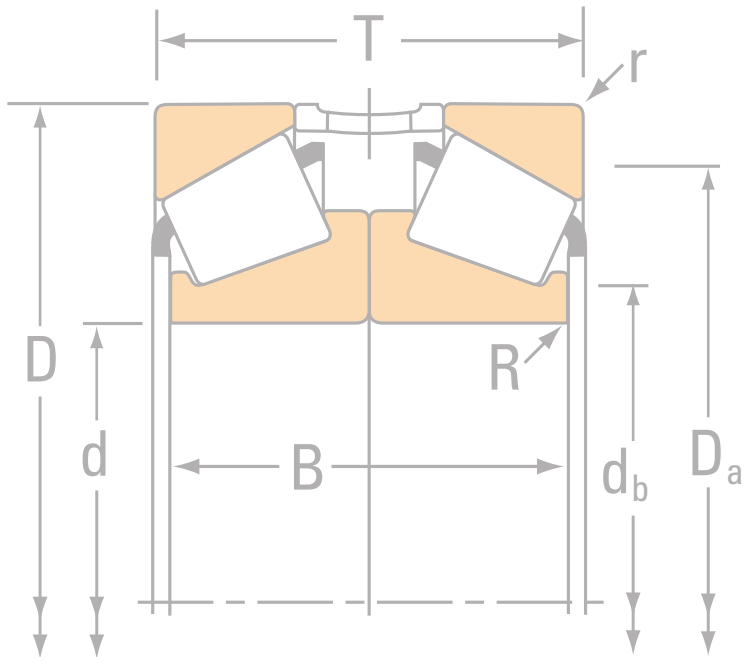


TIMKEN

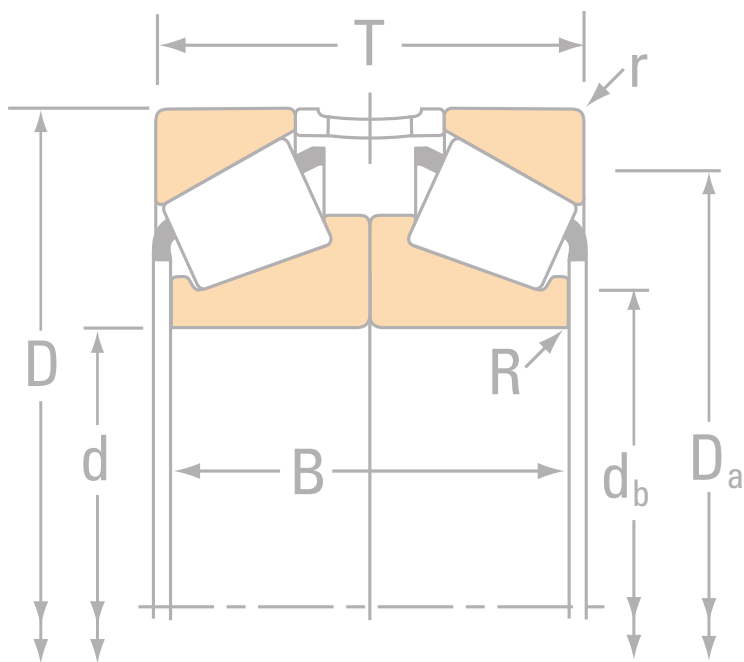


TIMKEN[®] METRIC TAPERED ROLLER BEARINGS
MATCHED BEARING ASSEMBLIES

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TIMKEN MATCHED BEARING ASSEMBLIES

Matched bearing assemblies are used in applications:

- That require higher load carrying capacity than can be achieved with a single-row tapered roller bearing; or
- Where the shaft must be located axially in both directions with a specific axial clearance or preload.

The standard range of assemblies included in the product tables are specified with a market standard axial clearance value that is referred to as Bench End Play (BEP). Application specific axial clearance values are available upon request.

All single-row metric tapered roller bearings are designed according to the ISO 355 standard.

Timken metric tapered roller bearing matched assemblies consist of two single-row bearings (type TS) with individually matched spacers that are set at the factory to pre-determined dimensions and tolerances.

The standard outer ring spacer is designed with lubrication holes to allow for lubricant flow into both bearing rows.

Matched bearing assemblies are supplied ready-to-fit into customer applications, with a unique serial number marked on spacers and bearing components for easy identification.



BENEFITS:

- Pre-set clearance simplifies mounting
- Higher productivity and greater uptime through precise setting
- High axial and radial load carrying capacity
- Axial loads accommodated in both directions

COMMON APPLICATIONS:

Standard matched assemblies are used in gear drives & transmissions, cement pulverizers, coal conveyors, cranes, calendar rolls and many more industrial applications.

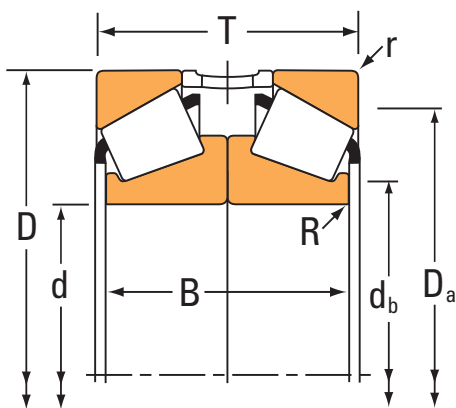
MOUNTING ARRANGEMENTS:

Timken can supply standard matched bearing assemblies in both the direct (DF) and indirect (DB) mounting arrangements to meet the application needs. Both types can accommodate axial loads in both directions.

Direct mounting "DF"
(face-to-face)

This arrangement consists of:

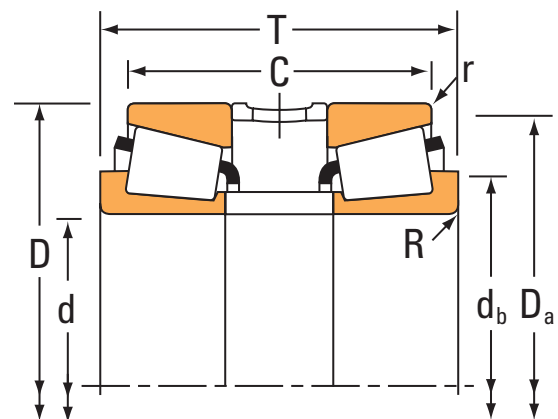
- Two single-row bearings, with abutting back-facing inner-rings
- An outer-ring spacer with lubricating holes



Indirect mounting "DB"
(back-to-back)

This arrangement consists of:

- Two single-row bearings
- An outer-ring spacer with lubricating holes
- A solid inner-ring spacer



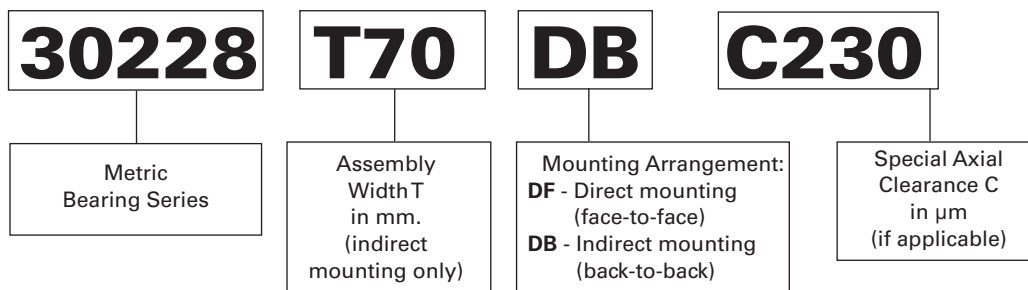
BEARING AXIAL CLEARANCE

The internal axial clearance is factory set for each assembly. The indicated axial clearance values are valid for general application conditions. The mean values (μm) are shown in the bearing table and are manufactured to a tolerance $\pm 25 \mu\text{m}$.

For example the matched bearing assembly 30228 DF will have a factory set axial clearance with a mean of $270 \mu\text{m}$, The actual clearance will therefore lie in the range of $245 \mu\text{m}$ to $295 \mu\text{m}$.

