Pentair 350105S

Pentair Purex 3.2kW Variable Speed Motor (Model 350105S) Instruction Manual

For IntelliFlo VF, VS 3050, and VS-SVRS Inground Pool and Spa Pumps

1. Introduction

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your Pentair Purex 3.2kW Variable Speed Motor, Model 350105S. This motor is specifically designed for use with Pentair IntelliFlo VF, VS 3050, and VS-SVRS inground pool and spa pumps. Please read this manual thoroughly before attempting any installation or operation to ensure proper function and longevity of the product.



Figure 1: Pentair Purex 3.2kW Variable Speed Motor. The motor is almond-colored and features a label with model number 350105S and serial information. The shaft extends from the front, ready for installation into a pump housing.

2. Safety Information

Always observe basic safety precautions to reduce the risk of fire, electric shock, and injury to persons. This motor operates on high voltage and should only be installed and serviced by a qualified professional.

- **Electrical Hazard:** Disconnect all power to the pump and motor at the circuit breaker before performing any service. Failure to do so can result in severe personal injury or death.
- **Proposition 65 Warning:** This product can expose you to chemicals which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.
- **Professional Installation:** Pentair recommends that this motor be installed by a qualified pool professional. Improper installation can void the warranty.
- **Moving Parts:** Keep hands and loose clothing away from moving parts when the motor is operating.

3. Setup and Installation

3.1 Unpacking and Inspection

Carefully remove the motor from its packaging. Inspect for any signs of shipping damage. Report any damage to your supplier

immediately. Ensure all components are present.

3.2 Tools Required

- Standard screwdriver set
- Wrench set
- Torque wrench (for specific bolt tightening, refer to pump manual)
- Seal/gasket replacement kit (Pentair "go kit" recommended)
- Silicone sealant (for pump seal, if applicable)

3.3 Mechanical Installation

1. **Disconnect Power:** Ensure all power to the pump system is disconnected at the circuit breaker.
2. **Drain Pump:** Drain the pump of all water.
3. **Remove Old Motor:** Disconnect the existing motor from the pump housing. This typically involves removing bolts that secure the motor to the seal plate and disconnecting any electrical wiring.
4. **Replace Seals:** It is highly recommended to replace all seals and gaskets, especially the shaft seal, when replacing the motor. Use a genuine Pentair "go kit" for optimal performance and to prevent leaks. Apply silicone sealant to the pump seal as per the pump's instruction manual.
5. **Mount New Motor:** Carefully align the new Pentair 3.2kW Variable Speed Motor with the pump housing and secure it with the appropriate bolts. Refer to your specific pump model's manual for torque specifications.
6. **Allow Sealant to Cure:** If silicone sealant was used, allow the recommended curing time (typically 24 hours) before operating the pump.

3.4 Electrical Connection

This motor is a variable frequency drive (VFD) permanent magnet synchronous motor (PMSM). Ensure proper electrical connections are made according to local electrical codes and the pump's wiring diagram.

- **Wiring Diagram:** Refer to the wiring diagram provided with your Pentair IntelliFlo pump for correct electrical connections.
- **Grounding:** Ensure the motor is properly grounded to prevent electrical shock.
- **Voltage:** Verify that the supply voltage matches the motor's requirements.

4. Operating Instructions

4.1 Initial Start-up

1. **Prime the Pump:** Ensure the pump is properly primed with water before starting the motor. Refer to your pump's manual for priming procedures.
2. **Restore Power:** Once mechanical and electrical installations are complete and verified, restore power at the circuit breaker.
3. **Monitor Operation:** Observe the pump and motor for any unusual noises, vibrations, or leaks during initial start-up.

4.2 Variable Speed Operation

This variable speed motor works in conjunction with your Pentair IntelliFlo pump's control system to optimize energy efficiency and performance. The pump's control panel allows you to set desired flow rates and schedules.

- **Programming:** Refer to your Pentair IntelliFlo pump's user manual for detailed instructions on programming variable speeds and schedules.
- **Energy Efficiency:** Running the pump at lower speeds for longer durations can significantly reduce energy consumption.

5. Maintenance

Regular maintenance ensures the longevity and efficient operation of your Pentair motor.

- **Routine Inspection:** Periodically check the motor for any signs of wear, corrosion, or damage. Ensure ventilation openings are clear of debris.
- **Noise Monitoring:** Listen for any unusual noises, such as grinding or whining, which may indicate bearing wear or other internal issues.
- **Leak Detection:** Regularly inspect the pump and motor assembly for water leaks. Even small leaks can lead to motor damage over time. Address any leaks promptly by replacing seals or gaskets.
- **Cleaning:** Keep the exterior of the motor clean and free of dirt and dust to ensure proper heat dissipation. Do not spray water directly onto the motor.

6. Troubleshooting

This section provides solutions to common issues you might encounter. For complex problems, contact a qualified pool professional or Pentair customer support.

Problem	Possible Cause	Solution
Motor does not start	No power, tripped breaker, wiring issue, pump control error	Check circuit breaker, verify wiring connections, consult pump control manual.
Unusual noise (whining/grinding)	Worn bearings, pump cavitation, debris in pump	Inspect for leaks, replace seals, check pump for obstructions, motor bearing replacement may be required by a professional.
Water leak from pump/motor area	Damaged seals or gaskets, loose connections	Inspect and replace all necessary seals and gaskets (e.g., shaft seal, O-rings). Tighten connections.
Motor overheating	Poor ventilation, excessive load, electrical issue	Ensure adequate airflow around motor, check pump for obstructions, verify electrical connections.

7. Specifications

Key specifications for the Pentair Purex 3.2kW Variable Speed Motor, Model 350105S:

- **Model Number:** 350105S
- **Motor Type:** Variable Frequency Drive (VFD) Permanent Magnet Synchronous Motor (PMSM)
- **Power:** 3.2 kW
- **Color:** Almond
- **Product Dimensions:** 22.5 x 9.25 x 11.5 inches
- **Item Weight:** 23.2 pounds
- **Compatibility:** Designed for Pentair IntelliFlo VF, VS 3050, and VS-SVRS inground pool and spa pumps.

8. Warranty and Protection Plans

Pentair offers specific warranty terms for its products. It is important to understand these terms to ensure coverage.

- **Standard Warranty:** Pentair typically provides a limited warranty on its motors. Please note that if the motor is installed by a consumer (DIY), the warranty period may be significantly shorter (e.g., 60 days) compared to installation by a certified pool professional. Always refer to the official Pentair warranty statement for the most current and detailed information.
- **Extended Protection Plans:** For additional peace of mind, extended protection plans may be available for purchase. These

plans can offer coverage beyond the manufacturer's standard warranty. Examples include:

- 2-Year Protection Plan
- 3-Year Protection Plan
- Complete Protect: A monthly plan covering eligible past and future purchases.

Review the terms and conditions of any protection plan carefully to understand coverage details and limitations.

9. Customer Support

For further assistance, technical support, or to locate a certified service professional, please contact Pentair customer support or visit their official website.

- **Pentair Official Website:** www.pentair.com
- **Technical Support:** Refer to the contact section on the Pentair website for phone numbers and email support options specific to your region.

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Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question