

⚠ WARNING Indicates a hazard which, if not avoided, could result in serious injury or death.

⚠ CAUTION Indicates a hazard which, if not avoided, could result in minor or moderate personal injury.

NOTICE Indicates information considered important, but not hazard-related (e.g. messages relating to property damage).

GENERAL SAFETY INSTRUCTIONS

⚠ WARNING

- Read and follow all instructions carefully.
- Disconnect and lock out power before installation and maintenance. Working on or near energized equipment can result in severe injury.
- Do not operate equipment without guards in place. Exposed equipment can result in severe injury or death.

⚠ CAUTION

- Read and understand the information in this section and in this manual completely before installing, operating or maintaining this equipment. Failure to follow this instruction could result in severe injury or death.

- Perform periodic inspections. Equipment may fail prematurely and could become unsafe if not properly inspected and maintained. Failure to follow this instruction could result in mild or moderate personal injury.

ALL UNITS

BEARING MOUNTING PROCEDURE

1. Inspect shaft size. The recommended shaft tolerance is nominal to minus (-) 0.0005". Shaft must be to correct size. Clean shaft and mounting surface as needed.
2. Coat the shaft and bearing bore with grease or oil to facilitate assembly.
3. Position bearings on the shaft, applying all driving pressure to the face of the inner ring.

NOTICE: Do NOT strike or exert pressure on housing or seals.

4. 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 2 mounting bolts are recommended.
5. 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 1**.
6. Lock bearings to the shaft. Tighten the set screws on the bearing to the proper tightening torque which can be found in the **TABLE 2** – Set Screw Torque Values. Alternate torquing the screws to prevent unequal loading. (See comment 7 in Additional Installation Comments.)
7. Installing Orange Safety Cap – With the rubber O-ring placed inside the cap, press cap onto set screw side of housing. Cap will snap on.

Note: All units come with an orange plastic pipe plug in box. If lube for life bearing is required, removed the grease fitting in the housing and replace with plastic pipe plug.

**Table 1 — HOUSING MOUNTING BOLT SIZE & TORQUE VALUES
(Recommended)**

Set Screw Size in. (mm)	Flange Housings		Pillow Block Housings	
	Bolt Size (in)	Tightening Torque (lb-ft)	Bolt Size (in)	Tightening Torque (lb-ft)
3/4" (20 mm)	3/8	20	3/8	20
1" (25 mm)	3/8	30	3/8	20
1 3/16", 1 1/4" (30 mm)	3/8	30	1/2	50
1 1/4", 1 3/8", 1 7/16" (35 mm)	3/8	30	1/2	50
1 1/2" (40 mm)	3/8	30	1/2	50

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. 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.



**Table 2 — INNER RING SET SCREW TIGHTENING TORQUE VALUES
(Recommended)**

Set Screw Size (in.)	Series	Shaft Size (in.)	Set Screw Seating Torque (Inch- Pounds)
1/4"	212 – 2E20	3/4 – 1 1/4	87 – 92
5/16"	220 – 224	1 1/4 – 1 1/2	165 – 185

LUBRICATION

Standard bearings come pre-lubricated from the factory with Lubriplate® FGL-2 grease. Lubriplate FGL-2 is a NLGI Grade 2 grease with an aluminum complex thickener. It can be used with a wide range of speeds, loads, and temperatures ranging from freezers to ovens. For high speeds, other special service conditions, or for inquiries on other acceptable greases, please consult your local Regal Rexnord™ representative or the Regal Rexnord Bearing Engineering Department.

NOTICE: 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 **TABLE 3**.

NOTICE: 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.

NOTICE: If the grease bases are different they should never be mixed.