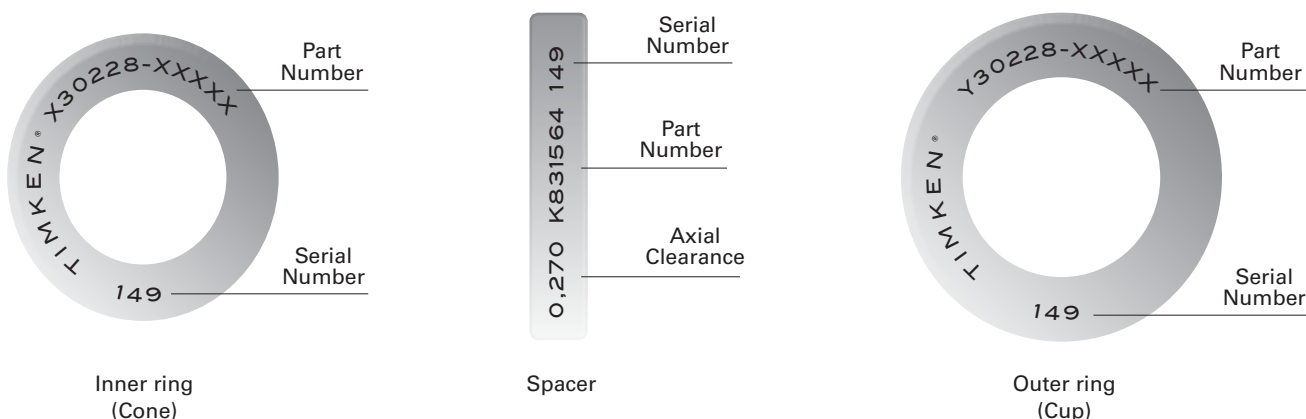
When a non-standard internal axial clearance is required, a "C" designation is used in the part number, along with the actual nominal clearance. For example the matched bearing assembly 30228 DF C230 will have a mean of $230 \mu\text{m}$, the actual axial clearance will lie in the range of $205 \mu\text{m}$ to $255 \mu\text{m}$.

BEARING PART NUMBERING SYSTEM



SERIAL NUMBERING

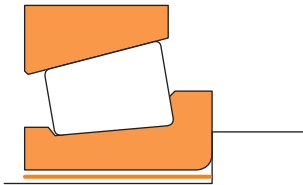
Timken metric matched bearing assemblies are measured and serialized at the factory. The spacer is custom fitted to obtain the specified clearance.



DISCLAIMER

Do not mix components with different serial numbers. This may result in incorrect bearing setting.

**INNER RING –
Industrial Equipment
Classes K and N (Metric)
ISO Bearing Classes P0 and P6**



Deviation from nominal (maximum) bearing bore and resultant fit.

T= Tight
L = Loose

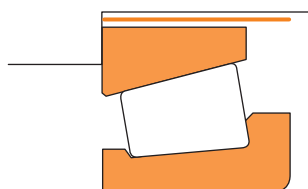
These charts are guidelines for specifying shaft and housing fits related to particular operating conditions.

FITTING PRACTICE.

Standard axial clearances shown in bearing table are appropriate for light duty fitting practice. A special axial clearance value may be needed for applications using Timken preferred, or special fitting practices. Special fitting practices may include applications with tubular shafts, with shaft/housing made of non-ferrous materials, with rotating housing/stationary shaft, with unground bearing seats, or applications running at very high speeds or in heavy operating conditions. Timken preferred fitting practice values are published in Timken Tapered Roller Bearing Catalog or Timken Engineering Manual. For more information consult your Timken engineer.

| Inner Ring Bore | | Tolerance | Rotating Inner Ring | | |
|-----------------|---------|-------------------|---------------------------|----------------------|--------|
| Range | | | Ground Seat | | |
| Over | Incl. | | Inner Ring Seat Deviation | Resultant Fit | Symbol |
| mm in. | mm in. | mm in. | mm in. | mm in. | |
| 10 | 18 | -0.012 0.000 | +0.015 +0.007 | 0.027T 0.007T | m5 |
| 0.3937 | 0.7087 | -0.0005 0.0000 | +0.0006 +0.0003 | +0.0011T +0.0003T | |
| 18 | 30 | -0.012 0.000 | +0.017 +0.008 | 0.029T 0.008T | m5 |
| 0.7087 | 1.1811 | -0.0005 0.0000 | +0.0007 +0.0003 | +0.0012T +0.0003T | |
| 30 | 50 | -0.012 0.000 | +0.020 +0.009 | 0.032T 0.009T | m5 |
| 1.1811 | 1.9685 | -0.0005 0.0000 | +0.0008 +0.0004 | +0.0013T +0.0004T | |
| 50 | 80 | -0.015 0.000 | +0.024 +0.011 | 0.039T 0.011T | m5 |
| 1.9685 | 3.1496 | -0.0006 0.0000 | +0.0009 +0.0004 | +0.0015T +0.0004T | |
| 80 | 120 | -0.020 0.000 | +0.028 +0.013 | 0.039T 0.011T | m5 |
| 3.1496 | 4.7244 | -0.0008 0.0000 | +0.0011 +0.0005 | +0.0019T +0.0005T | |
| 120 | 140 | -0.025 0.000 | +0.033 +0.015 | 0.059T 0.015T | m5 |
| 4.7244 | 5.5118 | -0.0010 0.0000 | +0.0013 +0.0006 | +0.0023T +0.0006T | |
| 140 | 180 | -0.025 0.000 | +0.052 +0.027 | 0.077T 0.027T | n6 |
| 5.5118 | 7.0866 | -0.0010 0.0000 | +0.0020 +0.0011 | +0.0030T +0.0011T | |
| 180 | 200 | -0.030 0.000 | +0.060 +0.031 | 0.090T 0.031T | n6 |
| 7.0866 | 7.8740 | -0.0012 0.0000 | +0.0024 +0.0012 | +0.0035T +0.0012T | |
| 200 | 225 | -0.030 0.000 | +0.079 +0.050 | 0.109T 0.050T | p6 |
| 7.8740 | 8.8583 | -0.0012 0.0000 | +0.0031 +0.0020 | +0.0043T +0.0020T | |
| 225 | 250 | -0.030 0.000 | +0.079 +0.050 | 0.109T 0.050T | p6 |
| 8.8583 | 9.8425 | -0.0012 0.0000 | +0.0031 +0.0020 | +0.0043T +0.0020T | |
| 250 | 280 | -0.035 0.000 | +0.088 +0.056 | 0.123T 0.056T | p6 |
| 9.8425 | 11.0236 | -0.0014 0.0000 | +0.0035 +0.0022 | +0.0048T +0.0022T | |
| 280 | 315 | -0.035 0.000 | +0.088 +0.056 | 0.123T 0.056T | p6 |
| 11.0236 | 12.4016 | -0.0014 0.0000 | +0.0035 +0.0022 | +0.0048T +0.0022T | |
| 315 | 355 | -0.040 0.000 | +0.098 +0.062 | 0.138T 0.062T | p6 |
| 12.4016 | 13.9764 | -0.0016 0.0000 | +0.0039 +0.0024 | +0.0054T +0.0024T | |
| 355 | 400 | -0.040 0.000 | +0.098 +0.062 | 0.138T 0.062T | p6 |
| 13.9764 | 15.7480 | -0.0016 0.0000 | +0.0039 +0.0024 | +0.0054T +0.0024T | |

**OUTER RING –
Industrial Equipment
Classes K and N (Metric)
ISO Bearing Classes P0 and P6**



Deviation from nominal (maximum) bearing O.D. and resultant fit.

T= Tight
L = Loose

These charts are guidelines for specifying shaft and housing fits related to particular operating conditions.

