

**SPHERICAL ROLLER BEARINGS** – *continued*

- Shaft and housing fits, internal clearances, tolerances and other technical data for these bearings are found in the engineering section of this catalog and the Timken Engineering Manual (order no. 10424).
- Bearings are available with a tapered bore for adapter-type mounting. To order, add the suffix “K” to bearing number (e.g., 23120K).
- Consult your Timken sales engineer for up-to-date information about the availability of the bearings you have selected.

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| Bearing Part Number | Bearing Dimensions |                |               | Load Ratings   |                          | Cage Type | Mounting Data                        |                         |                           | Equivalent Radial Load Factors <sup>(2)</sup> |                                   |                                   |  | Geometry Factor <sup>(3)</sup><br>C <sub>9</sub> | Speed Reference               |                |      | Weight       |
|---------------------|--------------------|----------------|---------------|----------------|--------------------------|-----------|--------------------------------------|-------------------------|---------------------------|---|-----------------------------------|-----------------------------------|--|--|-------------------------------|----------------|------|--------------|
|                     | Bore<br>d          | O.D.<br>D      | Width<br>B    | Dynamic<br>C   | Static<br>C <sub>0</sub> |           | Fillet <sup>(1)</sup><br>(Max.)<br>R | Backing Diameter        |                           | Dynamic                                       |                                   | Static                            | Thermal Reference Speed <sup>(4)</sup> |  | Limiting Speed <sup>(5)</sup> |                |      |              |
|                     |                    |                |               |                |                          |           |                                      | Shaft<br>d <sub>a</sub> | Housing<br>D <sub>a</sub> | e   | $\frac{F_a \leq e}{F_r}$<br>X = 1 | $\frac{F_a > e}{F_r}$<br>X = 0.67 |  |  |                               | In All Cases   |      |              |
|                     | mm<br>in.          | mm<br>in.      | mm<br>in.     | kN<br>lbf.     | kN<br>lbf.               |           | mm<br>in.                            | mm<br>in.               | mm<br>in.                 |   | $\frac{F_a \leq e}{F_r}$<br>Y     | $\frac{F_a > e}{F_r}$<br>Y        |  |  |                               | Y <sub>0</sub> | Oil  |              |
| 22324               | 120<br>4.7244      | 260<br>10.2362 | 86<br>3.3858  | 1080<br>244000 | 1210<br>272000           | EM        | 2.5<br>0.1                           | 157<br>6.2              | 234<br>9.2                | 0.32  | 2.11                              | 3.15                              | 2.07                                   | 0.083  | 2200                          | 1900           | 3320 | 22.3<br>49.1 |
| 23324               | 120<br>4.7244      | 260<br>10.2362 | 106<br>4.1732 | 1230<br>276000 | 1410<br>318000           | EM        | 2.5<br>0.1                           | 147<br>5.8              | 226<br>8.9                | 0.43  | 1.57                              | 2.34                              | 1.54                                   | 0.082  | 1500                          | 1400           | 2310 | 27.8<br>61.2 |
| 23926               | 130<br>5.1181      | 180<br>7.0866  | 37<br>1.4567  | 302<br>67900   | 453<br>102000            | EM        | 1<br>0.04                            | 142<br>5.6              | 169<br>6.7                | 0.18  | 3.83                              | 5.70                              | 3.75                                   | 0.076  | 300                           | 2400           | 3460 | 2.8<br>6.2   |
| 23026               | 130<br>5.1181      | 200<br>7.8740  | 52<br>2.0472  | 518<br>116000  | 723<br>162000            | EJ        | 2<br>0.08                            | 146<br>5.8              | 185<br>7.3                | 0.23  | 2.94                              | 4.37                              | 2.87                                   | 0.078  | 3100                          | 2500           | 3890 | 5.9<br>13.0  |
| 24026               | 130<br>5.1181      | 200<br>7.8740  | 69<br>2.7165  | 664<br>149000  | 966<br>217000            | EJ        | 2<br>0.08                            | 144<br>5.7              | 185<br>7.3                | 0.31  | 2.21                              | 3.29                              | 2.16                                   | 0.078  | 2400                          | 2000           | 3040 | 7.8<br>17.2  |
| 23126               | 130<br>5.1181      | 210<br>8.2677  | 64<br>2.5197  | 679<br>153000  | 937<br>211000            | EJ        | 2<br>0.08                            | 149<br>5.9              | 193<br>7.6                | 0.27  | 2.48                              | 3.69                              | 2.43                                   | 0.080  | 2400                          | 2000           | 3240 | 8.6<br>18.9  |
| 23126               | 130<br>5.1181      | 210<br>8.2677  | 64<br>2.5197  | 679<br>153000  | 937<br>211000            | EM        | 2<br>0.08                            | 149<br>5.9              | 193<br>7.6                | 0.27  | 2.48                              | 3.69                              | 2.43                                   | 0.080  | 2400                          | 2000           | 3300 | 8.6<br>18.9  |
