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# Metric tapered roller bearings — Double row bearings — Boundary dimensions

## ADDENDUM 1

Addendum 1 to International Standard ISO 355-1977 was developed by Technical Committee ISO/TC 4, *Rolling bearings*, and was circulated to the member bodies in March 1979.

It has been approved by the member bodies of the following countries :

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| Australia           | Hungary                | Romania               |
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No member body expressed disapproval of the document

## 1 Scope and field of application

This Addendum to ISO 355 specifies bearing width and cup width for double row metric tapered roller bearings.

Other boundary dimensions, which are identical to those of single row bearings of the same dimension series and with the same bearing bore diameter, are given in ISO 355. Tolerances are given in ISO/R 492 and ISO 582.

## 2 References

ISO 355, *Rolling bearings — Metric tapered roller bearings — Boundary dimensions and series designations.*

ISO/R 492, *Rolling bearings — Radial bearings — Tolerances.*

ISO 582, *Rolling bearings — Metric series bearings — Chamfer dimension limits.*

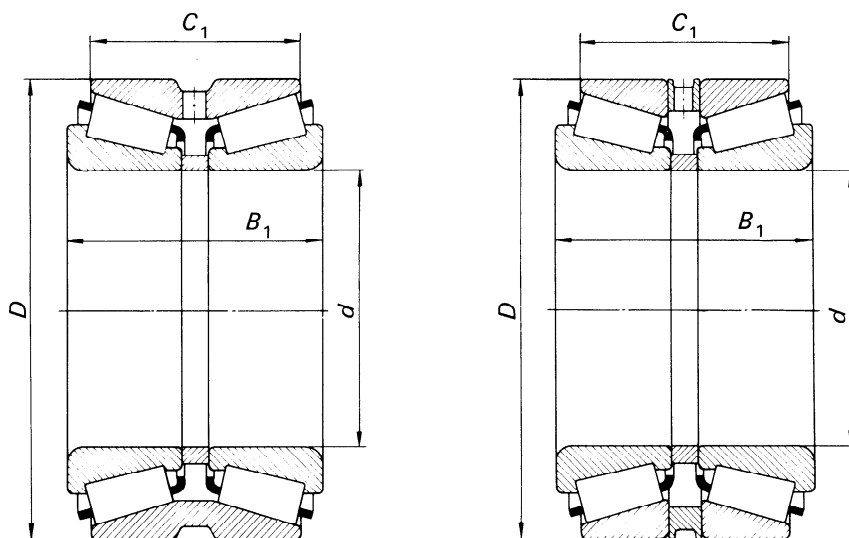
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**Descriptors** : rolling bearings, roller bearings, taper roller bearings, specifications, dimensions, designations.

Price based on 6 pages

### 3 Symbols



- $d$  = bearing bore diameter, nominal
- $D$  = bearing outside diameter, nominal
- $B_1$  = bearing width, nominal
- $C_1$  = double cup width or width over two single cups and spacer, nominal

The double row bearing cup or cup spacer may, or may not, have a lubrication groove and holes as identified by the bearing designation.

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### 4 Bearing dimensions

Tables 1 to 4 give  $B_1$  and  $C_1$  for double row metric tapered roller bearings grouped by contact angle series.

The bearing outside diameter  $D$  and the dimension series designation, also included in the tables, are identical to those of the corresponding single row bearing in ISO 355.