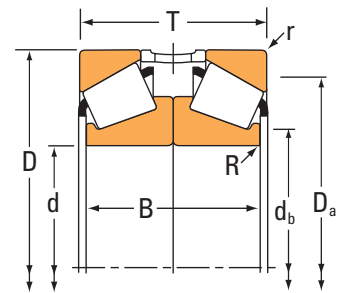
| Outer Ring O.D. | | Tolerance | Stationary Outer Ring | | | | | |
|-----------------|----------------|--------------------------------------|---------------------------------------|--------------------------------------|--------|--|--|--------|
| Range | | | Clamped | | | Adjustable | | |
| Over | Incl. | | Outer Ring Seat Deviation | Resultant Fit | Symbol | Outer Ring Seat Deviation | Resultant Fit | Symbol |
| mm in. | mm in. | mm in. | mm in. | mm in. | | mm in. | mm in. | |
| 18 0.7087 | 30 1.1811 | -0.012 0.000 -0.0005 0.0000 | +0.021 0.000 +0.0008 0.0000 | 0.000 0.033L 0.0000 0.0013L | H7 | +0.008 -0.005 +0.0003 -0.0002 | 0.005T 0.020L 0.0002T 0.0008L | J6 |
| 30 1.1811 | 50 1.9685 | -0.014 0.000 -0.0006 0.0000 | +0.025 0.000 +0.0010 +0.0000 | 0.000 0.039L 0.0000 0.0016L | H7 | +0.010 -0.006 +0.0004 -0.0002 | 0.006T 0.024L 0.0002T 0.0008L | J6 |
| 50 1.9685 | 80 3.1496 | -0.014 0.000 -0.0006 0.0000 | +0.030 0.000 +0.0012 +0.0000 | 0.000 0.044L 0.0000 0.0018L | H7 | +0.013 -0.006 +0.0005 -0.0002 | 0.006T 0.027L 0.0002T 0.0011L | J6 |
| 80 3.1496 | 120 4.7244 | -0.018 0.000 -0.0007 0.0000 | +0.035 0.000 +0.0014 +0.0000 | 0.000 0.053L 0.0000 0.0018L | H7 | +0.016 -0.006 +0.0006 -0.0002 | 0.006T 0.034L 0.0002T 0.0013L | J6 |
| 120 4.7244 | 150 5.9055 | -0.020 0.000 -0.0008 0.0000 | +0.040 0.000 +0.0016 +0.0000 | 0.000 0.060L 0.0000 0.0024L | H7 | +0.018 -0.007 +0.0007 -0.0003 | 0.007T 0.038L 0.0003T 0.0015L | J6 |
| 150 5.9055 | 180 7.0866 | -0.025 0.000 -0.0010 0.0000 | +0.040 0.000 +0.0016 +0.0000 | 0.000 0.065L 0.0000 0.0026L | H7 | +0.018 -0.007 +0.0007 -0.0003 | 0.007T 0.043L 0.0003T 0.0017L | J6 |
| 180 7.0866 | 250 9.8425 | -0.030 0.000 -0.0012 0.0000 | +0.046 0.000 +0.0018 +0.0000 | 0.000 0.076L 0.0000 0.0030L | H7 | +0.022 -0.007 +0.0009 -0.0003 | 0.007T 0.052L 0.0003T 0.0020L | J6 |
| 250 9.8425 | 315 12.4016 | -0.035 0.000 -0.0014 0.0000 | +0.052 0.000 +0.0020 +0.0000 | 0.000 0.087L 0.0000 0.0034L | H7 | +0.025 -0.007 +0.0010 -0.0003 | 0.007T 0.060L 0.0003T 0.0024L | J6 |
| 315 12.4016 | 400 15.7480 | -0.040 0.000 -0.0016 0.0000 | +0.057 0.000 +0.0022 +0.0000 | 0.000 0.097L 0.0000 0.0038L | H7 | +0.029 -0.007 +0.0011 -0.0003 | 0.007T 0.069L 0.0003T 0.0027L | J6 |
| 400 15.7480 | 500 19.6850 | -0.045 0.000 -0.0018 0.0000 | +0.063 0.000 +0.0025 +0.0000 | 0.000 0.108L 0.0000 0.0043L | H7 | +0.033 -0.007 +0.0013 -0.0003 | 0.007T 0.078L 0.0003T 0.0031L | J6 |

