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Pentair 350305S

Pentair 350305S IntelliFlo Motor Kit Instruction Manual

Model: 350305S

1. PRODUCT OVERVIEW

The Pentair 350305S Motor Kit is an OEM replacement motor designed for IntelliFlo variable-speed circulation pump systems. This kit is engineered to restore full functionality and performance to your existing IntelliFlo pump. It features a 3.2 kW (approximately 4.3 horsepower) 10-pole stator, providing the necessary power for demanding in-ground pool systems while supporting energy-efficient operation at lower speeds for daily filtration.

This motor kit is built to withstand the harsh conditions of pool equipment pads, including exposure to heat, humidity, vibration, and chemical spray. Its almond-colored housing matches Pentair's design standards, and its components are rated for long duty cycles, smooth operation, and high reliability. Proper installation ensures optimal flow rates, filter turnover, and extended equipment lifespan.



Image 1.1: The Pentair 350305S IntelliFlo Motor Kit. This image displays the almond-colored motor unit, highlighting its robust construction and design consistent with Pentair's OEM standards for pool pump components.

2. COMPATIBILITY

The 350305S motor kit is a direct replacement for specific Pentair IntelliFlo pump models. Verify your pump's model and manufacturing date for proper compatibility:

- **IntelliFlo XF:** Compatible with models manufactured after August 2015.
- **IntelliFlo 2 VST:** Fully compatible.
- **IntelliFlo VSF:** Fully compatible.
- **IntelliFlo i1/i2:** Compatible with models manufactured after April 2016.
- **IntelliFlo VS+SVRS:** Compatible with models manufactured after June 2016.

This broad compatibility simplifies service and retrofit installations across various IntelliFlo pump lines.

3. KEY FEATURES

- **OEM Almond-Finish Motor Kit:** Manufactured by Pentair for exact fit, performance, and form-factor with IntelliFlo XF, VSF, i1/i2, and VS+SVRS variable-speed pumps.
- **High-Output 3.2 kW (≈4.3 HP) Variable-Speed Motor:** Features a 10-pole configuration for robust hydraulic performance and energy savings at lower speeds.
- **Energy-Efficient Design:** Supports lower pump speeds during filtration, reducing power draw and operating costs while delivering full flow when required.
- **Professional-Grade Construction:** Designed for outdoor pool equipment pad conditions with durable components and appropriate mounting for IntelliFlo pumps.
- **Maintains Original Performance:** Aligns with the original design and footprint, minimizing downtime and preserving the pump's hydraulic performance.

4. INSTALLATION

Important: Installation should only be performed by a qualified service professional. Improper installation can lead to equipment damage, injury, or voiding of warranty.

1. **Safety First:** Shut down all power to the pool equipment system at the circuit breaker.
2. **Relieve Pressure:** Ensure the plumbing system pressure is fully relieved before proceeding.
3. **Disconnect Pump:** Disconnect any electrical wiring to the existing pump motor.
4. **Remove Old Motor:** Unbolt the pump housing and carefully remove the existing motor from the pump wet end.
5. **Mount New Motor:** Mount the 350305S motor kit in place, ensuring proper alignment with the pump wet end. Secure all bolts according to manufacturer specifications.
6. **Verify Wiring:** Reconnect electrical wiring, ensuring all connections are secure and correct according to the pump's wiring diagram.
7. **Check Rotation Direction:** Briefly power on the pump to verify the correct motor rotation direction. Adjust if necessary.
8. **Variable-Speed Setup:** Perform any necessary setup or programming for variable-speed control on the pump's control panel or associated automation system.
9. **System Test:** Restore full power and test the pump system for proper operation, checking for leaks and verifying flow rates.

5. OPERATION

The Pentair 350305S motor is designed for use with IntelliFlo variable-speed pump systems. Operation is typically managed

through the pump's integrated control panel or a connected pool automation system.

- **Variable Speed Control:** Utilize the pump's control interface to set desired speeds for different pool functions (e.g., filtration, heating, cleaning, spa jets). Lower speeds are recommended for daily filtration to maximize energy savings.
- **Priming:** Ensure the pump is properly primed before starting. Refer to your specific IntelliFlo pump manual for priming procedures.
- **Monitoring:** Regularly monitor the pump's performance, including flow rates and pressure, to ensure efficient operation.

6. MAINTENANCE

Regular maintenance helps ensure the longevity and efficient operation of your Pentair IntelliFlo pump system with the 350305S motor kit.

- **Keep Area Clear:** Ensure the area around the pump motor is clear of debris and allows for adequate ventilation to prevent overheating.
- **Inspect Wiring:** Periodically inspect electrical connections for tightness and signs of corrosion.
- **Check for Leaks:** Regularly check the pump and plumbing for any signs of water leaks.
- **Professional Inspection:** It is recommended to have a qualified pool professional inspect your pump system annually.

7. TROUBLESHOOTING

This section addresses common issues you might encounter. For complex problems, contact a qualified service professional.

Problem	Possible Cause	Solution
Motor does not start or hums	No power, incorrect wiring, seized impeller	Check circuit breaker. Verify wiring connections. Inspect impeller for obstructions.
Reduced flow or pressure	Clogged skimmer basket/pump basket, dirty filter, air leak in suction line	Clean baskets. Backwash or clean filter. Check for air leaks and tighten connections.
Motor overheating	Poor ventilation, low voltage, prolonged high-speed operation	Ensure adequate airflow around motor. Consult electrician for voltage check. Adjust pump speed settings.
Unusual noise from motor	Worn bearings, cavitation (air in pump), foreign object	Contact service professional for bearing replacement. Check for air leaks. Inspect pump for debris.

8. SPECIFICATIONS

Specification	Detail
Model Number	350305S
Brand	Pentair
Motor Type	Variable-Speed, 10-Pole Stator
Power Output	3.2 kW (approximately 4.3 HP)
Voltage	220 Volts

Specification	Detail
Speed	Up to 3450 RPM
Housing Color	Almond
Item Weight	40 pounds
Package Dimensions	24 x 12 x 12 inches
UPC	788379884864

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official Pentair website or contact Pentair customer service directly. Keep your purchase receipt and product model number (350305S) handy when contacting support.

Online Resources: www.pentair.com