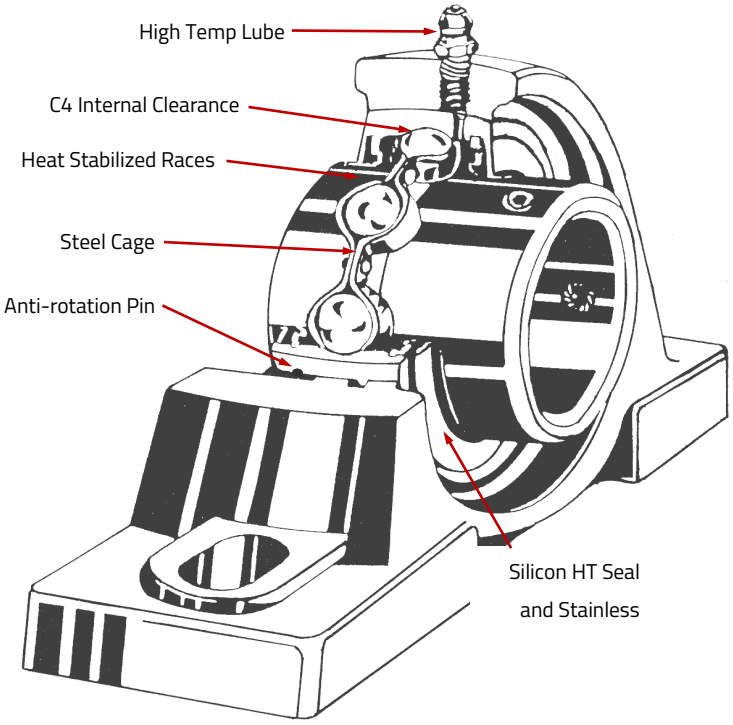
HIGH TEMPERATURE (HT)
MOUNTED BALL BEARINGS

P.T. INTERNATIONAL

European Metric and American Standard Industrial Power Transmission Products

PTI High Temperature (HT) Ball Bearings will operate at higher temperatures than standard bearing units. PTI inserts can be installed in any of our European or American Standard housing types. We stock HT inserts from 1/2" to 3-1/8" and from 12mm to 80mm shaft sizes. Low temp is also available. Bearing inserts are stocked at PTI without lubrication, so you can also use your own lubrication if desired for consistency.

KEY FEATURES



Stainless Steel Shields and HT Silicon bearing seals added for protection from the elevated temperatures and corrosive environments up to 390°F (200°C) are stock. Higher Temps & Viton seals on request.

Steel ball retainers (cages) can handle high temperatures and will not become brittle like polyamide or glass fiber cages.

High Temp Lubricant Rated for 260°C (500°F) & Food Grade Duty is our standard. Other lubricants are available upon request.

C4 Internal Clearance accommodates thermal growth of races (larger than normal C3)

Anti-Rotation pin on the insert OD allows the insert to align easily and restrict bearing rotation due to temperature differences. Insert fitted to housing with a loose fit before shipment.

High Temp Set Screw (UC) and Eccentric Locking Collar (HC) inserts are both available from stock. They will assemble into nearly any housing type we offer. Lube fill rates typically 35-50%. For low speed, or frequent wash-down, higher fill rates are recommended. For heavy loads, consult PTI.

Bearings are marked (HT, LT, etc.) and tagged so installers and maintenance personnel recognize the re-lube match requirement.

SOLID LUBRICANT OPTION



- Provides a continuous replenishment of graphite lubricant
- Eliminates need for re-lubrication
- Keeps contamination out
- Can not be washed out or adversely affected by steam or chemical washdown
- Non-toxic
- Available for operating temperatures from subzero to 660°F

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HIGH TEMPERATURE (HT) MOUNTED BALL BEARINGS

The shaft sizes and mounting options shown to the right are normally stocked and are available as High Temp or Low Temp units. Other sizes/ styles can also be provided. These inserts can be installed in all housing types. Refer to the PTI catalog for more dimensional information.

All units are C4 (greater than normal C3) internal clearance, which allows for internal expansion at higher operating temperatures.