TIMKEN® METRIC TAPERED ROLLER BEARINGS - MATCHED BEARING ASSEMBLIES

DIRECT MOUNTING

| Bore | Part Number | BEP axial clearance | Bearing Dimensions | | | | Load Ratings | | | | |
|------|--------------|---------------------|--------------------|---------|--------|--------|--------------|----------------|----------------|-------------------------------|-------------------|
| | | | Bore | O.D. | Width | Width | Factors | | | Dynamic Radial ⁽¹⁾ | |
| | | | d | D | T | B | e | Y ₁ | Y ₂ | K | C ₁₍₂₎ |
| | | mm | mm | mm | mm | mm | | | | N | |
| 30 | 32206DF | 0.120 | 30.000 | 62.000 | 42.500 | 40.000 | 0.37 | 1.80 | 2.69 | 1.56 | 112000 |
| 35 | 31307DF | 0.090 | 35.000 | 80.000 | 45.500 | 42.000 | 0.83 | 0.82 | 1.22 | 0.71 | 127000 |
| 40 | 31308DF | 0.090 | 40.000 | 90.000 | 50.500 | 46.000 | 0.83 | 0.82 | 1.22 | 0.71 | 149000 |
| 45 | 31309DF | 0.100 | 45.000 | 100.000 | 54.500 | 50.000 | 0.83 | 0.82 | 1.22 | 0.71 | 184000 |
| | 31309DFC25 | 0.025 | 45.000 | 100.000 | 54.500 | 50.000 | 0.83 | 0.82 | 1.22 | 0.71 | 184000 |
| 50 | 30210DF | 0.160 | 50.000 | 90.000 | 43.500 | 40.000 | 0.42 | 1.61 | 2.30 | 1.39 | 150000 |
| | 30210DFC120 | 0.120 | 50.000 | 90.000 | 43.500 | 40.000 | 0.42 | 1.61 | 2.30 | 1.39 | 150000 |
| | 31310DF | 0.100 | 50.000 | 110.000 | 58.500 | 54.000 | 0.83 | 0.82 | 1.22 | 0.71 | 217000 |
| 55 | 31311DF | 0.120 | 55.000 | 120.000 | 63.000 | 58.000 | 0.83 | 0.82 | 1.22 | 0.71 | 253000 |
| | 32011XDF | 0.160 | 55.000 | 90.000 | 46.000 | 46.000 | 0.41 | 1.67 | 2.48 | 1.44 | 165000 |
| | 33011DFC170 | 0.170 | 55.000 | 90.000 | 54.000 | 54.000 | 0.31 | 2.16 | 3.30 | 1.87 | 173000 |
| | 33111DF | 0.180 | 55.000 | 95.000 | 60.000 | 60.000 | 0.37 | 1.80 | 2.69 | 1.56 | 232000 |
| 60 | 30212DF | 0.180 | 60.000 | 110.000 | 47.500 | 44.000 | 0.40 | 1.67 | 2.48 | 1.44 | 186000 |
| | 31312DF | 0.120 | 60.000 | 130.000 | 67.000 | 62.000 | 0.83 | 0.82 | 1.22 | 0.71 | 298000 |
| | 32012XDFC250 | 0.250 | 60.000 | 95.000 | 46.000 | 46.000 | 0.43 | 1.57 | 2.34 | 1.36 | 168000 |
| | 32212DFC290 | 0.290 | 60.000 | 110.000 | 59.500 | 56.000 | 0.40 | 1.67 | 2.48 | 1.44 | 239000 |
| 65 | 30213DF | 0.180 | 65.000 | 120.000 | 49.500 | 46.000 | 0.40 | 1.67 | 2.48 | 1.44 | 241000 |
| | 31313DF | 0.120 | 65.000 | 140.000 | 72.000 | 66.000 | 0.83 | 0.82 | 1.22 | 0.71 | 341000 |
| | 31313DFC25 | 0.025 | 65.000 | 140.000 | 72.000 | 66.000 | 0.83 | 0.82 | 1.22 | 0.71 | 341000 |
| | 32013XDF | 0.160 | 65.000 | 100.000 | 46.000 | 46.000 | 0.46 | 1.47 | 2.19 | 1.27 | 171000 |
| 70 | 31314DF | 0.140 | 70.000 | 150.000 | 76.000 | 70.000 | 0.83 | 0.82 | 1.22 | 0.71 | 371000 |
| | 31314DF120 | 0.120 | 70.000 | 150.000 | 76.000 | 70.000 | 0.83 | 0.82 | 1.22 | 0.71 | 371000 |
| | 32014XDF | 0.180 | 70.000 | 110.000 | 50.000 | 50.000 | 0.43 | 1.55 | 2.31 | 1.34 | 196000 |
| | 33014DF | 0.270 | 70.000 | 110.000 | 62.000 | 62.000 | 0.28 | 2.37 | 3.60 | 2.05 | 267000 |
| 75 | 30215DF | 0.200 | 75.000 | 130.000 | 54.500 | 50.000 | 0.44 | 1.55 | 2.31 | 1.34 | 275000 |
| | 31315DF | 0.140 | 75.000 | 160.000 | 80.000 | 74.000 | 0.83 | 0.82 | 1.22 | 0.71 | 432000 |
| | 32215DF | 0.200 | 75.000 | 130.000 | 66.500 | 62.000 | 0.44 | 1.55 | 2.31 | 1.34 | 320000 |
| | 33015DF | 0.270 | 75.000 | 115.000 | 62.000 | 62.000 | 0.30 | 2.27 | 3.38 | 1.96 | 274000 |
| | 33015DFC155 | 0.155 | 75.000 | 115.000 | 62.000 | 62.000 | 0.30 | 2.27 | 3.38 | 1.96 | 274000 |
| | 33115DFC150 | 0.150 | 75.000 | 125.000 | 74.000 | 74.000 | 0.40 | 1.70 | 2.53 | 1.47 | 356000 |
| 80 | 31316DF | 0.140 | 80.000 | 170.000 | 85.000 | 78.000 | 0.83 | 0.82 | 1.22 | 0.71 | 471000 |
| | 32016XDF | 0.180 | 80.000 | 125.000 | 58.000 | 58.000 | 0.42 | 1.60 | 2.30 | 1.38 | 289000 |
| | 32216DF | 0.200 | 80.000 | 140.000 | 70.500 | 66.000 | 0.42 | 1.61 | 2.30 | 1.39 | 358000 |
| 85 | 30217DF | 0.240 | 85.000 | 150.000 | 61.000 | 56.000 | 0.42 | 1.61 | 2.30 | 1.39 | 347000 |
| | 30217DFC70 | 0.070 | 85.000 | 150.000 | 61.000 | 56.000 | 0.42 | 1.61 | 2.30 | 1.39 | 347000 |
| | 31317DF | 0.140 | 85.000 | 180.000 | 89.000 | 82.000 | 0.83 | 0.82 | 1.22 | 0.71 | 495000 |
| | 32017XDF | 0.210 | 85.000 | 130.000 | 58.000 | 58.000 | 0.44 | 1.53 | 2.27 | 1.32 | 283000 |
| | 32217DF | 0.240 | 85.000 | 150.000 | 77.000 | 72.000 | 0.42 | 1.61 | 2.30 | 1.39 | 427000 |
| | 33017DFC240 | 0.240 | 85.000 | 130.000 | 72.000 | 72.000 | 0.29 | 2.31 | 3.44 | 2.00 | 383000 |
| | 33217DF | 0.250 | 85.000 | 150.000 | 98.000 | 98.000 | 0.42 | 1.62 | 2.41 | 1.40 | 611000 |
| 90 | 30218DF | 0.240 | 90.000 | 160.000 | 65.000 | 60.000 | 0.42 | 1.61 | 2.30 | 1.39 | 419000 |
| | 31318DF | 0.140 | 90.000 | 190.000 | 93.000 | 86.000 | 0.83 | 0.82 | 1.22 | 0.71 | 564000 |
| | 31318DFC70 | 0.070 | 90.000 | 190.000 | 93.000 | 86.000 | 0.83 | 0.82 | 1.22 | 0.71 | 564000 |
| | 32018XDF | 0.210 | 90.000 | 140.000 | 64.000 | 64.000 | 0.42 | 1.60 | 2.30 | 1.38 | 319000 |
| | 32218DF | 0.240 | 90.000 | 160.000 | 85.000 | 80.000 | 0.42 | 1.61 | 2.30 | 1.39 | 544000 |
| | 33018DF | 0.370 | 90.000 | 140.000 | 78.000 | 78.000 | 0.27 | 2.51 | 3.74 | 2.17 | 430000 |
| | 33018DFC150 | 0.150 | 90.000 | 140.000 | 78.000 | 78.000 | 0.27 | 2.51 | 3.74 | 2.17 | 430000 |

| Shaft Dimensions | | Housing Dimensions | | Bearing Assembly Weight kg |
|---------------------------------------|--------------------------------|---|-------------------------------------|-------------------------------|
| Max. Shaft Fillet Radius $R^{(2)}$ | Backing Shoulder Dia. d_b | Max. housing Fillet Radius $r^{(2)}$ | Max. Backing Shoulder Dia. D_a | |
| mm | mm | mm | mm | |
| 0.3 | 37.0 | 1.0 | 54.0 | 0.61 |
| 0.3 | 45.0 | 1.5 | 68.0 | 1.14 |
| 0.4 | 52.0 | 1.5 | 76.0 | 1.48 |
| 0.5 | 56.0 | 1.5 | 85.0 | 1.95 |
| 0.5 | 56.0 | 1.5 | 85.0 | 1.95 |
| 0.7 | 58.0 | 1.5 | 81.0 | 1.15 |
| 0.7 | 58.0 | 1.5 | 81.0 | 1.15 |
| 0.3 | 63.0 | 2.0 | 93.0 | 2.56 |
| 0.3 | 68.0 | 2.0 | 103.0 | 3.27 |
| 0.3 | 61.0 | 1.5 | 82.0 | 1.14 |
| 0.3 | 61.0 | 1.5 | 82.0 | 1.36 |
| 0.3 | 61.0 | 1.5 | 85.0 | 1.73 |
| 0.5 | 68.0 | 1.5 | 99.0 | 1.84 |
| 1.0 | 74.0 | 2.5 | 111.0 | 3.95 |
| 0.4 | 66.0 | 1.5 | 86.0 | 1.23 |
| 0.3 | 67.0 | 1.5 | 98.0 | 2.35 |
| 0.5 | 74.0 | 1.5 | 110.0 | 2.28 |
| 0.5 | 80.0 | 2.5 | 120.0 | 5.04 |
| 0.5 | 80.0 | 2.5 | 120.0 | 5.04 |
| 0.3 | 71.0 | 1.5 | 91.0 | 1.31 |
| 1.0 | 85.0 | 2.5 | 128.0 | 5.85 |
| 1.0 | 85.0 | 2.5 | 128.0 | 5.85 |
| 0.3 | 76.0 | 1.5 | 100.0 | 1.79 |
| 0.6 | 77.0 | 1.5 | 101.0 | 2.16 |
| 0.5 | 85.0 | 1.5 | 120.0 | 2.85 |
| 1.0 | 91.0 | 2.5 | 138.0 | 7.28 |
| 0.3 | 84.0 | 1.5 | 117.0 | 3.47 |
| 0.3 | 83.0 | 1.5 | 104.0 | 2.34 |
| 0.3 | 83.0 | 1.5 | 104.0 | 2.34 |
| 0.3 | 88.0 | 1.5 | 112.0 | 3.61 |
| 0.5 | 97.0 | 2.5 | 146.0 | 8.62 |
| 0.3 | 87.0 | 1.5 | 114.0 | 5.48 |
| 0.5 | 91.0 | 2.0 | 128.0 | 4.26 |
| 0.5 | 93.0 | 2.0 | 137.0 | 4.33 |
| 0.5 | 93.0 | 2.0 | 137.0 | 4.33 |
| 0.5 | 110.0 | 3.0 | 154.0 | 10.5 |
| 0.3 | 92.0 | 1.5 | 119.0 | 2.74 |
| 0.5 | 97.0 | 2.0 | 135.0 | 5.22 |
| 0.3 | 93.0 | 1.5 | 120.0 | 3.50 |
| 0.3 | 94.0 | 2.0 | 134.0 | 7.40 |
| 0.6 | 102.0 | 2.0 | 146.0 | 5.47 |
| 1.0 | 117.0 | 3.0 | 164.0 | 12.5 |
| 1.0 | 117.0 | 3.0 | 164.0 | 12.5 |
| 0.3 | 99.0 | 1.5 | 128.0 | 3.50 |
| 0.6 | 101.0 | 2.0 | 145.0 | 7.15 |
| 0.3 | 98.0 | 1.5 | 131.0 | 4.50 |
| 0.3 | 98.0 | 1.5 | 131.0 | 4.50 |



⁽¹⁾ Based on 1×10^6 revolutions L_{10} life, for the ISO life-calculation method. $C_{1(2)}$ is the double-row radial value.

