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› S61912 2RS / SS6912 2RS 61912 6912 Stainless Steel Ball Bearings 60 x 85 x 13 mm Industrial Quality 61912 6912 User Manual

## CQ 23313-61912

# User Manual for CQ S61912 2RS / SS6912 2RS Stainless Steel Ball Bearings

Model: 23313-61912

## 1. INTRODUCTION

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This manual provides essential information for the proper installation, operation, and maintenance of your CQ S61912 2RS / SS6912 2RS Stainless Steel Ball Bearings. Designed for industrial applications, these bearings offer reliable performance and durability. Please read this manual thoroughly before use to ensure optimal performance and longevity of the product.

## 2. PRODUCT OVERVIEW

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The CQ S61912 2RS / SS6912 2RS ball bearings are high-quality components manufactured from full stainless steel, including rings, balls, cage, and cover discs. They are designed to meet industrial standards and provide excellent resistance to corrosion.



**Figure 2.1:** A CQ S61912 2RS / SS6912 2RS stainless steel ball bearing. The bearing features a metallic outer and inner race with a blue seal on both sides, indicating its sealed (2RS) nature. The brand "CQ" is subtly visible on the inner race.

### Key Features:

- **Dimensions:** 60 mm inner diameter, 85 mm outer diameter, 13 mm width.
- **Material:** Full stainless steel construction (rings, balls, cage, cover discs) for superior corrosion resistance.
- **Quality:** Certified industrial quality, compliant with DIN 625-1 standard, featuring G10 precision balls.
- **Sealing:** Equipped with NBR reinforced plastic seals on both sides (2RS / 2RSR / 2RS1 / RS / LLU / LU / DDU / DU) to protect against contaminants and retain lubricant.
- **Customization:** Option for single cover disc (RS) or open (greased) configuration upon request.

## 3. SPECIFICATIONS

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Attribute	Value
Model Number	23313-61912
Inner Diameter	60 mm
Outer Diameter	85 mm
Width	13 mm
Material	Full Stainless Steel (NIRO / INOX)
Sealing Type	2RS (NBR reinforced plastic seals on both sides)
Precision Grade	G10 Precision Balls
Standard Compliance	DIN 625-1
Manufacturer	CQ

## 4. INSTALLATION AND SETUP

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Proper installation is crucial for the longevity and performance of your ball bearings. Incorrect installation can lead to premature failure, noise, and reduced efficiency.

### 4.1 Preparation:

- Ensure the shaft and housing bores are clean, free from burrs, rust, and any foreign particles.
- Check the dimensions of the shaft and housing to ensure they match the bearing's specifications (60mm inner, 85mm outer).
- Use appropriate tools for installation; avoid direct hammering on the bearing races or seals.

### 4.2 Installation Procedure:

1. **Mounting on Shaft:** If the inner ring is to be press-fitted onto a shaft, apply force evenly to the inner ring using a bearing mounting tool or a press. Never apply force to the outer ring or seals.
2. **Mounting in Housing:** If the outer ring is to be press-fitted into a housing, apply force evenly to the outer ring. Never apply force to the inner ring or seals.
3. **Temperature Mounting:** For larger bearings or tight fits, heating the bearing (e.g., in an induction heater or oil bath) to a maximum of 80-100°C (176-212°F) can facilitate installation. Ensure even heating and wear protective gloves.
4. **Lubrication:** These 2RS bearings are pre-lubricated for life under normal operating conditions. If the application requires additional lubrication or if you have an "open" bearing, apply a suitable high-quality grease.
5. **Alignment:** Ensure the bearing is properly aligned with the shaft and housing to prevent undue stress and premature wear.

## 5. OPERATION

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Once installed, the CQ stainless steel ball bearings are designed to operate smoothly and efficiently in various industrial environments, especially where corrosion resistance is critical.

- **Load Capacity:** Operate within the specified radial and axial load limits for the bearing size. Exceeding these limits can lead to premature failure.
- **Speed Limits:** Adhere to the recommended speed limits for sealed ball bearings. High speeds can generate excessive heat and reduce bearing life.
- **Temperature Range:** These bearings are suitable for a wide range of operating temperatures. However, extreme

temperatures outside typical industrial ranges may require special consideration for lubrication and material properties.

- **Vibration and Noise:** During operation, the bearing should run smoothly with minimal vibration and noise. Any unusual sounds or excessive vibration may indicate an issue.

## 6. MAINTENANCE

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While 2RS sealed bearings are generally considered "maintenance-free" due to their pre-lubrication and sealed design, periodic inspection is recommended to ensure optimal performance and identify potential issues early.

- **Inspection:** Periodically inspect the bearings for signs of wear, damage, or contamination. Check the seals for integrity; any cracks or damage can compromise the bearing's protection.
- **Cleaning:** If the bearing is exposed to harsh environments, ensure the surrounding area is kept clean to prevent contaminants from entering if seals are compromised. Do not use high-pressure washers directly on the seals.
- **Re-lubrication:** For 2RS sealed bearings, re-lubrication is typically not required under normal operating conditions. If the seals are removed or damaged, or if the bearing is an "open" type, re-lubricate with a high-quality, compatible grease suitable for stainless steel bearings and the operating environment.
- **Storage:** Store bearings in a clean, dry, and temperature-controlled environment to prevent corrosion and damage before installation. Keep them in their original packaging until ready for use.

## 7. TROUBLESHOOTING

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If you encounter issues with your ball bearings, refer to the following common problems and their potential solutions:

Problem	Possible Cause(s)	Solution(s)
Excessive Noise / Vibration	<ul style="list-style-type: none"> <li>◦ Improper installation (misalignment, excessive force)</li> <li>◦ Contamination (dirt, debris)</li> <li>◦ Insufficient or degraded lubrication</li> <li>◦ Overload or excessive speed</li> <li>◦ Bearing damage (pitting, spalling)</li> </ul>	<ul style="list-style-type: none"> <li>◦ Re-install correctly, ensuring proper alignment.</li> <li>◦ Clean surrounding area; replace bearing if contaminated.</li> <li>◦ Check seals; if compromised, replace bearing.</li> <li>◦ Verify operating conditions are within specifications.</li> <li>◦ Replace damaged bearing.</li> </ul>
Overheating	<ul style="list-style-type: none"> <li>◦ Excessive speed or load</li> <li>◦ Insufficient lubrication</li> <li>◦ Tight fit or pre-load</li> <li>◦ Misalignment</li> </ul>	<ul style="list-style-type: none"> <li>◦ Reduce speed/load if possible.</li> <li>◦ Ensure proper lubrication (if applicable).</li> <li>◦ Check shaft/housing tolerances.</li> <li>◦ Re-align components.</li> </ul>
Premature Failure	<ul style="list-style-type: none"> <li>◦ Improper installation</li> <li>◦ Contamination</li> <li>◦ Corrosion (despite stainless steel, extreme conditions can cause issues)</li> <li>◦ Overload/Fatigue</li> <li>◦ Manufacturing defect (rare)</li> </ul>	<ul style="list-style-type: none"> <li>◦ Review installation procedures.</li> <li>◦ Improve sealing/environmental protection.</li> <li>◦ Ensure proper material compatibility for environment.</li> <li>◦ Verify application requirements vs. bearing capacity.</li> <li>◦ Contact manufacturer if defect is suspected.</li> </ul>

## 8. WARRANTY AND SUPPORT

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For information regarding product warranty, returns, or technical support, please refer to the purchase documentation or contact your supplier. While spare parts availability information is not directly provided, general inquiries can be directed to the manufacturer, CQ.

For further assistance, please visit the official CQ website or contact their customer service department.

