

JAPANESE INDUSTRIAL STANDARD

JIS B 1052-1991

Mechanical properties of steel nuts

1996.2

ERRATA

Page	Position	Wrong	Correct
14	Metric fine threads of Attached Table 2, Nominal dia. 12, Effective dia., Min.	11.093	11.082

Remarks: This errata is for correcting the first edition of this Standard.
Japanese Standards Association

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Ⓔ JIS B 1854-1987

Grooved pulleys for classical V-belts

1996.2

ERRATA

Page	Position	Wrong	Correct
10	Attached Table(No.2), Nominal dia.125 to 160 in Type B3, Form 4, s ₁ .	13	To be deleted and inserted the mark —.

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Grooved Pulleys for Classical V-belts

Ⓔ **JIS B 1854**—1987

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In the event of any doubt arising,
the original Standard in Japanese is to be final authority.



JAPANESE INDUSTRIAL STANDARD

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Grooved Pulleys for Classical
V-belts

B 1854-1987

1. Scope

This Japanese Industrial Standard specifies the classical V-pulley using V-belts specified in JIS K 6323, hereinafter referred to as the "V-pulley". However, those which use V-belts corresponding to M type, D type and E type specified in JIS K 6323, are specified for the shapes and dimensions of grooved parts only.

The shapes, dimensions and datum diameters of grooved parts of ISO type classical V-pulleys specified in JIS K 6323 are specified in Appendix.

2. Types

The types of V-pulley shall be as given in Table 1, according to the types and number of grooves of corresponding V-belts.

Table 1. Types of V-pulley

Type of V-belts \ Number of grooves	1	2	3	4	5	6
A	A 1	A 2	A 3	—	—	—
B	B 1	B 1	B 3	B 4	B 5	—
C	—	—	C 3	C 4	C 5	C 6

3. Material

The material to be used for the V-pulley shall be class 3 (FC 20) of JIS G 5501 or grey cast iron at least equal to it in quality.

Applicable Standards:

JIS B 0405-Permissible Machining Deviations in Dimensions without Tolerance Indication

JIS B 0407-Permissible Deviations in Dimensions without Tolerance Indication for Iron Castings

JIS B 7503-Dial Gauges Reading in 0.01 mm

JIS G 5501-Grey Iron Castings

JIS K 6323-V Belts for Power Transmission

Corresponding International Standard:

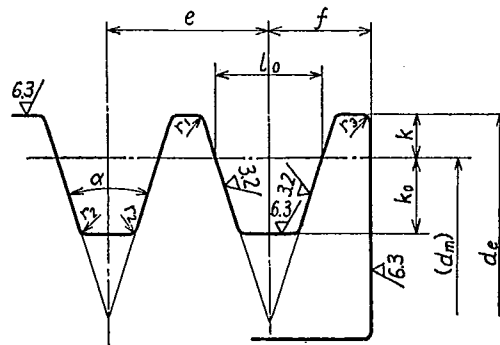
ISO 4183 Grooved pulleys for classical and narrow V-belts

4. Shapes and Dimensions

4.1 Shapes and Dimensions of V-pulley The shapes and dimensions (excluding grooved part) of the V-pulley shall conform to Attached Table.

4.2 Shape and Dimensions of Grooved Part The shape and dimensions of the grooved part of the V-pulley shall conform to Table 2.

Table 2. Shape and Dimensions of Grooved Part of V-pulley



Unit: mm

Type of V-belt	Nominal diameter ⁽²⁾	$\alpha(^{\circ})$	l_0	k	k_0	e	f	r_1	r_2	r_3
M	50 or over up to 71	34								
	Over 71 up to 90	36	8.0	2.7	6.3	— ⁽¹⁾	9.5	0.2 to 0.5	0.5 to 1.0	1 to 2
	Over 90	38								
A	71 or over up to 100	34								
	Over 100 up to 125	36	9.2	4.5	8.0	15.0	10.0	0.2 to 0.5	0.5 to 1.0	1 to 2
	Over 125	38								
B	125 or over up to 160	34								
	Over 160 up to 200	36	12.5	5.5	9.5	19.0	12.5	0.2 to 0.5	0.5 to 1.0	1 to 2
	Over 200	38								
C	200 or over up to 250	34								
	Over 250 up to 315	36	16.9	7.0	12.0	25.5	17.0	0.2 to 0.5	1.0 to 1.6	2 to 3
	Over 315	38								
D	355 or over up to 450	36	24.6	9.5	15.5	37.0	24.0	0.2 to 0.5	1.6 to 2.0	3 to 4
	Over 450	38								
E	500 or over up to 630	36	28.7	12.7	19.3	44.5	29.0	0.2 to 0.5	1.6 to 2.0	4 to 5
	Over 630	38								

Notes ⁽¹⁾ Type M shall generally be single belt driving.

⁽²⁾ This means the diameter (d_m) given in Figure above, a diameter with the basic width of groove l_0 which is to be used in the measurement of the belt length and in the calculation of the criterion for rotation ratio and others.

4.3 Tolerances on Outside Diameter of V-pulley shall conform to Table 3.

The tolerances on outside diameter (d_o)

Table 3. Tolerances on Outside Diameters d_o of V-pulley

Unit: mm

Nominal diameter	Tolerances on outside diameter (d_o)
75 or over up to 118	± 0.6
125 or over up to 300	± 0.8
315 or over up to 630	± 1.2
710 or over up to 900	± 1.6

4.4 Dimensional Tolerances on Respective Parts of Grooved Part The dimensional tolerances on respective parts of the grooved part of V-pulley shall conform to Table 4.