⁽²⁾ These maximum fillet radii will be cleared by the bearing corners.

Additional series may exist. If you do not see the assembly you are looking for, consult your Timken engineer for more information.

TIMKEN® METRIC TAPERED ROLLER BEARINGS - MATCHED BEARING ASSEMBLIES

DIRECT MOUNTING

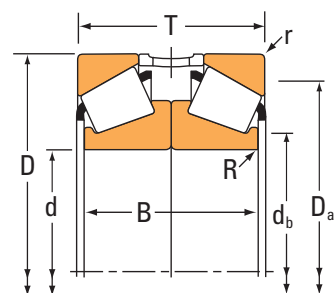
| Bore | Part Number | BEP axial clearance | Bearing Dimensions | | | | Load Ratings | | | | |
|-------------|--------------|---------------------|--------------------|---------|---------|---------|--------------|----------------|----------------|-------------------------------|-------------------|
| | | | Bore | O.D. | Width | Width | Factors | | | Dynamic Radial ⁽¹⁾ | |
| | | | d | D | T | B | e | Y ₁ | Y ₂ | K | C ₁₍₂₎ |
| | | mm | mm | mm | mm | mm | | | | N | |
| 95 | 30219DFC110 | 0.110 | 95.000 | 170.000 | 69.000 | 64.000 | 0.42 | 1.60 | 2.30 | 1.39 | 460000 |
| | 32219DF | 0.240 | 95.000 | 170.000 | 91.000 | 86.000 | 0.42 | 1.61 | 2.30 | 1.39 | 551000 |
| | 33019DF | 0.370 | 95.000 | 140.000 | 78.000 | 78.000 | 0.28 | 2.43 | 3.62 | 2.10 | 429000 |
| 100 | 30220DF | 0.240 | 100.000 | 180.000 | 74.000 | 68.000 | 0.42 | 1.60 | 2.30 | 1.39 | 524000 |
| | 30320DFC400 | 0.400 | 100.000 | 215.000 | 103.000 | 92.000 | 0.35 | 1.90 | 2.90 | 1.69 | 779520 |
| | 31320XDF | 0.140 | 100.000 | 215.000 | 113.000 | 102.000 | 0.83 | 0.80 | 1.20 | 0.71 | 725000 |
| | 32020XDF | 0.210 | 100.000 | 150.000 | 64.000 | 64.000 | 0.46 | 1.50 | 1.20 | 1.27 | 339000 |
| | 32220DF | 0.240 | 100.000 | 180.000 | 98.000 | 92.000 | 0.42 | 1.60 | 2.30 | 1.39 | 685000 |
| | 32320DF | 0.270 | 100.000 | 215.000 | 155.000 | 146.000 | 0.35 | 1.90 | 2.90 | 1.69 | 1020000 |
| | 33020DF | 0.370 | 100.000 | 150.000 | 78.000 | 78.000 | 0.29 | 2.30 | 3.50 | 2.03 | 436000 |
| 105 | 32021XDF | 0.250 | 105.000 | 160.000 | 70.000 | 70.000 | 0.44 | 1.50 | 2.50 | 1.31 | 395000 |
| | 32021XDFC150 | 0.150 | 105.000 | 160.000 | 70.000 | 70.000 | 0.44 | 1.50 | 2.50 | 1.31 | 395000 |
| | 32221DF | 0.250 | 105.000 | 190.000 | 106.000 | 100.000 | 0.42 | 1.60 | 2.40 | 1.39 | 694000 |
| | 33021DF | 0.380 | 105.000 | 160.000 | 86.000 | 86.000 | 0.28 | 2.40 | 3.50 | 2.07 | 506000 |
| 110 | 30222DF | 0.250 | 110.000 | 200.000 | 82.000 | 76.000 | 0.42 | 1.60 | 2.30 | 1.39 | 651000 |
| | 31322DF | 0.160 | 110.000 | 240.000 | 126.000 | 114.000 | 0.83 | 0.81 | 1.20 | 0.71 | 910000 |
| | 32022XDF | 0.250 | 110.000 | 170.000 | 76.000 | 76.000 | 0.43 | 1.60 | 2.30 | 1.36 | 490680 |
| | 32022XDFC200 | 0.200 | 110.000 | 170.000 | 76.000 | 76.000 | 0.43 | 1.60 | 2.30 | 1.36 | 490680 |
| | 32222DF | 0.250 | 110.000 | 200.000 | 112.000 | 106.000 | 0.42 | 1.60 | 2.30 | 1.39 | 858000 |
| | 32322DF | 0.310 | 110.000 | 240.000 | 169.000 | 160.000 | 0.35 | 1.90 | 2.90 | 1.69 | 1320000 |
| | 33122DF | 0.250 | 110.000 | 180.000 | 112.000 | 112.000 | 0.42 | 1.60 | 2.30 | 1.40 | 718000 |
| 33122DFC120 | 0.120 | 110.000 | 180.000 | 112.000 | 112.000 | 0.42 | 1.60 | 2.30 | 1.40 | 718000 | |
| 120 | 30224DF | 0.250 | 120.000 | 215.000 | 87.000 | 80.000 | 0.44 | 1.60 | 2.30 | 1.34 | 652000 |
| | 30324DFC600 | 0.600 | 120.000 | 260.000 | 119.000 | 110.000 | 0.35 | 1.90 | 2.90 | 1.69 | 1090000 |
| | 31324XDF | 0.160 | 120.000 | 260.000 | 136.000 | 124.000 | 0.83 | 0.81 | 1.20 | 0.71 | 1060000 |
| | 32024XDF | 0.250 | 120.000 | 180.000 | 76.000 | 76.000 | 0.46 | 1.50 | 2.20 | 1.27 | 509000 |
| | 32224DF | 0.250 | 120.000 | 215.000 | 123.000 | 116.000 | 0.44 | 1.60 | 2.30 | 1.34 | 963000 |
| | 32324DF | 0.300 | 120.000 | 260.000 | 181.000 | 172.000 | 0.35 | 1.90 | 2.90 | 1.69 | 1580000 |
| | 33024DF | 0.380 | 120.000 | 180.000 | 96.000 | 96.000 | 0.31 | 2.30 | 3.40 | 1.91 | 612480 |
| 33024DFC250 | 0.250 | 120.000 | 180.000 | 96.000 | 96.000 | 0.31 | 2.30 | 3.40 | 1.91 | 612480 | |
| 130 | 30226DF | 0.270 | 130.000 | 230.000 | 87.500 | 80.000 | 0.44 | 1.60 | 2.30 | 1.34 | 708000 |
| | 31326DF | 0.190 | 130.000 | 280.000 | 144.000 | 132.000 | 0.83 | 0.81 | 1.20 | 0.71 | 1200000 |
| | 32026XDF | 0.270 | 130.000 | 200.000 | 90.000 | 90.000 | 0.43 | 1.60 | 2.30 | 1.34 | 673000 |
| | 32226DF | 0.270 | 130.000 | 230.000 | 135.500 | 128.000 | 0.44 | 1.60 | 2.30 | 1.34 | 1120000 |
| | 32326DF | 0.350 | 130.000 | 280.000 | 197.500 | 186.000 | 0.35 | 1.90 | 2.90 | 1.69 | 1950000 |
| 140 | 30228DF | 0.270 | 140.000 | 250.000 | 91.500 | 84.000 | 0.44 | 1.60 | 2.30 | 1.34 | 825000 |
| | 30228DFC100 | 0.100 | 140.000 | 250.000 | 91.500 | 84.000 | 0.44 | 1.60 | 2.30 | 1.34 | 825000 |
| | 32028XDF | 0.270 | 140.000 | 210.000 | 90.000 | 90.000 | 0.46 | 1.50 | 2.20 | 1.27 | 685000 |
| | 32228DF | 0.270 | 140.000 | 250.000 | 143.500 | 136.000 | 0.44 | 1.60 | 2.30 | 1.34 | 1230000 |
| | 32928DF | 0.340 | 140.000 | 190.000 | 64.000 | 64.000 | 0.36 | 1.80 | 2.80 | 1.62 | 390000 |
| 150 | 30230DF | 0.300 | 150.000 | 270.000 | 98.000 | 90.000 | 0.44 | 1.60 | 2.30 | 1.34 | 928000 |
| | 30230DFC350 | 0.350 | 150.000 | 270.000 | 98.000 | 90.000 | 0.44 | 1.60 | 2.30 | 1.34 | 928000 |
| | 30230DFC475 | 0.475 | 150.000 | 270.000 | 98.000 | 90.000 | 0.44 | 1.60 | 2.30 | 1.34 | 928000 |
| | 31330DF | 0.210 | 150.000 | 320.000 | 164.000 | 150.000 | 0.83 | 0.81 | 1.20 | 0.71 | 1500000 |
| | 32030XDF | 0.300 | 150.000 | 225.000 | 96.000 | 96.000 | 0.46 | 1.50 | 2.20 | 1.27 | 728000 |
| | 32030XDFC145 | 0.145 | 150.000 | 225.000 | 96.000 | 96.000 | 0.46 | 1.50 | 2.20 | 1.27 | 728000 |
| | 32230DF | 0.300 | 150.000 | 270.000 | 154.000 | 146.000 | 0.44 | 1.60 | 2.30 | 1.34 | 1480000 |
| 32230DFC360 | 0.360 | 150.000 | 270.000 | 154.000 | 146.000 | 0.44 | 1.60 | 2.30 | 1.34 | 1480000 | |

