

Power transmission elements

# Grooved pulleys for narrow V-belts

## Inspection of grooves

**DIN**  
**2211**  
 Part 2

Antriebs-elemente; Schmalkeilriemenscheiben; Prüfung der Rillen

Supersedes July 1973 edition

*In keeping with current practice in standards published by the International Organization for Standardization (ISO), a comma has been used throughout as the decimal marker.*

The methods of measurement specified for the inspection of the groove angle and the datum diameter conform to International Standard ISO 255 – 1981 published by the International Organization for Standardization (ISO) "Pulleys for classical and narrow V-belts; geometrical inspection of grooves".

Dimensions in mm

### 1 Field of application

This standard specifies methods of inspecting the grooves of pulleys for narrow V-belts (hereinafter briefly referred to as pulleys) as specified in DIN 2211 Part 1.

### 2 Designation

Designation of method W for the determination of the groove angle  $\alpha$ :

Inspection DIN 2211 – W

### 3 Inspection of groove angle $\alpha$

#### Measuring method W

The groove angle  $\alpha$  shall be inspected with the aid of a limit gauge conforming to figure 1 as illustrated in figure 2. See DIN 2211 Part 1 for the values for the other limit gauges.

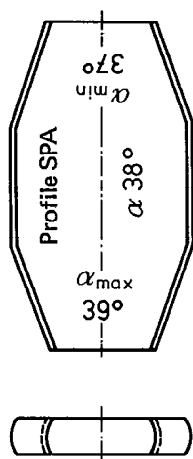


Figure 1.

Limit gauge for inspecting the groove angle:

The limit gauges shall be marked for groove angle  $\alpha = 38^\circ$  in accordance with the example illustrated.

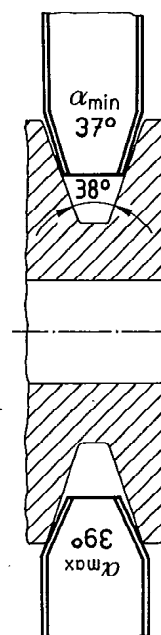


Figure 2.

Inspection of groove angle:

Illustrated by way of example on pulleys with groove angle  $\alpha = 38^\circ$ .

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**4 Inspection of datum diameter  $d_x$**

**4.1 Measuring method A**

First determine the external diameter  $d_a$  and inspect the cylindricity of the pulley.

The datum diameter  $d_x$  shall be determined with the aid of a depth gauge, e.g. as illustrated in figure 3 or figure 4:  $d_x = d_a - 2c$ .

If the pulley contains several grooves, each of these shall be inspected separately.

The fingers of the depth gauge shall be marked in accordance with the belt cross section.

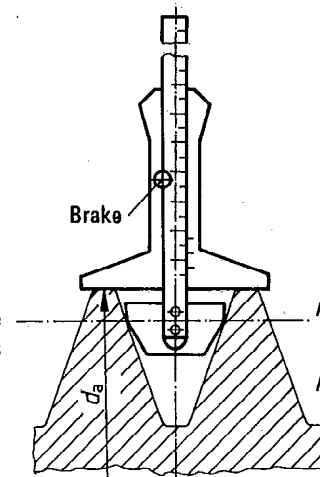


Figure 3.

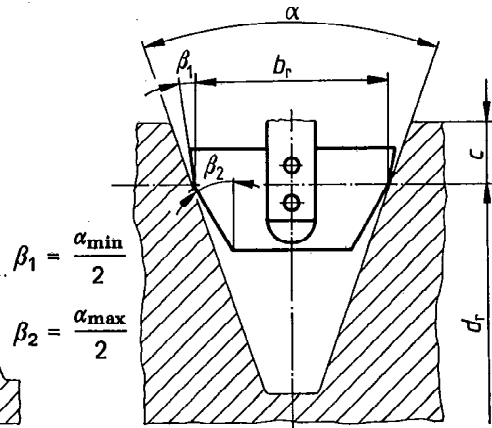


Figure 4.

**4.2 Measuring method B**

2 test rollers with diameter  $d$  (see table) shall be laid in the groove to be inspected in accordance with figure 5 and figure 6.

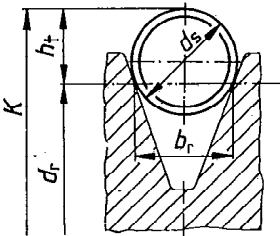


Figure 5.

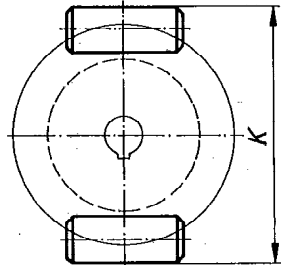


Figure 6.

Grooved pulley for narrow V-belt cross section as specified in			Datum width $b_r$	Test roller conforming to DIN 2269 $d_{s,r}$ accuracy grade 2	Correction $2h_t$ (rounded)
DIN 7753 Part 1	DIN 2215	DIN 2216			
SPZ	10	10	8,5	9	12
SPA	13	13	11	11,6	15
SPB	17	17	14	14,7	19
SPC	22	22	19	20	26

Once the distance  $K$  of the external tangential plane parallel to the axis of the pulley has been measured, the datum diameter  $d_x$  may be determined:  $d_x = K - 2h_t$ .

If a pulley contains several grooves, each groove shall be inspected separately. The test rollers shall be marked according to the belt cross sections.

**Standards referred to**

- DIN 2211 Part 1 Power transmission elements; grooved pulleys for narrow V-belts; dimensions, material
- DIN 2215 Endless classical V-belts; dimensions
- DIN 2216 Cut classical V-belts; dimensions
- DIN 2269 Test rollers
- DIN 7753 Part 1 Endless narrow V-belts for mechanical engineering; dimensions

**Previous editions**

DIN 2211 Part 2: 06.67, 07.73

**Amendments**

The following amendments have been made in comparison with the July 1973 edition:

- a) the content of the standard has been restructured;
- b) the reference to ISO 255 has been corrected;
- c) the designation clause has been included;
- d) the term "working diameter" has been amended to "datum diameter" and "working width" has been amended to "datum width";
- e) the test rollers conforming to DIN 2269 have been introduced for measuring method B in place of measuring cylinders;
- f) symbol  $k$  has been amended to  $K$ ,  $x$  has been amended to  $h_t$  and  $d$  has been amended to  $d_s$ .

**International Patent Classification**

F 16 H 55-49