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BEER®

Trusted Difference At Every Turn™

BEARING SOLUTIONS FOR INDUSTRIAL ELECTRICAL APPLICATIONS

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Smooth and quiet PEER Bearings
- Improve machine operating efficiency
- Minimize power loss & reduce energy costs

Longer PEER Bearing service life
- Increases machinery uptime and productivity
- Lowers machine maintenance costs

Globally interchangeable PEER designs
- Allow drop in replacement for OEM and rebuilders
- Eliminates machine re-design cost

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Trusted Difference At Every Turn™

Deep Groove Ball Bearings for the Industrial Electrical Industry

PEER Bearing has expanded the size range manufacturing capability of single row deep groove ball bearings for the global industrial electrical market. The product portfolio now includes larger bore deep groove ball bearings with bore size up to 200mm, intended for use in higher HP electrical applications. This new offering complements PEER's existing fractional and low HP bearing solutions offer. All bearings are manufactured at PEER's ISO/TS16949 and ISO 14001 certified facilities which allows us to support OEM design and development globally. Rely on PEER's expanded range of electric motor bearing solutions to meet your most demanding performance expectations and keep your electrical applications running quiet.

PRODUCT FEATURES AND BENEFITS

Optimized raceway geometry and surface finish
- Reduces vibration and bearing noise for quiet & efficient operation.
- Promotes lubrication effect so bearing runs cooler and extends service life.

High precision grade 10 balls
- Reduces vibration and bearing noise for quiet operation.

High precision accuracy and manufacturing consistency
- Eliminates vibration and bearing noise for quiet & efficient electrical operation.

High quality through hardened bearing steel
- Improves bearing fatigue life and extends service life.

Multiple seal options
- Provides supplemental protection against environmental contamination (dust, sand, moisture) extending service life.
- Promotes grease retention in the bearing cavity for longer service life.

Premium polyurea thickened grease
- Mobil PolyrexEM™
- Smooth running for quiet operation.
- Excellent high & low temperature capability extends service life.
- Superior water washout maintains lubricity when exposed to moisture.

DEEP GROOVE BALL BEARING PRODUCT CAPABILITIES

Bore Size: 3mm to 200mm

Outer Diameter: up to 300mm

Closures: Open
Non-contact metallic shields
Non-contact seals
Contact seals

Ring Material: 52100 chrome steel
440C stainless steel

Seal Material: Nitrile (Buna-N)
Polyacrylic (Hycar®)
Fluoroelastomer (Viton®)

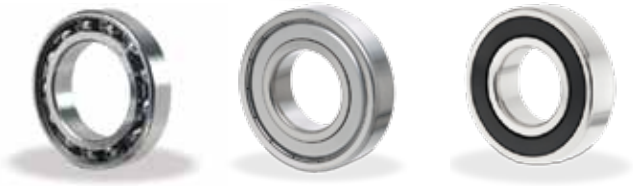
Retainer: Riveted steel, Crimped steel, Crowned steel, Crowned nylon

Precision Class: ABEC1, ABEC3, ABEC5

Radial Internal Clearance: C2, C0, C3, C4, CX

Lubrication: Quiet, Low or high temperature, Food grade, Low or high viscosity

Heat Stabilization: S0, S1, S2, S3



OPEN SHIELDED SEALED

DGBB Series	Unit	PEER Manufacturing Range Capability	Open	Shielded	Sealed
600	Metric	604 to 629	√	√	√
6800	Metric	6800 to 6815	√	√	√
6900	Metric	6900 to 6915	√	√	√
6000	Metric	6000 to 6038	√	√	√
6200	Metric	6200 to 6232	√	√	√
6300	Metric	6300 to 6328	√	√	√
6400	Metric	6400 to 6420	√	N/A	N/A
16000	Metric	16000 to 16032	√	N/A	N/A
R	Inch	R2 to R24	√	√	√
1600	Inch	1601 to 1658	√	√	√

PEER BEARING PART NUMBER NOMENCLATURE

MATERIAL

Blank	Chrome steel
SS	Stainless steel

SERIES

600	6200
6800	6300
6900	6400
6000	1600
	16000

CLOSURE (Size Dependent)