TIMKEN® METRIC TAPERED ROLLER BEARINGS - MATCHED BEARING ASSEMBLIES

DIRECT MOUNTING

| Bore | Part Number | BEP axial clearance | Bearing Dimensions | | | | Load Ratings | | | | |
|------|--------------|---------------------|--------------------|---------|---------|---------|--------------|----------------|----------------|-------------------------------|-------------------|
| | | | Bore | O.D. | Width | Width | Factors | | | Dynamic Radial ⁽¹⁾ | |
| | | | d | D | T | B | e | Y ₁ | Y ₂ | K | C ₁₍₂₎ |
| | | mm | mm | mm | mm | mm | | | | N | |
| 160 | 32032XDF | 0.300 | 160.000 | 240.000 | 102.000 | 102.000 | 0.46 | 1.50 | 2.20 | 1.27 | 836000 |
| | 32232DF | 0.300 | 160.000 | 290.000 | 168.000 | 160.000 | 0.44 | 1.60 | 2.30 | 1.34 | 1770000 |
| 170 | 32034XDF | 0.340 | 170.000 | 260.000 | 114.000 | 114.000 | 0.44 | 1.50 | 2.30 | 1.31 | 1000000 |
| | 32034XDFC545 | 0.545 | 170.000 | 260.000 | 114.000 | 114.000 | 0.44 | 1.50 | 2.30 | 1.31 | 1000000 |
| | 32234DF | 0.340 | 170.000 | 310.000 | 182.000 | 172.000 | 0.44 | 1.60 | 2.30 | 1.34 | 1940000 |
| | 32234DFC480 | 0.480 | 170.000 | 310.000 | 182.000 | 172.000 | 0.44 | 1.60 | 2.30 | 1.34 | 1940000 |
| | 32934DF | 0.400 | 170.000 | 230.000 | 76.000 | 76.000 | 0.38 | 1.70 | 2.80 | 1.52 | 584000 |
| | 32934DFC225 | 0.225 | 170.000 | 230.000 | 76.000 | 76.000 | 0.38 | 1.70 | 2.80 | 1.52 | 584000 |
| 180 | 30236DF | 0.340 | 180.000 | 320.000 | 114.000 | 104.000 | 0.45 | 1.50 | 2.30 | 1.30 | 1200000 |
| | 32036XDF | 0.340 | 180.000 | 280.000 | 128.000 | 128.000 | 0.42 | 1.60 | 2.30 | 1.38 | 1230000 |
| | 32236DF | 0.340 | 180.000 | 320.000 | 182.000 | 172.000 | 0.45 | 1.50 | 2.30 | 1.30 | 1980000 |
| | 32236DFC455 | 0.455 | 180.000 | 320.000 | 182.000 | 172.000 | 0.45 | 1.50 | 2.30 | 1.30 | 1980000 |
| | 32936DF | 0.400 | 180.000 | 250.000 | 90.000 | 90.000 | 0.48 | 1.40 | 2.10 | 1.22 | 702000 |
| 190 | 30238DF | 0.270 | 190.000 | 340.000 | 120.000 | 110.000 | 0.44 | 1.60 | 2.30 | 1.34 | 1460000 |
| | 32038XDF | 0.370 | 190.000 | 290.000 | 128.000 | 128.000 | 0.44 | 1.50 | 2.30 | 1.32 | 1250000 |
| | 32238DF | 0.380 | 190.000 | 340.000 | 194.000 | 184.000 | 0.44 | 1.60 | 2.30 | 1.34 | 2370000 |
| | 32938DF | 0.400 | 190.000 | 260.000 | 90.000 | 90.000 | 0.48 | 1.40 | 2.10 | 1.22 | 693000 |
| 200 | 30240DF | 0.380 | 200.000 | 360.000 | 128.000 | 116.000 | 0.44 | 1.60 | 2.30 | 1.34 | 1550000 |
| | 30240DFC570 | 0.570 | 200.000 | 360.000 | 128.000 | 116.000 | 0.44 | 1.60 | 2.30 | 1.34 | 1550000 |
| | 32040XDF | 0.370 | 200.000 | 310.000 | 140.000 | 140.000 | 0.43 | 1.60 | 2.30 | 1.36 | 1480000 |
| | 32240DF | 0.370 | 200.000 | 360.000 | 208.000 | 196.000 | 0.41 | 1.70 | 2.50 | 1.44 | 2420000 |
| | 32240DFC425 | 0.425 | 200.000 | 360.000 | 208.000 | 196.000 | 0.41 | 1.70 | 2.50 | 1.44 | 2420000 |
| | 32940DF | 0.420 | 200.000 | 280.000 | 102.000 | 102.000 | 0.39 | 1.70 | 2.50 | 1.48 | 922000 |
| 220 | 30244DF | 0.250 | 220.000 | 400.000 | 144.000 | 130.000 | 0.42 | 1.60 | 2.30 | 1.39 | 1910000 |
| | 32044XDF | 0.420 | 220.000 | 340.000 | 152.000 | 152.000 | 0.43 | 1.60 | 2.30 | 1.36 | 1730000 |
| | 32044XDFC325 | 0.325 | 220.000 | 340.000 | 152.000 | 152.000 | 0.43 | 1.60 | 2.30 | 1.36 | 1730000 |
| | 32244DF | 0.420 | 220.000 | 400.000 | 228.000 | 216.000 | 0.44 | 1.60 | 2.30 | 1.34 | 3220000 |
| | 32944DF | 0.470 | 220.000 | 300.000 | 102.000 | 102.000 | 0.43 | 1.60 | 2.30 | 1.37 | 977000 |
| | 32944DFC300 | 0.300 | 220.000 | 300.000 | 102.000 | 102.000 | 0.43 | 1.60 | 2.30 | 1.37 | 977000 |
| 240 | 32048XDF | 0.470 | 240.000 | 360.000 | 152.000 | 152.000 | 0.46 | 1.50 | 2.20 | 1.27 | 1790000 |
| | 32948DF | 0.470 | 240.000 | 320.000 | 102.000 | 102.000 | 0.46 | 1.50 | 2.20 | 1.27 | 994000 |
| 260 | 32052XDF | 0.520 | 260.000 | 400.000 | 174.000 | 174.000 | 0.43 | 1.60 | 2.30 | 1.34 | 2300000 |
| | 32252DF | 0.510 | 260.000 | 480.000 | 274.000 | 260.000 | 0.43 | 1.60 | 2.30 | 1.36 | 4340000 |
| 280 | 32056XDF | 0.520 | 280.000 | 420.000 | 174.000 | 174.000 | 0.46 | 1.50 | 2.20 | 1.27 | 2400000 |
| | 32056XDFC575 | 0.575 | 280.000 | 420.000 | 174.000 | 174.000 | 0.46 | 1.50 | 2.20 | 1.27 | 2400000 |
| | 32956DF | 0.560 | 280.000 | 380.000 | 127.000 | 127.000 | 0.43 | 1.60 | 2.30 | 1.35 | 1480000 |
| | 32956DFC645 | 0.645 | 280.000 | 380.000 | 127.000 | 127.000 | 0.43 | 1.60 | 2.30 | 1.35 | 1480000 |
| 300 | 32960DF | 0.670 | 300.000 | 420.000 | 152.000 | 152.000 | 0.39 | 1.70 | 2.50 | 1.48 | 2050000 |
| | 32960DFC575 | 0.575 | 300.000 | 420.000 | 152.000 | 152.000 | 0.39 | 1.70 | 2.50 | 1.48 | 2050000 |
| | 32960DFC585 | 0.585 | 300.000 | 420.000 | 152.000 | 152.000 | 0.39 | 1.70 | 2.50 | 1.48 | 2050000 |
| 320 | 32064XDF | 0.620 | 320.000 | 480.000 | 200.000 | 200.000 | 0.46 | 1.50 | 2.20 | 1.27 | 3140000 |
| | 32064XDFC675 | 0.675 | 320.000 | 480.000 | 200.000 | 200.000 | 0.46 | 1.50 | 2.20 | 1.27 | 3140000 |
| 340 | 32968DF | 0.610 | 340.000 | 460.000 | 152.000 | 152.000 | 0.44 | 1.60 | 2.30 | 1.34 | 2120000 |
| | 32968DFC225 | 0.225 | 340.000 | 460.000 | 152.000 | 152.000 | 0.44 | 1.60 | 2.30 | 1.34 | 2120000 |
| | 32968DFC270 | 0.270 | 340.000 | 460.000 | 152.000 | 152.000 | 0.44 | 1.60 | 2.30 | 1.34 | 2120000 |
| | 32968DFC575 | 0.575 | 340.000 | 460.000 | 152.000 | 152.000 | 0.44 | 1.60 | 2.30 | 1.34 | 2120000 |
| 360 | 32972DFC225 | 0.225 | 360.000 | 480.000 | 152.000 | 152.000 | 0.46 | 1.50 | 2.20 | 1.27 | 2170000 |
| | 32972DFC425 | 0.425 | 360.000 | 480.000 | 152.000 | 152.000 | 0.46 | 1.50 | 2.20 | 1.27 | 2170000 |

