

KS

KOREAN INDUSTRIAL STANDARD

Sleeve type half bearings for automobile engines

KS R 3001 : 1997

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Sleeve type half bearings for automobile engines

1. Applicable Scope : This standard defines main dimensions and tolerances of sleeve type half bearings out of main bearings and crank pin bearings (hereafter referred to as "Bearing") inside automobile engines.

Remarks 1. Not to mention standard size bearings, this standard is also applied to major dimensions of undersized bearings as well as dimensions of sections closely relevant to the undersized bearings.

2. Relevant international standard of this standard is as follows:

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

2. Referred standards : The standards listed below are referred to, and incorporated in this standard. The latest revision of the standards is referred to:

KS B 0161 Surface roughness - Definition and designation

3. Dimensions, tolerances and allowances

3.1 Thickness of bearings : The thickness of bearings is as follows:

a) The reference thickness of standard size bearings is indicated with ○ in **table 1**:

Table 1 Reference dimensions of thickness

Unit : mm

Inner diameter of housing	Reference dimensions of thickness					
	1.5	2.0	2.5	3.0	3.5	4.0
Between 20 and 35	○	-	-	-	-	-
Exceeding 35, lower than 45	○	○	-	-	-	-
Exceeding 45, lower than 60	○	○	○	-	-	-
Exceeding 60, lower than 85	-	○	○	○	-	-
Exceeding 85, lower than 110	-	-	○	○	○	-
Exceeding 110, lower than 125	-	-	-	○	○	○
Exceeding 125, lower than 150	-	-	-	-	○	○

- b) The thickness tolerances of bearings are as indicated in **table 2**. It is, however, demanded to note that the thickness tolerances of customized fitting bearings are determined by agreement between a delivering party and an accepting party. Deviation in dimensions of thickness is not defined for semi-finished bearings.

Table 2 Thickness tolerances

Unit : mm

Inner diameter of housing	Thickness tolerance	
	Bearing with surface layer not plated	Bearing with surface layer plated
Between 20 and 60	0.008	0.012
Exceeding 60, lower than 110	0.010	0.015
Exceeding 110, lower than 150	0.015	0.022

- c) In general, the thickness of end section is smaller than that on the center (**Fig. 1**). Please note that identical dimensions are allowed dependent upon operation conditions.

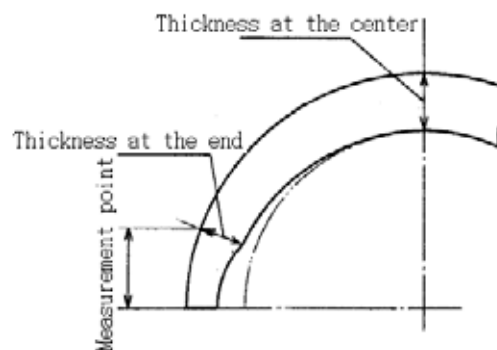


Fig. 1 Thickness at the end

- d) Increase of thickness of undersized bearings is as indicated in **table 3**:

Table 3 Increase of thickness of undersized bearings

Unit : mm

Nominal size of undersized bearing	Increase of thickness of bearing
0.25	0.125
0.50	0.250
0.75	0.375
1.00	0.500