Link-Belt® Ball Bearing Screw Conveyor Trough End

INSTALLATION INSTRUCTIONS
FF200 Series

Bearing Mounting Procedure

WARNING: These instructions should be read entirely and followed carefully before attempting to install or remove Link-Belt Ball bearings. Failure to do so can result in improper installation which could cause bearing performance problems as well as serious personal injury.

ALL UNITS

1. Inspect shaft size (see shaft tolerance table below). Shaft must be to correct size. Clean shaft and mounting surface as needed.
2. Machine snap ring grooves in shaft at each end of unit or groove at outer end of shouldered shaft for positive location of unit. See Table 4 on Page 2.
3. Coat the shaft and bearing bore to facilitate assembly.
4. Position bearings on the shaft, applying all driving pressure to the face of the inner ring. Do NOT strike or exert pressure on housing or seals. Thrust must be transmitted to the bearing through the snap ring, shaft shoulder, or some other method other than set screws.
5. Install snap rings and thrust washers on shaft and bolt unit securely to support. SAE Grade 5 mounting bolts are recommended.
6. Lock bearings to the shaft with the set screws tighten to the proper value listed in TABLE 2 below.

Table 1) Shaft Tolerance Table

SHAFT TOLERANCE TABLE – INCHES		
Shaft Size (Inches)	**Series**	**Tolerance Nominal to:**
1 1/2 – 2	224-232	-0.0005”
2 3/16 – 3 7/16	235-255	-0.001”
Recommended shaft tolerances are generally satisfactory for loads up to 15% of C (see load ratings in catalog). High load applications will require a press fit to the shaft.		

Table 2) Set Screw Torque Values

RECOMMENDED SCREW TIGHTENING TORQUE		
Series	**Shaft Size (in.)**	**Tightening Torque (Inch- Pounds)**
208	1 1/2	165 – 185
211	2 2 3/16	290 – 325
212	2 7/16	290 – 325
215	2 3/4 2 15/16 3	620 – 680
217	3 7/16	620 – 680

ADDITIONAL INSTALLATION COMMENTS

1. Position housings for accessibility of grease fittings.
2. Spot drill or mill flats on shaft for increased holding power of set screws or ease of removal.
3. When an eccentric load condition exists, position set screws directly opposite from eccentric weight.
4. Shaft shoulders are recommended to support vertical shafts and high thrust loads. The shoulder diameter should not exceed the outside diameter of the inner ring.
5. Avoid direct hammer blows to the bearing and its components by using a soft drift or block.
6. If an Allen wrench is used as a torque wrench, place a length of pipe over the long end and pull until the wrench begins to twist.

LUBRICATION INFORMATION

Standard bearings come pre-lubricated from the factory with Exxon Ronex MP grease. Exxon Ronex MP is an NLGI Grade 2 EP (extreme pressure) grease with a lithium complex thickener. It can be used for high loads, and in some cases at temperatures as low as -40°F or as high as +225°F. For high speeds, other special service conditions, or for inquires on other acceptable greases, please consult your local Rexnord representative or the Rexnord Bearing Engineering Department. Oil lubrication is not recommended.

RELUBRICATION

Bearings should be re-lubricated at regular intervals. The frequency and amount of lubricant will be determined by the type of service. General guidelines for re-lubrication frequency and amount are based upon average application conditions. See LUBRICATION TABLE on page 2. Oil lubrication is not recommended.

At High temperatures, greases tend to degrade more rapidly and thus require fresh grease more frequently. In general, small amounts of grease added frequently provide better lubrication. When equipment will not be in operation for some time, grease should be added to provide corrosion protection. This is particularly important for equipment exposed to severe weather.

AUTOMATIC LUBRICATION SYSTEMS

A variety of automatic re-lubrication systems are available for use with ball bearings. Key considerations are:

1. NLGI grade of grease used, consistent with system layout
2. An amount/frequency combination necessary to replenish the grease

MIXING OF GREASES

Mixing of any 2 greases should be checked with the lubricant manufacturer. If the grease bases are different they should never be mixed.

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Table 3) Lubrication Information

LUBRICATION TABLE – Trough End Ball Bearings			
Operating Conditions		**Bearing Operating Temperature**	**Greasing Interval (1)**
Dirt Exposure	*Moisture Exposure*		
Slight	None	32°F to 120°F 120°F to 160°F 160°F to 200°F	6 months 2-4 months 1-2 months
Moderate to Heavy		32°F to 160°F 160°F to 200°F	1-4 weeks 1 week
Slight to Heavy	Direct water splash or exposure to outdoor environment	32°F to 200°F	Daily to 1 week or as determined by inspection of installation
Slight	None	-60°F to 32°F	Determined by inspection of installation
		Above 200°F	

(1) Frequency of regreasing will vary, depending on the hours of operation, temperatures and surrounding conditions.

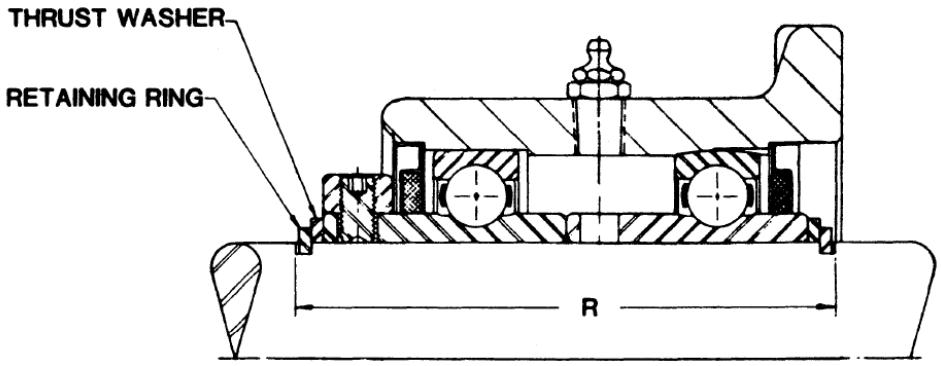

Table 4) Thrust Washer and Retaining Ring Detail

THRUST WASHER AND RETAINING RING					
SHAFT SIZE - INCHES	**R (INCHES)**	**Heavy Series Retaining Ring Eaton Number**	**Sharp Cornered Thrust Washer**		
			Bore (in)	**O.D. (in)**	**Width (in)**
1 1/2	4 7/32	344-1	(1/64 over the shaft diameter)	2	.0625
2 – 2 3/16	5 1/32	1071		2 1/2	.125
2 7/16	5 17/32	1227		3	.125
2 3/4 – 3	6 9/32	5224		3 1/2	.125
3 7/16	7 23/32	5531		4 1/16	.140