

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION

R 355

PART II

iTeh STANDARD PREVIEW

ROLLING BEARINGS

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TAPERED ROLLER BEARINGS

BOUNDARY DIMENSIONS

<https://standards.iteh.ai/catalog/standards/sist/2c7ce543-b9d6-483d-950b-134b721ecad6/iso-r-355-2-1965>

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BRIEF HISTORY

The ISO Recommendation R 355, *Rolling Bearings. Tapered Roller Bearings, Boundary Dimensions, Part II*, was drawn up by Technical Committee ISO/TC 4, *Rolling Bearings*, the Secretariat of which is held by the Sveriges Standardiseringskommission (SIS).

Work on this question by the Technical Committee began in 1958 and led, in 1961, to the adoption of a Draft ISO Recommendation.

In January 1963, this Draft ISO Recommendation (No. 472) was circulated to all the ISO Member Bodies for enquiry. It was approved by the following Member Bodies:

| | | |
|----------------|-------------|----------------|
| Australia | Greece | Spain |
| Austria | Hungary | Sweden |
| Belgium | India | Switzerland |
| Canada | Italy | Turkey |
| Chile | Japan | United Kingdom |
| Czechoslovakia | Netherlands | U.S.S.R. |
| France | Poland | Yugoslavia |
| Germany | Romania | |

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No Member Body opposed the approval of the Draft
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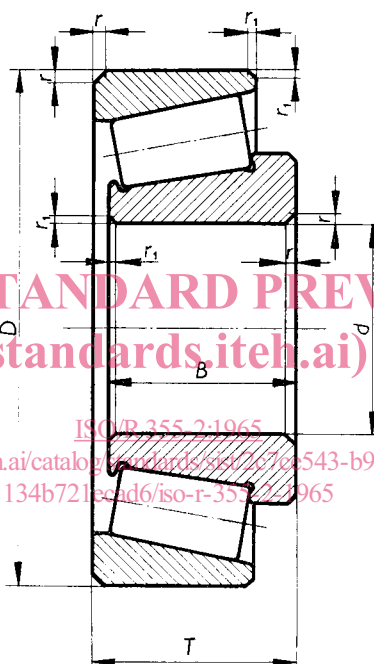
The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in December 1965, to accept it as an ISO RECOMMENDATION.

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ROLLING BEARINGS
TAPERED ROLLER BEARINGS
BOUNDARY DIMENSIONS

PART II

1. METRIC SERIES: EXTENSION OF DIAMETER SERIES 2 AND 3



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d = bearing bore diameter

D = bearing outside diameter

B = inner ring width

T = bearing width* (width over bearing rings)

r = chamfer dimension** (height and width) on inner and outer ring back faces

r_1 = chamfer dimension** (height and width) on inner and outer ring front faces

* Attention is called to the fact that the cage may project beyond the bearing width.

** Nominal chamfer dimensions do not control the shape of the bearing corner.

1.1 Diameter Series 2

1.1.1 Dimensions in millimetres

| Bore diameter d | Outside diameter D | Dimension series | | | | Chamfers | |
|----------------------|-------------------------|-------------------------|----------------------|-------------------------|----------------------|----------------|------------------|
| | | 02 | | 22 | | r nominal | r_1 nominal |
| | | Inner ring width B | Bearing width T | Inner ring width B | Bearing width T | | |
| 120 | 215 | 40 | 43.5 | — | — | 3.5 | 1.2 |
| 130 | 230 | 40 | 43.75 | — | — | 4 | 1.5 |
| 140 | 250 | 42 | 45.75 | — | — | 4 | 1.5 |
| 150 | 270 | 45 | 49 | — | — | 4 | 1.5 |
| 160 | 290 | 48 | 52 | 80 | 84 | 4 | 1.5 |
| 170 | 310 | 52 | 57 | 86 | 91 | 5 | 2 |
| 180 | 320 | 52 | 57 | 86 | 91 | 5 | 2 |
| 190 | 340 | 55 | 60 | 92 | 97 | 5 | 2 |
| 200 | 360 | 58 | 64 | 98 | 104 | 5 | 2 |
| 220 | 400 | 65 | 72 | 108 | 114 | 5 | 2 |
| 240 | 440 | 72 | 79 | 120 | 127 | 5 | 2 |
| 260 | 480 | 80 | 89 | — | — | 6 | 2.5 |
| 280 | 500 | 80 | 89 | — | — | 6 | 2.5 |
| 300 | 540 | 85 | 96 | — | — | 6 | 2.5 |
| 320 | 580 | 92 | 104 | — | — | 6 | 2.5 |

