

Mounted Ball Bearing Units

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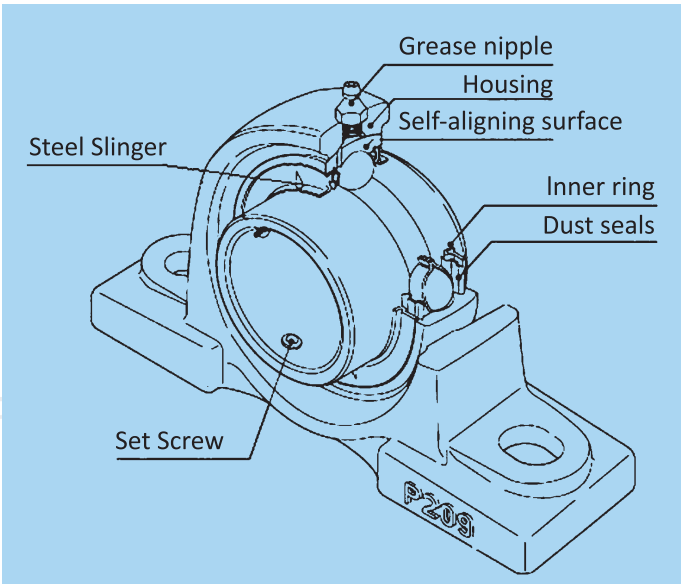
Engineered With Vision. Built With Care.

Hi-Sun Mechanical & Electric (USA) Co. Ltd. is a supplier of high quality bearings and components from ISO 9001 certified manufacturing facilities. Our mounted bearing products are widely used for power transmission, agricultural machinery, bulk material handling, and food processing applications across a wide variety of industries.

Based in Renton, Washington, our professional sales staff and support team are committed to delivering the highest of standards of customer service and support. In addition to our deep stock of inventory, Hi-Sun offers custom value added solutions based on the specific requirements of our OEM and distribution customers at competitive price levels.

HI-SUN Mounted Bearings

- Variety of alternative seal designs
- Grade 10 precision balls
- High strength riveted, Carbon steel retainers
- Nylon Retainers are also available
- Precision ground and super-finished raceways
- Four kinds of optional locking methods
- Housing materials:
High strength gray iron
Ductile iron
Stainless steel (AISI 304 Stainless Steel)
Thermoplastic
Zinc alloy
Carbon steel



Our Bearing Styles include

- Dual set screw locking with wide and narrow inner rings in spherical and cylindrical outer rings.
- Eccentric locking collar with wide and narrow inner rings in spherical and cylindrical outer rings.
- Concentric locking collar with wide and narrow inner rings in spherical and cylindrical outer rings.
- UK Adapter locking.

Our Housing Styles include

- Pillow-Blocks in high grade cast iron, high strength ductile iron, stamped steel, polymer and stainless steel.
- 2, 3 & 4 bolt flanges in high grade cast iron, high strength ductile iron, stamped steel, polymer and stainless steel.
- Hanger units, take-up units, cartridge and other specialty use designs.
- Rubber insulators.

Seal Design

HI-SUN offers a variety of seal designs according to the end user's unique application and design requirements. In addition, we enhance frame intensity and the structure intensity of seals to greatly improve dustproofing performance of our seals.

Sealing structure	Description
SL-seal	The inside is an NBR rubber sealed ring. It contains a metal cover which is fixed on the inner ring. The metal cover protects the inner rubber sealed ring from external mechanical damage.
R-seal	This design enhances dustproofing based on the SL seal design. It can be applied to most general applications and working environments.
ZZ-seal	The double seal of inner and outer layers are made of a metal plate. This design is most commonly used for high temperature applications.
L3-seal	This design provides superior dustproofing capabilities. It is ideal for low-speed applications operating in the harshest environments.
KRR-seal	This design provides the bearing with more space to keep grease which significantly reduces maintenance terms.
RST-seal	This design is made of a single metal plate which is pasted by NBR rubber on the inside surface, and fixed on the outer ring. The metal plate protects the rubber from premature damage.
P-seal	This design features inner and outer double frames made of carbon steel and interior NBR rubber, providing better intensity which prevents damaged seals during grease filling.

Shaft Locking Methods

HI-SUN provides four standard methods to lock mounted ball bearings to the shaft. Depending on application requirements, one method may yield a better operating result than another. HI-SUN has the ability to deliver custom high quality solutions for virtually any application.

Bearing Type	Locking Method	Description
		Set screw locking is one of the most popular and least expensive methods. Simple to install, this method has two set screws to tighten the bearing to the shaft. The clearance fit of the bearing on the shaft makes installation simple and quick. This method is typically used for low to medium speed applications. Periodic tightening of the set screws is required.
		The bearing inner ring has an eccentric groove and a mating groove is machined into the collar. Commonly a drift pin and hammer are used to tighten the collar against the mating eccentric of the inner ring, locking the bearing to the shaft. Generally the locking collar is tightened with the direction of shaft rotation. For reversing loads, it is best to use another locking method as torque reversals could loosen the collar.
		The concentric locking method is a clearance fit of the inner ring of the bearing to the shaft. It is easy to install and will not loosen after proper initial tightening. As the cap screw in the split locking collar is tightened, the collar compresses the spline zone of the inner ring to grip or squeeze the shaft. Loosening the concentric collar will loosen the unit and removal is easy.
		The adapter locking method provides the most concentric locking fit of all locking methods as it simulates the direct mounting of the bearing to the shaft. The adapter mounting allows the highest speed with the least amount of residual vibration.

Insert Bearings

Material

HI-SUN uses the highest quality steel approved by world famous bearing manufacturers. As per the customer's application and design requirements, HI-SUN typically offers products in chrome steel (ASTM52100) / stainless steel (AISI440C).

Table 1

Material		Analysis (%)						
		C	Si	Mn	Cr	Mo	P	S
GB/T	GCr15	0.95-1.05	0.15-0.35	0.25-0.45	1.40-1.65	≤0.08	≤0.025	≤0.025
DIN	100Cr6	0.95-1.05	0.15-0.35	0.25-0.45	1.40-1.65		≤0.030	≤0.025
ASTM	52100	0.98-1.10	0.15-0.35	0.25-0.45	1.30-1.60	≤0.10	≤0.025	≤0.025
JIS	SUJ2	0.95-1.10	0.15-0.35	≤0.50	1.30-1.60		≤0.025	≤0.025

Table 2

Material		Analysis (%)						
		C	Si	Mn	Cr	Mo	P	S
AISI	440C	0.95-1.20	≤1.00	≤1.00	16.0-18.0	≤0.75	≤0.04	≤0.03
GB/T	9Cr18	0.90-1.00	≤0.80	≤0.80	17.0-19.0	≤0.75	≤0.035	≤0.030

Operating Temperature

HI-SUN bearings perform at an optimal level a temperature between 14°F-248°F. We have the capability of manufacturing custom bearing solutions to meet demands in excessively hot or cold conditions.

Lubrication

HI-SUN's bearings are filled with #2 Lithium grease during production. Food Grade Grease is available upon request for food processing equipment.

Coating

HI-SUN offers quality coating options to prevent corrosion (zinc or chrome coating, which meets the EU RoHS environmental protection requirements.) The products are tested regularly by SGS etc. professional testing organizations. Different solutions are available according to different application requirements.

