual inspection.

**7.2** The dimensions of V-belts are measured in accordance with the specifications GB/T 11544.

**7.3** The tensile strength and elongation at reference load of V-belts are tested in accordance with the specifications of GB/T 3686. The reference load is as specified in Table 3.

**Table 3 -- Reference load parameters**

In kN

Type of V-belt	Y	Z	A	B	C	D	E
Reference load	0.6	0.8	1.4	2.4	3.9	7.8	11.8

**7.4** For the adhesion strength test between cloth and top rubber, first cut two samples on the top of the V-belt. The samples are rectangular with a width of 10.0 mm ± 0.2 mm. If necessary, the thickness shall be appropriately thinned. They are of sufficient length to allow the separation length during the measurement to be no less than 100 mm. The holder moves at a speed of 100 mm/min ± 10 mm/min. The value is calculated according to GB/T12833, and the arithmetic mean of the two samples is calculated.

**7.5** The no-torque fatigue life and pulley center-to-center distance change rate of V-belts is tested in accordance with the specifications of GB/T 15328.

## 8 Marking, labeling, packaging, transportation and storage

### 8.1 Marking