
INTERNATIONAL STANDARD



2982

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

● Rolling bearings — Locknuts, narrow series, and lockwashers with straight inner tab

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Descriptors : Nuts (fasteners), locknuts, washers (spacers), lockwashers, rolling bearings, dimensions.

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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 2982 (originally Draft No. 1979) was drawn up by Technical Committee ISO/TC 4, *Rolling bearings*.

It was approved in October 1971 by the Member Bodies of the following countries :

Australia	India	Spain
Austria	Ireland	Sweden
Belgium	Italy	Switzerland
Canada	Japan	Thailand
Czechoslovakia	Korea, Rep. of	United Kingdom
Egypt, Arab Rep. of	Netherlands	U.S.S.R.
Germany	Romania	
Hungary	South Africa, Rep. of	

The Member Body of the following country expressed disapproval of the document on technical grounds :

France

Rolling bearings — Locknuts, narrow series, and lockwashers with straight inner tab

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies dimensions and tolerances for the following locknuts and lockwashers :

1.1 Locknuts for adapter sleeves in accordance with ISO/R 113, *Rolling bearings — Accessories*, and for axial location of bearing inner rings on shafts. They are also recommended for dismantling of withdrawal sleeves shown in ISO/R 113.

1.2 Lockwashers with straight inner tab for adapter sleeves in accordance with ISO/R 113.

2 DIMENSIONS

The symbols shown in the illustrations and in the tables denote nominal dimensions.

