

# Installation & Lubrication

## Shaft Tolerances

Shaft Diameter	Shaft Tolerance
1/2" - 1 15/16"	Nominal to - .0005"
2" - 3 3/16"	Nominal to - .0010"
3 1/4" - Up	Nominal to - .0015"

For maximum life, **IPTCI** recommends a fit as close to nominal as possible. Turned and ground shafting is also beneficial as it tends to be rounder, straighter and free of burrs or other flaws.

## Mounting Instructions

When mounting, always clean shafting and bearing bore. Then, having coated the shaft with a light oil, slide the bearing unit on the shaft to its correct position. It may be necessary to use a soft mallet and/or pipe, on the inner ring only, to reach the correct position. Never pound on, or apply pressure to, the outside ring! Once the bearing unit is in position, precise alignment can be achieved by first fixing the housing in place, then simultaneously rotating and tapping the shaft with a soft mallet. This should be accomplished before any locking collar or set screw is tightened.

When mounting a locking collar bearing, use a spanner wrench or punch to lock the collar in place — always in the direction of shaft rotation. Then tighten set screw. Do not use locking collar bearings for bi-directional applications.

When mounting set screw locking bearings we recommend the following torque settings:

### Mild steel set screws - for standard bearing inserts

Set Screw Size	Max. Recommended Torque (in./lbs.)
10-32	28
1/4 - 28	66
5/16 - 24	126
3/8 - 24	228
7/16 - 20	306
1/2 - 20	330

### 300 series stainless set screws - for SUC & CUC bearing Inserts

Set Screw Size	Max. Recommended Torque (in./lbs.)
1/4 - 28	54
5/16 - 24	110
3/8 - 24	205

## Lubrication

All IPTCI bearing units are factory prelubricated and, therefore, do not require supplemental grease before service life begins. Relubrication, when administered correctly, can increase the life of a bearing substantially. IPTCI recommends the following general guidelines to maximize your bearing life:

RPM	Temperature	Environmental Condition	Interval
100	32° F - 120° F	Clean	6-12 months
500	32° F - 150° F	Clean	2-6 months
1,000	32° F - 210° F	Clean	2 weeks to 2 months
1,500	Over 210° F	Clean	Daily to weekly
Any	32° F - 150° F	Dirty	Weekly to monthly
Any	Over 150° F	Dirty	Daily to 2 weeks
Any	Any Temp.	Very Dirty	Daily to weekly
Any	Any Temp.	Extremely Dirty	Daily to weekly

### NOTE:

Overlubrication is a major cause of bearing failures. Please relubricate conservatively when unsure of bearing requirements.

When selecting a bearing lubricant, **IPTCI** suggests any lithium-based NLGI #2 grease. For operating temperatures higher than 210° F, please consult **IPTCI**.