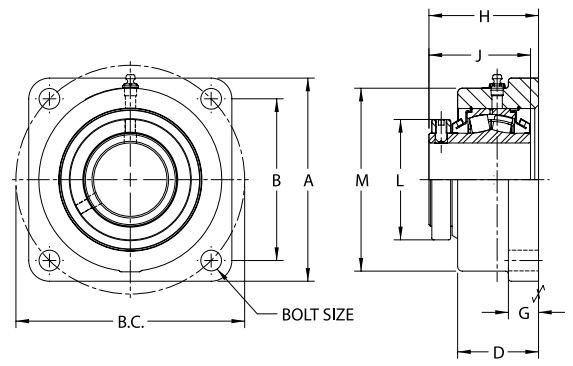


# SEALMASTER® Performance Mounted Spherical Roller Bearings

Mtd. Spherical Bearings



- Rolling Elements:** Spherical Roller
- Housing:** Ductile Iron Four Bolt Flange
- Self Alignment:** +/- 2 Degrees
- Lock:** Setscrew
- Seal:** Felt
- Optional Seal:** Double Lip Contact
- Temperature:** -20° to 220° F



## USFBE5000 Series Four-Bolt Flange Units - Collar Mount, Type E Mounting Dimensions

| Bore Diameter<br>inch | Part No.      | Basic Dynamic Rating<br>lb/N | Dimensions inch / mm |         |         |         |        |         |         |         |         |           | Unit Wt.<br>lb/kg |
|-----------------------|---------------|------------------------------|----------------------|---------|---------|---------|--------|---------|---------|---------|---------|-----------|-------------------|
|                       |               |                              | A                    | B       | B.C.    | D       | G      | H *     | J       | L       | M       | Bolt Size |                   |
| 1 15/16               | USFBE5000-115 | 23520                        | 5 1/2                | 4 3/8   | 6 3/16  | 2 9/16  | 7/8    | 3 3/16  | 2 7/8   | 3       | 4 31/32 | 1/2       | 11.6              |
| 2                     | USFBE5000-200 | 104617                       | 139.7                | 111.1   | 157.2   | 65.1    | 22.2   | 81.0    | 73.0    | 76.2    | 126.2   | 1/2       | 5.25              |
| 2 3/16                | USFBE5000-203 | 28087                        | 6 3/16               | 4 7/8   | 6 57/64 | 2 5/8   | 1      | 3 5/16  | 3 1/8   | 3 1/4   | 5 15/32 | 5/8       | 14.8              |
|                       |               | 124931                       | 157.2                | 123.8   | 175.0   | 66.7    | 25.4   | 84.1    | 79.4    | 82.6    | 138.9   | 5/8       | 6.75              |
| 2 7/16                | USFBE5000-207 | 44691                        | 6 3/4                | 5 3/8   | 7 19/32 | 2 11/16 | 1      | 3 31/64 | 3 3/8   | 4       | 6 3/32  | 5/8       | 19.1              |
| 2 1/2                 | USFBE5000-208 | 198786                       | 171.5                | 136.5   | 192.9   | 68.3    | 25.4   | 88.5    | 85.7    | 101.6   | 154.8   | 5/8       | 8.68              |
| 2 11/16               | USFBE5000-211 |                              |                      |         |         |         |        |         |         |         |         |           |                   |
| 2 3/4                 | USFBE5000-212 | 47447                        | 7 5/8                | 6       | 8 31/64 | 2 3/4   | 1 1/16 | 3 63/64 | 3 7/8   | 4 17/32 | 6 53/64 | 3/4       | 26.4              |
| 2 15/16               | USFBE5000-215 | 211044                       | 193.7                | 152.4   | 215.5   | 69.9    | 27.0   | 101.2   | 98.4    | 115.1   | 173.4   | 3/4       | 12.00             |
| 3                     | USFBE5000-300 |                              |                      |         |         |         |        |         |         |         |         |           |                   |
| 3 3/16                | USFBE5000-303 | 72640                        | 8 5/8                | 7       | 9 29/32 | 3 1/4   | 1 1/4  | 4 19/32 | 4 15/32 | 5 5/16  | 7 31/32 | 3/4       | 40.3              |
| 3 7/16                | USFBE5000-307 | 323103                       | 219.1                | 177.8   | 251.6   | 82.6    | 31.8   | 116.7   | 113.5   | 134.9   | 202.4   | 3/4       | 18.34             |
| 3 1/2                 | USFBE5000-308 |                              |                      |         |         |         |        |         |         |         |         |           |                   |
| 3 11/16               | USFBE5000-311 | 96050                        | 9 1/2                | 7 19/32 | 10 3/4  | 3 11/16 | 1 1/4  | 5 5/64  | 4 15/16 | 6       | 8 7/8   | 7/8       | 52.3              |
| 3 15/16               | USFBE5000-315 | 427230                       | 241.3                | 192.9   | 273.1   | 93.7    | 31.8   | 129.0   | 125.4   | 152.4   | 225.4   | 7/8       | 23.76             |
| 4                     | USFBE5000-400 |                              |                      |         |         |         |        |         |         |         |         |           |                   |

\*For expansion bearings, this dimension can increase by the corresponding value in table VIII on page I-69.

