

Link-Belt® Fan and Blower Bearing Units

INSTALLATION INSTRUCTIONS PPU200 & PPCL200 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. 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.
3. Where shimming is required – use full shims across the housing base – not just at the bolt holes. Position and loosely bolt housing to mounting base. SAE Grade 5 mounting bolts are recommended.
4. Establish the final shaft position. Align bearings by hand or rubber mallet if required. Securely bolt units to the mounting structure by correctly torquing the bolts to the proper value listed in TABLE 2 below.
5. Lock bearings to the shaft:

Set Screw Lock Units (PPU200)

Tighten the set screws on the bearing to the proper tightening torque which can be found in the SET SCREW TORQUE TABLE below. Alternate torquing the screws to prevent unequal loading. See comment 8 in Additional Installation Comments.

Centrik-Lok Units (PPCL200)

With the collar located between the tabs and housing with the chamfer facing the housing, alternately tighten the set screws (See figure 1 below) to the recommended torque value from the Centrik-Lok SET SCREW TORQUE TABLE on below.

Table 1) Shaft Tolerance Table

SHAFT TOLERANCE TABLE – INCHES		
Set Screw Mount	CL200 Collar Mount	Tolerance Nominal to:
215 – 231		-0.0005"
235 – 239		-0.001"
	215 – 231	-0.003"
	235 – 239	-0.004"

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) Mounting Bolt and Set Screw Torque Values

RECOMMENDED SCREW TIGHTENING TORQUE					
Series	Shaft Size (in.)	Mounting Bolts		Tightening Torque (Inch- Pounds)	
		Size (in.)	Tightening Torque (ft-lb)	U200 Set Screw Mount	CL200 Collar Mount
205	15/16	3/8	20	87 – 92	65-72
206	1 3/16	3/8	20	87 – 92	65-72
207	1 7/16	1/2	50	165 – 185	151-168
209	1 11/16	1/2	50	165 – 185	151-168
210	1 15/16	5/8	100	165 – 185	313-348
211	2 3/16	5/8	100	290 – 325	313-348
212	2 7/16	5/8	100	290 – 325	313-348

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. When pillow blocks are mounted on an inclined plane or the work force is parallel with the base, either lateral bolts or welded stop blocks should be used to prevent shifting.
6. Avoid direct hammer blows to the bearing and its components by using a soft drift or block.
7. Do not coat the shaft & bearing bore with grease or oil.
8. 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 inquiries 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.



Figure 1) Set screw tightening on a Centrik-Lok bearing

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Table 3) Lubrication Information

LUBRICATION TABLE – 200 Series Ball Bearings					
SHAFT SIZE - INCHES	To Lubricate Units (oz.)	RECOMMENDED NUMBER OF MONTHS BETWEEN RELUBRICATION* (BASED ON 24/7 OPERATION)			
		Relube Interval			
		6 Months	4 Months	2 Months	1 Month
15/16	0.06	3200	4800	7200	9600
1 3/16 – 1 7/16	0.15	2200	3400	5100	6800
1 11/16	0.23	1700	2600	4000	5300
1 15/16 – 2 3/16	0.26	1400	2100	3200	4300
2 7/16	0.28	1300	2000	3000	4000

DISASSEMBLY OF BEARING INSERTS

1. Remove snap ring that is holding bearing in housing.
2. Slide bearing out of housing.
3. Clean and inspect housing. Do not reuse worn housing.

REASSEMBLY OF BEARING INSERTS

1. Slide bearing into housing with seal facing outwards. For bearing selection, see TABLE 4 below.
2. Install snap ring into housing groove.
3. Install bearing via steps on page 1.

Table 4) Bearing Insert Selection

REPLACEMENT BEARINGS		
Shaft Size (in.)	Insert Part Numbers (2 per unit)	
	U200 Set Screw Mount	CL200 Collar Mount
15/16	UB215XNL	CLB215XNL
1 3/16	UB219XNL	CLB219XNL
1 7/16	UB223XNL	CLB223XNL
1 11/16	UB227XNL	CLB227XNL
1 15/16	UB231XNL	CLB231XNL
2 3/16	UB235XNL	CLB235XNL
2 7/16	UB239XNL	CLB239XNL

LIMITED WARRANTY – LIABILITY

A. IT IS EXPRESSLY AGREED THAT THE FOLLOWING WARRANTY IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESSLY IMPLIED OF STATUTORY. INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND OF ANY OTHER OBLIGATION OR LIABILITY ON OR PART OF ANY KIND OR NATURE WHATSOEVER.

No representative of ours has any authority to waive, alter, vary, or add to the terms hereof without prior approval in writing, to our customer, signed by an officer of our company. It is expressly agreed that the entire warranty given to the customer is embodied in this writing. This writing constitutes the final expression of the parties agreement with respect to warranties, and that it is a complete and exclusive statement of the terms of the warranty.

We warrant to our customers that all Products manufactured by us will be free from defects in material and workmanship at the time of shipment to our customer for a period of one (1) year from the date of shipment. All warranty claims must be submitted to us within ten days of discovery of defects within the warranty period, or shall be deemed waived. As to Products or parts thereof that are proven to have been defective at the time of shipment, and that were not damaged in shipment, the sole and exclusive remedy shall be repair or replacement of the defective parts or repayment of the proportionate purchase price for such Products or part, at our option. Replacement parts shall be shipped free of charge f.o.b. from our factory.

This warranty shall not apply to any Product which has been subject to misuse; misapplication, neglect (including but not limited to improper maintenance and storage); accident, improper installation, modification (including but not limited to use of unauthorized parts or attachments), adjustment, repair or lubrication. Misuse also includes, without implied limitation, deterioration in the Product or part caused by chemical reaction, wear caused by the presence of abrasive materials, and improper lubrication. Identifiable items manufactured by others but installed in or affixed to our Products are not warranted by use but, bear only those warranties, express or implied, given by the manufacturer of that item, if any. Responsibility for system design to insure proper use and application of Link-Belt Products within their published specifications and ratings rests solely with customer. This includes without implied limitation analysis of loads created by torsional vibrations within the entire system regardless of how induced.

B. It is expressly agreed that our liability for any damage arising out of or related to this transaction, or the use of our Products, whether in contract or in tort, is limited to the repair or replacement of the Products, or the parts thereof by use, or to a refund of the proportionate purchase price. We will not be liable for any other injury, loss, damage, or expense, whether direct or consequential, including but not limited to use, income, profit, production, or increased cost of operation, or spoilage of or damage to material, arising in connection with the sale, installation, use of, inability to use, or the replacement of, or late delivery of, our Products.



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