

## Grundfos UPS43-100F

# GRUNDFOS UPS43-100F Circulator Pump Instruction Manual

## INTRODUCTION

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This manual provides essential information for the safe and efficient installation, operation, and maintenance of your GRUNDFOS UPS43-100F circulator pump. Please read these instructions carefully before installation and use to ensure proper function and longevity of the product.

## SAFETY INFORMATION

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- **WARNING:** Always disconnect the power supply before performing any installation, maintenance, or service work on the pump. Failure to do so can result in serious injury or death.
- Ensure proper electrical grounding in accordance with all local and national electrical codes to prevent electrical shock hazards.
- Installation and electrical connections must be performed by qualified and authorized personnel.
- Do not operate the pump without liquid in the system (dry running), as this can cause severe damage to the pump.
- This pump is designed for indoor use only. Do not expose it to outdoor elements.
- Observe the maximum fluid temperature of 230 °F (110 °C) to prevent overheating and damage.

## PRODUCT OVERVIEW

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The GRUNDFOS UPS43-100F is a robust canned rotor type circulator pump, specifically engineered for heating and air-conditioning systems. Its design integrates the pump and motor into a single unit, eliminating the need for a shaft seal. The internal bearings are lubricated by the pumped liquid itself, ensuring efficient and quiet operation. Key features include a durable cast iron pump housing, ceramic shaft and radial bearings, a carbon axial bearing, and a corrosion-resistant composite (PES) impeller.



**Figure 1:** GRUNDFOS UPS43-100F Circulator Pump. This image displays the red cast iron body of the pump with a black electrical terminal box on its left side. The circular nameplate on the front of the pump clearly indicates the model type UPS43-100F, part number P/N 95906636, 1 PH, 115V, 60Hz, and ETL certification. It also specifies that the pump is for indoor use only and has a maximum fluid temperature of 230°F.

## TECHNICAL SPECIFICATIONS

Feature	Detail
Model	UPS43-100F
Part Number	95906637 (G95906637)
Pump Housing Material	Cast Iron (EN-GJL-200)
Impeller Material	Composite, PES
Rated Voltage	1 x 230 V
Main Frequency	60 Hz
Number of Poles	2
Max. Power Input	375 W
Rated Power - P2	0.335 HP
Maximum Operating Pressure	145 psi
Liquid Temperature Range	32 .. 230 °F (0 .. 110 °C)
Maximum Ambient Temperature	104 °F (40 °C)
Pipe Connection	2 - Bolt Flange
Port-to-port Length	8 1/2 in
Approvals	ETL, CSA

## INSTALLATION

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Proper installation is critical for the pump's performance, efficiency, and longevity. Always refer to local building and plumbing codes for specific requirements in your area.

### Mounting

- Mount the pump with the motor shaft in a horizontal position. This orientation is essential to ensure proper lubrication of the bearings by the pumped liquid.
- Ensure adequate clearance around the pump for future maintenance, inspection, and proper ventilation to prevent overheating.
- Use appropriate flange gaskets and tighten the flange bolts evenly and securely to prevent leaks and ensure a stable connection.

### Electrical Connection

- Verify that the main power supply voltage and frequency match the pump's rated specifications (1 x 230 V, 60 Hz).
- Connect the pump to a dedicated electrical circuit protected by an appropriately sized fuse or circuit breaker.
- The motor is a 1-phase motor; typically, no additional external motor protection is required.
- Ensure proper grounding of the pump according to all applicable electrical codes to prevent electrical hazards.

## OPERATING INSTRUCTIONS

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Before starting the pump for the first time or after maintenance, ensure the system is completely filled with liquid and all air has been vented.

### Starting the Pump

1. Open all isolation valves in the system to allow for proper liquid flow.
2. Fill the entire system with the appropriate liquid and carefully vent any trapped air from the pump and piping. Air in the system can cause noise and damage.
3. Switch on the main power supply to the pump.
4. The pump will begin circulating the liquid. Monitor the pump for any unusual noises, vibrations, or leaks during initial operation.

### Speed Settings

The GRUNDFOS UPS43-100F circulator pump is designed with multiple speed settings to optimize performance for various system requirements. The pump's nameplate indicates different current draws for speed 1, speed 2, and speed 3, confirming its multi-speed capability. Refer to the specific markings on your pump or the detailed product documentation for instructions on how to select and adjust the desired operating speed.

## MAINTENANCE

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The GRUNDFOS UPS43-100F is engineered for minimal maintenance due to its robust design. However, periodic checks are recommended to ensure optimal performance and extend its service life.

- **Annual Inspection:** Conduct a visual inspection annually. Check for any signs of leaks, unusual operating noises, or excessive vibrations. Address any issues promptly.
- **Cleaning:** Keep the exterior of the pump and motor free from dust, dirt, and debris. A clean surface ensures proper heat dissipation and prevents overheating.
- **System Fluid Quality:** Ensure the system fluid remains clean and free of contaminants, such as rust particles or sediment, which could potentially damage the pump's internal components.
- **Bearing Lubrication:** The pump's bearings are self-lubricated by the circulating system liquid. No external lubrication is required or recommended.

## TROUBLESHOOTING

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This section provides solutions to common operational issues. For problems not listed here, or if solutions do not resolve the issue, contact qualified service personnel.

Problem	Possible Cause	Solution
Pump does not start	No power supply; Motor seized; Air in pump.	Check electrical connections and circuit breaker; Attempt to free rotor (consult service manual or qualified technician); Vent the pump thoroughly.
Reduced flow or pressure	Air in system; Clogged impeller; Incorrect speed setting; Partially closed valves.	Vent the system; Inspect and clean impeller if accessible; Adjust to a higher speed setting; Ensure all valves are fully open.
Excessive noise or vibration	Air in pump/system (cavitation); Improper mounting; Foreign object in pump.	Vent the pump/system thoroughly; Ensure adequate system pressure; Check mounting for stability and tightness; Inspect for obstructions.
Leaking from pump connections	Loose connections; Damaged gaskets; Incorrect installation.	Tighten flange bolts evenly; Replace worn or damaged gaskets; Re-install connections correctly.

## WARRANTY AND SUPPORT

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For detailed warranty information, technical assistance, or to locate an authorized service center, please contact your GRUNDFOS dealer or visit the official GRUNDFOS website. When seeking support, please have your product model number (UPS43-100F) and part number (95906637) readily available.

**Note:** Any unauthorized repairs, modifications, or use of non-genuine parts may void the product warranty and compromise safety.