

ICS 21.220.10

CCS J 18



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 10412-2025

Replacing GB/T 10412-2002

**Belt drives - Grooved pulleys for classical and narrow V-belts
(system based on datum width)**

带传动 普通和窄V带轮 (基准宽度制)

(English Translation)

Issued on: October 31, 2025

Implemented on: May 1, 2026

Issued by: State Administration for Market Regulation

Table of Contents

Foreword
Introduction
1 Scope
2 Normative references
3 Terms and Definitions
4 Wheel groove cross-sectional dimensions

Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document replaces GB/T 10412-2002 "Ordinary and Narrow V-belt Pulleys (Base Width System)". Compared with GB/T 10412-2002, except for...

Aside from structural adjustments and editorial changes, the main technical changes are as follows.

---Some dimensional terminology symbols have been changed (see Figure 1 and Table 1, Figure 1 and Table 1 in the 2002 edition);

---Added information on chamfered pulley groove type and related content (see Tables 1-5);

---Unused diameters in the reference diameter series have been changed (see Table 3, Table 4 in the 2002 edition);

---Added specific chapters on wheel groove inspection (see 7.1, 7.2, 7.3, 7.4).

This document is modified to adopt ISO 4183:1995 "Belt drives - General and narrow V-belt grooved pulleys (reference width system)".

This document has undergone significant structural adjustments compared to ISO 4183:1995. A table comparing the structural numbering changes between the two documents is provided.

See Appendix A.

The technical differences between this document and ISO 4183:1995, and the reasons therefor, are as follows.

---ISO 1081:1980 has been replaced with the normatively referenced GB/T 6931.2,

increasing operability (see Chapter 3);

---ISO 255:1990 has been replaced with the normatively referenced GB/T 11356.1, increasing operability (see Chapter 7);

---ISO 254:1990 has been replaced with the normatively referenced GB/T 11357, increasing operability (see Chapter 8);

---Some dimensional terminology symbols have been changed (see Figure 1 and Table 1, Figure 1 and Table 2 of ISO 4183:1995), in accordance with existing national standards.

coordination;

---Added information on chamfered pulley groove type and related content (see Tables 1-5), added new models, and expanded the scope of standard application;

---Unused diameters in the reference diameter series have been changed (see Table 3, Table 3 of ISO 4183:1995) for clearer representation;

---Added specific chapters on wheel groove inspection (see 7.1, 7.2, 7.3, 7.4), with more detailed technical data.

The following editorial changes have been made to this document.

---The standard name has been changed to "Plain and Narrow V-Belt Pulleys for Belt Drives (Base Width System)".

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Machinery Industry Federation.

This document is under the jurisdiction of the National Technical Committee on Standardization of Pulleys and Belts (SAC/TC428).

Introduction

V-belt drive is one of the important transmission methods of belt drive. Ordinary and narrow V-belt drives are the most basic forms of V-belt drive.

Narrow V-belt drives can be divided into two series. standard width and effective width, and are widely used in machine tools, mining machinery, petroleum machinery, and coal mining machinery.

It is used in various fields such as machinery, woodworking machinery, garden machinery, and agricultural machinery. my country issued the national standard for "Ordinary V-belt Pulleys" as early as 1989.

The standard was expanded in 2002. The reference width is the standardized basic dimension of the wheel groove and its compatibility with standard and narrow V-belts.

The position of the guideline and the reference width determine the pulley groove shape, the pulley reference diameter, and the position of the belt in the groove.

Belt drives with standard and narrow V-belt pulleys (based on standard width).

1 Scope

This document specifies the reference width standard V-belt pulleys (types Y, Z, ZX, A, AX, B, BX, C, CX, D, and E) and narrow V-belt pulleys.

Wheel groove cross-sectional dimensions, reference diameter series, wheel groove inspection, and wheel material for (SPZ, XPZ, SPA, XPA, SPB, XPB, SPC, and XPC types) Quality, surface roughness, and balance.

This document applies to pulleys for single ordinary and narrow V-belts.

This document does not apply to pulleys used in banded belts.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

GB/T 6931.2 Belt Drives Terminology Part 2: V-Belts and Multi-Wedge Belt Drives (GB/T 6931.2-2020, ISO 1081.

2013, MOD)

GB/T 11356.1 Belt Drive V-Belt Pulleys (Reference Width System) Groove Shape Inspection (GB/T 11356.1-2008, ISO 255.

1990, MOD)

GB/T 11357 Material, surface roughness and balance of pulleys (GB/T 11357-2020, ISO 254:2011, MOD)

3 Terms and Definitions

The terms and definitions defined in GB/T 6931.2 apply to this document.

4 Wheel groove cross-sectional dimensions

The dimensions of the pulley groove cross-section are shown in Figure 1 and Table 1.