

International Standard



6125

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Spherical plain radial bearings; joint type — Tolerances

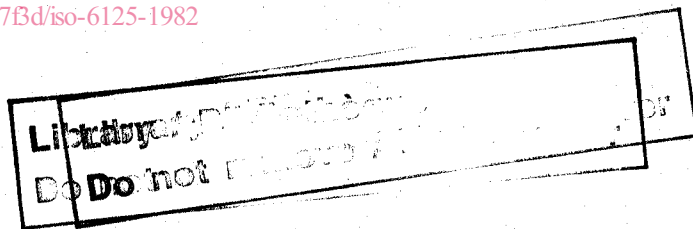
Rotules lisses d'articulation à contact radial — Tolérances

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 6125 was developed by Technical Committee ISO/TC 4, *Rolling bearings*, and was circulated to the member bodies in December 1980.

It has been approved by the member bodies of the following countries :

Australia	Germany, F. R.	Poland
Austria	Hungary	Romania
Belgium	India	South Africa, Rep. of
Brazil	Italy	Spain
Canada	Japan	Sweden
China	Korea, Dem. P. Rep. of	Switzerland
Czechoslovakia	Korea, Rep. of	United Kingdom
Egypt, Arab Rep. of	Mexico	USA
France	Netherlands	USSR

No member body expressed disapproval of the document.

This second edition cancels and replaces the first edition (i.e. ISO 6125-1979).

Spherical plain radial bearings; joint type — Tolerances

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1 Scope and field of application

This International Standard specifies the tolerances for boundary dimensions (except chamfer dimensions) of spherical plain radial bearings, joint type, for example the bearings given in ISO 6124/1 and ISO 6124/3.

Chamfer dimension limits are the same as those given in ISO 582 for rolling bearings.

These tolerances apply, under the general conditions given in ISO 1132, to finished inner and outer rings before any coating, plating, splitting or fracturing.

They do not normally apply to spherical plain bearings for air-frame applications.

2 References

- ISO 582, *Rolling bearings — Metric series — Chamfer dimension limits.*
- ISO 1132, *Rolling bearings — Tolerances — Definitions.*
- ISO 6124/1, *Spherical plain radial bearings, joint type — Boundary dimensions — Part 1 : Dimension series E and G.*
- ISO 6124/3, *Spherical plain radial bearings, joint type — Boundary dimensions — Part 3 : Dimension series C.*

3 Definitions

The concepts to which the tolerances specified in this International Standard apply are defined in ISO 1132.

4 Symbols

- d = nominal bearing bore diameter
- Δ_{dmp} = single plane mean bore diameter deviation
- V_{dp} = bore diameter variation in a single radial plane
- V_{dmp} = mean bore diameter variation
- B = nominal inner ring width
- Δ_{Bs} = deviation of a single width of the inner ring
- D = nominal bearing outside diameter
- Δ_{Dmp} = single plane mean outside diameter deviation
- V_{Dp} = outside diameter variation in a single radial plane
- V_{Dmp} = mean outside diameter variation
- C = nominal outer ring width
- Δ_{Cs} = deviation of a single width of the outer ring

5 Tolerance values

Table 1 — Inner ring

Tolerance values in micrometres

<i>d</i> mm		Δ_{dmp}		V_{dp}	V_{dmp}	Δ_{Bs}	
over	up to (inclusive)	high	low	max.	max.	high	low
—	10	0	− 8	8	6	0	− 120
10	18	0	− 8	8	6	0	− 120
18	30	0	− 10	10	8	0	− 120
30	50	0	− 12	12	9	0	− 120
50	80	0	− 15	15	11	0	− 150
80	120	0	− 20	20	15	0	− 200
120	150	0	− 25	25	19	0	− 250
150	180	0	− 25	25	19	0	− 250
180	250	0	− 30	30	23	0	− 300
250	315	0	− 35	35	26	0	− 350
315	400	0	− 40	—	—	0	− 400
400	500	0	− 45	—	—	0	− 450
500	630	0	− 50	—	—	0	− 500
630	800	0	− 75	—	—	0	− 750
800	1 000	0	− 100	—	—	0	− 1 000
1 000	1 250	0	− 125	—	—	0	− 1 250
1 250	1 600	0	− 160	—	—	0	− 1 600
1 600	2 000	0	− 200	—	—	0	− 2 000

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Table 2 — Outer ring

Tolerance values in micrometres

<i>D</i> mm		Δ_{Dmp}		V_{Dp}	V_{Dmp}	Δ_{Cs}	
over	up to (inclusive)	high	low	max.	max.	high	low
10	18	0	− 8	10	6	0	− 240
18	30	0	− 9	12	7	0	− 240
30	50	0	− 11	15	8	0	− 240
50	80	0	− 13	17	10	0	− 300
80	120	0	− 15	20	11	0	− 400
120	150	0	− 18	24	14	0	− 500
150	180	0	− 25	33	19	0	− 500
180	250	0	− 30	40	23	0	− 600
250	315	0	− 35	47	26	0	− 700
315	400	0	− 40	53	30	0	− 800
400	500	0	− 45	60	34	0	− 900
500	630	0	− 50	—	—	0	− 1 000
630	800	0	− 75	—	—	0	− 1 100
800	1 000	0	− 100	—	—	0	− 1 200
1 000	1 250	0	− 125	—	—	0	− 1 300
1 250	1 600	0	− 160	—	—	0	− 1 600
1 600	2 000	0	− 200	—	—	0	− 2 000
2 000	2 500	0	− 250	—	—	0	− 2 500
2 500	3 150	0	− 320	—	—	0	− 3 200