
International Standard



113/I

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

Rolling bearing accessories — Part I : Tapered sleeves

Accessoires de roulements — Partie I : Manchons coniques

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Descriptors : rolling bearings, accessories, clamping adapter sleeves, dimensions, diameters, taper.

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 113/1 was developed by Technical Committee ISO/TC 4, *Rolling bearings*.

It was submitted directly to the ISO Council, in accordance with clause 6.13.1 of the Directives for the technical work of ISO. It cancels and replaces clause 1 of ISO Recommendation R 113-1969, which had been approved by the member bodies of the following countries :

| | | |
|---------------------|-------------|----------------|
| Australia | Hungary | Sweden |
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| Canada | Japan | United Kingdom |
| Czechoslovakia | Netherlands | USA |
| Egypt, Arab Rep. of | Poland | Yugoslavia |
| France | Romania | |
| Germany, F.R. | Spain | |

No member body had expressed disapproval of the document.

Rolling bearing accessories — Part I : Tapered sleeves

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies :

- boundary dimensions of adapter sleeves and withdrawal sleeves for rolling bearings of a number of dimension series;
- the outside diameter of suitable locknuts.

Dimensions of locknuts and lockwashers for the adapter sleeves (except those locknuts covered by note 1 to table 1)

are given in ISO 2982. These locknuts are also recommended for the dismounting of the withdrawal sleeves.

2 REFERENCE

ISO 2982, *Rolling bearings — Locknuts, narrow series, and lockwashers with straight inner tab.*

3 SYMBOLS

See below.

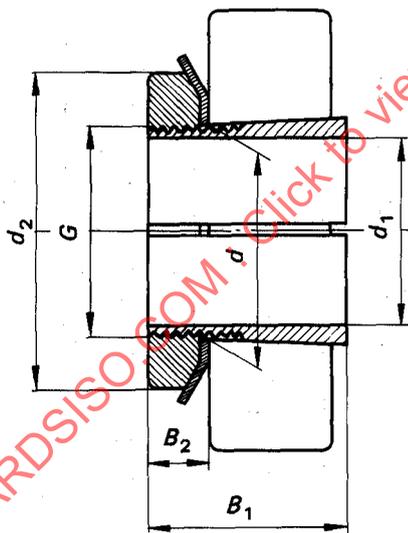


FIGURE 1 — Adapter sleeve

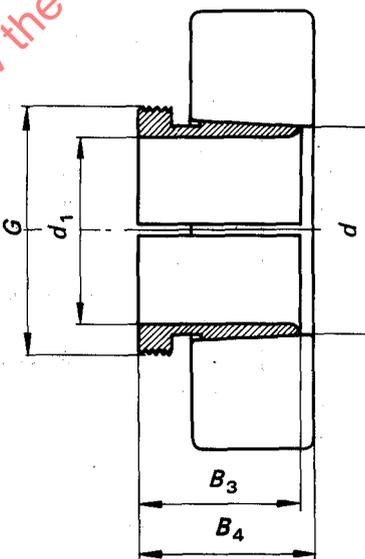


FIGURE 2 — Withdrawal sleeve

d = Bearing bore diameter, nominal

d_1 = Sleeve bore diameter, nominal

d_2 = Nut outside diameter

B_1 = Length of adapter sleeve

B_2 = Adapter sleeve nominal projection beyond bearing small bore face

B_3 = Length of withdrawal sleeve

B_4 = Overall length of withdrawal sleeve and bearing ring

G = Thread dimensions

4 ADAPTER SLEEVES WITH TAPER 1 : 12

TABLE 1 — Dimensions of adapter sleeves with taper 1 : 12

Dimensions in millimetres

| d | d ₁ | B ₂ | d ₂ | B ₁ | | | | | G |
|-----|----------------|----------------|------------------------------|--|-----------|----------------|--|--------|-----------|
| | | | | suitable for bearing dimension series | | | | | |
| | | | | 02 | 22 and 03 | 31 | 32 | 23 | |
| 15 | 12 | 6 | 25 | 19 | 22 | — | — | 25 | M15X1 |
| 17 | 14 | 6 | 28 | 20 | 24 | — | — | 27 | M17X1 |
| 20 | 17 | 7 | 32 | 24 | 28 | — | — | 31 | M20X1 |
| 25 | 20 | 8 | 38 | 26 | 29 | — | — | 35 | M25X1,5 |
| 30 | 25 | 8 | 45 | 27 | 31 | — | — | 38 | M30X1,5 |
| 35 | 30 | 9 | 52 | 29 | 35 | — | — | 43 | M35X1,5 |
| 40 | 35 | 10 | 58 | 31 | 36 | — | — | 46 | M40X1,5 |
| 45 | 40 | 11 | 65 | 33 | 39 | — | — | 50 | M45X1,5 |
| 50 | 45 | 12 | 70 | 35 | 42 | — | — | 55 | M50X1,5 |
| 55 | 50 | 12 | 75 | 37 | 45 | — | — | 59 | M55X2 |
| 60 | 55 | 13 | 80 | 38 | 47 | — | — | 62 | M60X2 |
| 65 | 60 | 14 | 85 | 40 | 50 | — | — | 65 | M65X2 |
| 70 | 60 | 14 | 92 | 41 | 52 | — | — | 68 | M70X2 |
| 75 | 65 | 15 | 98 | 43 | 55 | — | — | 73 | M75X2 |
| 80 | 70 | 17 | 105 | 46 | 59 | — | — | 78 | M80X2 |
| 85 | 75 | 18 | 110 | 50 | 63 | — | — | 82 | M85X2 |
| 90 | 80 | 18 | 120 | 52 | 65 | — | 86 | 86 | M90X2 |
| 95 | 85 | 19 | 125 | 55 | 68 | — | 90 | 90 | M95X2 |
| 100 | 90 | 20 | 130 | 58 | 71 | 76 | 97 | 97 | M100X2 |
| 105 | 95 | 20 | 140 | 60 | 74 | 80 | 101 | 101 | M105X2 |
| 110 | 100 | 21 | 145 | 63 | 77 | 81 | 105 | 105 | M110X2 |
| | | | d ₂ ¹⁾ | B ₁ | | d ₂ | B ₁ | | |
| | | | | suitable for bearing dimension series 30, 02 and 12 | | | suitable for bearing dimension series 31, 22 03 and 13 | | 32 and 23 |
| 120 | 110 | 22 | 145 | 72 | 155 | 88 | 112 | M120X2 | |
| 130 | 115 | 23 | 155 | 80 | 165 | 92 | 121 | M130X2 | |
| 140 | 125 | 24 | 165 | 82 | 180 | 97 | 131 | M140X2 | |
| 150 | 135 | 26 | 180 | 87 | 195 | 111 | 139 | M150X2 | |
| 160 | 140 | 28 | 190 | 93 | 210 | 119 | 147 | M160X3 | |
| 170 | 150 | 29 | 200 | 101 | 220 | 122 | 154 | M170X3 | |
| 180 | 160 | 30 | 210 | 109 | 230 | 131 | 161 | M180X3 | |
| 190 | 170 | 31 | 220 | 112 | 240 | 141 | 169 | M190X3 | |
| 200 | 180 | 32 | 240 | 120 | 250 | 150 | 176 | M200X3 | |

1) Corresponding nuts are not standardized by ISO.