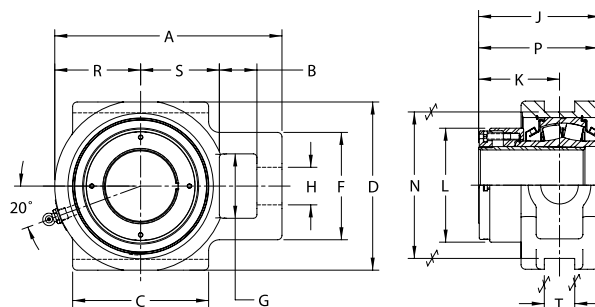


# Performance Mounted Spherical Roller Bearings **SEALMASTER®**



**Rolling Elements:** Spherical Roller  
**Housing:** Cast Iron Take-Up  
**Self Alignment:** +/- 2 Degrees  
**Lock:** Adapter  
**Seal:** Felt  
**Optional Seal:** Double Lip Contact  
**Temperature:** -20° to 220° F



Mtd. Spherical Bearings



## USTU5000A Series Take-Up Units - Adapter Mount

| Bore Diameter<br>inch | Part No.      | Basic Dynamic Rating<br>lb/N | Dimensions inch / mm |         |       |        |       |         |         |         |         |         |         |         |        |       |         | Unit Wt.<br>lb/kg |
|-----------------------|---------------|------------------------------|----------------------|---------|-------|--------|-------|---------|---------|---------|---------|---------|---------|---------|--------|-------|---------|-------------------|
|                       |               |                              | A                    | B       | C     | D      | F     | G       | H       | J       | K       | L       | N       | P       | R      | S     | T       |                   |
| 1 15/16               | USTU5000A-115 | 23520                        | 6 3/16               | 1 1/16  | 3 1/2 | 4 3/4  | 2 7/8 | 1 15/16 | 1 1/16  | 3 1/2   | 2 11/32 | 3 3/16  | 4       | 3 9/16  | 2 1/4  | 2 1/8 | 11/16   | 8.8               |
| 2                     | USTU5000A-200 | 104617                       | 157.2                | 27.0    | 88.9  | 120.7  | 73.0  | 49.2    | 27.0    | 88.9    | 59.5    | 81.0    | 101.6   | 90.5    | 57.2   | 54.0  | 17.5    | 3.99              |
| 2 3/16                | USTU5000A-203 | 28087                        | 6 13/16              | 1 3/16  | 3 3/4 | 5 1/4  | 3 1/2 | 2 1/4   | 1 3/16  | 3 7/8   | 2 45/64 | 3 7/16  | 4 1/2   | 3 63/64 | 2 1/2  | 2 3/8 | 13/16   | 11.3              |
|                       |               | 124931                       | 173.0                | 30.2    | 95.3  | 133.4  | 88.9  | 57.2    | 30.2    | 98.4    | 68.7    | 87.3    | 114.3   | 101.2   | 63.5   | 60.3  | 20.6    | 5.14              |
| 2 7/16                | USTU5000A-207 | 44691                        | 7 15/16              | 1 5/16  | 4 3/4 | 5 7/8  | 3 3/4 | 2 1/4   | 1 5/16  | 4 5/16  | 2 7/8   | 3 63/64 | 5 1/8   | 4 15/64 | 3      | 2 3/4 | 1 1/16  | 17.7              |
| 2 1/2                 | USTU5000A-208 | 198786                       | 201.6                | 33.3    | 120.7 | 149.2  | 95.3  | 57.2    | 33.3    | 109.5   | 73.0    | 101.2   | 130.2   | 107.6   | 76.2   | 69.9  | 27.0    | 8.04              |
| 2 11/16               | USTU5000A-211 |                              |                      |         |       |        |       |         |         |         |         |         |         |         |        |       |         |                   |
| 2 3/4                 | USTU5000A-212 | 47447                        | 8 3/4                | 1 9/16  | 4 3/4 | 6 3/4  | 4 1/4 | 2 3/4   | 1 9/16  | 4 31/64 | 2 31/32 | 4 25/64 | 5 15/16 | 4 15/32 | 3 3/16 | 3     | 1 13/16 | 24.6              |
| 2 15/16               | USTU5000A-215 | 211044                       | 222.3                | 39.7    | 120.7 | 171.5  | 108.0 | 69.9    | 39.7    | 113.9   | 75.4    | 111.5   | 150.8   | 113.5   | 81.0   | 76.2  | 46.0    | 11.20             |
| 3                     | USTU5000A-300 |                              |                      |         |       |        |       |         |         |         |         |         |         |         |        |       |         |                   |
| 3 3/16                | USTU5000A-303 | 72640                        | 10 7/16              | 1 13/16 | 6 1/4 | 7 5/8  | 4 7/8 | 2 7/8   | 1 13/16 | 5 35/64 | 3 47/64 | 5 15/32 | 6 13/16 | 5 35/64 | 4      | 3 5/8 | 1 13/16 | 42.9              |
| 3 7/16                | USTU5000A-307 | 323103                       | 265.1                | 46.0    | 158.8 | 193.7  | 123.8 | 73.0    | 46.0    | 140.9   | 94.9    | 138.9   | 173.0   | 140.9   | 101.6  | 92.1  | 46.0    | 19.50             |
| 3 1/2                 | USTU5000A-308 |                              |                      |         |       |        |       |         |         |         |         |         |         |         |        |       |         |                   |
| 3 11/16               | USTU5000A-311 | 96050                        | 11 13/16             | 2 1/8   | 7     | 9 7/16 | 5 5/8 | 3 3/8   | 2 3/16  | 5 15/16 | 3 15/16 | 5 13/16 | 8 5/8   | 6 3/16  | 4 7/16 | 4 1/8 | 2 1/16  | 67.3              |
| 3 15/16               | USTU5000A-315 | 427230                       | 300.0                | 54.0    | 177.8 | 239.7  | 142.9 | 85.7    | 55.6    | 150.8   | 100.0   | 147.6   | 219.1   | 157.2   | 112.7  | 104.8 | 52.4    | 30.61             |
| 4                     | USTU5000A-400 |                              |                      |         |       |        |       |         |         |         |         |         |         |         |        |       |         |                   |

Note: These take-up units can be used with T-1000 take-up frames shown on pages I-45 and I-46.  
 One expansion unit is to be used in conjunction with one non-expansion unit for applications using an adapter lock unit  
 Failure to utilize one expansion and one non-expansion unit is likely to result in reduced bearing performance.

### 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         |