Table 4. Dimensional Tolerances on Respective Parts of Grooved Part

Unit: mm

Type of V-belt	Tolerances on α	Tolerances ⁽³⁾ on k	Tolerances ⁽⁴⁾ on e	Tolerances on f
M	$\pm 0.5^\circ$	$+ 0.2$ 0	—	± 1
A			± 0.4	
B				
C		$+ 0.3$ 0	± 0.5	$+ 2$ $- 1$
D		$+ 0.4$ 0		
E		$+ 0.5$ 0		

Notes ⁽³⁾ The tolerances on k indicates the tolerances on the positions of d_m that will designate the width of groove l_0 on the basis of the outside diameter (d_o).

⁽⁴⁾ The aggregate errors of dimension e within a piece of V-pulley shall be within ± 0.8 on all of the types of A, B, C, D and E.

4.5 Dimensional Tolerances on Parts with No Dimensional Tolerances Specified

The dimensional tolerances on the parts to be machined for which no dimensional tolerance for V-pulley is specified shall be in accordance with those for the coarse grade of JIS B 0405.

The dimensional tolerances on the as cast parts shall be in accordance with those for the common grade of JIS B 0407.

5. Qualities

5.1 Appearance The V-pulley shall be free from such harmful defects such as blowholes, flaws or cracks.

5.2 Permissible Values for Runout Present on Outside Circumference and on Side Face of Rim Permissible deviations for the runout on outside circumference in respect to the center of shaft bore of V-pulley and for the runout on the side face of rim shall conform to Table 5.

Table 5. Runout on Outside Circumference and Runout on Side Face of Rim of V-pulley

Unit: mm

Nominal diameter	Permissible value of runout on outside circumference	Permissible value of runout on side face of rim
75 or over up to 118	0.3	0.3
125 or over up to 300	0.4	0.4
315 or over up to 630	0.6	0.6
710 or over up to 900	0.8	0.8

5.3 Balancing In terms of the balancing of V-pulley, the permissible deviations to observe shall be 0.2 % of the mass of the V-pulley or 3 g, whichever is greater.

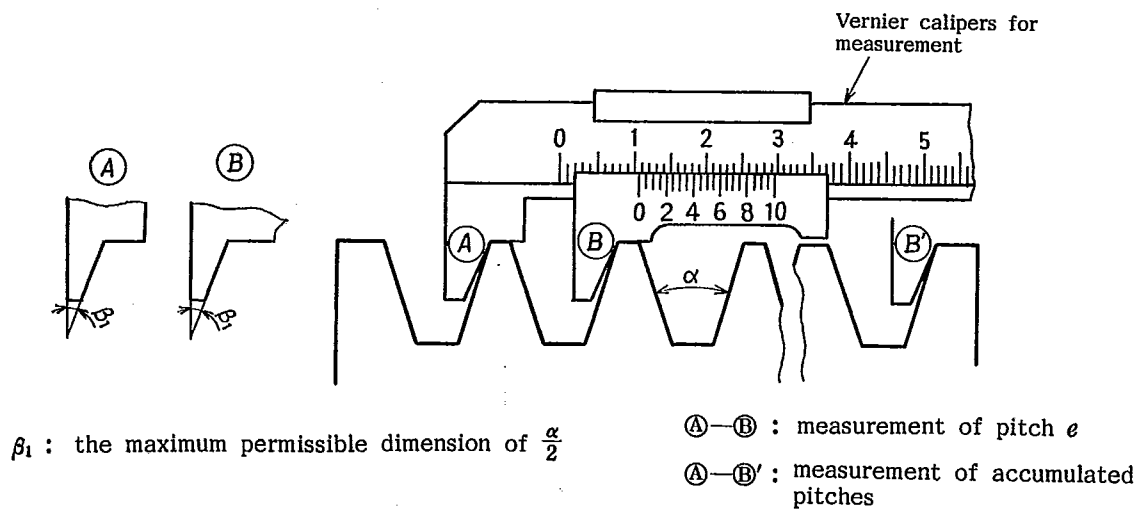
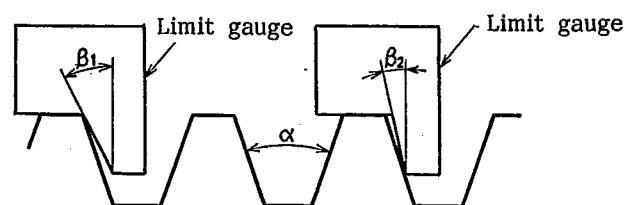
6. Inspection

6.1 Appearance The appearance of the V-pulley shall be examined by visual inspection, and the results shall satisfy the requirements of 5.1.

6.2 Shape and Dimensions The shape and dimensions of the V-pulley shall satisfy the requirements of 4.

Reference: For the measurements of the pitch of grooves e , angle of groove α , and depth h from outside periphery to basic width of groove b_0 , the vernier calipers, limit gauge and vernier type depth gauge as shown in Reference Figs. 1 to 3 shall be used.

Reference Fig. 1. Measurements of Pitch of Groove and Accumulated Pitches of Grooves

Reference Fig. 2. Measurement of Angle of Groove α Reference Fig. 3. Measurement of Depth (k) from Outside Periphery to Basic Width of Groove (l_0)