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Pentair USQ1152

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Model: USQ1152

1. INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of your Pentair USQ1152 Sta-Rite 1.5 HP Threaded Motor. Please read all instructions carefully before proceeding with installation or operation to ensure proper function and to prevent potential hazards.

The Pentair USQ1152 is a 1.5 horsepower replacement motor designed for various in-ground pool pumps, including Sta-Rite Max-E Glas, Dura Glas, and Dyna Glas models. It features a 48Y frame with a square flange for mounting.

Important Safety Information: Always disconnect power to the motor and pump before performing any service or maintenance. Installation and service should be performed by a qualified professional in accordance with all local and national electrical and plumbing codes.

2. PRODUCT OVERVIEW



Image 2.1: The Pentair USQ1152 Sta-Rite 1.5 HP Threaded Motor. This image displays the motor unit, characterized by its black cylindrical body, ventilation slots, and the square flange with a threaded shaft extending from one end, designed for connection to a pool pump.

The Pentair USQ1152 motor is engineered for reliable performance in pool pump applications. Key features

include:

- **Horsepower:** 1.5 HP
- **Speed:** 3450 RPM
- **Voltage:** 115/230V, 60Hz
- **Amperage:** 19.2/9.6 amps
- **Frame:** 48Y Frame, Square Flange
- **Shaft:** 5/8" diameter threaded stainless steel shaft
- **Bearings:** Ball Bearings
- **Protection:** Automatic Overload Protection
- **Service Factor:** 1.10
- **Enclosure:** Open Drip Proof (ODP)
- **Rotation:** Counter-Clockwise (CCW) when facing the shaft

3. SETUP AND INSTALLATION

Proper installation is crucial for the safe and efficient operation of the motor. It is recommended that installation be performed by a qualified pool professional or electrician.

3.1 Pre-Installation Checks

- Verify that the motor specifications (voltage, horsepower) match the requirements of your pump and electrical supply.
- Ensure the mounting flange and shaft dimensions are compatible with your existing pump housing. This motor features a 48Y square flange with four non-threaded bolt holes and a 5/8" threaded shaft.
- Confirm that the electrical supply is disconnected at the circuit breaker before beginning any work.

3.2 Mounting the Motor

1. Carefully remove the old motor from the pump housing, noting the orientation of all components.
2. Inspect the pump seal and replace it if necessary. A new pump seal is highly recommended during motor replacement.
3. Align the new Pentair USQ1152 motor with the pump housing, ensuring the square flange bolts align with the pump's mounting points.
4. Secure the motor to the pump housing using appropriate fasteners. Do not overtighten.
5. Attach the impeller to the motor shaft. Note that 48Y motors do not have an internal threaded hole in the shaft; the impeller typically secures with a bolt through the end of the shaft.

3.3 Electrical Connections

All electrical wiring must comply with local and national electrical codes. If you are unsure, consult a licensed electrician.

- The motor is rated for 115V or 230V operation. Ensure the motor is wired for the correct voltage of your electrical supply. Refer to the motor's wiring diagram, typically located on the motor label, for specific connection instructions.
- Connect the power supply wires to the motor terminals. Ensure all connections are tight and secure.
- Properly ground the motor according to electrical codes to prevent electrical shock hazards.
- Ensure the conduit and wiring are protected from moisture and physical damage.

4. OPERATING INSTRUCTIONS

Once the motor is properly installed and wired, it is ready for operation.

1. **Initial Start-up:** Before restoring power, ensure the pump is primed according to the pump manufacturer's instructions. Running a pump dry can cause severe damage.
2. **Power On:** Restore power to the motor at the circuit breaker.
3. **Observe Operation:** The motor should start smoothly. Listen for any unusual noises or vibrations. The motor's rotation is Counter-Clockwise (CCW) when viewed from the shaft end.
4. **Automatic Overload Protection:** This motor is equipped with automatic overload protection. If the motor overheats due to excessive load or insufficient ventilation, it will automatically shut off. Allow the motor to cool down before attempting to restart. Investigate and resolve the cause of the overload.

5. MAINTENANCE

Regular maintenance helps ensure the longevity and efficient operation of your Pentair USQ1152 motor.

- **Keep Clean:** Periodically clean the exterior of the motor, especially the ventilation openings, to prevent dust and debris buildup. This ensures proper airflow and cooling.
- **Ventilation:** Ensure the motor has adequate ventilation space around it. Do not obstruct the air vents.
- **Inspect Wiring:** Regularly check electrical connections for tightness and signs of corrosion or damage.
- **Listen for Unusual Noises:** Pay attention to any changes in motor sound, which could indicate a developing issue with bearings or other components. This motor uses sealed ball bearings, which typically do not require lubrication.
- **Environmental Protection:** As an Open Drip Proof (ODP) motor, it is designed for use in relatively clean, dry environments. Protect the motor from direct exposure to rain, excessive moisture, or corrosive chemicals.

6. TROUBLESHOOTING

This section addresses common issues you might encounter with your motor. For problems not listed here, or if solutions do not resolve the issue, contact a qualified service technician.

- **Motor Does Not Start:**
 - Check if the circuit breaker is tripped.
 - Verify all electrical connections are secure and correct voltage is present.
 - Ensure the pump impeller is not jammed.
 - If the motor recently shut off, allow time for the automatic overload protector to reset.
- **Motor Overheats and Shuts Off:**
 - Check for proper ventilation around the motor. Clear any obstructions.
 - Ensure the motor is not running under excessive load (e.g., clogged pump, restricted plumbing).
 - Verify the motor is wired for the correct voltage.
- **Unusual Noise or Vibration:**
 - Inspect the motor and pump for loose mounting bolts or debris.
 - Check the pump impeller for damage or obstructions.

- If the noise is internal to the motor, it may indicate a bearing issue, requiring professional service.
- **Motor Hums but Does Not Start:**
 - This often indicates a starting capacitor issue or a jammed impeller. Disconnect power and manually check if the impeller can be turned.
 - Consult a qualified technician for capacitor testing and replacement.

7. SPECIFICATIONS

Specification	Value
Model Number	USQ1152
Brand	Pentair
Horsepower (HP)	1.5 HP
Speed (RPM)	3450 RPM
Voltage	115/230V
Frequency	60Hz
Amperage	19.2/9.6 amps
Service Factor	1.10
Frame Type	48Y Frame - Square Flange
Shaft Diameter	5/8"
Shaft Type	Threaded Stainless Steel
Rotation	CCW (Counter-Clockwise) facing shaft
Bearings	Ball Bearings
Enclosure Type	Open Drip Proof (ODP)
Compatible Pumps	Sta-Rite Max-E Glas, Dura Glas, Dyna Glas (and similar with 48Y square flange)
US Electric Equivalent	EUSQ1152

8. WARRANTY INFORMATION

The Pentair USQ1152 motor comes with a **1-year manufacturer warranty**. This warranty covers defects in materials and workmanship under normal use and service conditions from the date of purchase.

Please retain your proof of purchase for warranty claims. For specific warranty terms, conditions, and claim procedures, refer to the official warranty documentation provided by Pentair or contact Pentair customer support directly. Unauthorized repairs or modifications may void the warranty.

9. SUPPORT AND CONTACT INFORMATION

For technical assistance, replacement parts, or further information regarding your Pentair USQ1152 motor, please contact Pentair customer support or visit their official website.

When contacting support, please have your motor model number (USQ1152) and serial number (if applicable) readily available to expedite service.