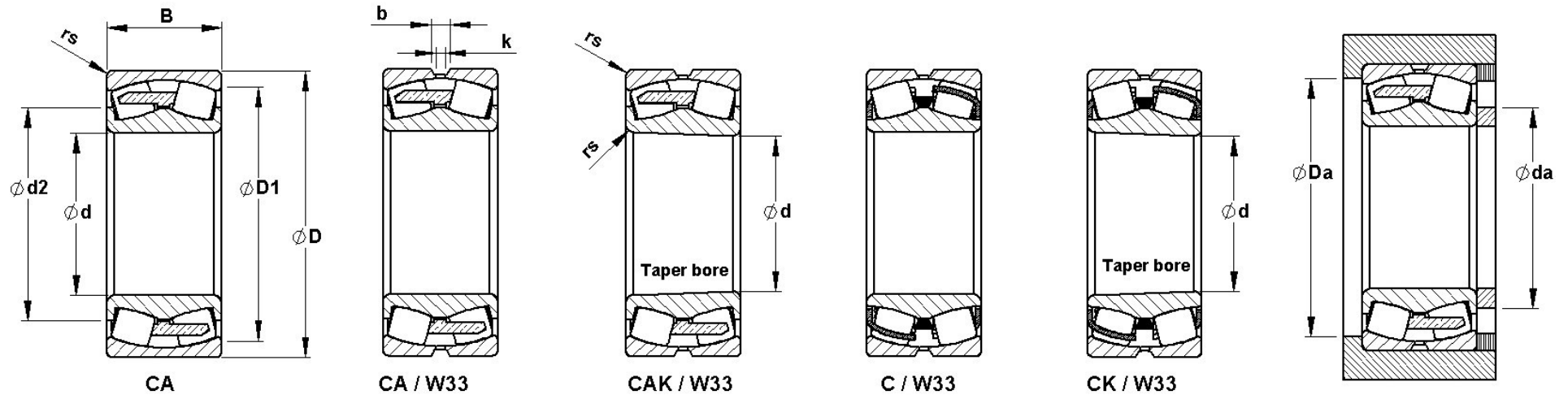


# Spherical Roller Bearings

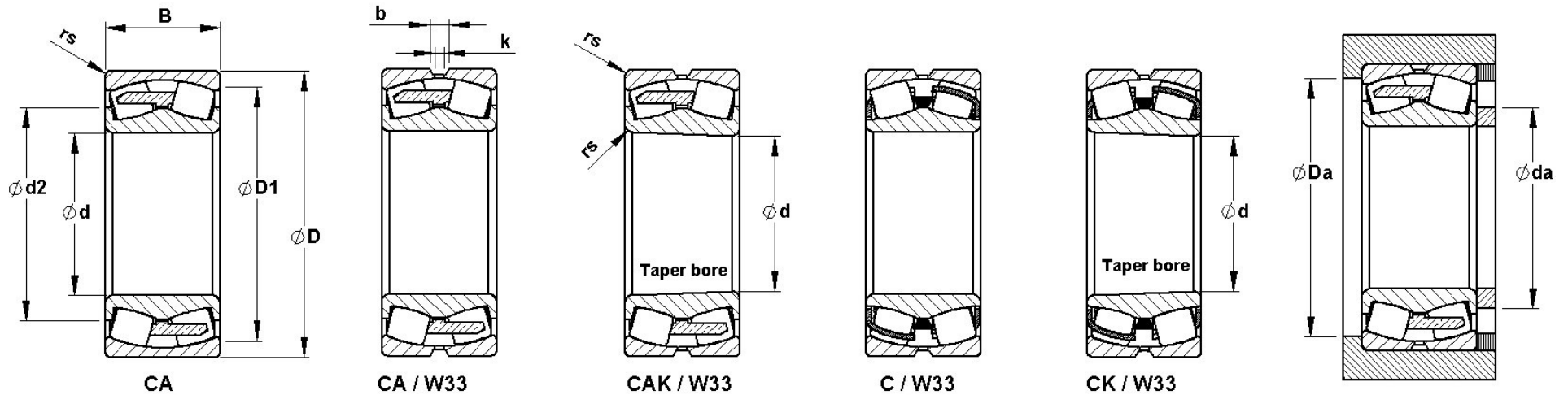
d 30 to 50 mm



| Dimensions in mm |     |    |                     | Basic Load Rating - KN |          | Limit speed ratings- RPM |      | Part Number | Mating and Fillet Dimensions in mm |       |      |     |             |             | Calculation Factor |      |       |       | Weight Kg |       |       |
|------------------|-----|----|---------------------|------------------------|----------|--------------------------|------|-------------|------------------------------------|-------|------|-----|-------------|-------------|--------------------|------|-------|-------|-----------|-------|-------|
| d                | D   | B  | $r_{s \text{ min}}$ | $C_r$                  | $C_{or}$ | Grease                   | Oil  |             | $d_2$                              | $D_1$ | b    | k   | $d_a$ (min) | $D_a$ (max) | $r_a$ (max)        | e    | $y_1$ | $y_2$ |           | $y_0$ |       |
| 30               | 68  | 20 | 1                   | 51                     | 54       | 6000                     | 7500 | 22206X1CAN  |                                    | 41    | 52.3 |     | 37          | 60          | 1                  | 0.32 | 2.09  | 3.11  | 2.04      | 0.384 |       |
| 40               | 80  | 23 | 1.1                 | 77.5                   | 88.5     | 6000                     | 7500 | 22208C      | 22208C/W33                         | 50.4  | 68.9 | 5.5 | 2           | 47          | 73                 | 1    | 0.28  | 2.40  | 3.50      | 2.50  | 0.523 |
|                  | 80  | 23 | 1.1                 | 77.5                   | 88.5     | 6000                     | 7500 | 22208CK     | 22208CK/W33                        | 50.4  | 68.9 | 5.5 | 2           | 47          | 73                 | 1    | 0.28  | 2.40  | 3.50      | 2.50  | 0.521 |
|                  | 90  | 33 | 1.5                 | 116                    | 130      | 4500                     | 5600 | 22308CA     | 22308CA/W33                        | 56    | 74   | 5.5 | 2.5         | 49          | 81                 | 1.5  | 0.39  | 1.73  | 2.58      | 1.69  | 1.010 |
|                  | 90  | 33 | 1.5                 | 116                    | 130      | 4500                     | 5600 | 22308CAK    | 22308CAK/W33                       | 56    | 74   | 5.5 | 2.5         | 49          | 81                 | 1.5  | 0.39  | 1.73  | 2.58      | 1.69  | 0.983 |
|                  | 90  | 33 | 1.5                 | 120                    | 130      | 4500                     | 5600 | 22308C      | 22308C/W33                         | 56    | 74   | 5.5 | 2.5         | 49          | 81                 | 1.5  | 0.38  | 1.80  | 2.70      | 1.80  | 1.010 |
|                  | 90  | 33 | 1.5                 | 120                    | 130      | 4500                     | 5600 | 22308CK     | 22308CK/W33                        | 56    | 74   | 5.5 | 2.5         | 49          | 81                 | 1.5  | 0.38  | 1.80  | 2.70      | 1.80  | 0.986 |
| 45               | 85  | 23 | 1.1                 | 88.6                   | 95       | 5300                     | 6700 | 22209CA     | 22209CA/W33                        | 57.6  | 73   | 5.5 | 2           | 52          | 78                 | 1    | 0.28  | 2.40  | 3.50      | 2.50  | 0.629 |
|                  | 100 | 36 | 1.5                 | 140                    | 168      | 3800                     | 4800 | 22309C      | 22309CK                            | 57.4  | 81.4 |     |             | 54          | 91                 | 1.5  | 0.26  | 2.60  | 3.90      | 2.50  | 1.560 |
|                  | 100 | 36 | 1.5                 | 140                    | 168      | 3800                     | 4800 | 22309CA     | 22309CA/W33                        | 63    | 81.4 | 5.5 | 2.5         | 54          | 91                 | 1.5  | 0.38  | 1.80  | 2.60      | 1.70  | 1.520 |
|                  | 100 | 36 | 1.5                 | 140                    | 168      | 3800                     | 4800 | 22309CAK    | 22309CAK/W33                       | 63    | 81.4 | 5.5 | 2.5         | 54          | 91                 | 1.5  | 0.38  | 1.80  | 2.60      | 1.70  | 1.520 |
| 50               | 90  | 23 | 1.1                 | 78.1                   | 95       | 5000                     | 6300 | 22210CA     | 22210CA/W33                        | 62.2  | 81.6 | 5.5 | 2           | 57          | 83                 | 1    | 0.26  | 2.60  | 3.90      | 2.50  | 0.630 |
|                  | 90  | 23 | 1.1                 | 78.5                   | 96       | 5000                     | 6300 | 22210/W33   |                                    | 63    | 81.6 | 5.5 | 2           | 57          | 83                 | 1    | 0.27  | 2.50  | 3.70      | 2.50  | 0.629 |
|                  | 90  | 23 | 1.1                 | 78.1                   | 95       | 5000                     | 6300 | 22210CAK    | 22210CAK/W33                       | 62.2  | 81.6 | 5.5 | 2           | 57          | 83                 | 1    | 0.26  | 2.60  | 3.90      | 2.50  | 0.630 |
|                  | 90  | 23 | 1.1                 | 85                     | 101      | 5000                     | 6300 | 22210C      |                                    | 62.5  | 81.6 |     |             | 57          | 83                 | 1    | 0.25  | 2.60  | 3.90      | 2.50  | 0.642 |
|                  | 110 | 27 | 2                   | 129                    | 129      | 3400                     | 4300 | 21310CA/C3  |                                    | 69    | 92   |     |             | 60          | 100                | 2    | 0.24  | 2.80  | 4.20      | 2.80  | 1.340 |
|                  | 110 | 40 | 2                   | 181                    | 208      | 3400                     | 4300 | 22310C      | 22310C/W33                         | 62.9  | 90.6 | 5.5 | 2.5         | 61          | 100                | 2    | 0.38  | 1.80  | 2.70      | 1.80  | 1.960 |

# Spherical Roller Bearings

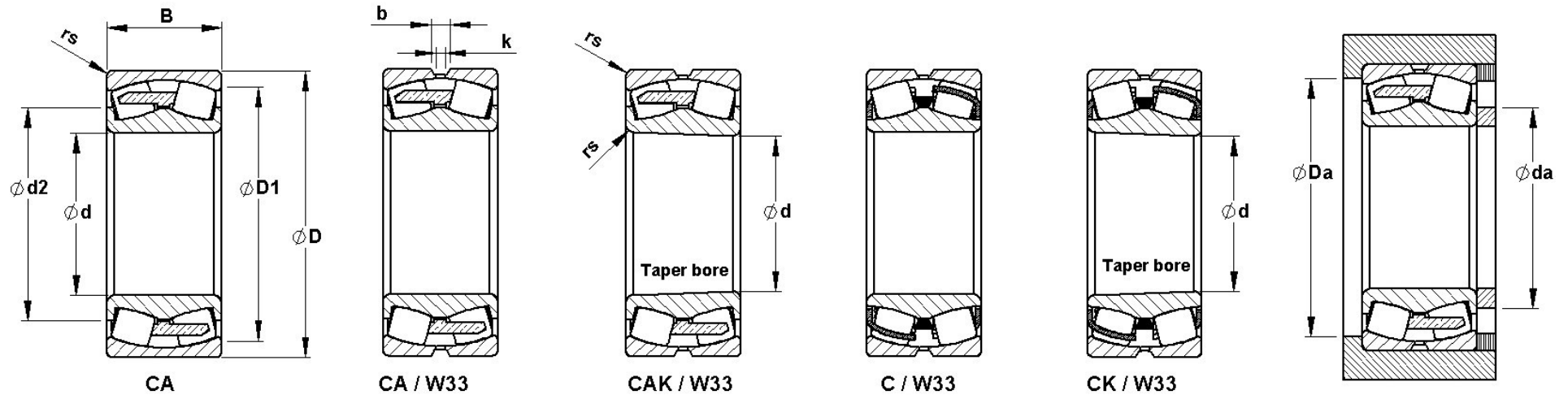
d 50 to 60 mm



| Dimensions in mm |     |    |        | Basic Load Rating - KN |                 | Limit speed ratings- RPM |      | Part Number  | Mating and Fillet Dimensions in mm |                |      |     |          |                      | Calculation Factor   |     |                |                | Weight Kg |                |       |
|------------------|-----|----|--------|------------------------|-----------------|--------------------------|------|--------------|------------------------------------|----------------|------|-----|----------|----------------------|----------------------|-----|----------------|----------------|-----------|----------------|-------|
| d                | D   | B  | rs min | Cr                     | C <sub>or</sub> | Grease                   | Oil  |              | d <sub>2</sub>                     | D <sub>1</sub> | b    | k   | da (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e   | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |       |
| 50               | 110 | 40 | 2      | 181                    | 208             | 3400                     | 4300 | 22310CA/W33A |                                    | 69             | 90.6 | 5.5 | 2.5      | 60                   | 100                  | 2   | 0.38           | 1.80           | 2.60      | 1.70           | 2.060 |
|                  | 110 | 40 | 2      | 181                    | 208             | 3400                     | 4300 | 22310CAK     | 22310CAK/W33                       | 69             | 90.6 | 5.5 | 2.5      | 60                   | 100                  | 2   | 0.38           | 1.80           | 2.60      | 1.70           | 2.130 |
| 55               | 100 | 25 | 1.5    | 106                    | 126             | 4500                     | 5600 | 22211CA      | 22211CA/W33                        | 68.8           | 87.3 | 5.5 | 2        | 64                   | 91                   | 1.5 | 0.25           | 2.70           | 4.00      | 2.60           | 0.887 |
|                  | 100 | 25 | 1.5    | 106                    | 126             | 4500                     | 5600 | 22211CAK     | 22211CAK/W33                       | 68.8           | 87.3 | 5.5 | 2        | 64                   | 91                   | 1.5 | 0.25           | 2.70           | 4.00      | 2.60           | 0.879 |
|                  | 100 | 25 | 1.5    | 101                    | 126             | 4500                     | 5600 | 22211/W33    |                                    | 70             | 87.3 | 5.5 | 2        | 64                   | 91                   | 1.5 | 0.26           | 2.60           | 3.90      | 2.50           | 0.742 |
|                  | 100 | 25 | 1.5    | 101                    | 126             | 4500                     | 5600 | 22211K/W33   |                                    | 70             | 87.3 | 5.5 | 2        | 64                   | 91                   | 1.5 | 0.26           | 2.60           | 3.90      | 2.50           | 0.724 |
|                  | 100 | 25 | 1.5    | 116                    | 126             | 4500                     | 5600 | 22211C       | 22211C/W33                         | 65.7           | 87.3 | 5.5 | 2        | 62                   | 91                   | 1.5 | 0.24           | 2.80           | 4.20      | 2.80           | 0.856 |
|                  | 100 | 25 | 1.5    | 116                    | 126             | 4500                     | 5600 | 22211CK/W33  |                                    | 65.7           | 87.3 | 5.5 | 2        | 62                   | 91                   | 1.5 | 0.24           | 2.80           | 4.20      | 2.80           | 0.844 |
|                  | 120 | 43 | 2      | 213                    | 248             | 3200                     | 4000 | 22311C       | 22311C/W33                         | 69             | 99.5 | 5.5 | 2.5      | 65                   | 110                  | 2   | 0.37           | 1.90           | 2.90      | 1.80           | 2.370 |
|                  | 120 | 43 | 2      | 193                    | 230             | 3200                     | 4000 | 22311CA      | 22311CA/W33                        | 75             | 99.5 | 5.5 | 2.5      | 65                   | 110                  | 2   | 0.37           | 1.80           | 2.70      | 1.80           | 2.600 |
|                  | 120 | 43 | 2      | 193                    | 230             | 3200                     | 4000 | 22311CA/YB2  | 22311CAF3                          | 75             | 99.5 |     |          | 65                   | 110                  | 2   | 0.37           | 1.80           | 2.70      | 1.80           | 2.600 |
|                  | 120 | 43 | 2      | 193                    | 230             | 3200                     | 4000 | 22311CAK     | 22311CAK/W33                       | 75             | 99.5 | 5.5 | 2.5      | 65                   | 110                  | 2   | 0.37           | 1.80           | 2.70      | 1.80           | 2.420 |
| 60               | 110 | 28 | 1.5    | 126                    | 154             | 4000                     | 5000 | 22212CA      | 22212CA/W33                        | 75.2           | 95   | 5.5 | 2        | 69                   | 101                  | 1.5 | 0.24           | 2.80           | 4.20      | 2.80           | 1.010 |
|                  | 110 | 28 | 1.5    | 126                    | 154             | 4000                     | 5000 | 22212CAK/W33 | 22212CA-2RS/S0                     | 75.2           | 95   | 5.5 | 2        | 69                   | 101                  | 1.5 | 0.24           | 2.80           | 4.20      | 2.80           | 0.982 |
|                  | 110 | 28 | 1.5    | 121                    | 145             | 4000                     | 5000 | 22212        | 22212/W33                          | 75.5           | 95   | 5.5 | 2        | 69                   | 101                  | 1.5 | 0.27           | 2.50           | 3.70      | 2.50           | 1.090 |
|                  | 110 | 28 | 1.5    | 120                    | 150             | 4300                     | 5300 | 22212C       | 22212C/W33                         | 75.5           | 95   | 5.5 | 2        | 69                   | 101                  | 1.5 | 0.24           | 2.80           | 4.20      | 2.80           | 1.110 |

# Spherical Roller Bearings

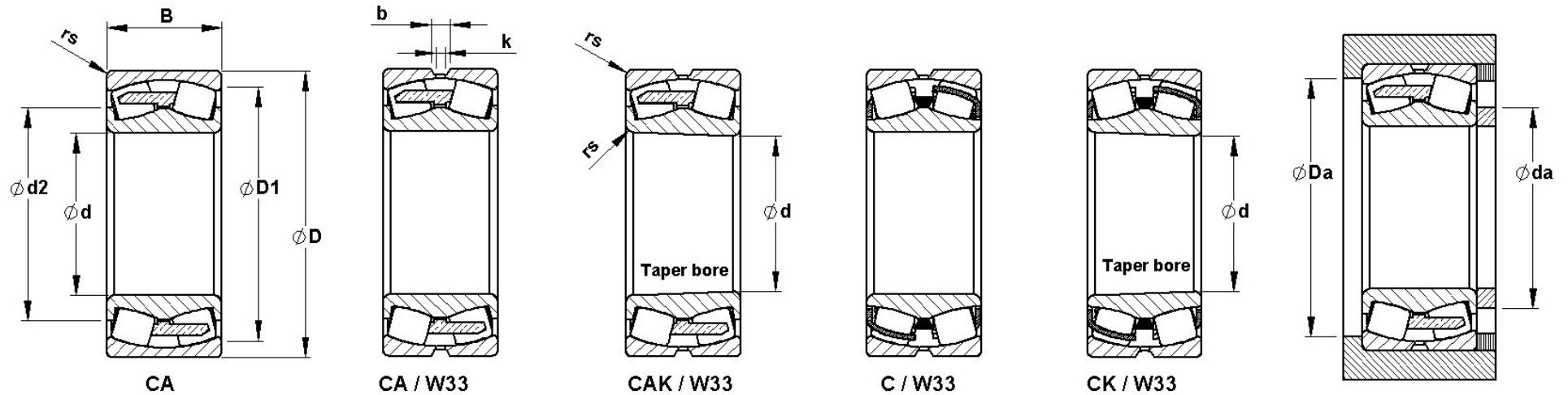
d 60 to 65 mm



| Dimensions in mm |     |    |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |      | Part Number |              | Mating and Fillet Dimensions in mm |                |     |     |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |
|------------------|-----|----|--------------------|------------------------|-----------------|--------------------------|------|-------------|--------------|------------------------------------|----------------|-----|-----|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|
| d                | D   | B  | r <sub>s min</sub> | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil  |             |              | d <sub>2</sub>                     | D <sub>1</sub> | b   | k   | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |
| 60               | 110 | 28 | 1.5                | 120                    | 150             | 4300                     | 5300 | 22212CK     | 22212CK/W33  | 75.5                               | 95             | 5.5 | 2   | 69                   | 101                  | 1.5                  | 0.24 | 2.80           | 4.20           | 2.80      | 1.11           |
|                  | 130 | 46 | 2.1                | 243                    | 286             | 2800                     | 3600 | 22312C      | 22312C/W33   | 81.4                               | 108            | 5.5 | 3   | 72                   | 118                  | 2                    | 0.37 | 1.90           | 2.90           | 1.80      | 3.25           |
|                  | 130 | 46 | 2.1                | 243                    | 286             | 2800                     | 3600 | 22312CK     | 22312CK/W33  | 81.4                               | 108            | 5.5 | 3   | 72                   | 118                  | 2                    | 0.37 | 1.90           | 2.90           | 1.80      | 3.21           |
|                  | 130 | 46 | 2.1                | 225                    | 248             | 3000                     | 3800 | 22312K      | 22312K/W33   | 79                                 | 108            | 5.5 | 3   | 72                   | 118                  | 2                    | 0.40 | 1.68           | 2.50           | 1.64      | 2.86           |
|                  | 130 | 46 | 2.1                | 233                    | 284             | 3000                     | 3800 | 22312CA     | 22312CA/W33  | 81.4                               | 108            | 5.5 | 3   | 72                   | 118                  | 2                    | 0.37 | 1.80           | 2.70           | 1.80      | 3.33           |
|                  | 130 | 46 | 2.1                | 233                    | 284             | 3000                     | 3800 | 22312CA/YB2 | 22312CAF3    | 81.4                               | 108            |     |     | 72                   | 118                  | 2                    | 0.37 | 1.80           | 2.70           | 1.80      | 3.33           |
|                  | 130 | 46 | 2.1                | 233                    | 284             | 3000                     | 3800 | 22312CAK    |              | 81.4                               | 108            |     |     | 72                   | 118                  | 2                    | 0.37 | 1.80           | 2.70           | 1.80      | 3.33           |
| 65               | 120 | 31 | 1.5                | 149                    | 193             | 3800                     | 4800 | 22213CA     | 22213CA/W33  | 81.5                               | 103            | 5.5 | 2.5 | 74                   | 111                  | 1.5                  | 0.25 | 2.70           | 4.00           | 2.50      | 1.56           |
|                  | 120 | 31 | 1.5                | 149                    | 193             | 3800                     | 4800 | 22213CAK    | 22213CAK/W33 | 81.5                               | 103            | 5.5 | 2.5 | 74                   | 111                  | 1.5                  | 0.25 | 2.70           | 4.00           | 2.50      | 1.52           |
|                  | 120 | 31 | 1.5                | 143                    | 175             | 3800                     | 4800 | 22213/W33   |              | 82                                 | 103            | 5.5 | 2.5 | 74                   | 111                  | 1.5                  | 0.27 | 2.50           | 3.70           | 2.50      | 1.57           |
|                  | 120 | 31 | 1.5                | 143                    | 175             | 3800                     | 4800 | 22213K/W33  |              | 82                                 | 103            | 5.5 | 2.5 | 74                   | 111                  | 1.5                  | 0.27 | 2.50           | 3.70           | 2.50      | 1.54           |
|                  | 120 | 31 | 1.5                | 155                    | 195             | 3800                     | 4800 | 22213C      | 22213C/W33   | 81.5                               | 103            | 5.5 | 2.5 | 74                   | 111                  | 1.5                  | 0.25 | 2.70           | 4.00           | 2.50      | 1.55           |
|                  | 120 | 31 | 1.5                | 155                    | 195             | 3800                     | 4800 | 22213CK     | 22213CK/W33  | 81.5                               | 103            | 5.5 | 2.5 | 74                   | 111                  | 1.5                  | 0.25 | 2.70           | 4.00           | 2.50      | 1.52           |
|                  | 140 | 33 | 2.1                | 173                    | 200             | 2800                     | 3600 | 21313CA     |              | 87.9                               | 119            |     |     | 77                   | 128                  | 2                    | 0.25 | 2.70           | 4.00           | 2.60      | 2.58           |
|                  | 140 | 48 | 2.1                | 265                    | 325             | 2600                     | 3400 | 22313C      | 22313C/YB2   | 81.4                               | 116            |     |     | 77                   | 128                  | 2                    | 0.35 | 1.90           | 2.90           | 1.80      | 4.97           |
|                  | 140 | 48 | 2.1                | 265                    | 325             | 2600                     | 3400 | 22313C/W33  |              | 88.6                               | 116            | 5.5 | 3   | 77                   | 128                  | 2                    | 0.35 | 1.90           | 2.90           | 1.80      | 4.92           |
|                  | 140 | 48 | 2.1                | 262                    | 325             | 2600                     | 3400 | 22313CA     | 22313CA/W33  | 88.6                               | 116            | 5.5 | 3   | 77                   | 128                  | 2                    | 0.35 | 1.90           | 2.90           | 1.80      | 4.92           |

# Spherical Roller Bearings

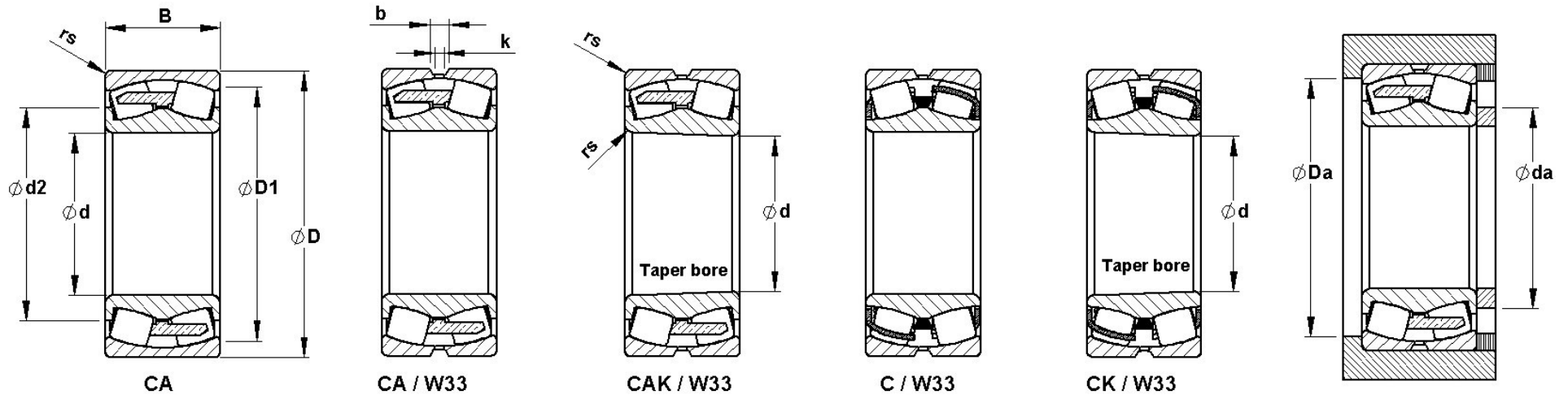
d 65 to 75 mm



| Dimensions in mm |     |    |        | Basic Load Rating - KN |     | Limit speed ratings- RPM |      | Part Number | Mating and Fillet Dimensions in mm |                |     |     |          |          | Calculation Factor |      |                |                | Weight Kg |                |      |
|------------------|-----|----|--------|------------------------|-----|--------------------------|------|-------------|------------------------------------|----------------|-----|-----|----------|----------|--------------------|------|----------------|----------------|-----------|----------------|------|
| d                | D   | B  | rs min | Cr                     | Cor | Grease                   | Oil  |             | d <sub>2</sub>                     | D <sub>1</sub> | b   | k   | da (min) | Da (max) | ra (max)           | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |      |
| 65               | 140 | 48 | 2.1    | 262                    | 325 | 2600                     | 3400 | 22313CAF3   | 22313CAKF3                         | 88.6           | 116 |     | 77       | 128      | 2                  | 0.35 | 1.90           | 2.90           | 1.80      | 4.90           |      |
|                  | 140 | 48 | 2.1    | 262                    | 325 | 2600                     | 3400 | 22313CAK    | 22313CAK/W33                       | 88.6           | 116 | 5.5 | 3        | 77       | 128                | 2    | 0.35           | 1.90           | 2.90      | 1.80           | 4.90 |
|                  | 140 | 48 | 2.1    | 262                    | 325 | 2600                     | 3400 | 22313CK     | 22313CK/W33                        | 88.6           | 116 | 5.5 | 3        | 77       | 128                | 2    | 0.35           | 1.90           | 2.90      | 1.80           | 4.88 |
| 70               | 125 | 31 | 1.5    | 155                    | 205 | 3600                     | 4500 | 22214CA     | 22214CA/W33                        | 86.8           | 109 | 6   | 2.5      | 79       | 116                | 1.5  | 0.24           | 3.00           | 4.60      | 2.80           | 1.83 |
|                  | 125 | 31 | 1.5    | 155                    | 205 | 3600                     | 4500 | 22214CAK    |                                    | 86.8           | 109 |     |          | 79       | 116                | 1.5  | 0.24           | 3.00           | 4.60      | 2.80           | 1.81 |
|                  | 125 | 31 | 1.5    | 159                    | 200 | 3600                     | 4500 | 22214/W33   |                                    | 87.2           | 109 | 6   | 2.5      | 79       | 116                | 1.5  | 0.26           | 2.60           | 3.90      | 2.50           | 1.66 |
|                  | 125 | 31 | 1.5    | 170                    | 220 | 3600                     | 4500 | 22214C      | 22214C/W33                         | 86.8           | 109 | 6   | 2.5      | 79       | 116                | 1.5  | 0.24           | 3.00           | 4.60      | 2.80           | 1.63 |
|                  | 125 | 31 | 1.5    | 170                    | 220 | 3600                     | 4500 | 22214CK     | 22214CK/W33                        | 86.8           | 109 | 6   | 2.5      | 79       | 116                | 1.5  | 0.24           | 3.00           | 4.60      | 2.80           | 1.59 |
|                  | 150 | 35 | 2.1    | 205                    | 233 | 2400                     | 3200 | 21314CA     |                                    | 95.4           | 127 |     |          | 82       | 138                | 2    | 0.25           | 2.70           | 4.00      | 2.60           | 3.02 |
|                  | 150 | 51 | 2.1    | 315                    | 390 | 2200                     | 3000 | 22314C      | 22314C/W33                         | 95.8           | 125 | 8.3 | 4        | 82       | 138                | 2    | 0.35           | 1.90           | 2.90      | 1.80           | 4.48 |
|                  | 150 | 51 | 2.1    | 315                    | 390 | 2200                     | 3000 | 22314CK     | 22314CK/W33                        | 95.8           | 125 | 8.3 | 4        | 82       | 138                | 2    | 0.35           | 1.90           | 2.90      | 1.80           | 4.45 |
|                  | 150 | 51 | 2.1    | 330                    | 360 | 2200                     | 3000 | 22314CA     | 22314CA/W33                        | 95.8           | 125 | 8.3 | 4        | 82       | 138                | 2    | 0.35           | 1.90           | 2.90      | 1.80           | 5.23 |
|                  | 150 | 51 | 2.1    | 330                    | 360 | 2200                     | 3000 | 22314CAK    | 22314CAK/W33                       | 95.8           | 125 | 8.3 | 4        | 82       | 138                | 2    | 0.35           | 1.90           | 2.90      | 1.80           | 5.21 |
| 75               | 115 | 40 | 1.1    | 160                    | 250 | 2900                     | 3500 | 24015CA     | 24015CA/W33                        | 87.5           | 100 | 5.5 | 3        | 82       | 106                | 1    | 0.32           | 2.09           | 3.11      | 2.04           | 1.48 |
|                  | 130 | 31 | 1.5    | 160                    | 208 | 3400                     | 4300 | 22215CA     | 22215CA/W33                        | 92             | 114 | 5.5 | 2.5      | 84       | 121                | 1.5  | 0.24           | 3.00           | 4.60      | 2.80           | 1.71 |
|                  | 130 | 31 | 1.5    | 160                    | 208 | 3400                     | 4300 | 22215CAK    |                                    | 92             | 114 |     |          | 84       | 121                | 1.5  | 0.24           | 3.00           | 4.60      | 2.80           | 1.67 |

# Spherical Roller Bearings

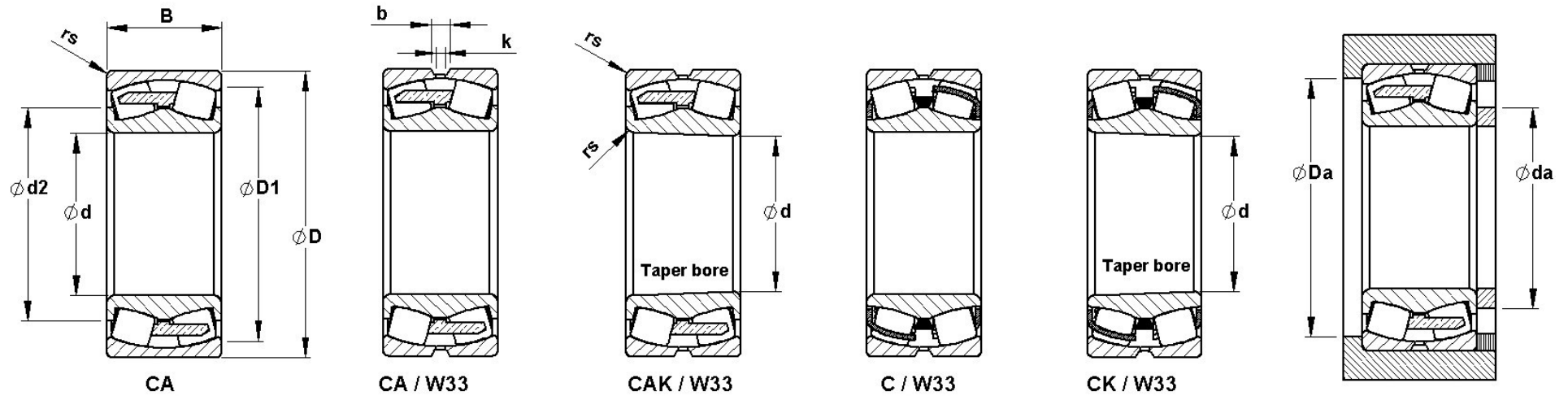
d 75 to 80 mm



| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |          | Part Number        |               | Mating and Fillet Dimensions in mm |                |     |     |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|----------|--------------------|---------------|------------------------------------|----------------|-----|-----|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|
| d                | D   | B   | r <sub>s min</sub> | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil      |                    |               | d <sub>2</sub>                     | D <sub>1</sub> | b   | k   | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |
| 75               | 130 | 31  | 1.5                | 160                    | 208             | 3400                     | 4300     | 22215C             | 22215C/W33    | 92                                 | 114            | 5.5 | 2.5 | 84                   | 121                  | 1.5                  | 0.24 | 3.00           | 4.60           | 2.80      | 1.71           |
|                  | 130 | 31  | 1.5                | 160                    | 208             | 3400                     | 4300     | 22215CK            | 22215CK/W33   | 92                                 | 114            | 5.5 | 2.5 | 84                   | 121                  | 1.5                  | 0.24 | 3.00           | 4.60           | 2.80      | 1.70           |
|                  | 160 | 55  | 2.1                | 345                    | 420             | 2200                     | 3000     | 22315C             | 22315C/W33    | 101                                | 133            | 8.3 | 4   | 87                   | 148                  | 2                    | 0.35 | 1.90           | 2.90           | 1.80      | 5.39           |
|                  | 160 | 55  | 2.1                | 345                    | 420             | 2200                     | 3000     | 22315CK            | 22315CK/W33   | 101                                | 133            | 8.3 | 4   | 87                   | 148                  | 2                    | 0.35 | 1.90           | 2.90           | 1.80      | 5.37           |
|                  | 160 | 55  | 2.1                | 345                    | 420             | 2200                     | 3000     | 22315CA            | 22315CA/W33   | 101                                | 133            | 8.3 | 4   | 87                   | 148                  | 2                    | 0.35 | 1.90           | 2.90           | 1.80      | 5.44           |
|                  | 160 | 55  | 2.1                | 345                    | 420             | 2200                     | 3000     | 22315CAF3          | 22315CAF3/W33 | 101                                | 133            | 8.3 | 4   | 87                   | 148                  | 2                    | 0.35 | 1.90           | 2.90           | 1.80      | 5.40           |
| 80               | 160 | 55  | 2.1                | 345                    | 420             | 2200                     | 3000     | 22315CAK           | 22315CAK/W33  | 101                                | 133            | 8.3 | 4   | 87                   | 148                  | 2                    | 0.35 | 1.90           | 2.90           | 1.80      | 5.32           |
|                  | 140 | 33  | 2                  | 165                    | 225             | 3200                     | 4000     | 22216C             | 22216C/W33    | 98.9                               | 122            | 5.5 | 2.5 | 91                   | 129                  | 2                    | 0.22 | 3.00           | 4.60           | 2.80      | 2.10           |
|                  | 140 | 33  | 2                  | 165                    | 225             | 3200                     | 4000     | 22216CK            | 22216CK/W33   | 98.9                               | 122            | 5.5 | 2.5 | 91                   | 129                  | 2                    | 0.22 | 3.00           | 4.60           | 2.80      | 2.09           |
|                  | 140 | 33  | 2                  | 165                    | 225             | 3200                     | 4000     | 22216CA            | 22216CA/W33   | 98.9                               | 122            | 5.5 | 2.5 | 91                   | 129                  | 2                    | 0.24 | 2.80           | 4.20           | 2.80      | 2.08           |
|                  | 140 | 33  | 2                  | 165                    | 225             | 3200                     | 4000     | 22216CAK           |               | 98.9                               | 122            |     |     | 91                   | 129                  | 2                    | 0.24 | 2.80           | 4.20           | 2.80      | 2.03           |
|                  | 170 | 58  | 2.1                | 395                    | 500             | 2000                     | 2800     | 22316C             | 22316C/W33    | 109                                | 142            | 8.3 | 4   | 92                   | 158                  | 2                    | 0.34 | 1.90           | 2.90           | 1.80      | 6.60           |
|                  | 170 | 58  | 2.1                | 395                    | 500             | 2000                     | 2800     | 22316CK            | 22316CK/W33   | 109                                | 142            | 8.3 | 4   | 92                   | 158                  | 2                    | 0.34 | 1.90           | 2.90           | 1.80      | 6.56           |
|                  | 170 | 58  | 2.1                | 380                    | 495             | 2000                     | 2800     | 22316CA            | 22316CA/W33   | 109                                | 142            | 8.3 | 4   | 92                   | 158                  | 2                    | 0.34 | 1.99           | 2.96           | 1.94      | 7.47           |
|                  | 170 | 58  | 2.1                | 380                    | 495             | 2000                     | 2800     | 22316CA/HAC9W33YA8 |               | 109                                | 142            | 8.3 | 4   | 92                   | 158                  | 2                    | 0.34 | 1.99           | 2.96           | 1.94      | 7.36           |
|                  | 170 | 58  | 2.1                | 380                    | 495             | 2000                     | 2800     | 22316CAF3          |               | 109                                | 142            |     |     | 92                   | 158                  | 2                    | 0.34 | 1.99           | 2.96           | 1.94      | 7.34           |
| 170              | 58  | 2.1 | 380                | 495                    | 2000            | 2800                     | 22316CAK |                    | 109           | 142                                |                |     | 92  | 158                  | 2                    | 0.34                 | 1.99 | 2.96           | 1.94           | 7.40      |                |

# Spherical Roller Bearings

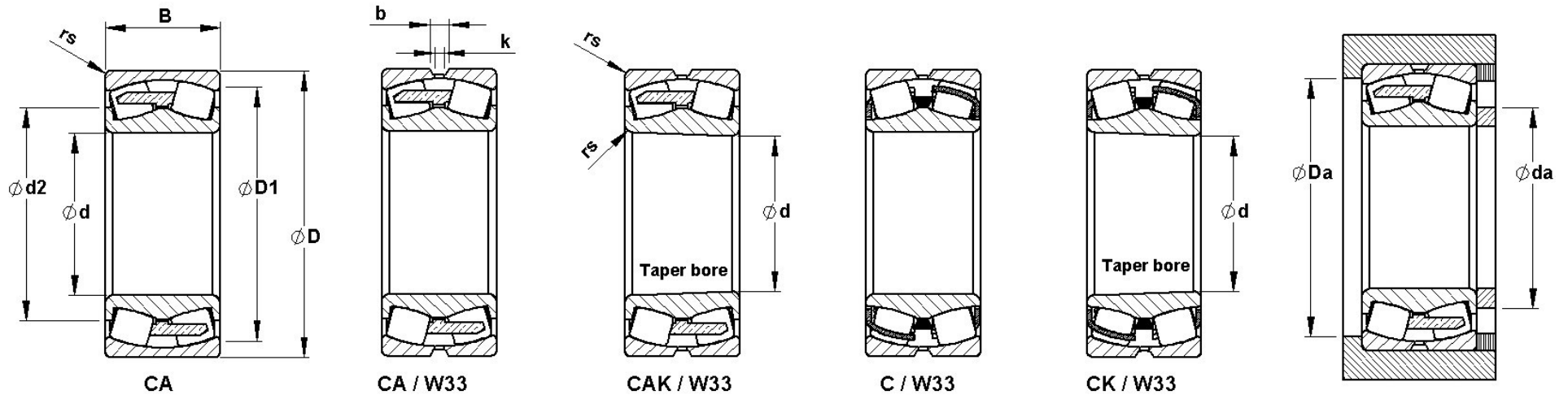
d 85 to 90 mm



| Dimensions in mm |     |    |        | Basic Load Rating - KN |                 | Limit speed ratings- RPM |            | Part Number    | Mating and Fillet Dimensions in mm |                |     |     |          |                      | Calculation Factor   |      |                |                | Weight Kg |                |      |
|------------------|-----|----|--------|------------------------|-----------------|--------------------------|------------|----------------|------------------------------------|----------------|-----|-----|----------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|------|
| d                | D   | B  | rs min | Cr                     | C <sub>or</sub> | Grease                   | Oil        |                | d <sub>2</sub>                     | D <sub>1</sub> | b   | k   | da (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |      |
| 85               | 150 | 36 | 2      | 220                    | 290             | 2800                     | 3600       | 22217C/W33     |                                    | 105            | 132 | 6.5 | 3        | 96                   | 139                  | 2    | 0.23           | 3.00           | 4.60      | 2.80           | 2.73 |
|                  | 150 | 36 | 2      | 220                    | 290             | 2800                     | 3600       | 22217CK        | 22217CK/W33                        | 105            | 132 | 6.5 | 3        | 96                   | 139                  | 2    | 0.23           | 3.00           | 4.60      | 2.80           | 2.64 |
|                  | 150 | 36 | 2      | 193                    | 254             | 3000                     | 3800       | 22217CA        | 22217CA/W33                        | 105            | 132 | 6.5 | 3        | 96                   | 139                  | 2    | 0.24           | 2.80           | 4.20      | 2.80           | 2.69 |
|                  | 150 | 36 | 2      | 193                    | 254             | 3000                     | 3800       | 22217CAK       |                                    | 105            | 132 |     |          | 96                   | 139                  | 2    | 0.24           | 2.80           | 4.20      | 2.80           | 2.64 |
|                  | 180 | 41 | 3      | 294                    | 360             | 2000                     | 2800       | 21317CA        |                                    | 118            | 152 |     |          | 99                   | 166                  | 2.5  | 0.24           | 2.80           | 4.20      | 2.80           | 5.42 |
|                  | 180 | 60 | 3      | 430                    | 545             | 1900                     | 2600       | 22317C         | 22317C/W33                         | 105            | 150 | 8.3 | 4        | 99                   | 166                  | 2.5  | 0.33           | 2.00           | 3.00      | 2.00           | 7.38 |
|                  | 180 | 60 | 3      | 430                    | 545             | 1900                     | 2600       | 22317CK        | 22317CK/W33                        | 105            | 150 | 8.3 | 4        | 99                   | 166                  | 2.5  | 0.33           | 2.00           | 3.00      | 2.00           | 7.23 |
|                  | 180 | 60 | 3      | 391                    | 505             | 1900                     | 2600       | 22317CA        | 22317CA/W33                        | 115            | 150 | 8.3 | 4        | 99                   | 166                  | 2.5  | 0.34           | 1.99           | 2.96      | 1.94           | 8.19 |
|                  | 180 | 60 | 3      | 390                    | 505             | 1900                     | 2600       | 22317ACA       |                                    | 115            | 150 |     |          | 99                   | 166                  | 2.5  | 0.34           | 1.99           | 2.96      | 1.94           | 8.19 |
|                  | 180 | 60 | 3      | 391                    | 505             | 1900                     | 2600       | 22317CAF3      |                                    | 115            | 150 |     |          | 99                   | 166                  | 2.5  | 0.34           | 1.99           | 2.96      | 1.94           | 8.12 |
|                  | 180 | 60 | 3      | 391                    | 505             | 1900                     | 2600       | 22317CAK       | 22317CAK/W33                       | 115            | 150 | 8.3 | 4        | 99                   | 166                  | 2.5  | 0.34           | 1.99           | 2.96      | 1.94           | 8.08 |
| 180              | 60  | 3  | 391    | 505                    | 1900            | 2600                     | 22317CAKF3 | 22317CAKF3/W33 | 115                                | 150            | 8.3 | 4   | 99       | 166                  | 2.5                  | 0.34 | 1.99           | 2.96           | 1.94      | 8.01           |      |
| 90               | 140 | 50 | 1.5    | 233                    | 390             | 2600                     | 3400       | 24018CA        | 24018CA/W33                        | 106            | 121 | 5.5 | 3        | 100                  | 125                  | 1.5  | 0.33           | 2.00           | 3.00      | 2.00           | 3.25 |
|                  | 160 | 40 | 2      | 255                    | 375             | 2600                     | 3400       | 22218C         | 22218C/W33                         | 106            | 139 | 8.3 | 2.5      | 101                  | 149                  | 2    | 0.23           | 2.80           | 4.20      | 2.80           | 4.50 |
|                  | 160 | 40 | 2      | 255                    | 375             | 2600                     | 3400       | 22218CK        | 22218CK/W33                        | 106            | 139 | 8.3 | 2.5      | 101                  | 149                  | 2    | 0.23           | 2.80           | 4.20      | 2.80           | 4.35 |
|                  | 160 | 40 | 2      | 269                    | 360             | 2600                     | 3400       | 22218CA        | 22218CA/W33                        | 111            | 139 | 8.3 | 2.5      | 101                  | 149                  | 2    | 0.25           | 2.70           | 4.00      | 2.60           | 3.40 |
|                  | 160 | 40 | 2      | 269                    | 360             | 2600                     | 3400       | 22218CAF3      |                                    | 111            | 139 |     |          | 101                  | 149                  | 2    | 0.25           | 2.70           | 4.00      | 2.60           | 3.38 |

# Spherical Roller Bearings

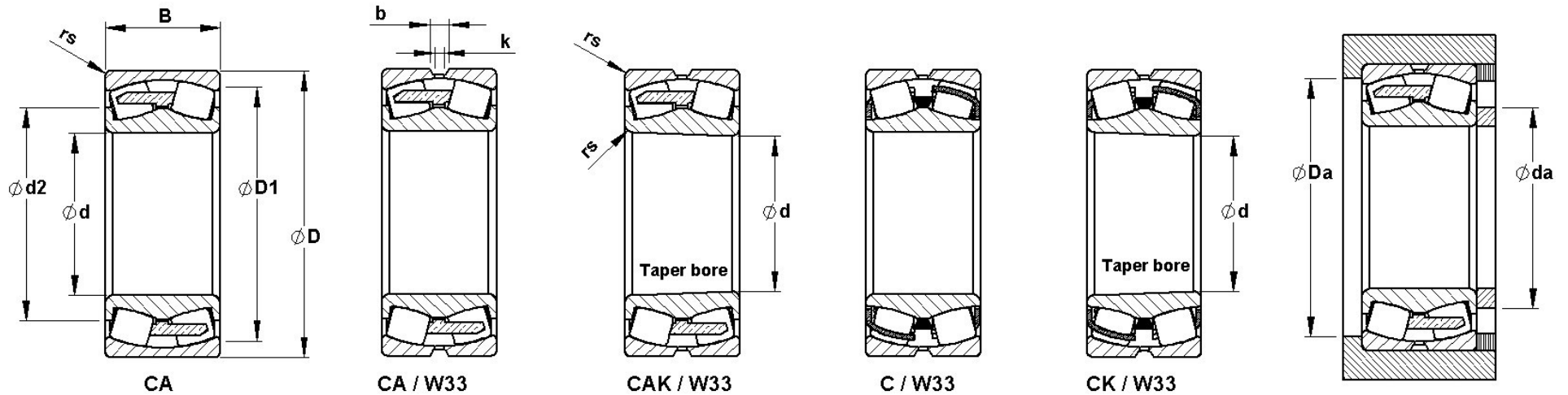
d 90 to 95 mm



| Dimensions in mm |     |      |        | Basic Load Rating - KN |                 | Limit speed ratings- RPM |       | Part Number       |              | Mating and Fillet Dimensions in mm |                |     |     |          |                      | Calculation Factor   |      |                |                | Weight Kg |                |
|------------------|-----|------|--------|------------------------|-----------------|--------------------------|-------|-------------------|--------------|------------------------------------|----------------|-----|-----|----------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|
| d                | D   | B    | rs min | Cr                     | C <sub>or</sub> | Grease                   | Oil   |                   |              | d <sub>2</sub>                     | D <sub>1</sub> | b   | k   | da (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |
| 90               | 160 | 40   | 2      | 269                    | 360             | 2600                     | 3400  | 22218CAK          | 22218CAK/W33 | 111                                | 139            | 8.3 | 2.5 | 101      | 149                  | 2                    | 0.25 | 2.70           | 4.00           | 2.60      | 3.28           |
|                  | 160 | 52.4 | 2      | 287                    | 415             | 2000                     | 2800  | 23218             |              | 111                                | 133            |     |     | 101      | 149                  | 2                    | 0.35 | 1.90           | 2.90           | 1.80      | 4.64           |
|                  | 160 | 52.4 | 2      | 319                    | 475             | 1900                     | 2600  | 23218C            |              | 106                                | 136            |     |     | 101      | 149                  | 2                    | 0.31 | 2.20           | 3.30           | 2.20      | 4.66           |
|                  | 160 | 52.4 | 2      | 319                    | 475             | 1900                     | 2600  | 23218CA           | 23218CA/W33  | 112                                | 136            | 5.5 | 3   | 101      | 149                  | 2                    | 0.25 | 2.70           | 4.00           | 2.60      | 4.82           |
|                  | 160 | 52.4 | 2      | 369                    | 480             | 1900                     | 2600  | 23218CA/HAC9SOW24 |              | 112                                | 136            | 5.5 | 3   | 101      | 149                  | 2                    | 0.25 | 2.70           | 4.00           | 2.60      | 4.72           |
|                  | 160 | 52.4 | 2      | 319                    | 475             | 1900                     | 2600  | 23218CAK          | 23218CAK/W33 | 112                                | 136            | 5.5 | 3   | 101      | 149                  | 2                    | 0.25 | 2.70           | 4.00           | 2.60      | 4.55           |
|                  | 160 | 67   | 2      | 334                    | 475             | 1900                     | 2600  | 24218X2CA/YB2     |              | 112                                | 136            |     |     | 101      | 149                  | 2                    | 0.31 | 2.20           | 3.30           | 2.20      | 5.87           |
|                  | 190 | 64   | 3      | 485                    | 625             | 1800                     | 2400  | 22318C            | 22318C/W33   | 123                                | 159            | 8.3 | 5   | 104      | 176                  | 2                    | 0.35 | 2.00           | 3.00           | 2.00      | 10.1           |
|                  | 190 | 64   | 3      | 485                    | 625             | 1800                     | 2400  | 22318CK           | 22318CK/W33  | 123                                | 159            | 8.3 | 5   | 104      | 176                  | 2.5                  | 0.35 | 2.00           | 3.00           | 2.00      | 9.25           |
|                  | 190 | 64   | 3      | 485                    | 625             | 1800                     | 2400  | 22318CA           | 22318CA/W33  | 123                                | 159            | 8.3 | 5   | 104      | 176                  | 2.5                  | 0.34 | 1.99           | 2.96           | 1.94      | 11.5           |
|                  | 190 | 64   | 3      | 485                    | 625             | 1800                     | 2400  | 22318CAF3         | 22318CAF3    | 123                                | 159            |     |     | 104      | 176                  | 2.5                  | 0.34 | 1.99           | 2.96           | 1.94      | 11.2           |
|                  | 190 | 64   | 3      | 485                    | 625             | 1800                     | 2400  | 22318CAK          | 22318CAK/W33 | 123                                | 159            | 8.3 | 5   | 104      | 176                  | 2.5                  | 0.34 | 1.99           | 2.96           | 1.94      | 11.1           |
|                  | 190 | 64   | 3      | 485                    | 625             | 1800                     | 2400  | 22318ACA          |              | 123                                | 159            |     |     | 104      | 176                  | 2.5                  | 0.34 | 1.99           | 2.96           | 1.94      | 9.44           |
| 190              | 64  | 3    | 400    | 505                    | 1800            | 2400                     | 22318 |                   | 121          | 159                                |                |     | 104 | 176      | 2.5                  | 0.36                 | 1.87 | 2.79           | 1.83           | 8.62      |                |
| 95               | 170 | 43   | 2.1    | 284                    | 380             | 2400                     | 3200  | 22219C            | 22219C/W33   | 114                                | 148            | 8.3 | 3   | 107      | 158                  | 2                    | 0.24 | 2.80           | 4.20           | 2.80      | 4.16           |
|                  | 170 | 43   | 2.1    | 284                    | 380             | 2400                     | 3200  | 22219CK           | 22219CK/W33  | 114                                | 148            | 8.3 | 3   | 107      | 158                  | 2                    | 0.24 | 2.80           | 4.20           | 2.80      | 4.07           |
|                  | 170 | 43   | 2.1    | 270                    | 375             | 2400                     | 3200  | 22219CA           | 22219CA/W33  | 119                                | 148            | 8.3 | 3   | 107      | 158                  | 2                    | 0.24 | 2.80           | 4.20           | 2.80      | 4.68           |