Table 3 — LUBRICATION INFORMATION

Operating Conditions		Bearing Operating Temperature	Greasing Interval†
Dirt Exposure	Moisture Exposure		
Slight	None	32° F to 120° F 120° F to 160° F	6 months 2-4 months
Moderate to Heavy		32° F to 160° F	1-4 weeks
Slight to Heavy	Direct water splash or exposure to outdoor environment	32° F to 160° F	Daily to 1 week or as determined by inspection of installation
Slight	None	-5° F to 32° F	Determined by inspection of installation

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

Table 4 — RELUBRICATION AMOUNTS (Recommended)

Shaft Size in. (mm)	Volume Cubic in.	Volume Ounces
3/4" (20 mm)	.12	.06
1" (25 mm)	.12	.06
1 3/16", 1 1/4" (30 mm)	.30	.15
1 1/4", 1 3/8", 1 7/16" (35 mm)	.30	.15
1 1/2" (40 mm)	.45	.23

**Table 5 — KLEAN-GARD™ ASSESSORY KIT
CAP AND SEAL PART NUMBERS**

Screw Size	Basic Unit #	DC - Closed Cap w/O-ring	DC - Open Cap w/Seal and O-ring†	Rear Auxiliary Seal†
3/4"	212	K2126	K2126D	K212E
20 mm	2M20	K2126	K2M206D	K2M20E
1"	216	K2166	K2166D	K216E
25 mm	2M25	K2166	K2M256D	K2M25E
1 3/16"	219	K2196	K2196D	K219E
1 1/4"	2E20	K2196	K2E206D	K2E20E
30 mm	2M30	K2196	K2M306D	K2M30E
1 1/4"	220	K2236	K2206D	K220E
1 3/8"	222	K2236	K2226D	K222E
1 7/16"	223	K2236	K2236D	K223E
35 mm	2M35	K2236	K2M356D	K2M35E
1 1/2"	224	K2256	K2246D	K224E
40 mm	2M40	K2256	K2M406D	K2M40E

† For open cap kit (D) or Rear Auxiliary seal in Viton®** material, add an "L" after the "K". Example: KL2166D and KL216E.

Table 6 — BEARING LOAD RATINGS (Recommended)

Size Code	Bearing Load Ratings	
	Dynamic C	Static Co
204	1960 lb 8730 N	1480 lb 6590 N
205	2130 lb 9500 N	1760 lb 7830 N
206	2970 lb 13190 N	2530 lb 11300 N
207	3900 lb 17340 N	3340 lb 15300 N
208	4430 lb 19710 N	4460 lb 19900 N

TECHNICAL INFORMATION

Components:

- Reinforced Polypropylene Housing
- AISI 440 Stainless Steel Bearing
- AISI 304 Seal, Retainer and Set Screws
- Standard Nitrile Rubber Seals. Viton available upon request
- Rust Resistant Grease Fitting
- Plastic pipe plug
- Orange Safety Caps available upon request

Self-Alignment

Maximum misalignment between housing and shaft: $\pm 2^\circ$.

Continuous Operating Temperatures

Bearing units can withstand temperatures in the range of -5° F to +160° F. At the maximum temperature, the housing still maintains a high dimensional stability.

*The following trademarks or trade names are owned by or under the control of a third party and are not owned by or under the control of Regal Rexnord Corporation or its affiliates. Lubriplate: Lubriplate Lubricants Company; Viton: The Chemours Company FC, LLC.