1.1.2 Dimensions in inches

| Bore diameter <i>d</i> | Outside diameter <i>D</i> | Dimension series | | | | Chamfers | |
|---------------------------|------------------------------|------------------------------|---------------------------|------------------------------|---------------------------|---------------------|----------------------------------|
| | | 02 | | 22 | | <i>r</i> nominal | <i>r</i> ₁ nominal |
| | | Inner ring width <i>B</i> | Bearing width <i>T</i> | Inner ring width <i>B</i> | Bearing width <i>T</i> | | |
| 4.724 41 | 8.464 57 | 1.574 8 | 1.712 6 | — | — | 0.138 | 0.047 |
| 5.118 11 | 9.055 12 | 1.574 8 | 1.722 4 | — | — | 0.157 | 0.059 |
| 5.511 81 | 9.842 52 | 1.653 5 | 1.801 2 | — | — | 0.157 | 0.059 |
| 5.905 51 | 10.629 92 | 1.771 7 | 1.929 1 | — | — | 0.157 | 0.059 |
| 6.299 21 | 11.417 32 | 1.889 8 | 2.047 2 | 3.149 6 | 3.307 1 | 0.157 | 0.059 |
| 6.692 91 | 12.204 72 | 2.047 2 | 2.244 1 | 3.385 8 | 3.582 7 | 0.197 | 0.079 |
| 7.086 61 | 12.598 43 | 2.047 2 | 2.244 1 | 3.385 8 | 3.582 7 | 0.197 | 0.079 |
| 7.480 31 | 13.385 83 | 2.165 4 | 2.362 2 | 3.622 0 | 3.818 9 | 0.197 | 0.079 |
| 7.874 02 | 14.173 23 | 2.283 5 | 2.519 7 | 3.858 3 | 4.094 5 | 0.197 | 0.079 |
| 8.661 42 | 15.748 03 | 2.559 1 | 2.834 6 | 4.252 0 | 4.488 2 | 0.197 | 0.079 |
| 9.448 82 | 17.322 83 | 2.834 6 | 3.110 2 | 4.724 4 | 5.000 0 | 0.197 | 0.079 |
| 10.236 22 | 18.897 64 | 3.149 6 | 3.503 9 | — | — | 0.236 | 0.098 |
| 11.023 62 | 19.685 04 | 3.149 6 | 3.503 9 | — | — | 0.236 | 0.098 |
| 11.811 02 | 21.259 84 | 3.346 5 | 3.779 5 | — | — | 0.236 | 0.098 |
| 12.598 43 | 22.834 65 | 3.622 0 | 4.094 5 | — | — | 0.236 | 0.098 |

1.2 Diameter series 3

1.2.1 Dimensions in millimetres

| Bore diameter <i>d</i> | Outside diameter <i>D</i> | Dimension series | | | | Chamfers | |
|---------------------------|------------------------------|------------------------------|---------------------------|------------------------------|---------------------------|---------------------|----------------------------------|
| | | 03 | | 13 | | <i>r</i> nominal | <i>r</i> _s nominal |
| | | Inner ring width <i>B</i> | Bearing width <i>T</i> | Inner ring width <i>B</i> | Bearing width <i>T</i> | | |
| 100 | 215 | 47 | 51.5 | 51 | 56.5 | 4 | 1.5 |
| 105 | 225 | 49 | 53.5 | 53 | 58 | 4 | 1.5 |
| 110 | 240 | 50 | 54.5 | 57 | 63 | 4 | 1.5 |
| 120 | 260 | 55 | 59.5 | 62 | 68 | 4 | 1.5 |
| 130 | 280 | 58 | 63.75 | 66 | 72 | 5 | 2 |
| 140 | 300 | 62 | 67.75 | 70 | 77 | 5 | 2 |
| 150 | 320 | 65 | 72 | 75 | 82 | 5 | 2 |
| 160 | 340 | 68 | 75 | 79 | 87 | 5 | 2 |
| 170 | 360 | 72 | 80 | 84 | 92 | 5 | 2 |
| 180 | 380 | 75 | 83 | 88 | 97 | 5 | 2 |
| 190 | 400 | 78 | 86 | 92 | 101 | 6 | 2.5 |
| 200 | 420 | 80 | 89 | 97 | 107 | 6 | 2.5 |
| 220 | 460 | 88 | 97 | 106 | 117 | 6 | 2.5 |
| 240 | 500 | 95 | 105 | 114 | 125 | 6 | 2.5 |
| 260 | 540 | 102 | 113 | 123 | 135 | 8 | 3.5 |
| 280 | 580 | 108 | 119 | 132 | 145 | 8 | 3.5 |
| 300 | 620 | — | — | 140 | 154 | 10 | 3.5 |