# Spherical Roller Bearings

d 95 to 100 mm

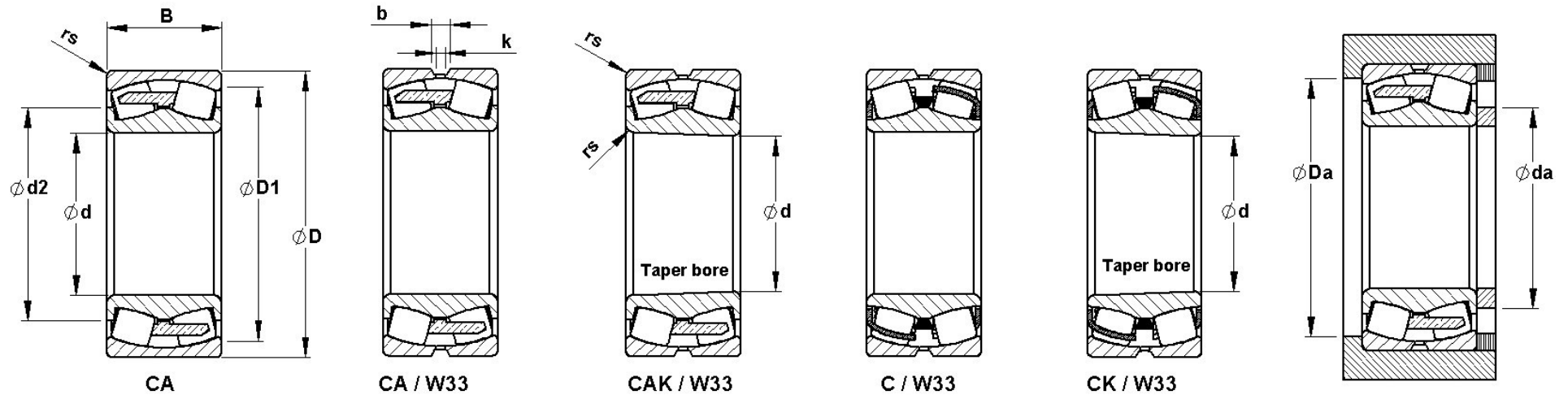


| Dimensions in mm |     |    |                     | Basic Load Rating - KN |          | Limit speed ratings- RPM |      | Part Number  |                | Mating and Fillet Dimensions in mm |       |     |   |             |             | Calculation Factor |      |       |       | Weight Kg |       |
|------------------|-----|----|---------------------|------------------------|----------|--------------------------|------|--------------|----------------|------------------------------------|-------|-----|---|-------------|-------------|--------------------|------|-------|-------|-----------|-------|
| d                | D   | B  | $r_{s \text{ min}}$ | $C_r$                  | $C_{or}$ | Grease                   | Oil  |              |                | $d_2$                              | $D_1$ | b   | k | $d_a$ (min) | $D_a$ (max) | $r_a$ (max)        | e    | $y_1$ | $y_2$ |           | $y_0$ |
| 95               | 170 | 43 | 2.1                 | 270                    | 375      | 2400                     | 3200 | 22219CAK     | 22219CAK/W33   | 119                                | 148   | 8.3 | 3 | 107         | 158         | 2                  | 0.24 | 2.80  | 4.20  | 2.80      | 4.48  |
|                  | 200 | 67 | 3                   | 535                    | 690      | 1800                     | 2400 | 22319C       | 22319C/W33     | 128                                | 167   | 8.3 | 5 | 109         | 186         | 2.5                | 0.34 | 2.00  | 3.00  | 2.00      | 10.20 |
|                  | 200 | 67 | 3                   | 535                    | 690      | 1800                     | 2400 | 22319CK      | 22319CK/W33    | 128                                | 167   | 8.3 | 5 | 109         | 186         | 2.5                | 0.34 | 2.00  | 3.00  | 2.00      | 10.00 |
|                  | 200 | 67 | 3                   | 512                    | 685      | 1800                     | 2400 | 22319CA      | 22319CA/W33    | 128                                | 167   | 8.3 | 5 | 109         | 186         | 2.5                | 0.34 | 1.99  | 2.96  | 1.94      | 10.50 |
|                  | 200 | 67 | 3                   | 512                    | 685      | 1800                     | 2400 | 22319CAF3    | 22319CAK       | 128                                | 167   |     |   | 109         | 186         | 2.5                | 0.34 | 1.99  | 2.96  | 1.94      | 10.50 |
|                  | 200 | 67 | 3                   | 512                    | 685      | 1800                     | 2400 | 22319CAKF3   | 22319CAKF3/W33 | 128                                | 167   | 8.3 | 5 | 109         | 186         | 2.5                | 0.34 | 1.99  | 2.96  | 1.94      | 10.30 |
| 100              | 150 | 37 | 1.5                 | 215                    | 400      | 2400                     | 3200 | 23020CA      |                | 116                                | 135   |     |   | 110         | 140         | 2                  | 0.23 | 2.90  | 4.40  | 2.80      | 2.51  |
|                  | 150 | 37 | 1.5                 | 206                    | 325      | 2400                     | 3200 | 23020C       | 23020C/W33     | 116                                | 135   | 5.5 | 3 | 110         | 140         | 2                  | 0.22 | 2.90  | 4.40  | 2.80      | 2.21  |
|                  | 150 | 37 | 1.5                 | 206                    | 325      | 2400                     | 3200 | 23020CK      | 23020CK/W33    | 116                                | 135   | 5.5 | 3 | 110         | 140         | 2                  | 0.22 | 2.90  | 4.40  | 2.80      | 2.17  |
|                  | 150 | 50 | 1.5                 | 271                    | 445      | 2400                     | 3200 | 24020CA/W33  |                | 115                                | 133   | 5.5 | 3 | 110         | 140         | 2                  | 0.30 | 2.25  | 3.35  | 2.20      | 3.18  |
|                  | 165 | 52 | 2                   | 315                    | 510      | 2000                     | 2800 | 23120CA      | 23120CA/W33    | 121                                | 143   | 5.5 | 3 | 110         | 155         | 2                  | 0.30 | 2.90  | 4.40  | 2.80      | 4.42  |
|                  | 165 | 52 | 2                   | 315                    | 510      | 2000                     | 2800 | 23120CAK/W33 |                | 121                                | 143   | 5.5 | 3 | 110         | 155         | 2                  | 0.30 | 2.90  | 4.40  | 2.80      | 4.26  |
|                  | 165 | 52 | 2                   | 310                    | 465      | 2000                     | 2800 | 23120K/W33   |                | 121                                | 143   | 5.5 | 3 | 110         | 155         | 2                  | 0.30 | 2.25  | 3.35  | 2.20      | 4.44  |
|                  | 165 | 52 | 2                   | 330                    | 515      | 2000                     | 2800 | 23120C       | 23120C/W33     | 121                                | 143   | 5.5 | 3 | 110         | 155         | 2                  | 0.30 | 2.30  | 3.40  | 2.20      | 4.43  |
|                  | 165 | 52 | 2                   | 330                    | 515      | 2000                     | 2800 | 23120CK      | 23120CK/W33    | 121                                | 143   | 5.5 | 3 | 110         | 155         | 2                  | 0.30 | 2.30  | 3.40  | 2.20      | 4.39  |
|                  | 180 | 46 | 2.1                 | 320                    | 425      | 2200                     | 3000 | 22220C       | 22220C/W33     | 124                                | 156   | 8.3 | 3 | 112         | 168         | 2                  | 0.24 | 2.80  | 4.20  | 2.80      | 5.30  |
|                  | 180 | 46 | 2.1                 | 320                    | 425      | 2200                     | 3000 | 22220CK      | 22220CK/W33    | 124                                | 156   | 8.3 | 3 | 112         | 168         | 2                  | 0.24 | 2.80  | 4.20  | 2.80      | 5.25  |



# Spherical Roller Bearings

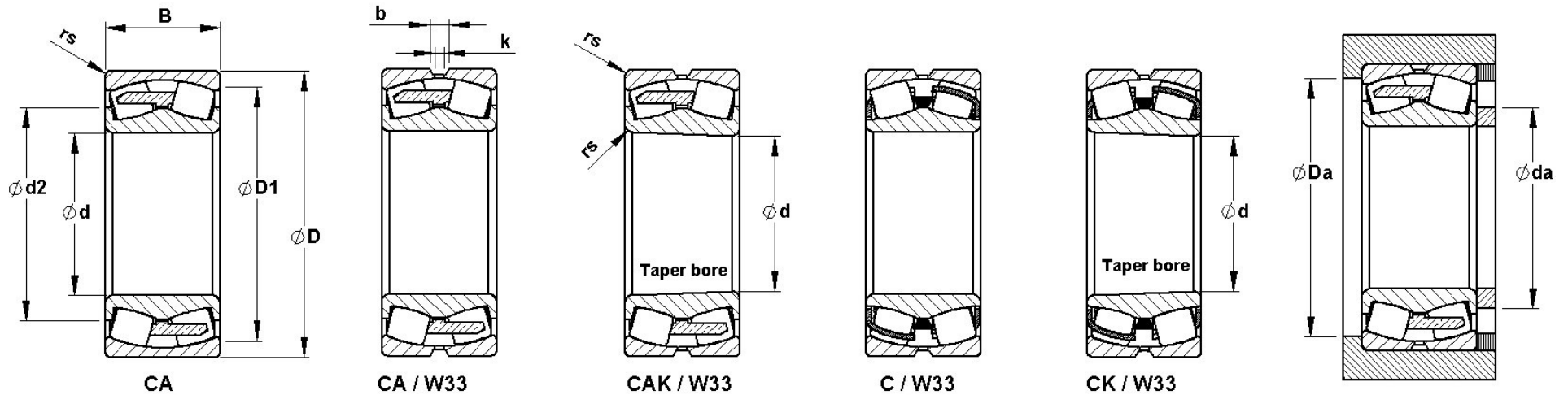
d 100 to 110 mm



| Dimensions in mm |     |      |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |      | Part Number  |                | Mating and Fillet Dimensions in mm |                |      |   |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |
|------------------|-----|------|--------------------|------------------------|-----------------|--------------------------|------|--------------|----------------|------------------------------------|----------------|------|---|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|
| d                | D   | B    | r <sub>s min</sub> | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil  |              |                | d <sub>2</sub>                     | D <sub>1</sub> | b    | k | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |
| 100              | 180 | 46   | 2.1                | 305                    | 425             | 2200                     | 3000 | 22220CA      | 22220CA/W33    | 124                                | 156            | 8.3  | 3 | 112                  | 168                  | 2                    | 0.24 | 2.80           | 4.20           | 2.80      | 5.18           |
|                  | 180 | 46   | 2.1                | 305                    | 425             | 2200                     | 3000 | 22220CAF3    | 22220CAKF3     | 124                                | 156            |      |   | 112                  | 168                  | 2                    | 0.24 | 2.80           | 4.20           | 2.80      | 5.10           |
|                  | 180 | 46   | 2.1                | 305                    | 425             | 2200                     | 3000 | 22220CAK     | 22220CAK/W33   | 124                                | 156            | 8.3  | 3 | 112                  | 168                  | 2                    | 0.24 | 2.80           | 4.20           | 2.80      | 4.96           |
|                  | 180 | 60.3 | 2.1                | 415                    | 600             | 1700                     | 2200 | 23220C       |                | 125                                | 153            |      |   | 112                  | 168                  | 2                    | 0.33 | 2.00           | 3.00           | 2.00      | 6.65           |
|                  | 180 | 60.3 | 2.1                | 440                    | 570             | 1700                     | 2200 | 23220CA      | 23220CA/W33    | 125                                | 153            | 9.5  | 4 | 112                  | 168                  | 2                    | 0.33 | 2.00           | 3.00           | 2.00      | 6.58           |
|                  | 180 | 60.3 | 2.1                | 440                    | 570             | 1700                     | 2200 | 23220CAK/W33 | 23220CAKF3/W33 | 125                                | 153            | 9.5  | 4 | 112                  | 168                  | 2                    | 0.33 | 2.00           | 3.00           | 2.00      | 6.21           |
|                  | 215 | 73   | 3                  | 610                    | 800             | 1700                     | 2200 | 22320C       | 22320C/W33     | 138                                | 179            | 11.1 | 5 | 114                  | 201                  | 2.5                  | 0.35 | 2.00           | 3.00           | 2.00      | 13.10          |
|                  | 215 | 73   | 3                  | 610                    | 800             | 1700                     | 2200 | 22320CK      | 22320CK/W33    | 138                                | 179            | 11.1 | 5 | 114                  | 201                  | 2.5                  | 0.35 | 2.00           | 3.00           | 2.00      | 12.90          |
|                  | 215 | 73   | 3                  | 594                    | 815             | 1700                     | 2200 | 22320CA      | 22320CA/W33    | 138                                | 179            | 11.1 | 5 | 114                  | 201                  | 2.5                  | 0.35 | 1.90           | 2.90           | 1.80      | 13.80          |
|                  | 215 | 73   | 3                  | 594                    | 815             | 1700                     | 2200 | 22320CAF3    | 22320CAKF3     | 138                                | 179            |      |   | 114                  | 201                  | 2.5                  | 0.35 | 1.90           | 2.90           | 1.80      | 13.40          |
| 105              | 175 | 56   | 2                  | 402                    | 550             | 1900                     | 2700 | 23121CA      | 23121CAL       | 127                                | 151            |      |   | 115                  | 165                  | 2                    | 0.31 | 2.20           | 3.30           | 2.20      | 5.48           |
|                  | 175 | 56   | 2                  | 402                    | 550             | 1900                     | 2700 | 23121CA/W33  |                | 127                                | 151            | 5.5  | 3 | 115                  | 165                  | 2                    | 0.31 | 2.20           | 3.30           | 2.20      | 5.35           |
|                  | 175 | 56   | 2                  | 365                    | 560             | 1900                     | 2700 | 23121C       | 23121C/W33     | 127                                | 151            | 5.5  | 3 | 115                  | 165                  | 2                    | 0.30 | 2.20           | 3.30           | 2.20      | 5.36           |
|                  | 175 | 56   | 2                  | 365                    | 560             | 1900                     | 2700 | 23121CK      | 23121CK/W33    | 127                                | 151            | 5.5  | 3 | 115                  | 165                  | 2                    | 0.30 | 2.20           | 3.30           | 2.20      | 5.19           |
| 110              | 170 | 45   | 2                  | 278                    | 460             | 2200                     | 3000 | 23022CA      | 23022CA/W33    | 128                                | 150            | 7.5  | 3 | 120                  | 160                  | 2                    | 0.25 | 2.70           | 4.00           | 2.60      | 3.54           |
|                  | 170 | 45   | 2                  | 278                    | 460             | 2200                     | 3000 | 23022CAF3    | 23022CAF3/W33  | 128                                | 150            | 7.5  | 3 | 120                  | 160                  | 2                    | 0.25 | 2.70           | 4.00           | 2.60      | 3.50           |

# Spherical Roller Bearings

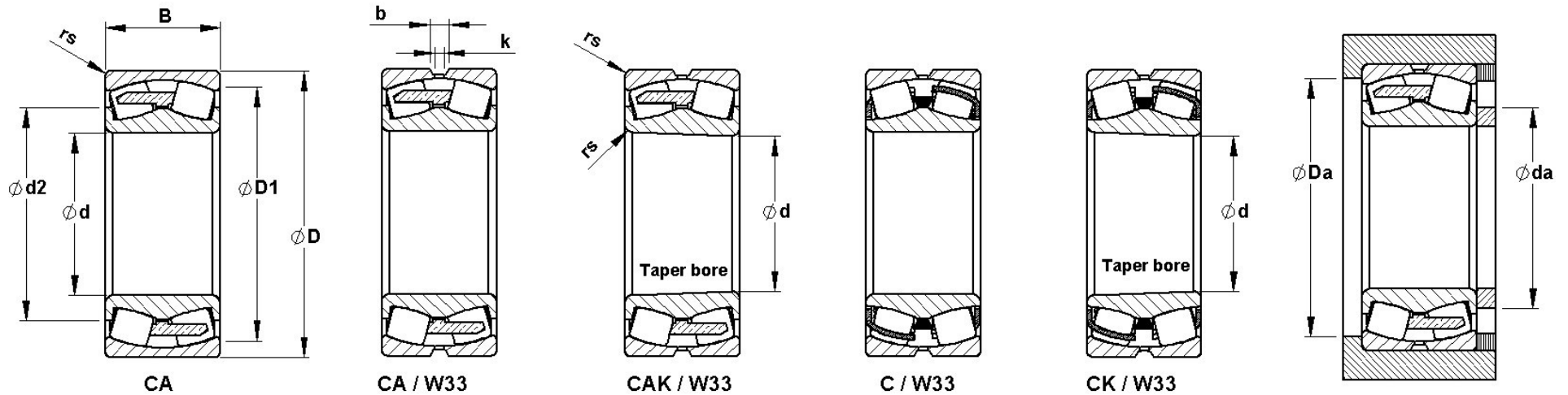
d 110 mm



| Dimensions in mm |      |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |         | Part Number     |                | Mating and Fillet Dimensions in mm |                |     |     |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |
|------------------|------|-----|--------------------|------------------------|-----------------|--------------------------|---------|-----------------|----------------|------------------------------------|----------------|-----|-----|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|
| d                | D    | B   | r <sub>s min</sub> | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil     |                 |                | d <sub>2</sub>                     | D <sub>1</sub> | b   | k   | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |
| 110              | 170  | 45  | 2                  | 288                    | 460             | 2200                     | 3000    | 23022C          | 23022C/W33     | 128                                | 150            | 7.5 | 3   | 120                  | 160                  | 2                    | 0.24 | 2.90           | 4.40           | 2.80      | 3.68           |
|                  | 170  | 45  | 2                  | 288                    | 460             | 2200                     | 3000    | 23022CK         | 23022CK/W33    | 128                                | 150            | 7.5 | 3   | 120                  | 160                  | 2                    | 0.24 | 2.90           | 4.40           | 2.80      | 3.57           |
|                  | 170  | 60  | 2                  | 330                    | 580             | 2100                     | 2800    | 24022CA         | 24022CA/W33    | 128                                | 150            | 5.5 | 3   | 120                  | 160                  | 2                    | 0.32 | 2.09           | 3.11           | 2.04      | 4.98           |
|                  | 170  | 60  | 2                  | 330                    | 580             | 2100                     | 2800    | 24022CA/W33A    |                | 128                                | 150            | 5.5 | 3   | 120                  | 160                  | 2                    | 0.32 | 2.09           | 3.11           | 2.04      | 4.90           |
|                  | 180  | 56  | 2                  | 358                    | 580             | 1900                     | 2600    | 23122CA         | 23122CAK/C3W33 | 132                                | 156            | 5.5 | 3   | 120                  | 170                  | 2                    | 0.30 | 2.25           | 3.35           | 2.20      | 5.73           |
|                  | 180  | 56  | 2                  | 358                    | 580             | 1900                     | 2600    | 23122CAF3       |                | 132                                | 156            |     |     | 120                  | 170                  | 2                    | 0.30 | 2.25           | 3.35           | 2.20      | 5.73           |
|                  | 180  | 56  | 2                  | 358                    | 580             | 1900                     | 2600    | 23122CAK/F3/W33 |                | 132                                | 156            | 5.5 | 3   | 120                  | 170                  | 2                    | 0.30 | 2.25           | 3.35           | 2.20      | 5.51           |
|                  | 180  | 56  | 2                  | 375                    | 590             | 1900                     | 2600    | 23122C          | 23122C/W33     | 132                                | 156            | 5.5 | 3   | 120                  | 170                  | 2                    | 0.30 | 2.30           | 3.40           | 2.20      | 5.69           |
|                  | 180  | 56  | 2                  | 375                    | 590             | 1900                     | 2600    | 23122CK         | 23122CK/W33    | 132                                | 156            | 5.5 | 3   | 120                  | 170                  | 2                    | 0.30 | 2.30           | 3.40           | 2.20      | 5.67           |
|                  | 180  | 69  | 2                  | 479                    | 400             | 1000                     | 1400    | 24122C/W24      |                | 133                                | 153            |     | 6   | 120                  | 170                  | 2                    | 0.35 | 1.90           | 2.90           | 1.80      | 6.90           |
|                  | 180  | 69  | 2                  | 468                    | 750             | 1000                     | 1400    | 24122CA         | 24122CA/W33    | 131                                | 153            | 5.5 | 2.5 | 120                  | 170                  | 2                    | 0.35 | 1.90           | 2.90           | 1.80      | 6.92           |
|                  | 200  | 53  | 2.1                | 415                    | 575             | 2000                     | 2800    | 22222C          | 22222C/W33     | 133                                | 173            | 8.3 | 4   | 122                  | 188                  | 2                    | 0.26 | 2.70           | 4.00           | 2.50      | 7.32           |
|                  | 200  | 53  | 2.1                | 415                    | 575             | 2000                     | 2800    | 22222CK         | 22222CK/W33    | 133                                | 173            | 8.3 | 4   | 122                  | 188                  | 2                    | 0.26 | 2.70           | 4.00           | 2.50      | 7.16           |
|                  | 200  | 53  | 2.1                | 380                    | 545             | 2000                     | 2800    | 22222CA         | 22222CA/W33    | 139                                | 173            | 8.3 | 4   | 122                  | 188                  | 2                    | 0.26 | 2.60           | 3.90           | 2.50      | 7.43           |
|                  | 200  | 53  | 2.1                | 380                    | 545             | 2000                     | 2800    | 22222CAF3       |                | 139                                | 173            |     |     | 122                  | 188                  | 2                    | 0.26 | 2.60           | 3.90           | 2.50      | 7.37           |
|                  | 200  | 53  | 2.1                | 380                    | 545             | 2000                     | 2800    | 22222CAK        | 22222CAK/W33   | 139                                | 173            | 8.3 | 4   | 122                  | 188                  | 2                    | 0.26 | 2.60           | 3.90           | 2.50      | 7.25           |
| 200              | 69.8 | 2.1 | 539                | 720                    | 1600            | 2000                     | 23222CA | 23222CA/W33     | 138            | 168                                | 12             | 5   | 122 | 188                  | 2                    | 0.34                 | 1.99 | 2.96           | 1.94           | 10.10     |                |

# Spherical Roller Bearings

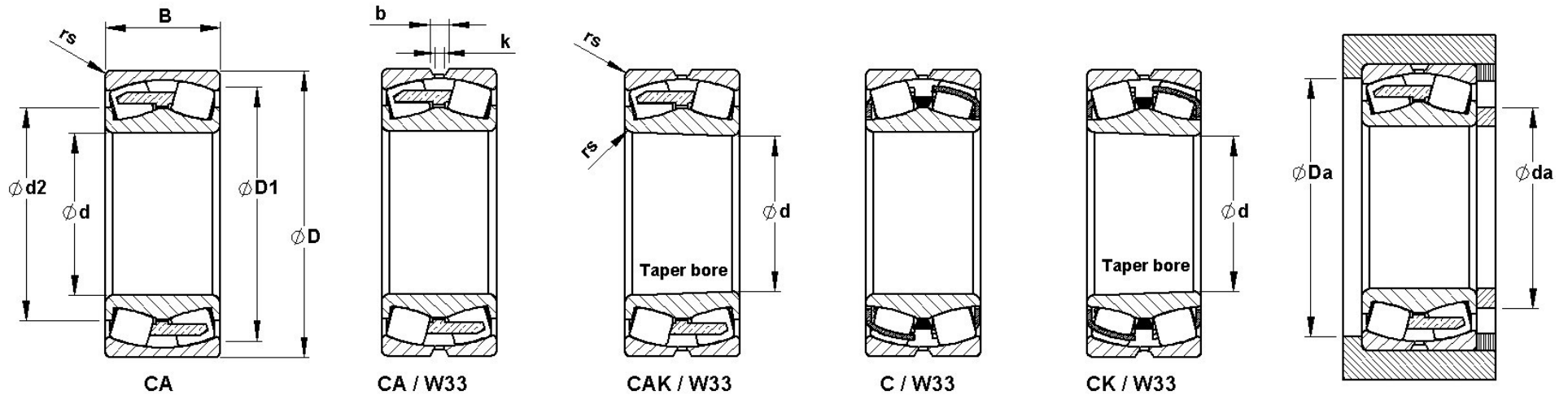
d 110 to 120 mm



| Dimensions in mm |     |      |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |          | Part Number    | Mating and Fillet Dimensions in mm |                |      |      |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |       |
|------------------|-----|------|--------------------|------------------------|-----------------|--------------------------|----------|----------------|------------------------------------|----------------|------|------|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|-------|
| d                | D   | B    | r <sub>s min</sub> | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil      |                | d <sub>2</sub>                     | D <sub>1</sub> | b    | k    | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |       |
| 110              | 200 | 69.8 | 2.1                | 539                    | 720             | 1600                     | 2000     | 23222CAF3      | 23222CAF3/W33                      | 138            | 168  | 12   | 5                    | 122                  | 188                  | 2    | 0.34           | 1.99           | 2.96      | 1.94           | 10.00 |
|                  | 200 | 69.8 | 2.1                | 539                    | 720             | 1600                     | 2000     | 23222CAK       | 23222CAK/W33                       | 138            | 168  | 12   | 5                    | 122                  | 188                  | 2    | 0.34           | 1.99           | 2.96      | 1.94           | 9.83  |
|                  | 200 | 69.8 | 2.1                | 539                    | 720             | 1600                     | 2000     | 23222CAKF3     |                                    | 138            | 168  |      |                      | 122                  | 188                  | 2    | 0.34           | 1.99           | 2.96      | 1.94           | 9.77  |
|                  | 200 | 69.8 | 2.1                | 490                    | 720             | 1700                     | 2200     | 23222/W33      |                                    | 139            | 168  | 12   | 5                    | 122                  | 188                  | 2    | 0.35           | 1.90           | 2.90      | 1.80           | 9.54  |
|                  | 200 | 69.8 | 2.1                | 550                    | 830             | 1600                     | 2000     | 23222C         | 22322C/W33                         | 138            | 168  |      |                      | 122                  | 188                  | 2    | 0.33           | 2.00           | 3.00      | 2.00           | 9.73  |
|                  | 240 | 80   | 3                  | 760                    | 995             | 1600                     | 2000     | 22322C         | 22322CK/W33                        | 151            | 197  | 13.9 | 6                    | 122                  | 188                  | 2.5  | 0.34           | 2.20           | 3.30      | 2.20           | 17.90 |
|                  | 240 | 80   | 3                  | 760                    | 995             | 1600                     | 2000     | 22322CK        | 22322CA/W33                        | 151            | 197  | 13.9 | 6                    | 122                  | 188                  | 2.5  | 0.34           | 2.20           | 3.30      | 2.20           | 17.70 |
|                  | 240 | 80   | 3                  | 693                    | 955             | 1600                     | 2000     | 22322CA        | 22322CAKF3                         | 151            | 197  | 13.9 | 6                    | 122                  | 188                  | 2.5  | 0.31           | 2.20           | 3.30      | 2.20           | 18.90 |
|                  | 240 | 80   | 3                  | 693                    | 955             | 1600                     | 2000     | 22322CAF3      | 22322CAK/W33                       | 151            | 197  |      |                      | 122                  | 188                  | 2.5  | 0.31           | 2.20           | 3.30      | 2.20           | 18.70 |
| 240              | 80  | 3    | 693                | 955                    | 1600            | 2000                     | 22322CAK |                | 151                                | 197            | 13.9 | 6    | 122                  | 188                  | 2.5                  | 0.31 | 2.20           | 3.30           | 2.20      | 18.50          |       |
| 120              | 180 | 46   | 2                  | 290                    | 495             | 2000                     | 2800     | 23024C         | 23024CC                            | 134            | 162  |      |                      | 130                  | 170                  | 2    | 0.22           | 3.00           | 4.60      | 2.80           | 4.19  |
|                  | 180 | 46   | 2                  | 290                    | 495             | 2000                     | 2800     | 23024CK        |                                    | 134            | 162  |      |                      | 130                  | 170                  | 2    | 0.22           | 3.00           | 4.60      | 2.80           | 4.32  |
|                  | 180 | 46   | 2                  | 300                    | 495             | 2000                     | 2800     | 23024CA        | 23024CA/W33                        | 139            | 162  | 5.5  | 3                    | 130                  | 170                  | 2    | 0.23           | 2.90           | 4.40      | 2.80           | 4.44  |
|                  | 180 | 46   | 2                  | 300                    | 495             | 2000                     | 2800     | 23024CAK       |                                    | 139            | 162  |      |                      | 130                  | 170                  | 2    | 0.23           | 2.90           | 4.40      | 2.80           | 4.42  |
|                  | 180 | 46   | 2                  | 300                    | 495             | 2000                     | 2800     | 23024CAKF3/W33 |                                    | 139            | 162  | 5.5  | 3                    | 130                  | 170                  | 2    | 0.23           | 2.90           | 4.40      | 2.80           | 4.34  |
|                  | 180 | 60   | 2                  | 360                    | 660             | 1600                     | 2000     | 24024CA        | 24024CA/W33                        | 139            | 158  | 5.5  | 4                    | 130                  | 170                  | 2    | 0.31           | 2.20           | 3.30      | 2.20           | 5.83  |
|                  | 180 | 60   | 2                  | 360                    | 660             | 1600                     | 2000     | 24024CA/W513   |                                    | 139            | 158  | 5.5  | 4                    | 130                  | 170                  | 2    | 0.31           | 2.20           | 3.30      | 2.20           | 5.79  |

# Spherical Roller Bearings

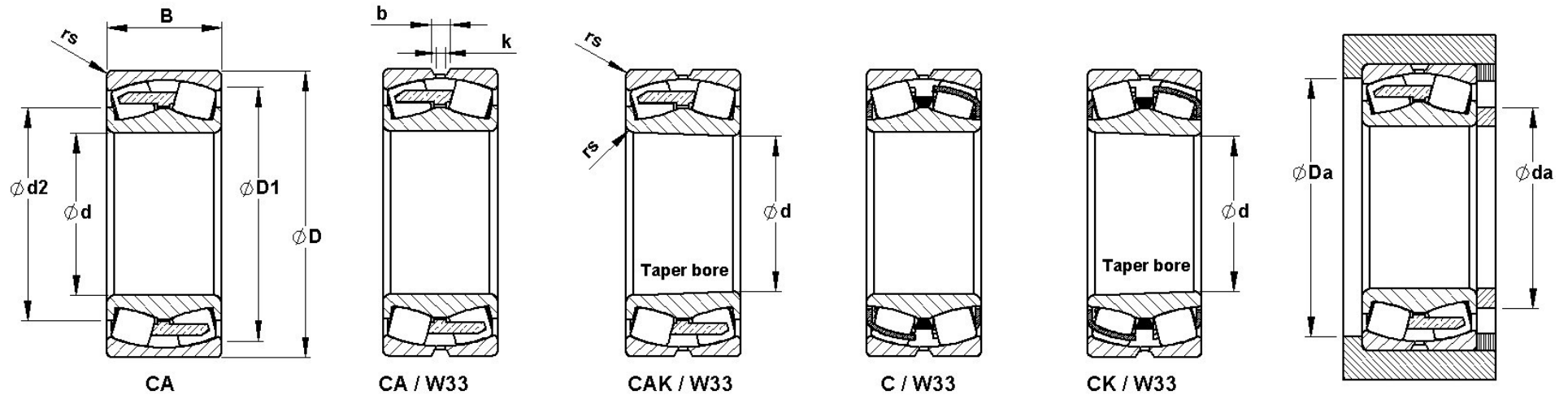
d 120 mm



| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |              | Part Number    |                | Mating and Fillet Dimensions in mm |                |      |     |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|--------------|----------------|----------------|------------------------------------|----------------|------|-----|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|
| d                | D   | B   | r <sub>s min</sub> | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil          |                |                | d <sub>2</sub>                     | D <sub>1</sub> | b    | k   | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |
| 120              | 200 | 62  | 2                  | 460                    | 715             | 1800                     | 2400         | 23124CA/W33    | 23124CAK/W33   | 146                                | 174            | 5.5  | 3   | 130                  | 190                  | 2                    | 0.30 | 2.30           | 3.40           | 2.20      | 12.40          |
|                  | 200 | 62  | 2                  | 460                    | 715             | 1800                     | 2400         | 23124C         | 23124C/W33     | 146                                | 174            | 5.5  | 3   | 130                  | 190                  | 2                    | 0.29 | 2.40           | 3.60           | 2.50      | 7.97           |
|                  | 200 | 62  | 2                  | 460                    | 715             | 1800                     | 2400         | 23124CK        | 23124CK/W33    | 146                                | 174            | 5.5  | 3   | 130                  | 190                  | 2                    | 0.29 | 2.40           | 3.60           | 2.50      | 7.96           |
|                  | 200 | 62  | 2                  | 430                    | 650             | 1900                     | 2600         | 23124/W33      |                | 146                                | 174            | 5.5  | 3   | 130                  | 190                  | 2                    | 0.31 | 2.20           | 3.30           | 2.20      | 7.97           |
|                  | 200 | 62  | 2                  | 430                    | 650             | 1900                     | 2600         | 23124K         |                | 146                                | 174            |      |     | 130                  | 190                  | 2                    | 0.31 | 2.20           | 3.30           | 2.20      | 7.73           |
|                  | 200 | 80  | 2                  | 570                    | 925             | 1400                     | 1800         | 24124CA        | 24124CA/W33    | 146                                | 167            | 5.5  | 3   | 130                  | 190                  | 2                    | 0.30 | 2.30           | 3.40           | 2.20      | 10.60          |
|                  | 200 | 80  | 2                  | 570                    | 925             | 1400                     | 1800         | 24124CAF3      |                | 146                                | 167            |      |     | 130                  | 190                  | 2                    | 0.30 | 2.30           | 3.40           | 2.20      | 10.50          |
|                  | 200 | 80  | 2                  | 570                    | 925             | 1400                     | 1800         | 24124C         |                | 146                                | 167            |      |     | 130                  | 190                  | 2                    | 0.38 | 1.80           | 2.70           | 1.80      | 10.00          |
|                  | 215 | 58  | 2.1                | 485                    | 680             | 1900                     | 2600         | 22224C         | 22224C/W33     | 149                                | 187            | 11.1 | 4   | 132                  | 203                  | 2                    | 0.25 | 2.60           | 3.90           | 2.50      | 9.78           |
|                  | 215 | 58  | 2.1                | 485                    | 680             | 1900                     | 2600         | 22224CK        | 22224CK/W33    | 149                                | 187            | 11.1 | 4   | 132                  | 203                  | 2                    | 0.25 | 2.60           | 3.90           | 2.50      | 9.66           |
|                  | 215 | 58  | 2.1                | 490                    | 680             | 1900                     | 2600         | 22224CA        | 22224CAF3      | 149                                | 187            |      |     | 132                  | 203                  | 2                    | 0.26 | 2.60           | 3.90           | 2.50      | 9.87           |
|                  | 215 | 58  | 2.1                | 490                    | 680             | 1900                     | 2600         | 22224CAK       | 22224CAK/W33   | 149                                | 187            | 11.1 | 4   | 132                  | 203                  | 2                    | 0.26 | 2.60           | 3.90           | 2.50      | 9.76           |
|                  | 215 | 58  | 2.1                | 490                    | 680             | 1900                     | 2600         | 22224CAKF3     | 22224CAKF3/W33 | 149                                | 187            | 11.1 | 4   | 132                  | 203                  | 2                    | 0.26 | 2.60           | 3.90           | 2.50      | 9.68           |
|                  | 215 | 76  | 2.1                | 615                    | 940             | 1500                     | 1900         | 23224CA        | 23224CA/W33    | 150                                | 182            | 8.3  | 5   | 132                  | 203                  | 2                    | 0.35 | 1.90           | 2.90           | 1.80      | 12.10          |
|                  | 215 | 76  | 2.1                | 615                    | 940             | 1500                     | 1900         | 23224CAF3/W33  |                | 150                                | 182            | 8.3  | 5   | 132                  | 203                  | 2                    | 0.35 | 1.90           | 2.90           | 1.80      | 12.00          |
| 215              | 76  | 2.1 | 615                | 940                    | 1500            | 1900                     | 23224CAK/W33 | 23224CAKF3/W33 | 150            | 182                                | 8.3            | 5    | 132 | 203                  | 2                    | 0.35                 | 1.90 | 2.90           | 1.80           | 11.90     |                |
| 215              | 76  | 2.1 | 615                | 940                    | 1500            | 1900                     | 23224C       |                | 150            | 182                                |                |      | 132 | 203                  | 2                    | 0.34                 | 1.90 | 2.90           | 1.80           | 11.50     |                |

# Spherical Roller Bearings

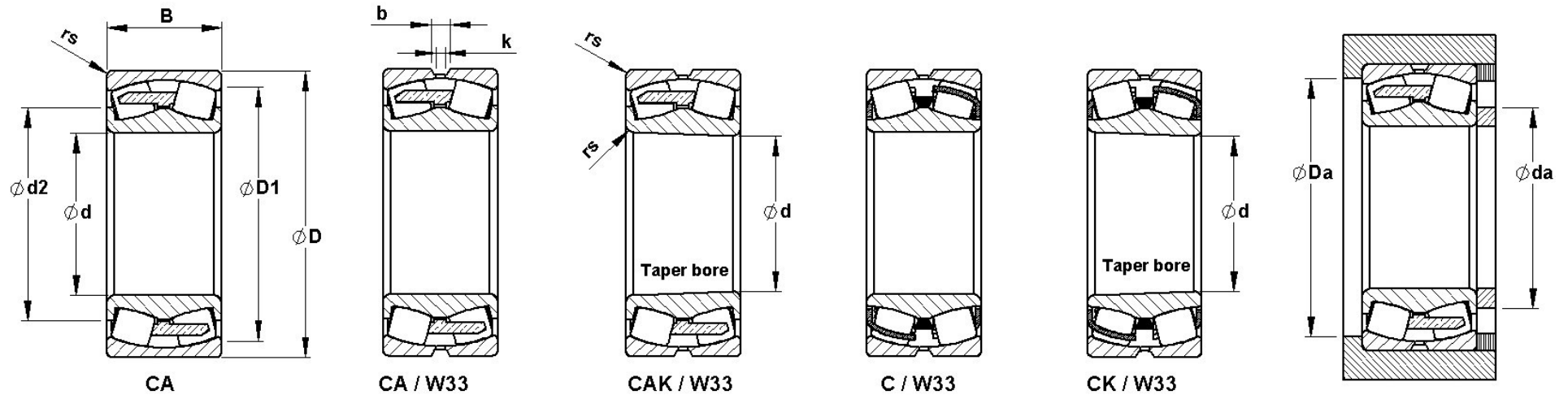
d 120 to 130 mm



| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |      | Part Number      | Mating and Fillet Dimensions in mm |                |     |      |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |       |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|------|------------------|------------------------------------|----------------|-----|------|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|-------|
| d                | D   | B   | r <sub>s</sub> min | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil  |                  | d <sub>2</sub>                     | D <sub>1</sub> | b   | k    | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |       |
| 120              | 240 | 100 | 2                  | 570                    | 925             | 1500                     | 1900 | 24124X3CA/C9WN33 |                                    | 146            | 167 |      | 130                  | 190                  | 2                    | 0.38 | 1.80           | 2.60           | 1.70      | 21.30          |       |
|                  | 260 | 86  | 3                  | 840                    | 1120            | 1400                     | 1800 | 22324C           | 22324C/W33                         | 165            | 218 | 13.9 | 6                    | 134                  | 246                  | 2.5  | 0.35           | 1.90           | 2.90      | 1.80           | 23.80 |
|                  | 260 | 86  | 3                  | 840                    | 1120            | 1400                     | 1800 | 22324CK          | 22324CK/W33                        | 165            | 218 | 13.9 | 6                    | 134                  | 246                  | 2.5  | 0.35           | 1.90           | 2.90      | 1.80           | 21.80 |
|                  | 260 | 86  | 3                  | 840                    | 1100            | 1400                     | 1800 | 22324CA          | 22324CA/W33                        | 165            | 215 | 13.9 | 6                    | 134                  | 246                  | 2.5  | 0.34           | 1.99           | 2.96      | 1.94           | 23.30 |
|                  | 260 | 86  | 3                  | 840                    | 1100            | 1400                     | 1800 | 22324CAF3        | 22324CAK                           | 165            | 215 |      |                      | 134                  | 246                  | 2.5  | 0.34           | 1.99           | 2.96      | 1.94           | 23.10 |
|                  | 260 | 86  | 3                  | 840                    | 1100            | 1400                     | 1800 | 22324CAKF3       | 22324CAKF3/W33                     | 165            | 215 | 13.9 | 6                    | 134                  | 246                  | 2.5  | 0.34           | 1.99           | 2.96      | 1.94           | 22.80 |
|                  | 260 | 86  | 3                  | 840                    | 1100            | 1400                     | 1800 | 22324ACA         |                                    | 165            | 215 |      |                      | 134                  | 246                  | 2.5  | 0.34           | 1.99           | 2.96      | 1.94           | 21.30 |
| 130              | 200 | 52  | 2                  | 410                    | 680             | 1900                     | 2600 | 23026CA          | 23026CA/W33                        | 153            | 179 | 9.5  | 4                    | 140                  | 190                  | 2    | 0.24           | 2.80           | 4.20      | 2.80           | 7.04  |
|                  | 200 | 52  | 2                  | 410                    | 680             | 1900                     | 2600 | 23026CAF3        | 23026CAF3/W33                      | 153            | 179 | 9.5  | 4                    | 140                  | 190                  | 2    | 0.24           | 2.80           | 4.20      | 2.80           | 6.75  |
|                  | 200 | 52  | 2                  | 410                    | 680             | 1900                     | 2600 | 23026CAK         |                                    | 153            | 179 |      |                      | 140                  | 190                  | 2    | 0.24           | 2.80           | 4.20      | 2.80           | 6.68  |
|                  | 200 | 52  | 2                  | 410                    | 680             | 1900                     | 2600 | 23026CAKF3       | 23026CAKF3/W33                     | 153            | 179 | 9.5  | 4                    | 140                  | 190                  | 2    | 0.24           | 2.80           | 4.20      | 2.80           | 6.57  |
|                  | 200 | 52  | 2                  | 400                    | 650             | 1900                     | 2600 | 23026C           | 23026C/W33                         | 153            | 179 | 9.5  | 4                    | 140                  | 190                  | 2    | 0.24           | 2.90           | 4.40      | 2.80           | 5.72  |
|                  | 200 | 52  | 2                  | 400                    | 650             | 1900                     | 2600 | 23026CK          | 23026CK/W33                        | 153            | 179 | 9.5  | 4                    | 140                  | 190                  | 2    | 0.24           | 2.90           | 4.40      | 2.80           | 5.54  |
|                  | 200 | 69  | 2                  | 470                    | 810             | 1800                     | 2400 | 24026CA/W33      | 24026CA/W513                       | 151            | 175 | 5.5  | 3                    | 140                  | 190                  | 2    | 0.32           | 2.09           | 3.11      | 2.04           | 7.76  |
|                  | 210 | 64  | 2                  | 490                    | 790             | 1700                     | 2200 | 23126C           | 23126C/W33                         | 156            | 183 | 8.3  | 4                    | 140                  | 200                  | 2    | 0.28           | 2.40           | 3.50      | 2.50           | 9.56  |
|                  | 210 | 64  | 2                  | 490                    | 790             | 1700                     | 2200 | 23126CK          | 23126CK/W33                        | 156            | 183 | 8.3  | 4                    | 140                  | 200                  | 2    | 0.28           | 2.40           | 3.50      | 2.50           | 9.13  |
|                  | 210 | 64  | 2                  | 490                    | 790             | 1700                     | 2200 | 23126CA          | 23126CA/W33                        | 156            | 183 | 8.3  | 4                    | 140                  | 200                  | 2    | 0.28           | 2.40           | 3.50      | 2.50           | 10.70 |

# Spherical Roller Bearings

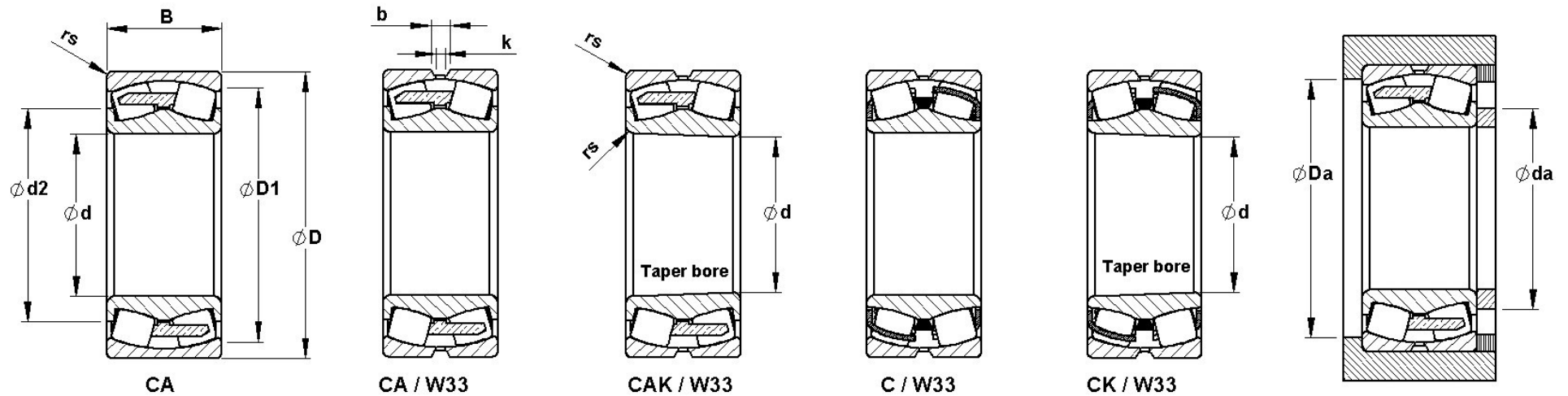
d 130 mm



| Dimensions in mm |     |    |        | Basic Load Rating - KN |                 | Limit speed ratings- RPM |           | Part Number          | Mating and Fillet Dimensions in mm |                |      |      |          |                      | Calculation Factor   |      |                |                | Weight Kg |                |      |
|------------------|-----|----|--------|------------------------|-----------------|--------------------------|-----------|----------------------|------------------------------------|----------------|------|------|----------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|------|
| d                | D   | B  | rs min | Cr                     | C <sub>or</sub> | Grease                   | Oil       |                      | d <sub>2</sub>                     | D <sub>1</sub> | b    | k    | da (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |      |
| 130              | 210 | 64 | 2      | 490                    | 790             | 1700                     | 2200      | 23126CAKF3/W33       |                                    | 156            | 183  | 8.3  | 4        | 140                  | 200                  | 2    | 0.28           | 2.40           | 3.50      | 2.50           | 10.1 |
|                  | 210 | 80 | 2      | 555                    | 980             | 1700                     | 2200      | 24126CA              | 24126CA/W33                        | 153            | 180  | 8.3  | 4        | 140                  | 200                  | 2    | 0.35           | 1.90           | 2.90      | 1.80           | 10.6 |
|                  | 220 | 73 | 3      | 575                    | 905             | 1700                     | 2200      | 23226X3CAQ1/HG2P63   |                                    | 157            | 188  |      |          | 140                  | 210                  | 2    | 0.32           | 2.09           | 3.11      | 2.04           | 11.3 |
|                  | 230 | 64 | 3      | 560                    | 805             | 1800                     | 2400      | 22226C               | 22226C/W33                         | 162            | 200  | 10   | 5        | 144                  | 216                  | 2.5  | 0.26           | 2.50           | 3.70      | 2.50           | 11.5 |
|                  | 230 | 64 | 3      | 560                    | 805             | 1800                     | 2400      | 22226CK              | 22226CK/W33                        | 162            | 200  | 10   | 5        | 144                  | 216                  | 2.5  | 0.26           | 2.50           | 3.70      | 2.50           | 11.3 |
|                  | 230 | 64 | 3      | 560                    | 805             | 1800                     | 2400      | 22226CA              | 22226CA/W33                        | 162            | 200  | 10   | 5        | 144                  | 216                  | 2.5  | 0.27           | 2.50           | 3.70      | 2.50           | 12.4 |
|                  | 230 | 64 | 3      | 560                    | 805             | 1800                     | 2400      | 22226CAK             | 22226CAK/W33                       | 162            | 200  | 10   | 5        | 144                  | 216                  | 2.5  | 0.27           | 2.50           | 3.70      | 2.50           | 12.2 |
|                  | 230 | 64 | 3      | 560                    | 805             | 1800                     | 2400      | 22226CAKF3           |                                    | 162            | 200  |      |          | 144                  | 216                  | 2.5  | 0.27           | 2.50           | 3.70      | 2.50           | 12.1 |
|                  | 230 | 80 | 3      | 580                    | 910             | 1400                     | 1800      | 23226/W33            |                                    | 164            | 194  | 12   | 5        | 144                  | 216                  | 2.5  | 0.34           | 1.99           | 2.96      | 1.94           | 14.9 |
|                  | 230 | 80 | 3      | 737                    | 1020            | 1300                     | 1700      | 23226CA              | 23226CA/W33                        | 161            | 194  | 12   | 5        | 144                  | 216                  | 2.5  | 0.33           | 2.00           | 3.00      | 2.00           | 15.9 |
|                  | 230 | 80 | 3      | 737                    | 1020            | 1300                     | 1700      | 23226CAF3            | 23226CAF3/W33                      | 161            | 194  | 12   | 5        | 144                  | 216                  | 2.5  | 0.33           | 2.00           | 3.00      | 2.00           | 15.8 |
|                  | 230 | 80 | 3      | 737                    | 1020            | 1300                     | 1700      | 23226CAF3/HAC9SOW20X |                                    | 161            | 194  | 12   | 5        | 144                  | 216                  | 2.5  | 0.33           | 2.00           | 3.00      | 2.00           | 15.8 |
|                  | 230 | 80 | 3      | 737                    | 1020            | 1300                     | 1700      | 23226CAK             | 23226CAKF3                         | 161            | 194  |      |          | 144                  | 216                  | 2.5  | 0.33           | 2.00           | 3.00      | 2.00           | 15.9 |
|                  | 280 | 93 | 4      | 970                    | 1320            | 1300                     | 1700      | 22326C               | 22326C/W33                         | 178            | 232  | 16.7 | 6        | 148                  | 262                  | 3    | 0.34           | 1.00           | 2.90      | 1.80           | 24.8 |
| 280              | 93  | 4  | 970    | 1320                   | 1300            | 1700                     | 22326CK   | 22326CK/W33          | 178                                | 232            | 16.7 | 6    | 148      | 262                  | 3                    | 0.34 | 1.90           | 2.90           | 1.80      | 24.2           |      |
| 280              | 93  | 4  | 924    | 1300                   | 1300            | 1700                     | 22326CA   | 22326CA/W33          | 178                                | 232            | 16.7 | 6    | 148      | 262                  | 3                    | 0.34 | 1.99           | 2.96           | 1.94      | 18.3           |      |
| 280              | 93  | 4  | 924    | 1300                   | 1300            | 1700                     | 22326CAF3 | 22326CAF3/W33        | 178                                | 232            | 16.7 | 6    | 148      | 262                  | 3                    | 0.34 | 1.99           | 2.96           | 1.94      | 18.0           |      |