Table 1 – Contact angle series 2

| Dimensions in millimetres |          |                       |                       |                  | Dimensions in millimetres |          |                       |                       |                  |
|---------------------------|----------|-----------------------|-----------------------|------------------|---------------------------|----------|-----------------------|-----------------------|------------------|
| <i>d</i>                  | <i>D</i> | <i>B</i> <sub>1</sub> | <i>C</i> <sub>1</sub> | Dimension series | <i>d</i>                  | <i>D</i> | <i>B</i> <sub>1</sub> | <i>C</i> <sub>1</sub> | Dimension series |
| 20                        | 45       | 39                    | 32                    | 2DC              | 95                        | 140      | 64                    | 54                    | 2CC              |
|                           | 50       | 50                    | 43                    | 2ED              |                           | 145      | 76                    | 64                    | 64               |
| 22                        | 47       | 39                    | 32                    | 2CC              | 100                       | 160      | 104                   | 88                    | 2ED              |
|                           | 52       | 50                    | 43                    | 2ED              |                           | 145      | 64                    | 54                    | 2DC              |
| 25                        | 50       | 39                    | 32                    | 2CC              |                           | 150      | 76                    | 64                    | 2CD              |
|                           | 58       | 58                    | 48                    | 2EE              | 165                       | 104      | 88                    | 2EE                   |                  |
| 28                        | 55       | 43                    | 36                    | 2CD              | 105                       | 155      | 74                    | 62                    | 2CD              |
|                           | 65       | 61                    | 51                    | 2ED              |                           | 160      | 84                    | 70                    | 2DD              |
| 30                        | 58       | 44                    | 37                    | 2CD              |                           | 170      | 104                   | 88                    | 2EE              |
|                           | 68       | 65                    | 55                    | 2EE              | 110                       | 160      | 74                    | 62                    | 2CD              |
| 32                        | 62       | 47                    | 39                    | 2CD              |                           | 165      | 84                    | 70                    | 2DD              |
|                           | 72       | 65                    | 55                    | 2ED              |                           | 175      | 104                   | 88                    | 2EE              |
| 35                        | 68       | 51                    | 42                    | 2DD              | 120                       | 175      | 82                    | 68                    | 2DC              |
|                           | 78       | 61                    | 61                    | 2EE              |                           | 180      | 92                    | 76                    | 2DD              |
| 40                        | 75       | 53                    | 44                    | 2CD              |                           | 190      | 110                   | 92                    | 2EE              |
|                           | 85       | 73                    | 63                    | 2EE              | 130                       | 185      | 82                    | 68                    | 2DC              |
| 45                        | 80       | 53                    | 44                    | 2CD              |                           | 190      | 92                    | 76                    | 2DD              |
|                           | 95       | 79                    | 67                    | 2ED              |                           | 200      | 110                   | 92                    | 2DE              |
| 50                        | 85       | 53                    | 44                    | 2CD              | 140                       | 200      | 88                    | 72                    | 2DC              |
|                           | 100      | 79                    | 67                    | 2ED              |                           | 205      | 98                    | 82                    | 2DD              |
| 55                        | 85       | 41                    | 33                    | 2CC              |                           | 215      | 116                   | 98                    | 2ED              |
|                           | 95       | 60                    | 49                    | 2CD              | 150                       | 215      | 98                    | 82                    | 2DD              |
| 110                       | 87       | 73                    | 2ED                   | 225              |                           | 116      | 98                    | 2ED                   |                  |
| 60                        | 90       | 42                    | 34                    | 2CC              |                           | 160      | 225                   | 98                    | 82               |
|                           | 100      | 60                    | 49                    | 2CD              | 235                       |          | 116                   | 98                    | 2ED              |
|                           | 115      | 88                    | 74                    | 2EE              | 170                       | 235      | 98                    | 82                    | 2DD              |
| 65                        | 100      | 50                    | 41                    | 2CC              |                           | 245      | 116                   | 98                    | 2ED              |
|                           | 110      | 70                    | 58                    | 2DD              | 180                       | 240      | 88                    | 72                    | 2DC              |
|                           | 125      | 95                    | 79                    | 2FD              |                           | 245      | 98                    | 82                    | 2DD              |
| 70                        | 105      | 50                    | 41                    | 2CC              |                           | 255      | 116                   | 98                    | 2ED              |
|                           | 120      | 76                    | 62                    | 2DD              | 190                       | 255      | 92                    | 76                    | 2DC              |
|                           | 130      | 95                    | 79                    | 2ED              |                           | 260      | 104                   | 86                    | 2DD              |
| 75                        | 115      | 56                    | 46                    | 2CC              |                           | 270      | 124                   | 104                   | 2ED              |
|                           | 125      | 76                    | 62                    | 2DD              | 200                       | 265      | 92                    | 76                    | 2DC              |
|                           | 135      | 95                    | 79                    | 2ED              |                           | 270      | 104                   | 86                    | 2DD              |
| 80                        | 120      | 56                    | 46                    | 2CC              |                           | 280      | 124                   | 104                   | 2ED              |
|                           | 130      | 76                    | 62                    | 2DD              | 220                       | 285      | 92                    | 76                    | 2DC              |
|                           | 145      | 104                   | 88                    | 2ED              |                           | 290      | 104                   | 86                    | 2DD              |
| 85                        | 125      | 58                    | 48                    | 2CC              |                           | 300      | 124                   | 104                   | 2ED              |
|                           | 135      | 76                    | 64                    | 2DD              | 240                       | 265      | 92                    | 76                    | 2DC              |
|                           | 150      | 104                   | 88                    | 2ED              |                           | 270      | 104                   | 86                    | 2DD              |
| 90                        | 135      | 64                    | 54                    | 2CC              |                           | 320      | 126                   | 104                   | 2EE              |
|                           | 140      | 76                    | 64                    | 2CD              | 260                       | 325      | 92                    | 76                    | 2DC              |
|                           | 155      | 104                   | 88                    | 2ED              |                           | 330      | 104                   | 86                    | 2DD              |
| 95                        | 140      | 64                    | 54                    | 2CC              |                           | 340      | 126                   | 104                   | 2DE              |
|                           | 145      | 76                    | 64                    | 2CD              | 280                       | 360      | 126                   | 104                   | 2DE              |
|                           | 160      | 104                   | 88                    | 2ED              |                           |          |                       |                       |                  |

