International Standard 7063

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Needle roller bearings — Track rollers — Tolerances

Roulements à aiguilles — Galets de came — Tolérances

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Descriptors : bearings, rolling bearings, needle bearings, dimensional tolerances.

Foreword

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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 7063 was developed by Technical Committee ISO/TC 4, *Rolling bearings*, and was circulated to the member bodies in May 1981.

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

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

No member body expressed disapproval of the document.

Needle roller bearings — Track rollers — Tolerances

1 Scope and field of application

This International Standard specifies the tolerances for boundary dimensions and running accuracy of track rollers, yoke and stud type.

2 References

ISO 492, *Rolling bearings — Radial bearings — Tolerances.*

ISO 1132, *Rolling bearings — Tolerances — Definitions.*

ISO 6278, *Needle roller bearings — Track rollers — Boundary dimensions.*

3 Definitions

Definitions of the concepts to which the tolerances specified in this International Standard apply are given in ISO 1132.

4 Symbols

B = overall width of inner ring with end washers, nominal

Δ_{Bs} = deviation of a single width of the inner ring

B_1 = total length of stud type roller, nominal

Δ_{B1} = deviation of the total length of stud type roller

B_2 = stud length, nominal

Δ_{B2} = deviation of the stud length

C = outer ring width, nominal

Δ_{Cs} = deviation of a single width of the outer ring

d = inner ring bore diameter, nominal

Δ_{ds} = deviation of a single bore diameter

Δ_{dmp} = single plane mean bore diameter deviation

d_1 = stud diameter, nominal

Δ_{d1s} = deviation of a single stud diameter

D = outside diameter of roller, nominal

Δ_{Dmp} = single plane mean outside diameter deviation

K_{ea} = radial runout of assembled bearing outer ring

5 Tolerances

5.1 Track rollers — Yoke type

5.1.1 Outer ring

Table 1 — Outer ring

Tolerance values in micrometres

D mm		Δ_{Dmp}				Δ_{Cs}		K_{ea}
over	up to and including	cylindrical		crowned		high	low	max.
		high	low	high	low			
10	18	0	−18	0	−43	0	−120	15
18	30	0	−21	0	−52	0	−120	15
30	50	0	−25	0	−62	0	−120	20
50	80	0	−30	0	−74	0	−120	25
80	120	0	−35	0	−87	0	−120	35
120	150	0	−40	0	−100	0	−120	40
150	180	0	−40	0	−100	0	−150	45
180	240	0	−46	0	−115	0	−200	50

5.1.2 Inner ring

Table 2 — Inner ring

Tolerance values in micrometres

d mm		Δ_{dmp}		Δ_{Bs}	
over	up to and including	high	low	high	low
2,5	10	0	−12	0	−270
10	18	0	−12	0	−330
18	30	0	−12	0	−390
30	50	0	−12	0	−460
50	80	0	−15	0	−540
80	120	0	−20	0	−630

5.2 Track rollers — Stud type

5.2.1 Outer ring

The outer ring tolerances in 5.1.1, table 1, also apply to stud type track rollers.

5.2.2 Stud

Table 3 — Stud diameter

Tolerance values in micrometres

d_1 mm		Δ_{d1s}	
over	up to and including	high	low
3	6	0	−12
6	10	0	−15
10	18	0	−18
18	30	0	−21
30	50	0	−25
50	80	0	−30
80	100	0	−35

Table 4 — Stud length

Tolerance values in millimetres

B_2	Δ_{B2}	
	high	low
All lengths	0	−1