# Spherical Roller Bearings

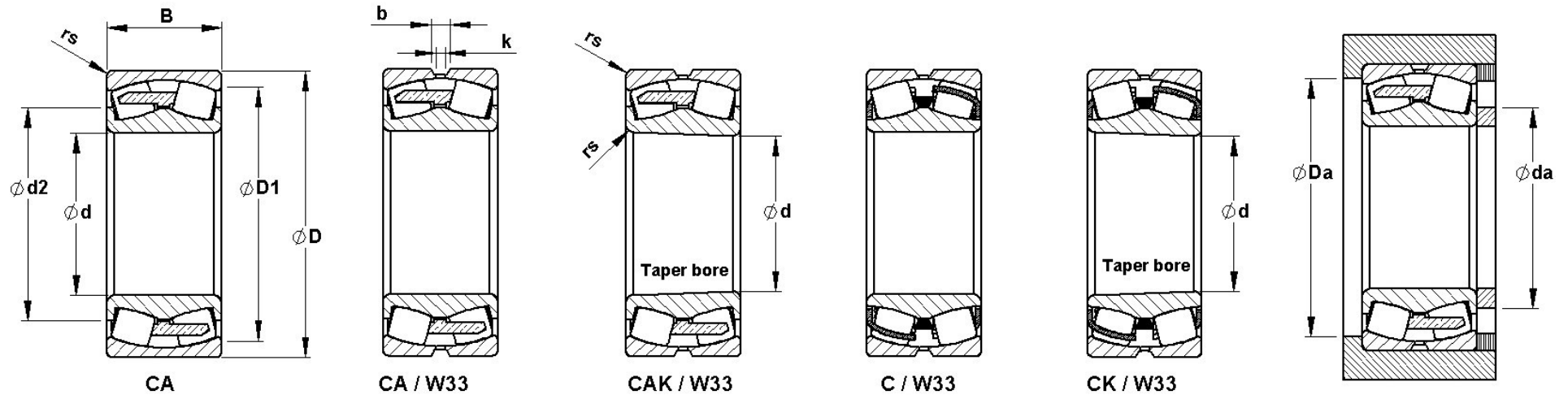
d 130 to 140 mm



| Dimensions in mm |     |    |              | Basic Load Rating - KN |          | Limit speed ratings- RPM |           | Part Number    |                | Mating and Fillet Dimensions in mm |       |      |     |             |             | Calculation Factor |      |       |       | Weight Kg |       |
|------------------|-----|----|--------------|------------------------|----------|--------------------------|-----------|----------------|----------------|------------------------------------|-------|------|-----|-------------|-------------|--------------------|------|-------|-------|-----------|-------|
| d                | D   | B  | $r_{s \min}$ | $C_r$                  | $C_{or}$ | Grease                   | Oil       |                |                | $d_2$                              | $D_1$ | b    | k   | $d_a$ (min) | $D_a$ (max) | $r_a$ (max)        | e    | $y_1$ | $y_2$ |           | $y_0$ |
| 130              | 280 | 93 | 4            | 924                    | 1300     | 1300                     | 1700      | 22326CAK       | 22326CAK/W33   | 178                                | 232   | 16.7 | 6   | 148         | 262         | 3                  | 0.34 | 1.99  | 2.96  | 1.94      | 18.00 |
|                  | 280 | 93 | 4            | 924                    | 1300     | 1300                     | 1700      | 22326ACA       |                | 178                                | 232   |      |     | 148         | 262         | 3                  | 0.34 | 1.99  | 2.96  | 1.94      | 28.90 |
|                  | 280 | 93 | 4            | 1060                   | 1500     | 1300                     | 1700      | 22326CAQ1/HA   |                | 178                                | 232   |      |     | 148         | 262         | 3                  | 0.34 | 1.99  | 2.96  | 1.94      | 18.10 |
| 140              | 210 | 53 | 2            | 402                    | 705      | 1800                     | 2400      | 23028CA        | 23028CA/W33    | 162                                | 188   | 8.3  | 4.5 | 150         | 200         | 2                  | 0.23 | 2.90  | 4.40  | 2.80      | 6.70  |
|                  | 210 | 53 | 2            | 402                    | 705      | 1800                     | 2400      | 23028CAF3      |                | 162                                | 188   |      |     | 150         | 200         | 2                  | 0.23 | 2.90  | 4.40  | 2.80      | 6.68  |
|                  | 210 | 53 | 2            | 402                    | 705      | 1800                     | 2400      | 23028CAK       | 23028CAKF3     | 162                                | 188   |      |     | 150         | 200         | 2                  | 0.23 | 2.90  | 4.40  | 2.80      | 6.50  |
|                  | 210 | 53 | 2            | 420                    | 715      | 1800                     | 2400      | 23028C         | 23028C/W33     | 162                                | 188   | 8.3  | 4.5 | 150         | 200         | 2                  | 0.22 | 3.00  | 4.60  | 2.80      | 6.31  |
|                  | 210 | 53 | 2            | 420                    | 715      | 1800                     | 2400      | 23028CK        | 23028CK/W33    | 162                                | 188   | 8.3  | 4.5 | 150         | 200         | 2                  | 0.22 | 3.00  | 4.60  | 2.80      | 6.11  |
|                  | 210 | 69 | 2            | 484                    | 920      | 1800                     | 2400      | 24028CA/W33    | 24028CAK30/W33 | 162                                | 188   | 5.5  | 3   | 150         | 200         | 2                  | 0.30 | 2.30  | 3.40  | 2.20      | 8.31  |
|                  | 225 | 68 | 2.1          | 570                    | 935      | 1600                     | 2000      | 23128CA        | 23128CA/W33    | 166                                | 196   | 8.3  | 5   | 152         | 213         | 2                  | 0.29 | 2.30  | 3.50  | 2.40      | 10.90 |
|                  | 225 | 68 | 2.1          | 570                    | 935      | 1600                     | 2000      | 23128CAN       |                | 166                                | 196   | 8.3  | 5   | 152         | 213         | 2                  | 0.29 | 2.30  | 3.50  | 2.40      | 10.90 |
|                  | 225 | 68 | 2.1          | 570                    | 935      | 1600                     | 2000      | 23128C         | 23128C/W33     | 166                                | 196   | 8.3  | 5   | 152         | 213         | 2                  | 0.28 | 2.40  | 3.60  | 2.50      | 10.70 |
|                  | 225 | 68 | 2.1          | 570                    | 935      | 1600                     | 2000      | 23128CK        | 23128CK/W33    | 166                                | 196   | 8.3  | 5   | 152         | 213         | 2                  | 0.28 | 2.40  | 3.60  | 2.50      | 10.40 |
|                  | 225 | 85 | 2.1          | 638                    | 1150     | 850                      | 1100      | 24128CA        | 24128CAF3      | 165                                | 192   |      |     | 152         | 213         | 2                  | 0.37 | 1.80  | 2.70  | 1.80      | 13.50 |
|                  | 225 | 85 | 2.1          | 638                    | 1150     | 850                      | 1100      | 24128CAK30/W33 |                | 165                                | 192   | 8.3  | 4.5 | 152         | 213         | 2                  | 0.37 | 1.80  | 2.70  | 1.80      | 13.20 |
| 250              | 68  | 3  | 616          | 930                    | 1700     | 2200                     | 22228CA   | 22228CA/W33    | 176            | 218                                | 11.1  | 5    | 154 | 236         | 2.5         | 0.26               | 2.60 | 3.90  | 2.50  | 16.20     |       |
| 250              | 68  | 3  | 616          | 930                    | 1700     | 2200                     | 22228CAF3 | 22228CAF3/W33  | 176            | 218                                | 11.1  | 5    | 154 | 236         | 2.5         | 0.26               | 2.60 | 3.90  | 2.50  | 15.60     |       |

# Spherical Roller Bearings

d 140 to 150 mm

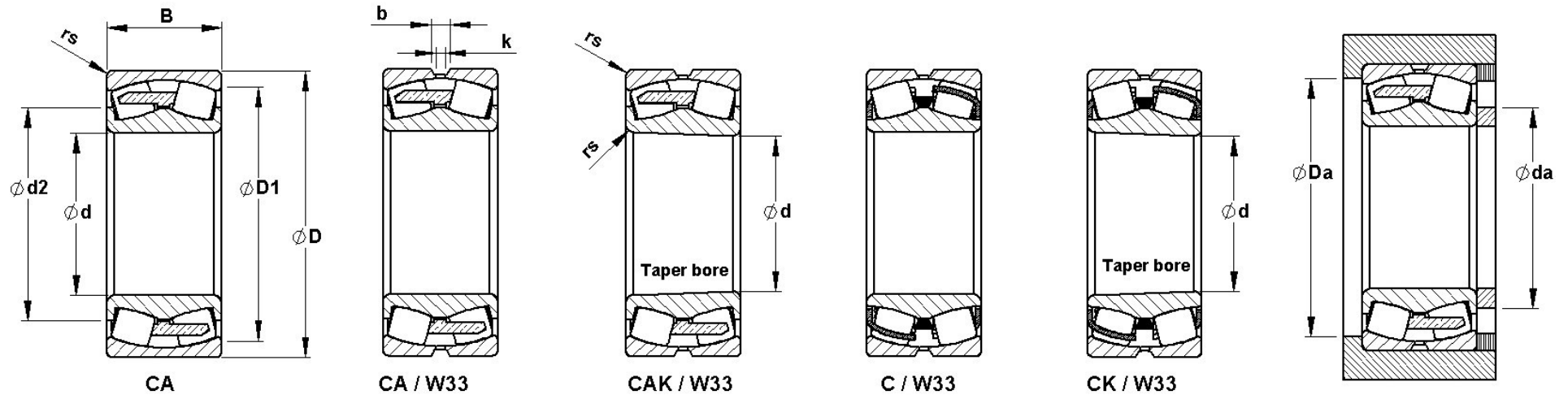


| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |      | Part Number    |               | Mating and Fillet Dimensions in mm |                |      |     |          |                      | Calculation Factor   |      |                |                | Weight Kg |                |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|------|----------------|---------------|------------------------------------|----------------|------|-----|----------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|
| d                | D   | B   | r <sub>s min</sub> | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil  |                |               | d <sub>2</sub>                     | D <sub>1</sub> | b    | k   | da (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |
| 140              | 250 | 68  | 3                  | 616                    | 930             | 1700                     | 2200 | 22228CAK       | 22228CAK/W33  | 176                                | 218            | 11.1 | 5   | 154      | 236                  | 2.5                  | 0.26 | 2.60           | 3.90           | 2.50      | 15.00          |
|                  | 250 | 68  | 3                  | 616                    | 930             | 1700                     | 2200 | 22228CAKF3/W33 |               | 176                                | 218            | 11.1 | 5   | 154      | 236                  | 2.5                  | 0.26 | 2.60           | 3.90           | 2.50      | 14.80          |
|                  | 250 | 68  | 3                  | 670                    | 960             | 1700                     | 2200 | 22228C         | 22228C/W33    | 176                                | 218            | 11.1 | 5   | 154      | 236                  | 2.5                  | 0.26 | 2.60           | 3.90           | 2.50      | 14.50          |
|                  | 250 | 68  | 3                  | 670                    | 960             | 1700                     | 2200 | 22228CK        | 22228CK/W33   | 176                                | 218            | 11.1 | 5   | 154      | 236                  | 2.5                  | 0.26 | 2.60           | 3.90           | 2.50      | 14.50          |
|                  | 250 | 88  | 3                  | 770                    | 1095            | 1300                     | 1700 | 23228K/W33     |               | 172                                | 215            | 15   | 6   | 154      | 236                  | 2.5                  | 0.36 | 1.87           | 2.79           | 1.83      | 18.30          |
|                  | 250 | 88  | 3                  | 1000                   | 1365            | 1200                     | 1600 | 23228CA/W33    | 23228CAF3/W33 | 173                                | 215            | 15   | 6   | 154      | 236                  | 2.5                  | 0.33 | 2.00           | 3.00           | 2.00      | 19.70          |
|                  | 250 | 88  | 3                  | 1000                   | 1365            | 1200                     | 1600 | 23228CAK/W33   |               | 173                                | 215            | 15   | 6   | 154      | 236                  | 2.5                  | 0.33 | 2.00           | 3.00           | 2.00      | 19.30          |
|                  | 300 | 102 | 3.7                | 1160                   | 1590            | 1100                     | 1500 | 22328C         | 22328C/W33    | 191                                | 249            | 16.7 | 7   | 158      | 282                  | 3                    | 0.34 | 1.90           | 2.90           | 1.80      | 35.20          |
|                  | 300 | 102 | 3.7                | 1160                   | 1590            | 1100                     | 1500 | 22328CK        | 22328CK/W33   | 191                                | 249            | 16.7 | 7   | 158      | 282                  | 3                    | 0.34 | 1.90           | 2.90           | 1.80      | 34.40          |
|                  | 300 | 102 | 4                  | 1330                   | 1950            | 1100                     | 1500 | 22328CA        | 22328CA/W33   | 191                                | 249            | 16.7 | 7   | 158      | 282                  | 3                    | 0.35 | 1.90           | 2.90           | 1.80      | 36.20          |
|                  | 300 | 102 | 4                  | 1330                   | 1950            | 1100                     | 1500 | 22328CAF3      | 22328CAQ1/HA  | 191                                | 249            |      |     | 158      | 282                  | 3                    | 0.35 | 1.90           | 2.90           | 1.80      | 35.90          |
|                  | 300 | 102 | 4                  | 1330                   | 1950            | 1100                     | 1500 | 22328CAK       | 22328CAK/W33  | 191                                | 249            | 16.7 | 7   | 158      | 282                  | 3                    | 0.35 | 1.90           | 2.90           | 1.80      | 36.20          |
| 150              | 225 | 56  | 2.1                | 435                    | 730             | 1700                     | 2200 | 23030C         | 23030C/W33    | 174                                | 201            | 8.3  | 4.5 | 162      | 213                  | 2                    | 0.22 | 3.00           | 4.60           | 2.80      | 7.82           |
|                  | 225 | 56  | 2.1                | 435                    | 730             | 1700                     | 2200 | 23030CK        | 23030CK/W33   | 174                                | 201            | 8.3  | 4.5 | 162      | 213                  | 2                    | 0.22 | 3.00           | 4.60           | 2.80      | 7.15           |
|                  | 225 | 56  | 2.1                | 440                    | 795             | 1700                     | 2200 | 23030CA        | 23030CA/W33   | 174                                | 201            | 8.3  | 4.5 | 162      | 213                  | 2                    | 0.22 | 3.00           | 4.60           | 2.80      | 8.01           |
|                  | 225 | 56  | 2.1                | 440                    | 795             | 1700                     | 2200 | 23030CAF3      |               | 174                                | 201            |      |     | 162      | 213                  | 2                    | 0.22 | 3.00           | 4.60           | 2.80      | 7.96           |



# Spherical Roller Bearings

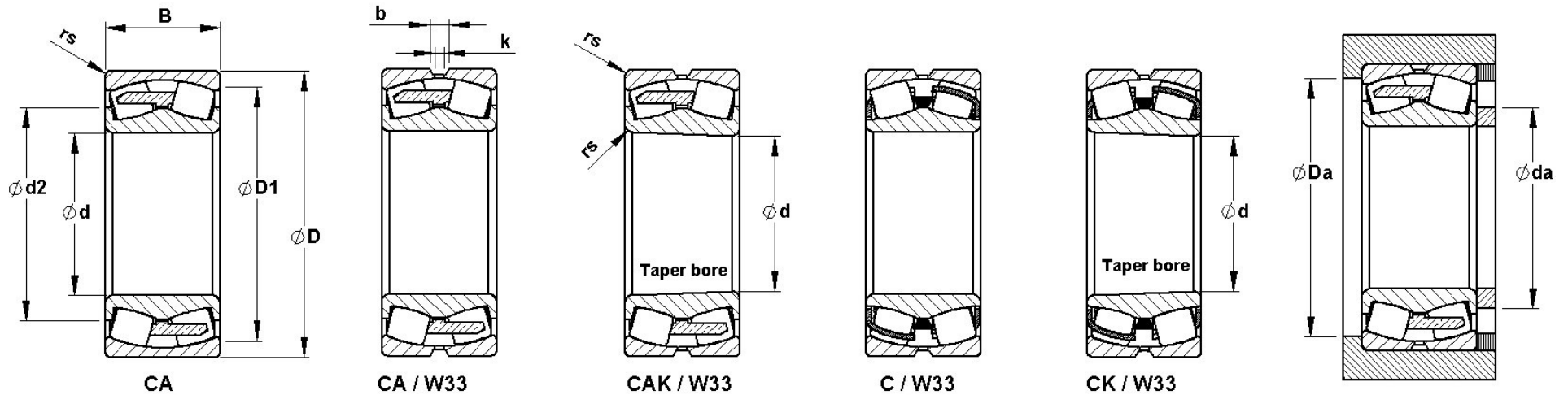
d 150 mm



| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |         | Part Number      | Mating and Fillet Dimensions in mm |                |      |      |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |       |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|---------|------------------|------------------------------------|----------------|------|------|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|-------|
| d                | D   | B   | r <sub>s min</sub> | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil     |                  | d <sub>2</sub>                     | D <sub>1</sub> | b    | k    | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |       |
| 150              | 225 | 75  | 2.1                | 550                    | 1050            | 1300                     | 1700    | 24030CA/W33      | 24030CAK30/W33                     | 175            | 196  | 5.5  | 3                    | 162                  | 213                  | 2    | 0.31           | 2.20           | 3.30      | 2.20           | 9.39  |
|                  | 225 | 75  | 2.1                | 550                    | 1050            | 1300                     | 1700    | 24030CA/W33X     |                                    | 175            | 196  | 5.5  | 3                    | 162                  | 213                  | 2    | 0.31           | 2.20           | 3.30      | 2.20           | 9.39  |
|                  | 250 | 80  | 2.1                | 745                    | 1230            | 1400                     | 1800    | 23130C           | 23130C/W33                         | 173            | 216  | 11.1 | 3                    | 162                  | 238                  | 2    | 0.30           | 2.30           | 3.40      | 2.20           | 16.20 |
|                  | 250 | 80  | 2.1                | 745                    | 1230            | 1400                     | 1800    | 23130CK          | 23130CK/W33                        | 173            | 216  | 11.1 | 3                    | 162                  | 238                  | 2    | 0.30           | 2.30           | 3.40      | 2.20           | 15.70 |
|                  | 250 | 80  | 2.1                | 820                    | 1300            | 1400                     | 1800    | 23130CA          | 23130CA/W33                        | 182            | 216  | 11.1 | 3                    | 162                  | 238                  | 2    | 0.30           | 2.30           | 3.40      | 2.20           | 16.50 |
|                  | 250 | 80  | 2.1                | 820                    | 1300            | 1400                     | 1800    | 23130CAF3        | 23130CAF3/W33                      | 182            | 216  | 11.1 | 3                    | 162                  | 238                  | 2    | 0.30           | 2.30           | 3.40      | 2.20           | 16.40 |
|                  | 250 | 80  | 2.1                | 820                    | 1300            | 1400                     | 1800    | 23130CAK         | 23130CAK3/W33                      | 182            | 216  | 11.1 | 3                    | 162                  | 238                  | 2    | 0.30           | 2.30           | 3.40      | 2.20           | 16.40 |
|                  | 250 | 100 | 2.1                | 865                    | 1400            | 800                      | 1000    | 24130CA          | 24130CA/W33                        | 180            | 208  | 8.3  | 4.5                  | 162                  | 238                  | 2    | 0.37           | 1.80           | 2.70      | 1.80           | 19.20 |
|                  | 250 | 100 | 2.1                | 865                    | 1400            | 800                      | 1000    | 24130CAK30/C3W33 |                                    | 180            | 208  | 8.3  | 4.5                  | 162                  | 238                  | 2    | 0.37           | 1.80           | 2.70      | 1.80           | 19.00 |
|                  | 250 | 100 | 2.1                | 850                    | 1470            | 800                      | 1000    | 24130C           |                                    | 180            | 208  |      |                      | 162                  | 238                  | 2    | 0.37           | 1.80           | 2.70      | 1.80           | 18.90 |
|                  | 270 | 73  | 3                  | 671                    | 1000            | 1600                     | 2000    | 22230C/W33       |                                    | 179            | 234  | 12   | 6                    | 164                  | 256                  | 2.5  | 0.26           | 2.60           | 3.90      | 2.50           | 18.60 |
|                  | 270 | 73  | 3                  | 693                    | 1050            | 1600                     | 2000    | 22230CA          | 22230CA/W33                        | 189            | 234  | 12   | 6                    | 164                  | 256                  | 2.5  | 0.26           | 2.60           | 3.90      | 2.50           | 18.70 |
|                  | 270 | 73  | 3                  | 693                    | 1050            | 1600                     | 2000    | 22230CAF3        | 22230CAK                           | 189            | 234  |      |                      | 164                  | 256                  | 2.5  | 0.26           | 2.60           | 3.90      | 2.50           | 18.50 |
|                  | 270 | 73  | 3                  | 693                    | 1050            | 1600                     | 2000    | 22230ACA         |                                    | 189            | 234  |      |                      | 164                  | 256                  | 2.5  | 0.26           | 2.60           | 3.90      | 2.50           | 18.20 |
| 270              | 96  | 3   | 1050               | 1550                   | 1100            | 1500                     | 23230C  |                  | 177                                | 228            |      |      | 164                  | 256                  | 2.5                  | 0.35 | 1.90           | 2.90           | 1.80      | 25.70          |       |
| 270              | 96  | 3   | 1050               | 1550                   | 1100            | 1500                     | 23230CA | 23230CA/W33      | 188                                | 228            | 11.1 | 6    | 164                  | 256                  | 2.5                  | 0.35 | 1.90           | 2.90           | 1.80      | 26.60          |       |
| 320              | 108 | 4   | 1230               | 1810                   | 1000            | 1400                     | 22330CA | 22330CA/W33      | 203                                | 265            | 16.7 | 9    | 168                  | 302                  | 3                    | 0.36 | 1.87           | 2.79           | 1.83      | 41.50          |       |

# Spherical Roller Bearings

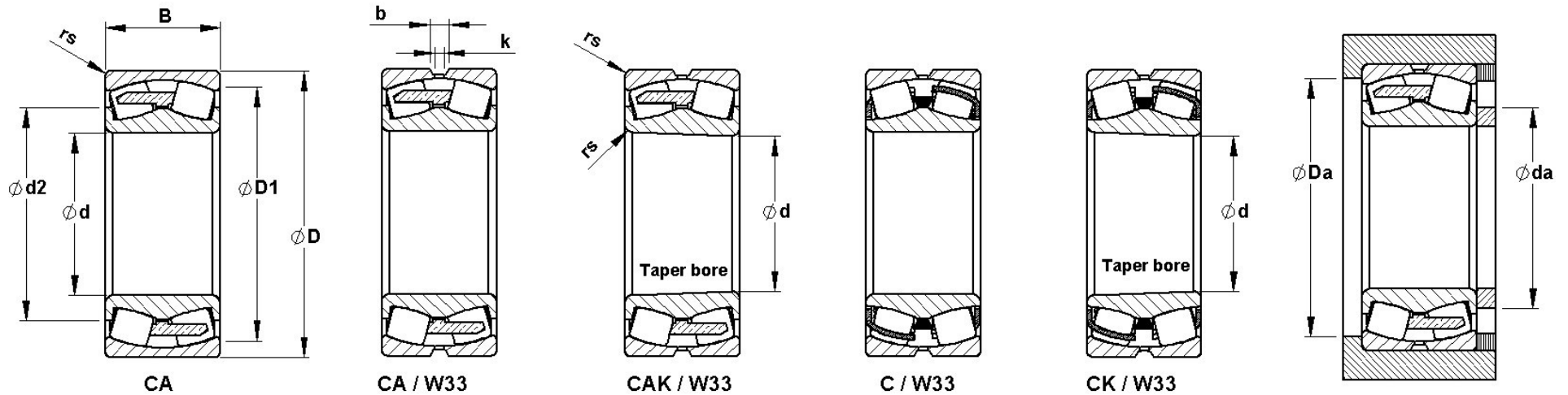
d 150 to 160 mm



| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |                  | Part Number        |                | Mating and Fillet Dimensions in mm |                |      |     |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|------------------|--------------------|----------------|------------------------------------|----------------|------|-----|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|
| d                | D   | B   | r <sub>s</sub> min | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil              |                    |                | d <sub>2</sub>                     | D <sub>1</sub> | b    | k   | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |
| 150              | 320 | 108 | 4                  | 1230                   | 1810            | 1000                     | 1400             | 22330CAK           | 22330CAKF3     | 203                                | 265            |      | 168 | 302                  | 3                    | 0.36                 | 1.87 | 2.79           | 1.83           | 41.10     |                |
| 160              | 240 | 60  | 2.1                | 510                    | 875             | 1700                     | 2200             | 23032C             | 23032C/W33     | 180                                | 216            | 11.1 | 4   | 172                  | 228                  | 2                    | 0.22 | 3.00           | 4.60           | 2.80      | 8.86           |
|                  | 240 | 60  | 2.1                | 510                    | 875             | 1700                     | 2200             | 23032CK            | 23032CK/W33    | 180                                | 216            | 11.1 | 4   | 172                  | 228                  | 2                    | 0.22 | 3.00           | 4.60           | 2.80      | 8.63           |
|                  | 240 | 60  | 2.1                | 490                    | 875             | 1700                     | 2200             | 23032CA            | 23032CA/W33    | 186                                | 216            | 8.3  | 5   | 172                  | 228                  | 2                    | 0.22 | 3.00           | 4.60           | 2.80      | 10.00          |
|                  | 240 | 60  | 2.1                | 490                    | 875             | 1700                     | 2200             | 23032CAF3          |                | 186                                | 216            |      |     | 172                  | 228                  | 2                    | 0.22 | 3.00           | 4.60           | 2.80      | 9.97           |
|                  | 240 | 80  | 2.1                | 627                    | 1210            | 1100                     | 1500             | 24032CA/W33        | 24032CAF3/W33  | 183                                | 209            | 8.3  | 5   | 172                  | 228                  | 2                    | 0.30 | 2.30           | 3.40           | 2.20      | 13.20          |
|                  | 240 | 80  | 2.1                | 627                    | 1210            | 1100                     | 1500             | 24032CAK30F3       | 24032CAK30/W33 | 183                                | 209            | 8.3  | 5   | 172                  | 228                  | 2                    | 0.30 | 2.30           | 3.40           | 2.20      | 13.20          |
|                  | 240 | 80  | 2.1                | 560                    | 1020            | 1200                     | 1600             | 24032K/W33         |                | 184                                | 209            | 8.3  | 5   | 172                  | 228                  | 2                    | 0.32 | 2.09           | 3.11           | 2.04      | 12.10          |
|                  | 270 | 86  | 2.1                | 840                    | 1430            | 1300                     | 1700             | 23132CA            | 23132CA/W33    | 188                                | 234            | 13.9 | 6   | 172                  | 258                  | 2                    | 0.30 | 2.30           | 3.40           | 2.20      | 21.90          |
|                  | 270 | 86  | 2.1                | 870                    | 1420            | 1300                     | 1700             | 23132C             | 23132C/W33     | 188                                | 234            | 13.9 | 6   | 172                  | 258                  | 2                    | 0.30 | 2.30           | 3.40           | 2.20      | 21.90          |
|                  | 270 | 86  | 2.1                | 840                    | 1430            | 1300                     | 1700             | 23132CAF3          | 23132CAK       | 195                                | 234            |      |     | 172                  | 258                  | 2                    | 0.30 | 2.30           | 3.40           | 2.20      | 21.90          |
|                  | 270 | 86  | 2.1                | 685                    | 1140            | 1400                     | 1800             | 23132K             |                | 193                                | 231            |      |     | 172                  | 258                  | 2                    | 0.34 | 1.99           | 2.96           | 1.94      | 20.60          |
|                  | 270 | 86  | 2.1                | 870                    | 1420            | 1400                     | 1800             | 23132CK            | 23132CK/W33    | 193                                | 231            | 13.9 | 6   | 172                  | 258                  | 2                    | 0.34 | 1.99           | 2.96           | 1.94      | 21.20          |
|                  | 270 | 109 | 2.1                | 1120                   | 1690            | 700                      | 900              | 24132CA/HAC9SOW20X |                | 195                                | 225            | 8.3  | 4   | 172                  | 258                  | 2                    | 0.40 | 1.69           | 2.51           | 1.65      | 23.40          |
| 270              | 109 | 2.1 | 952                | 1690                   | 700             | 900                      | 24132CA/W33      | 24132CA/W33X       | 193            | 225                                | 8.3            | 4    | 172 | 258                  | 2                    | 0.40                 | 1.69 | 2.51           | 1.65           | 24.60     |                |
| 270              | 109 |     | 950                | 1690                   | 700             | 900                      | 24132CAK30/C3W33 |                    | 193            | 225                                | 8.3            | 4    | 172 | 258                  | 2                    | 0.40                 | 1.69 | 2.51           | 1.65           | 24.20     |                |
| 290              | 80  |     | 825                | 1300                   | 1500            | 1900                     | 22232CA          | 22232CAF3          | 193            | 249                                |                |      | 174 | 276                  | 2.5                  | 0.27                 | 2.50 | 3.70           | 2.50           | 24.60     |                |

# Spherical Roller Bearings

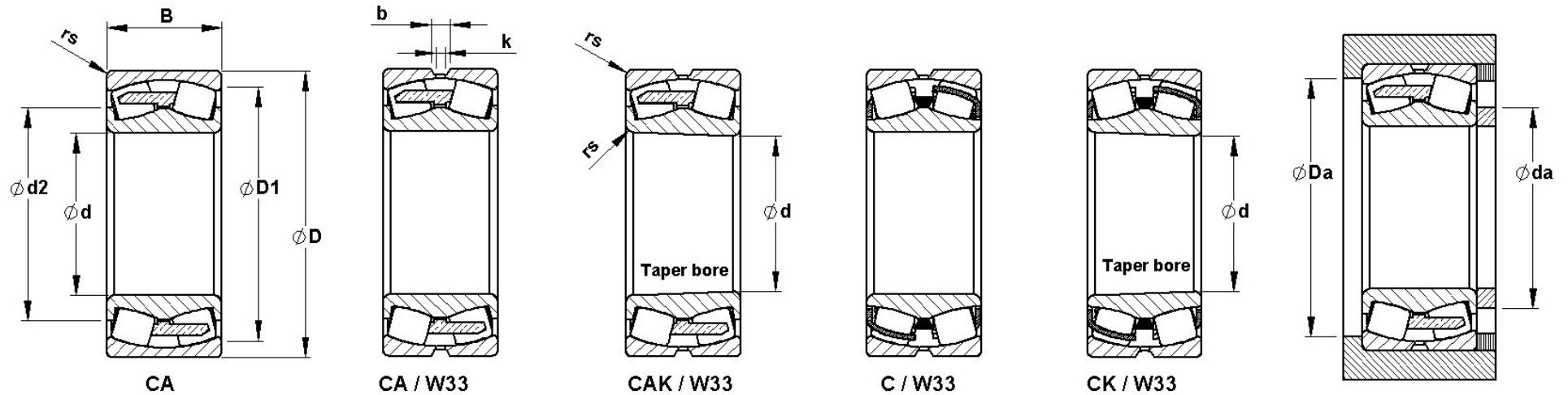
d 160 mm



| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |               | Part Number    | Mating and Fillet Dimensions in mm |                |     |      |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |      |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|---------------|----------------|------------------------------------|----------------|-----|------|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|------|
| d                | D   | B   | r <sub>s min</sub> | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil           |                | d <sub>2</sub>                     | D <sub>1</sub> | b   | k    | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |      |
| 160              | 290 | 80  |                    | 825                    | 1300            | 1500                     | 1900          | 22232CAK       |                                    | 201            | 249 |      | 174                  | 276                  | 2.5                  | 0.27 | 2.50           | 3.70           | 2.50      | 24.1           |      |
|                  | 290 | 80  |                    | 825                    | 1300            | 1500                     | 1900          | 22233ACA       |                                    | 201            | 249 |      | 174                  | 276                  | 2.5                  | 0.27 | 2.50           | 3.70           | 2.50      | 24.1           |      |
|                  | 290 | 80  |                    | 820                    | 1200            | 1500                     | 1900          | 22232KQ1/VBW33 |                                    | 201            | 249 | 13.9 | 5                    | 174                  | 276                  | 2.5  | 0.27           | 2.50           | 3.70      | 2.50           | 22.5 |
|                  | 290 | 80  |                    | 860                    | 1280            | 1500                     | 1900          | 22232CK        | 22232CK/W33                        | 201            | 249 | 13.9 | 5                    | 174                  | 276                  | 2.5  | 0.27           | 2.50           | 3.70      | 2.50           | 22.2 |
|                  | 290 | 80  |                    | 860                    | 1280            | 1500                     | 1900          | 22232C         | 22232C/W33                         | 201            | 249 | 13.9 | 5                    | 174                  | 276                  | 2.5  | 0.27           | 2.50           | 3.70      | 2.50           | 22.8 |
|                  | 290 | 104 |                    | 1210                   | 1760            | 1000                     | 1400          | 23232C         | 23232C/W33                         | 201            | 244 | 13.9 | 7                    |                      | 276                  | 2.5  | 0.35           | 1.90           | 2.90      | 1.80           | 30.0 |
|                  | 290 | 104 |                    | 1050                   | 1770            | 1000                     | 1400          | 23232CA        | 23232CA/W33                        | 189            | 244 | 13.9 | 7                    | 174                  | 276                  | 2.5  | 0.35           | 1.90           | 2.90      | 1.80           | 30.2 |
|                  | 290 | 104 |                    | 1050                   | 1770            | 1000                     | 1400          | 23232CAK       | 23232CAK/W33                       | 200            | 244 | 13.9 | 7                    | 174                  | 276                  | 2.5  | 0.35           | 1.90           | 2.90      | 1.80           | 29.2 |
|                  | 290 | 104 |                    | 1210                   | 1760            | 1000                     | 1400          | 23232CK/W33    |                                    | 200            | 244 | 13.9 | 7                    | 174                  | 276                  | 2.5  | 0.35           | 1.90           | 2.90      | 1.80           | 29.0 |
|                  | 340 | 114 |                    | 1450                   | 2050            | 950                      | 1300          | 22332C         | 22332C/W33                         | 189            | 284 | 16.7 | 7                    | 178                  | 322                  | 3    | 0.35           | 1.90           | 2.90      | 1.80           | 51.6 |
|                  | 340 | 114 |                    | 1400                   | 2050            | 950                      | 1300          | 22332CAK       |                                    | 201            | 284 |      |                      | 178                  | 322                  | 3    | 0.35           | 1.90           | 2.90      | 1.80           | 52.8 |
|                  | 340 | 114 |                    | 1460                   | 2050            | 950                      | 1300          | 22332CA        | 22332CA/W33                        | 201            | 284 | 16.7 | 7                    | 178                  | 322                  | 3    | 0.35           | 1.90           | 2.90      | 1.80           | 51.6 |
|                  | 340 | 114 |                    | 1400                   | 2050            | 950                      | 1300          | 22332CAF3      | 22332CAF3/W33                      | 216            | 284 | 16.7 | 7                    | 178                  | 322                  | 3    | 0.35           | 1.90           | 2.90      | 1.80           | 52.5 |
|                  | 340 | 114 |                    | 1400                   | 2050            | 950                      | 1300          | 22332CAKF3/W33 |                                    | 216            | 284 | 16.7 | 7                    | 178                  | 322                  | 3    | 0.35           | 1.90           | 2.90      | 1.80           | 52.5 |
|                  | 340 | 114 |                    | 1450                   | 2050            | 950                      | 1300          | 22332CK        | 22332CK/W33                        | 216            | 284 | 16.7 | 7                    | 178                  | 322                  | 3    | 0.35           | 1.90           | 2.90      | 1.80           | 50.9 |
|                  | 340 | 114 |                    | 1330                   | 1810            | 950                      | 1300          | 22332Q1/VBW33  |                                    | 216            | 284 | 16.7 | 7                    | 178                  | 322                  | 3    | 0.35           | 1.90           | 2.90      | 1.80           | 52.0 |
| 340              | 136 |     | 1300               | 1840                   | 950             | 1300                     | 23332Q1/VBW33 |                | 216                                | 284            | 22  | 8    | 178                  | 322                  | 3                    | 0.35 | 1.90           | 2.90           | 1.80      | 60.6           |      |

# Spherical Roller Bearings

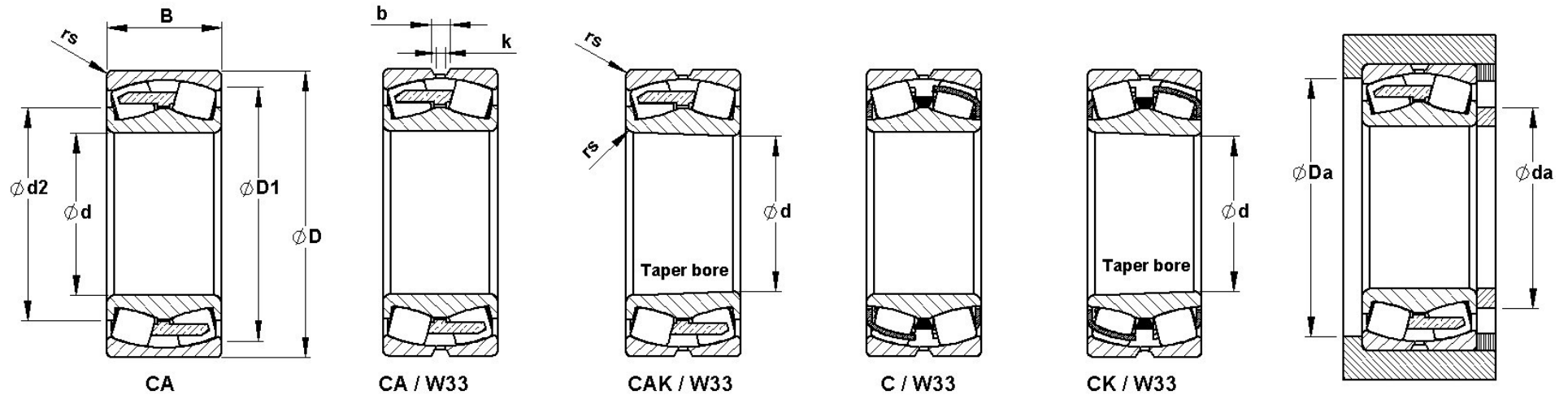
d 170 mm



| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |         | Part Number    |              | Mating and Fillet Dimensions in mm |                |      |     |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|---------|----------------|--------------|------------------------------------|----------------|------|-----|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|
| d                | D   | B   | r <sub>s min</sub> | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil     |                |              | d <sub>2</sub>                     | D <sub>1</sub> | b    | k   | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |
| 170              | 260 | 67  |                    | 610                    | 1090            | 1600                     | 2000    | 23034CA        | 23034CA/W33  | 198                                | 231            | 11.1 | 5   | 182                  | 248                  | 2                    | 0.23 | 2.90           | 4.40           | 2.80      | 14.1           |
|                  | 260 | 67  |                    | 610                    | 1090            | 1600                     | 2000    | 23034CAF3      | 23034CAK     | 198                                | 231            |      |     | 182                  | 248                  | 2                    | 0.23 | 2.90           | 4.40           | 2.80      | 14.0           |
|                  | 260 | 67  |                    | 610                    | 1090            | 1600                     | 2000    | 23034CAKF3/W33 |              | 198                                | 231            | 11.1 | 5   | 182                  | 248                  | 2                    | 0.23 | 2.90           | 4.40           | 2.80      | 13.5           |
|                  | 260 | 67  |                    | 625                    | 1150            | 1600                     | 2000    | 23034CK        | 23034CK/W33  | 192                                | 231            | 11.1 | 5   | 182                  | 248                  | 2                    | 0.23 | 2.90           | 4.40           | 2.80      | 13.7           |
|                  | 260 | 67  |                    | 625                    | 1150            | 1600                     | 2000    | 23034C         | 23034C/W33   | 192                                | 231            | 11.1 | 5   | 182                  | 248                  | 2                    | 0.23 | 2.90           | 4.40           | 2.80      | 13.6           |
|                  | 260 | 90  |                    | 775                    | 1500            | 1000                     | 1400    | 24034CA/W33    |              | 198                                | 227            | 8.3  | 4   | 182                  | 248                  | 2                    | 0.33 | 2.00           | 3.00           | 2.00      | 17.8           |
|                  | 280 | 88  |                    | 850                    | 1390            | 1200                     | 1600    | 23134CA        |              | 204                                | 243            |      |     | 182                  | 268                  | 2                    | 0.30 | 2.30           | 3.40           | 2.20      | 26.1           |
|                  | 280 | 88  |                    | 850                    | 1390            | 1200                     | 1600    | 23134CAK       | 23134CAKF3   | 204                                | 243            |      |     | 182                  | 268                  | 2                    | 0.30 | 2.30           | 3.40           | 2.20      | 24.6           |
|                  | 280 | 88  |                    | 910                    | 1520            | 1200                     | 1600    | 23134C         |              | 204                                | 243            |      |     | 182                  | 268                  | 2                    | 0.30 | 2.30           | 3.40           | 2.20      | 22.0           |
|                  | 280 | 88  |                    | 910                    | 1520            | 1200                     | 1600    | 23134CK        | 23134CK/W33  | 204                                | 243            | 8.3  | 5   | 182                  | 268                  | 2                    | 0.30 | 2.30           | 3.40           | 2.20      | 24.6           |
|                  | 280 | 109 |                    | 1010                   | 1830            | 670                      | 850     | 24134CA/W33    |              | 203                                | 237            | 8.3  | 5   | 182                  | 268                  | 2                    | 0.37 | 1.80           | 2.70           | 1.80      | 24.8           |
|                  | 280 | 109 |                    | 1050                   | 1830            | 670                      | 850     | 24134CA        |              | 203                                | 237            |      |     | 182                  | 268                  | 2                    | 0.37 | 1.80           | 2.70           | 1.80      | 25.4           |
|                  | 310 | 86  |                    | 930                    | 1450            | 1300                     | 1700    | 22234CA        | 22234CA/W33  | 215                                | 268            | 16.7 | 6   | 188                  | 292                  | 3                    | 0.27 | 2.50           | 3.70           | 2.50      | 26.8           |
|                  | 310 | 86  |                    | 930                    | 1450            | 1300                     | 1700    | 22234CAK       | 22234CAK/W33 | 215                                | 268            | 16.7 | 6   | 188                  | 292                  | 3                    | 0.27 | 2.50           | 3.70           | 2.50      | 26.2           |
| 310              | 86  |     | 970                | 1450                   | 1300            | 1700                     | 22234C  | 22234C/W33     | 215          | 268                                | 16.7           | 6    | 188 | 292                  | 3                    | 0.27                 | 2.50 | 3.70           | 2.50           | 29.2      |                |
| 310              | 86  |     | 970                | 1450                   | 1300            | 1700                     | 22234CK | 22234CK/W33    | 215          | 268                                | 16.7           | 6    | 188 | 292                  | 3                    | 0.27                 | 2.50 | 3.70           | 2.50           | 28.5      |                |
| 310              | 110 | 4   | 1180               | 1930                   | 950             | 1300                     | 23234CA | 23234CAF3/W33  | 214          | 261                                | 13.9           | 7    | 188 | 292                  | 3                    | 0.34                 | 1.99 | 2.96           | 1.94           | 38.0      |                |

# Spherical Roller Bearings

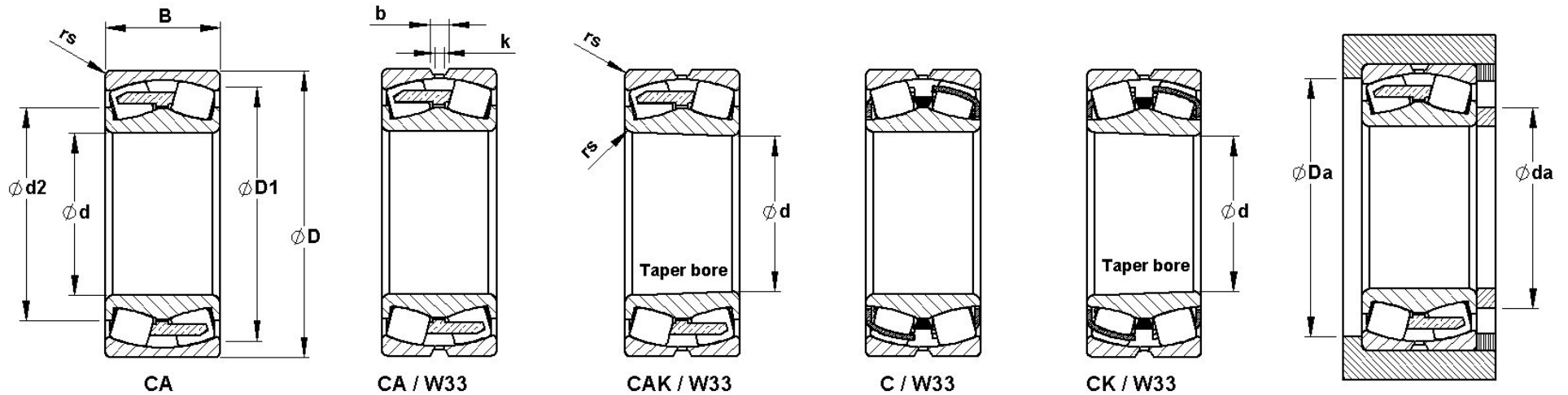
d 170 to 180 mm



| Dimensions in mm |     |     |        | Basic Load Rating - KN |                 | Limit speed ratings- RPM |      | Part Number    | Mating and Fillet Dimensions in mm |                |     |      |          |                      | Calculation Factor   |      |                |                | Weight Kg |                |      |
|------------------|-----|-----|--------|------------------------|-----------------|--------------------------|------|----------------|------------------------------------|----------------|-----|------|----------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|------|
| d                | D   | B   | rs min | Cr                     | C <sub>or</sub> | Grease                   | Oil  |                | d <sub>2</sub>                     | D <sub>1</sub> | b   | k    | da (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |      |
| 170              | 360 | 120 | 4      | 1450                   | 2120            | 950                      | 1300 | 22334C/YA7     |                                    | 211            | 299 |      | 188      | 342                  | 3                    | 0.37 | 1.80           | 2.70           | 1.80      | 59.7           |      |
|                  | 360 | 120 | 4      | 1450                   | 2120            | 950                      | 1300 | 22334CA        | 22334CA/W33                        | 231            | 299 | 16.7 | 7        | 188                  | 342                  | 3    | 0.34           | 1.99           | 2.96      | 1.94           | 62.6 |
|                  | 360 | 120 | 4      | 1450                   | 2120            | 950                      | 1300 | 22334CA/W33X   |                                    | 231            | 299 | 16.7 | 7        | 188                  | 342                  | 3    | 0.34           | 1.99           | 2.96      | 1.94           | 62.6 |
|                  | 360 | 120 | 4      | 1450                   | 2120            | 950                      | 1300 | 22334ACA       |                                    | 231            | 299 |      |          | 188                  | 342                  | 3    | 0.34           | 1.99           | 2.96      | 1.94           | 61.4 |
|                  | 360 | 120 | 4      | 1640                   | 2120            | 950                      | 1300 | 22334CA/HCEW33 |                                    | 231            | 299 | 16.7 | 7        | 188                  | 342                  | 3    | 0.34           | 1.99           | 2.96      | 1.94           | 62.6 |
| 180              | 250 | 52  | 2      | 473                    | 830             | 1700                     | 2200 | 23936CAF3/W33  |                                    | 204            | 230 | 9.5  | 4        | 190                  | 240                  | 2    | 0.18           | 3.80           | 5.60      | 3.60           | 7.3  |
|                  | 280 | 74  | 2.1    | 693                    | 1280            | 1400                     | 1800 | 23036CA        | 23036CA/W33                        | 214            | 247 | 13.9 | 7.5      | 192                  | 268                  | 2    | 0.25           | 2.70           | 4.00      | 2.60           | 17.7 |
|                  | 280 | 74  | 2.1    | 693                    | 1280            | 1400                     | 1800 | 23036CAF3      |                                    | 214            | 247 |      |          | 192                  | 268                  | 2    | 0.25           | 2.70           | 4.00      | 2.60           | 17.6 |
|                  | 280 | 74  | 2.1    | 730                    | 1290            | 1400                     | 1800 | 23036C         | 23036C/W33                         | 214            | 247 | 13.9 | 7.5      | 192                  | 268                  | 2    | 0.25           | 2.70           | 4.00      | 2.60           | 17.1 |
|                  | 280 | 74  | 2.1    | 730                    | 1290            | 1400                     | 1800 | 23036CK        | 23036CK/W33                        | 214            | 247 | 13.9 | 7.5      | 192                  | 268                  | 2    | 0.25           | 2.70           | 4.00      | 2.60           | 17.0 |
|                  | 280 | 100 | 2.1    | 919                    | 1750            | 950                      | 1300 | 24036CA        | 24036CA/W33                        | 210            | 242 | 8.3  | 4        | 192                  | 268                  | 2    | 0.33           | 2.00           | 3.00      | 2.00           | 26.6 |
|                  | 280 | 100 | 2.1    | 919                    | 1750            | 950                      | 1300 | 24036CAF3/W33  | 24036CAK30F3/W33                   | 210            | 242 | 8.3  | 4        | 192                  | 268                  | 2    | 0.33           | 2.00           | 3.00      | 2.00           | 26.6 |
|                  | 300 | 96  | 3      | 990                    | 1720            | 1100                     | 1500 | 23136CA        | 23136CA/W33                        | 216            | 259 | 13.9 | 6        | 194                  | 286                  | 2.5  | 0.30           | 2.30           | 3.40      | 2.20           | 27.1 |
|                  | 300 | 96  | 3      | 990                    | 1720            | 1100                     | 1500 | 23136CAF3      | 23136CAK                           | 216            | 259 |      |          | 194                  | 286                  | 2.5  | 0.30           | 2.30           | 3.40      | 2.20           | 27.0 |
|                  | 300 | 96  | 3      | 990                    | 1720            | 1100                     | 1500 | 23136CAK       | 23136CAK30/W33                     | 216            | 259 | 13.9 | 6        | 194                  | 286                  | 2.5  | 0.30           | 2.30           | 3.40      | 2.20           | 26.3 |
|                  | 300 | 96  | 3      | 1030                   | 1720            | 1100                     | 1500 | 23136C/W33     |                                    | 216            | 259 | 13.9 | 6        | 194                  | 286                  | 2.5  | 0.30           | 2.30           | 3.40      | 2.20           | 26.3 |
|                  | 300 | 118 | 3      | 1120                   | 2030            | 630                      | 800  | 24136CA        | 24136CA/W33                        | 212            | 252 | 11.1 | 6        | 194                  | 286                  | 2.5  | 0.37           | 1.80           | 2.70      | 1.80           | 33.0 |

