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PGN 6204-2RS Bearing Instruction Manual

Model: 6204-2RS

1. PRODUCT OVERVIEW

The PGN 6204-2RS is a high-quality, lubricated chrome steel sealed ball bearing designed for various industrial and mechanical applications. This deep-groove ball bearing features dual-sided rubber seals to protect internal components from contaminants and retain lubrication, ensuring extended operational life and high RPM support.



Image: A PGN 6204-2RS sealed ball bearing, showcasing its chrome steel construction and blue rubber seals.

2. KEY FEATURES

- **Reduced Replacement Frequency:** Constructed from ultra-durable, high-quality materials designed for demanding conditions, minimizing maintenance and replacement needs.
- **High RPM Support:** Engineered to withstand extreme rotational speeds, which helps to reduce wear and tear and prevent premature failure.
- **Ultra-Resistant Construction:** Made from chrome steel, providing resilience against severe impacts and metal fatigue, suitable for diverse machinery.
- **Dual-Sided Rubber Seal:** Equipped with rubber seals on both sides to protect the internal ball bearing components, maintaining integrity and lubrication.
- **Designed in USA:** These sealed ball bearings are locally designed in South Florida, ensuring quality and reliability.

CRAFTED FOR RELIABILITY

SEALED FOR PROTECTION
Zero prep, max output

CHROME STEEL RINGS
Withstands extreme wear

PRE-LUBED CORE
Zero prep, max output



Image: A graphic highlighting the reliability features of the PGN bearing, including sealed protection, chrome steel rings, and a pre-lubricated core.

3. TECHNICAL SPECIFICATIONS

Specification	Value
Brand	PGN Bearings
Model Number	6204-2RS
Bearing Number	6204 2RS
Bearing Type	Deep-Groove Ball Bearing
Material	Alloy Steel (Chrome Steel)
Inside Diameter (ID)	20 mm
Outside Diameter (OD)	47 mm
Width (W)	14 mm
Item Dimensions (L x W x H)	3.94 x 3.35 x 1.97 inches
Item Weight	2.25 Pounds
Compatible Lubricant	Grease (Pre-lubricated)
Specification Met	ISO 9001
UPC	735424862711

DIMENSIONS

6204 SERIES

I.D. (Inside Diameter) **20 mm**

O.D. (Outside Diameter) **47 mm**

W. (Width) **14 mm**

RPM **17,000**

Dynamic Load **2,880 lbs**

Static Load **1,485 lbs**

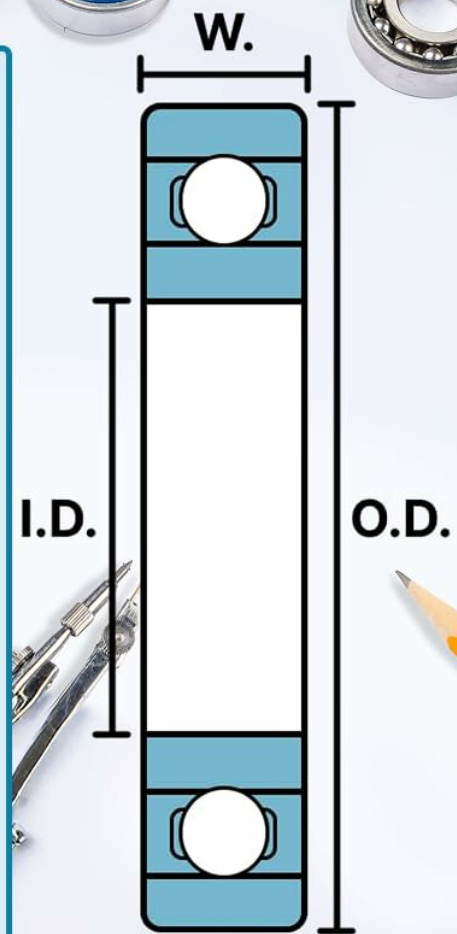


Image: A visual representation of the 6204 series bearing dimensions, including inner diameter, outer diameter, width, maximum RPM, dynamic load, and static load ratings.

