
INTERNATIONAL STANDARD



3030

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

**Needle roller bearings — Needle roller and cage assemblies —
Metric series — Part I : Radial needle roller and cage
assemblies — Boundary dimensions and tolerances**

Roulements à aiguilles — Cages à aiguilles — Séries métriques — Partie I : Cages à aiguilles radiales — Dimensions d'encombrement et 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 3030 was drawn up by Technical Committee ISO/TC 4, *Rolling bearings*, and circulated to the Member Bodies in January 1973.

It has been approved by the Member Bodies of the following countries:

Australia	India	Sweden
Austria	Italy	Switzerland
Belgium	Japan	Thailand
Bulgaria	Mexico	Turkey
Egypt, Arab Rep. of	Netherlands	United Kingdom
France	Poland	U.S.A.
Germany	Romania	U.S.S.R.
Hungary	Spain	

This International Standard has also been approved by the International Union of Railways (UIC).

No Member Body expressed disapproval of the document.

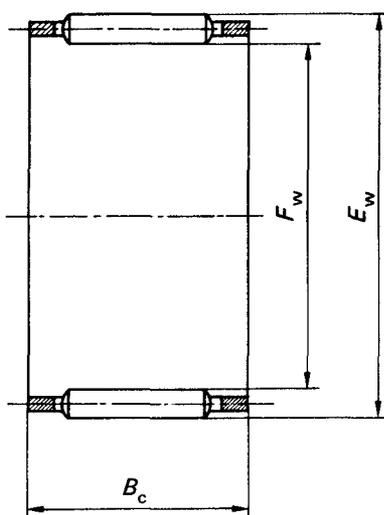
Needle roller bearings – Needle roller and cage assemblies – Metric series – Part I : Radial needle roller and cage assemblies – Boundary dimensions and tolerances

1 SCOPE AND FIELD OF APPLICATION

This International Standard gives a general plan for boundary dimensions for needle roller and cage assemblies, and specifies preferred dimensions to be used.

In addition, it gives the tolerance for the width of cages and method of checking free operation.

2 SYMBOLS



E_w = diameter of a circle circumscribed round the roller set, nominal

F_w = diameter of a circle inscribed inside the roller set, nominal

B_c = cage width, nominal

3 BOUNDARY DIMENSIONS

3.1 General plan

Underlined values are the preferred dimensions shown in tables 3 and 4.

TABLE 1 — Diameter series 1 C and 2 C

Dimensions in millimetres

F_w	Diameter series 1 C								Diameter series 2 C							
	E_w	Dimension series							E_w	Dimension series						
		11 C	21 C	31 C	41 C	51 C	61 C	71 C		12 C	22 C	32 C	42 C	52 C	62 C	72 C
Width B_c								Width B_c								
4	7	6	8	10					9	8	10	13				
<u>5</u>	<u>8</u>	6	<u>8</u>	10	13				10	8	10	13	15			
<u>6</u>	<u>9</u>	6	<u>8</u>	<u>10</u>	13	15			11	8	10	<u>13</u>	15	17		
<u>7</u>	<u>10</u>	6	<u>8</u>	<u>10</u>	13	15	17		12	8	10	13	15	17	20	
<u>8</u>	<u>11</u>	6	8	<u>10</u>	<u>13</u>	15	17		13	8	<u>10</u>	13	15	17	20	
<u>9</u>	<u>12</u>	6	8	<u>10</u>	<u>13</u>	15	17		<u>14</u>	8	10	<u>13</u>	15	17	20	
<u>10</u>	<u>13</u>	6	8	<u>10</u>	<u>13</u>	15	17		<u>16</u>	8	10	<u>13</u>	15	17	20	
<u>12</u>	<u>15</u>	6	8	<u>10</u>	<u>13</u>	15	17									
<u>14</u>	<u>18</u>	8	<u>10</u>	<u>13</u>	15	17	20	23	19	10	13	15	17	20	23	27
<u>15</u>	<u>19</u>	8	<u>10</u>	<u>13</u>	15	17	20	23	20	10	13	15	17	20	23	27
<u>16</u>	<u>20</u>	8	<u>10</u>	<u>13</u>	15	17	20	23	21	10	13	15	17	20	23	27
<u>17</u>	<u>21</u>	8	<u>10</u>	<u>13</u>	15	17	20	23	22	10	13	15	17	20	23	27
<u>18</u>	<u>22</u>	8	<u>10</u>	<u>13</u>	15	17	20	23	23	10	13	15	17	20	23	27
<u>20</u>	<u>24</u>	8	<u>10</u>	<u>13</u>	15	17	20	23	25	10	13	15	17	20	23	27
<u>22</u>	<u>26</u>	8	<u>10</u>	<u>13</u>	15	17	20	23	27	10	13	15	17	20	23	27
<u>25</u>	<u>29</u>	8	<u>10</u>	<u>13</u>	15	17	20	23	30	10	13	15	17	20	23	27
<u>28</u>	<u>33</u>	10	<u>13</u>	15	<u>17</u>	20	23	27	<u>34</u>	12	15	<u>17</u>	20	25	30	35
<u>30</u>	<u>35</u>	10	<u>13</u>	15	<u>17</u>	20	23	27	36	12	15	17	20	25	30	35
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40	45	10	13	15	17	20	23	<u>27</u>	46	12	15	17	20	25	30	35
42	47	10	13	15	17	20	23	27	48	12	15	17	20	25	30	35
<u>45</u>	<u>50</u>	10	13	15	<u>17</u>	20	23	<u>27</u>	51	12	15	17	20	25	30	35
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65	71	12	15	17	20	25	30	35	72	16	20	25	30	35	40	
70	76	12	15	17	20	25	30	35	77	16	20	25	30	35	40	
75	81	12	15	17	20	25	30	35	82	16	20	25	30	35	40	
80	86	12	15	17	20	25	30	35	87	16	20	25	30	35	40	
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