# Spherical Roller Bearings

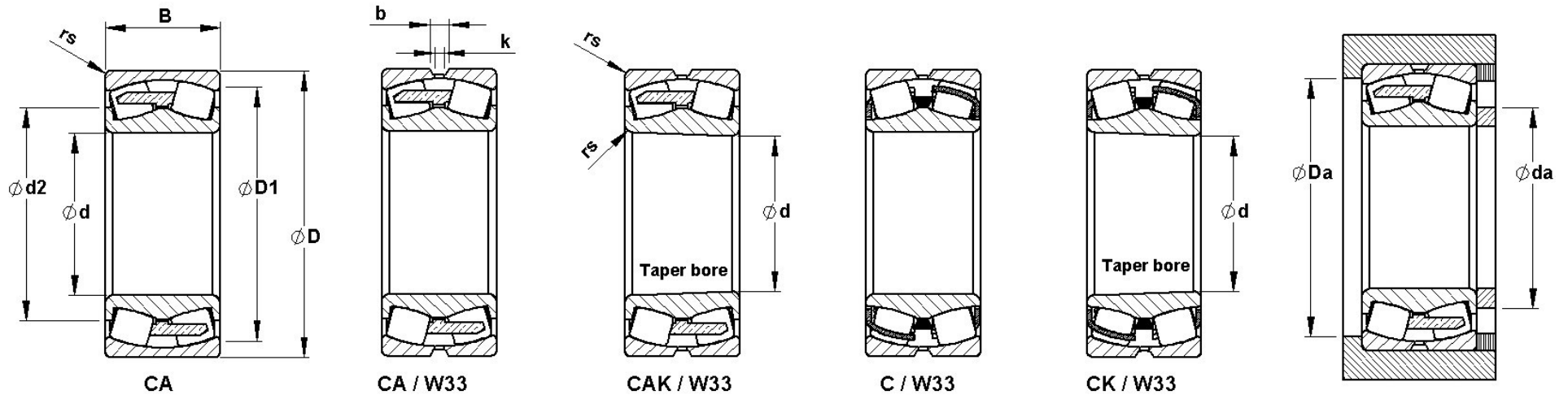
d 180 to 190 mm



| Dimensions in mm |     |     |           | Basic Load Rating - KN |          | Limit speed ratings- RPM |            | Part Number   | Mating and Fillet Dimensions in mm |       |      |      |             |             | Calculation Factor |      |       |       | Weight Kg |       |      |
|------------------|-----|-----|-----------|------------------------|----------|--------------------------|------------|---------------|------------------------------------|-------|------|------|-------------|-------------|--------------------|------|-------|-------|-----------|-------|------|
| d                | D   | B   | $r_s$ min | $C_r$                  | $C_{or}$ | Grease                   | Oil        |               | $d_2$                              | $D_1$ | b    | k    | $d_a$ (min) | $D_a$ (max) | $r_a$ (max)        | e    | $y_1$ | $y_2$ |           | $y_0$ |      |
| 180              | 300 | 118 | 3         | 1120                   | 2030     | 630                      | 800        | 24136CAQ1     |                                    | 212   | 252  |      | 194         | 286         | 2.5                | 0.37 | 1.80  | 2.70  | 1.80      | 33.0  |      |
|                  | 320 | 86  | 4         | 985                    | 1550     | 1300                     | 1700       | 22236CA       | 22236CA/W33                        | 224   | 278  | 16.7 | 6           | 198         | 302                | 3    | 0.26  | 2.60  | 3.90      | 2.50  | 29.4 |
|                  | 320 | 86  | 4         | 985                    | 1550     | 1300                     | 1700       | 22236CAF3     | 22236CAQ1                          | 224   | 278  |      |             | 198         | 302                | 3    | 0.26  | 2.60  | 3.90      | 2.50  | 29.2 |
|                  | 320 | 86  | 4         | 985                    | 1550     | 1300                     | 1700       | 22236CAK      | 22236CAKF3                         | 224   | 278  |      |             | 198         | 302                | 3    | 0.26  | 2.60  | 3.90      | 2.50  | 29.3 |
|                  | 320 | 86  | 4         | 985                    | 1550     | 1300                     | 1700       | 22236CK       | 22236CK/W33                        | 224   | 278  | 16.7 | 6           | 198         | 302                | 3    | 0.26  | 2.60  | 3.90      | 2.50  | 68.3 |
|                  | 320 | 86  | 4         | 985                    | 1550     | 1300                     | 1700       | 22236C        | 22236C/W33                         | 224   | 278  | 16.7 | 6           | 198         | 302                | 3    | 0.26  | 2.60  | 3.90      | 2.50  | 29.9 |
|                  | 320 | 112 | 4         | 1280                   | 2130     | 900                      | 1200       | 23236CA       |                                    | 222   | 271  |      |             | 198         | 302                | 3    | 0.35  | 1.90  | 2.90      | 1.80  | 38.7 |
|                  | 320 | 112 | 4         | 1280                   | 2130     | 900                      | 1200       | 23236CA/HCW33 | 23236CA/HCW33YA2                   | 222   | 271  | 13.9 | 7           | 198         | 302                | 3    | 0.35  | 1.90  | 2.90      | 1.80  | 38.6 |
|                  | 320 | 112 | 4         | 1280                   | 2130     | 900                      | 1200       | 23236CAF3     | 23236CAF3/W33                      | 222   | 271  | 13.9 | 7           | 198         | 302                | 3    | 0.35  | 1.90  | 2.90      | 1.80  | 38.5 |
|                  | 320 | 112 | 4         | 1280                   | 2130     | 900                      | 1200       | 23236CAK/W33  | 23236CAKF3/W33                     | 222   | 271  | 13.9 | 8           | 198         | 302                | 3    | 0.35  | 1.90  | 2.90      | 1.80  | 38.4 |
|                  | 380 | 126 | 4         | 1620                   | 2400     | 900                      | 1200       | 22336CA       | 22336CA/W33                        | 242   | 316  | 22.3 | 8           | 198         | 362                | 3    | 0.34  | 1.99  | 2.96      | 1.94  | 72.2 |
|                  | 380 | 126 | 4         | 1620                   | 2400     | 900                      | 1200       | 22336CAF3/W33 | 22336CAK                           | 242   | 316  | 22.3 | 8           | 198         | 362                | 3    | 0.34  | 1.99  | 2.96      | 1.94  | 71.3 |
| 380              | 126 | 4   | 1690      | 2400                   | 900      | 1200                     | 22336CK    | 22336CK/W33   | 242                                | 316   | 22.3 | 8    | 198         | 362         | 3                  | 0.34 | 1.99  | 2.96  | 1.94      | 68.3  |      |
| 380              | 126 | 4   | 1690      | 2400                   | 900      | 1200                     | 22336C/W33 |               | 242                                | 316   | 22.3 | 8    | 198         | 362         | 3                  | 0.34 | 1.99  | 2.96  | 1.94      | 69.6  |      |
| 190              | 260 | 52  | 2         | 440                    | 855      | 1600                     | 2000       | 23938CA/W33   |                                    | 213   | 238  | 5.5  | 3           | 202         | 248                | 2    | 0.18  | 3.80  | 5.60      | 3.60  | 8.3  |
|                  | 290 | 75  | 2.1       | 770                    | 1450     | 1300                     | 1700       | 23038C        |                                    | 215   | 259  |      |             | 202         | 278                | 2    | 0.23  | 2.90  | 4.40      | 2.80  | 16.9 |
|                  | 290 | 75  | 2.1       | 770                    | 1450     | 1300                     | 1700       | 23038CA       | 23038CA/W33                        | 224   | 259  | 13.9 | 5           | 202         | 278                | 2    | 0.23  | 2.90  | 4.40      | 2.80  | 17.3 |

# Spherical Roller Bearings

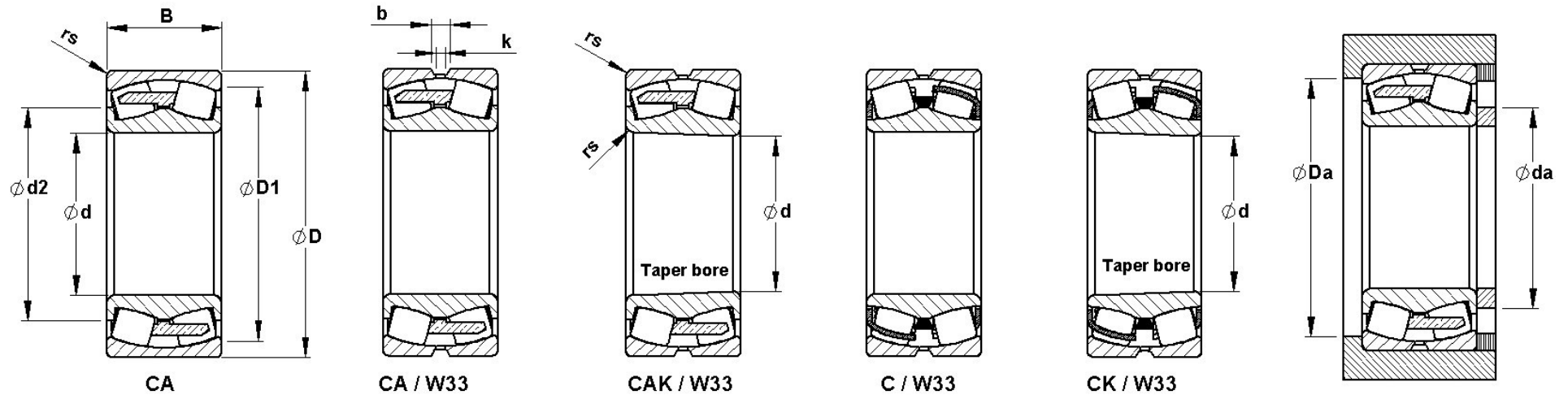
d 190 mm



| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |              | Part Number      | Mating and Fillet Dimensions in mm |                |      |      |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |      |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|--------------|------------------|------------------------------------|----------------|------|------|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|------|
| d                | D   | B   | r <sub>s min</sub> | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil          |                  | d <sub>2</sub>                     | D <sub>1</sub> | b    | k    | d <sub>a (min)</sub> | D <sub>a (max)</sub> | r <sub>a (max)</sub> | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |      |
| 190              | 290 | 75  | 2.1                | 770                    | 1450            | 1300                     | 1700         | 23038CAF3        |                                    | 224            | 259  |      | 202                  | 278                  | 2                    | 0.23 | 2.90           | 4.40           | 2.80      | 17.2           |      |
|                  | 290 | 75  | 2.1                | 770                    | 1450            | 1300                     | 1700         | 23038CAK         | 23038CAK/W33                       | 224            | 259  | 13.9 | 5                    | 202                  | 278                  | 2    | 0.23           | 2.90           | 4.40      | 2.80           | 16.8 |
|                  | 290 | 75  | 2.1                | 770                    | 1450            | 1300                     | 1700         | 23038CAKF3/W33   |                                    | 224            | 259  | 13.9 | 5                    | 202                  | 278                  | 2    | 0.23           | 2.90           | 4.40      | 2.80           | 16.5 |
|                  | 290 | 100 | 2.1                | 941                    | 1840            | 950                      | 1300         | 24038CA          | 24038CAF3                          | 219            | 252  |      |                      | 202                  | 278                  | 2    | 0.31           | 2.20           | 3.30      | 2.20           | 22.9 |
|                  | 320 | 104 | 3                  | 1140                   | 1840            | 1000                     | 1400         | 23138CA          | 23138CA/W33                        | 232            | 276  | 13.9 | 7                    | 204                  | 306                  | 2.5  | 0.31           | 2.20           | 3.30      | 2.20           | 34.3 |
|                  | 320 | 128 | 3                  | 1320                   | 2400            | 600                      | 750          | 24138CA          | 24138CA/W33                        | 226            | 267  | 11.1 | 6                    | 204                  | 306                  | 2.5  | 0.40           | 1.69           | 2.51      | 1.65           | 41.9 |
|                  | 320 | 128 | 3                  | 1320                   | 2400            | 600                      | 750          | 24138CAF3        | 24138CAK30/W33                     | 226            | 267  | 11.1 | 6                    | 204                  | 306                  | 2.5  | 0.40           | 1.69           | 2.51      | 1.65           | 41.8 |
|                  | 320 | 128 | 3                  | 1320                   | 2400            | 600                      | 750          | 24138CA/HCW33    | 24138CA/C9W33                      | 226            | 267  | 11.1 | 6                    | 204                  | 306                  | 2.5  | 0.40           | 1.69           | 2.51      | 1.65           | 41.8 |
|                  | 320 | 128 | 3                  | 1320                   | 2400            | 600                      | 750          | 24138CAK30F3/W33 |                                    | 226            | 267  | 11.1 | 6                    | 204                  | 306                  | 2.5  | 0.40           | 1.69           | 2.51      | 1.65           | 41.5 |
|                  | 340 | 92  | 4                  | 1050                   | 1620            | 1200                     | 1600         | 22238CA          | 22238CA/W33                        | 235            | 293  | 16.7 | 6                    | 208                  | 322                  | 3    | 0.26           | 2.60           | 3.90      | 2.50           | 37.4 |
|                  | 340 | 92  | 4                  | 1050                   | 1620            | 1200                     | 1600         | 22238CAF3        | 22238CAKF3                         | 235            | 293  |      |                      | 208                  | 322                  | 3    | 0.26           | 2.60           | 3.90      | 2.50           | 37.2 |
|                  | 340 | 92  | 4                  | 1050                   | 1620            | 1200                     | 1600         | 22238CAK         | 22238CAK/W33                       | 235            | 293  | 16.7 | 6                    | 208                  | 322                  | 3    | 0.26           | 2.60           | 3.90      | 2.50           | 37.3 |
|                  | 340 | 92  | 4                  | 1050                   | 1620            | 1200                     | 1600         | 22238ACA         |                                    | 235            | 293  |      |                      | 208                  | 322                  | 3    | 0.26           | 2.60           | 3.90      | 2.50           | 37.0 |
|                  | 340 | 92  | 4                  | 1120                   | 1680            | 1200                     | 1600         | 22238CK          | 22238CK/W33                        | 235            | 293  | 16.7 | 6                    | 208                  | 322                  | 3    | 0.26           | 2.60           | 3.90      | 2.50           | 37.9 |
|                  | 340 | 92  | 4                  | 1120                   | 1680            | 1200                     | 1600         | 22238C           | 22238C/W33                         | 235            | 293  | 16.7 | 6                    | 208                  | 322                  | 3    | 0.26           | 2.60           | 3.90      | 2.50           | 37.9 |
| 340              | 120 | 4   | 1420               | 2400                   | 850             | 1100                     | 23238CA      | 23238CA/W33      | 237                                | 288            | 16.7 | 7    | 208                  | 322                  | 3                    | 0.35 | 1.90           | 2.90           | 1.80      | 44.8           |      |
| 340              | 120 | 4   | 1420               | 2400                   | 850             | 1100                     | 23238CAK/W33 |                  | 237                                | 288            | 16.7 | 7    | 208                  | 322                  | 3                    | 0.35 | 1.90           | 2.90           | 1.80      | 43.1           |      |

# Spherical Roller Bearings

d 190 to 200 mm

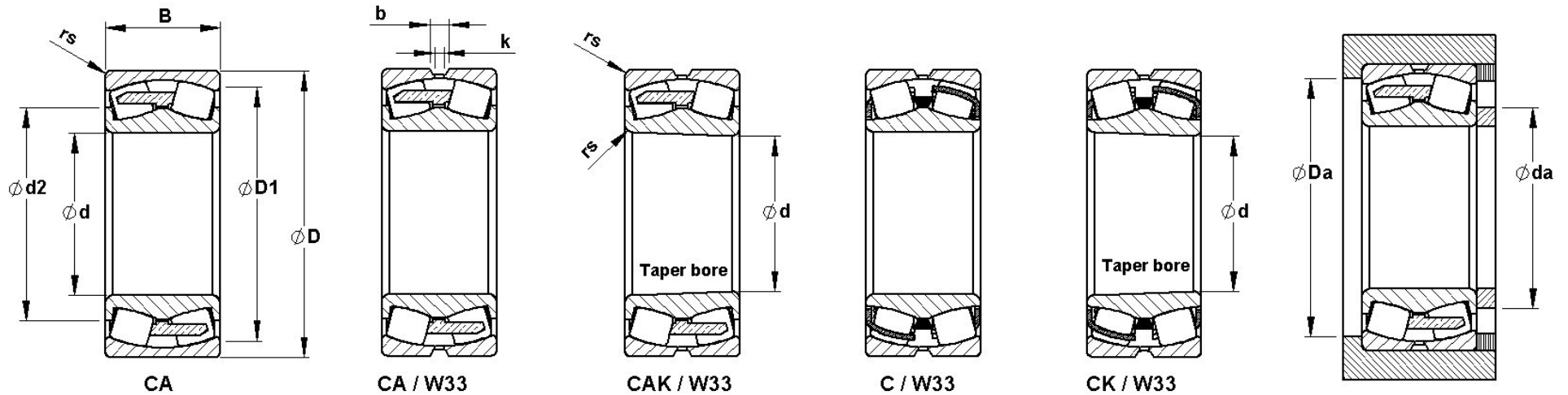


| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |             | Part Number      | Mating and Fillet Dimensions in mm |                |      |      |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |      |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|-------------|------------------|------------------------------------|----------------|------|------|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|------|
| d                | D   | B   | r <sub>s</sub> min | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil         |                  | d <sub>2</sub>                     | D <sub>1</sub> | b    | k    | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |      |
| 190              | 400 | 132 | 5                  | 1800                   | 2630            | 850                      | 1100        | 22338C           |                                    | 238            | 334  |      |                      | 212                  | 378                  | 4    | 0.34           | 1.99           | 2.96      | 1.94           | 80.8 |
|                  | 400 | 132 | 5                  | 1800                   | 2630            | 850                      | 1100        | 22338CA          | 22338CA/W33                        | 257            | 334  | 22.3 | 8                    | 212                  | 378                  | 4    | 0.34           | 1.99           | 2.96      | 1.94           | 82.2 |
|                  | 400 | 132 | 5                  | 1920                   | 2780            | 850                      | 1100        | 22338C           | 22338C/W33                         | 257            | 334  | 22.3 | 8                    | 212                  | 378                  | 4    | 0.34           | 1.99           | 2.96      | 1.94           | 81.9 |
|                  | 400 | 132 | 5                  | 1920                   | 2780            | 850                      | 1100        | 22338CK          | 22338CK/W33                        | 257            | 334  | 22.3 | 8                    | 212                  | 378                  | 4    | 0.34           | 1.99           | 2.96      | 1.94           | 80.9 |
|                  | 400 | 132 | 5                  | 1800                   | 2630            | 850                      | 1100        | 22338CAF3        |                                    | 257            | 334  |      |                      | 212                  | 378                  | 4    | 0.34           | 1.99           | 2.96      | 1.94           | 81.7 |
|                  | 400 | 132 | 5                  | 1800                   | 2630            | 850                      | 1100        | 22338ACA         | 22338ACA/W33X                      | 257            | 334  | 22.3 | 12                   | 212                  | 378                  | 4    | 0.34           | 1.99           | 2.96      | 1.94           | 81.0 |
| 200              | 280 | 60  | 2.1                | 545                    | 1150            | 1600                     | 2000        | 23940CAF3/W33    |                                    | 226            | 254  | 9.5  | 4                    | 212                  | 268                  | 2    | 0.19           | 3.61           | 5.38      | 3.53           | 12.1 |
|                  | 280 | 186 | 1.1                |                        |                 |                          |             | H2344            |                                    |                |      |      |                      |                      |                      |      |                |                |           |                | 16.8 |
|                  | 310 | 82  | 2.1                | 850                    | 1560            | 1200                     | 1600        | 23040CA          | 23040CA/W33                        | 237            | 276  | 13.9 | 7.5                  | 212                  | 298                  | 2    | 0.25           | 2.70           | 4.00      | 2.60           | 22.6 |
|                  | 310 | 82  | 2.1                | 850                    | 1560            | 1200                     | 1600        | 23040CAK         | 23040CAK/W33                       | 237            | 276  | 13.9 | 7.5                  | 212                  | 298                  | 2    | 0.25           | 2.70           | 4.00      | 2.60           | 22.4 |
|                  | 310 | 82  | 2.1                | 880                    | 1560            | 1200                     | 1600        | 23040C           | 23040C/W33                         | 237            | 276  | 13.9 | 7.5                  | 212                  | 298                  | 2    | 0.25           | 2.70           | 4.00      | 2.60           | 23.3 |
|                  | 310 | 82  | 2.1                | 880                    | 1560            | 1200                     | 1600        | 23040CK          | 23040CK/W33                        | 237            | 276  | 13.9 | 7.5                  | 212                  | 298                  | 2    | 0.25           | 2.70           | 4.00      | 2.60           | 24.5 |
|                  | 310 | 109 | 2.1                | 1080                   | 2130            | 900                      | 1200        | 24040CA/W33      | 24040CAK30/W33                     | 233            | 268  | 11.1 | 5                    | 212                  | 298                  | 2    | 0.33           | 2.00           | 3.00      | 2.00           | 31.3 |
|                  | 340 | 112 | 3                  | 1300                   | 2240            | 950                      | 1300        | 23140CA          | 23140CA/W33                        | 243            | 292  | 16.7 | 7                    | 214                  | 326                  | 2.5  | 0.31           | 2.20           | 3.30      | 2.20           | 43.8 |
|                  | 340 | 112 | 3                  | 1300                   | 2240            | 950                      | 1300        | 23140CAK         | 23140CAK/W33                       | 243            | 292  | 16.7 | 7                    | 214                  | 326                  | 2.5  | 0.31           | 2.20           | 3.30      | 2.20           | 42.6 |
|                  | 340 | 112 | 3                  | 1340                   | 2240            | 950                      | 1300        | FL-23140C/W33    |                                    | 243            | 292  | 16.7 | 7                    | 21                   | 326                  | 2.5  | 0.31           | 2.20           | 3.30      | 2.20           | 41.6 |
| 340              | 140 | 3   | 1520               | 2800                   | 5601            | 700                      | 24140CA/W33 | 24140CAK30F3/W33 | 242                                | 283            | 11.1 | 6    | 214                  | 326                  | 2.5                  | 0.40 | 1.70           | 2.50           | 1.60      | 52.1           |      |



# Spherical Roller Bearings

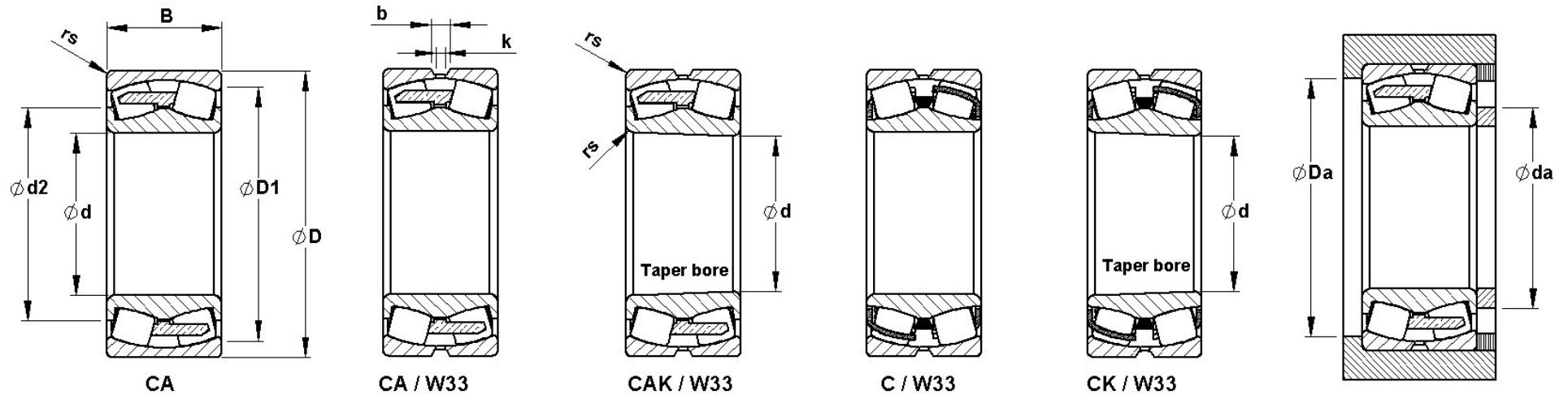
d 200 to 220 mm



| Dimensions in mm |     |     |        | Basic Load Rating - KN |                 | Limit speed ratings- RPM |           | Part Number   | Mating and Fillet Dimensions in mm |                |     |      |          |                      | Calculation Factor   |      |                |                | Weight Kg |                |      |
|------------------|-----|-----|--------|------------------------|-----------------|--------------------------|-----------|---------------|------------------------------------|----------------|-----|------|----------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|------|
| d                | D   | B   | rs min | Cr                     | C <sub>or</sub> | Grease                   | Oil       |               | d <sub>2</sub>                     | D <sub>1</sub> | b   | k    | da (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |      |
| 200              | 360 | 98  | 4      | 1210                   | 1950            | 1100                     | 1500      | 22240C        |                                    | 237            | 309 |      | 218      | 342                  | 3                    | 0.26 | 2.60           | 3.90           | 2.50      | 43.7           |      |
|                  | 360 | 98  | 4      | 1210                   | 1950            | 1100                     | 1500      | 22240CA       | 22240CA/W33                        | 250            | 309 | 16.7 | 6        | 218                  | 342                  | 3    | 0.26           | 2.60           | 3.90      | 2.50           | 44.7 |
|                  | 360 | 98  | 4      | 1210                   | 1950            | 1100                     | 1500      | 22240CAF3     | 22240CAKF3                         | 250            | 309 |      |          | 218                  | 342                  | 3    | 0.26           | 2.60           | 3.90      | 2.50           | 44.3 |
|                  | 360 | 98  | 4      | 1210                   | 1950            | 1100                     | 1500      | 22240CAK      | 22240CAK/W33                       | 250            | 309 | 16.7 | 6        | 218                  | 342                  | 3    | 0.26           | 2.60           | 3.90      | 2.50           | 44.0 |
|                  | 360 | 128 | 4      | 1530                   | 2530            | 850                      | 1100      | 23240CA/W33   |                                    | 249            | 304 | 16.7 | 8        | 218                  | 342                  | 3    | 0.35           | 1.90           | 2.90      | 1.80           | 53.4 |
|                  | 360 | 128 | 4      | 1530                   | 2530            | 850                      | 1100      | 23240CAK      | 23240CAK/W33                       | 249            | 304 | 16.7 | 8        | 218                  | 342                  | 3    | 0.35           | 1.90           | 2.90      | 1.80           | 52.0 |
|                  | 360 | 128 | 4      | 1560                   | 2730            | 900                      | 1200      | 23240/W33     |                                    | 248            | 304 | 16.7 | 8        | 218                  | 342                  | 3    | 0.36           | 1.87           | 2.79      | 1.83           | 56.5 |
|                  | 420 | 138 | 5      | 1910                   | 2860            | 850                      | 1100      | 22340CA       | 22340CAF3                          | 269            | 350 |      |          | 222                  | 398                  | 4    | 0.34           | 1.99           | 2.96      | 1.94           | 97.0 |
|                  | 420 | 138 | 5      | 1910                   | 2860            | 850                      | 1100      | 22340CAK      | 22340CAK/W33                       | 269            | 350 | 22.3 | 8        | 222                  | 398                  | 4    | 0.34           | 1.99           | 2.96      | 1.94           | 95.3 |
|                  | 420 | 138 | 5      | 2000                   | 2870            | 850                      | 1100      | FL-22340C/W33 |                                    | 269            | 350 | 22.3 | 8        | 222                  | 398                  | 4    | 0.34           | 1.99           | 2.96      | 1.94           | 92.0 |
|                  | 420 | 138 | 5      | 2000                   | 2870            | 850                      | 1100      | 22340CK       | 22340CK/W33                        | 269            | 350 | 22.3 | 8        | 222                  | 398                  | 4    | 0.34           | 1.99           | 2.96      | 1.94           | 90.0 |
|                  | 420 | 138 | 5      | 2000                   | 2870            | 850                      | 1100      | 22340C        | 22340C/W33                         | 269            | 350 | 22.3 | 8        | 222                  | 398                  | 4    | 0.34           | 1.99           | 2.96      | 1.94           | 92.0 |
| 420              | 165 | 5   | 2220   | 3500                   | 750             | 950                      | 23340CAF3 |               | 266                                | 340            |     |      | 222      | 398                  | 4                    | 0.40 | 1.68           | 2.50           | 1.64      | 122.0          |      |
| 220              | 300 | 60  | 2.1    | 550                    | 1190            | 1500                     | 1900      | 23944CA/W33   | 23944CAF3/C3W33                    | 242            | 278 | 8.3  | 4        | 232                  | 288                  | 2    | 0.18           | 3.80           | 5.60      | 3.60           | 12.9 |
|                  | 340 | 90  | 3      | 1030                   | 1900            | 1100                     | 1500      | 23044CA       | 23044CA/W33                        | 260            | 303 | 13.9 | 6        | 234                  | 326                  | 2.5  | 0.24           | 2.80           | 4.20      | 2.80           | 32.0 |
|                  | 340 | 90  | 3      | 1030                   | 1900            | 1100                     | 1500      | 23044CAK      | 23044CAK/W33                       | 260            | 303 | 13.9 | 6        | 234                  | 326                  | 2.5  | 0.24           | 2.80           | 4.20      | 2.80           | 31.6 |
|                  | 340 | 90  | 3      | 1030                   | 1900            | 1100                     | 1500      | 23044CA/YA2   |                                    | 260            | 303 |      |          | 234                  | 326                  | 2.5  | 0.25           | 2.75           | 4.09      | 2.69           | 31.5 |

# Spherical Roller Bearings

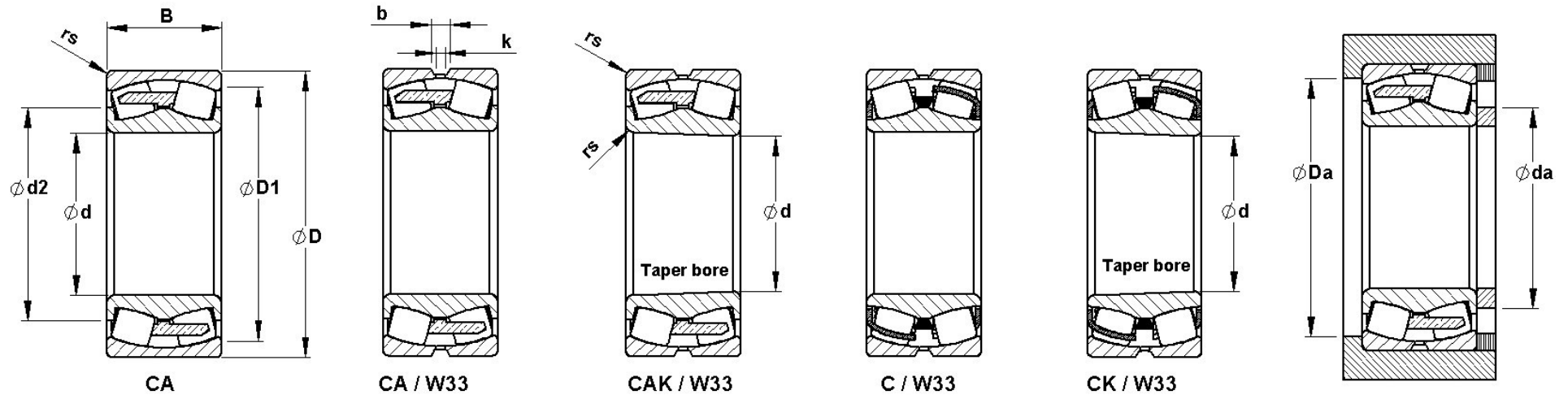
d 220 to 240 mm



| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |             | Part Number    | Mating and Fillet Dimensions in mm |                |      |      |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |      |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|-------------|----------------|------------------------------------|----------------|------|------|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|------|
| d                | D   | B   | r <sub>s</sub> min | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil         |                | d <sub>2</sub>                     | D <sub>1</sub> | b    | k    | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |      |
| 220              | 340 | 90  | 3                  | 1030                   | 1900            | 1100                     | 1500        | 23044CAKF3     |                                    | 260            | 303  |      | 234                  | 326                  | 2.5                  | 0.24 | 2.80           | 4.20           | 2.80      | 31.0           |      |
|                  | 340 | 118 | 3                  | 1270                   | 2500            | 850                      | 1100        | 24044CA/W33    | 24044CA/W33X                       | 257            | 295  | 11.1 | 5                    | 234                  | 326                  | 2.5  | 0.33           | 2.00           | 3.00      | 2.00           | 39.1 |
|                  | 340 | 118 | 3                  | 1270                   | 2500            | 850                      | 1100        | 24044CAN       |                                    | 257            | 295  | 11.1 | 5                    | 234                  | 326                  | 2.5  | 0.33           | 2.00           | 3.00      | 2.00           | 39.1 |
|                  | 340 | 118 | 3                  | 1270                   | 2500            | 850                      | 1100        | 24044CAK30/W33 |                                    | 257            | 295  | 11.1 | 5                    | 234                  | 326                  | 2.5  | 0.33           | 2.00           | 3.00      | 2.00           | 38.5 |
|                  | 340 | 118 | 3                  | 1270                   | 2500            | 850                      | 1100        | 24044CAF3      | 24044CAF3/W33                      | 257            | 295  | 11.1 | 5                    | 234                  | 326                  | 2.5  | 0.33           | 2.00           | 3.00      | 2.00           | 39.0 |
|                  | 370 | 120 | 4                  | 1510                   | 2710            | 900                      | 1200        | 23144CA        | 23144CA/W33                        | 268            | 320  | 16.7 | 7                    | 238                  | 352                  | 3    | 0.30           | 2.30           | 3.40      | 2.20           | 54.7 |
|                  | 370 | 120 | 4                  | 1510                   | 2750            | 900                      | 1200        | 23144CA/HG2W33 |                                    | 268            | 320  | 16.7 | 7                    | 238                  | 352                  | 3    | 0.30           | 2.30           | 3.40      | 2.20           | 54.6 |
|                  | 370 | 120 | 4                  | 1510                   | 2710            | 900                      | 1200        | 23144CAK       | 23144CAK/W33                       | 268            | 320  | 16.7 | 7                    | 238                  | 352                  | 3    | 0.30           | 2.30           | 3.40      | 2.20           | 53.1 |
|                  | 370 | 120 | 4                  | 1730                   | 2750            | 900                      | 1200        | 23144CAKF3/W33 |                                    | 268            | 320  | 16.7 | 7                    | 238                  | 352                  | 3    | 0.30           | 2.30           | 3.40      | 2.20           | 52.7 |
|                  | 370 | 150 | 4                  | 1800                   | 3410            | 500                      | 630         | 24144CA/W33    | 24144CAK30                         | 262            | 308  | 11.1 | 6                    | 238                  | 352                  | 3    | 0.40           | 1.70           | 2.50      | 1.60           | 66.4 |
|                  | 400 | 108 | 4                  | 1490                   | 2400            | 950                      | 1300        | 22244CA        | 22244CA/W33                        | 275            | 344  | 16.7 | 8                    | 238                  | 382                  | 3    | 0.27           | 2.50           | 3.70      | 2.50           | 63.5 |
|                  | 400 | 108 | 4                  | 1490                   | 2400            | 950                      | 1300        | 22244CA/W33X   | 22244CAF3                          | 275            | 344  | 16.7 | 8                    | 238                  | 382                  | 3    | 0.27           | 2.50           | 3.70      | 2.50           | 62.0 |
|                  | 400 | 108 | 4                  | 1490                   | 2400            | 950                      | 1300        | 22244CAK       |                                    | 275            | 344  |      |                      | 238                  | 382                  | 3    | 0.27           | 2.50           | 3.70      | 2.50           | 63.2 |
|                  | 400 | 144 | 4                  | 1950                   | 3200            | 750                      | 950         | 23244CA/W33    | 23244CAK/W33                       | 272.5          | 334  | 16.7 | 8                    | 238                  | 382                  | 3    | 0.36           | 1.89           | 2.81      | 1.85           | 77.3 |
| 460              | 145 | 5   | 2370               | 3450                   | 980             | 1360                     | 22344CA/W33 | 22344CAK/W33   | 293.5                              | 384.5          | 22.3 | 12   | 246                  | 422                  | 4                    | 0.32 | 2.09           | 3.11           | 2.04      | 119.0          |      |
| 240              | 320 | 60  | 2.1                | 530                    | 1310            | 1300                     | 1700        | 23948CA/W33    |                                    | 266            | 295  | 9.5  | 4                    | 252                  | 308                  | 2    | 0.15           | 4.50           | 6.70      | 4.50           | 15.0 |
|                  | 320 | 60  | 2.1                | 530                    | 1310            | 1300                     | 1700        | 23948CAF3      | 23948CAF3/W33                      | 266            | 295  | 9.5  | 4                    | 252                  | 308                  | 2    | 0.15           | 4.50           | 6.70      | 4.50           | 14.9 |

# Spherical Roller Bearings

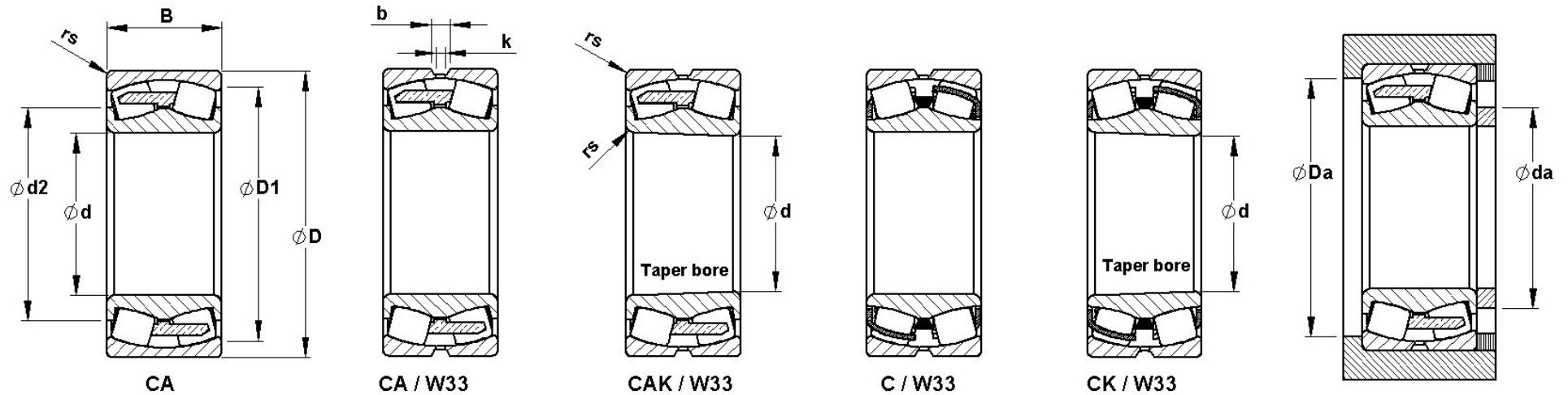
d 240 mm



| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |                 | Part Number      |                  | Mating and Fillet Dimensions in mm |                |      |     |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|-----------------|------------------|------------------|------------------------------------|----------------|------|-----|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|
| d                | D   | B   | r <sub>s min</sub> | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil             |                  |                  | d <sub>2</sub>                     | D <sub>1</sub> | b    | k   | d <sub>a (min)</sub> | D <sub>a (max)</sub> | r <sub>a (max)</sub> | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |
| 240              | 330 | 60  | 2.1                | 610                    | 1380            | 1200                     | 1500            | 23948X1CAF3/HA   |                  | 266                                | 295            |      |     | 252                  | 308                  | 2                    | 0.15 | 4.50           | 6.70           | 4.50      | 15.8           |
|                  | 330 | 190 | 1.1                |                        |                 |                          |                 | OH3152H          |                  |                                    |                |      |     |                      |                      |                      |      |                |                |           | 23.3           |
|                  | 360 | 92  | 3                  | 1080                   | 2080            | 1000                     | 1400            | 23048CA          | 23048CA/W33      | 278                                | 322            | 13.9 | 6   | 254                  | 346                  | 2.5                  | 0.24 | 2.80           | 4.20           | 2.80      | 34.2           |
|                  | 360 | 92  | 3                  | 1080                   | 2080            | 1000                     | 1400            | 23048CAK         | 23048CAK/W33     | 278                                | 322            | 13.9 | 6   | 254                  | 346                  | 2.5                  | 0.24 | 2.80           | 4.20           | 2.80      | 32.2           |
|                  | 360 | 92  | 3                  | 1080                   | 2080            | 1000                     | 1400            | 23048CAQ1        |                  | 278                                | 322            |      |     | 254                  | 346                  | 2.5                  | 0.24 | 2.80           | 4.20           | 2.80      | 34.2           |
|                  | 360 | 118 | 3                  | 1360                   | 2800            | 800                      | 1000            | 24048CA          | 24048CA/W33X     | 278                                | 318            | 11.1 | 5   | 254                  | 346                  | 2.5                  | 0.30 | 2.30           | 3.40           | 2.20      | 46.5           |
|                  | 360 | 118 | 3                  | 1360                   | 2800            | 800                      | 1000            | 24048CAK30       |                  | 278                                | 318            |      |     | 254                  | 346                  | 2.5                  | 0.30 | 2.30           | 3.40           | 2.20      | 46.5           |
|                  | 400 | 128 | 4                  | 1650                   | 3000            | 850                      | 1100            | 23148CA          | 23148CA/W33      | 289                                | 345            | 16.7 | 8   | 258                  | 382                  | 3                    | 0.31 | 2.21           | 3.29           | 2.16      | 68.2           |
|                  | 400 | 128 | 4                  | 1650                   | 3000            | 850                      | 1100            | 23148CAK/W33     |                  | 289                                | 345            | 16.7 | 8   | 258                  | 382                  | 3                    | 0.31 | 2.21           | 3.29           | 2.16      | 66.5           |
|                  | 400 | 128 | 4                  | 1750                   | 3040            | 850                      | 1100            | 23148CK          | 23148CK/W33      | 289                                | 345            | 16.7 | 8   | 258                  | 382                  | 3                    | 0.31 | 2.21           | 3.29           | 2.16      | 62.8           |
|                  | 400 | 128 | 4                  | 1750                   | 3040            | 850                      | 1100            | 23148C           | 23148C/W33       | 289                                | 345            | 16.7 | 8   | 258                  | 382                  | 3                    | 0.31 | 2.21           | 3.29           | 2.16      | 64.8           |
|                  | 400 | 160 | 4                  | 2010                   | 3400            | 480                      | 600             | 24148CA          | 24148CA/W33      | 285                                | 336            | 11.1 | 6   | 258                  | 382                  | 3                    | 0.40 | 1.70           | 2.50           | 1.60      | 79.0           |
|                  | 400 | 160 | 4                  | 2010                   | 3400            | 480                      | 600             | 24148CAK/W33     |                  | 285                                | 336            | 11.1 | 6   | 258                  | 382                  | 3                    | 0.40 | 1.70           | 2.50           | 1.60      | 75.6           |
|                  | 400 | 160 | 4                  | 2010                   | 3400            | 480                      | 600             | 24148CAK30/C3W33 | 24148CAK30F3/W33 | 285                                | 336            | 11.1 | 6   | 258                  | 382                  | 3                    | 0.40 | 1.70           | 2.50           | 1.60      | 77.8           |
| 440              | 120 | 4   | 2000               | 2850                   | 900             | 1200                     | 22248CA/W33     |                  | 290              | 383                                | 18             | 7    | 258 | 422                  | 3                    | 0.27                 | 2.50 | 3.70           | 2.50           | 85.3      |                |
| 440              | 120 | 4   | 2000               | 2850                   | 900             | 1200                     | 22248CAK        | 22248CAK/W33     | 290              | 383                                | 18             | 7    | 258 | 422                  | 3                    | 0.27                 | 2.50 | 3.70           | 2.50           | 82.4      |                |
| 440              | 120 | 4   | 2000               | 2850                   | 900             | 1200                     | 22248CAF3/C9W33 | 22248CAF3/W33    | 303              | 379                                | 18             | 7    | 258 | 422                  | 3                    | 0.27                 | 2.50 | 3.70           | 2.50           | 85.0      |                |

# Spherical Roller Bearings

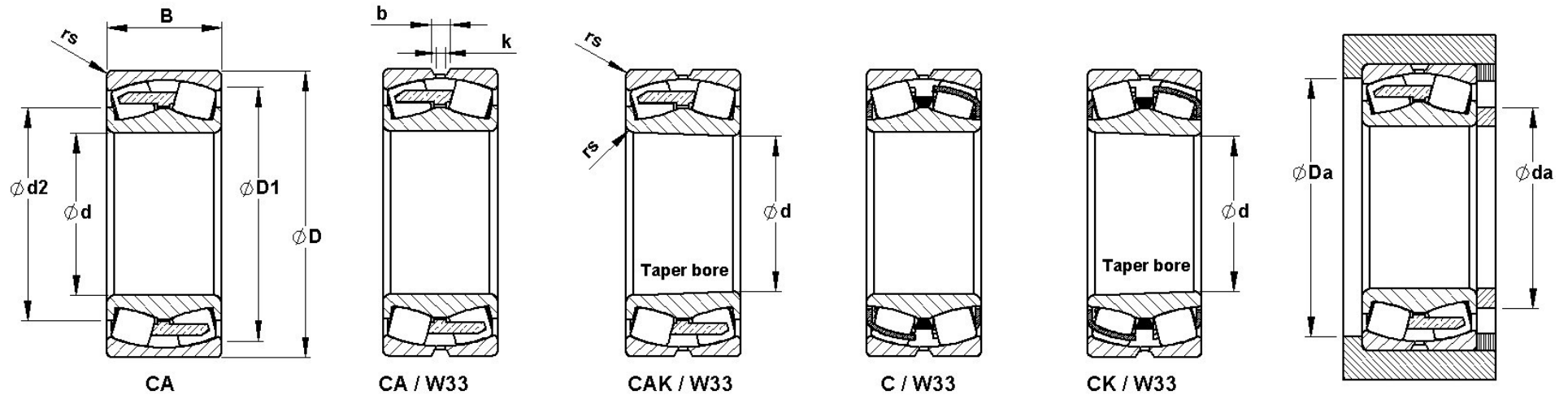
d 240 to 260 mm



| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |      | Part Number   | Mating and Fillet Dimensions in mm |                |     |      |          |                      | Calculation Factor   |     |                |                | Weight Kg |                |       |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|------|---------------|------------------------------------|----------------|-----|------|----------|----------------------|----------------------|-----|----------------|----------------|-----------|----------------|-------|
| d                | D   | B   | r <sub>s</sub> min | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil  |               | d <sub>2</sub>                     | D <sub>1</sub> | b   | k    | da (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e   | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |       |
| 240              | 440 | 120 | 4                  | 2000                   | 2850            | 900                      | 1200 | 22248K/W33    |                                    | 305            | 379 | 18   | 7        | 258                  | 422                  | 3   | 0.27           | 2.50           | 3.70      | 2.50           | 84.1  |
|                  | 440 | 160 | 4                  | 2520                   | 3950            | 670                      | 850  | 23248CA/W33   |                                    | 292            | 369 | 22.3 | 8        | 258                  | 422                  | 3   | 0.35           | 1.90           | 2.90      | 1.80           | 102.0 |
|                  | 440 | 160 | 4                  | 2520                   | 3950            | 670                      | 850  | 23248CAK/W33  |                                    | 292            | 369 | 22.3 | 8        | 258                  | 422                  | 3   | 0.35           | 1.90           | 2.90      | 1.80           | 102.0 |
|                  | 440 | 160 | 4                  | 2520                   | 3950            | 670                      | 850  | 23248CAF3     |                                    | 292            | 369 |      |          | 258                  | 422                  | 3   | 0.35           | 1.90           | 2.90      | 1.80           | 102.0 |
|                  | 500 | 155 | 5                  | 2610                   | 4100            | 650                      | 800  | 22348CA/W33   | 22348CAK/W33                       | 330            | 390 | 22.3 | 12       | 297                  | 439                  | 4   | 0.32           | 2.09           | 3.11      | 2.04           | 148.0 |
| 241              | 360 | 92  | 3                  | 985                    | 2080            | 1000                     | 1400 | 23048CAQ1/YA2 |                                    | 278            | 322 |      |          | 254                  | 346                  | 2.5 | 0.24           | 2.80           | 4.20      | 2.80           | 34.0  |
| 250              | 410 | 128 | 4                  | 1860                   | 3350            | 1000                     | 1400 | 2650CA        |                                    | 299            | 356 |      |          | 272                  | 382                  | 3   | 0.29           | 2.30           | 3.50      | 2.40           | 59.4  |
| 260              | 350 | 195 | 1.1                |                        |                 |                          |      | OH3156H       |                                    |                |     |      |          |                      |                      |     |                |                |           |                | 25.9  |
|                  | 360 | 75  | 2.1                | 900                    | 1750            | 1100                     | 1500 | 23952CA       | 23952CA/W33                        | 294            | 328 | 12   | 6        | 272                  | 348                  | 2   | 0.18           | 3.80           | 5.60      | 3.60           | 21.6  |
|                  | 400 | 104 | 4                  | 1350                   | 2550            | 900                      | 1200 | 23052CA       | 23052CA/W33                        | 306            | 357 | 16.7 | 7        | 278                  | 382                  | 3   | 0.23           | 2.90           | 4.40      | 2.80           | 49.8  |
|                  | 400 | 104 | 4                  | 1350                   | 2550            | 900                      | 1200 | 23052CAF3     |                                    | 306            | 357 |      |          | 278                  | 382                  | 3   | 0.23           | 2.90           | 4.40      | 2.80           | 49.5  |
|                  | 400 | 104 | 4                  | 1350                   | 2550            | 900                      | 1200 | 23052CAK      | 23052CAK/W33                       | 306            | 357 | 16.7 | 7        | 278                  | 382                  | 3   | 0.23           | 2.90           | 4.40      | 2.80           | 46.9  |
|                  | 400 | 104 | 4                  | 1350                   | 2550            | 900                      | 1200 | 23052CAKF3    |                                    | 306            | 357 |      |          | 278                  | 382                  | 3   | 0.23           | 2.90           | 4.40      | 2.80           | 46.6  |
|                  | 400 | 104 | 4                  | 1410                   | 2560            | 900                      | 1200 | 23052C        | 23052C/W33                         | 306            | 357 | 16.7 | 7        | 278                  | 382                  | 3   | 0.23           | 2.90           | 4.40      | 2.80           | 47.8  |
|                  | 400 | 104 | 4                  | 1410                   | 2560            | 900                      | 1200 | 23052C        | 23052CK/W33                        | 306            | 357 | 16.7 | 7        | 278                  | 382                  | 3   | 0.23           | 2.90           | 4.40      | 2.80           | 47.5  |
|                  | 400 | 140 | 4                  | 1710                   | 3500            | 700                      | 900  | 24052CA/W33   |                                    | 300            | 347 | 11.1 | 6        | 278                  | 382                  | 3   | 0.33           | 2.00           | 3.00      | 2.00           | 66.7  |
|                  | 400 | 140 | 4                  | 1710                   | 3500            | 700                      | 900  | 24052CAF3     | 24052CAF3/W33                      | 300            | 347 | 11.1 | 6        | 278                  | 382                  | 3   | 0.33           | 2.00           | 3.00      | 2.00           | 64.9  |