HIGH TEMPERATURE BEARING FAQ'S

Q. IS THE FIT OF INSERT TO HOUSING ADJUSTED FOR HIGH TEMPERATURE APPLICATIONS?

A. Yes, light swivel torque of the insert is normally recommended. The insert will grow in diameter more than the housing due to material differences, so the use of an anti-rotation pin will ensure the insert will not spin due to a reduced swivel torque.

Q. CAN THE CUSTOMER SPECIFY THE HT GREASE?

A. *Yes, we can also ship units tagged with a caution note to allow the customer to install the lube.*

Q. HOW OFTEN SHOULD GREASED UNITS BE RE-LUBRICATED?

A. This will depend on the application, temperatures and hours of operation. Experience is the best guide. Small amounts more frequently is better than large amounts infrequently. Please consult the PTI installation manual.

LUBRICATION TIPS

Lubrication for any high temperature application requires careful consideration. Frequent re-lubrication may be necessary to ensure that an adequate level of fresh grease is maintained. As speeds and temperatures increase, more frequent re-lube intervals will be required. Experience will

BEARING DERATE FACTOR BY TEMPERATURE

Elevated bearing temperatures affect the load capability of the bearing. A de-rate factor on the capability of the bearing is provided below as a guide.

Operating Temp	SN Class Up to 250°F (120°C)	S1 Class Up to 390°F (200°C)	S2 Class Up To 480°F (250°C)	S3 Class Up to 575°F (300°C)
Load Rating DeRate Factor	**1.00**	**0.90**	**0.75**	**0.75**

Multiply Load Rating by derate factor for new load rating at the elevated operating temperature.

PTI PART NUMBERS - STOCK

Shaft Size	HT UC Set Screw Insert	HT HC Eccentric Lock Insert
1/2"	UC201-8C4	Non Stock
1/2"	UC201-8C4-40	Non-Stock
12mm	UC201-12MMC4-40	Non-Stock
5/8"	UC202-10C4	Non Stock
5/8"	UC202-10C4-40	Non Stock
15mm	UC202-15MMC4	Non Stock
15mm	UC202-15MMC4-40	Non Stock
11/16"	UC203-11C4-40	Non Stock
17mm	UC203-17MMC4-40	Non Stock
3/4"	UC204-12C4	HC204-12C4
20mm	UC204-20MMC4	HC204-20MMC4
7/8"	UC205-14C4	Non Stock
15/16"	UC205-15C4	Non-Stock
1"	UC205-16C4	HC205-16C4
25mm	UC205-25MMC4	HC205-25MMC4
1-1/8"	UC206-18C4	Non Stock
1-3/16"	UC206-19C4	HC206-19C4
1-1/4"	UC206-20C4	HC206-20C4
30mm	UC206-30MMC4	HC206-30MMC4
1-1/4"	UC207-20C4	HC207-20C4
1-3/8"	UC207-22C4	HC207-22C4
1-7/16"	UC207-23C4	HC207-23C4
35mm	UC207-35MMC4	HC207-35MMC4
1-1/2"	UC208-24C4	HC208-24C4
40mm	UC208-40MMC4	HC208-40MMC4
1-11/16"	UC209-27C4	HC209-27C4
1-3/4"	UC209-28C4	HC209-28C4
45mm	UC209-45MMC4	HC209-45MMC4
1-7/8"	UC210-30C4	HC210-30C4
1-15/16"	UC210-31C4	HC210-31C4
2"	UC210-32 C4	HC210-32 C4
50mm	UC210-50MMC4	HC210-50MMC4
2"	UC211-32C4	Non Stock
2-1/8"	UC211-34C4	Non Stock
2-3/16"	UC211-35C4	Non Stock
55mm	UC211-55MMC4	Non Stock
2-7/16"	UC212-39C4	Non Stock
60mm	UC212-60MMC4	Non Stock
2-1/2"	UC213-40C4	Non Stock
65mm	UC213-65MMC4	Non Stock
2-11/16"	UC214-43C4	Non Stock
2-3/4"	UC214-44C4	Non Stock
70mm	UC213-70MMC4	Non Stock
2-15/16"	**UC215-47C4**	**Non Stock**
3"	**UC215-48C4**	**Non Stock**
75mm	**UC215-75MMC4**	**Non Stock**
80mm	**UC216-80MMC4**	**Non Stock**
3-1/8"	**UC316-50C4**	**Non-Stock**