



OPERATION & MAINTENANCE TYPE-E BEARING

INSTALLATION INSTRUCTIONS

1. Clean the shaft and the bearing bore. The shaft should be straight, free of nicks, and burrs and correctly sized. Shaft tolerances should be as follows:

Shaft Diameter	Recommended Tolerance*
1-7/16" thru 1-1/2"	+0.0000", -0.0010"
1-11/16" thru 2-1/2"	+0.0000", -0.0015"
2-11/16" thru 3"	+0.0000", -0.0020"
3-3/16" thru 4"	+0.0000", -0.0030"
4-7/16" thru 5"	+0.0000", -0.0050"

*For low-speed applications, such as conveyor pulleys, commercial shaft tolerances may be used. For recommendations on a specific application, contact PPI.

2. Lubricate bearing bore and shaft with grease or oil to ease installation of bearing onto shaft. If a light tap or press fit is required, only press on the inner ring of the bearing, not on the housing or seals. Use a hardwood block or soft metal drift on the bearing inner ring if tapping is used.
3. Bolt the bearing to the support. Use shims to align the bearing so that the inner ring has equal clearance around the housing bore. Shims should cover the entire area of the bearing base.

4. Determine proper final shaft position. Line up set screws across multiple bearings. Tighten collar set screw to the recommended torque listed below:

Set Screw Size (in)	Hex Size (in)	Torque (in-lb)
3/8	3/16	290
7/16	7/32	460
1/2	1/4	620
5/8	5/16	1,325

5. Check rotation. If there is irregular resistance, rotation or vibrations, check bearing alignment and straightness of shafting and mounts. Recheck installation and make corrections as necessary.
6. In some cases, transit or movement during install can loosen the set screws. It is recommended to retorque setscrews prior to commissioning the conveyor.
7. 2nd generation bearings come as fixed with the option to modify to expansion. To modify bearing to expansion, mark the housing and retaining nut. Loosen the set screws in the bearing housing that fix the retaining nut. Loosen the retaining nut using a hammer and punch (counterclockwise) one complete revolution. Tighten the set screws to fix the retaining nut.

LUBRICATION INSTRUCTIONS

Bearings are prelubricated with No. 2 lithium base grease. No additional lubrication is necessary before startup. Re-lubricate bearings with a high-quality No. 2 lithium base grease that is compatible with original grease and suitable for precision bearingservice. Extra protection may be required in environments with excessive moisture, dust, or corrosive vapor. In these cases, it is recommended that the bearing contain as much grease as the bearing speed allows.

Generally, unusually high operating temperatures associated with excessive leakage of grease indicates too much grease. High temperatures with no grease showing at seals, particularly if bearing sounds noisy, usually indicate too little grease.

Higher Speed Operation – At higher operating speeds, excess grease may cause overheating. In these cases, only experience can determine the proper amount of lubrication. At these higher speeds, small amounts of grease at frequent intervals are preferred to large amounts of grease at less frequent intervals.

Lubrication Guide:

PPI recommends a high-quality No. 2 lithium base grease be used on conveyor pulley applications. Suggested grease intervals are as follows:

Shaft Diameter	Initial Weight	Relubrication Weight	Suggested Relubrication Interval (Hours of Service based on RPM and Temperature deg. F)											
	oz	oz	100 RPM		250 RPM		500 RPM		1000 RPM		2000 RPM		3000 RPM	
			<160°F	>160°F	<160°F	>160°F	<160°F	>160°F	<160°F	>160°F	<160°F	>160°F	<160°F	>160°F
1-7/16" thru 1-1/2"	0.5	0.1	2200	100	1400	700	1000	500	240	120	120	60	40	20
1-11/16" thru 1-3/4"	0.6	0.2	200	1000	1200	600	800	400	320	160	160	80	80	40
1-15/16" thru 2"	0.6	0.2	1600	800	1000	500	640	320	240	120	120	60	60	30
2-3/16" thru 2-1/4"	0.8	0.3	1200	600	800	400	440	220	160	80	100	50	60	30
2-7/16" thru 2-1/2"	1.4	0.4	1120	560	720	360	360	180	120	60	80	40	40	20
2-11/16" thru 3"	1.6	0.7	1040	520	680	340	340	170	100	50	60	30		
3-3/16" thru 3-1/2"	2.9	0.9	960	480	600	300	300	150	80	40	40	20		
3-11/16" thru 4"	4.3	1.6	840	420	520	260	240	120	60	30	20	16		
4-7/16" thru 4-1/2"	6.1	1.9	680	340	440	220	200	100	60	30	20	16		
4-15/16" thru 5"	9.4	2.7	560	280	360	180	160	80						

Check the grease for excessive oiliness or dirt, and adjust greasing frequency accordingly.

Special Operating Conditions: For chemical exposure, extreme shock loads or other special operating conditions contact PPI.



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