Blank	Open
ZZ, ZZP, ZZD	Two, non-contact shields
2RLAD	Two, Nitrile, non-contact seals
2RLBD	Two, Nitrile, light contact seals (Lower torgue)
2RS, 2RSP, 2RLD	Two, Nitrile, contact seals (Standard torque)
2RSFP, 2RLYD	Two, Nitrile, contact seals (Higher torque)
2HRS, 2HRSP, 2HRLD	Two, Polyacrylate, contact seals (Standard torque)
2VRS, 2VRSP, 2VRLD	Two, Fluoroelastomer, contact seals (Standard torque)

PRECISION CLASS

Blank	ABEC1
A3	ABEC3
A5	ABEC5

SS - 6203 - 2RLD - NR - 8 - TN - C3 - A3 - S0

SNAP RING / GROOVE

N	Snap ring groove
NR	Snap ring groove and ring

MODIFIED DIMENSION

4	¼" bore	8MM	
6	⅜" bore	13MM	
8	½" bore	16MM	
10	⅝" bore	3123	.3123" bore (608)
12	¾" bore	3125	.3125" bore (608)
14	⅞" bore	3126	.3126" bore (608)
16	1" bore		

RETAINER

Blank	Two pcs crimped steel (small sizes)
Blank	Two pcs riveted steel
TN	One pc crowned nylon

RADIAL INTERNAL CLEARANCE

C2	Smaller than normal
Blank	C0 normal
C3	Larger than normal
C4	Larger than C3
CX	Non-standard radial clearance

RINGS HEAT STABILIZATION

Blank	Heat stabilized to operate at 120C
S0	Heat stabilized to operate at 150C
S1	Heat stabilized to operate at 200C
S2	Heat stabilized to operate at 250C
S3	Heat stabilized to operate at 300C

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High-Precision Measurement of Ball Bearing Vibrations and Noise are Key

In electrical applications, low noise and vibration are primary considerations in bearing design. To achieve low noise and vibration, PEER controls precision, accuracy and finish of rolling surfaces. PEER's designation for bearings that meet these strict requirements is Electric Motor Quality (EMQ).

PEER EMQ bearings are 100% noise tested on state-of-the-art anderon meter equipment (fig. 1) to meet electrical OEM requirements. Used to detect vibrations from bearing imperfections, the anderon meter displays vibration levels over three frequency ranges as well as amplified audibly.

Figure 2 represents anderon meter data comparing PEER against 2 major manufacturers using 6316 size ball bearings. The data shows PEER with lower vibration levels over all 3 frequency bands. Low vibration values are desirable for smooth bearing operation, low noise and long service life in industrial electrical applications.

Figure 1: Anderon meter testing equipment.

