SLOVENSKI STANDARD
SIST ISO 3031:2002

01-december-2002

Kotalni leģaji - Aksialne igliļne kotalke in kletka, pritisni kolut - Mejne mere in tolerance

Rolling bearings -- Thrust needle roller and cage assemblies, thrust washers -- Boundary dimensions and tolerances

Roulements -- Cages à aiguilles axiales et rondelles de butée -- Dimensions d'encombrement et tolérances

Ta slovenski standard je istoveten z: ISO 3031:2000

ICS:

21.100.20 Kotalni ležaji Rolling bearings

SIST ISO 3031:2002 **en**

INTERNATIONAL STANDARD

ISO 3031

Third edition
2000-08-01

Rolling bearings — Thrust needle roller and cage assemblies, thrust washers — Boundary dimensions and tolerances

Roulements — Cages à aiguilles axiales et rondelles de butée — Dimensions d'encombrement et tolérances

Reference number
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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.ch
Web www.iso.ch

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 3031 was prepared by Technical Committee ISO/TC 4, *Rolling bearings*, Subcommittee SC 5, *Needle roller bearings*.

This third edition cancels and replaces the second edition (ISO 3031:1979), which has been technically revised, in particular with the addition of the specification for checking and checking gauge dimensions.

Rolling bearings — Thrust needle roller and cage assemblies, thrust washers — Boundary dimensions and tolerances

1 Scope

This International Standard specifies the boundary dimensions and tolerances for thrust needle roller and cage assemblies. Furthermore, it recommends dimensions and tolerances for thrust washers, i.e. raceway members, which can be used either as shaft or housing washers.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 286-2:1988, *ISO system of limits and fits — Part 2: Tables of standard tolerance grades and limit deviations for holes and shafts.*

ISO 1132-1:2000, *Rolling bearings — Tolerances — Part 1: Terms and definitions.*

ISO 3096:1996, *Rolling bearings — Needle rollers — Dimensions and tolerances.*

ISO 5593:1997, *Rolling bearings — Vocabulary.*

ISO 15241—[1)], *Rolling bearings — Symbols for quantities.*

3 Terms and definitions

For the purposes of this International Standard, the terms and definitions given in ISO 1132-1 and ISO 5593 apply.

1) To be published.

4 Thrust needle roller and cage assemblies

4.1 Symbols

For the purpose of this International Standard, the symbols given in ISO 15241 apply.

The symbols (except those for tolerances) shown in Figure 1 and the values given in Table 1 denote nominal dimensions unless specified otherwise.

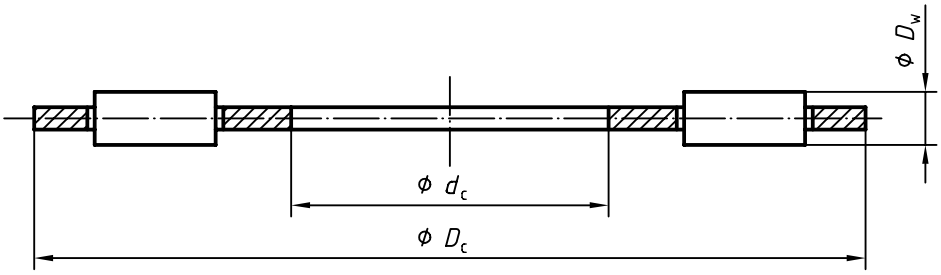

Figure 1 — Thrust needle roller and cage assembly

D_c outside diameter of cage

$D_{cs\ max}$ largest single outside diameter of cage

V_{Dcs} variation of outside diameter of cage

d_c bore diameter of cage

$d_{cs\ min}$ smallest bore diameter of cage

V_{dcs} variation of bore diameter of cage

D_w diameter of needle roller

4.2 Dimensions and tolerances

Dimensions and tolerances of thrust needle roller and cage assemblies are given in Table1.

Table 1 — Dimensions and tolerances of thrust needle roller and cage assemblies

Dimensions in millimetres, tolerances in micrometres

d_c	Tolerances for $d_{cs\ min}$ [a]		V_{dcs} max.	D_c	Tolerances for $D_{cs\ max}$ [b]		V_{Dcs} max.	D_w [c]
	high	low			high	low		
6	+ 95	+ 20	75	19	– 110	– 320	210	2
7	+ 115	+ 25	90	20	– 110	– 320	210	2
8	+ 115	+ 25	90	21	– 110	– 320	210	2
9	+ 115	+ 25	90	22	– 110	– 320	210	2
10	+ 115	+ 25	90	24	– 110	– 320	210	2
12	+ 142	+ 32	110	26	– 110	– 320	210	2
14	+ 142	+ 32	110	27	– 110	– 320	210	2
15	+ 142	+ 32	110	28	– 110	– 320	210	2
16	+ 142	+ 32	110	29	– 110	– 320	210	2
17	+ 142	+ 32	110	30	– 110	– 320	210	2
18	+ 142	+ 32	110	31	– 120	– 370	250	2
20	+ 170	+ 40	130	35	– 120	– 370	250	2
22	+ 170	+ 40	130	37	– 120	– 370	250	2
25	+ 170	+ 40	130	42	– 130	– 380	250	2
28	+ 170	+ 40	130	45	– 130	– 380	250	2
30	+ 170	+ 40	130	47	– 130	– 380	250	2
32	+ 210	+ 50	160	49	– 130	– 380	250	2
35	+ 210	+ 50	160	52	– 140	– 440	300	2
40	+ 210	+ 50	160	60	– 140	– 440	300	3
45	+ 210	+ 50	160	65	– 140	– 440	300	3
50	+ 210	+ 50	160	70	– 150	– 450	300	3
55	+ 250	+ 60	190	78	– 150	– 450	300	3
60	+ 250	+ 60	190	85	– 170	– 520	350	3
65	+ 250	+ 60	190	90	– 170	– 520	350	3
70	+ 250	+ 60	190	95	– 170	– 520	350	4
75	+ 250	+ 60	190	100	– 170	– 520	350	4
80	+ 250	+ 60	190	105	– 180	– 530	350	4
85	+ 292	+ 72	220	110	– 180	– 530	350	4
90	+ 292	+ 72	220	120	– 180	– 530	350	4
100	+ 292	+ 72	220	135	– 200	– 600	400	4
110	+ 292	+ 72	220	145	– 210	– 610	400	4
120	+ 292	+ 72	220	155	– 210	– 610	400	4
130	+ 335	+ 85	250	170	– 230	– 630	400	5
140	+ 335	+ 85	250	180	– 230	– 630	400	5
150	+ 335	+ 85	250	190	– 240	– 700	460	5
160	+ 335	+ 85	250	200	– 240	– 700	460	5

[a] The values in this table give the limits of the difference between $d_{cs\ min}$ and d_c.

[b] The values in this table give the limits of the difference between $D_{cs\ max}$ and D_c.

[c] For needle roller diameter values and gauges, see ISO 3096.