| Shaft Dimensions | | Housing Dimensions | | Bearing Assembly Weight |
|--------------------------|-----------------------|----------------------------|----------------------------|-------------------------|
| Max. Shaft Fillet Radius | Backing Shoulder Dia. | Max. housing Fillet Radius | Max. Backing Shoulder Dia. | |
| R ⁽²⁾ | d _b | r ⁽²⁾ | D _a | |
| mm | mm | mm | mm | kg |
| 1.0 | 174.0 | 2.5 | 221.0 | 16.3 |
| 1.8 | 185.0 | 3.0 | 261.0 | 47.0 |
| 1.0 | 187.0 | 2.5 | 238.0 | 21.8 |
| 1.0 | 187.0 | 2.5 | 238.0 | 21.8 |
| 0.8 | 198.0 | 4.0 | 279.0 | 58.6 |
| 0.8 | 198.0 | 4.0 | 279.0 | 58.6 |
| 0.6 | 179.0 | 2.0 | 215.0 | 9.10 |
| 0.6 | 179.0 | 2.0 | 215.0 | 9.10 |
| 0.8 | 200.0 | 4.0 | 294.0 | 38.0 |
| 1.0 | 197.0 | 2.5 | 256.0 | 29.0 |
| 0.8 | 210.0 | 4.0 | 288.0 | 62.5 |
| 0.8 | 210.0 | 4.0 | 288.0 | 62.5 |
| 0.6 | 192.0 | 2.0 | 231.0 | 13.4 |
| 1.5 | 215.0 | 4.0 | 310.0 | 47.0 |
| 1.0 | 207.0 | 2.5 | 267.0 | 30.2 |
| 1.5 | 219.0 | 4.0 | 305.0 | 75.0 |
| 1.0 | 202.0 | 2.0 | 242.0 | 14.3 |
| 3.3 | 227.0 | 4.0 | 331.0 | 53.8 |
| 3.3 | 227.0 | 4.0 | 331.0 | 53.8 |
| 1.5 | 220.0 | 2.5 | 284.0 | 38.7 |
| 1.5 | 229.0 | 4.0 | 326.0 | 87.8 |
| 1.5 | 229.0 | 4.0 | 326.0 | 87.8 |
| 1.0 | 213.0 | 2.5 | 262.0 | 19.5 |
| 1.5 | 245.0 | 4.0 | 364.0 | 74.4 |
| 1.5 | 241.0 | 3.0 | 312.0 | 49.6 |
| 1.5 | 241.0 | 3.0 | 312.0 | 49.6 |
| 0.8 | 251.0 | 4.0 | 362.0 | 122.6 |
| 1.0 | 232.0 | 2.5 | 281.0 | 20.5 |
| 1.0 | 232.0 | 2.5 | 281.0 | 20.5 |
| 2.0 | 259.0 | 3.0 | 331.0 | 53.3 |
| 1.0 | 251.0 | 2.5 | 300.0 | 21.3 |
| 1.5 | 284.0 | 4.0 | 367.0 | 78.7 |
| 1.5 | 306.0 | 5.0 | 432.0 | 215.0 |
| 1.5 | 302.0 | 4.0 | 388.0 | 83.8 |
| 1.5 | 302.0 | 4.0 | 388.0 | 83.8 |
| 1.0 | 296.0 | 2.5 | 356.0 | 41.0 |
| 1.0 | 296.0 | 2.5 | 356.0 | 41.0 |
| 0.8 | 318.0 | 3.0 | 393.0 | 64.5 |
| 0.8 | 318.0 | 3.0 | 393.0 | 64.5 |
| 0.8 | 318.0 | 3.0 | 393.0 | 64.5 |
| 1.5 | 343.0 | 4.0 | 442.0 | 124.0 |
| 1.5 | 343.0 | 4.0 | 442.0 | 124.0 |
| 1.5 | 359.0 | 3.0 | 432.0 | 71.2 |
| 1.5 | 359.0 | 3.0 | 432.0 | 71.2 |
| 1.5 | 359.0 | 3.0 | 432.0 | 71.2 |
| 1.5 | 359.0 | 3.0 | 432.0 | 71.2 |
| 1.5 | 378.0 | 3.0 | 451.0 | 92.8 |
| 1.5 | 378.0 | 3.0 | 451.0 | 92.8 |



⁽¹⁾ Based on 1 x 10⁶ revolutions L₁₀ life, for the ISO life-calculation method. C₁₍₂₎ is the double-row radial value.