# Spherical Roller Bearings

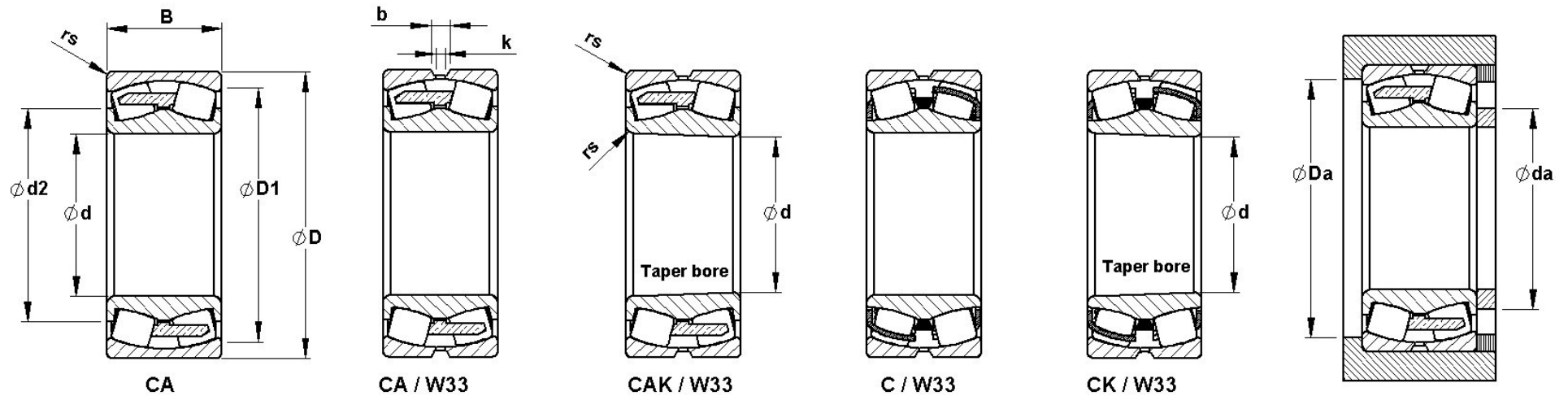
d 260 mm



| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |               | Part Number          | Mating and Fillet Dimensions in mm |                |      |      |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |       |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|---------------|----------------------|------------------------------------|----------------|------|------|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|-------|
| d                | D   | B   | r <sub>s</sub> min | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil           |                      | d <sub>2</sub>                     | D <sub>1</sub> | b    | k    | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |       |
| 260              | 400 | 140 | 4                  | 1710                   | 3500            | 700                      | 900           | 24052CAK30/W33       |                                    | 300            | 347  | 11.1 | 6                    | 278                  | 382                  | 3    | 0.33           | 2.00           | 3.00      | 2.00           | 65.2  |
|                  | 440 | 144 | 4                  | 2190                   | 4050            | 800                      | 1000          | 23152CA              | 23152CA/W33                        | 310            | 379  | 16.7 | 9                    | 278                  | 422                  | 3    | 0.31           | 2.20           | 3.30      | 2.20           | 88.9  |
|                  | 440 | 144 | 4                  | 2190                   | 4050            | 800                      | 1000          | 23152CAK             | 23152CAK/W33                       | 310            | 379  | 16.7 | 9                    | 278                  | 422                  | 3    | 0.31           | 2.20           | 3.30      | 2.20           | 88.7  |
|                  | 440 | 144 | 4                  | 2190                   | 4050            | 800                      | 1000          | 23152CAK/HG2C9YA6W33 |                                    | 310            | 379  | 16.7 | 9                    | 278                  | 422                  | 3    | 0.31           | 2.20           | 3.30      | 2.20           | 88.7  |
|                  | 440 | 144 | 4                  | 2190                   | 4050            | 800                      | 1000          | 23152CAK30           | 23152CAK30/W33                     | 310            | 379  | 16.7 | 9                    | 278                  | 422                  | 3    | 0.31           | 2.20           | 3.30      | 2.20           | 86.7  |
|                  | 440 | 180 | 4                  | 2100                   | 4350            | 430                      | 530           | 24152CA              | 24152CA/W33                        | 312            | 366  | 13.9 | 8                    | 278                  | 422                  | 3    | 0.39           | 1.73           | 2.58      | 1.69           | 115.0 |
|                  | 440 | 180 | 4                  | 2420                   | 4380            | 430                      | 530           | 24152CA/HAW36        | 24152CAQ1/HAW36                    | 312            | 366  | 13.9 | 8                    | 278                  | 422                  | 3    | 0.39           | 1.73           | 2.58      | 1.69           | 114.0 |
|                  | 440 | 180 | 4                  | 2100                   | 4350            | 430                      | 530           | 24152CAK30/W33       |                                    | 312            | 366  | 13.9 | 8                    | 278                  | 422                  | 3    | 0.39           | 1.73           | 2.58      | 1.69           | 112.0 |
|                  | 440 | 180 | 4                  | 2100                   | 4350            | 430                      | 530           | 24152CAF3/W33        |                                    | 312            | 366  | 13.9 | 8                    | 278                  | 422                  | 3    | 0.39           | 1.73           | 2.58      | 1.69           | 113.0 |
|                  | 440 | 180 | 4                  | 2420                   | 4380            | 430                      | 530           | SX-24152             |                                    | 312            | 366  | 13.9 | 8                    | 278                  | 422                  | 3    | 0.39           | 1.73           | 2.58      | 1.69           | 114.0 |
|                  | 480 | 130 | 5                  | 2280                   | 3600            | 850                      | 1100          | 22252CA              | 22252CA/W33                        | 330            | 414  | 22.3 | 12                   | 282                  | 458                  | 4    | 0.27           | 2.51           | 3.74      | 2.45           | 106.0 |
|                  | 480 | 130 | 5                  | 2280                   | 3600            | 850                      | 1100          | 22252CAK             |                                    | 330            | 414  |      |                      | 282                  | 458                  | 4    | 0.27           | 2.51           | 3.74      | 2.45           | 105.0 |
|                  | 480 | 174 | 5                  | 2800                   | 4750            | 630                      | 800           | 23252CA/W33          |                                    | 320            | 404  | 22.3 | 8                    | 282                  | 458                  | 4    | 0.35           | 1.90           | 2.90      | 1.80           | 141.0 |
|                  | 480 | 174 | 5                  | 2800                   | 4750            | 630                      | 800           | 23252CA/W33X         |                                    | 320            | 404  | 22.3 | 12                   | 282                  | 458                  | 4    | 0.35           | 1.90           | 2.90      | 1.80           | 141.0 |
| 480              | 174 | 5   | 2800               | 4750                   | 630             | 800                      | 23252CA/W33XB |                      | 320                                | 404            | 25   | 15   | 282                  | 458                  | 4                    | 0.35 | 1.90           | 2.90           | 1.80      | 141.0          |       |
| 480              | 174 | 5   | 2800               | 4750                   | 630             | 800                      | 23252CAF3/W33 |                      | 320                                | 404            | 22.3 | 8    | 282                  | 458                  | 4                    | 0.35 | 1.90           | 2.90           | 1.80      | 138.0          |       |
| 480              | 174 | 5   | 2800               | 4750                   | 630             | 800                      | 23252CAK/W33  |                      | 320                                | 404            | 22.3 | 8    | 282                  | 458                  | 4                    | 0.35 | 1.90           | 2.90           | 1.80      | 145.0          |       |

# Spherical Roller Bearings

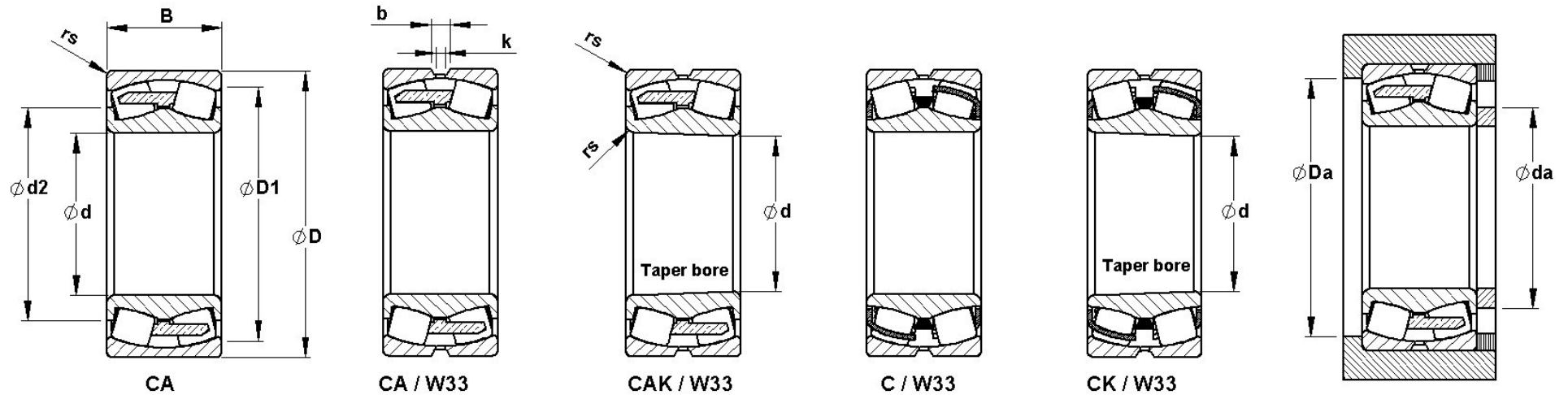
d 260 to 280 mm



| Dimensions in mm |     |     |                     | Basic Load Rating - KN |          | Limit speed ratings- RPM |      | Part Number   | Mating and Fillet Dimensions in mm |       |     |      |             |             | Calculation Factor |   |       |       | Weight Kg |       |       |
|------------------|-----|-----|---------------------|------------------------|----------|--------------------------|------|---------------|------------------------------------|-------|-----|------|-------------|-------------|--------------------|---|-------|-------|-----------|-------|-------|
| d                | D   | B   | $r_{s \text{ min}}$ | $C_r$                  | $C_{or}$ | Grease                   | Oil  |               | $d_2$                              | $D_1$ | b   | k    | $d_a$ (min) | $D_a$ (max) | $r_a$ (max)        | e | $y_1$ | $y_2$ |           | $y_0$ |       |
| 260              | 480 | 174 | 5                   | 2800                   | 4750     | 630                      | 800  | 23252CAKL/W33 |                                    | 320   | 404 | 22.3 | 8           | 282         | 458                | 4 | 0.35  | 1.90  | 2.90      | 1.80  | 137.0 |
|                  | 540 | 165 | 6                   | 3080                   | 4750     | 630                      | 800  | 22352CA/W33   |                                    | 349   | 455 | 22.3 | 8           | 288         | 512                | 5 | 0.31  | 2.20  | 3.30      | 2.20  | 186.0 |
|                  | 540 | 165 | 6                   | 3080                   | 4750     | 630                      | 800  | 22352CAK/W33  |                                    | 349   | 455 | 22.3 | 8           | 288         | 512                | 5 | 0.31  | 2.20  | 3.30      | 2.20  | 185.0 |
|                  | 540 | 165 | 6                   | 3100                   | 4650     | 630                      | 800  | 22352C/C9W33  |                                    | 349   | 455 | 22.3 | 8           | 288         | 512                | 5 | 0.31  | 2.20  | 3.30      | 2.20  | 185.0 |
|                  | 540 | 165 | 6                   | 3080                   | 4750     | 630                      | 800  | 22352CAF3/W33 |                                    | 349   | 455 | 22.3 | 8           | 288         | 512                | 5 | 0.31  | 2.20  | 3.30      | 2.20  | 184.0 |
|                  | 540 | 165 | 6                   | 3080                   | 4750     | 630                      | 800  | 22352CAK3/W33 |                                    | 349   | 455 | 22.3 | 8           | 288         | 512                | 5 | 0.31  | 2.20  | 3.30      | 2.20  | 183.0 |
| 280              | 350 | 52  | 2                   | 435                    | 1230     | 1200                     | 1500 | 23856CA       | 23856CA/W33                        | 305   | 328 | 8.3  | 4.5         | 278         | 348                | 2 | 0.13  | 5.36  | 7.98      | 5.24  | 11.4  |
|                  | 380 | 75  | 2.1                 | 803                    | 1850     | 1000                     | 1400 | 23956CAQ1/W33 |                                    | 316   | 346 | 12   | 6           | 292         | 368                | 2 | 0.18  | 3.80  | 5.66      | 3.72  | 25.7  |
|                  | 380 | 75  | 2.1                 | 803                    | 1850     | 1000                     | 1400 | 23956CA/W33   |                                    | 316   | 346 | 12   | 6           | 292         | 368                | 2 | 0.18  | 3.80  | 5.66      | 3.72  | 25.7  |
|                  | 420 | 106 | 4                   | 1320                   | 2850     | 850                      | 1100 | 23056CA       |                                    | 323   | 377 |      |             | 298         | 402                | 3 | 0.23  | 2.91  | 4.40      | 2.84  | 56.8  |
|                  | 420 | 106 | 4                   | 1320                   | 2850     | 850                      | 1100 | 23056CAK      |                                    | 323   | 377 |      |             | 298         | 402                | 3 | 0.23  | 2.91  | 4.40      | 2.84  | 56.6  |
|                  | 420 | 106 | 4                   | 1550                   | 2940     | 850                      | 1100 | 23056CK       | 23056CK/W33                        | 323   | 377 | 16.7 | 7           | 298         | 402                | 3 | 0.23  | 2.91  | 4.40      | 2.84  | 56.6  |
|                  | 420 | 106 | 4                   | 1550                   | 2940     | 850                      | 1100 | 23056C        | 23056C/W33                         | 323   | 377 | 16.7 | 7           | 298         | 402                | 3 | 0.23  | 2.91  | 4.40      | 2.84  | 53.9  |
|                  | 420 | 140 | 4                   | 1780                   | 3700     | 670                      | 850  | 24056CA/W33   |                                    | 317   | 366 | 11.1 | 6           | 298         | 402                | 3 | 0.31  | 2.20  | 3.30      | 2.20  | 69.2  |
|                  | 420 | 140 | 4                   | 1780                   | 3700     | 670                      | 850  | 24056CAF3     | 24056CAF3/W33                      | 317   | 366 | 11.1 | 6           | 298         | 402                | 3 | 0.31  | 2.20  | 3.30      | 2.20  | 68.9  |
|                  | 420 | 140 | 4                   | 1780                   | 3700     | 670                      | 850  | 24056CAK30F3  | 24056CAK30F3/W33                   | 317   | 366 | 11.1 | 6           | 298         | 402                | 3 | 0.31  | 2.20  | 3.30      | 2.20  | 67.2  |
|                  | 460 | 146 | 5                   | 2190                   | 4150     | 750                      | 950  | 23156CA       | 23156CA/W33                        | 333   | 400 | 16.7 | 8           | 302         | 438                | 4 | 0.30  | 2.30  | 3.40      | 2.20  | 104.0 |

# Spherical Roller Bearings

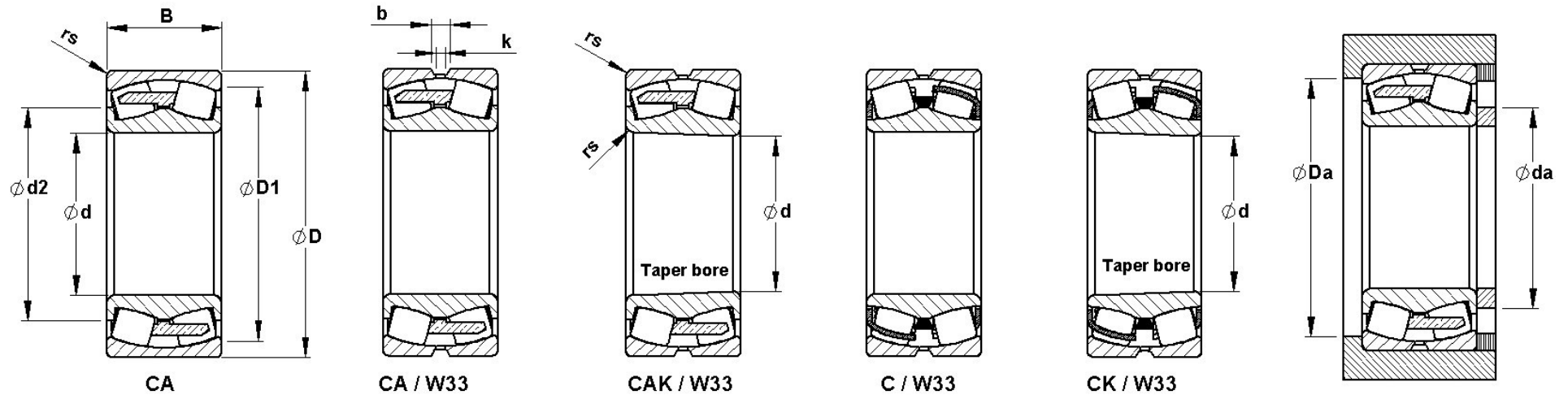
d 280 mm



| Dimensions in mm |     |     |        | Basic Load Rating - KN |                 | Limit speed ratings- RPM |                | Part Number   | Mating and Fillet Dimensions in mm |                |      |      |          |                      | Calculation Factor   |      |                |                | Weight Kg |                |       |
|------------------|-----|-----|--------|------------------------|-----------------|--------------------------|----------------|---------------|------------------------------------|----------------|------|------|----------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|-------|
| d                | D   | B   | rs min | Cr                     | C <sub>or</sub> | Grease                   | Oil            |               | d <sub>2</sub>                     | D <sub>1</sub> | b    | k    | da (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |       |
| 280              | 460 | 146 | 5      | 2340                   | 4200            | 800                      | 1000           | 23156/W33     |                                    | 337            | 400  | 16.7 | 8        | 302                  | 438                  | 4    | 0.32           | 2.09           | 3.11      | 2.04           | 99.1  |
|                  | 460 | 146 | 5      | 2190                   | 4150            | 750                      | 950            | 23156CAF3     |                                    | 333            | 400  |      |          | 302                  | 438                  | 4    | 0.30           | 2.30           | 3.40      | 2.20           | 103.0 |
|                  | 460 | 146 | 5      | 2190                   | 4150            | 750                      | 950            | 23156CAKF3    |                                    | 333            | 400  |      |          | 302                  | 438                  | 4    | 0.30           | 2.30           | 3.40      | 2.20           | 100.0 |
|                  | 460 | 146 | 5      | 2190                   | 4150            | 750                      | 950            | 23156CAK      | 23156CAK/W33                       | 333            | 400  | 16.7 | 8        | 302                  | 438                  | 4    | 0.30           | 2.30           | 3.40      | 2.20           | 101.0 |
|                  | 460 | 130 | 5      | 1700                   | 3400            | 750                      | 950            | 23156X2CA     |                                    | 332            | 404  |      |          | 302                  | 438                  | 4    | 0.27           | 2.50           | 3.72      | 2.45           | 87.0  |
|                  | 460 | 180 | 5      | 2530                   | 4750            | 400                      | 500            | 24156CA       |                                    | 327            | 393  |      |          | 302                  | 438                  | 4    | 0.40           | 1.70           | 2.50      | 1.60           | 119.0 |
|                  | 460 | 180 | 5      | 2530                   | 4750            | 400                      | 500            | 24156CA/HCW33 | 24156CA/W33                        | 327            | 388  | 13.9 | 8        | 302                  | 438                  | 4    | 0.40           | 1.70           | 2.50      | 1.60           | 119.0 |
|                  | 500 | 130 | 5      | 2190                   | 3600            | 800                      | 1000           | 22256CA       | 22256CA/W33                        | 347            | 435  | 22.3 | 8        | 302                  | 478                  | 4    | 0.26           | 2.60           | 3.90      | 2.50           | 118.0 |
|                  | 500 | 130 | 5      | 2190                   | 3600            | 800                      | 1000           | 22256CAK      | 22256CAK/W33                       | 347            | 435  | 22.3 | 8        | 302                  | 478                  | 4    | 0.26           | 2.60           | 3.90      | 2.50           | 117.0 |
|                  | 500 | 130 | 5      | 2190                   | 3600            | 800                      | 1000           | 22256CAF3     |                                    | 347            | 435  |      |          | 302                  | 478                  | 4    | 0.26           | 2.60           | 3.90      | 2.50           | 117.0 |
|                  | 500 | 130 | 5      | 2130                   | 3300            | 850                      | 1100           | 22256/W33     |                                    | 348            | 435  | 22.3 | 8        | 302                  | 478                  | 4    | 0.27           | 2.50           | 3.70      | 2.50           | 113.0 |
|                  | 500 | 130 | 5      | 2130                   | 3300            | 850                      | 1100           | 22256K/W33    |                                    | 348            | 435  | 22.3 | 8        | 302                  | 478                  | 4    | 0.27           | 2.50           | 3.70      | 2.50           | 109.0 |
|                  | 500 | 176 | 5      | 2840                   | 5100            | 600                      | 750            | 23256CA       |                                    | 340            | 424  |      |          | 302                  | 478                  | 4    | 0.35           | 1.90           | 2.90      | 1.80           | 147.0 |
|                  | 500 | 176 | 5      | 2840                   | 5100            | 600                      | 750            | 23256CAF3     | 23256CAF3/W33                      | 340            | 424  | 22.3 | 8        | 302                  | 478                  | 4    | 0.35           | 1.90           | 2.90      | 1.80           | 146.0 |
| 500              | 176 | 5   | 2840   | 5100                   | 600             | 750                      | 23256CAK/W33   |               | 340                                | 424            | 22.3 | 8    | 302      | 478                  | 4                    | 0.35 | 1.90           | 2.90           | 1.80      | 153.0          |       |
| 500              | 176 | 5   | 2840   | 5100                   | 600             | 750                      | 23256CAKF3/W33 |               | 340                                | 424            | 22.3 | 8    | 302      | 478                  | 4                    | 0.35 | 1.90           | 2.90           | 1.80      | 142.0          |       |
| 580              | 175 | 6   | 3520   | 5700                   | 600             | 750                      | 22356CA/W33    |               | 364                                | 485            | 22.3 | 8    | 308      | 552                  | 5                    | 0.30 | 2.30           | 3.40           | 2.20      | 221.0          |       |

# Spherical Roller Bearings

d 280 to 300 mm

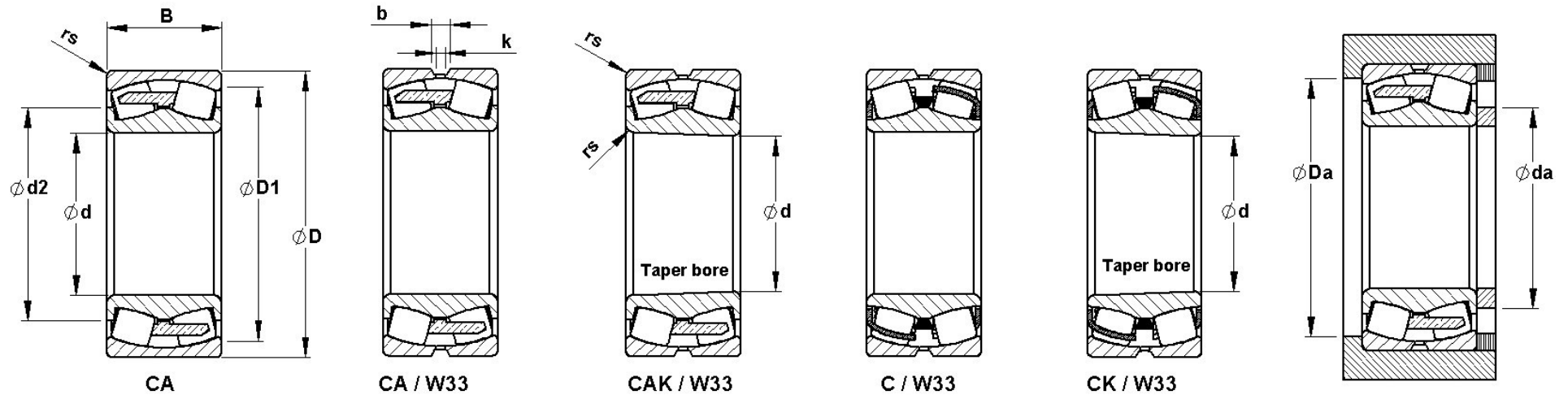


| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |               | Part Number      | Mating and Fillet Dimensions in mm |                |      |      |          |                      | Calculation Factor   |      |                |                | Weight Kg |                |       |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|---------------|------------------|------------------------------------|----------------|------|------|----------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|-------|
| d                | D   | B   | r <sub>s</sub> min | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil           |                  | d <sub>2</sub>                     | D <sub>1</sub> | b    | k    | da (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |       |
| 280              | 580 | 175 | 6                  | 3520                   | 5700            | 600                      | 750           | 22356CAK/W33     |                                    | 364            | 485  | 22.3 | 8        | 308                  | 552                  | 5    | 0.30           | 2.30           | 3.40      | 2.20           | 217.0 |
|                  | 580 | 175 | 6                  | 3520                   | 5700            | 600                      | 750           | 22356CAF3/W33    |                                    | 364            | 485  | 22.3 | 8        | 308                  | 552                  | 5    | 0.30           | 2.30           | 3.40      | 2.20           | 221.0 |
|                  | 580 | 175 | 6                  | 3800                   | 5250            | 630                      | 800           | 22356/W33        |                                    | 372            | 485  | 22.3 | 8        | 314                  | 552                  | 5    | 0.32           | 2.09           | 3.11      | 2.04           | 229.0 |
| 300              | 380 | 60  | 3                  | 640                    | 1650            | 950                      | 1400          | 23860CA/W33      |                                    | 328            | 357  | 12   | 6        | 310                  | 368                  | 2    | 0.13           | 5.20           | 7.70      | 5.00           | 18.2  |
|                  | 380 | 60  | 3                  | 640                    | 1650            | 950                      | 1400          | 23860CAK/W33     |                                    | 328            | 357  | 12   | 6        | 310                  | 368                  | 2    | 0.13           | 5.20           | 7.70      | 5.00           | 17.6  |
|                  | 400 |     | 1.5                |                        |                 |                          |               | H3264            |                                    |                |      |      |          |                      |                      |      |                |                |           |                | 40.8  |
|                  | 420 | 90  | 3                  | 1160                   | 2500            | 950                      | 1300          | 23960CA/W33      |                                    | 339            | 382  | 15   | 6        | 314                  | 406                  | 2.5  | 0.19           | 3.60           | 5.30      | 3.60           | 40.1  |
|                  | 420 | 90  | 3                  | 1160                   | 2500            | 950                      | 1300          | 23960CAK         |                                    | 339            | 382  |      |          | 314                  | 406                  | 2.5  | 0.19           | 3.60           | 5.30      | 3.60           | 39.0  |
|                  | 460 | 118 | 4                  | 1770                   | 3450            | 800                      | 1000          | 23060CA          | 23060CA/W33                        | 351            | 409  | 16.7 | 9        | 318                  | 442                  | 3    | 0.23           | 2.90           | 4.40      | 2.80           | 75.8  |
|                  | 460 | 118 | 4                  | 1770                   | 3450            | 800                      | 1000          | 23060CAK         |                                    | 351            | 409  |      |          | 318                  | 442                  | 3    | 0.23           | 2.90           | 4.40      | 2.80           | 73.6  |
|                  | 460 | 118 | 4                  | 1770                   | 3450            | 800                      | 1000          | 23060CAK/W33     | 23060CAK/C9W33                     | 351            | 409  | 16.7 | 7        | 318                  | 442                  | 3    | 0.23           | 2.90           | 4.40      | 2.80           | 73.4  |
|                  | 440 | 105 | 4                  | 1310                   | 2880            | 870                      | 1100          | 23060X3CA/W33    |                                    | 343            | 396  | 16.7 | 9        | 302                  | 438                  | 3    | 0.21           | 3.16           | 4.71      | 3.09           | 54.7  |
|                  | 460 | 118 | 4                  | 1770                   | 3450            | 800                      | 1000          | 23060CAF3/W33    |                                    | 351            | 409  | 16.7 | 7        | 318                  | 442                  | 3    | 0.23           | 2.90           | 4.40      | 2.80           | 74.9  |
|                  | 460 | 118 | 4                  | 1770                   | 3450            | 800                      | 1000          | FL-23060C/W33    |                                    | 351            | 409  | 16.7 | 7        | 318                  | 442                  | 3    | 0.23           | 2.90           | 4.40      | 2.80           | 69.5  |
|                  | 460 | 160 | 4                  | 2220                   | 2700            | 600                      | 750           | 24060CA          | 24060CA/W33                        | 342            | 399  | 13.9 | 7        | 318                  | 442                  | 3    | 0.32           | 2.09           | 3.11      | 2.04           | 99.0  |
|                  | 500 | 160 | 5                  | 2680                   | 4750            | 670                      | 850           | 23160CA          | 23160CA/W33                        | 356            | 433  | 16.7 | 9        | 322                  | 478                  | 4    | 0.30           | 2.30           | 3.40      | 2.20           | 126.0 |
| 500              | 160 | 5   | 2680               | 4750                   | 670             | 850                      | 23160CA/C9W33 | 23160CA/HCEC9W33 | 356                                | 433            | 16.7 | 9    | 322      | 478                  | 4                    | 0.30 | 2.30           | 3.40           | 2.20      | 126.0          |       |



# Spherical Roller Bearings

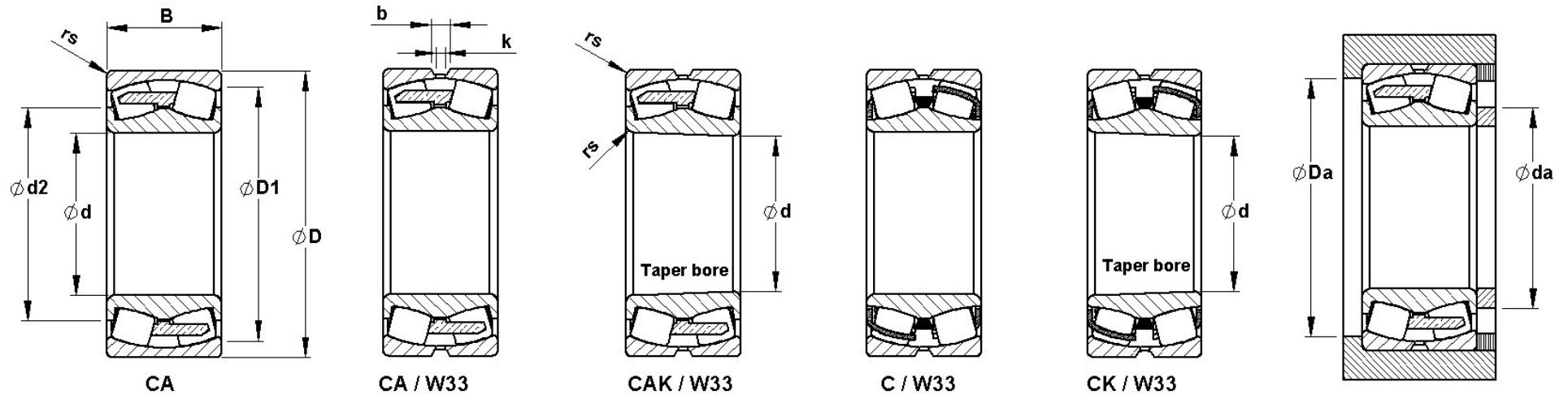
d 300 to 320 mm



| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |              | Part Number     |                 | Mating and Fillet Dimensions in mm |                |      |     |          |                      | Calculation Factor   |      |                |                | Weight Kg |                |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|--------------|-----------------|-----------------|------------------------------------|----------------|------|-----|----------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|
| d                | D   | B   | r <sub>s min</sub> | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil          |                 |                 | d <sub>2</sub>                     | D <sub>1</sub> | b    | k   | da (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |
| 300              | 500 | 160 | 5                  | 2680                   | 4750            | 670                      | 850          | 23160CAF3       | 23160CAF3/C9W33 | 356                                | 433            | 16.7 | 9   | 322      | 478                  | 4                    | 0.30 | 2.30           | 3.40           | 2.20      | 125.0          |
|                  | 500 | 160 | 5                  | 2680                   | 4750            | 670                      | 850          | 23160CAK/W33    | 23160CAK/F3     | 356                                | 433            | 16.7 | 9   | 322      | 478                  | 4                    | 0.30 | 2.30           | 3.40           | 2.20      | 125.0          |
|                  | 500 | 200 | 5                  | 3100                   | 6000            | 600                      | 750          | 24160CA         | 24160CA/W33     | 356                                | 420            | 13.9 | 6   | 322      | 478                  | 4                    | 0.39 | 1.75           | 2.61           | 1.71      | 161.0          |
|                  | 500 | 200 | 5                  | 3100                   | 6000            | 600                      | 750          | SX-24160C       |                 | 356                                | 420            | 13.9 | 6   | 322      | 478                  | 4                    | 0.39 | 1.75           | 2.61           | 1.71      | 161.0          |
|                  | 540 | 140 | 5                  | 2620                   | 4300            | 750                      | 950          | 22260CA         |                 | 374                                | 467            |      |     | 322      | 518                  | 4                    | 0.26 | 2.60           | 3.90           | 2.50      | 138.0          |
|                  | 540 | 140 | 5                  | 2620                   | 4300            | 750                      | 950          | 22260CAF3       | 22260CAF3/W33   | 374                                | 467            | 22.3 | 8   | 322      | 518                  | 4                    | 0.26 | 2.60           | 3.90           | 2.50      | 136.0          |
|                  | 540 | 140 | 5                  | 2620                   | 4300            | 750                      | 950          | 22260CAK/F3     |                 | 374                                | 467            |      |     | 322      | 518                  | 4                    | 0.26 | 2.60           | 3.90           | 2.50      | 136.0          |
|                  | 540 | 140 | 5                  | 2400                   | 3750            | 800                      | 1000         | 22260/W33       |                 | 374                                | 467            | 22.3 | 8   | 322      | 518                  | 4                    | 0.27 | 2.50           | 3.70           | 2.50      | 140.0          |
|                  | 540 | 140 | 5                  | 2400                   | 3750            | 800                      | 1000         | 22260K/W33      |                 | 374                                | 467            | 22.3 | 8   | 322      | 518                  | 4                    | 0.27 | 2.50           | 3.70           | 2.50      | 137.0          |
|                  | 540 | 192 | 5                  | 3300                   | 5600            | 530                      | 670          | 23260CAF1       | 23260CAF3/W33   | 373                                | 455            | 22   | 10  | 322      | 518                  | 4                    | 0.35 | 1.90           | 2.90           | 1.80      | 192.0          |
|                  | 540 | 192 | 5                  | 3300                   | 5600            | 530                      | 670          | 23260CAK/F1/W33 |                 | 373                                | 455            | 22   | 10  | 322      | 518                  | 4                    | 0.35 | 1.90           | 2.90           | 1.80      | 190.0          |
| 540              | 192 | 5   | 3300               | 5600                   | 530             | 670                      | 23260CAK/W33 |                 | 373             | 455                                | 22             | 10   | 322 | 518      | 4                    | 0.35                 | 1.90 | 2.90           | 1.80           | 189.0     |                |
| 320              | 400 | 60  | 2.1                | 670                    | 1620            | 920                      | 1280         | 23864CA/W33     |                 | 346                                | 376            | 13.9 | 6   | 332      | 388                  | 2                    | 0.12 | 5.60           | 8.40           | 5.60      | 20.3           |
|                  | 400 | 60  | 2.1                | 670                    | 1620            | 920                      | 1280         | 23864CAK/W33    |                 | 346                                | 376            | 13.9 | 6   | 332      | 388                  | 2                    | 0.12 | 5.60           | 8.40           | 5.60      | 19.4           |
|                  | 440 | 90  | 3                  | 1200                   | 2650            | 900                      | 1200         | 23964CA/W33     |                 | 360                                | 402            | 15   | 6   | 338      | 426                  | 2.5                  | 0.18 | 3.80           | 5.60           | 3.60      | 42.7           |
|                  | 440 | 254 | 1.5                |                        |                 |                          |              | OH3168H         |                 |                                    |                |      |     |          |                      |                      |      |                |                |           | 52.4           |
|                  | 480 | 121 | 4                  | 1930                   | 2200            | 800                      | 1000         | 23064CA         | 23064CA/W33     | 368                                | 431            | 16.7 | 8   | 338      | 462                  | 3                    | 0.23 | 2.90           | 4.40           | 2.80      | 84.8           |

# Spherical Roller Bearings

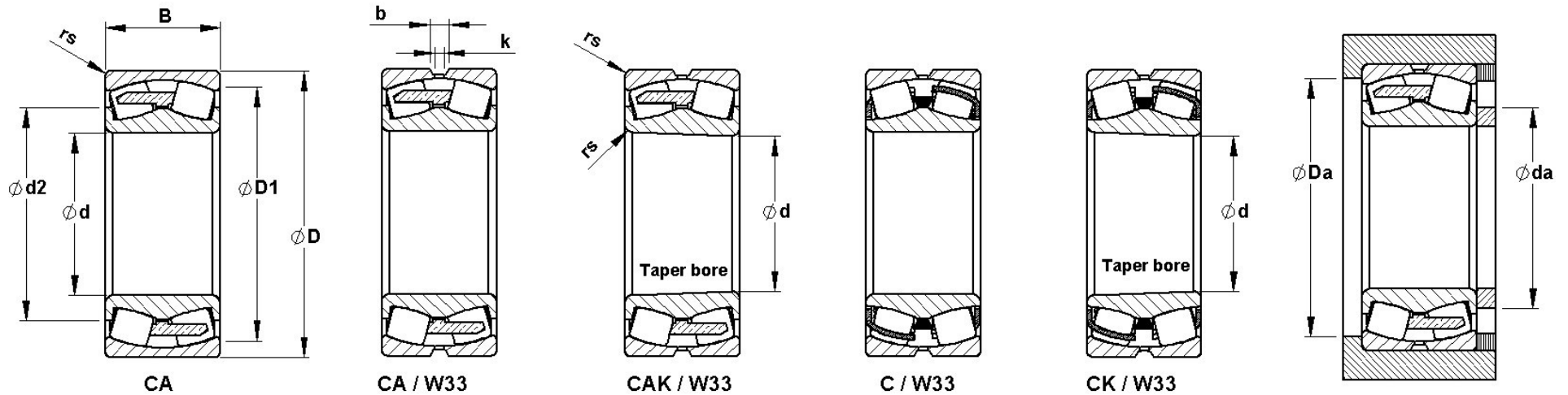
d 320 mm



| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |                | Part Number    |               | Mating and Fillet Dimensions in mm |                |      |     |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|----------------|----------------|---------------|------------------------------------|----------------|------|-----|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|
| d                | D   | B   | r <sub>s</sub> min | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil            |                |               | d <sub>2</sub>                     | D <sub>1</sub> | b    | k   | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |
| 320              | 480 | 121 | 4                  | 1930                   | 2200            | 800                      | 1000           | 23064CAK       | 23064CAK/W33  | 368                                | 431            | 16.7 | 8   | 338                  | 462                  | 3                    | 0.23 | 2.90           | 4.40           | 2.80      | 84.3           |
|                  | 480 | 121 | 4                  | 1930                   | 2200            | 800                      | 1000           | 23064CAF3/W33  |               | 368                                | 431            | 16.7 | 8   | 338                  | 462                  | 3                    | 0.23 | 2.90           | 4.40           | 2.80      | 84.7           |
|                  | 480 | 160 | 4                  | 2300                   | 5100            | 560                      | 700            | 24064CA        | 24064CA/W33   | 368                                | 421            | 22   | 8   | 338                  | 462                  | 3                    | 0.32 | 2.09           | 3.11           | 2.04      | 105.0          |
|                  | 480 | 160 | 4                  | 2300                   | 5100            | 560                      | 700            | 24064CAF3      | 24064CAF3/W33 | 368                                | 421            | 22   | 8   | 338                  | 462                  | 3                    | 0.32 | 2.09           | 3.11           | 2.04      | 106.0          |
|                  | 480 | 160 | 5                  | 2300                   | 5100            | 560                      | 700            | 24064CAK30/W33 |               | 368                                | 421            | 22   | 8   | 338                  | 462                  | 3                    | 0.32 | 2.09           | 3.11           | 2.04      | 103.0          |
|                  | 540 | 176 | 5                  | 3150                   | 3200            | 630                      | 800            | 23164CA        | 23164CA/W33   | 389                                | 465            | 22.3 | 8   | 342                  | 518                  | 4                    | 0.31 | 2.20           | 3.30           | 2.20      | 200.0          |
|                  | 540 | 176 | 5                  | 3150                   | 3200            | 630                      | 800            | 23164CAK       | 23164CAK/W33  | 389                                | 465            | 22.3 | 8   | 342                  | 518                  | 4                    | 0.31 | 2.20           | 3.30           | 2.20      | 195.0          |
|                  | 540 | 210 | 5                  | 3560                   | 6500            | 340                      | 430            | 24164CA/W33    |               | 364                                | 455            | 16.7 | 9   | 342                  | 518                  | 4                    | 0.40 | 1.70           | 2.50           | 1.60      | 206.0          |
|                  | 580 | 150 | 5                  | 3000                   | 4550            | 670                      | 850            | 22264CA        | 22264CA/W33   | 400                                | 502            | 22.3 | 8   | 342                  | 558                  | 4                    | 0.26 | 2.60           | 3.90           | 2.50      | 175.0          |
|                  | 580 | 150 | 5                  | 3000                   | 4550            | 670                      | 850            | 22264CAK       |               | 400                                | 502            |      |     | 342                  | 558                  | 4                    | 0.26 | 2.60           | 3.90           | 2.50      | 172.0          |
|                  | 580 | 150 | 5                  | 2770                   | 4350            | 700                      | 900            | 22264/W33      |               | 400                                | 502            | 22.3 | 8   | 342                  | 558                  | 4                    | 0.27 | 2.50           | 3.70           | 2.50      | 177.0          |
|                  | 580 | 150 | 5                  | 2770                   | 4350            | 700                      | 900            | 22264K/W33     |               | 400                                | 502            | 22.3 | 8   | 342                  | 558                  | 4                    | 0.27 | 2.50           | 3.70           | 2.50      | 173.0          |
|                  | 580 | 208 | 5                  | 3900                   | 6800            | 500                      | 630            | 23264CA        | 23264CA/W33   | 400                                | 490            | 24   | 10  | 342                  | 558                  | 4                    | 0.35 | 1.90           | 2.90           | 1.80      | 253.0          |
|                  | 580 | 208 | 5                  | 3900                   | 6800            | 500                      | 630            | 23264CAF3      | 23264CAF3/W33 | 400                                | 490            | 24   | 10  | 342                  | 558                  | 4                    | 0.35 | 1.90           | 2.90           | 1.80      | 252.0          |
| 580              | 208 | 5   | 3900               | 6800                   | 500             | 630                      | 23264CAK30/W33 |                | 400           | 490                                | 24             | 10   | 342 | 558                  | 4                    | 0.35                 | 1.90 | 2.90           | 1.80           | 243.0     |                |
| 580              | 208 | 5   | 4500               | 6820                   | 500             | 630                      | 23264CAK/W33   |                | 400           | 490                                | 24             | 10   | 342 | 558                  | 4                    | 0.35                 | 1.90 | 2.90           | 1.80           | 245.0     |                |
| 670              | 200 | 7.5 | 4530               | 6820                   |                 |                          |                | 22364CAK/W33   |               |                                    |                | 22.3 | 12  |                      |                      | 0.31                 |      |                |                | 344.0     |                |

# Spherical Roller Bearings

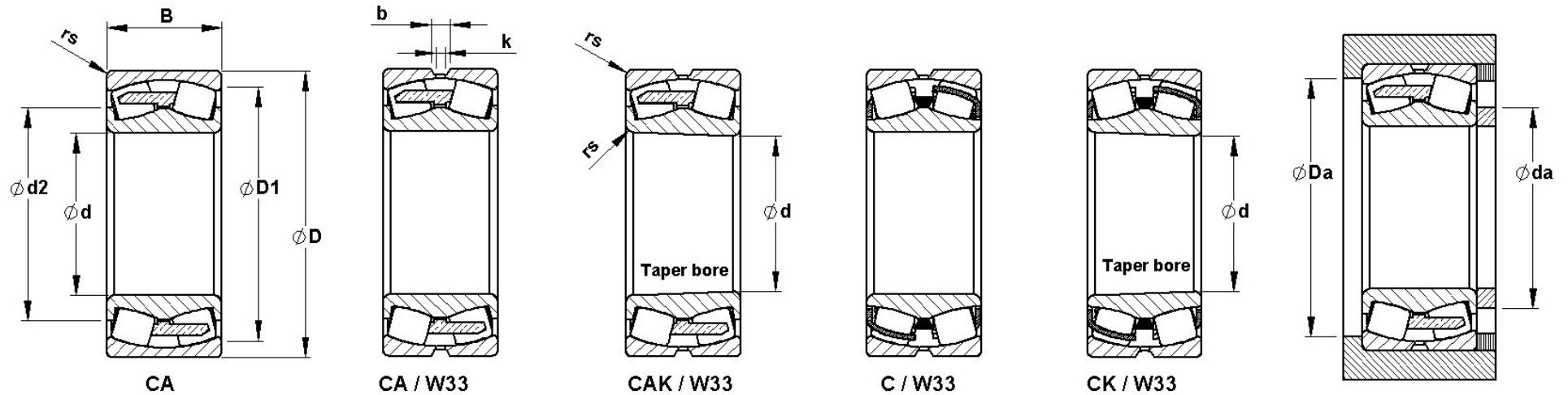
d 340 mm



| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |              | Part Number      |                  | Mating and Fillet Dimensions in mm |                |      |     |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |      |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|--------------|------------------|------------------|------------------------------------|----------------|------|-----|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|------|
| d                | D   | B   | r <sub>s</sub> min | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil          |                  |                  | d <sub>2</sub>                     | D <sub>1</sub> | b    | k   | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |      |
| 340              | 460 | 90  | 3                  | 1200                   | 2700            | 900                      | 1200         | 23968CA/W33      |                  | 378                                | 423            | 15   | 6   | 354                  | 446                  | 2.5                  | 0.17 | 4.00           | 5.90           | 4.00      | 46.0           |      |
|                  | 460 | 90  | 3                  | 1200                   | 2700            | 900                      | 1200         | 23968CAK/W33     |                  | 378                                | 423            | 15   | 6   | 354                  | 446                  | 2.5                  | 0.17 | 4.00           | 5.90           | 4.00      | 45.9           |      |
|                  | 460 | 90  | 3                  | 1200                   | 2700            | 900                      | 1200         | 23968CAF3/W33    |                  | 378                                | 423            | 15   | 6   | 354                  | 446                  | 2.5                  | 0.17 | 4.00           | 5.90           | 4.00      | 45.6           |      |
|                  | 460 | 259 | 1.5                |                        |                 |                          |              | OH3172H          |                  |                                    |                |      |     |                      |                      |                      |      |                |                |           |                | 57.3 |
|                  | 520 | 133 | 5                  | 2180                   | 4400            | 700                      | 900          | 23068CA          | 23068CA/W33      | 400                                | 464            | 22.3 | 8   | 362                  | 498                  | 4                    | 0.24 | 2.80           | 4.20           | 2.80      | 115.0          |      |
|                  | 520 | 133 | 5                  | 2180                   | 4400            | 700                      | 900          | 23068CA/W33YA1   |                  | 400                                | 464            | 22.3 | 8   | 362                  | 498                  | 4                    | 0.24 | 2.80           | 4.20           | 2.80      | 114.0          |      |
|                  | 520 | 133 | 5                  | 2180                   | 4400            | 700                      | 900          | 23068CAK         |                  | 400                                | 464            | 22.3 | 8   | 362                  | 498                  | 4                    | 0.24 | 2.80           | 4.20           | 2.80      | 112.0          |      |
|                  | 520 | 133 | 5                  | 2180                   | 4400            | 700                      | 900          | 23068CAF3        | 23068CAF3/W33    | 400                                | 464            | 22.3 | 8   | 362                  | 498                  | 4                    | 0.24 | 2.80           | 4.20           | 2.80      | 114.0          |      |
|                  | 520 | 133 | 5                  | 2180                   | 4400            | 700                      | 900          | 23068CAKF3       | 23068CAKF3/W33   | 400                                | 464            | 22.3 | 8   | 362                  | 498                  | 4                    | 0.24 | 2.80           | 4.20           | 2.80      | 111.0          |      |
|                  | 520 | 180 | 5                  | 2710                   | 5700            | 530                      | 670          | 24068CA/W33      |                  | 394                                | 451            | 16.7 | 8   | 362                  | 498                  | 4                    | 0.33 | 2.00           | 3.00           | 2.00      | 137.0          |      |
|                  | 520 | 180 | 5                  | 2710                   | 5700            | 530                      | 670          | 24068CAK/W33     |                  | 394                                | 451            | 16.7 | 8   | 362                  | 498                  | 4                    | 0.33 | 2.00           | 3.00           | 2.00      | 132.0          |      |
|                  | 520 | 180 | 5                  | 2710                   | 5700            | 530                      | 670          | 24068CAF1/HA     | 24068CAF1/W33    | 394                                | 451            | 16.7 | 8   | 362                  | 498                  | 4                    | 0.33 | 2.00           | 3.00           | 2.00      | 136.0          |      |
|                  | 520 | 180 | 5                  | 2710                   | 5700            | 530                      | 670          | 24068CAF3        | 24068CAF3/W33    | 394                                | 451            | 16.7 | 8   | 362                  | 498                  | 4                    | 0.33 | 2.00           | 3.00           | 2.00      | 136.0          |      |
|                  | 520 | 180 | 5                  | 2710                   | 5700            | 530                      | 670          | 24068CAK30F1     | 24068CAK30F1/W33 | 394                                | 451            | 16.7 | 8   | 362                  | 498                  | 4                    | 0.33 | 2.00           | 3.00           | 2.00      | 134.0          |      |
| 520              | 180 | 5   | 2710               | 5700                   | 530             | 670                      | 24068CAK30F3 | 24068CAK30F3/W33 | 394              | 451                                | 16.7           | 8    | 362 | 498                  | 4                    | 0.33                 | 2.00 | 3.00           | 2.00           | 134.0     |                |      |
| 580              | 190 | 5   | 3500               | 6300                   | 600             | 750                      | 23168CA      | 23168CA/W33      | 412              | 497                                | 22.3           | 8    | 362 | 558                  | 4                    | 0.31                 | 2.20 | 3.30           | 2.20           | 211.0     |                |      |
| 580              | 190 | 5   | 3500               | 6300                   | 600             | 750                      | 23168CAK/W33 |                  | 412              | 497                                | 22.3           | 8    | 362 | 558                  | 4                    | 0.31                 | 2.20 | 3.30           | 2.20           | 208.0     |                |      |

# Spherical Roller Bearings

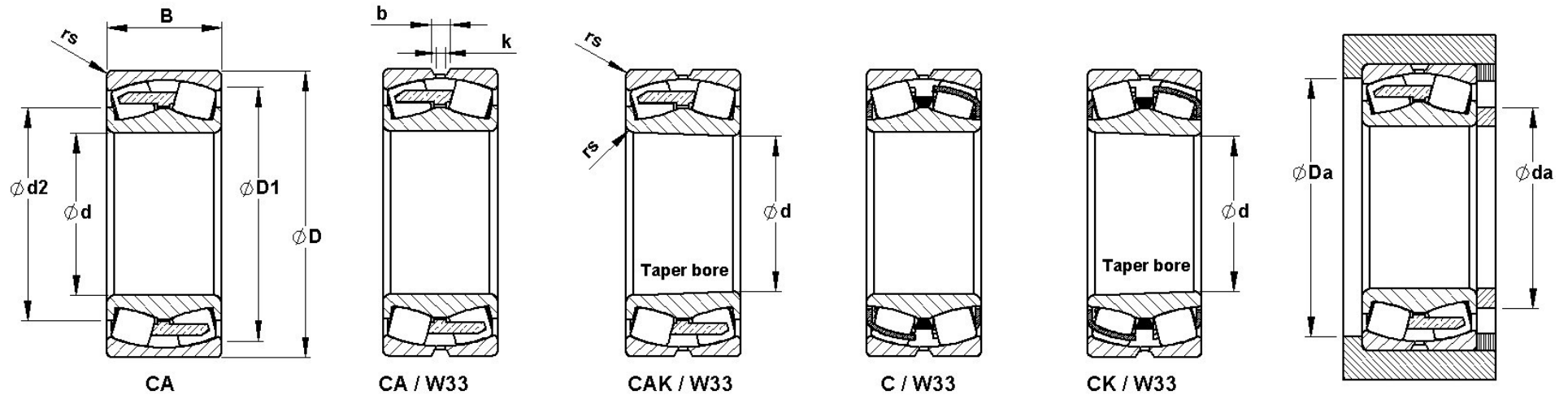
d 340 to 360 mm



| Dimensions in mm |     |     |        | Basic Load Rating - KN |                 | Limit speed ratings- RPM |            | Part Number     | Mating and Fillet Dimensions in mm |                |     |      |          |                      | Calculation Factor   |      |                |                | Weight Kg |                |       |
|------------------|-----|-----|--------|------------------------|-----------------|--------------------------|------------|-----------------|------------------------------------|----------------|-----|------|----------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|-------|
| d                | D   | B   | rs min | Cr                     | C <sub>or</sub> | Grease                   | Oil        |                 | d <sub>2</sub>                     | D <sub>1</sub> | b   | k    | da (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |       |
| 340              | 580 | 190 | 5      | 3500                   | 6300            | 600                      | 750        | 23168CAF3/W33   |                                    | 412            | 497 | 22.3 | 8        | 362                  | 558                  | 4    | 0.31           | 2.20           | 3.30      | 2.20           | 210.0 |
|                  | 580 | 190 | 5      | 3500                   | 6300            | 600                      | 750        | 23168CAKF3/W33  |                                    | 412            | 497 | 22.3 | 8        | 362                  | 558                  | 4    | 0.31           | 2.20           | 3.30      | 2.20           | 206.0 |
|                  | 580 | 243 | 5      | 4050                   | 7950            | 320                      | 400        | 24168CAK30/W33  |                                    | 408            | 486 | 22.3 | 10       | 362                  | 558                  | 4    | 0.40           | 1.70           | 2.50      | 1.60           | 256.0 |
|                  | 580 | 243 | 5      | 4050                   | 7950            | 320                      | 400        | 24168CA/W33     |                                    | 408            | 486 | 22.3 | 10       | 362                  | 558                  | 4    | 0.40           | 1.70           | 2.50      | 1.60           | 261.0 |
|                  | 620 | 224 | 6      | 4400                   | 7700            | 430                      | 530        | 23268CA         |                                    | 426            | 528 |      |          | 368                  | 592                  | 5    | 0.35           | 1.90           | 2.90      | 1.80           | 297.0 |
|                  | 620 | 224 | 6      | 4400                   | 7700            | 430                      | 530        | 23268CAK/W33    |                                    | 426            | 528 | 22.3 | 12       | 368                  | 592                  | 5    | 0.35           | 1.90           | 2.90      | 1.80           | 292.0 |
| 360              | 480 | 90  | 3      | 1290                   | 2820            | 850                      | 1100       | 23972CA         | 23972CA/W33                        | 403            | 441 | 11.1 | 6        | 374                  | 466                  | 2.5  | 0.16           | 4.20           | 6.30      | 4.00           | 46.6  |
|                  | 480 | 90  | 3      | 1290                   | 2820            | 850                      | 1100       | 23972CAK/W33    |                                    | 403            | 441 | 11.1 | 6        | 374                  | 466                  | 2.5  | 0.16           | 4.20           | 6.30      | 4.00           | 46.4  |
|                  | 540 | 134 | 5      | 2280                   | 4800            | 670                      | 850        | 23072CA         | 23072CA/W33                        | 419            | 486 | 22.3 | 8        | 382                  | 518                  | 4    | 0.23           | 2.90           | 4.40      | 2.80           | 126.0 |
|                  | 540 | 134 | 5      | 2280                   | 4800            | 670                      | 850        | 23072CAK        |                                    | 419            | 486 |      |          | 382                  | 518                  | 4    | 0.23           | 2.90           | 4.40      | 2.80           | 125.0 |
|                  | 540 | 134 | 5      | 2280                   | 4800            | 670                      | 850        | 23072CAF3       | 23072CAF1                          | 419            | 486 |      |          | 382                  | 518                  | 4    | 0.23           | 2.90           | 4.40      | 2.80           | 125.0 |
|                  | 540 | 134 | 5      | 2280                   | 4800            | 670                      | 850        | 23072CAKF3/W33  |                                    | 419            | 486 | 22.3 | 8        | 382                  | 518                  | 4    | 0.23           | 2.90           | 4.40      | 2.80           | 124.0 |
|                  | 540 | 134 | 5      | 2280                   | 4800            | 670                      | 850        | 23072CAF3/HAW33 | 23072CAF3/W33                      | 419            | 486 | 22.3 | 8        | 382                  | 518                  | 4    | 0.23           | 2.90           | 4.40      | 2.80           | 125.0 |
|                  | 540 | 134 | 5      | 2280                   | 4800            | 670                      | 850        | FL-23072C/W33   |                                    | 419            | 486 | 22.3 | 8        | 382                  | 518                  | 4    | 0.23           | 2.90           | 4.40      | 2.80           | 124.0 |
|                  | 540 | 180 | 5      | 2940                   | 6100            | 600                      | 750        | 24072CA         | 24072CA/W33                        | 398            | 474 | 16.7 | 8        | 382                  | 518                  | 4    | 0.31           | 2.20           | 3.30      | 2.20           | 150.0 |
|                  | 540 | 180 | 5      | 2940                   | 6100            | 600                      | 750        | 24072CAK/W33    |                                    | 398            | 474 | 16.7 | 8        | 382                  | 518                  | 4    | 0.31           | 2.20           | 3.30      | 2.20           | 143.0 |
| 540              | 180 | 5   | 2940   | 6100                   | 600             | 750                      | 24072CAK30 |                 | 398                                | 474            |     |      | 382      | 518                  | 4                    | 0.31 | 2.20           | 3.30           | 2.20      | 148.0          |       |

