

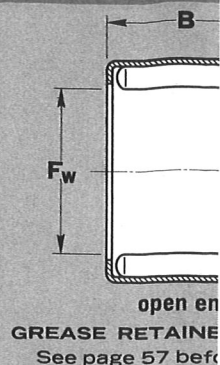
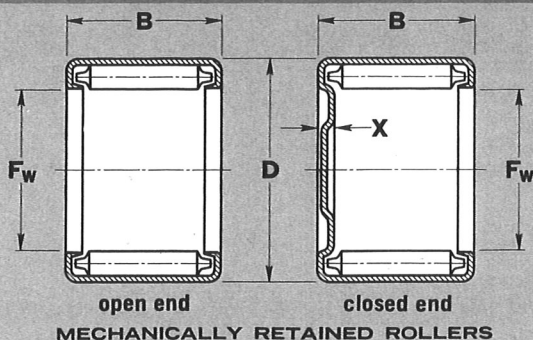
# TORRINGTON

## BEARING DIMENSIONS

Before ordering any bearing, check for availability.

Metric-inch conversions given are for the convenience of the user. The controlling dimensions are in millimetres for nominal metric bearings and in inches for nominal inch bearings.

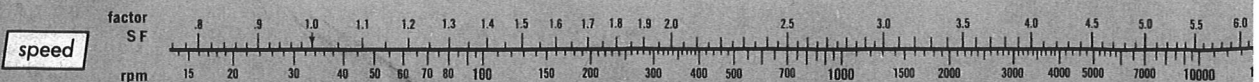
## FULL COMPLEMENT NEEDLE ROLLER BEARINGS



MECHANICALLY RETAINED ROLLERS

GREASE RETAINED ROLLERS  
See page 57 before ordering

| F <sub>w</sub><br>bore<br>(nom.) |      | D<br>o.d.<br>(nom.) |       | B<br>width<br>+0.00<br>-0.25<br>+0.000<br>-0.010 |       | bearing designation |          | C <sub>r</sub><br>basic dynamic<br>load rating |                                      | C <sub>0</sub><br>basic static<br>load rating | X<br>end<br>thickness<br>(max.) |      | limiting<br>speed<br>all full<br>complement<br>bearings<br>rpm | bearing<br>design-<br>ation | C<br>basic dy<br>load r |
|----------------------------------|------|---------------------|-------|--------------------------------------------------|-------|---------------------|----------|------------------------------------------------|--------------------------------------|-----------------------------------------------|---------------------------------|------|----------------------------------------------------------------|-----------------------------|-------------------------|
|                                  |      |                     |       |                                                  |       |                     |          | open<br>end<br>lbf                             | closed<br>end<br>ISO<br>R 281<br>lbf | lbf                                           | mm                              | inch |                                                                |                             |                         |
| 13                               | .51  | 19                  | .75   | 12                                               | .472  | F-1312              | MF-1312  | 1420                                           | 1920                                 | 1680                                          | 1.9                             | .07  | 7150                                                           | —                           | —                       |
| 14                               | .55  | 19                  | .75   | 16                                               | .630  | NF-1416             | MNF-1416 | 1920                                           | 2590                                 | 2870                                          | 1.6                             | .06  | 5360                                                           | —                           | —                       |
| 14                               | .55  | 19                  | .75   | 20                                               | .787  | NF-1420             | MNF-1420 | 2400                                           | 3240                                 | 3830                                          | 1.6                             | .06  | 5360                                                           | —                           | —                       |
| 14                               | .55  | 20                  | .79   | 12                                               | .472  | F-1412              | MF-1412  | 1420                                           | 1920                                 | 1760                                          | 2.2                             | .09  | 6250                                                           | FY-1412                     | 1620                    |
| 14                               | .55  | 20                  | .79   | 13                                               | .512  | F-1413              | MF-1413  | 1570                                           | 2120                                 | 2010                                          | 2.2                             | .09  | 6250                                                           | —                           | —                       |
| 14                               | .55  | 20                  | .79   | 16                                               | .630  | F-1416              | MF-1416  | 2000                                           | 2700                                 | 2740                                          | 2.2                             | .09  | 6250                                                           | —                           | —                       |
| 14.29                            | 5/16 | 19.05               | 3/4   | 7.92                                             | .312  | B-95                | M-951    | 797                                            | 1080                                 | 963                                           | 2.0                             | .08  | 5000                                                           | —                           | —                       |
| 14.29                            | 5/16 | 19.05               | 3/4   | 9.52                                             | .375  | B-96                | M-961    | 1030                                           | 1400                                 | 1340                                          | 2.0                             | .08  | 5000                                                           | —                           | —                       |
| 14.29                            | 5/16 | 19.05               | 3/4   | 11.13                                            | .438  | B-97                | M-971    | 1260                                           | 1700                                 | 1730                                          | 2.0                             | .08  | 5000                                                           | —                           | —                       |
| 14.29                            | 5/16 | 19.05               | 3/4   | 12.70                                            | .500  | B-98                | M-981    | 1470                                           | 1980                                 | 2110                                          | 2.0                             | .08  | 5000                                                           | Y-98                        | 1580                    |
| 14.29                            | 5/16 | 19.05               | 3/4   | 15.88                                            | .625  | B-910               | M-9101   | 1870                                           | 2520                                 | 2880                                          | 2.0                             | .08  | 5000                                                           | Y-910                       | 1980                    |
| 14.29                            | 5/16 | 19.05               | 3/4   | 19.05                                            | .750  | B-912               | M-9121   | 2240                                           | 3040                                 | 3640                                          | 2.0                             | .08  | 5000                                                           | Y-912                       | 2350                    |
| 14.29                            | 5/16 | 20.64               | 13/16 | 12.70                                            | .500  | BH-98               | —        | 1710                                           | 2300                                 | 2040                                          | —                               | —    | 6800                                                           | —                           | —                       |
