

JIS

JAPANESE INDUSTRIAL STANDARD

Sleeve Type Half Bearings for Automobile Engines

JIS D 3102—1987

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by

Japanese Standards Association

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



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Sleeve Type Half Bearings for Automobile Engines D 3102-1987

1. Scope

This Japanese Industrial Standard specifies the main dimensions, permissible deviations, etc. of sleeve type half bearings out of main bearings and crank pin bearings, hereinafter referred to as the "bearings", for automobile engines.

Remark: This Standard applies to main dimensions of under-size bearings other than standard-size bearings, and also to the dimensions of parts relating closely to these.

2. Dimensions, Tolerances and Permissible Deviations

2.1 Wall Thickness of Bearings The wall thickness of bearings shall be as follows:

- (1) The reference dimensions of wall thickness of standard size bearings shall be as shown by ○ mark in Table 1.

Table 1. Reference Dimensions of Wall Thickness

Unit: mm

Housing internal diameter	Reference dimension of wall thickness					
	1.5	2.0	2.5	3.0	3.5	4.0
20 up to and including 35	○	—	—	—	—	—
Exceeding 35 up to and including 45	○	○	—	—	—	—
Exceeding 45 up to and including 60	○	○	○	—	—	—
Exceeding 60 up to and including 85	—	○	○	○	—	—
Exceeding 85 up to and including 110	—	—	○	○	○	—
Exceeding 110 up to and including 125	—	—	—	○	○	○
Exceeding 125 up to and including 150	—	—	—	—	○	○

Applicable Standard:

JIS B 0601-Definitions and Designation of Surface Roughness

Corresponding International Standard:

ISO 3548-Plain bearings—Thin-walled half bearings—Dimensions, tolerances and methods of checking

- (2) Wall thickness tolerances shall be as given in Table 2. However, concerning wall thickness tolerances on bearings for selection fit shall be subject to agreement between the parties concerned.

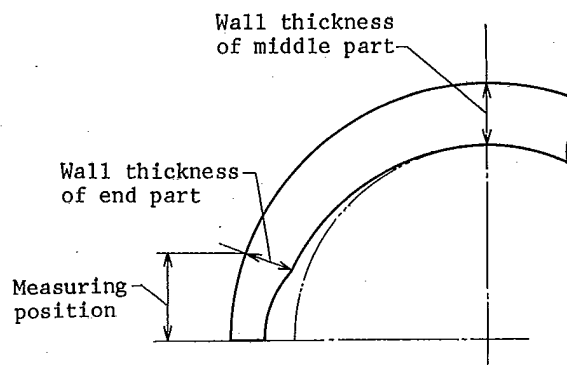
Table 2. Tolerances on Wall Thickness

Unit: mm

Housing internal diameter	Tolerance on wall thickness	
	Bearing without plated surface layer	Bearing with plated surface layer
20 up to and including 60	0.008	0.012
Exceeding 60 up to and including 110	0.010	0.015
Exceeding 110 up to and including 150	0.015	0.022

- (3) Generally, the wall thickness of end part shall be reduced than that of middle part (Fig. 1). However, depending upon the using conditions, the dimensions may be same.

Fig. 1. Wall Thickness of End Part



- (4) The increasing dimensions of wall thickness of under size bearings shall, as a rule, be as shown in Table 3.

Table 3. Wall Thickness Increasing Dimensions of Under Size Bearings

Unit: mm

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