**Table 2 – Contact angle series 3**

Dimensions in millimetres

| $d$ | $D$ | $B_1$ | $C_1$ | Dimension series |
|-----|-----|-------|-------|------------------|
| 20  | 42  | 34    | 28    | 3CC              |
| 22  | 44  | 34    | 27    | 3CC              |
| 40  | 68  | 44    | 35    | 3CD              |
| 45  | 75  | 46    | 37    | 3CC              |
| 50  | 80  | 46    | 37    | 3CC              |
| 55  | 90  | 52    | 41    | 3CC              |
| 65  | 135 | 112   | 94    | 3FE              |
| 75  | 145 | 112   | 94    | 3FE              |
| 80  | 125 | 66    | 52    | 3CC              |
| 85  | 160 | 118   | 98    | 3FE              |
| 90  | 140 | 73    | 57    | 3CC              |
| 110 | 190 | 126   | 104   | 3FE              |
| 130 | 210 | 126   | 104   | 3EE              |
| 150 | 235 | 132   | 110   | 3EE              |
| 170 | 255 | 132   | 110   | 3EE              |
| 180 | 280 | 142   | 110   | 3FD              |
| 190 | 280 | 140   | 116   | 3EE              |

Table 3 – Contact angle series 4

Dimensions in millimetres

Dimensions in millimetres

| <i>d</i> | <i>D</i> | <i>B</i> <sub>1</sub> | <i>C</i> <sub>1</sub> | Dimension series |
|----------|----------|-----------------------|-----------------------|------------------|
| 25       | 47       | 34                    | 27                    | 4CC              |
| 28       | 52       | 37                    | 29                    | 4CC              |
| 30       | 55       | 39                    | 31                    | 4CC              |
| 32       | 58       | 39                    | 31                    | 4CC              |
| 35       | 62       | 41                    | 33                    | 4CC              |
| 50       | 105      | 88                    | 74                    | 4FE              |
| 55       | 115      | 95                    | 81                    | 4FE              |
| 60       | 95       | 52                    | 41                    | 4CC              |
| 60       | 125      | 104                   | 88                    | 4FE              |
| 65       | 100      | 52                    | 41                    | 4CC              |
| 70       | 110      | 57                    | 45                    | 4CC              |
| 70       | 140      | 112                   | 94                    | 4FE              |
| 75       | 115      | 58                    | 46                    | 4CC              |
| 80       | 150      | 112                   | 94                    | 4FE              |
| 85       | 130      | 67                    | 53                    | 4CC              |
| 90       | 165      | 120                   | 100                   | 4FE              |
| 95       | 145      | 73                    | 57                    | 4CC              |
| 95       | 170      | 120                   | 100                   | 4FE              |
| 100      | 150      | 73                    | 57                    | 4CC              |
| 100      | 175      | 120                   | 100                   | 4FE              |
| 105      | 160      | 80                    | 62                    | 4DC              |
| 105      | 180      | 120                   | 100                   | 4EE              |

