

# INTERNATIONAL STANDARD

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## **Belt drives — Grooved pulleys for V-belts (system based on effective width) — Geometrical inspection of grooves**

*Transmissions par courroies — Poulies à gorges pour courroies  
trapézoïdales (système basé sur la largeur effective) — Contrôle  
géométrique des gorges*



Reference number  
ISO 9980:1990(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 9980 was prepared by Technical Committee ISO/TC 41, *Pulleys and belts (including veebelts)*.

Annex A of this International Standard is for information only.

## Introduction

In drives using V-belts, the dimensions of the pulley grooves can be defined either on the basis of the datum width or on the basis of the effective width. As a result, two systems for definition and description of the dimensions of pulleys and belts have been developed. The two systems are independent of each other.

For the geometrical inspection of grooves defined on the basis of the effective width, necessary tests to ensure by mechanical means the conformity of a grooved pulley with standard specifications were specified, but modern quick or serial checking procedures for grooved pulley production control were not.

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# Belt drives — Grooved pulleys for V-belts (system based on effective width) — Geometrical inspection of grooves

## 1 Scope

This International Standard specifies the methods of checking the regularity of the grooves and pulleys for V-belts specified in the system based on effective width. The grooved pulleys may be designed for use with classical or narrow V-belts. The V-belts may be either single or joined units.

The inspection parameters and tolerances of grooved pulleys will be specified in future International Standards.

## 2 Principle

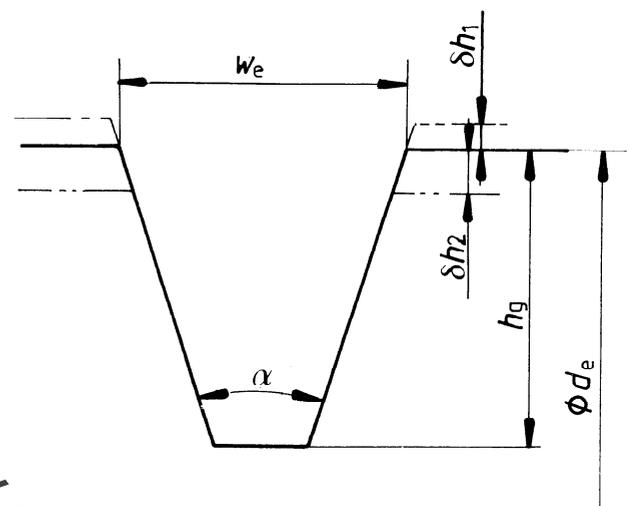
Complete inspection of a grooved pulley carried out in four successive checking operations, in the following order:

- inspection of groove profile (see clause 3);
- inspection of groove spacing (see clause 4);
- inspection of effective diameter (see clause 5);
- inspection of run-out (see clause 6).

## 3 Groove profile

### 3.1 Specification

The groove profile shall be specified in the corresponding International Standard by the dimensions shown in figure 1 and given in table 1.



NOTE — The flanks of the grooves straight up to at least  $d_e - 2\delta h_2$ .

Figure 1 — Groove profile

Table 1 — Groove profile specification

Dimension	Symbol	Tolerance
Effective width	$w_e$	A specified value not subject to tolerance
Groove angle	$\alpha$	$\pm \Delta\alpha$
Groove depth	$h_g$	Minimum value
Sidewall bevel depth	$\delta h_2$	Maximum value
Groove land height	$\delta h_1$ <sup>1)</sup>	Maximum value

1) Only for grooved pulleys for use with joined V-belts.