Metric dimensions for reference only.  
 Not all parts are available from stock. Please contact customer service for availability (800) 626-2120.  
 For more information on bearing capabilities outside of our standard offering, please contact Application Engineering (800) 626-2093.

### Installation Instructions continued

#### Alternate Lubrication Procedure:

Stop rotating equipment. Add one half the recommended amount shown in Table V. Start the bearing and run for a few minutes. Stop the bearing and add the second half of the recommended amount. A temperature rise after lubrication, sometimes 30°F (17°C), is normal. Bearing should operate at temperatures less than 200°F (94°C) and should not exceed 250° (121°C) for intermittent operation. For lubrication guidelines, see Table VI.

**Note:** Table VI are general recommendations. Experience and testing may be required for specific applications.

**Note:** Grease charges in Table V are based on the use of lithium complex thickened grease with a NLGI grade 2 consistency.

#### Expansion Bearing Applications:

Before installation, make certain proper expansion is accounted for. Expansion units should be placed in a location where relative movement between the bearing insert and the housing can be tolerated. For most applications using expansion type units, the fixed unit (non-expansion unit) is placed at the drive end of the shaft. Use Table VIII to review the total available bearing expansion. If the application requires additional expansion, consult Application Engineering.

**NOTICE:** One expansion unit is to be used in conjunction with one non-expansion unit for applications using adapter lock units. Failure to utilize one expansion and one non-expansion unit is likely to result in reduced bearing performance.

Table V

| Grease Charge for Relubrication |                               |
|---------------------------------|-------------------------------|
| Bore Size                       | Grease Charge (Mass - Ounces) |
| 1 1/8 - 1 1/2                   | 0.20                          |
| 1 11/16 - 1 3/4                 | 0.20                          |
| 1 15/16 - 2                     | 0.25                          |
| 2 3/16                          | 0.40                          |
| 2 7/16 - 2 1/2                  | 0.60                          |
| 2 11/16 - 3                     | 0.75                          |
| 3 3/16 - 3 1/2                  | 1.25                          |
| 3 11/16 - 4                     | 2.00                          |
| 4 7/16 - 4 1/2                  | 2.75                          |
| 4 15/16 - 5                     | 4.00                          |

Table VI

| Relubrication Recommendations |                  |                       |                   |
|-------------------------------|------------------|-----------------------|-------------------|
| Environment                   | Temperature (°F) | Speed (% Catalog Max) | Frequency         |
| Dirty                         | -20 to 250       | 0 - 100%              | Daily to 1 Week   |
| Clean                         | -20 to 125       | 0 - 25%               | 4 to 10 Months    |
|                               |                  | 26 - 50%              | 1 to 4 Months     |
|                               |                  | 51 - 75%              | 1 Week to 1 Month |
|                               |                  | 76 - 100%             | Daily to 1 Week   |
|                               | 125 to 175       | 0 - 25%               | 2 to 6 Weeks      |
|                               |                  | 26 - 50%              | 1 Week to 1 Month |
|                               |                  | 51 - 75%              | Daily to 1 Week   |
|                               |                  | 76 - 100%             |                   |
|                               | 175 to 250       | 0 - 100%              | Daily to 1 Week   |

Table VII

| Maximum Operational Speed |                 |                    |
|---------------------------|-----------------|--------------------|
| Bore Size                 | Felt Seal (RPM) | Contact Seal (RPM) |
| 1 1/8 - 1 1/2             | 4000            | 3000               |
| 1 11/16 - 1 3/4           | 4000            | 2750               |
| 1 15/16 - 2               | 4000            | 2500               |
| 2 3/16                    | 3750            | 2200               |
| 2 7/16 - 2 1/2            | 3250            | 1750               |
| 2 11/16 - 3               | 3000            | 1600               |
| 3 3/16 - 3 1/2            | 2500            | 1350               |
| 3 11/16 - 4               | 2250            | 1200               |
| 4 7/16 - 4 1/2            | 2000            | 1100               |
| 4 15/16 - 5               | 1750            | 900                |

Table VIII

| Total Available Housing Expansion (inch) |          |              |
|------------------------------------------|----------|--------------|
| Bore Size                                | Setscrew | Adapter Lock |
| 1 1/8 - 1 1/2                            | 3/16     | 5/32         |
| 1 11/16 - 3 1/2                          | 1/4      | 7/32         |
| 3 11/16 - 4                              | 5/16     | 1/4          |
| 4 7/16 - 5                               | 3/8      | 9/32         |