| 14.29                            | 5/16 | 20.64               | 13/16 | 15.88                                            | .625  | BH-910              | —        | 2210                                           | 2990                                 | 2850                                          | —                               | —    | 6800                                                           | —                           | —                       |
| 14.29                            | 5/16 | 20.64               | 13/16 | 19.05                                            | .750  | BH-912              | MH-9121  | 2680                                           | 3620                                 | 3660                                          | 2.3                             | .09  | 6800                                                           | —                           | —                       |
| 15                               | .59  | 21                  | .83   | 12                                               | .472  | F-1512              | MF-1512  | 1530                                           | 2070                                 | 1900                                          | 1.8                             | .07  | 6250                                                           | —                           | —                       |
| 15                               | .59  | 21                  | .83   | 14                                               | .551  | F-1514              | MF-1514  | 1850                                           | 2500                                 | 2420                                          | 1.8                             | .07  | 6250                                                           | —                           | —                       |
| 15                               | .59  | 21                  | .83   | 16                                               | .630  | F-1516              | MF-1516  | 2150                                           | 2900                                 | 2940                                          | 1.8                             | .07  | 6250                                                           | —                           | —                       |
| 15.88                            | 5/8  | 20.64               | 13/16 | 7.92                                             | .312  | B-105               | M-1051   | 846                                            | 1140                                 | 1060                                          | 2.0                             | .08  | 4500                                                           | Y-105                       | 986                     |
| 15.88                            | 5/8  | 20.64               | 13/16 | 11.13                                            | .438  | B-107               | M-1071   | 1330                                           | 1800                                 | 1900                                          | 2.0                             | .08  | 4500                                                           | —                           | —                       |
| 15.88                            | 5/8  | 20.64               | 13/16 | 12.70                                            | .500  | B-108               | M-1081   | 1560                                           | 2100                                 | 2320                                          | 2.0                             | .08  | 4500                                                           | Y-108                       | 1680                    |
| 15.88                            | 5/8  | 20.64               | 13/16 | 15.88                                            | .625  | B-1010              | M-10101  | 1980                                           | 2680                                 | 3170                                          | 2.0                             | .08  | 4500                                                           | —                           | —                       |
| 15.88                            | 5/8  | 20.64               | 13/16 | 19.05                                            | .750  | B-1012              | M-10121  | 2380                                           | 3220                                 | 4010                                          | 2.0                             | .08  | 4500                                                           | Y-1012                      | 2490                    |
| 15.88                            | 5/8  | 22.22               | 7/8   | 12.70                                            | .500  | BH-108              | MH-1081  | 1810                                           | 2450                                 | 2240                                          | 2.3                             | .09  | 6200                                                           | YH-108                      | 1910                    |
| 15.88                            | 5/8  | 22.22               | 7/8   | 15.88                                            | .625  | BH-1010             | —        | 2340                                           | 3170                                 | 3120                                          | —                               | —    | 6200                                                           | —                           | —                       |
| 15.88                            | 5/8  | 22.22               | 7/8   | 19.05                                            | .750  | BH-1012             | MH-10121 | 2840                                           | 3850                                 | 4010                                          | 2.3                             | .09  | 6200                                                           | —                           | —                       |
| 15.88                            | 5/8  | 22.22               | 7/8   | 25.40                                            | 1.000 | BH-1016             | —        | 3780                                           | 5110                                 | 5770                                          | —                               | —    | 6200                                                           | —                           | —                       |
| 16                               | .63  | 22                  | .87   | 12                                               | .472  | F-1612              | MF-1612  | 1520                                           | 2060                                 | 1980                                          | 2.2                             | .09  | 5560                                                           | —                           | —                       |
| 16                               | .63  | 22                  | .87   | 16                                               | .630  | F-1616              | MF-1616  | 2140                                           | 2900                                 | 3080                                          | 2.2                             | .09  | 5560                                                           | —                           | —                       |



Load ratings are given in pounds-force: 1 lbf = 0.454 kgf = 4.448 N

Required Basic Dynamic Load Rating (C<sub>r</sub>) = Applied Load • SF • LF • HF (see page 52).

Aircraft Static Capacity = 1.6 C<sub>0</sub>