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Rolling Bearings – Chamfer Dimension – Maximum Values

(ISO 582:1995, MOD)

滚动轴承 倒角尺寸 最大值

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Table of Contents

Rolling Bearings – Chamfer Dimension – Maximum Values

1 Scope

This Document specifies the maximum chamfer dimension for rolling bearings and the single chamfer dimension for shaft and housing bores where they mate with the bearing.

This Document applies to the chamfers of metric series rolling bearings specified in GB/T 273.1-2023, GB/T 273.2-2018, GB/T 273.3-2020, GB/T 305-2019, GB/T 20057-2012, GB/T 20058-2017, and GB/T 20060-2011.

2 Normative References

The provisions in following documents become the essential provisions of this Document through reference in this Document. For the dated documents, only the versions with the dates indicated are applicable to this Document; for the undated documents, only the latest version (including all the amendments) is applicable to this Document.

GB/T 273.1-2023 Rolling bearings - Boundary dimensions general plan - Part 1： Tapered roller bearings (ISO 355:2019, IDT)

GB/T 273.2-2018 Rolling bearings - Boundary dimensions general plan - Part 2: Thrust bearings (ISO 104:2015, IDT)

GB/T 273.3-2020 Rolling bearings - Boundary dimensions general plan - Part 3: Radial bearings (ISO 15:2017, IDT)

GB/T 305-2019 Rolling bearings - Snap ring grooves and snap rings for radial bearings - Dimensions, geometrical product specifications (GPS) and tolerance values (ISO 464:2015, MOD)

GB/T 20057-2012 Rolling bearings - Single-row cylindrical roller bearings - Chamfer dimensions for loose rib and non-rib sides (iso 12043:2007, IDT)

GB/T 20058-2017 Rolling bearings - Single-row angular contact ball bearings - Chamfer dimensions for outer ring non-thrust side (ISO 12044:2014, IDT)

GB/T 20060-2011 Rolling bearings - Cylindrical roller bearings, separate thrust collars - Boundary dimensions (ISO 246:2007, IDT)

3 Terms and Definitions

For the purposes of this Document, the following terms and definitions apply.

3.1 Radial direction chamfer dimension (of a bearing ring, washer, loose rib or thrust collar)

The distance from the imaginary sharp corner of a bearing ring, washer or thrust collar to the intersection BETWEEN the chamfer surface AND the end face of the bearing ring, washer or thrust collar.

3.2 Axial directions chamfer dimension (of a bearing ring, washer, loose rib or thrust collar)

The distance from the imaginary sharp corner of a bearing ring, washer or thrust collar to the intersection BETWEEN the chamfer surface AND the inner bore or outer cylindrical surface of the bearing ring, washer or thrust collar.

4 Signs

The following signs are applicable to this Document. The shape example of the chamfer is shown in Figure 1.

D: Bearing nominal outer diameter.

d: Bearing nominal inner diameter.

r_{as}: Single chamfer dimension at the joint between the shaft or bearing seat hole and the bearing.

r_{asmax}: Maximum single chamfer dimension allowed by r_{as}.

r_s: Single chamfer dimension of the back side of the inner ring of radial bearings, tapered roller bearings and thrust bearings.

r_{ls}: Single chamfer dimension of the cylindrical roller bearing flat and inclined thrust collars and the outer ring on one side of the stop groove, the narrow end faces of the inner and outer rings of cylindrical roller bearings and the narrow end faces of the outer ring of angular contact ball bearings, back sides of the outer ring of tapered roller bearings, and the center ring of the thrust bearing.

r_{smax}, r_{lsmax}: Maximum single chamfer dimensions allowed by r_s and r_{ls}, respectively.

r_{smin}, r_{lsmin}: Minimum single chamfer dimensions allowed by r_s and r_{ls}, respectively.

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