1.2.2 Dimensions in inches

| Bore diameter <i>d</i> | Outside diameter <i>D</i> | Dimension series | | | | Chamfers | |
|---------------------------|------------------------------|------------------------------|---------------------------|------------------------------|---------------------------|---------------------|----------------------------------|
| | | 03 | | 13 | | <i>r</i> nominal | <i>r</i> ₁ nominal |
| | | Inner ring width <i>B</i> | Bearing width <i>T</i> | Inner ring width <i>B</i> | Bearing width <i>T</i> | | |
| 3.937 01 | 8.464 57 | 1.850 4 | 2.027 6 | 2.007 9 | 2.224 4 | 0.157 | 0.059 |
| 4.133 86 | 8.858 27 | 1.929 1 | 2.106 3 | 2.086 6 | 2.283 5 | 0.157 | 0.059 |
| 4.330 71 | 9.448 82 | 1.968 5 | 2.145 7 | 2.244 1 | 2.480 3 | 0.157 | 0.059 |
| 4.724 41 | 10.236 22 | 2.165 4 | 2.342 5 | 2.440 9 | 2.677 2 | 0.157 | 0.059 |
| 5.118 11 | 11.023 62 | 2.283 5 | 2.509 8 | 2.598 4 | 2.834 6 | 0.197 | 0.079 |
| 5.511 81 | 11.811 02 | 2.440 9 | 2.667 3 | 2.755 9 | 3.031 5 | 0.197 | 0.079 |
| 5.905 51 | 12.598 43 | 2.559 1 | 2.834 6 | 2.952 8 | 3.228 3 | 0.197 | 0.079 |
| 6.299 21 | 13.385 83 | 2.677 2 | 2.952 8 | 3.110 2 | 3.425 2 | 0.197 | 0.079 |
| 6.692 91 | 14 173 23 | 2.834 6 | 3.149 6 | 3.307 1 | 3.622 0 | 0.197 | 0.079 |
| 7.086 61 | 14.960 63 | 2.952 8 | 3.267 7 | 3.464 6 | 3.818 9 | 0.197 | 0.079 |
| 7.480 31 | 15.748 03 | 3.070 9 | 3.385 8 | 3.622 0 | 3.976 4 | 0.236 | 0.098 |
| 7.874 02 | 16.535 43 | 3.149 6 | 3.503 9 | 3.818 9 | 4.212 6 | 0.236 | 0.098 |
| 8.661 42 | 18.110 24 | 3.464 6 | 3.818 9 | 4.173 2 | 4.606 3 | 0.236 | 0.098 |
| 9.448 82 | 19.685 04 | 3.740 2 | 4.133 9 | 4.488 2 | 4.921 3 | 0.236 | 0.098 |
| 10.236 22 | 21.259 84 | 4.015 7 | 4.448 8 | 4.842 5 | 5.315 0 | 0.315 | 0.138 |
| 11.023 62 | 22.834 65 | 4.252 0 | 4.685 0 | 5.196 9 | 5.708 7 | 0.315 | 0.138 |
| 11.811 02 | 24.409 45 | — | — | 5.511 8 | 6.063 0 | 0.394 | 0.138 |

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