⁽²⁾ These maximum fillet radii will be cleared by the bearing corners.

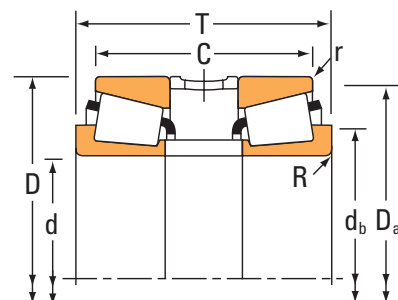
Additional series may exist. If you do not see the assembly you are looking for, consult your Timken engineer for more information.

TIMKEN® METRIC TAPERED ROLLER BEARINGS - MATCHED BEARING ASSEMBLIES

INDIRECT MOUNTING

| Bore | Part Number | BEP | Bearing Dimensions | | | | Load Ratings | | | | |
|------|------------------|-------|--------------------|---------|---------|---------|--------------|----------------|----------------|------|-------------------------------|
| | | | Bore | O.D. | Width | Width | Factors | | | | Dynamic Radial ⁽¹⁾ |
| | | | d | D | T | C | e | Y ₁ | Y ₂ | K | C ₁₍₂₎ |
| | | mm | mm | mm | mm | mm | | | | | N |
| 75 | 30215T70DBC270 | 0.270 | 75.000 | 130.000 | 70.000 | 59.500 | 0.44 | 1.55 | 2.31 | 1.34 | 275000 |
| | 32215T80DB | 0.200 | 75.000 | 130.000 | 80.000 | 67.500 | 0.44 | 1.55 | 2.31 | 1.34 | 320000 |
| 80 | 32216T78DBC110 | 0.110 | 80.000 | 140.000 | 78.000 | 63.500 | 0.42 | 1.60 | 2.30 | 1.39 | 358000 |
| 85 | 30217T71DB | 0.240 | 85.000 | 150.000 | 71.000 | 58.000 | 0.42 | 1.61 | 2.30 | 1.39 | 347000 |
| 95 | 32019XT73DBC100 | 0.100 | 95.000 | 145.000 | 73.000 | 57.000 | 0.44 | 1.53 | 2.27 | 1.32 | 324000 |
| 100 | 32220T108DB | 0.240 | 100.000 | 180.000 | 108.000 | 88.000 | 0.42 | 1.60 | 2.30 | 1.39 | 640000 |
| 110 | 32022XT84DBC200 | 0.200 | 110.000 | 170.000 | 84.000 | 66.000 | 0.43 | 1.60 | 2.30 | 1.36 | 963000 |
| 120 | 32024XT84DBC200 | 0.200 | 120.000 | 180.000 | 84.000 | 66.000 | 0.46 | 1.50 | 2.20 | 1.27 | 509000 |
| 130 | 30226T97.5DB | 0.270 | 130.000 | 230.000 | 97.500 | 78.000 | 0.44 | 1.60 | 2.30 | 1.34 | 708000 |
| 140 | 30228T106DB | 0.280 | 140.000 | 250.000 | 106.000 | 86.500 | 0.44 | 1.60 | 2.30 | 1.34 | 825000 |
| | 32028XT130DB | 0.270 | 140.000 | 210.000 | 130.000 | 108.000 | 0.46 | 1.50 | 2.20 | 1.27 | 685000 |
| | 32228T158DB | 0.270 | 140.000 | 250.000 | 158.000 | 130.500 | 0.44 | 1.60 | 2.30 | 1.34 | 1230000 |
| 150 | 31330T179DB | 0.200 | 150.000 | 320.000 | 179.000 | 115.000 | 0.83 | 0.81 | 1.20 | 0.71 | 1500000 |
| | 32230T168DB | 0.360 | 150.000 | 270.000 | 168.000 | 134.000 | 0.44 | 1.60 | 2.30 | 1.34 | 140000 |
| 180 | 32036XT150DB | 0.340 | 180.000 | 280.000 | 150.000 | 118.000 | 0.42 | 1.60 | 2.30 | 1.38 | 1230000 |
| | 32936T135DBC260 | 0.260 | 180.000 | 250.000 | 135.000 | 113.000 | 0.48 | 1.40 | 2.10 | 1.22 | 702000 |
| 190 | 32038XT146DBC220 | 0.220 | 190.000 | 290.000 | 146.000 | 114.000 | 0.44 | 1.50 | 2.30 | 1.32 | 1250000 |
| 220 | 32044XT165DBC340 | 0.340 | 220.000 | 340.000 | 165.000 | 127.000 | 0.43 | 1.60 | 2.30 | 1.36 | 1730000 |
| | 32044XT168DB | 0.420 | 220.000 | 340.000 | 168.000 | 130.000 | 0.43 | 1.60 | 2.30 | 1.36 | 1730000 |
| 240 | 32048XT172DB | 0.470 | 240.000 | 360.000 | 172.000 | 134.000 | 0.46 | 1.50 | 2.20 | 1.27 | 1790000 |
| 260 | 32052XT189DBC280 | 0.280 | 260.000 | 400.000 | 189.000 | 145.000 | 0.43 | 1.60 | 2.30 | 1.34 | 2300000 |
| | 32052XT194DB | 0.520 | 260.000 | 400.000 | 194.000 | 150.000 | 0.43 | 1.60 | 2.30 | 1.34 | 2300000 |

| Shaft Dimensions | | Housing Dimensions | | Bearing Assembly Weight kg |
|---------------------------------------|--------------------------------|---|-------------------------------------|-------------------------------|
| Max. Shaft Fillet Radius $R^{(2)}$ | Backing Shoulder Dia. d_b | Max. housing Fillet Radius $r^{(2)}$ | Max. Backing Shoulder Dia. D_a | |
| mm | mm | mm | mm | |
| 2.0 | 88.0 | 0.8 | 124.0 | 3.25 |
| 2.0 | 88.0 | 0.8 | 125.0 | 3.80 |
| 2.5 | 96.0 | 1.0 | 134.0 | 4.45 |
| 2.5 | 97.0 | 1.0 | 142.0 | 4.00 |
| 2.0 | 107.0 | 0.8 | 139.0 | 4.10 |
| 3.0 | 117.0 | 1.3 | 170.0 | 10.5 |
| 2.5 | 124.0 | 0.8 | 164.0 | 6.60 |
| 2.5 | 134.0 | 0.8 | 174.0 | 7.30 |
| 4.0 | 152.0 | 1.0 | 217.0 | 15.0 |
| 4.0 | 164.0 | 1.0 | 234.0 | 19.5 |
| 2.5 | 158.0 | 0.6 | 203.0 | 12.8 |
| 4.0 | 171.0 | 1.0 | 239.0 | 30.2 |
| 5.0 | 210.0 | 3.3 | 300.0 | 58.5 |
| 4.0 | 183 | 2.3 | 254.0 | 38.0 |
| 3.0 | 203.0 | 1.0 | 270.0 | 30.0 |
| 2.5 | 195.0 | 0.6 | 243.0 | 14.5 |
| 3.0 | 214.0 | 1.0 | 281.0 | 31.2 |
| 4.0 | 248.0 | 1.5 | 325.0 | 50.0 |
| 4.0 | 248.0 | 1.5 | 325.0 | 52.0 |
| 4.0 | 268.0 | 2.0 | 346.0 | 56.0 |
| 5.0 | 293.0 | 1.5 | 382.0 | 80.5 |
| 5.0 | 293.0 | 1.5 | 382.0 | 81.0 |



⁽¹⁾ Based on 1×10^6 revolutions L_{10} life, for the ISO life-calculation method. $C_{1(2)}$ is the double-row radial value.

⁽²⁾ These maximum fillet radii will be cleared by the bearing corners.

Additional series may exist. If you do not see the assembly you are looking for, consult your Timken engineer for more information.

TIMKEN

The Timken team applies their know-how to improve the reliability and performance of machinery in diverse markets worldwide. The company designs, makes and markets high-performance mechanical components, including bearings, gears, chain and related mechanical power transmission products and services.

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