

## Pentair PS-200

# Pentair Dynamo Pump Seal PS-200 Instruction Manual

## 1. INTRODUCTION

This manual provides essential information for the proper installation, function, and maintenance of the Pentair Dynamo Pump Seal, model PS-200. This component is designed to prevent water leakage from the pump shaft, ensuring efficient and safe operation of your pool or spa pump. Please read these instructions carefully before proceeding with installation or maintenance.

## 2. SAFETY INFORMATION

Always prioritize safety when working with electrical and plumbing equipment. Failure to follow these safety guidelines may result in serious injury or property damage.

- **Disconnect Power:** Before performing any work on the pump, always ensure that the main power supply to the pump is disconnected at the circuit breaker. Verify that the power is off before touching any components.
- **Wear Protective Gear:** Use appropriate personal protective equipment, including safety glasses and gloves, to prevent injury.
- **Consult a Professional:** If you are unsure about any step of the installation or repair process, consult a qualified pool technician or electrician.
- **Handle with Care:** The seal components, especially the ceramic and carbon faces, are delicate. Avoid touching the sealing surfaces with bare hands or allowing them to come into contact with dirt or grease.

## 3. PRODUCT COMPONENTS

The Pentair Dynamo Pump Seal PS-200 is a mechanical shaft seal consisting of several parts designed to create a watertight barrier around the pump shaft. It typically includes a stationary ceramic seat and a rotating carbon face, held together by a spring and encased in rubber boots.



Figure 1: Two Pentair Dynamo Pump Seals (PS-200) stacked, illustrating the overall design and material composition.




Figure 2: Top view of a single Pentair Dynamo Pump Seal, showing the precise fit and finish of the sealing components.




Figure 3: Close-up of the inner mechanism of the Pentair Dynamo Pump Seal, detailing the spring and rubber boot that ensure proper tension and sealing.

## 4. INSTALLATION INSTRUCTIONS

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Proper installation is crucial for the longevity and effectiveness of the pump seal. Follow these steps carefully:

- Preparation:** Ensure the pump is disconnected from power. Drain the pump and remove the motor from the wet end. Disassemble the impeller and diffuser to access the old seal.
- Remove Old Seal:** Carefully remove the old pump seal. Note the orientation of both the stationary and rotating parts. Clean the seal plate and pump shaft thoroughly, removing any debris, corrosion, or old gasket material.
- Install Stationary Seat:** The stationary seat (usually ceramic) has a rubber boot. Lightly lubricate the outer rubber edge of the stationary seat with a small amount of silicone lubricant or soapy water. Press the stationary seat firmly and squarely into the seal plate cavity. Ensure it is seated completely and evenly. **Do not touch the polished ceramic face.**
- Install Rotating Face:** The rotating face (usually carbon) is part of the spring-loaded assembly. Lightly lubricate the pump shaft with silicone lubricant or soapy water. Slide the rotating seal assembly onto the pump shaft, ensuring the carbon face is oriented to meet the ceramic face when the pump is reassembled. **Do not touch the polished carbon face.**
- Reassembly:** Reassemble the pump components (impeller, diffuser, motor) in reverse order of disassembly. Ensure all gaskets and O-rings are properly seated and in good condition. Tighten all bolts according to the pump manufacturer's specifications.
- Test for Leaks:** After reassembly, reconnect power and prime the pump. Carefully inspect for any leaks around the pump shaft area. A small amount of initial dripping may occur as the seal seats, but this should stop quickly. Persistent leaking indicates an issue with installation or a damaged seal.

## 5. FUNCTION AND PURPOSE

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The Pentair Dynamo Pump Seal PS-200 creates a dynamic seal between the rotating pump shaft and the stationary pump housing. This prevents water from the wet end of the pump from leaking into the motor, which could cause damage to the motor and electrical components. The ceramic and carbon faces, under spring tension, maintain constant contact, forming a tight barrier while allowing the shaft to rotate freely.

## 6. MAINTENANCE

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Pump seals are wear items and will eventually require replacement. Regular maintenance involves:

- Visual Inspection:** Periodically inspect the area around the pump shaft for signs of water leakage. Even minor drips can indicate a failing seal.
- Prompt Replacement:** Replace the seal immediately if leaks are detected. Continuing to operate a pump with a leaking seal can lead to severe damage to the pump motor.
- Cleanliness:** Ensure the pump environment is kept clean to prevent debris from entering the seal area, which can accelerate wear.

## 7. TROUBLESHOOTING

If you experience issues after installing a new pump seal, consider the following:

Problem	Possible Cause	Solution
Water leaking from pump shaft area after seal replacement.	<ul style="list-style-type: none"><li>• Improper installation (e.g., seal not seated squarely).</li><li>• Damaged seal faces (scratches, chips).</li><li>• Incorrect seal size or type.</li><li>• Debris caught between seal faces.</li><li>• Old O-rings or gaskets not replaced or improperly seated.</li></ul>	<ul style="list-style-type: none"><li>• Re-inspect installation, ensuring seal is square and fully seated.</li><li>• Replace the seal if faces are damaged.</li><li>• Verify the correct seal model (PS-200) for your pump.</li><li>• Disassemble, clean, and reassemble carefully.</li><li>• Replace all necessary O-rings and gaskets during reassembly.</li></ul>

## 8. SPECIFICATIONS

Specification	Detail
Brand	Pentair
Model Number	PS-200
Shaft Size	5/8 inch
Material	Metal, Steel (with ceramic and carbon sealing faces)
Item Weight	4 Ounces
ASIN	B003GUS2J2

## 9. WARRANTY AND SUPPORT

For specific warranty information regarding your Pentair Dynamo Pump Seal PS-200, please refer to the documentation provided with your original pump or contact Pentair customer support directly. For technical assistance or further inquiries, please visit the official Pentair website or contact their customer service department.