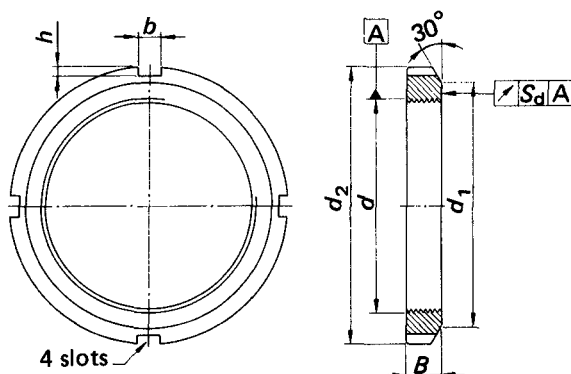


FIGURE 1 — Locknuts

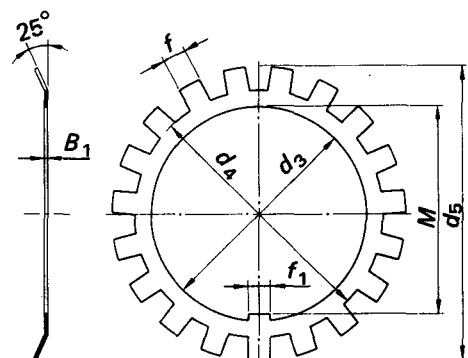


FIGURE 2 — Lockwashers

TABLE 1 – Locknuts

Dimensions in millimetres							
<i>d</i>	Threads 5H	<i>d</i> ₂	<i>d</i> ₁	<i>B</i>	<i>b</i> ¹⁾	<i>h</i>	<i>S</i> _d ²⁾
10	M 10 × 0,75	18	13,5	4	3	2	0,04
12	12 × 1	22	17	4	3	2	
15	15 × 1	25	21	5	4	2	
17	M 17 × 1	28	24	5	4	2	
20	20 × 1	32	26	6	4	2	
22	22 × 1	34	28	6	4	2	
25	M 25 × 1,5	38	32	7	5	2	
28	28 × 1,5	42	36	7	5	2	
30	30 × 1,5	45	38	7	5	2	
32	M 32 × 1,5	48	40	8	5	2	
35	35 × 1,5	52	44	8	5	2	
40	40 × 1,5	58	50	9	6	2,5	
45	M 45 × 1,5	65	56	10	6	2,5	
50	50 × 1,5	70	61	11	6	2,5	
55	55 × 2	75	67	11	7	3	
60	M 60 × 2	80	73	11	7	3	
65	65 × 2	85	79	12	7	3	
70	70 × 2	92	85	12	8	3,5	
75	M 75 × 2	98	90	13	8	3,5	
80	80 × 2	105	95	15	8	3,5	
85	85 × 2	110	102	16	8	3,5	
90	M 90 × 2	120	108	16	10	4	
95	95 × 2	125	113	17	10	4	
100	100 × 2	130	120	18	10	4	
105	M 105 × 2	140	126	18	12	5	
110	110 × 2	145	133	19	12	5	
115	115 × 2	150	137	19	12	5	
120	M 120 × 2	155	138	20	12	5	
125	125 × 2	160	148	21	12	5	
130	130 × 2	165	149	21	12	5	
135	M 135 × 2	175	160	22	14	6	
140	140 × 2	180	160	22	14	6	
145	145 × 2	190	171	24	14	6	
150	M 150 × 2	195	171	24	14	6	
155	155 × 3	200	182	25	16	7	
160	160 × 3	210	182	25	16	7	
165	M 165 × 3	210	193	26	16	7	
170	170 × 3	220	193	26	16	7	
180	180 × 3	230	203	27	18	8	
190	M 190 × 3	240	214	28	18	8	
200	200 × 3	250	226	29	18	8	
220*	Tr 220 × 4	280	250	32	20	10	
240*	Tr 240 × 4	300	270	34	20	10	
260*	Tr 260 × 4	330	300	36	24	12	
280*	Tr 280 × 4	350	320	38	24	12	

TABLE 2 – Lockwashers

Dimensions in millimetres							
<i>d</i> ₃ C11	<i>d</i> ₄	<i>d</i> ₅ ≈	<i>f</i> ₁ ³⁾	<i>M</i> C11	<i>f</i> ₄ ⁴⁾	<i>B</i> ₁ ⁵⁾ ≈	<i>N</i> ₆ ⁶⁾
10	13,5	21	3	8,5	3	1	9
12	17	25	3	10,5	3	1	11
15	21	28	4	13,5	4	1	
17	24	32	4	15,5	4	1	
20	26	36	4	18,5	4	1	13
22	28	38	4	20,5	4	1	
25	32	42	5	23	5	1,25	
28	36	46	5	26	5	1,25	
30	38	49	5	27,5	5	1,25	
32	40	52	5	29,5	5	1,25	
35	44	57	6	32,5	5	1,25	17
40	50	62	6	37,5	6	1,25	
45	56	69	6	42,5	6	1,25	
50	61	74	6	47,5	6	1,25	19
55	67	81	8	52,5	7	1,5	
60	73	86	8	57,5	7	1,5	
65	79	92	8	62,5	7	1,5	
70	85	98	8	66,5	8	1,5	
75	90	104	8	71,5	8	1,5	
80	95	112	10	76,5	8	1,8	17
85	102	119	10	81,5	8	1,8	
90	108	126	10	86,5	10	1,8	
95	113	133	10	91,5	10	1,8	17
100	120	142	12	96,5	10	1,8	
105	126	145	12	100,5	12	1,8	
110	133	154	12	105,5	12	1,8	19
115	137	159	12	110,5	12	2	
120	138	164	14	115	12	2	
125	148	170	14	120	12	2	
130	149	175	14	125	12	2	
135	160	185	14	130	14	2	
140	160	192	16	135	14	2	
145	171	202	16	140	14	2	
150	171	205	16	145	14	2	
155	182	212	16	147,5	16	2,5	19
160	182	217	18	154	16	2,5	
165	193	222	18	157,5	16	2,5	
170	193	232	18	164	16	2,5	19
180	203	242	20	174	18	2,5	
190	214	252	20	184	18	2,5	
200	226	262	20	194	18	2,5	
220	250	292	24	213	20	3	
240	270	312	24	233	20	3	
260	300	342	28	253	24	3	
280	320	362	28	273	24	3	

* Tolerances for trapezoidal threads are not yet established by ISO.

1) Actual single width must be ≥ *b*.

2) Measurement taken at a radius = $\frac{d + d_1}{4}$

3) Actual single width must be ≤ *f*₁.

4) Actual single width must be ≤ *f*.

5) The thickness is approximate only, and small variations are permissible.

6) *N* = minimum number of outer tabs; since the nuts have four slots, *N* must be an odd number.