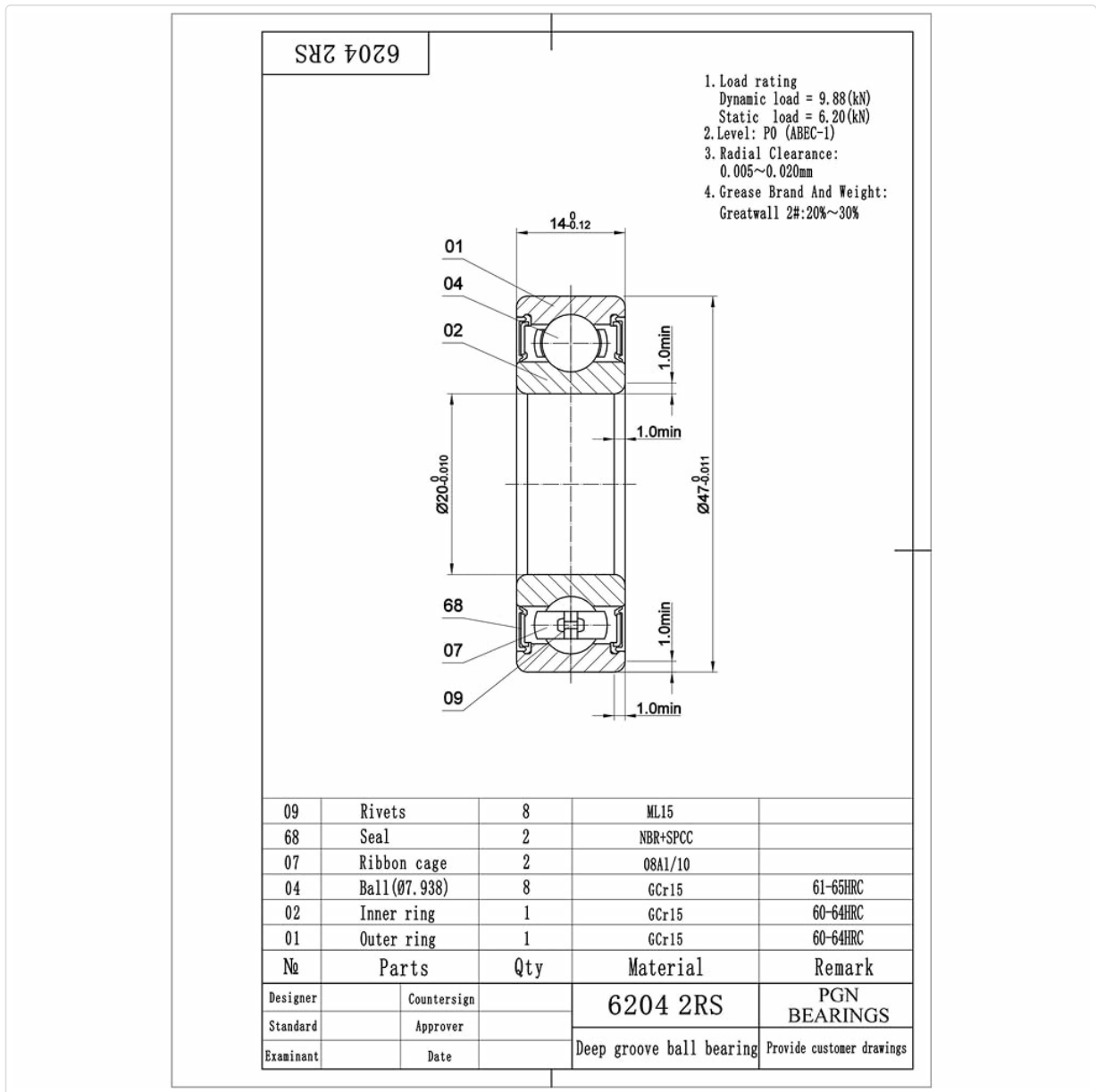


Image: A technical drawing providing detailed dimensions and specifications for the 6204 2RS bearing, including load ratings and material composition.

4. SETUP AND INSTALLATION

Proper installation is crucial for the optimal performance and longevity of your PGN 6204-2RS bearing. These bearings are pre-lubricated and ready for immediate use, requiring no additional greasing prior to installation.

4.1 Preparation

- Ensure the housing and shaft surfaces are clean, dry, and free from burrs or debris.
- Verify that the shaft and housing dimensions are within the specified tolerances for a proper fit.
- Gather appropriate installation tools, such as a bearing press or a soft-faced hammer and a suitable installation sleeve. Avoid direct hammering on the bearing rings or seals.

4.2 Installation Procedure

1. For shaft installation, apply pressure evenly to the inner ring of the bearing.
2. For housing installation, apply pressure evenly to the outer ring of the bearing.

