

## Wilo S33 FC 230V/60Hz

# Wilo Star S33 FC Circulating Pump User Manual

Model: S33 FC 230V/60Hz

## 1. PRODUCT OVERVIEW

The Wilo Star S 33 FC 230V/60Hz circulator pump is engineered for efficient fluid circulation in various heating systems. It features a robust cast iron housing and a three-speed motor, providing versatility for different application requirements.

This model is designed for quiet operation due to its wet rotor design, making it suitable for sound-sensitive installations. It includes a built-in, removable check valve for enhanced system control.

### Key Features:

- Cast iron housing with fixed flanges.
- Three-speed motor (Low/Medium/High) with a maximum head of 33 feet.
- Integrated, removable check valve.
- Suitable for radiant heating, hydronic heating, fan coil heating, and solar systems.
- Whisper-quiet operation.
- Includes two gaskets (O-rings).
- UL/CSA listed for safety and compliance.



Figure 1: Front view of the Wilo Star S33 FC Circulating Pump, showing the control panel and specifications label.

## 2. SAFETY INFORMATION

Read all instructions carefully before installation and operation. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- **Electrical Safety:** Ensure power is disconnected before any installation, maintenance, or repair work. All electrical connections must be performed by a qualified electrician in accordance with local codes and regulations.
- **Water Temperature:** The pump is designed for a maximum water temperature of 230°F (110°C). Do not exceed this temperature.
- **Pressure:** The maximum working pressure is 140 PSI. Do not exceed this pressure.

- **Installation Environment:** Install the pump in a dry, well-ventilated area. Protect from freezing temperatures.
- **Fluid Compatibility:** This pump is suitable for water and glycol mixtures. Do not use with flammable or corrosive liquids.
- **Non-Submersible:** This pump is not submersible. Do not immerse in water.
- **Do Not Run Dry:** Operating the pump without fluid can cause severe damage. Ensure the system is properly filled and purged of air before starting the pump.

## 3. SETUP AND INSTALLATION

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### 3.1 Pre-Installation Checks

- Verify that the pump's voltage (230V) matches the supply voltage.
- Ensure the installation location provides adequate space for maintenance and ventilation.
- Confirm that all necessary plumbing fittings and electrical components are available.

### 3.2 Mounting the Pump

1. Position the pump in the system piping, ensuring the flow direction matches the arrow on the pump housing.
2. Use appropriate pipe wrenches to secure the pump flanges to the system piping. Do not overtighten.
3. Ensure the pump is installed horizontally with the motor shaft level to prevent air pockets and ensure proper lubrication.

### 3.3 Electrical Connection

**WARNING:** Electrical connections must be made by a qualified electrician. Disconnect power before proceeding.

1. Open the electrical terminal box on the pump.
2. Connect the 230V/60Hz power supply wires to the designated terminals (L1, L2, Ground) according to the wiring diagram inside the terminal box cover.
3. Ensure all connections are secure and properly insulated.
4. Close the terminal box cover securely to protect against moisture and dust.



Figure 2: Side view of the Wilo Star S33 FC Circulating Pump, highlighting the electrical connection box and removable check valve.

## 4. OPERATING INSTRUCTIONS

### 4.1 System Filling and Purging

Before starting the pump, ensure the heating system is completely filled with fluid and all air has been purged. Running the pump dry will cause damage.

### 4.2 Starting the Pump

1. Once the system is filled and purged, restore power to the pump.
2. The pump will begin operating at the selected speed setting.

### 4.3 Speed Selection

The Wilo Star S33 FC features a three-speed motor. The speed can be adjusted using the selector switch on the pump's motor housing:

- **Setting 1 (Low):** For systems requiring minimal flow or for quietest operation.
- **Setting 2 (Medium):** A balanced setting for general applications.
- **Setting 3 (High):** For systems requiring maximum flow and head pressure.

Select the speed setting that best matches your system's requirements to optimize performance and energy consumption.

## 5. MAINTENANCE

The Wilo Star S33 FC pump is designed for minimal maintenance. However, regular checks can ensure optimal performance and longevity.

- **Annual Inspection:** Annually inspect the pump for any signs of leaks, unusual noises, or vibrations.
- **System Fluid Quality:** Ensure the system fluid is clean and free of debris. Poor fluid quality can lead to premature wear.
- **Check Valve:** The built-in check valve is removable for inspection or cleaning if necessary. Ensure power is off and the system is drained before attempting to remove it.
- **Motor Cooling:** Ensure the motor is not obstructed and has adequate ventilation for cooling.

For any complex maintenance or repairs, it is recommended to contact a qualified service technician.

## 6. TROUBLESHOOTING

Problem	Possible Cause	Solution
Pump does not start	No power supply Motor seized Incorrect wiring	Check circuit breaker/fuse Contact qualified technician Verify wiring connections
Pump is noisy	Air in system Cavitation Loose mounting	Purge air from system Check system pressure/flow Tighten mounting bolts
Insufficient flow/pressure	Incorrect speed setting System blockage Pump worn out	Adjust to higher speed Inspect system for blockages Contact qualified technician
Pump leaking	Loose connections Damaged gaskets/seals	Tighten connections Replace gaskets/seals (ensure power is off and system drained)

If the problem persists after attempting these solutions, please contact Wilo customer support or a qualified service professional.

## 7. SPECIFICATIONS

Attribute	Value
Model Number	S33 FC 230V/60Hz
Voltage	230V
Frequency	60Hz
Speeds	Three (Low/Medium/High)
Max Head	33 feet
Max Working Pressure	140 PSI
Max Water Temperature	230°F (110°C)
Housing Material	Cast Iron
Item Weight	9.53 pounds
Package Dimensions	12.28 x 7.56 x 6.61 inches
Certifications	UL/CSA listed

## 8. WARRANTY AND SUPPORT

For detailed warranty information and technical support, please refer to the official Wilo website or contact Wilo customer service directly. Keep your purchase receipt as proof of purchase for warranty claims.

**Wilo Contact Information:**

- **Website:** [www.wilo.com](http://www.wilo.com) (Please check for regional specific websites)
- **Customer Service:** Refer to the website for contact numbers and email support.