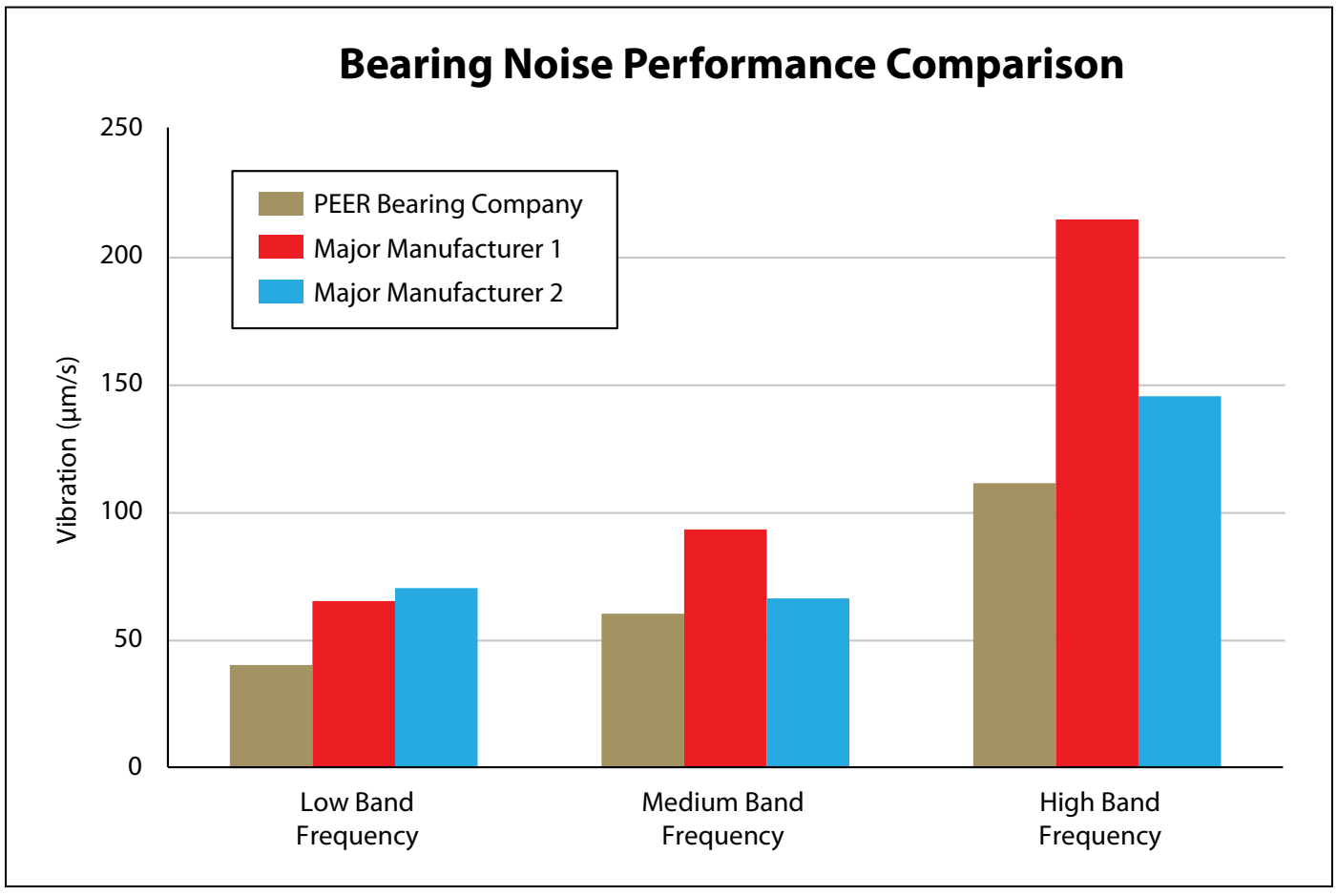

Figure 2: 6316 noise test data results (Anderon meter testing comparing PEER Bearing versus 2 major manufacturers).

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Bearing Closures

To meet varying operating and environmental conditions, PEER offers a wide range of bearing closure options. Non-contact shields and non-contact seals are used in torque sensitive applications. Contact seals are used to protect from light external contaminants and promote bearing grease retention. For extreme conditions such as higher temp or caustic environments, alternative seal materials such as Polyacrylate (Hycar®) or Fluoroelastomer (Viton®) are available.

NON-CONTACT SHIELDED | NON-CONTACT SEALED | LIGHT CONTACT SEALED | CONTACT SEALED

Bearing Seals (Heavy Contamination)

Properly designed bearing seals offer performance advantages when used in contaminated electrical applications. PEER offers alternative seal solutions engineered to provide superior contamination exclusion from dust, dirt and water. Typical applications include mid to high horsepower motors.

2RLYD | 2RSFP

Ceramic Balls

Ceramic balls offer performance advantages when used in electric motor applications with electric current. Typical applications include variable speed electric motors with high conductivity and generators.

Lubrication (Greases)

Specifying the appropriate grease can be the difference between bearing success or damage. PEER stocks our bearings with electric motor quality grease (Mobil PolyrexEM) or we can select based on the application requirements.

PEER CODE	GREASE	APPLICATION USE
L151	Mobil PolyrexEM	PEER standard
L06	Mobil Beacon 325	Lower temperature
L21	Kyodo Yushi Multemp SRL	Miniature, higher speed
L67	Chevron FM ALC EP2	Food grade (FDA approved)
L157	Kyodo Yushi Multemp SB-M	Miniature, higher temperature

Contact PEER Application Engineering to select a bearing solution to meet your performance requirements.

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ABOUT PEER

- Full line of agricultural, radial, mounted unit ball bearings and tapered roller bearings
- Valued bearing solutions for lawn & garden, agricultural, industrial transmission, material handling, fluid, electrical, HVAC, off-highway and on-highway applications
- Global application engineering support
- TS-16949 certified manufacturing facilities
- Dedicated Research and Development center
- Testing capabilities include: fatigue life, noise/vibration, mud slurry and salt spray testing
- Flexible manufacturing to allow for low to high volume production
- Customer service excellence

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