# Spherical Roller Bearings

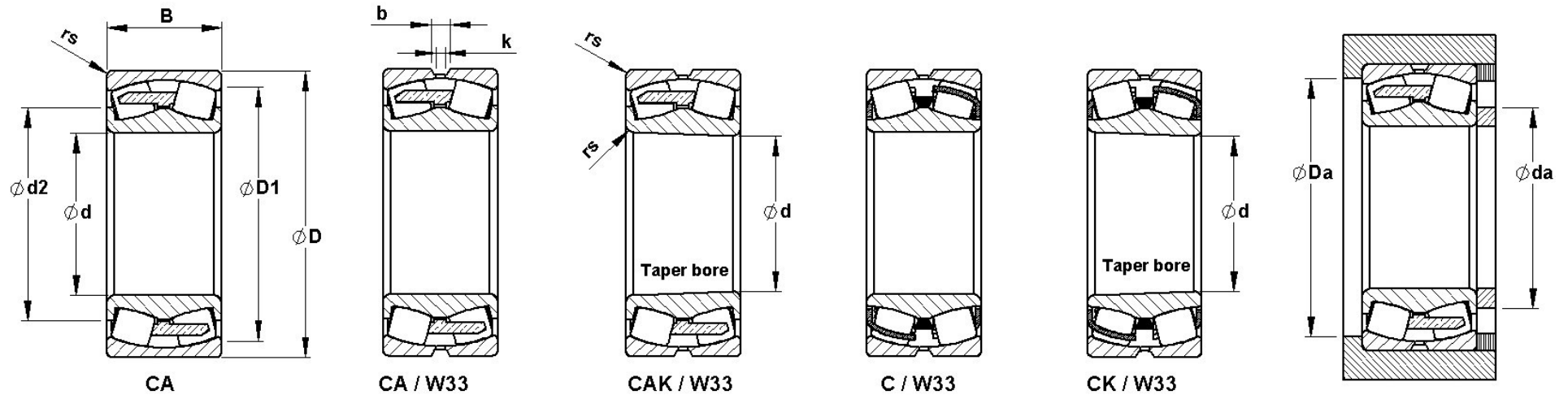
d 360 mm



| Dimensions in mm |     |     |              | Basic Load Rating - KN |          | Limit speed ratings- RPM |                | Part Number      |               | Mating and Fillet Dimensions in mm |       |      |     |             |             | Calculation Factor |      |       |       | Weight Kg |       |
|------------------|-----|-----|--------------|------------------------|----------|--------------------------|----------------|------------------|---------------|------------------------------------|-------|------|-----|-------------|-------------|--------------------|------|-------|-------|-----------|-------|
| d                | D   | B   | $r_{s \min}$ | $C_r$                  | $C_{or}$ | Grease                   | Oil            |                  |               | $d_2$                              | $D_1$ | b    | k   | $d_a$ (min) | $D_a$ (max) | $r_a$ (max)        | e    | $y_1$ | $y_2$ |           | $y_0$ |
| 360              | 600 | 192 | 5            | 3580                   | 6850     | 560                      | 700            | 23172CA          | 23172CA/W33   | 434                                | 518   | 22.3 | 12  | 382         | 578         | 4                  | 0.30 | 2.30  | 3.40  | 2.20      | 255.0 |
|                  | 600 | 192 | 5            | 3580                   | 6850     | 560                      | 700            | 23172CAK/W33     |               | 434                                | 518   | 22.3 | 12  | 382         | 578         | 4                  | 0.30 | 2.30  | 3.40  | 2.20      | 254.0 |
|                  | 600 | 192 | 5            | 3580                   | 6850     | 560                      | 700            | 23172CAKF1/W33   |               | 434                                | 518   | 22.3 | 12  | 382         | 578         | 4                  | 0.30 | 2.30  | 3.40  | 2.20      | 250.0 |
|                  | 600 | 243 | 5            | 5600                   | 8400     | 300                      | 380            | 24172CA          | 24172CA/W33   | 430                                | 511   | 20   | 12  | 382         | 578         | 4                  | 0.37 | 1.80  | 2.70  | 1.80      | 270.0 |
|                  | 600 | 243 | 5            | 5600                   | 8400     | 300                      | 380            | 24172CA/W36      |               | 430                                | 511   | 20   | 8   | 382         | 578         | 4                  | 0.37 | 1.80  | 2.70  | 1.80      | 270.0 |
|                  | 600 | 243 | 5            | 5600                   | 8400     | 300                      | 380            | 24172CAF1        | 24172CAF1/W33 | 430                                | 511   | 20   | 12  | 382         | 578         | 4                  | 0.37 | 1.80  | 2.70  | 1.80      | 269.0 |
|                  | 600 | 243 | 5            | 5600                   | 8400     | 300                      | 380            | 24172CAK30/W33   |               | 430                                | 511   | 20   | 12  | 382         | 578         | 4                  | 0.37 | 1.80  | 2.70  | 1.80      | 267.0 |
|                  | 600 | 243 | 5            | 5600                   | 8400     | 300                      | 380            | 24172CAK30F1/W33 |               | 430                                | 511   | 20   | 12  | 382         | 578         | 4                  | 0.37 | 1.80  | 2.70  | 1.80      | 266.0 |
|                  | 600 | 243 | 5            | 5600                   | 8400     | 300                      | 380            | 24172CAQ1/W36    |               | 430                                | 511   | 20   | 12  | 382         | 578         | 4                  | 0.37 | 1.80  | 2.70  | 1.80      | 270.0 |
|                  | 600 | 243 | 5            | 5600                   | 8400     | 300                      | 380            | SX-24172         |               | 430                                | 511   | 20   | 8   | 382         | 578         | 4                  | 0.37 | 1.80  | 2.70  | 1.80      | 271.0 |
| 650              | 170 | 6   | 3630         | 6200                   | 380      | 480                      | 22272CA/W33    |                  | 449           | 563                                | 22.3  | 8    | 388 | 622         | 5           | 0.26               | 2.60 | 3.87  | 2.54  | 253.0     |       |
| 650              | 232 | 6   | 4650         | 8300                   | 400      | 500                      | 23272CA        | 23272CA/W33      | 443           | 547                                | 22.3  | 10   | 388 | 622         | 5           | 0.35               | 1.90 | 2.90  | 1.80  | 335.0     |       |
| 650              | 232 | 6   | 4650         | 8300                   | 400      | 500                      | 23272CAK       |                  | 443           | 547                                |       |      | 388 | 622         | 5           | 0.35               | 1.90 | 2.90  | 1.80  | 333.0     |       |
| 650              | 232 | 6   | 4650         | 8300                   | 400      | 500                      | 23272CAKF3/W33 |                  | 443           | 547                                | 22.3  | 10   | 388 | 622         | 5           | 0.35               | 1.90 | 2.90  | 1.80  | 330.0     |       |
| 750              | 224 | 7.5 | 4900         | 8600                   | 400      | 500                      | 22372CAK       | 22372CAK/W33     | 471           | 631                                | 22.3  | 12   | 392 | 720         | 6           | 0.31               | 2.21 | 3.29  | 2.16  | 460.0     |       |
| 750              | 224 | 7.5 | 4900         | 8600                   | 400      | 500                      | 22372CAF3      |                  | 471           | 631                                |       |      | 392 | 720         | 6           | 0.31               | 2.21 | 3.29  | 2.16  | 466.0     |       |
| 750              | 224 | 7.5 | 4900         | 8600                   | 400      | 500                      | 22372CAKF3     |                  | 471           | 631                                |       |      | 392 | 720         | 6           | 0.31               | 2.21 | 3.29  | 2.16  | 456.0     |       |

# Spherical Roller Bearings

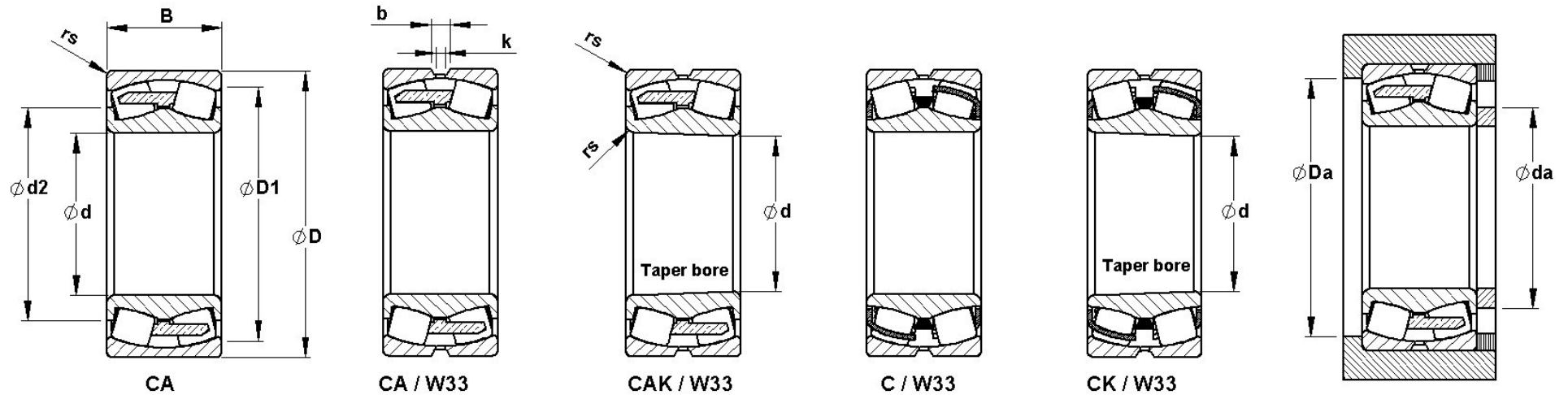
d 380 to 400 mm



| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |                | Part Number      |                | Mating and Fillet Dimensions in mm |                |      |     |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|----------------|------------------|----------------|------------------------------------|----------------|------|-----|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|
| d                | D   | B   | r <sub>s</sub> min | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil            |                  |                | d <sub>2</sub>                     | D <sub>1</sub> | b    | k   | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |
| 380              | 520 | 106 | 4                  | 1730                   | 3800            | 800                      | 1000           | 23976CAF1/W33    | 23976CAF3/W33  | 426                                | 476            | 15   | 10  | 398                  | 502                  | 3                    | 0.17 | 4.00           | 5.90           | 4.00      | 69.5           |
|                  | 560 | 135 | 5                  | 2480                   | 5000            | 630                      | 800            | 23076CA          | 23076CA/W33    | 441                                | 505            | 22.3 | 8   | 402                  | 538                  | 4                    | 0.22 | 3.00           | 4.60           | 2.80      | 130.0          |
|                  | 560 | 135 | 5                  | 2480                   | 5000            | 630                      | 800            | 23076CAK/W33     |                | 441                                | 505            | 22.3 | 8   | 402                  | 538                  | 4                    | 0.22 | 3.00           | 4.60           | 2.80      | 126.0          |
|                  | 560 | 135 | 5                  | 2480                   | 5000            | 630                      | 800            | 23076CAF1/W33    | 23076CAF3/W33  | 441                                | 505            | 22.3 | 8   | 402                  | 538                  | 4                    | 0.22 | 3.00           | 4.60           | 2.80      | 129.0          |
|                  | 560 | 135 | 5                  | 2480                   | 5000            | 630                      | 800            | 23076CAKF3       | 23076CAKF3/W33 | 441                                | 505            | 22.3 | 8   | 402                  | 538                  | 4                    | 0.22 | 3.00           | 4.60           | 2.80      | 125.0          |
|                  | 560 | 180 | 5                  | 3080                   | 6580            | 480                      | 600            | 24076CAF3        | 24076CAF3/W33  | 435                                | 494            | 22.3 | 8   | 402                  | 538                  | 4                    | 0.30 | 2.30           | 3.40           | 2.20      | 150.0          |
|                  | 560 | 180 | 5                  | 3080                   | 6580            | 480                      | 600            | 24076CAK30F3/W33 |                | 435                                | 494            | 22   | 10  | 402                  | 538                  | 4                    | 0.30 | 2.30           | 3.40           | 2.20      | 153.0          |
|                  | 560 | 180 | 5                  | 3080                   | 6580            | 480                      | 600            | 24076CA/W33      |                | 435                                | 494            | 22   | 10  | 402                  | 538                  | 4                    | 0.30 | 2.30           | 3.40           | 2.20      | 151.0          |
|                  | 620 | 194 | 5                  | 3400                   | 7350            | 400                      | 500            | 23176CA/W33      |                | 457                                | 540            | 22   | 8   | 402                  | 598                  | 4                    | 0.30 | 2.30           | 3.40           | 2.20      | 250.0          |
|                  | 620 | 194 | 5                  | 3400                   | 7350            | 400                      | 500            | 23176CAK         | 23176CAK/W33   | 457                                | 540            | 22   | 8   | 402                  | 598                  | 4                    | 0.30 | 2.30           | 3.40           | 2.20      | 244.0          |
|                  | 620 | 194 | 5                  | 3400                   | 7350            | 400                      | 500            | 23176CAF3/HAW33  | 23176CAF3/W33  | 457                                | 540            | 22   | 8   | 402                  | 598                  | 4                    | 0.30 | 2.30           | 3.40           | 2.20      | 248.0          |
|                  | 620 | 194 | 5                  | 3400                   | 7350            | 400                      | 500            | 23176CAKF3/W33   |                | 457                                | 540            | 22   | 8   | 402                  | 598                  | 4                    | 0.30 | 2.30           | 3.40           | 2.20      | 241.0          |
|                  | 620 | 194 | 5                  | 3400                   | 7350            | 400                      | 500            | 23176CAK/W33     |                | 457                                | 540            | 22   | 8   | 402                  | 598                  | 4                    | 0.30 | 2.30           | 3.40           | 2.20      | 243.0          |
|                  | 620 | 194 | 5                  | 4050                   | 7750            | 400                      | 500            | 23176CA          |                | 457                                | 540            |      |     | 402                  | 598                  | 4                    | 0.30 | 2.30           | 3.40           | 2.20      | 251.0          |
| 620              | 243 | 5   | 4400               | 9200                   | 300             | 380                      | 24176CA/C9     | 24176CA/W33      | 457            | 540                                | 22             | 8    | 402 | 598                  | 4                    | 0.30                 | 2.30 | 3.40           | 2.20           | 296.0     |                |
| 680              | 240 | 6   | 4800               | 9200                   | 380             | 480                      | 23276CAKF3/W33 |                  | 468            | 574                                | 22.3           | 10   | 408 | 652                  | 5                    | 0.35                 | 1.90 | 2.90           | 1.80           | 386.0     |                |
| 400              | 540 | 106 | 4                  | 1750                   | 3950            | 750                      | 950            | 23980CAF1/W33    | 23980CAF3/W33  | 445                                | 497            | 15   | 10  | 418                  | 522                  | 3                    | 0.17 | 4.00           | 5.90           | 4.00      | 72.4           |

# Spherical Roller Bearings

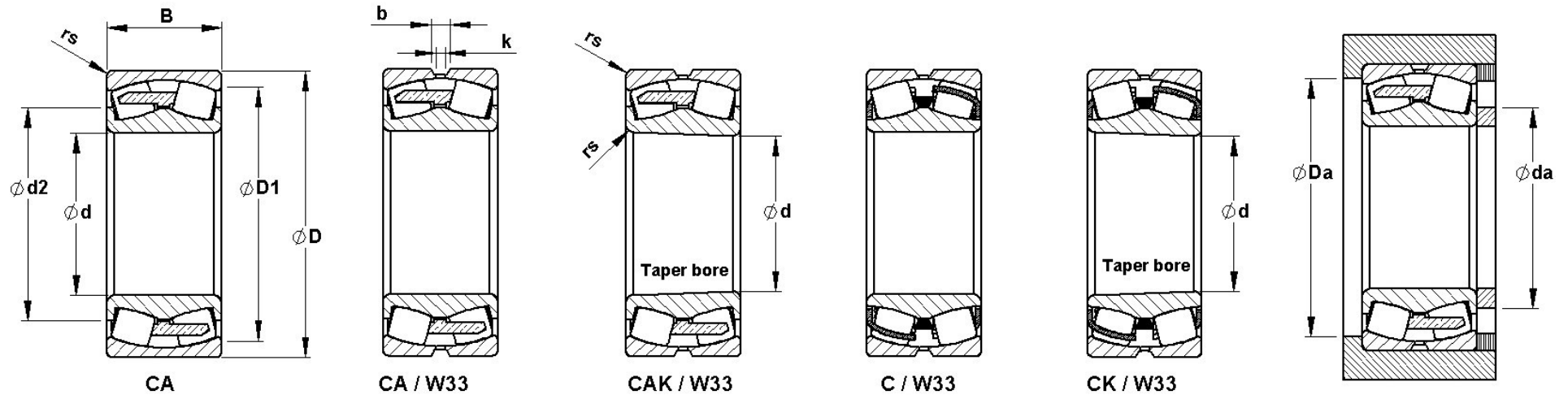
d 400 mm



| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |               | Part Number     |                    | Mating and Fillet Dimensions in mm |                |      |     |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|---------------|-----------------|--------------------|------------------------------------|----------------|------|-----|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|
| d                | D   | B   | r <sub>s</sub> min | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil           |                 |                    | d <sub>2</sub>                     | D <sub>1</sub> | b    | k   | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |
| 400              | 540 | 100 | 4                  | 1750                   | 3950            | 750                      | 950           | 23980X2CAF3/W33 | 23980X2CAF3/W33YA1 | 445                                | 498            | 13.9 | 7.5 | 418                  | 522                  | 3                    | 0.16 | 4.20           | 6.30           | 4.00      | 67.8           |
|                  | 590 | 142 | 5                  | 2650                   | 5600            | 630                      | 800           | 23080X3CA       | 23080X3CA/W33      | 461                                | 532            | 22.3 | 12  | 422                  | 578                  | 4                    | 0.21 | 3.14           | 4.68           | 3.07      | 133.0          |
|                  | 600 | 148 | 5                  | 2790                   | 5900            | 600                      | 750           | 23080CA         |                    | 460                                | 538            |      |     | 422                  | 578                  | 4                    | 0.23 | 2.90           | 4.40           | 2.80      | 161.0          |
|                  | 600 | 148 | 5                  | 2790                   | 5900            | 600                      | 750           | 23080CAF3       | 23080CAF3/W33      | 460                                | 538            | 22   | 12  | 422                  | 578                  | 4                    | 0.23 | 2.90           | 4.40           | 2.80      | 158.0          |
|                  | 600 | 148 | 5                  | 2790                   | 5900            | 600                      | 750           | 23080CAKF3      | 23080CAKF3/W33     | 460                                | 538            | 22   | 12  | 422                  | 578                  | 4                    | 0.23 | 2.90           | 4.40           | 2.80      | 152.0          |
|                  | 600 | 200 | 5                  | 3960                   | 7800            | 450                      | 560           | 24080CAF3       | 24080CAF3/W33      | 458                                | 524            | 22   | 12  | 422                  | 578                  | 4                    | 0.30 | 2.30           | 3.40           | 2.20      | 202.0          |
|                  | 600 | 200 | 5                  | 3960                   | 7800            | 450                      | 560           | 24080CA/W33     |                    | 458                                | 524            | 22   | 12  | 422                  | 578                  | 4                    | 0.30 | 2.30           | 3.40           | 2.20      | 203.0          |
|                  | 600 | 200 | 5                  | 3960                   | 7800            | 450                      | 560           | 24080CAK30/W33  |                    | 458                                | 524            | 22   | 12  | 422                  | 578                  | 4                    | 0.30 | 2.30           | 3.40           | 2.20      | 202.0          |
|                  | 650 | 200 | 6                  | 4250                   | 8200            | 380                      | 480           | 23180CA         | 23180CA/W33        | 480                                | 568            | 22.3 | 8   | 428                  | 622                  | 5                    | 0.28 | 2.40           | 3.60           | 2.50      | 275.0          |
|                  | 650 | 200 | 6                  | 4250                   | 8200            | 380                      | 480           | 23180CAF3       | 23180CAF3/W33      | 480                                | 568            | 22.3 | 8   | 428                  | 622                  | 5                    | 0.28 | 2.40           | 3.60           | 2.50      | 273.0          |
|                  | 650 | 200 | 6                  | 4250                   | 8200            | 380                      | 480           | 23180CAKF3/W33  |                    | 480                                | 568            | 22.3 | 8   | 428                  | 622                  | 5                    | 0.28 | 2.40           | 3.60           | 2.50      | 264.0          |
|                  | 650 | 200 | 6                  | 4250                   | 8200            | 380                      | 480           | 23180CA/HCRW33  |                    | 480                                | 568            | 22.3 | 8   | 428                  | 622                  | 5                    | 0.28 | 2.40           | 3.60           | 2.50      | 274.0          |
|                  | 670 | 216 | 6                  | 4000                   | 8550            | 380                      | 480           | 23180X3CA/W33   |                    | 480                                | 579            | 22.3 | 8   | 428                  | 622                  | 5                    | 0.28 | 2.40           | 3.60           | 2.50      | 293.0          |
|                  | 650 | 250 | 6                  | 4800                   | 9600            | 320                      | 400           | 24180CAF3       | 24180CAF3/W33      | 476                                | 563            | 22.3 | 8   | 428                  | 622                  | 5                    | 0.36 | 1.87           | 2.79           | 1.83      | 323.0          |
|                  | 650 | 250 | 6                  | 4800                   | 9600            | 320                      | 400           | 24180CA         | 24180CA/W33        | 476                                | 563            | 22.3 | 8   | 428                  | 622                  | 5                    | 0.36 | 1.87           | 2.79           | 1.83      | 325.0          |
|                  | 720 | 256 | 6                  | 6150                   | 11300           | 340                      | 430           | 23280CA         | 23280CA/W33        | 499                                | 606            | 22   | 10  | 428                  | 692                  | 5                    | 0.35 | 1.90           | 2.90           | 1.80      | 350.0          |
| 720              | 256 | 6   | 6150               | 11300                  | 340             | 430                      | 23280CAF3/W33 | 23280CAF3       | 499                | 606                                | 22             | 10   | 428 | 692                  | 5                    | 0.35                 | 1.90 | 2.90           | 1.80           | 353.0     |                |

# Spherical Roller Bearings

d 400 to 420 mm

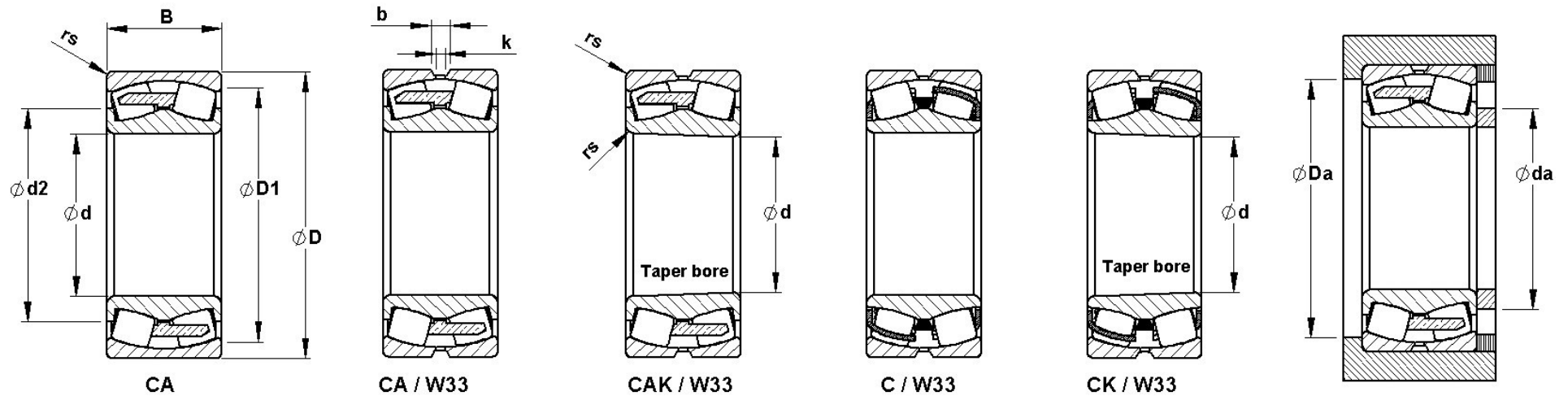


| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |                | Part Number       | Mating and Fillet Dimensions in mm |                |      |      |                      |                      |                      | Calculation Factor |                |                |                | Weight Kg |       |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|----------------|-------------------|------------------------------------|----------------|------|------|----------------------|----------------------|----------------------|--------------------|----------------|----------------|----------------|-----------|-------|
| d                | D   | B   | r <sub>s</sub> min | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil            |                   | d <sub>2</sub>                     | D <sub>1</sub> | b    | k    | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e                  | y <sub>1</sub> | y <sub>2</sub> | y <sub>0</sub> |           |       |
| 400              | 720 | 256 | 6                  | 6150                   | 11300           | 340                      | 430            | 23280CAKF3/W33    |                                    | 499            | 606  | 22   | 10                   | 428                  | 692                  | 5                  | 0.35           | 1.90           | 2.90           | 1.80      | 350.0 |
|                  | 820 | 243 | 7.5                | 5400                   | 9600            | 340                      | 430            | 22380CA/HCW33     | 22380CA/W33                        | 520            | 694  | 22.3 | 12                   | 442                  | 790                  | 6                  | 0.31           | 2.21           | 3.29           | 2.16      | 623.0 |
| 420              | 520 | 75  | 2.1                | 950                    | 2630            | 750                      | 950            | 23884CAK          |                                    | 454            | 490  | 13.9 | 5                    | 430                  | 504                  | 2                  | 0.12           | 5.60           | 8.40           | 5.60      | 34.6  |
|                  | 560 | 106 | 4                  | 1530                   | 4050            | 700                      | 900            | 23984ACA/W33      | 23884CAK/W33                       | 464            | 517  | 16.7 | 9                    | 435                  | 545                  | 3                  | 0.16           | 4.20           | 6.30           | 4.00      | 72.4  |
|                  | 560 | 106 | 4                  | 1530                   | 4050            | 700                      | 900            | 23984CA/W33       |                                    | 464            | 517  | 16.7 | 9                    | 435                  | 545                  | 3                  | 0.16           | 4.20           | 6.30           | 4.00      | 73.6  |
|                  | 620 | 150 | 5                  | 2970                   | 6400            | 450                      | 560            | 23084CA           |                                    | 484            | 558  |      |                      | 442                  | 598                  | 4                  | 0.22           | 3.00           | 4.60           | 2.80      | 150.0 |
|                  | 620 | 150 | 5                  | 2970                   | 6400            | 450                      | 560            | 23084CAF3         | 23084CAF3/W33                      | 484            | 558  | 22   | 8                    | 442                  | 598                  | 4                  | 0.22           | 3.00           | 4.60           | 2.80      | 149.0 |
|                  | 620 | 150 | 5                  | 2970                   | 6400            | 450                      | 560            | 23084CAKF3        |                                    | 484            | 558  |      |                      | 442                  | 598                  | 4                  | 0.22           | 3.00           | 4.60           | 2.80      | 144.0 |
|                  | 620 | 200 | 5                  | 3690                   | 8450            | 380                      | 480            | 24084CA/W33       |                                    | 479            | 548  | 22.3 | 12                   | 442                  | 598                  | 4                  | 0.30           | 2.30           | 3.40           | 2.20      | 202.0 |
|                  | 620 | 200 | 5                  | 3690                   | 8450            | 380                      | 480            | 24084CAF3/W33     |                                    | 479            | 548  | 22.3 | 12                   | 442                  | 598                  | 4                  | 0.30           | 2.30           | 3.40           | 2.20      | 201.0 |
|                  | 620 | 200 | 5                  | 3690                   | 8450            | 380                      | 480            | 24084CAK30F3/W33X |                                    | 479            | 548  | 22.3 | 12                   | 442                  | 598                  | 4                  | 0.30           | 2.30           | 3.40           | 2.20      | 197.0 |
|                  | 700 | 224 | 6                  | 4680                   | 9200            | 360                      | 450            | 23184CA/W33       |                                    | 505            | 605  | 22.3 | 12                   | 448                  | 672                  | 5                  | 0.30           | 2.30           | 3.40           | 2.20      | 353.0 |
|                  | 700 | 224 | 6                  | 4680                   | 9200            | 360                      | 450            | 23184CAK          | 23184CAK/W33                       | 505            | 605  | 22.3 | 12                   | 448                  | 672                  | 5                  | 0.30           | 2.30           | 3.40           | 2.20      | 352.0 |
|                  | 700 | 224 | 6                  | 4680                   | 9200            | 360                      | 450            | 23184CAF3         | 23184CAF3/W513                     | 505            | 605  | 22.3 | 12                   | 448                  | 672                  | 5                  | 0.30           | 2.30           | 3.40           | 2.20      | 352.0 |
| 700              | 280 | 6   | 5750               | 11100                  | 300             | 380                      | 24184CA/W33    |                   | 497                                | 599            | 22.3 | 12   | 448                  | 674                  | 5                    | 0.38               | 1.80           | 2.60           | 1.70           | 436.0     |       |
| 700              | 280 | 6   | 6050               | 11800                  | 300             | 380                      | 24184CAK30/W33 |                   | 495                                | 596            | 22.3 | 12   | 448                  | 674                  | 5                    | 0.38               | 1.80           | 2.60           | 1.70           | 428.0     |       |
| 700              | 280 | 6   | 6050               | 11800                  | 300             | 380                      | 24184CA/HCRW33 |                   | 495                                | 596            | 22.3 | 12   | 448                  | 674                  | 5                    | 0.38               | 1.80           | 2.60           | 1.70           | 436.0     |       |



# Spherical Roller Bearings

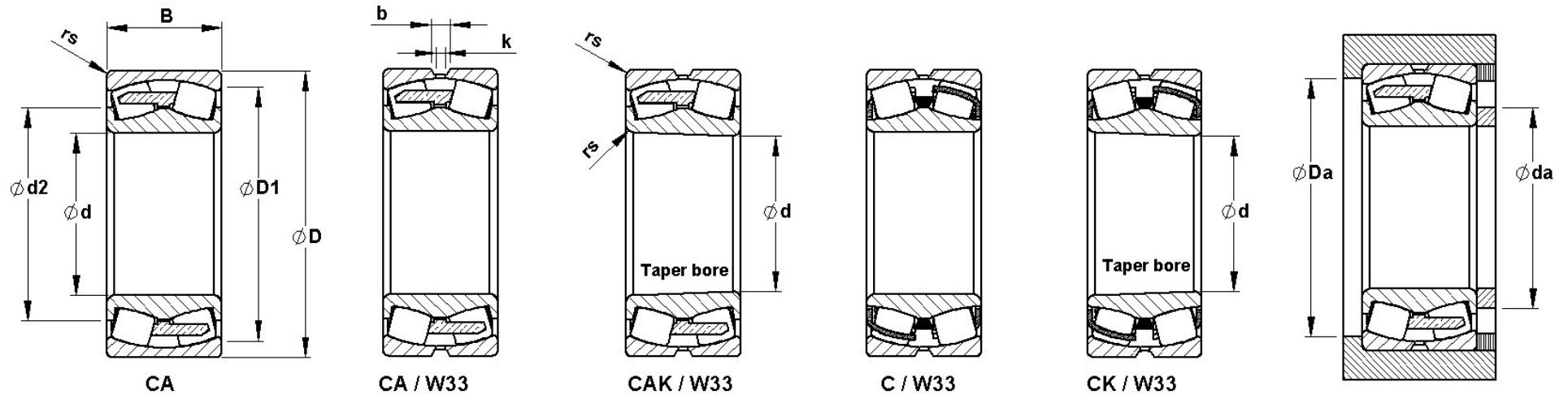
d 420 to 460 mm



| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |              | Part Number      | Mating and Fillet Dimensions in mm |                |      |      |          |                      | Calculation Factor   |      |                |                | Weight Kg |                |       |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|--------------|------------------|------------------------------------|----------------|------|------|----------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|-------|
| d                | D   | B   | r <sub>s</sub> min | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil          |                  | d <sub>2</sub>                     | D <sub>1</sub> | b    | k    | da (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |       |
| 420              | 760 | 272 | 7.5                | 6170                   | 11900           | 320                      | 400          | 23284CA/W33      |                                    | 525            | 643  | 22   | 12       | 456                  | 724                  | 6    | 0.35           | 1.90           | 2.90      | 1.80           | 550.0 |
|                  | 760 | 272 | 7.5                | 6170                   | 11900           | 320                      | 400          | 23284CAK/W33     |                                    | 525            | 643  | 22   | 12       | 456                  | 724                  | 6    | 0.35           | 1.90           | 2.90      | 1.80           | 549.0 |
|                  | 760 | 272 | 7.5                | 6170                   | 11900           | 320                      | 400          | 23284CAF3/C9W33  |                                    | 525            | 643  | 22   | 12       | 456                  | 724                  | 6    | 0.35           | 1.90           | 2.90      | 1.80           | 546.0 |
| 440              | 600 | 118 | 4                  | 2030                   | 4850            | 450                      | 560          | 23988CA/W33      |                                    | 492            | 553  | 16.7 | 8        | 462                  | 578                  | 3    | 0.17           | 4.00           | 5.90      | 4.00           | 101.0 |
|                  | 650 | 157 | 6                  | 3060                   | 6500            | 430                      | 530          | 23088CAK/W33     |                                    | 507            | 585  | 22.3 | 8        | 468                  | 622                  | 5    | 0.22           | 3.00           | 4.60      | 2.80           | 179.0 |
|                  | 650 | 157 | 6                  | 3060                   | 6500            | 430                      | 530          | 23088CAF3        | 23088CAF3/W33                      | 507            | 585  | 22.3 | 8        | 468                  | 622                  | 5    | 0.22           | 3.00           | 4.60      | 2.80           | 185.0 |
|                  | 650 | 157 | 6                  | 3060                   | 6500            | 430                      | 530          | 23088CAKF3       | 23088CAKF3/W33                     | 507            | 585  | 22.3 | 8        | 468                  | 622                  | 5    | 0.22           | 3.00           | 4.60      | 2.80           | 178.0 |
|                  | 650 | 212 | 6                  | 4150                   | 9100            | 360                      | 450          | 24088CA/W33      |                                    | 502            | 569  | 22.3 | 12       | 468                  | 626                  | 5    | 0.30           | 2.30           | 3.40      | 2.20           | 251.0 |
|                  | 650 | 212 | 6                  | 4150                   | 9100            | 360                      | 450          | 24088CAK30F3/W33 |                                    | 502            | 569  | 22.3 | 12       | 468                  | 626                  | 5    | 0.30           | 2.30           | 3.40      | 2.20           | 245.0 |
|                  | 720 | 226 | 6                  | 4950                   | 10000           | 340                      | 430          | 23188CA          |                                    | 522            | 626  |      |          | 468                  | 692                  | 5    | 0.30           | 2.30           | 3.40      | 2.20           | 378.0 |
|                  | 720 | 226 | 6                  | 4950                   | 10000           | 340                      | 430          | 23188CA/W33      | 23188CAK/W33                       | 522            | 626  | 22.3 | 12       | 468                  | 692                  | 5    | 0.30           | 2.30           | 3.40      | 2.20           | 377.0 |
|                  | 720 | 280 | 6                  | 6250                   | 12500           | 300                      | 380          | 24188CA/W33      |                                    | 517            | 618  | 22.3 | 12       | 468                  | 692                  | 5    | 0.37           | 1.80           | 2.70      | 1.80           | 436.0 |
|                  | 720 | 280 | 6                  | 6250                   | 12500           | 300                      | 380          | 24188CAK30/W33   |                                    | 517            | 618  | 22.3 | 12       | 468                  | 692                  | 5    | 0.37           | 1.80           | 2.70      | 1.80           | 455.0 |
|                  | 790 | 280 | 7.5                | 6850                   | 12800           | 320                      | 400          | 23288CA/W33      |                                    | 548            | 675  | 22.3 | 12       | 472                  | 578                  | 6    | 0.35           | 1.90           | 2.90      | 1.80           | 611.0 |
| 790              | 280 | 7.5 | 6850               | 12800                  | 320             | 400                      | 23288CAK/W33 |                  | 548                                | 675            | 22.3 | 12   | 472      | 578                  | 6                    | 0.35 | 1.90           | 2.90           | 1.80      | 578.0          |       |
| 460              | 580 | 118 | 3                  | 1730                   | 4850            | 450                      | 560          | 24892CA/W33      |                                    | 504            | 540  | 15   | 6        | 472                  | 566                  | 2.5  | 0.17           | 4.00           | 5.90      | 4.00           | 82.0  |
|                  | 580 | 118 | 3                  | 1730                   | 4850            | 450                      | 560          | 24892CAK30/W33   |                                    | 504            | 540  | 15   | 6        | 472                  | 566                  | 2.5  | 0.17           | 4.00           | 5.90      | 4.00           | 82.0  |

# Spherical Roller Bearings

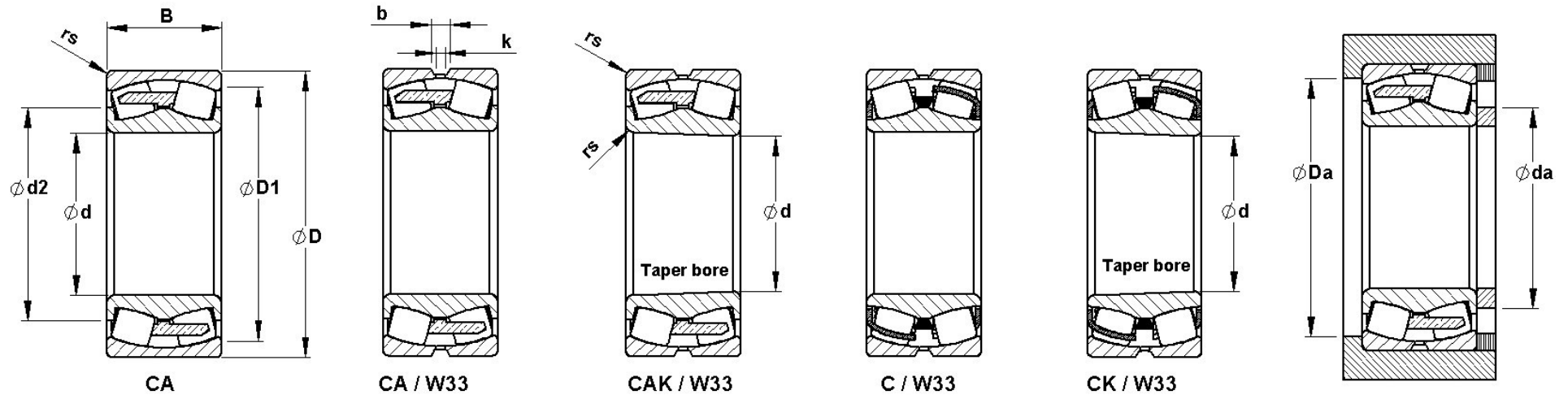
d 460 to 480 mm



| Dimensions in mm |     |     |        | Basic Load Rating - KN |                 | Limit speed ratings- RPM |                | Part Number            | Mating and Fillet Dimensions in mm |                |      |      |          |                      | Calculation Factor   |      |                |                | Weight Kg |                |       |
|------------------|-----|-----|--------|------------------------|-----------------|--------------------------|----------------|------------------------|------------------------------------|----------------|------|------|----------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|-------|
| d                | D   | B   | rs min | Cr                     | C <sub>or</sub> | Grease                   | Oil            |                        | d <sub>2</sub>                     | D <sub>1</sub> | b    | k    | da (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |       |
| 460              | 620 | 118 | 4      | 2120                   | 5000            | 430                      | 530            | 23992CA/W33            |                                    | 511            | 572  | 16.7 | 9        | 475                  | 605                  | 3    | 0.16           | 4.20           | 6.30      | 4.00           | 105.0 |
|                  | 620 | 110 | 4      | 1980                   | 4400            | 430                      | 530            | 23992X2CA/W33AYA1      |                                    | 511            | 574  | 16.7 | 9        | 475                  | 605                  | 3    | 0.16           | 4.20           | 6.30      | 4.00           | 96.8  |
|                  | 650 | 120 | 4      | 2430                   | 5150            | 420                      | 510            | 23992X3CA              | 23992X3CA/W33                      | 520            | 592  | 16.7 | 9        | 480                  | 615                  | 3    | 0.17           | 4.00           | 5.90      | 4.00           | 132.0 |
|                  | 680 | 163 | 6      | 3280                   | 6950            | 400                      | 500            | 23092CAF3/W33          | 23092CAF3/W33                      | 531            | 613  | 23.5 | 12       | 488                  | 652                  | 5    | 0.22           | 3.00           | 4.60      | 2.80           | 226.0 |
|                  | 680 | 163 | 6      | 3280                   | 6950            | 400                      | 500            | 23092CAKF3             |                                    | 531            | 613  |      |          | 488                  | 652                  | 5    | 0.22           | 3.00           | 4.60      | 2.80           | 225.0 |
|                  | 680 | 218 | 6      | 4650                   | 10200           | 340                      | 430            | 24092CAF3/W33          |                                    | 528            | 600  | 24   | 12       | 488                  | 652                  | 5    | 0.29           | 2.35           | 3.50      | 2.30           | 304.0 |
|                  | 680 | 218 | 6      | 4650                   | 10200           | 340                      | 430            | 24092CA/HCRW33         |                                    | 528            | 600  | 24   | 12       | 488                  | 652                  | 5    | 0.29           | 2.35           | 3.50      | 2.30           | 308.0 |
|                  | 760 | 240 | 7.5    | 5500                   | 10000           | 320                      | 400            | 23192CA                | 23192CA/W33                        | 557            | 660  | 22   | 8        | 496                  | 724                  | 6    | 0.30           | 2.30           | 3.40      | 2.20           | 443.0 |
|                  | 760 | 240 | 7.5    | 5500                   | 10000           | 320                      | 400            | 23192CAF3              | 23192CAF3/W33                      | 557            | 660  | 22   | 8        | 496                  | 724                  | 6    | 0.30           | 2.30           | 3.40      | 2.20           | 440.0 |
|                  | 760 | 240 | 7.5    | 5500                   | 10000           | 320                      | 400            | 23192CAKF3/W33         |                                    | 557            | 660  | 22   | 8        | 496                  | 724                  | 6    | 0.30           | 2.30           | 3.40      | 2.20           | 438.0 |
|                  | 760 | 300 | 7.5    | 6890                   | 14400           | 160                      | 200            | 24192CA/W33            |                                    | 540            | 639  | 22.3 | 8        | 496                  | 724                  | 6    | 0.37           | 1.80           | 2.70      | 1.80           | 461.0 |
|                  | 760 | 300 | 7.5    | 6890                   | 14400           | 160                      | 200            | 24192CAK30/W33         |                                    | 540            | 639  | 22.3 | 8        | 496                  | 724                  | 6    | 0.37           | 1.80           | 2.70      | 1.80           | 460.0 |
| 760              | 300 | 7.5 | 6890   | 14400                  | 160             | 200                      | 24192CAF3/W33  |                        | 540                                | 639            | 22.3 | 8    | 496      | 724                  | 6                    | 0.37 | 1.80           | 2.70           | 1.80      | 459.0          |       |
| 830              | 296 | 7.5 | 7350   | 13500                  | 300             | 380                      | 23292CAKF3/W33 |                        | 566                                | 698            | 22.3 | 10   | 496      | 794                  | 6                    | 0.35 | 1.90           | 2.90           | 1.80      | 698.0          |       |
| 479              | 790 | 258 | 7.5    | 5300                   | 12100           | 300                      | 380            | 231/479X2CAKF1/W33XYB2 |                                    | 578            | 683  | 22   | 12       | 516                  | 754                  | 6    | 0.31           | 2.20           | 3.30      | 2.20           | 497.0 |
| 480              | 600 | 90  | 3      | 1420                   | 4000            | 450                      | 600            | 23896CA                |                                    | 523            | 563  |      |          | 500                  | 580                  | 2.5  | 0.13           | 5.36           | 7.98      | 5.24           | 60.4  |
|                  | 650 | 128 | 5      | 2370                   | 5750            | 400                      | 500            | 23996CA/W33            |                                    | 532            | 596  | 16.7 | 10       | 502                  | 628                  | 4    | 0.18           | 3.80           | 5.60      | 3.60           | 126.0 |

# Spherical Roller Bearings

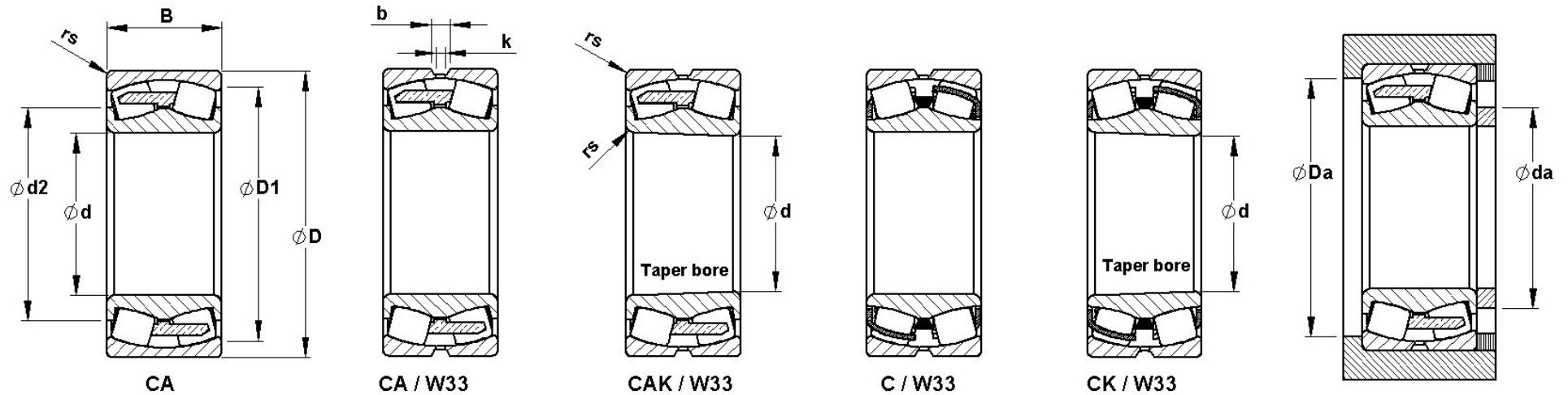
d 480 mm



| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |           | Part Number      |                | Mating and Fillet Dimensions in mm |                |      |     |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|-----------|------------------|----------------|------------------------------------|----------------|------|-----|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|
| d                | D   | B   | r <sub>s</sub> min | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil       |                  |                | d <sub>2</sub>                     | D <sub>1</sub> | b    | k   | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |
| 480              | 650 | 128 | 5                  | 2370                   | 5750            | 400                      | 500       | 23996CAF1/W33    | 23996CAF3/W33  | 532                                | 596            | 16.7 | 10  | 502                  | 628                  | 4                    | 0.18 | 3.80           | 5.60           | 3.60      | 125.0          |
|                  | 650 | 128 | 5                  | 2370                   | 5750            | 400                      | 500       | 23996CAK1        | 23996CAK3      | 532                                | 596            |      |     | 504                  | 628                  | 4                    | 0.18 | 3.80           | 5.60           | 3.60      | 121.0          |
|                  | 650 | 128 | 5                  | 2370                   | 5750            | 400                      | 500       | 23996CAK1/W33    |                | 532                                | 596            | 16.7 | 10  | 504                  | 628                  | 4                    | 0.18 | 3.80           | 5.60           | 3.60      | 121.0          |
|                  | 700 | 165 | 6                  | 3300                   | 6900            | 380                      | 480       | 23096CA/W33      |                | 552                                | 634            | 22.3 | 12  | 504                  | 678                  | 5                    | 0.21 | 3.20           | 4.80           | 3.20      | 217.0          |
|                  | 700 | 165 | 6                  | 3300                   | 6900            | 380                      | 480       | 23096CAK/W33     |                | 552                                | 634            | 22.3 | 12  | 504                  | 678                  | 5                    | 0.21 | 3.20           | 4.80           | 3.20      | 206.0          |
|                  | 700 | 165 | 6                  | 3260                   | 7530            | 400                      | 500       | 23096F3          | 23096F3/W33    | 553                                | 625            | 22.3 | 12  | 504                  | 678                  | 5                    | 0.23 | 2.90           | 4.40           | 2.80      | 247.0          |
|                  | 700 | 218 | 6                  | 4650                   | 10400           | 340                      | 430       | 24096CA/W33      |                | 542                                | 618            | 22.3 | 12  | 504                  | 678                  | 5                    | 0.28 | 2.40           | 3.60           | 2.50      | 296.0          |
|                  | 700 | 218 | 6                  | 4650                   | 10400           | 340                      | 430       | 24096CAK30/W33   |                | 542                                | 618            | 22.3 | 12  | 504                  | 678                  | 5                    | 0.28 | 2.40           | 3.60           | 2.50      | 290.0          |
|                  | 790 | 248 | 7.5                | 6100                   | 12000           | 300                      | 380       | 23196CAF1/W33X   | 23196CAF3/W33X | 578                                | 687            | 22   | 12  | 516                  | 754                  | 6                    | 0.30 | 2.30           | 3.40           | 2.20      | 516.0          |
|                  | 790 | 248 | 7.5                | 6100                   | 12000           | 300                      | 380       | 23196CAK1/W33X   | 23196CAK3/W33X | 578                                | 687            | 22   | 12  | 516                  | 754                  | 6                    | 0.30 | 2.30           | 3.40           | 2.20      | 485.0          |
|                  | 790 | 308 | 7.5                | 8000                   | 14900           | 240                      | 320       | 24196CAF3/W33    |                | 568                                | 673            | 22.3 | 8   | 513                  | 759                  | 6                    | 0.37 | 1.80           | 2.70           | 1.80      | 584.0          |
|                  | 790 | 308 | 7.5                | 8000                   | 14900           | 240                      | 320       | 24196CAF3K30/W33 |                | 568                                | 673            | 22.3 | 8   | 513                  | 759                  | 6                    | 0.37 | 1.80           | 2.70           | 1.80      | 582.0          |
|                  | 870 | 310 | 7.5                | 7750                   | 15200           | 260                      | 340       | 23296CAF3        | 23296CAF3/W33  | 581                                | 732            | 22.3 | 12  | 516                  | 834                  | 6                    | 0.35 | 1.90           | 2.90           | 1.80      | 853.0          |
|                  | 870 | 310 | 7.5                | 7750                   | 15200           | 260                      | 340       | 23296CAK3        | 23296CAK3/W33  | 581                                | 732            | 22.3 | 12  | 516                  | 834                  | 6                    | 0.35 | 1.90           | 2.90           | 1.80      | 848.0          |
|                  | 870 | 310 | 7.5                | 7750                   | 15200           | 260                      | 340       | 23296CAK         |                | 581                                | 732            |      |     | 516                  | 834                  | 6                    | 0.35 | 1.90           | 2.90           | 1.80      | 859.0          |
| 870              | 310 | 7.5 | 6750               | 15200                  | 280             | 360                      | 23296/W33 |                  | 581            | 736                                | 22.3           | 12   | 516 | 834                  | 6                    | 0.35                 | 1.90 | 2.90           | 1.80           | 910.0     |                |
| 870              | 310 | 7.5 | 6750               | 15200                  | 280             | 360                      | 23296F3   |                  | 581            | 736                                |                |      | 516 | 834                  | 6                    | 0.35                 | 1.90 | 2.90           | 1.80           | 909.0     |                |