Table 7 — RESISTANCE TO CHEMICAL AGENTS

Legend: A = No Effect B = Minor Effect C = Moderate Effect D = Severe Effect

Chemical Agent	Polypropylene Housing			Rubber						Stainless Steel					
	Note Conc. % 23° C			Standard Nitrile Seal			Optional Viton Seal			AISI 304			AISI 440		
				Note	Conc. %	23° C	Note	Conc. %	23° C	Note	Conc. %	23° C	Note	Conc. %	23° C
Acetic Acid		40	A			D		20	D		20	B		25	A
Acetone			A			D			D		25	A			B
Aluminum Chloride				Sol.		A	Sol.	Sat.	A		20	D		20	D
Ammonia		30	A	Sol.		C	Sol.		C		100	A		100	A
Ammonium Chloride				Sol.		A	Sol.	Sat.	A			A			A
Amyl Alcohol			A						A			A			A
Beer			A			A			A			A			A
Benzoic Acid		Sat.	A	Sol.		A	Sol.		A		100	A			A
Benzol			C			D			C			A			
Boric Acid		Sat.	A	Sol.		A	Sol.	Sat.	A		Sat.	A		Sat.	A
Butter			A			A			A			B			
Butyl Alcohol			A			C			A						A
Calcium Chloride	Sol.	50	A	Sol.		A	Sol.	Sat.	A			A			C
Carbon Sulphide			A			D			A			A			
Carbon Tetrachloride			D			D			A			B			A
Chloroform			C			D			A			A			A
Citric Acid		10	A	Sol.		A		Sat.	A		25	A			A
Copper Sulphate				Sol.		A	Sol.	Sat.	A		100	A			
Distilled Water			A												
Ethyl Acetate			A			D			D			A			A
Ethyl Alcohol		96	A			C			A						A
Ethyl Chloride			D									A			A
Ethyl Ether			A						D						
Ferric Chloride			A	Sol.		A	Sol.	Sat.	A			D			D
Food Oils and Fats			A			A			A						
Formaldehyde	Sol.	40	A					40	A						A
Freon 12						A			C						A
Gasoline			C			C			A			A			A
Glycerine			A			A			A			A			A
Hydrochloric Acid	Sol.	30	A	Sol.	10	C	Sol.	37	A			D		75	D
Hydrofluoric Acid		40	A		65	D		48	A		20	D		20	D
Hydrogen Peroxide		30	A	Sol.	80	D		90	A		10	C			
Lactic Acid	Sol.	20	A	Sol.		A			A			A			C
Linseed Oil			A			A			A						A
Magnesium Chloride	Sol.	Sat.	A	Sol.		A	Sol.	Sat.	A			B			A
Mercury						A			A			A			A
Methyl Alcohol			A			C			C						A
Methylene Chloride			C			D			C			B			
Milk			A			A			A			A			A
Mineral Oil			A			A			A			A			A
Nitric Acid	Sol.		A	Sol.	10	D		70	A		50	A		50	A
Oleic Acid		98	A			C			C			A			B
Petroleum						A			A			A			A
Petroleum Ether			A									A			
Phenol			A			D			A			A			A
Phosphoric Acid		85	A	Sol.	20	C		85	A		40	B		40	A
Potassium Hydroxide				Sol.		C	Sol.		A		50	B		50	B
Sea Water			A			A			A			A			A
Silicone Oil			A			A			A						A
Silver Nitrate	Sol.		A	Sol.		C	Sol.		A			A			A
Sodium Chloride	Sol.	Sat.	A	Sol.		A	Sol.	Sat.	A			B			B
Sodium Carbonate	Sol.	Sat.	A	Sol.		A	Sol.		A		100	A			B
Sodium Hydroxide		52	A	Sol.		C		45	A		20	A		20	A
Sodium Hypochlorite	Sol.	20	A	Sol.		D		5	A		20	C		20	C
Sodium Silicate				Sol.		A					100	A			A
Sodium Sulphate				Sol.		A	Sol.		A		100	A			
Suds	Sol.		A	Sol.		A			A		100	A			
Sulphuric Acid		98	A	Sol.		D		95	A						
Tartaric Acid	Sol.	10	A	Sol.		A			A		50	A			B
Tetralin			D			D			A						
Tincture of Iodine			A												
Transformer Oil			C			A			A						
Trichloroethylene			C			D			A						A
Vaseline®*						A			A						A
Vinegar			A			C			D			A			A
Whisky and Wine			A			A			A			A			A
Xylol			D			D			A			A			A
Zinc Chloride	Sol.	20	A	Sol.		A	Sol.	Sat.	A			D			B

* Vaseline is believed to be the trademark and/or trade name of Unilever, and is not owned or controlled by Regal Rexnord Corporation or its affiliates.

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