

JIS

JAPANESE INDUSTRIAL STANDARD

**Sleeve Type Flanged Half
Bearings for Automobile Engines**

JIS D 3106—1988

Translated and Published

by

Japanese Standards Association

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

JAPANESE INDUSTRIAL STANDARD

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Sleeve Type Flanged Half Bearings for Automobile Engines D 3106-1988

1. Scope

This Japanese Industrial Standard specifies the principal dimensions, permissible deviations thereof, and others for flanged half bearings, among the main bearings of automobile engines, hereinafter referred to as the "bearings".

Remark: This Standard applies, other than the standard size bearings, also to the principal dimensions of the under size bearings and the dimensions of the under size bearings and the dimensions of parts having close relations to these.

2. Dimensions, Tolerances and Permissible Deviations2.1 Dimensions Tolerances and Permissible Deviations for Journal Bearing Parts

2.1.1 Thicknesses of Bearings The thicknesses of bearings shall be as given in the following:

- (1) The basic dimensions of the thicknesses of the standard size bearings shall be as given by o marks in Table 1.

Table 1. Basic Dimensions of Thicknesses

Unit: mm

Housing inside diameter	Basic dimension of thickness					
	1.5	2.0	2.5	3.0	3.5	4.0
40 to 45 incl.	o	o	—	—	—	—
Over 45 to 60 incl.	o	o	o	—	—	—
Over 60 to 85 incl.	—	o	o	o	—	—
Over 85 to 110 incl.	—	—	o	o	o	—
Over 110 to 125 incl.	—	—	—	o	o	o
Over 125 to 150 incl.	—	—	—	—	o	o

Applicable Standard:

JIS B 0601-Definitions and Designation of Surface Roughness

Corresponding International Standard:

ISO 6864-Plain bearings - Thin-walled flanged half bearings - Dimensions, tolerances and methods of checking

Reference Standard:

JIS D 3102-Sleeve Type Half Bearing for Automobile Engines



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- (2) The tolerances for the thicknesses of bearings shall be as given in Table 2. However, regarding the tolerances for the thicknesses of recommendable bearings for selection fittings shall be as agreed between the parties concerned.

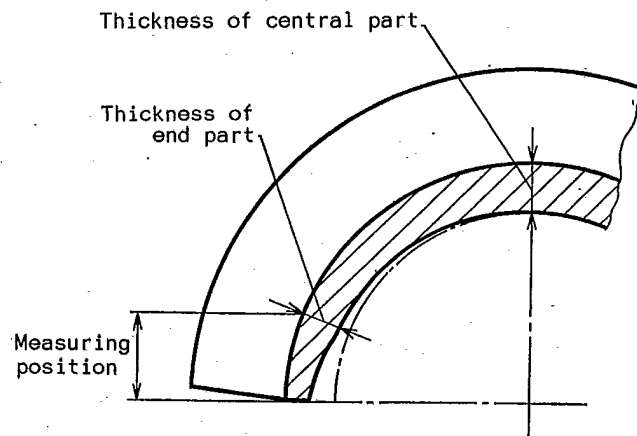
Table 2. Tolerances on Thicknesses

Unit: mm

Housing inside diameter	Tolerances on thicknesses	
	Bearing without surface layer plating	Bearing with surface layer plating
40 to 60 incl.	0.008	0.012
Over 60 to 110 incl.	0.010	0.015
Over 110 to 150 incl.	0.015	0.022

- (3) Thickness of end part shall be lessened than the thickness of central part (Fig. 1). However, it may be the same dimension according to the service conditions.

Fig. 1. Thickness of End Part



- (4) The increasing dimensions of thicknesses for under size bearings shall generally be as given in Table 3.

Table 3. Increasing Dimensions of Thicknesses of Under Size Bearings

Unit: mm

Designation of under size bearing	Increasing dimension of thickness of bearing
0.25	0.125
0.50	0.250
0.75	0.375
1.00	0.500

2.1.2 Dimensions of Nick of Bearing and Dimensions of Nick Groove of Housing The dimensions of the nick of the bearing and the dimensions of the nick groove of the housing shall be as given in the following:

- (1) The dimensions of the nick of the bearing and the permissible deviations shall generally be as given in Table 4.
- (2) The position of the nick of the bearing (H) shall be 1.5 times or over ($H \geq 1.5 \times \text{thickness}$) the thickness from the end part due to the restriction of processing, and it shall be provided at the position of 3 mm or over ($H \geq 3 \text{ mm}$). However, in the case of exceeding this restriction, it shall be as agreed between the parties concerned. The permissible deviations shall be $\pm 0.1 \text{ mm}$.
- (3) The position (J) of the nick, in the case where a peripheral groove is provided in the bearing, shall either be provided in the groove due to the restriction of processing, or be kept apart 2 mm or over ($J \geq 2 \text{ mm}$) from the upper edge of cut of the groove. however, in the case of exceeding this restriction, it shall be as agreed between the parties concerned.
- (4) The width (E) of the nick groove of the housing and permissible deviations shall generally be as given in Table 5. However, the depth (G) and length (N_z) are the informative reference values.