# Spherical Roller Bearings

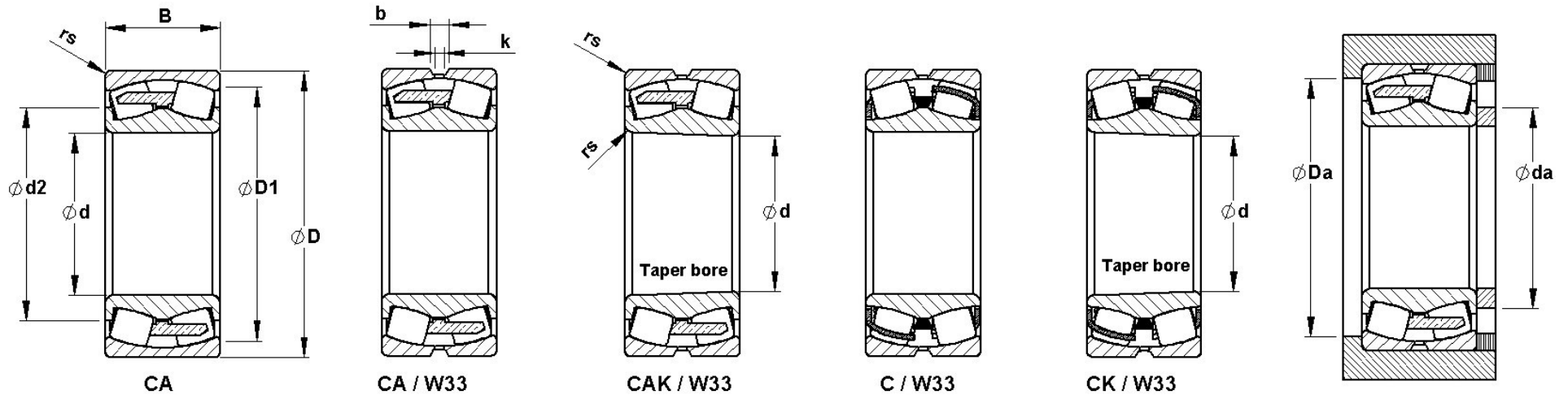
d 500 mm



| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |                  | Part Number         | Mating and Fillet Dimensions in mm |                |      |      |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |       |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|------------------|---------------------|------------------------------------|----------------|------|------|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|-------|
| d                | D   | B   | r <sub>s</sub> min | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil              |                     | d <sub>2</sub>                     | D <sub>1</sub> | b    | k    | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |       |
| 500              | 620 | 90  | 3                  | 1450                   | 3800            | 420                      | 520              | 238/500CA/W33       |                                    | 542            | 586  | 16.7 | 8                    | 512                  | 606                  | 2.5  | 0.12           | 5.60           | 8.40      | 5.60           | 66.0  |
|                  | 620 | 90  | 3                  | 1450                   | 3800            | 420                      | 520              | 238/500CAK/W33      |                                    | 542            | 586  | 16.7 | 8                    | 512                  | 606                  | 2.5  | 0.12           | 5.60           | 8.40      | 5.60           | 54.0  |
|                  | 670 | 128 | 5                  | 2380                   | 5750            | 400                      | 500              | 239/500CA/W33       |                                    | 555            | 619  | 22.3 | 12                   | 522                  | 648                  | 4    | 0.17           | 4.00           | 5.90      | 4.00           | 120.0 |
|                  | 670 | 128 | 5                  | 2380                   | 5750            | 400                      | 500              | 239/500CAF1         | 239/500CAF1/W33                    | 555            | 619  | 22.3 | 12                   | 522                  | 648                  | 4    | 0.17           | 4.00           | 5.90      | 4.00           | 119.0 |
|                  | 670 | 128 | 5                  | 2380                   | 5750            | 400                      | 500              | 239/500CAF3/W33     |                                    | 555            | 619  | 22.3 | 12                   | 522                  | 648                  | 4    | 0.17           | 4.00           | 5.90      | 4.00           | 119.0 |
|                  | 670 | 128 | 5                  | 2380                   | 5750            | 400                      | 500              | 239/500CAF1/W33YA1  | 239/500CAF3/W33YA1                 | 555            | 619  | 22.3 | 12                   | 522                  | 648                  | 4    | 0.17           | 4.00           | 5.90      | 4.00           | 119.0 |
|                  | 670 | 128 | 5                  | 2380                   | 5750            | 400                      | 500              | 239/500CAK/W33      |                                    | 555            | 619  | 22.3 | 12                   | 522                  | 648                  | 4    | 0.17           | 4.00           | 5.90      | 4.00           | 119.0 |
|                  | 720 | 167 | 6                  | 3470                   | 7650            | 380                      | 480              | 230/500CAF3         | 230/500CAF3/W33                    | 568            | 653  | 22.3 | 12                   | 528                  | 692                  | 5    | 0.21           | 3.20           | 4.80      | 3.20           | 228.0 |
|                  | 720 | 167 | 6                  | 3470                   | 7650            | 380                      | 480              | 230/500CAKF3        | 230/500CAKF3/W33                   | 568            | 653  | 22.3 | 12                   | 528                  | 692                  | 5    | 0.21           | 3.20           | 4.80      | 3.20           | 227.0 |
|                  | 720 | 167 | 6                  | 3470                   | 7650            | 380                      | 480              | 230/500CAKF3/W33X   |                                    | 568            | 653  | 22.3 | 8                    | 528                  | 692                  | 5    | 0.21           | 3.20           | 4.80      | 3.20           | 227.0 |
|                  | 720 | 167 | 6                  | 3470                   | 7650            | 380                      | 480              | 230/500CAF3/HAW33X  |                                    | 568            | 653  | 22.3 | 8                    | 528                  | 692                  | 5    | 0.21           | 3.20           | 4.80      | 3.20           | 228.0 |
|                  | 720 | 167 | 6                  | 3470                   | 7650            | 380                      | 480              | 230/500CAKF3/HAW33X |                                    | 568            | 653  | 22.3 | 8                    | 528                  | 692                  | 5    | 0.21           | 3.20           | 4.80      | 3.20           | 227.0 |
|                  | 720 | 218 | 6                  | 4600                   | 10400           | 420                      | 520              | 240/500CA/W33       |                                    | 565            | 645  | 22.3 | 12                   | 523                  | 698                  | 5    | 0.26           | 2.60           | 3.90      | 2.50           | 297.0 |
|                  | 720 | 218 | 6                  | 5400                   | 10600           | 420                      | 520              | 240/500CAK30/W33    |                                    | 565            | 645  | 22.3 | 12                   | 523                  | 698                  | 5    | 0.26           | 2.60           | 3.90      | 2.50           | 298.0 |
| 830              | 264 | 7.5 | 6100               | 13800                  | 320             | 400                      | 231/500CA/W33    | 231/500CAK/W33      | 603                                | 726            | 22.3 | 12   | 536                  | 794                  | 6                    | 0.30 | 2.30           | 3.40           | 2.20      | 588.0          |       |
| 830              | 325 | 7.5 | 9600               | 16000                  | 300             | 380                      | 241/500CAK30/W33 |                     | 588                                | 712            | 22.3 | 12   | 531                  | 798                  | 6                    | 0.37 | 1.80           | 2.70           | 1.80      | 712.0          |       |
| 830              | 325 | 7.5 | 7550               | 15300                  | 300             | 380                      | 241/500CA/W33    |                     | 588                                | 712            | 22.3 | 12   | 531                  | 798                  | 6                    | 0.37 | 1.80           | 2.70           | 1.80      | 719.0          |       |

# Spherical Roller Bearings

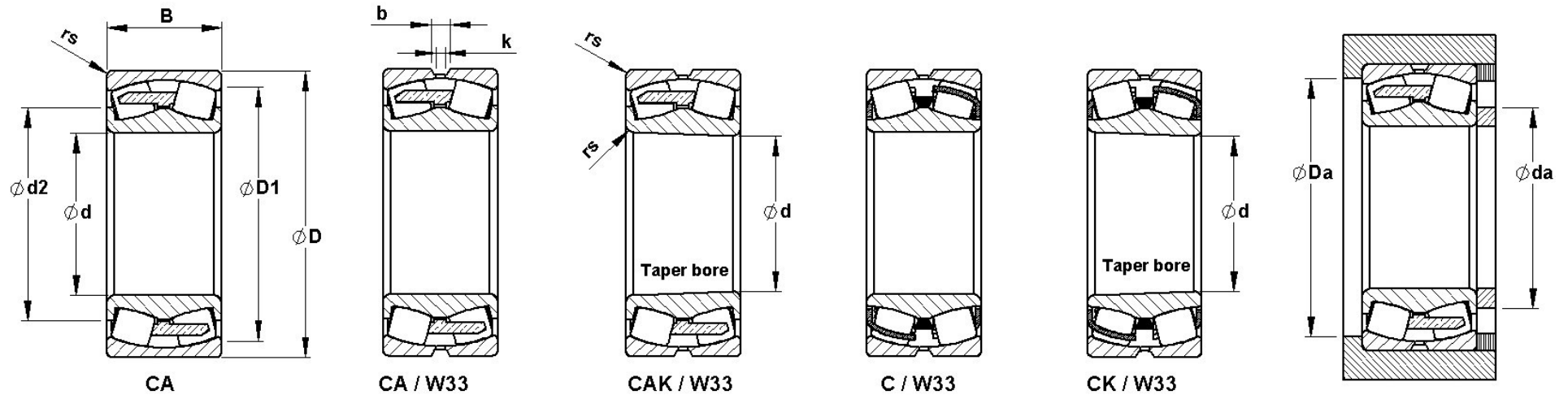
d 500 to 530 mm



| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |                | Part Number         | Mating and Fillet Dimensions in mm |                |      |      |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |       |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|----------------|---------------------|------------------------------------|----------------|------|------|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|-------|
| d                | D   | B   | r <sub>s</sub> min | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil            |                     | d <sub>2</sub>                     | D <sub>1</sub> | b    | k    | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |       |
| 500              | 920 | 336 | 7.5                | 9460                   | 18600           | 280                      | 360            | 232/500CAF3/W33     |                                    | 620            | 774  | 22.3 | 12                   | 536                  | 884                  | 6    | 0.35           | 1.90           | 2.90      | 1.80           | 985.0 |
|                  | 920 | 336 | 7.5                | 9460                   | 18600           | 280                      | 360            | 232/500CAK/W33      |                                    | 620            | 774  | 22.3 | 12                   | 536                  | 884                  | 6    | 0.35           | 1.90           | 2.90      | 1.80           | 973.0 |
| 530              | 650 | 90  | 3                  | 1500                   | 4200            | 400                      | 500            | 238/530CAF1/W33     |                                    | 575            | 613  | 22.4 | 12                   | 552                  | 652                  | 2.5  | 0.12           | 5.60           | 8.40      | 5.60           | 64.2  |
|                  | 650 | 118 | 3                  | 1820                   | 5280            | 380                      | 480            | 248/530CA/W33       |                                    | 573            | 612  | 22   | 8                    | 543                  | 636                  | 2.5  | 0.15           | 4.50           | 6.70      | 4.50           | 91.0  |
|                  | 650 | 118 | 3                  | 1820                   | 5280            | 380                      | 480            | 248/530CAK30/W33    |                                    | 573            | 612  | 22   | 8                    | 543                  | 636                  | 2.5  | 0.15           | 4.50           | 6.70      | 4.50           | 86.0  |
|                  | 710 | 316 | 5                  | 2900                   | 6700            | 360                      | 450            | 239/530CAF3/W33AYA1 |                                    | 586            | 658  | 22.3 | 12                   | 548                  | 690                  | 4    | 0.17           | 4.00           | 5.90      | 4.00           | 154.0 |
|                  | 710 | 136 | 5                  | 3050                   | 7100            | 360                      | 450            | 239/530CAK/W33      |                                    | 586            | 658  | 22.3 | 12                   | 548                  | 690                  | 4    | 0.17           | 4.00           | 5.90      | 4.00           | 150.0 |
|                  | 710 | 136 | 5                  | 3050                   | 7100            | 360                      | 450            | 239/530CA/HCRW33    |                                    | 586            | 658  | 22.3 | 12                   | 548                  | 690                  | 4    | 0.17           | 4.00           | 5.90      | 4.00           | 155.0 |
|                  | 780 | 185 | 6                  | 4700                   | 10200           | 340                      | 430            | 230/530CA           | 230/530CA/W33X                     | 614            | 703  | 24   | 12                   | 558                  | 752                  | 5    | 0.22           | 3.00           | 4.60      | 2.80           | 339.0 |
|                  | 780 | 185 | 6                  | 4700                   | 10200           | 340                      | 430            | 230/530CAF3         | 230/530CAF3/W33X                   | 614            | 703  | 24   | 12                   | 558                  | 752                  | 5    | 0.22           | 3.00           | 4.60      | 2.80           | 335.0 |
|                  | 780 | 185 | 6                  | 4700                   | 10200           | 340                      | 430            | 230/530CAK/W33      | 230/530CAK                         | 614            | 703  | 24   | 12                   | 558                  | 752                  | 5    | 0.22           | 3.00           | 4.60      | 2.80           | 328.0 |
|                  | 780 | 185 | 6                  | 4700                   | 10200           | 340                      | 430            | 230/530CA/HCRW33    |                                    | 614            | 703  | 24   | 12                   | 558                  | 752                  | 5    | 0.22           | 3.00           | 4.60      | 2.80           | 338.0 |
|                  | 780 | 250 | 6                  | 5400                   | 12700           | 280                      | 360            | 240/530CA/W33       |                                    | 605            | 691  | 22.3 | 12                   | 553                  | 758                  | 5    | 0.29           | 2.30           | 3.50      | 2.40           | 416.0 |
|                  | 780 | 250 | 6                  | 5400                   | 12700           | 280                      | 360            | 240/530CA/HCRW33    |                                    | 605            | 691  | 22.3 | 12                   | 553                  | 758                  | 5    | 0.29           | 2.30           | 3.50      | 2.40           | 416.0 |
| 870              | 272 | 7.5 | 7600               | 15300                  | 260             | 340                      | 231/530CA/W33  |                     | 635                                | 762            | 22.3 | 12   | 560                  | 837                  | 6                    | 0.30 | 2.30           | 3.40           | 2.20      | 665.0          |       |
| 870              | 272 | 7.5 | 7600               | 15300                  | 260             | 340                      | 231/530CAK/W33 |                     | 635                                | 762            | 22.3 | 12   | 560                  | 837                  | 6                    | 0.30 | 2.30           | 3.40           | 2.20      | 640.0          |       |
| 870              | 335 | 7.5 | 10300              | 18700                  | 190             | 280                      | 241/530CA/W33  |                     | 622                                | 748            | 22.3 | 12   | 560                  | 837                  | 6                    | 0.37 | 1.80           | 2.80           | 1.80      | 846.0          |       |

# Spherical Roller Bearings

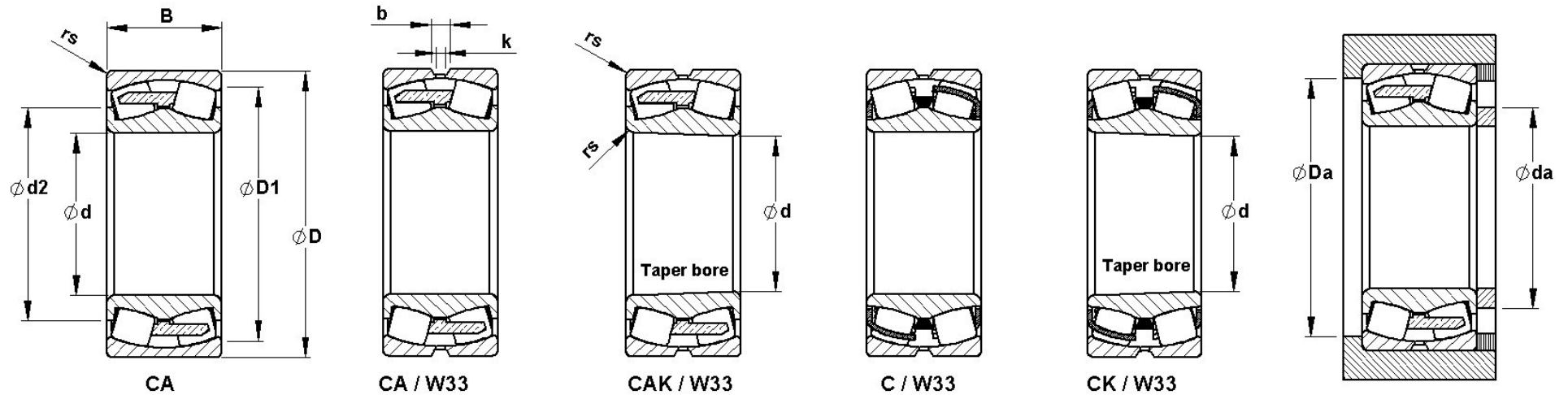
d 530 to 560 mm



| Dimensions in mm |     |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |                | Part Number        | Mating and Fillet Dimensions in mm |                |      |      |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |        |
|------------------|-----|-----|--------------------|------------------------|-----------------|--------------------------|----------------|--------------------|------------------------------------|----------------|------|------|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|--------|
| d                | D   | B   | r <sub>s</sub> min | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil            |                    | d <sub>2</sub>                     | D <sub>1</sub> | b    | k    | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |        |
| 530              | 870 | 335 | 7.5                | 10000                  | 18700           | 190                      | 280            | 241/530CAK30/W33   |                                    | 622            | 748  | 22.3 | 12                   | 560                  | 837                  | 6    | 0.37           | 1.80           | 2.80      | 1.80           | 825.0  |
|                  | 980 | 335 | 9.5                | 10300                  | 20300           | 210                      | 290            | 232/530CAK30/W33   |                                    | 656            | 818  | 22.3 | 12                   | 565                  | 932                  | 8    | 0.36           | 1.87           | 2.79      | 1.83           | 1220.0 |
| 560              | 750 | 140 | 5                  | 3050                   | 7200            | 340                      | 430            | 239/560CAF1        | 239/560CAF3                        | 621            | 693  |      |                      | 582                  | 728                  | 4    | 0.16           | 4.20           | 6.30      | 4.00           | 177.0  |
|                  | 750 | 140 | 5                  | 3050                   | 7200            | 340                      | 430            | 239/560CAF3/W33    |                                    | 621            | 693  | 22.3 | 12                   | 582                  | 728                  | 4    | 0.16           | 4.20           | 6.30      | 4.00           | 177.0  |
|                  | 820 | 195 | 6                  | 4300                   | 10500           | 320                      | 410            | 230/560CA          | 230/560CAF3                        | 644            | 741  |      |                      | 588                  | 792                  | 5    | 0.22           | 3.14           | 4.67      | 3.07           | 363.0  |
|                  | 820 | 195 | 6                  | 4950                   | 10500           | 320                      | 410            | 230/560CAF3/W33    |                                    | 644            | 741  | 22.3 | 9                    | 588                  | 792                  | 5    | 0.22           | 3.14           | 4.67      | 3.07           | 360.0  |
|                  | 820 | 195 | 6                  | 4950                   | 10500           | 320                      | 410            | 230/560CAKF3/W33   |                                    | 644            | 741  | 22.3 | 9                    | 588                  | 792                  | 5    | 0.22           | 3.14           | 4.67      | 3.07           | 351.0  |
|                  | 820 | 195 | 6                  | 4950                   | 10500           | 320                      | 410            | 230/560CAK/W33     |                                    | 644            | 741  | 22.3 | 9                    | 588                  | 792                  | 5    | 0.22           | 3.14           | 4.67      | 3.07           | 353.0  |
|                  | 820 | 258 | 6                  | 5700                   | 13200           | 220                      | 300            | 240/560CA/W33      |                                    | 640            | 721  | 22.3 | 12                   | 585                  | 798                  | 5    | 0.28           | 2.40           | 3.60      | 2.50           | 471.0  |
|                  | 820 | 258 | 6                  | 5700                   | 13200           | 220                      | 300            | 240/560CAK30/W33   |                                    | 640            | 721  | 22.3 | 12                   | 585                  | 798                  | 5    | 0.28           | 2.40           | 3.60      | 2.50           | 464.0  |
|                  | 920 | 280 | 7.5                | 7590                   | 15700           | 240                      | 320            | 231/560CA/W33      | 231/560CAF3/W33                    | 677            | 803  | 22.3 | 12                   | 596                  | 884                  | 6    | 0.30           | 2.30           | 3.40      | 2.20           | 756.0  |
|                  | 920 | 280 | 7.5                | 7590                   | 15700           | 240                      | 320            | 231/560CAK/W33     | 231/560CAKF3/W33                   | 677            | 803  | 22.3 | 12                   | 596                  | 884                  | 6    | 0.30           | 2.30           | 3.40      | 2.20           | 745.0  |
|                  | 920 | 280 | 7.5                | 7590                   | 15700           | 240                      | 320            | 231/560CA/HCRW33   |                                    | 677            | 8.3  | 22.3 | 12                   | 596                  | 884                  | 6    | 0.30           | 2.30           | 3.40      | 2.20           | 756.0  |
|                  | 920 | 355 | 7.5                | 10000                  | 20100           | 120                      | 160            | 241/560CAF3K30/W33 | 241/560CAF3K30/HCW33               | 634            | 796  | 22.3 | 12                   | 596                  | 884                  | 6    | 0.37           | 1.80           | 2.80      | 1.80           | 953.0  |
|                  | 920 | 355 | 7.5                | 10000                  | 20100           | 120                      | 160            | 241/560CAK30/W33   |                                    | 634            | 796  | 22.3 | 12                   | 596                  | 884                  | 6    | 0.37           | 1.80           | 2.80      | 1.80           | 958.0  |
| 1030             | 365 | 9.5 | 11200              | 21000                  | 190             | 260                      | 232/560CA/W33  |                    | 705                                | 877            | 22.3 | 12   | 600                  | 990                  | 8                    | 0.35 | 1.90           | 2.90           | 1.80      | 1380.0         |        |
| 1030             | 365 | 9.5 | 11200              | 21000                  | 190             | 260                      | 232/560CAK/W33 |                    | 70                                 | 877            | 22.3 | 12   | 600                  | 990                  | 8                    | 0.35 | 1.90           | 2.90           | 1.80      | 1340.0         |        |

# Spherical Roller Bearings

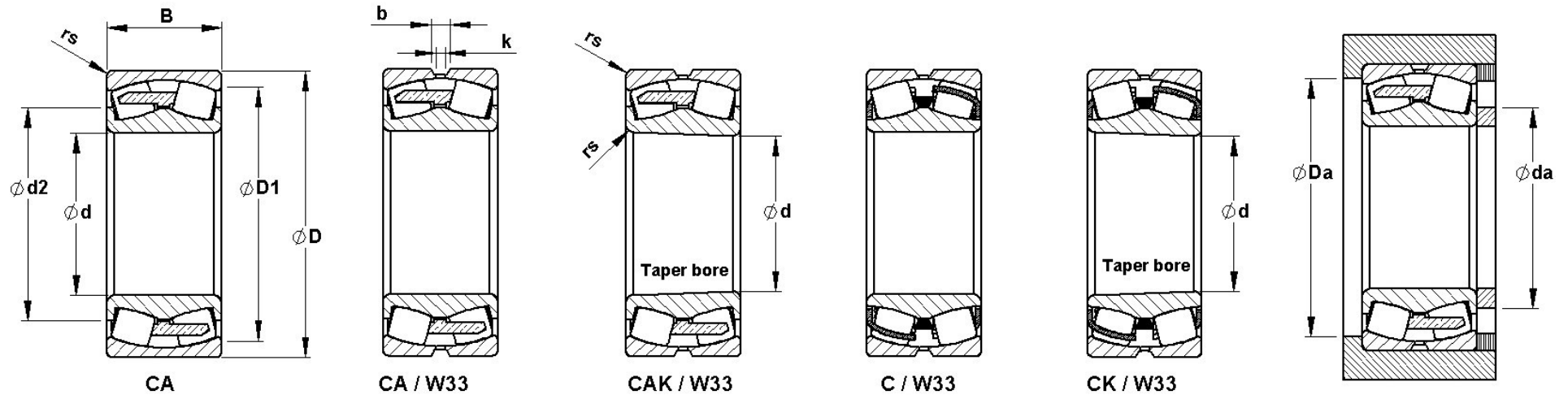
d 580 to 630 mm



| Dimensions in mm |      |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |                  | Part Number         |                 | Mating and Fillet Dimensions in mm |                |      |     |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |
|------------------|------|-----|--------------------|------------------------|-----------------|--------------------------|------------------|---------------------|-----------------|------------------------------------|----------------|------|-----|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|
| d                | D    | B   | r <sub>s</sub> min | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil              |                     |                 | d <sub>2</sub>                     | D <sub>1</sub> | b    | k   | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |
| 580              | 780  | 130 | 5                  | 3050                   | 6800            |                          |                  | 26/580CAKF3/W33     |                 |                                    |                |      |     |                      |                      |                      |      |                |                |           |                |
| 600              | 800  | 150 | 5                  | 2960                   | 8400            | 320                      | 400              | 239/600CA           | 239/600CA/W33   | 668                                | 742            | 22.3 | 12  | 622                  | 778                  | 4                    | 0.17 | 4.00           | 5.90           | 4.00      | 220.0          |
|                  | 800  | 150 | 5                  | 2960                   | 8400            | 320                      | 400              | 239/600CAK/W33      |                 | 668                                | 742            | 22.3 | 12  | 622                  | 778                  | 4                    | 0.17 | 4.00           | 5.90           | 4.00      | 213.0          |
|                  | 800  | 200 | 5                  | 4070                   | 11200           | 320                      | 400              | 249/600CAF1/W33     | 249/600CAF3/W33 | 666                                | 728            | 22.3 | 12  | 622                  | 760                  | 4                    | 0.22 | 3.00           | 4.60           | 2.80      | 287.0          |
|                  | 870  | 200 | 6                  | 5170                   | 11600           | 300                      | 380              | 230/600CAF3         | 230/600CAF3/W33 | 685                                | 787            | 22.3 | 9   | 628                  | 842                  | 5                    | 0.22 | 3.00           | 4.60           | 2.80      | 442.0          |
|                  | 870  | 200 | 6                  | 5170                   | 11600           | 300                      | 380              | 230/600CAKF3        |                 | 685                                | 787            |      |     | 628                  | 842                  | 5                    | 0.22 | 3.00           | 4.60           | 2.80      | 430.0          |
|                  | 870  | 200 | 6                  | 5170                   | 11600           | 300                      | 380              | 230/600CA/W33       |                 | 685                                | 787            | 22.3 | 9   | 628                  | 842                  | 5                    | 0.22 | 3.00           | 4.60           | 2.80      | 431.0          |
|                  | 870  | 200 | 6                  | 5170                   | 11600           | 300                      | 380              | 230/600CAK/W33      |                 | 685                                | 787            | 22.3 | 9   | 628                  | 842                  | 5                    | 0.22 | 3.00           | 4.60           | 2.80      | 419.0          |
|                  | 870  | 272 | 6                  | 6600                   | 15400           | 220                      | 300              | 240/600CA/W33       |                 | 682                                | 770            | 22.3 | 12  | 628                  | 850                  | 5                    | 0.30 | 2.30           | 3.40           | 2.80      | 551.0          |
|                  | 870  | 272 | 6                  | 6600                   | 15400           | 220                      | 300              | 240/600CA/HCRW33    |                 | 682                                | 770            | 22.3 | 12  | 628                  | 850                  | 5                    | 0.30 | 2.30           | 3.40           | 2.80      | 551.0          |
|                  | 870  | 272 | 6                  | 7690                   | 15900           | 240                      | 320              | 240/600/W33         |                 | 680                                | 770            | 22.3 | 12  | 628                  | 850                  | 5                    | 0.30 | 2.30           | 3.40           | 2.20      | 550.0          |
| 980              | 300  | 7.5 | 8900               | 18800                  | 180             | 250                      | 231/600CAF3/W33  |                     | 717             | 855                                | 22.3           | 12   | 660 | 996                  | 6                    | 0.29                 | 2.30 | 3.50           | 2.40           | 894.0     |                |
|                  | 375  | 7.5 | 10000              | 21600                  | 110             | 150                      | 241/600CA        | 241/600CA/HCW33     | 709             | 827                                | 22             | 8    | 636 | 944                  | 6                    | 0.36                 | 1.90 | 2.82           | 1.85           | 1140.0    |                |
|                  | 375  | 7.5 | 10000              | 21600                  | 110             | 150                      | 241/600CAK30/W33 |                     | 709             | 827                                | 22             | 8    | 636 | 944                  | 6                    | 0.36                 | 1.90 | 2.82           | 1.85           | 1134.0    |                |
|                  | 375  | 7.5 | 10000              | 21600                  | 110             | 150                      | 241/600CA/W33    |                     | 709             | 827                                | 22             | 8    | 636 | 944                  | 6                    | 0.36                 | 1.90 | 2.82           | 1.85           | 1151.0    |                |
|                  | 1090 | 388 | 9.5                | 12500                  | 25000           | 190                      | 260              | 232/600CAKF3/YA2W33 |                 | 750                                | 920            |      |     | 700                  | 1000                 | 8                    | 0.35 | 1.93           | 2.88           | 1.80      | 1568.0         |
| 630              | 780  | 112 | 4                  | 2200                   | 6300            | 300                      | 380              | 238/630CAF3/W33     |                 | 682                                | 738            | 16.7 | 9   | 645                  | 765                  | 3                    | 0.12 | 5.60           | 8.40           | 5.60      | 124.0          |

# Spherical Roller Bearings

d 630 to 670 mm

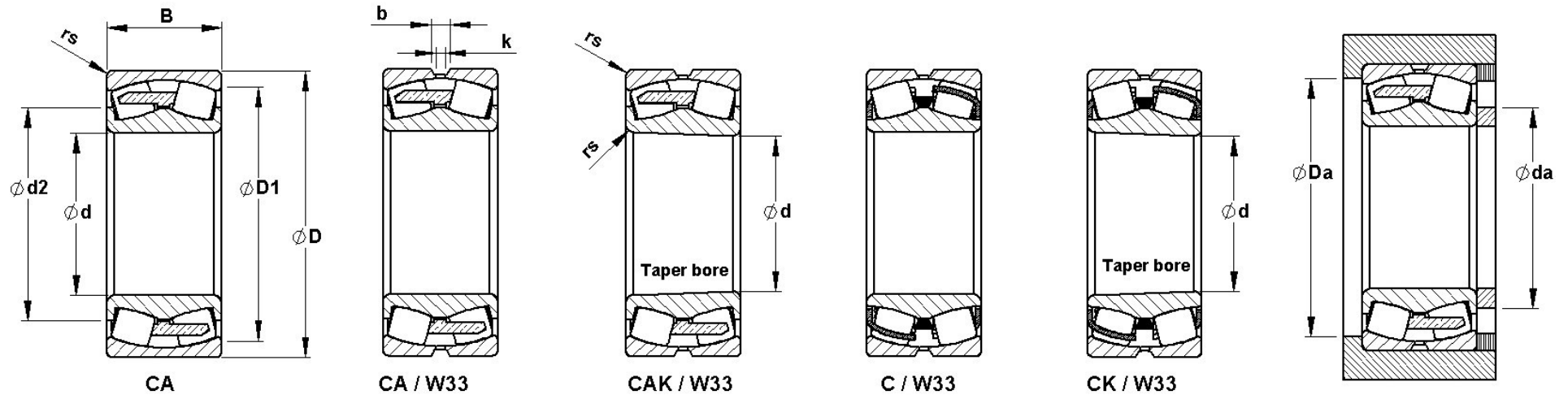


| Dimensions in mm |      |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |                  | Part Number      |                 | Mating and Fillet Dimensions in mm |                |      |     |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |
|------------------|------|-----|--------------------|------------------------|-----------------|--------------------------|------------------|------------------|-----------------|------------------------------------|----------------|------|-----|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|
| d                | D    | B   | r <sub>s</sub> min | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil              |                  |                 | d <sub>2</sub>                     | D <sub>1</sub> | b    | k   | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |
| 630              | 850  | 165 | 6                  | 3905                   | 9750            | 280                      | 360              | 239/630CA        | 239/630CAK/W33  | 705                                | 786            | 22.3 | 12  | 658                  | 822                  | 5                    | 0.17 | 4.00           | 5.90           | 4.00      | 280.0          |
|                  | 850  | 165 | 6                  | 3905                   | 9750            | 280                      | 360              | 239/630CA/W33    |                 | 705                                | 786            | 22.3 | 12  | 658                  | 822                  | 5                    | 0.17 | 4.00           | 5.90           | 4.00      | 220.0          |
|                  | 920  | 212 | 7.5                | 5670                   | 12800           | 260                      | 340              | 230/630CAF3      | 230/630CAF3/W33 | 721                                | 831            | 22.3 | 9   | 666                  | 884                  | 6                    | 0.21 | 3.20           | 4.80           | 3.20      | 471.0          |
|                  | 920  | 290 | 7.5                | 7350                   | 17100           | 220                      | 300              | 240/630/W33      |                 | 722                                | 815            | 22.3 | 10  | 666                  | 884                  | 6                    | 0.30 | 2.30           | 3.40           | 2.20      | 661.0          |
|                  | 1030 | 315 | 7.5                | 10000                  | 21000           | 180                      | 250              | 231/630CA/W33    |                 | 756                                | 918            | 22.3 | 12  | 668                  | 996                  | 6                    | 0.30 | 2.30           | 3.40           | 2.20      | 1080.0         |
|                  | 1030 | 315 | 7.5                | 10000                  | 21000           | 180                      | 250              | 231/630CAK/W33   |                 | 756                                | 918            | 22.3 | 12  | 668                  | 996                  | 6                    | 0.30 | 2.30           | 3.40           | 2.20      | 1020.0         |
|                  | 1030 | 400 | 7.5                | 12500                  | 27200           | 160                      | 210              | 241/630CA/W33    |                 | 736                                | 885            | 22.3 | 12  | 662                  | 996                  | 6                    | 0.37 | 1.80           | 2.70           | 1.80      | 1440.0         |
| 1030             | 400  | 7.5 | 12500              | 27200                  | 160             | 210                      | 241/630CAK30/W33 |                  | 736             | 885                                | 22.3           | 12   | 662 | 996                  | 6                    | 0.37                 | 1.80 | 2.70           | 1.80           | 1400.0    |                |
| 670              | 820  | 112 | 4                  | 2210                   | 6300            | 270                      | 350              | 238/670CA/W33    |                 | 722                                | 778            | 16.7 | 9   | 686                  | 805                  | 3                    | 0.11 | 6.10           | 9.10           | 6.30      | 136.0          |
|                  | 820  | 112 | 4                  | 2210                   | 6300            | 270                      | 350              | 238/670CAK/W33   |                 | 722                                | 778            | 16.7 | 9   | 686                  | 805                  | 3                    | 0.11 | 6.10           | 9.10           | 6.30      | 128.0          |
|                  | 820  | 150 | 4                  | 3100                   | 9600            | 270                      | 350              | 248/670CA/W33    |                 | 716                                | 771            | 16.7 | 9   | 686                  | 805                  | 3                    | 0.16 | 4.20           | 6.30           | 4.00      | 178.0          |
|                  | 900  | 170 | 6                  | 4370                   | 10600           | 260                      | 340              | FL-239/670CA/W33 |                 | 743                                | 831            | 22.3 | 12  | 692                  | 876                  | 5                    | 0.17 | 4.00           | 5.90           | 4.00      | 315.0          |
|                  | 900  | 170 | 6                  | 4400                   | 10600           | 260                      | 340              | 239/670CAF3/W33  |                 | 743                                | 831            | 22.3 | 12  | 692                  | 876                  | 5                    | 0.17 | 4.00           | 5.90           | 4.00      | 313.0          |
|                  | 980  | 230 | 7.5                | 6900                   | 15000           | 240                      | 310              | 230/670CAF3      | 230/670CAF3/W33 | 760                                | 885            | 22.3 | 12  | 706                  | 944                  | 6                    | 0.22 | 3.00           | 4.60           | 3.20      | 601.0          |
|                  | 980  | 230 | 7.5                | 6900                   | 15000           | 240                      | 310              | 230/670CAK3/W33  |                 | 760                                | 885            | 22.3 | 12  | 706                  | 944                  | 6                    | 0.22 | 3.00           | 4.60           | 3.20      | 596.0          |
|                  | 980  | 308 | 7.5                | 9500                   | 20000           | 190                      | 270              | 240/670CA        | 240/670CA/W33   | 760                                | 866            | 22.3 | 12  | 700                  | 952                  | 6                    | 0.28 | 2.40           | 3.60           | 2.50      | 807.0          |
| 1090             | 336  | 7.5 | 11000              | 22500                  | 175             | 240                      | 231/670CA/W33    |                  | 801             | 958                                | 22.3           | 12   | 700 | 1056                 | 6                    | 0.30                 | 2.30 | 3.40           | 2.20           | 1280.0    |                |



# Spherical Roller Bearings

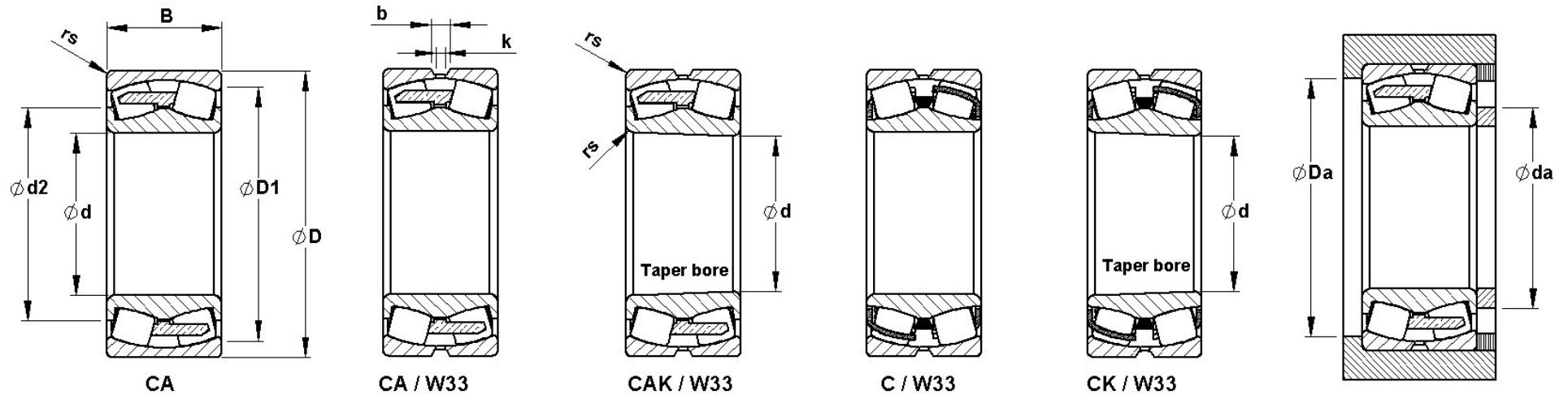
d 670 to 750 mm



| Dimensions in mm |      |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |               | Part Number      | Mating and Fillet Dimensions in mm |                |      |      |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |        |
|------------------|------|-----|--------------------|------------------------|-----------------|--------------------------|---------------|------------------|------------------------------------|----------------|------|------|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|--------|
| d                | D    | B   | r <sub>s</sub> min | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil           |                  | d <sub>2</sub>                     | D <sub>1</sub> | b    | k    | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |        |
| 670              | 1090 | 336 | 7.5                | 11000                  | 22500           | 175                      | 240           | 231/670CAK/W33   |                                    | 801            | 958  | 22.3 | 12                   | 700                  | 1056                 | 6    | 0.30           | 2.30           | 3.40      | 2.20           | 1240.0 |
|                  | 1090 | 412 | 7.5                | 14000                  | 31500           | 150                      | 190           | 241/670CA/W33    |                                    | 786            | 934  | 22.3 | 12                   | 705                  | 1056                 | 6    | 0.36           | 1.87           | 2.79      | 1.83           | 1560.0 |
|                  | 1220 | 438 | 12                 | 15000                  | 32000           | 160                      | 210           | 232/670CA/W33    |                                    | 832            | 1027 | 22.3 | 12                   | 718                  | 1170                 | 10   | 0.35           | 1.90           | 2.90      | 1.80           | 2300.0 |
|                  | 1220 | 438 | 12                 | 15000                  | 32000           | 160                      | 210           | 232/670CAK/W33   |                                    | 832            | 1027 | 22.3 | 12                   | 718                  | 1170                 | 10   | 0.35           | 1.90           | 2.90      | 1.80           | 2260.0 |
| 710              | 870  | 118 | 4                  | 2680                   | 7550            | 260                      | 340           | 238/710CAF3/W33  |                                    | 761            | 824  | 22.3 | 12                   | 725                  | 855                  | 3    | 0.11           | 6.10           | 9.10      | 6.30           | 156.0  |
|                  | 950  | 180 | 6                  | 5000                   | 12000           | 240                      | 310           | 239/710CAF1/W33  | 239/710CAF3/W33                    | 787            | 882  | 22.3 | 12                   | 733                  | 927                  | 5    | 0.17           | 4.00           | 5.90      | 4.00           | 364.0  |
|                  | 950  | 243 | 6                  | 6200                   | 17000           | 200                      | 280           | 249/710CAF1/W33X |                                    | 791            | 864  | 22.3 | 12                   | 733                  | 927                  | 5    | 0.22           | 3.00           | 4.60      | 2.80           | 500.0  |
|                  | 1030 | 236 | 7.5                | 6300                   | 16200           | 220                      | 300           | 230/710CAF3/W33  |                                    | 814            | 939  | 22.3 | 12                   | 746                  | 994                  | 6    | 0.21           | 3.20           | 4.80      | 3.20           | 669.0  |
|                  | 1030 | 236 | 7.5                | 7060                   | 15700           | 220                      | 300           | 230/710/W33      |                                    | 814            | 939  | 22.3 | 12                   | 746                  | 994                  | 6    | 0.21           | 3.20           | 4.80      | 3.20           | 580.0  |
|                  | 1030 | 315 | 7.5                | 9300                   | 22500           | 180                      | 250           | 240/710CA/W33    |                                    | 806            | 918  | 22.3 | 12                   | 738                  | 1002                 | 6    | 0.27           | 2.50           | 3.70      | 2.50           | 910.0  |
|                  | 1030 | 315 | 7.5                | 9300                   | 22500           | 180                      | 250           | 240/710CAK30/W33 |                                    | 806            | 918  | 22.3 | 12                   | 738                  | 1002                 | 6    | 0.27           | 2.50           | 3.70      | 2.50           | 893.0  |
|                  | 1150 | 345 | 9.8                | 12000                  | 25800           | 170                      | 220           | 231/710CA/W33    |                                    | 851            | 1016 | 22.3 | 12                   | 750                  | 1110                 | 8    | 0.28           | 2.40           | 3.60      | 2.50           | 1480.0 |
|                  | 1150 | 345 | 9.8                | 12000                  | 25800           | 170                      | 220           | 231/710CAK/W33   |                                    | 851            | 1016 | 22.3 | 12                   | 750                  | 1110                 | 8    | 0.28           | 2.40           | 3.60      | 2.50           | 1430.0 |
|                  | 1150 | 438 | 9.5                | 11900                  | 29700           | 90                       | 120           | 241/710CAF1/W33  | 241/710CAF3/W33                    | 838            | 982  | 22.3 | 12                   | 754                  | 1106                 | 8    | 0.35           | 1.90           | 2.90      | 1.80           | 1791.0 |
|                  | 1150 | 438 | 9.5                | 13200                  | 31000           | 105                      | 140           | 241/710K30/HCW33 |                                    | 836            | 974  | 23.5 | 12.5                 | 754                  | 1106                 | 8    | 0.38           | 1.80           | 2.60      | 1.70           | 1800.0 |
| 1280             | 450  | 12  | 17500              | 34400                  | 160             | 210                      | 232/710CA/W33 |                  | 876                                | 1096           | 22.3 | 12   | 758                  | 1232                 | 10                   | 0.35 | 1.90           | 2.90           | 1.80      | 2640.0         |        |
| 750              | 920  | 128 | 5                  | 2950                   | 8600            | 240                      | 310           | 238/750CA/W33    |                                    | 806            | 873  | 22.3 | 12                   | 770                  | 902                  | 4    | 0.11           | 6.10           | 9.10      | 6.30           | 188.0  |

# Spherical Roller Bearings

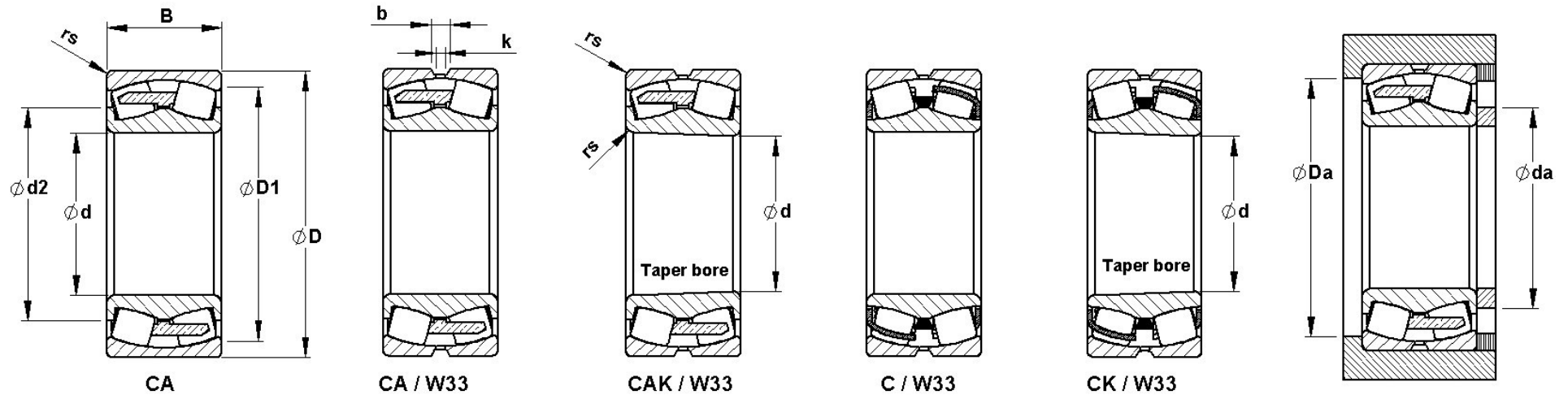
d 750 to 800 mm



| Dimensions in mm |      |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |                 | Part Number      | Mating and Fillet Dimensions in mm |                |      |      |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |        |
|------------------|------|-----|--------------------|------------------------|-----------------|--------------------------|-----------------|------------------|------------------------------------|----------------|------|------|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|--------|
| d                | D    | B   | r <sub>s</sub> min | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil             |                  | d <sub>2</sub>                     | D <sub>1</sub> | b    | k    | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |        |
| 750              | 920  | 128 | 5                  | 2950                   | 8600            | 240                      | 310             | 238/750CAK/W33   |                                    | 806            | 873  | 22.3 | 12                   | 770                  | 902                  | 4    | 0.11           | 6.10           | 9.10      | 6.30           | 180.0  |
|                  | 920  | 170 | 5                  | 3550                   | 10900           | 220                      | 300             | 248/750F1        | 248/750F3                          | 808            | 864  |      |                      | 770                  | 902                  | 4    | 0.16           | 4.20           | 6.30      | 4.00           | 249.0  |
|                  | 1000 | 185 | 6                  | 5500                   | 13700           | 210                      | 290             | 239/750CA/W33    |                                    | 831            | 930  | 22.3 | 12                   | 772                  | 976                  | 5    | 0.16           | 4.20           | 6.30      | 4.00           | 414.0  |
|                  | 1000 | 185 | 6                  | 5500                   | 13700           | 210                      | 290             | 239/750CAK/W33   |                                    | 831            | 930  | 22.3 | 12                   | 772                  | 976                  | 5    | 0.16           | 4.20           | 6.30      | 4.00           | 401.0  |
|                  | 1000 | 250 | 6                  | 7600                   | 18200           | 180                      | 250             | 249/750CA/W33    |                                    | 830            | 916  | 22.3 | 12                   | 773                  | 976                  | 5    | 0.22           | 3.00           | 4.60      | 2.80           | 566.0  |
|                  | 1000 | 250 | 6                  | 7600                   | 18200           | 180                      | 250             | 249/750CAK30/W33 |                                    | 830            | 916  | 22.3 | 12                   | 773                  | 976                  | 5    | 0.22           | 3.00           | 4.60      | 2.80           | 558.0  |
|                  | 1090 | 250 | 7.5                | 7000                   | 17900           | 200                      | 280             | 230/750CA        | 230/750CAF1/W33XYA7                | 847            | 987  | 22.3 | 12                   | 786                  | 1054                 | 6    | 0.21           | 3.20           | 4.80      | 3.20           | 789.0  |
|                  | 1090 | 250 | 7.5                | 7000                   | 17900           | 200                      | 280             | 230/750CAF3      | 230/750CAF3/W33                    | 847            | 987  | 22.3 | 12                   | 786                  | 1054                 | 6    | 0.21           | 3.20           | 4.80      | 3.20           | 786.0  |
|                  | 1090 | 335 | 7.5                | 10000                  | 24800           | 170                      | 220             | 240/750CA/W33    |                                    | 852            | 970  | 22.3 | 12                   | 779                  | 1062                 | 6    | 0.28           | 2.40           | 3.60      | 2.50           | 1100.0 |
|                  | 1090 | 335 | 7.5                | 10000                  | 24800           | 170                      | 220             | 240/750CAK30/W33 |                                    | 852            | 970  | 22.3 | 12                   | 779                  | 1062                 | 6    | 0.28           | 2.40           | 3.60      | 2.50           | 1070.0 |
|                  | 1220 | 365 | 9.5                | 13500                  | 28800           | 160                      | 210             | 231/750CA/W33    |                                    | 898            | 1080 | 22.3 | 12                   | 798                  | 1180                 | 8    | 0.28           | 2.40           | 3.60      | 2.50           | 1760.0 |
|                  | 1220 | 365 | 9.5                | 13500                  | 28800           | 160                      | 210             | 231/750CAK/W33   |                                    | 898            | 1080 | 22.3 | 12                   | 798                  | 1180                 | 8    | 0.28           | 2.40           | 3.60      | 2.50           | 1760.0 |
|                  | 1220 | 475 | 9.5                | 16000                  | 37000           | 130                      | 170             | 241/750CA/W33    |                                    | 872            | 1039 | 22.3 | 12                   | 792                  | 1175                 | 8    | 0.35           | 1.90           | 2.90      | 1.80           | 2195.0 |
|                  | 1220 | 475 | 9.5                | 16000                  | 37000           | 130                      | 170             | 241/750CAK30/W33 |                                    | 872            | 1039 | 22.3 | 12                   | 792                  | 1175                 | 8    | 0.35           | 1.90           | 2.90      | 1.80           | 2160.0 |
| 1360             | 475  | 15  | 16390              | 36000                  | 90              | 120                      | 232/750CAF1/W33 | 232/750CAF3/W33  | 930                                | 1145           | 22.3 | 12   | 876                  | 1536                 | 14                   | 0.36 | 1.87           | 2.79           | 1.83      | 3100.0         |        |
| 1360             | 475  | 15  | 16390              | 36000                  | 90              | 120                      | 232/750CAK3/W33 |                  | 930                                | 1145           | 22.3 | 12   | 876                  | 1536                 | 14                   | 0.36 | 1.87           | 2.79           | 1.83      | 3012.0         |        |
| 800              | 980  | 180 | 5                  | 4150                   | 13000           | 170                      | 220             | 248/800CA/W33    |                                    | 860            | 920  | 22.3 | 12                   | 820                  | 962                  | 4    | 0.15           | 4.50           | 6.70      | 4.50           | 330.0  |