3. Ensure the bearing is seated squarely and fully against its shoulder.
4. Avoid applying force through the balls or seals, as this can damage the bearing.

The PGN 6204-2RS bearings are designed for effortless installation due to their pre-lubricated state and precise fit.



Image: A graphic detailing the PGN Promise, emphasizing quality packaging, US engineering, and a ready-to-install fit for the bearings.

5. OPERATING PRINCIPLES

Ball bearings like the PGN 6204-2RS facilitate rotational motion by reducing friction between moving parts. The balls, housed within raceways, roll between the inner and outer rings, allowing for smooth and efficient rotation. The dual rubber seals prevent the ingress of dust, dirt, and moisture, while retaining the factory-applied grease, which is essential for minimizing friction and heat generation during operation.

These bearings are designed to support both radial and axial loads, making them versatile for various applications requiring high RPM and reliable performance under stress.

PERFORMS UNDER THE TOUGHEST LOADS



- Reduced friction, high-load tolerance
- Optimized for long-hour usage at high RPM

Image: A graphic highlighting the bearing's ability to perform under tough loads, featuring reduced friction, high-load tolerance, and optimization for extended high-RPM use.

6. MAINTENANCE

The PGN 6204-2RS bearings are sealed and pre-lubricated, designed for minimal maintenance. However, periodic inspection of the bearing environment and seals is recommended to ensure optimal performance and longevity.

6.1 Inspection

- Regularly check for any signs of damage to the outer seals, such as cracks or tears, which could compromise the bearing's protection.
- Listen for unusual noises (grinding, squealing) during operation, which may indicate wear or contamination.
- Monitor for excessive heat generation, which can be a sign of improper lubrication or overloading.

6.2 Cleaning and Lubrication

As these are sealed bearings, they generally do not require re-lubrication under normal operating

conditions. Attempting to clean or re-lubricate by removing the seals may introduce contaminants and reduce the bearing's lifespan. If seals are compromised or removed for specific applications, ensure proper re-lubrication with compatible grease and re-sealing to maintain protection.

7. TROUBLESHOOTING

If you encounter issues with your PGN 6204-2RS bearing, consider the following common problems and potential solutions:

Problem	Possible Cause	Solution
Excessive Noise (Grinding/Squealing)	Contamination, lack of lubrication, improper installation, bearing damage.	Inspect seals for damage. If seals are intact, consider replacement. Ensure proper installation technique.
Overheating	Excessive load, insufficient lubrication, misalignment, tight fit.	Verify load capacity. Check for proper alignment and fit during installation. Replace if damaged.
Vibration	Bearing wear, imbalance, contamination, improper fit.	Inspect for wear or damage. Ensure components are balanced and properly fitted.
Premature Failure	Improper installation, overloading, contamination, material fatigue.	Review installation procedures. Ensure bearing is suitable for the application's load and environment.

8. APPLICATIONS

The PGN 6204-2RS bearing is a versatile component suitable for a wide range of applications due to its robust construction and high-performance characteristics. Common uses include:

- Electric motors
- Automotive components
- Industrial machinery
- Power tools
- Lawn and garden equipment (e.g., mower decks)
- Skateboards and other recreational equipment
- Conveyor systems

FROM WORKSHOPS TO WHEELS



Image: A collage demonstrating the wide range of applications for PGN bearings, from industrial settings to automotive and recreational uses.

9. IMPORTANT SAFETY INFORMATION

- Always wear appropriate personal protective equipment (PPE), such as safety glasses and gloves, when handling or installing bearings.
- Use correct tools and techniques for installation and removal to prevent injury and damage to the bearing or surrounding components.
- Never apply excessive force or impact directly to the bearing seals or races, as this can cause internal damage.
- Ensure machinery is powered off and secured before attempting any bearing installation or maintenance.
- Store bearings in their original packaging in a clean, dry environment to prevent contamination and corrosion.

10. PRODUCT VIDEO

Watch the official PGN Bearings video for a visual overview of ball bearing construction and function.

Video: An animated demonstration of the internal components and assembly of a ball bearing, provided by PGN Bearings.

11. WARRANTY AND SUPPORT

PGN Bearings are designed and manufactured to high-quality standards. For specific warranty information or technical support, please refer to the official PGN Bearings website or contact their customer service directly. PGN Bearings is a US-based company committed to providing reliable industrial parts.

For further assistance, please visit the PGN Bearings Store on Amazon.