| <i>d</i> | <i>D</i> | <i>B</i> <sub>1</sub> | <i>C</i> <sub>1</sub> | Dimension series |
|----------|----------|-----------------------|-----------------------|------------------|
| 110      | 170      | 86                    | 68                    | 4DC              |
| 120      | 180      | 88                    | 70                    | 4DC              |
| 120      | 200      | 126                   | 104                   | 4FE              |
| 130      | 200      | 102                   | 80                    | 4EC              |
| 140      | 210      | 104                   | 82                    | 4DC              |
| 140      | 220      | 126                   | 104                   | 4EE              |
| 150      | 225      | 110                   | 86                    | 4EC              |
| 160      | 240      | 116                   | 90                    | 4EC              |
| 160      | 245      | 132                   | 110                   | 4EE              |
| 170      | 260      | 128                   | 100                   | 4EC              |
| 180      | 265      | 132                   | 110                   | 4EE              |
| 190      | 290      | 142                   | 110                   | 4FD              |
| 200      | 290      | 140                   | 116                   | 4EE              |
| 200      | 310      | 154                   | 120                   | 4FD              |
| 220      | 340      | 166                   | 128                   | 4FD              |
| 240      | 360      | 166                   | 128                   | 4FD              |
| 260      | 400      | 190                   | 146                   | 4FC              |
| 280      | 420      | 190                   | 146                   | 4FC              |
| 300      | 460      | 220                   | 168                   | 4GD              |
| 320      | 480      | 220                   | 168                   | 4GD              |

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**Table 4 — Contact angle series 7**

Dimensions in millimetres

| $d$ | $D$        | $B_1$      | $C_1$      | Dimension series |
|-----|------------|------------|------------|------------------|
| 25  | 62         | 42         | 31,5       | 7FB              |
| 30  | 72         | 47         | 33,5       | 7FB              |
| 35  | 80         | 51         | 35,5       | 7FB              |
| 40  | 90         | 56         | 39,5       | 7FB              |
| 45  | 95<br>100  | 63<br>60   | 45<br>41,5 | 7FC<br>7FB       |
| 50  | 105<br>110 | 69<br>64   | 49<br>43,5 | 7FC<br>7FB       |
| 55  | 115<br>120 | 73<br>70   | 52<br>49   | 7FC<br>7FB       |
| 60  | 125<br>130 | 79<br>74   | 57<br>51   | 7FC<br>7FB       |
| 65  | 130<br>140 | 79<br>79   | 57<br>53   | 7FC<br>7GB       |
| 70  | 140<br>150 | 83<br>83   | 59<br>57   | 7FC<br>7GB       |
| 75  | 150<br>160 | 89<br>88   | 63<br>60   | 7FC<br>7GB       |
| 80  | 160<br>170 | 95<br>94   | 67<br>63   | 7FC<br>7GB       |
| 85  | 170<br>180 | 102<br>99  | 72<br>66   | 7FC<br>7GB       |
| 90  | 175<br>190 | 102<br>103 | 72<br>70   | 7FC<br>7GB       |
| 95  | 180<br>200 | 104<br>109 | 72<br>74   | 7FC<br>7GB       |
| 100 | 190<br>215 | 110<br>124 | 76<br>81   | 7FC<br>7GB       |
| 105 | 200<br>225 | 114<br>127 | 80<br>83   | 7FC<br>7GB       |
| 110 | 210<br>240 | 120<br>137 | 84<br>87   | 7GC<br>7GB       |
| 120 | 220<br>260 | 120<br>148 | 84<br>96   | 7FC<br>7GB       |
| 130 | 230<br>280 | 120<br>156 | 84<br>100  | 7FC<br>7GB       |
| 140 | 240<br>300 | 120<br>168 | 84<br>108  | 7FC<br>7GB       |
| 150 | 250<br>320 | 120<br>178 | 84<br>114  | 7FC<br>7GB       |

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