| 24126               | 130<br>5.1181      | 210<br>8.2677  | 80<br>3.1496  | 798<br>179000  | 1130<br>255000           | EJ        | 2<br>0.08                            | 146<br>5.7              | 192<br>7.6                | 0.34  | 1.99                              | 2.96                              | 1.94                                   | 0.079  | 1600                          | 1500           | 2490 | 10.5<br>23.1 |
| 22226               | 130<br>5.1181      | 230<br>9.0551  | 64<br>2.5197  | 757<br>170000  | 945<br>212000            | EJ        | 2.5<br>0.1                           | 155<br>6.1              | 210<br>8.3                | 0.26  | 2.62                              | 3.90                              | 2.56                                   | 0.082  | 2900                          | 2400           | 3750 | 11.3<br>24.9 |
| 22226               | 130<br>5.1181      | 230<br>9.0551  | 64<br>2.5197  | 757<br>170000  | 945<br>212000            | EM        | 2.5<br>0.1                           | 155<br>6.1              | 210<br>8.3                | 0.26  | 2.62                              | 3.90                              | 2.56                                   | 0.082  | 2900                          | 2400           | 4280 | 11.3<br>24.9 |
| 23226               | 130<br>5.1181      | 230<br>9.0551  | 80<br>3.1496  | 915<br>206000  | 1170<br>262000           | EJ        | 2.5<br>0.1                           | 153<br>6.0              | 211<br>8.3                | 0.32  | 2.14                              | 3.19                              | 2.09                                   | 0.082  | 1900                          | 1700           | 2910 | 14.0<br>30.8 |
| 23226               | 130<br>5.1181      | 230<br>9.0551  | 80<br>3.1496  | 915<br>206000  | 1170<br>262000           | EM        | 2.5<br>0.1                           | 153<br>6.0              | 211<br>8.3                | 0.32  | 2.14                              | 3.19                              | 2.09                                   | 0.082  | 1900                          | 1700           | 2740 | 14.0<br>30.8 |
| 22326               | 130<br>5.1181      | 280<br>11.0236 | 93<br>3.6614  | 1250<br>281000 | 1410<br>318000           | EJ        | 3<br>0.1                             | 169<br>6.7              | 252<br>9.9                | 0.32  | 2.11                              | 3.14                              | 2.06                                   | 0.087  | 2000                          | 1800           | 2520 | 26.7<br>60.3 |
| 22326               | 130<br>5.1181      | 280<br>11.0236 | 93<br>3.6614  | 1250<br>281000 | 1410<br>318000           | EM        | 3<br>0.1                             | 169<br>6.7              | 252<br>9.9                | 0.32  | 2.11                              | 3.14                              | 2.06                                   | 0.087  | 2000                          | 1800           | 3090 | 27.8<br>61.2 |
| 23326               | 130<br>5.1181      | 280<br>11.0236 | 112<br>4.4094 | 1340<br>302000 | 1590<br>359000           | EM        | 3<br>0.1                             | 164<br>6.5              | 245<br>9.6                | 0.42  | 1.62                              | 2.42                              | 1.59                                   | 0.086  | 1400                          | 1200           | 2130 | 33.8<br>74.4 |
| 23928               | 140<br>5.5118      | 190<br>7.4803  | 37<br>1.4567  | 314<br>70500   | 477<br>107000            | EM        | 1.5<br>0.06                          | 152<br>6.0              | 180<br>7.1                | 0.16  | 4.10                              | 6.10                              | 4.01                                   | 0.079  | 2800                          | 2200           | 3340 | 2.9<br>6.4   |
| 23028               | 140<br>5.5118      | 210<br>8.2677  | 53<br>2.0866  | 551<br>124000  | 802<br>180000            | EJ        | 2<br>0.08                            | 158<br>6.2              | 196<br>7.7                | 0.22  | 3.10                              | 4.61                              | 3.03                                   | 0.082  | 2800                          | 2300           | 3480 | 6.2<br>13.6  |
| 24028               | 140<br>5.5118      | 210<br>8.2677  | 69<br>2.7165  | 702<br>158000  | 1060<br>238000           | EJ        | 2<br>0.08                            | 154<br>6.1              | 195<br>7.7                | 0.29  | 2.36                              | 3.51                              | 2.31                                   | 0.081  | 2100                          | 1800           | 2980 | 8.2<br>18.0  |

<sup>(1)</sup>Maximum shaft or housing fillet radius that bearing corners will clear.

<sup>(2)</sup>These factors apply for both inch and metric calculations. See engineering section for instructions on use.

<sup>(3)</sup>Geometry constant for Lubrication Life Factor a31 is found in the Bearing Ratings section of the Engineering Manual (order no. 10424).

<sup>(4)</sup>See thermal reference speed in the Engineering Manual (order no. 10424) and on page 61.

<sup>(5)</sup>See limiting speed on page 61.

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