# Spherical Roller Bearings

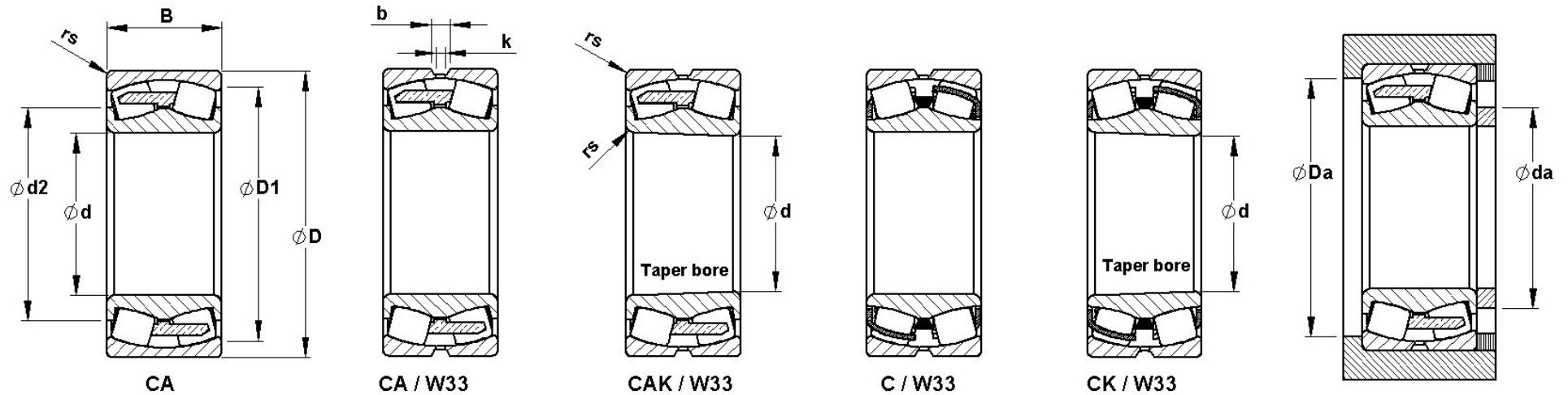
d 800 to 850 mm



| Dimensions in mm |      |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |                 | Part Number          | Mating and Fillet Dimensions in mm |                |      |      |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |        |
|------------------|------|-----|--------------------|------------------------|-----------------|--------------------------|-----------------|----------------------|------------------------------------|----------------|------|------|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|--------|
| d                | D    | B   | r <sub>s min</sub> | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil             |                      | d <sub>2</sub>                     | D <sub>1</sub> | b    | k    | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |        |
| 800              | 1060 | 195 | 6                  | 6350                   | 14200           | 190                      | 270             | 239/800CA/W33        | 883                                | 985            | 22.3 | 12   | 823                  | 1036                 | 5                    | 0.16 | 4.20           | 6.30           | 4.00      | 480.0          |        |
|                  | 1060 | 195 | 6                  | 6350                   | 14200           | 190                      | 270             | 239/800CAK/W33       | 883                                | 985            | 22.3 | 12   | 823                  | 1036                 | 5                    | 0.16 | 4.20           | 6.30           | 4.00      | 460.0          |        |
|                  | 1060 | 258 | 6                  | 7800                   | 19500           | 175                      | 240             | 249/800CA/W33        | 880                                | 971            | 22.3 | 12   | 823                  | 1036                 | 5                    | 0.21 | 3.20           | 4.80           | 3.20      | 648.0          |        |
|                  | 1060 | 258 | 6                  | 7800                   | 19500           | 175                      | 240             | 249/800CAK30/W33     | 880                                | 971            | 22.3 | 12   | 823                  | 1036                 | 5                    | 0.21 | 3.20           | 4.80           | 3.20      | 635.0          |        |
|                  | 1060 | 258 | 6                  | 7000                   | 19300           | 175                      | 240             | 249/800CAF3/C9W33YA3 | 880                                | 971            | 22.3 | 12   | 823                  | 1036                 | 5                    | 0.21 | 3.20           | 4.80           | 3.20      | 634.0          |        |
|                  | 1150 | 258 | 7.5                | 8090                   | 19100           | 170                      | 220             | 230/800CA/W33        | 900                                | 1029           | 22.3 | 12   | 836                  | 1114                 | 6                    | 0.20 | 3.40           | 5.00           | 3.20      | 894.0          |        |
|                  | 1150 | 345 | 7.5                | 10300                  | 24600           | 170                      | 220             | 240/800CAF3          | 240/800CAF3/W33                    | 900            | 1029 |      |                      | 836                  | 1114                 | 6    | 0.27           | 2.50           | 3.70      | 2.50           | 1092.0 |
|                  | 1150 | 358 | 7.5                | 6850                   | 15600           | 170                      | 220             | 230/800D             |                                    | 900            | 1029 | 22.3 | 12                   | 836                  | 1114                 | 6    | 0.27           | 2.50           | 3.70      | 2.50           | 1087.0 |
|                  | 1280 | 375 | 9.5                | 14500                  | 31000           | 150                      | 190             | 231/800CA/W33        |                                    | 948            | 1140 | 22.3 | 12                   | 842                  | 1238                 | 8    | 0.28           | 2.40           | 3.60      | 2.50           | 1960.0 |
|                  | 1280 | 375 | 9.5                | 14500                  | 31000           | 150                      | 190             | 231/800CAK/W33       |                                    | 948            | 1140 | 22.3 | 12                   | 842                  | 1238                 | 8    | 0.28           | 2.40           | 3.60      | 2.50           | 1900.0 |
| 1280             | 475  | 9.5 | 16300              | 37100                  | 130             | 170                      | 241/800CAF1/W33 | 241/800CAF3/W33      | 938                                | 1102           | 22.3 | 12   | 842                  | 1238                 | 8                    | 0.35 | 1.90           | 2.90           | 1.80      | 2350.0         |        |
| 850              | 1030 | 136 | 5                  | 3300                   | 9800            | 180                      | 250             | 238/850CA/W33        | 910                                | 980            | 22.3 | 12   | 866                  | 1012                 | 4                    | 0.11 | 6.10           | 9.10           | 6.30      | 244.0          |        |
|                  | 1030 | 136 | 5                  | 3300                   | 9800            | 180                      | 250             | 238/850CAK/W33       | 910                                | 980            | 22.3 | 12   | 866                  | 1012                 | 4                    | 0.11 | 6.10           | 9.10           | 6.30      | 236.0          |        |
|                  | 1120 | 200 | 6                  | 5800                   | 15500           | 180                      | 250             | 239/850CA/W33        | 938                                | 1045           | 22.3 | 12   | 872                  | 1097                 | 5                    | 0.16 | 4.20           | 6.30           | 4.00      | 570.0          |        |
|                  | 1120 | 200 | 6                  | 5800                   | 15500           | 180                      | 250             | 239/850CAK/W33       | 938                                | 1045           | 22.3 | 12   | 872                  | 1097                 | 5                    | 0.16 | 4.20           | 6.30           | 4.00      | 550.0          |        |
|                  | 1120 | 272 | 6                  | 8200                   | 22500           | 170                      | 220             | 249/850CA/W33        | 938                                | 1028           | 22.3 | 12   | 872                  | 1097                 | 5                    | 0.22 | 3.00           | 4.60           | 2.80      | 750.0          |        |
|                  | 1120 | 272 | 6                  | 8200                   | 22500           | 170                      | 220             | 249/850CAK30/W33     | 938                                | 1028           | 22.3 | 12   | 872                  | 1097                 | 5                    | 0.22 | 3.00           | 4.60           | 2.80      | 730.0          |        |

# Spherical Roller Bearings

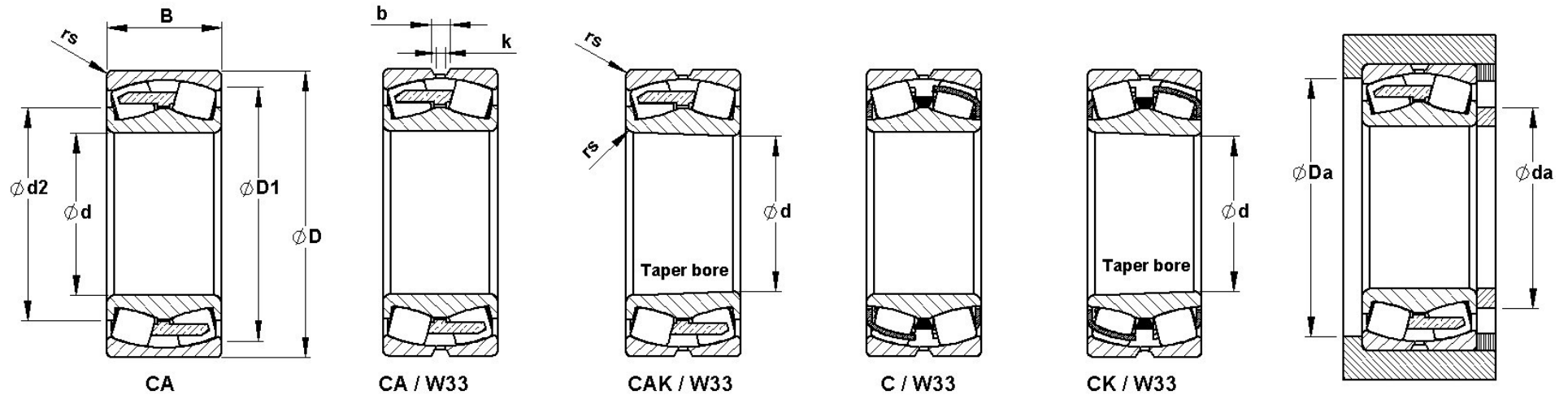
d 850 to 900 mm



| Dimensions in mm |      |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |                  | Part Number       | Mating and Fillet Dimensions in mm |                |      |      |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |        |
|------------------|------|-----|--------------------|------------------------|-----------------|--------------------------|------------------|-------------------|------------------------------------|----------------|------|------|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|--------|
| d                | D    | B   | r <sub>s</sub> min | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil              |                   | d <sub>2</sub>                     | D <sub>1</sub> | b    | k    | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |        |
| 850              | 1220 | 272 | 7.5                | 8450                   | 22500           | 180                      | 240              | 230/850CAF1       |                                    | 954            | 1108 |      | 886                  | 1184                 | 6                    | 0.20 | 3.40           | 5.00           | 3.20      | 1074.0         |        |
|                  | 1220 | 272 | 7.5                | 8450                   | 22500           | 180                      | 240              | 230/850CAKF1      | 230/850CAKF3                       | 954            | 1108 |      | 886                  | 1184                 | 6                    | 0.20 | 3.40           | 5.00           | 3.20      | 1070.0         |        |
|                  | 1220 | 365 | 7.5                | 10400                  | 29700           | 160                      | 200              | 240/850CAF1/W33X  | 240/850CAF1/YA1                    | 956            | 1086 | 22.3 | 12                   | 886                  | 1184                 | 6    | 0.27           | 2.50           | 3.70      | 2.50           | 1410.0 |
|                  | 1220 | 365 | 7.5                | 10400                  | 29700           | 160                      | 200              | 240/850CAF1/W33   | 240/850CAF1                        | 956            | 1086 | 22.3 | 12                   | 886                  | 1184                 | 6    | 0.27           | 2.50           | 3.70      | 2.50           | 1410.0 |
|                  | 1220 | 365 | 7.5                | 10400                  | 29700           | 160                      | 200              | 240/850CAF3/W33X  | 240/850CAF3/YA1                    | 956            | 1086 | 22.3 | 12                   | 886                  | 1184                 | 6    | 0.27           | 2.50           | 3.70      | 2.50           | 1410.0 |
|                  | 1220 | 365 | 7.5                | 10400                  | 29700           | 160                      | 200              | 240/850CAF3/W33   | 240/850CAF3                        | 956            | 1086 | 22.3 | 12                   | 886                  | 1184                 | 6    | 0.27           | 2.50           | 3.70      | 2.50           | 1410.0 |
|                  | 1360 | 400 | 12                 | 16000                  | 34200           | 130                      | 170              | 231/850CA/W33     |                                    | 1008           | 1204 | 22.3 | 12                   | 898                  | 1312                 | 10   | 0.28           | 2.40           | 3.60      | 2.50           | 2260.0 |
|                  | 1360 | 400 | 12                 | 16000                  | 34200           | 130                      | 170              | 231/850CAK/W33    |                                    | 1008           | 1204 | 22.3 | 12                   | 898                  | 1312                 | 10   | 0.28           | 2.40           | 3.60      | 2.50           | 2180.0 |
|                  | 1360 | 500 | 12                 | 20000                  | 45100           | 105                      | 140              | 241/850CA/W33     |                                    | 986            | 1180 | 22.3 | 12                   | 898                  | 1312                 | 10   | 0.35           | 1.90           | 2.90      | 1.80           | 2750.0 |
| 1360             | 500  | 12  | 20000              | 45100                  | 105             | 140                      | 241/850CA30K/W33 |                   | 986                                | 1180           | 22.3 | 12   | 898                  | 1312                 | 10                   | 0.35 | 1.90           | 2.90           | 1.80      | 2720.0         |        |
| 884              | 1320 | 365 | 7.5                | 12900                  | 28900           | 110                      | 150              | 240/884/HCC9YA1   |                                    | 1038           | 1184 | 24   | 12                   | 936                  | 1258                 | 6    | 0.28           | 2.40           | 3.60      | 2.50           | 1811.0 |
| 900              | 1090 | 190 | 5                  | 4890                   | 15500           | 210                      | 375              | 248/900CA/W33     |                                    | 963            | 1031 | 22.3 | 12                   | 918                  | 1073                 | 4    | 0.14           | 4.80           | 7.20      | 4.50           | 370.0  |
|                  | 1180 | 206 | 6                  | 6050                   | 16400           | 180                      | 240              | 239/900CAF1/W33   | 239/900CAF3/W33                    | 988            | 1096 | 22.3 | 12                   | 928                  | 1150                 | 5    | 0.15           | 4.50           | 6.70      | 4.50           | 611.0  |
|                  | 1180 | 206 | 6                  | 6050                   | 16400           | 180                      | 240              | 239/900CAKF3/W33  |                                    | 988            | 1096 | 22.3 | 12                   | 928                  | 1150                 | 5    | 0.15           | 4.50           | 6.70      | 4.50           | 591.0  |
|                  | 1270 | 365 | 7.5                | 11400                  | 28400           | 160                      | 210              | 240/900X3/HC      | 240/900X3/HCYA3                    | 1007           | 1139 | 24   | 12                   | 936                  | 1236                 | 6    | 0.28           | 2.40           | 3.60      | 2.50           | 1434.0 |
|                  | 1270 | 365 | 7.5                | 11400                  | 28400           | 160                      | 210              | 240/900X3/HCC9YA1 |                                    | 1007           | 1139 |      | 12                   | 936                  | 1236                 | 6    | 0.28           | 2.40           | 3.60      | 2.50           | 1434.0 |
|                  | 1270 | 365 | 9.5                | 9800                   | 24600           | 160                      | 210              | 240/900X3D-2      |                                    | 1007           | 1139 |      | 12                   | 936                  | 1236                 | 6    | 0.28           | 2.40           | 3.60      | 2.50           | 1970.0 |

# Spherical Roller Bearings

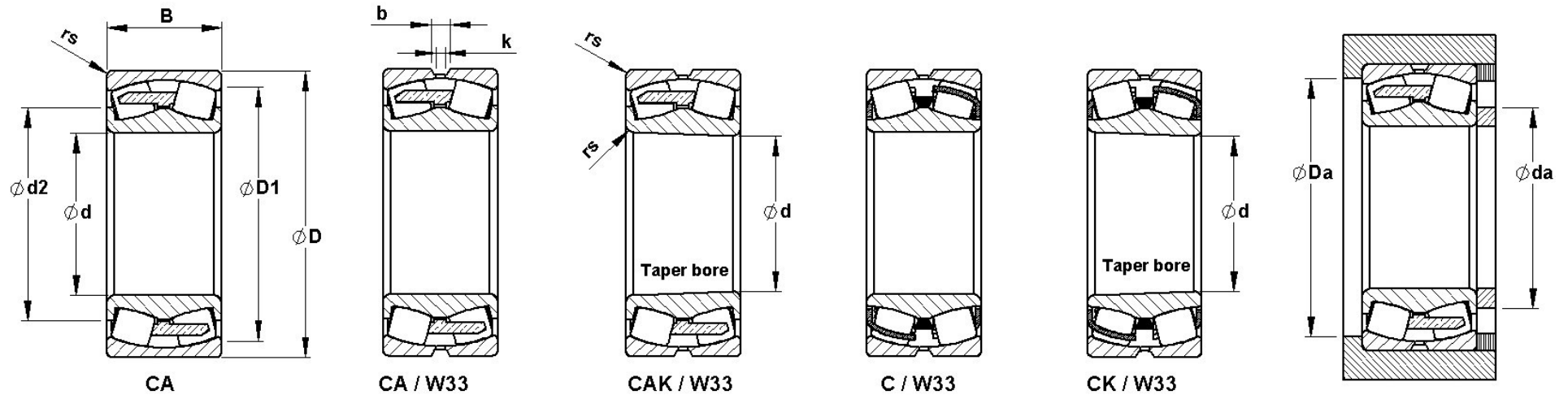
d 900 to 1000 mm



| Dimensions in mm |      |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |                  | Part Number       | Mating and Fillet Dimensions in mm |                |      |     |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |
|------------------|------|-----|--------------------|------------------------|-----------------|--------------------------|------------------|-------------------|------------------------------------|----------------|------|-----|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|
| d                | D    | B   | r <sub>s</sub> min | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil              |                   | d <sub>2</sub>                     | D <sub>1</sub> | b    | k   | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |
| 900              | 1280 | 280 | 7.5                | 10100                  | 23300           | 160                      | 210              | 230/900CA/W33     | 1024                               | 1175           | 22.3 | 12  | 928                  | 1250                 | 6                    | 0.20 | 3.40           | 5.00           | 3.20      | 1220.0         |
|                  | 1280 | 280 | 7.5                | 10100                  | 23300           | 160                      | 210              | 230/900CAF3/W33   | 1024                               | 1175           | 22.3 | 12  | 928                  | 1250                 | 6                    | 0.20 | 3.40           | 5.00           | 3.20      | 1168.0         |
|                  | 1280 | 280 | 7.5                | 10200                  | 23500           | 160                      | 210              | 230/900CAK/W33    | 1024                               | 1175           | 22.3 | 12  | 928                  | 1250                 | 6                    | 0.20 | 3.40           | 5.00           | 3.20      | 1180.0         |
|                  | 1280 | 375 | 7.5                | 13000                  | 34200           | 140                      | 190              | 240/900CA/W33     | 1010                               | 1136           | 22.3 | 12  | 936                  | 1244                 | 6                    | 0.26 | 2.60           | 3.90           | 2.50      | 1600.0         |
|                  | 1280 | 375 | 7.5                | 10070                  | 27900           | 150                      | 190              | 240/900/W33       | 1008                               | 1136           | 24   | 12  | 936                  | 1244                 | 6                    | 0.26 | 2.60           | 3.90           | 2.50      | 1520.0         |
|                  | 1320 | 365 | 7.5                | 10500                  | 27600           | 130                      | 170              | 240/900X3/HCC9-1  | 1021                               | 1184           |      |     | 940                  | 1282                 | 6                    | 0.26 | 2.60           | 3.90           | 2.50      | 1730.0         |
|                  | 1420 | 515 | 12                 | 21000                  | 48500           | 95                       | 140              | 241/900CAK/W33    | 1042                               | 1233           | 22.3 | 12  | 948                  | 1372                 | 10                   | 0.35 | 1.90           | 2.90           | 1.80      | 3400.0         |
| 1420             | 515  | 12  | 21000              | 48500                  | 95              | 140                      | 241/900CAK30/W33 | 1042              | 1233                               | 22.3           | 12   | 948 | 1372                 | 10                   | 0.35                 | 1.90 | 2.90           | 1.80           | 3360.0    |                |
| 950              | 1250 | 224 | 7.5                | 7350                   | 19000           | 160                      | 225              | 239/950CA/W33     | 1046                               | 1163           | 22.3 | 12  | 978                  | 1222                 | 6                    | 0.15 | 4.50           | 6.70           | 4.50      | 759.0          |
|                  | 1250 | 300 | 7.5                | 9300                   | 25500           | 135                      | 180              | 249/950CA/W33     | 1048                               | 1149           | 22.3 | 12  | 978                  | 1222                 | 6                    | 0.21 | 3.20           | 4.80           | 3.20      | 1030.0         |
|                  | 1250 | 300 | 7.5                | 9300                   | 25500           | 135                      | 180              | 249/950CAK30/W33  | 1048                               | 1149           | 22.3 | 12  | 978                  | 1222                 | 6                    | 0.21 | 3.20           | 4.80           | 3.20      | 1000.0         |
|                  | 1360 | 300 | 7.5                | 11000                  | 26800           | 150                      | 210              | 230/950CAF3/W33   | 1075                               | 1234           | 22.3 | 12  | 978                  | 1330                 | 6                    | 0.20 | 3.40           | 5.00           | 3.20      | 1440.0         |
|                  | 1360 | 412 | 7.5                | 15000                  | 38500           | 125                      | 160              | 240/950CA/W33     | 1072                               | 1212           | 22.3 | 12  | 978                  | 1330                 | 6                    | 0.27 | 2.50           | 3.70           | 2.50      | 2100.0         |
|                  | 1360 | 412 | 7.5                | 15000                  | 38500           | 125                      | 160              | 240/950CAK30/W33  | 1072                               | 1212           | 22.3 | 12  | 978                  | 1330                 | 6                    | 0.27 | 2.50           | 3.70           | 2.50      | 2000.0         |
|                  | 1500 | 545 | 7.5                | 24000                  | 54500           | 90                       | 125              | 241/950CA/W33     | 1104                               | 1304           | 22.3 | 12  | 998                  | 1452                 | 6                    | 0.35 | 1.90           | 2.90           | 1.80      | 3600.0         |
| 1500             | 545  | 7.5 | 24000              | 54500                  | 90              | 125                      | 241/950CAK30/W33 | 1104              | 1304                               | 22.3           | 12   | 998 | 1452                 | 6                    | 0.35                 | 1.90 | 2.90           | 1.80           | 3540.0    |                |
| 1000             | 1220 | 165 | 6                  | 4400                   | 13600           | 125                      | 160              | 238/1000CAK1A/W20 | 1069                               | 1154           |      | 9   | 972                  | 1260                 | 5                    | 0.11 | 5.92           | 8.81           | 5.78      | 402.0          |

# Spherical Roller Bearings

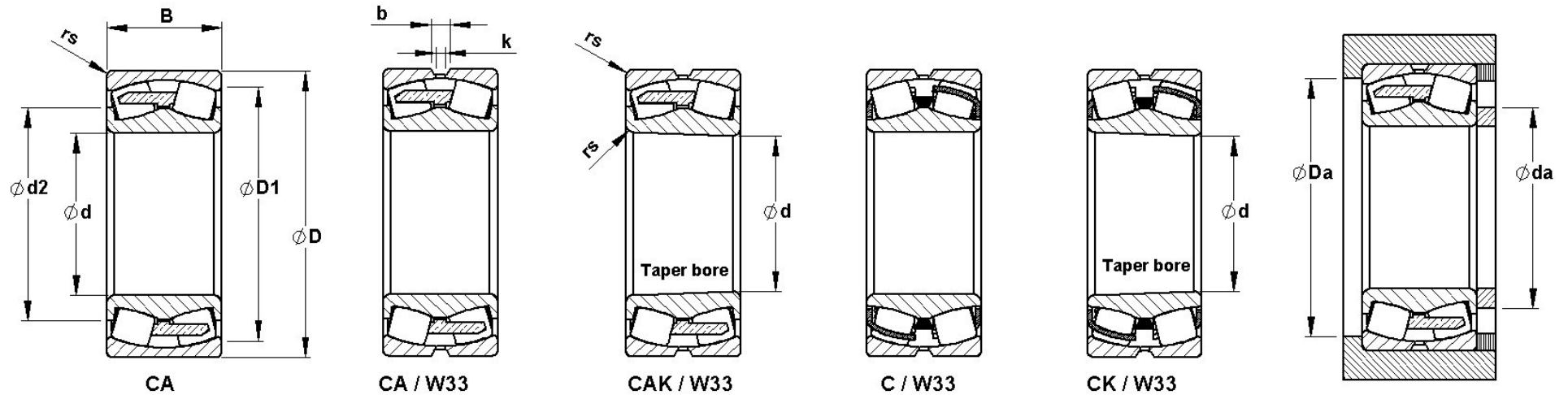
d 1000 to 1060 mm



| Dimensions in mm |      |     |        | Basic Load Rating - KN |       | Limit speed ratings- RPM |                   | Part Number        | Mating and Fillet Dimensions in mm |      |      |      |          |          | Calculation Factor |      |      |      | Weight Kg |        |        |
|------------------|------|-----|--------|------------------------|-------|--------------------------|-------------------|--------------------|------------------------------------|------|------|------|----------|----------|--------------------|------|------|------|-----------|--------|--------|
| d                | D    | B   | rs min | Cr                     | Cor   | Grease                   | Oil               |                    | d2                                 | D1   | b    | k    | da (min) | Da (max) | ra (max)           | e    | y1   | y2   |           | y0     |        |
| 1000             | 1320 | 315 | 7.5    | 10200                  | 29200 | 125                      | 160               | 249/1000CA/W33     |                                    | 1108 | 1211 | 22.3 | 12       | 1027     | 1291               | 6    | 0.21 | 3.20 | 4.80      | 3.20   | 1220.0 |
|                  | 1320 | 315 | 7.5    | 10200                  | 29200 | 125                      | 160               | 249/1000CAK30/W33  |                                    | 1108 | 1211 | 22.3 | 12       | 1027     | 1291               | 6    | 0.21 | 3.20 | 4.80      | 3.20   | 1200.0 |
|                  | 1420 | 308 | 7.5    | 12700                  | 30500 | 130                      | 175               | 230/1000CAF1/W33   | 230/1000CAF3/W33                   | 1140 | 1303 | 22.3 | 12       | 1028     | 1392               | 6    | 0.19 | 3.60 | 5.30      | 3.60   | 1590.0 |
|                  | 1420 | 412 | 7.5    | 15200                  | 40500 | 110                      | 150               | 240/1000CAF3/W33   |                                    | 1130 | 1267 | 22.3 | 12       | 1028     | 1392               | 6    | 0.26 | 2.60 | 3.90      | 2.50   | 2130.0 |
|                  | 1580 | 462 | 12     | 21500                  | 48200 | 95                       | 130               | 231/1000CA/W33     |                                    | 1181 | 1404 | 22.3 | 12       | 1048     | 1532               | 10   | 0.28 | 2.40 | 3.50      | 2.50   | 3520.0 |
|                  | 1580 | 462 | 12     | 21500                  | 48200 | 95                       | 130               | 231/1000CAK/W33    |                                    | 1181 | 1404 | 22.3 | 12       | 1048     | 1532               | 10   | 0.28 | 2.40 | 3.50      | 2.50   | 3410.0 |
|                  | 1580 | 580 | 12     | 26500                  | 62200 | 85                       | 110               | 241/1000CA/W33     |                                    | 1160 | 1372 | 22.3 | 12       | 1048     | 1532               | 10   | 0.35 | 1.90 | 2.90      | 1.80   | 4350.0 |
|                  | 1580 | 580 | 12     | 26500                  | 62200 | 85                       | 110               | 241/1000CAK30/W33  |                                    | 1160 | 1372 | 22.3 | 12       | 1048     | 1532               | 10   | 0.35 | 1.90 | 2.90      | 1.80   | 4260.0 |
| 1060             | 1280 | 165 | 6      | 4700                   | 14800 | 150                      | 195               | 238/1060CA/W33     |                                    | 1134 | 1218 | 22.3 | 12       | 1082     | 1258               | 5    | 0.11 | 6.10 | 9.10      | 6.30   | 440.0  |
|                  | 1280 | 165 | 6      | 4700                   | 14800 | 150                      | 195               | 238/1060CAK/W33    |                                    | 1134 | 1218 | 22.3 | 12       | 1082     | 1258               | 5    | 0.11 | 6.10 | 9.10      | 6.30   | 425.0  |
|                  | 1280 | 218 | 6      | 6000                   | 19500 | 125                      | 160               | 248/1060CA/W33     |                                    | 1136 | 1211 | 22.3 | 12       | 1082     | 1258               | 5    | 0.14 | 4.80 | 7.20      | 4.50   | 576.0  |
|                  | 1280 | 218 | 6      | 6000                   | 19500 | 125                      | 160               | 248/1060CAK30/W33  |                                    | 1136 | 1211 | 22.3 | 12       | 1082     | 1258               | 5    | 0.14 | 4.80 | 7.20      | 4.50   | 565.0  |
|                  | 1400 | 250 | 7.5    | 9870                   | 26300 | 145                      | 170               | 239/1060CAKF3/W33X |                                    | 1170 | 1304 | 22.3 | 12       | 1088     | 1392               | 6    | 0.16 | 4.20 | 6.30      | 4.00   | 1041.0 |
|                  | 1400 | 250 | 7.5    | 9870                   | 26300 | 145                      | 170               | 239/1060CAKF3/W33  | 239/1060CAKF3/C9W33                | 1170 | 1304 | 22.3 | 12       | 1088     | 1392               | 6    | 0.16 | 4.20 | 6.30      | 4.00   | 1041.0 |
|                  | 1400 | 335 | 7.5    | 11100                  | 31500 | 145                      | 170               | 249/1060CAF3/W33   |                                    | 1170 | 1304 | 22.3 | 12       | 1088     | 1392               | 6    | 0.16 | 4.20 | 6.30      | 4.00   | 1441.0 |
|                  | 1400 | 335 | 7.5    | 11000                  | 32600 | 115                      | 150               | 249/1060CA/W33     |                                    | 1164 | 1285 | 22.3 | 12       | 1088     | 1372               | 6    | 0.21 | 3.20 | 4.80      | 3.20   | 1420.0 |
| 1400             | 335  | 7.5 | 11000  | 32600                  | 115   | 150                      | 249/1060CAK30/W33 |                    | 1164                               | 1285 | 22.3 | 12   | 1088     | 1372     | 6                  | 0.21 | 3.20 | 4.80 | 3.20      | 1390.0 |        |

# Spherical Roller Bearings

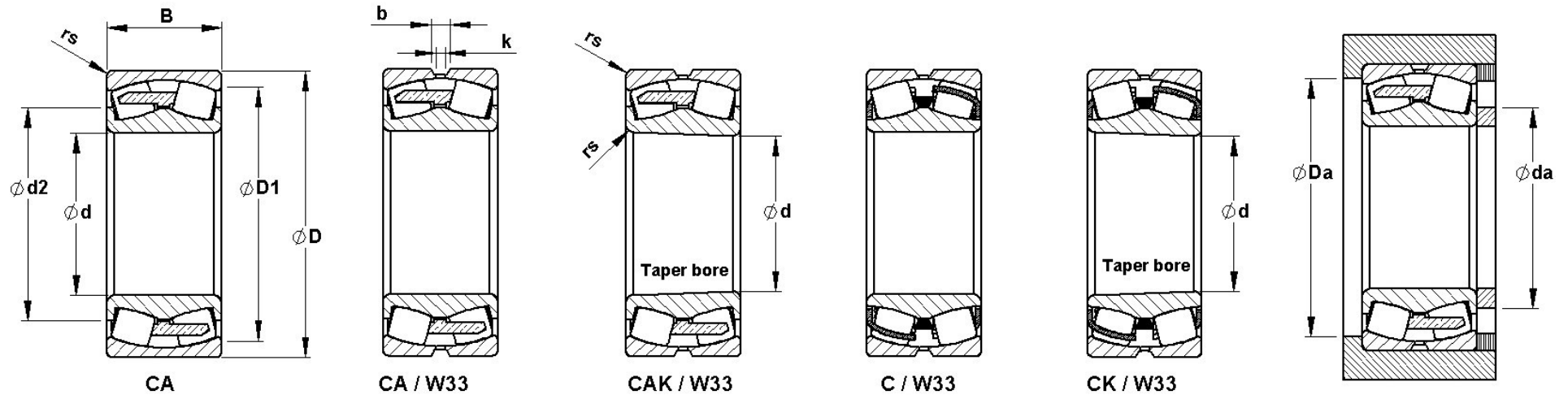
d 1060 to 1180 mm



| Dimensions in mm |      |     |        | Basic Load Rating - KN |       | Limit speed ratings- RPM |     | Part Number       | Mating and Fillet Dimensions in mm |                |      |    |          | Calculation Factor |          |      |                | Weight Kg |                |                |
|------------------|------|-----|--------|------------------------|-------|--------------------------|-----|-------------------|------------------------------------|----------------|------|----|----------|--------------------|----------|------|----------------|-----------|----------------|----------------|
| d                | D    | B   | rs min | Cr                     | Cor   | Grease                   | Oil |                   | d <sub>2</sub>                     | D <sub>1</sub> | b    | k  | da (min) | Da (max)           | ra (max) | e    | y <sub>1</sub> |           | y <sub>2</sub> | y <sub>0</sub> |
| 1060             | 1500 | 325 | 9.5    | 13500                  | 33000 | 125                      | 160 | 230/1060CA/W33    | 1200                               | 1377           | 22.3 | 12 | 1093     | 1465               | 8        | 0.19 | 3.60           | 5.30      | 3.60           | 2300.0         |
|                  | 1500 | 325 | 9.5    | 13500                  | 33000 | 125                      | 160 | 230/1060CAK/W33   | 1200                               | 1377           | 22.3 | 12 | 1093     | 1465               | 8        | 0.19 | 3.60           | 5.30      | 3.60           | 2210.0         |
|                  | 1500 | 438 | 9.5    | 17000                  | 44100 | 110                      | 150 | 240/1060F3/HCW33  | 1185                               | 1339           | 22.3 | 12 | 1093     | 1465               | 8        | 0.27 | 2.50           | 3.70      | 2.50           | 2500.0         |
|                  | 1500 | 438 | 9.5    | 17000                  | 44100 | 110                      | 150 | 240/1060F3/W33    | 1185                               | 1339           | 22.3 | 12 | 1093     | 1465               | 8        | 0.27 | 2.50           | 3.70      | 2.50           | 2500.0         |
|                  | 1500 | 438 | 9.5    | 17000                  | 46000 | 100                      | 145 | 240/1060CA/W33    | 1190                               | 1339           | 22.3 | 12 | 1093     | 1465               | 8        | 0.26 | 2.60           | 3.90      | 2.50           | 2530.0         |
|                  | 1500 | 438 | 9.5    | 17000                  | 46000 | 100                      | 145 | 240/1060CAK30/W33 | 1190                               | 1339           | 22.3 | 12 | 1093     | 1465               | 8        | 0.26 | 2.60           | 3.90      | 2.50           | 2490.0         |
|                  | 1500 | 585 | 9.5    | 15000                  | 40000 | 100                      | 145 | 240/1060D         | 1190                               | 1339           |      |    | 1093     | 1465               | 8        | 0.26 | 2.60           | 3.90      | 2.50           | 3083.0         |
| 1120             | 1360 | 243 | 6      | 7150                   | 23500 | 105                      | 165 | 248/1120CA/W33    | 1198                               | 1278           | 22.3 | 12 | 1140     | 1335               | 5        | 0.15 | 4.50           | 6.70      | 4.50           | 740.0          |
|                  | 1360 | 243 | 6      | 7150                   | 23500 | 105                      | 165 | 248/1120CAK30/W33 | 1198                               | 1278           | 22.3 | 12 | 1140     | 1335               | 5        | 0.15 | 4.50           | 6.70      | 4.50           | 725.0          |
|                  | 1460 | 335 | 7.5    | 12000                  | 35200 | 90                       | 135 | 249/1120CAF3/W33  | 1235                               | 1348           | 22.3 | 12 | 1146     | 1431               | 6        | 0.20 | 3.40           | 5.00      | 3.20           | 1500.0         |
|                  | 1580 | 345 | 9.5    | 15000                  | 38100 | 90                       | 125 | 230/1120CAF3/W33X | 1286                               | 1443           | 40   | 25 | 1155     | 1545               | 8        | 0.19 | 3.40           | 5.00      | 3.20           | 2210.0         |
|                  | 1580 | 462 | 9.5    | 18100                  | 49500 | 90                       | 125 | 240/1120CA/W33    | 1268                               | 1421           | 22.3 | 12 | 1155     | 1545               | 8        | 0.26 | 2.60           | 3.90      | 2.50           | 2940.0         |
|                  | 1580 | 462 | 9.5    | 18100                  | 49500 | 90                       | 125 | 240/1120CAK30/W33 | 1268                               | 1421           | 22.3 | 12 | 1155     | 1545               | 8        | 0.26 | 2.60           | 3.90      | 2.50           | 2850.0         |
| 1180             | 1420 | 180 | 6      | 5600                   | 18000 | 150                      | 190 | 238/1180CAK1A/W20 | 1254                               | 1349           |      | 9  | 1180     | 1450               | 5        | 0.11 | 6.28           | 9.35      | 6.14           | 577.0          |
|                  | 1420 | 180 | 6      | 5340                   | 17200 | 150                      | 190 | 238/1180CAF3A/W20 | 1254                               | 1349           |      | 9  | 1180     | 1450               | 5        | 0.11 | 6.28           | 9.35      | 6.14           | 580.0          |
|                  | 1420 | 243 | 6      | 7700                   | 27200 | 135                      | 160 | 248/1180CA/W33    | 1250                               | 1344           | 22.3 | 12 | 1180     | 1450               | 5        | 0.14 | 4.80           | 7.20      | 4.50           | 790.0          |
|                  | 1420 | 243 | 6      | 7700                   | 27200 | 135                      | 160 | 248/1180CAK30/W33 | 1250                               | 1344           | 22.3 | 12 | 1180     | 1450               | 5        | 0.14 | 4.80           | 7.20      | 4.50           | 770.0          |

# Spherical Roller Bearings

d 1180 to 1800 mm



| Dimensions in mm |      |     |                    | Basic Load Rating - KN |                 | Limit speed ratings- RPM |     | Part Number         |                    | Mating and Fillet Dimensions in mm |                |      |    |                      |                      | Calculation Factor   |      |                |                | Weight Kg |                |
|------------------|------|-----|--------------------|------------------------|-----------------|--------------------------|-----|---------------------|--------------------|------------------------------------|----------------|------|----|----------------------|----------------------|----------------------|------|----------------|----------------|-----------|----------------|
| d                | D    | B   | r <sub>s min</sub> | C <sub>r</sub>         | C <sub>or</sub> | Grease                   | Oil |                     |                    | d <sub>2</sub>                     | D <sub>1</sub> | b    | k  | d <sub>a</sub> (min) | D <sub>a</sub> (max) | r <sub>a</sub> (max) | e    | y <sub>1</sub> | y <sub>2</sub> |           | y <sub>0</sub> |
| 1180             | 1540 | 272 | 7.5                | 10290                  | 29600           | 110                      | 150 | 239/1180CAKF3/W33X  | 239/1180CAKF1/W33X | 1296                               | 1432           | 24   | 12 | 1216                 | 1536                 | 6                    | 0.16 | 4.20           | 6.30           | 4.00      | 1350.0         |
|                  | 1540 | 272 | 7.5                | 10700                  | 29600           | 110                      | 150 | 239/1180CAF3/W33X   |                    | 1296                               | 1432           | 24   | 12 | 1216                 | 1536                 | 6                    | 0.16 | 4.20           | 6.30           | 4.00      | 1390.0         |
|                  | 1540 | 355 | 7.5                | 13310                  | 40000           | 110                      | 150 | 249/1180CAF1/W33X   |                    | 1290                               | 1422           | 22.3 | 12 | 1216                 | 1536                 | 6                    | 0.20 | 3.42           | 5.09           | 3.34      | 1772.0         |
|                  | 1540 | 355 | 7.5                | 13900                  | 40000           | 110                      | 150 | 249/1180CAK30F3/W33 |                    | 1290                               | 1422           | 22.3 | 12 | 1216                 | 1536                 | 6                    | 0.20 | 3.42           | 5.09           | 3.34      | 1742.0         |
|                  | 1660 | 355 | 9.5                | 10290                  | 29600           | 110                      | 150 | 230/1180CAF1/W33X   |                    | 1328                               | 1509           | 24   | 12 | 1240                 | 1600                 | 8                    | 0.20 | 3.42           | 5.09           | 3.34      | 2460.0         |
| 1250             | 1750 | 375 | 9.5                | 17500                  | 44800           | 95                       | 125 | 230/1250CA/W33      |                    | 1412                               | 1610           | 22.3 | 12 | 1285                 | 1715                 | 8                    | 0.19 | 3.60           | 5.30           | 3.60      | 2850.0         |
|                  | 1750 | 375 | 9.5                | 17500                  | 44800           | 95                       | 125 | 230/1250CAK/W33     |                    | 1412                               | 1610           | 22.3 | 12 | 1285                 | 1715                 | 8                    | 0.19 | 3.60           | 5.30           | 3.60      | 2760.0         |
| 1320             | 1600 | 280 | 6                  | 9750                   | 33400           | 85                       | 115 | 248/1320CA/W33      |                    | 1418                               | 1513           | 22.3 | 12 | 1342                 | 1578                 | 5                    | 0.15 | 4.50           | 6.70           | 4.50      | 1180.0         |
|                  | 1600 | 280 | 6                  | 9750                   | 33400           | 85                       | 115 | 248/1320CA30/W33    |                    | 1418                               | 1513           | 22.3 | 12 | 1342                 | 1578                 | 5                    | 0.15 | 4.50           | 6.70           | 4.50      | 1150.0         |
|                  | 1720 | 400 | 7.5                | 16000                  | 49200           | 80                       | 105 | 249/1320CA/W33      |                    | 1446                               | 1588           | 24   | 12 | 1350                 | 1691                 | 6                    | 0.21 | 3.20           | 4.80           | 3.20      | 2510.0         |
|                  | 1720 | 400 | 7.5                | 16000                  | 49200           | 80                       | 105 | 249/1320CAK30/W33   |                    | 1446                               | 1588           | 24   | 12 | 1350                 | 1691                 | 6                    | 0.21 | 3.20           | 4.00           | 3.20      | 2460.0         |
| 1320             | 1850 | 530 | 12                 | 23200                  | 63300           | 70                       | 85  | 240/1320CAF3/W33T   |                    | 1485                               | 1662           | 40   | 25 | 1390                 | 1765                 | 11                   | 0.25 | 2.70           | 4.00           | 2.60      | 4540.0         |
| 1400             | 1820 | 425 | 9.5                | 20000                  | 58500           | 70                       | 85  | 249/1400CAF3/W33    |                    | 1528                               | 1681           | 22.3 | 12 | 1452                 | 1768                 | 8                    | 0.20 | 3.42           | 5.09           | 3.34      | 2920.0         |
| 1500             | 1820 | 315 | 7.5                | 12000                  | 40000           | 65                       | 83  | 248/1500CA/W33      |                    | 1608                               | 1710           | 24   | 12 | 1528                 | 1792                 | 6                    | 0.15 | 4.50           | 6.70           | 4.50      | 1730.0         |
| 1800             | 1820 | 315 | 7.5                | 12000                  | 40000           | 65                       | 83  | 248/1500CAK30F3/W20 |                    | 1608                               | 1710           |      | 12 | 1528                 | 1792                 | 6                    | 0.15 | 4.50           | 6.70           | 4.50      | 1700.0         |
|                  | 2180 | 375 | 9.5                | 17400                  | 62800           | 62                       | 70  | 248/1800CA/W33      |                    | 1935                               | 2058           | 24   | 12 | 1832                 | 2145                 | 8                    | 0.15 | 4.50           | 6.70           | 4.50      | 2920.0         |
|                  | 2180 | 375 | 9.5                | 17400                  | 62800           | 62                       | 70  | 248/1800CAK30/W33   |                    | 1935                               | 2058           | 24   | 12 | 1832                 | 2145                 | 8                    | 0.15 | 4.50           | 6.70           | 4.50      | 2870.0         |



# Spherical Roller Bearings



## Radial Clearance of Spherical Roller Bearings with Cylindrical Bore

| Nominal Inner Ring Diameter d (mm) |      | Group 2 (C2) |     | Group 0 (C0) |     | Group 3 (C3) |     | Group 4 (C4) |      | Group 5 (C5) |      |
|------------------------------------|------|--------------|-----|--------------|-----|--------------|-----|--------------|------|--------------|------|
| Over                               | to   | Min          | Max | Min          | Max | Min          | Max | Min          | Max  | Min          | Max  |
| 14                                 | 18   | 10           | 20  | 20           | 35  | 35           | 45  | 45           | 60   | 60           | 75   |
| 18                                 | 24   | 10           | 20  | 20           | 35  | 35           | 45  | 45           | 60   | 60           | 75   |
| 24                                 | 30   | 15           | 25  | 25           | 40  | 40           | 55  | 55           | 75   | 75           | 95   |
| 30                                 | 40   | 15           | 30  | 30           | 45  | 45           | 60  | 60           | 80   | 80           | 100  |
| 40                                 | 50   | 20           | 35  | 35           | 55  | 55           | 75  | 75           | 100  | 100          | 125  |
| 50                                 | 65   | 20           | 40  | 40           | 65  | 65           | 90  | 90           | 120  | 120          | 150  |
| 65                                 | 80   | 30           | 50  | 50           | 80  | 80           | 110 | 110          | 145  | 145          | 180  |
| 80                                 | 100  | 35           | 60  | 60           | 100 | 100          | 135 | 135          | 180  | 180          | 225  |
| 100                                | 120  | 40           | 75  | 75           | 120 | 120          | 160 | 160          | 210  | 210          | 260  |
| 120                                | 140  | 50           | 95  | 95           | 145 | 145          | 190 | 190          | 240  | 240          | 300  |
| 140                                | 160  | 60           | 110 | 110          | 170 | 170          | 220 | 220          | 280  | 280          | 350  |
| 160                                | 180  | 65           | 120 | 120          | 180 | 180          | 240 | 240          | 310  | 310          | 390  |
| 180                                | 200  | 70           | 130 | 130          | 200 | 200          | 260 | 260          | 340  | 340          | 430  |
| 200                                | 225  | 80           | 140 | 140          | 220 | 220          | 290 | 290          | 380  | 380          | 470  |
| 225                                | 250  | 90           | 150 | 150          | 240 | 240          | 320 | 320          | 420  | 420          | 520  |
| 250                                | 280  | 100          | 170 | 170          | 260 | 260          | 350 | 350          | 460  | 460          | 570  |
| 280                                | 315  | 110          | 190 | 190          | 280 | 280          | 370 | 370          | 500  | 500          | 630  |
| 315                                | 355  | 120          | 200 | 200          | 310 | 310          | 410 | 410          | 550  | 550          | 690  |
| 355                                | 400  | 130          | 220 | 220          | 340 | 340          | 450 | 450          | 600  | 600          | 750  |
| 400                                | 450  | 140          | 240 | 240          | 370 | 370          | 500 | 500          | 660  | 660          | 820  |
| 450                                | 500  | 140          | 260 | 260          | 410 | 410          | 550 | 550          | 720  | 720          | 900  |
| 500                                | 560  | 150          | 280 | 280          | 440 | 440          | 600 | 600          | 780  | 780          | 1000 |
| 560                                | 630  | 170          | 310 | 310          | 480 | 480          | 650 | 650          | 850  | 850          | 1100 |
| 630                                | 710  | 190          | 350 | 350          | 530 | 530          | 700 | 700          | 920  | 920          | 1190 |
| 710                                | 800  | 210          | 390 | 390          | 580 | 580          | 770 | 770          | 1010 | 1010         | 1300 |
| 800                                | 900  | 230          | 430 | 430          | 650 | 650          | 860 | 860          | 1120 | 1120         | 1440 |
| 900                                | 1000 | 260          | 480 | 480          | 710 | 710          | 930 | 930          | 1220 | 1220         | 1570 |

# Spherical Roller Bearings



## Radial Clearance of Spherical Roller Bearings with Tapered Bore

| Nominal Inner Ring Diameter d (mm) |      | Group 2 (C2) |     | Group 0 (C0) |     | Group 3 (C3) |      | Group 4 (C4) |      | Group 5 (C5) |      |
|------------------------------------|------|--------------|-----|--------------|-----|--------------|------|--------------|------|--------------|------|
| Over                               | to   | Min          | Max | Min          | Max | Min          | Max  | Min          | Max  | Min          | Max  |
| 18                                 | 24   | 15           | 25  | 25           | 35  | 35           | 45   | 45           | 60   | 60           | 75   |
| 24                                 | 30   | 20           | 30  | 30           | 40  | 40           | 55   | 55           | 75   | 75           | 95   |
| 30                                 | 40   | 25           | 35  | 35           | 50  | 50           | 65   | 65           | 85   | 85           | 105  |
| 40                                 | 50   | 30           | 45  | 45           | 60  | 60           | 80   | 80           | 100  | 100          | 130  |
| 50                                 | 65   | 40           | 55  | 55           | 75  | 75           | 95   | 95           | 120  | 120          | 160  |
| 65                                 | 80   | 50           | 70  | 70           | 95  | 95           | 120  | 120          | 150  | 150          | 200  |
| 80                                 | 100  | 55           | 80  | 80           | 110 | 110          | 140  | 140          | 180  | 180          | 230  |
| 100                                | 120  | 65           | 100 | 100          | 135 | 135          | 170  | 170          | 220  | 220          | 280  |
| 120                                | 140  | 80           | 120 | 120          | 160 | 160          | 200  | 200          | 260  | 260          | 330  |
| 140                                | 160  | 90           | 130 | 130          | 180 | 180          | 230  | 230          | 300  | 300          | 380  |
| 160                                | 180  | 100          | 140 | 140          | 200 | 200          | 260  | 260          | 340  | 340          | 430  |
| 180                                | 200  | 110          | 160 | 160          | 220 | 220          | 290  | 290          | 370  | 370          | 470  |
| 200                                | 225  | 120          | 180 | 180          | 250 | 250          | 320  | 320          | 410  | 410          | 520  |
| 225                                | 250  | 140          | 200 | 200          | 270 | 270          | 350  | 350          | 450  | 450          | 570  |
| 250                                | 280  | 150          | 220 | 220          | 300 | 300          | 390  | 390          | 490  | 490          | 620  |
| 280                                | 315  | 170          | 240 | 240          | 330 | 330          | 430  | 430          | 540  | 540          | 680  |
| 315                                | 355  | 190          | 270 | 270          | 360 | 360          | 470  | 470          | 590  | 590          | 740  |
| 355                                | 400  | 210          | 300 | 300          | 400 | 400          | 520  | 520          | 650  | 650          | 820  |
| 400                                | 450  | 230          | 330 | 330          | 440 | 440          | 570  | 570          | 720  | 720          | 910  |
| 450                                | 500  | 260          | 370 | 370          | 490 | 490          | 630  | 630          | 790  | 790          | 1000 |
| 500                                | 560  | 290          | 410 | 410          | 540 | 540          | 680  | 680          | 870  | 870          | 1100 |
| 560                                | 630  | 320          | 460 | 460          | 600 | 600          | 760  | 760          | 980  | 980          | 1230 |
| 630                                | 710  | 350          | 510 | 510          | 670 | 670          | 850  | 850          | 1090 | 1090         | 1360 |
| 710                                | 800  | 390          | 570 | 570          | 750 | 750          | 960  | 960          | 1200 | 1200         | 1500 |
| 800                                | 900  | 440          | 640 | 640          | 840 | 840          | 1070 | 1070         | 1370 | 1370         | 1690 |
| 900                                | 1000 | 490          | 710 | 710          | 930 | 930          | 1190 | 1190         | 1520 | 1520         | 1860 |



## Typical suffixes in bearing part number

**C— Spherical roller bearings with central rib, parallel rollers, stamped steel cage, and inner ring without rib.**

**CA—Spherical roller bearings with central rib, parallel rollers, machine brass cage, and inner ring without rib.**

**F1 — Solid carbon steel cage**

**F3 — Nodular cast iron cage**

**K— Tapered bore bearing; Conicity 1 : 12**

**/ W20 — Spherical roller bearings with no oil groove and three lubricating oil holes on outer ring.**

**/ W33 — Spherical roller bearings with oil groove and three lubricating oil holes on outer ring.**

**/ W33X — Spherical roller bearings with oil groove and six lubricating oil holes on outer ring.**

**Contact WJB Engineering for other suffixes not listed.**