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## FORAS PE50F

# FORAS PE50F Peripheral Electric Pump User Manual

Model: PE50F

## 1. INTRODUCTION

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This manual provides essential information for the safe and efficient installation, operation, and maintenance of your FORAS PE50F Peripheral Electric Pump. Please read this manual thoroughly before using the pump and retain it for future reference. The FORAS PE50F is a reliable peripheral pump designed for boosting water pressure and transferring clean water without abrasive particles or chemically aggressive liquids. It is suitable for domestic use, small-scale irrigation, and general water supply applications.



Figure 1: FORAS PE50F Peripheral Electric Pump.

## 2. SAFETY INSTRUCTIONS

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Always observe the following safety precautions to prevent personal injury and damage to the pump:

- Ensure the pump is installed by a qualified professional in accordance with local electrical and plumbing codes.
- Always disconnect the power supply before performing any installation, maintenance, or repair work.
- The pump is designed for clean water only. Do not use it for flammable, corrosive, or explosive liquids.
- Protect the pump from atmospheric influences such as rain, direct sunlight, and freezing temperatures. It must be installed in enclosed spaces or protected locations.
- Ensure proper grounding of the electrical connection.
- Do not operate the pump dry (without water), as this can cause severe damage.
- Keep children and unauthorized personnel away from the operating pump.
- Wear appropriate personal protective equipment (PPE) during installation and maintenance.

## 3. PRODUCT OVERVIEW AND FEATURES

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The FORAS PE50F pump is engineered for reliability and efficiency, featuring robust construction and high-quality components.

### Key Features:

- **Stable Flow Rate:** Up to 40 liters per minute (2.4 m<sup>3</sup>/h), suitable for domestic use and small production.

- **High Head:** Maximum delivery head up to 40 meters.
- **Durable Construction:** Italian engineering with high-quality European components ensures long service life.
- **Thermal Protection:** Integrated thermal protection in the motor safeguards against damage.
- **Corrosion Resistance:** Special materials prevent rust and ensure reliable, low-vibration operation.
- **Anti-Blocking Function:** Motor cover with brass insert reduces the risk of impeller seizure.

### Component Materials:

- **Pump Body:** Cataphoresis cast iron.
- **Motor Cover:** Aluminum with brass insert.
- **Impeller:** Brass with radial paddles.
- **Drive Shaft:** AISI 416 stainless steel.
- **Mechanical Seal:** Ceramic - Graphite (NBR).
- **Output Nozzle:** 1 inch (25 mm).



**FORAS water pumps**

Peripheral positive displacement pump with frontal suction for small household systems and simple industrial applications; characterised by a considerable ratio between performance and required output

**CONSTRUCTION FEATURES**

- Pump body cast iron, bronze (BR)
- Motor bracket cast iron or bronze (BR)
- Impeller brass
- Mechanical seal ceramic-graphite
- Motor shaft stainless steel AISI 416
- Liquid temperature 0 - 90 °C
- Operating pressure max 6 bar (PE50), max 8 bar (PE70, PE100), max 9 bar (PE90)
- Motor
  - 2 poles induction motor 3~ 230/400V-50Hz
  - 1~ 230V-50Hz
  - Insulation class F
  - Protection degree IP44

*made in Italy*

[www.eesystem.de](http://www.eesystem.de)

Figure 2: Diagram illustrating FORAS PE pump features and specifications.

## 4. TECHNICAL SPECIFICATIONS

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Detailed technical data for the FORAS PE50F pump:

Specification	Value
Model Number	PE50F
Manufacturer	PENTAX INDUSTRIES S.P.A.
Power (Consumed)	370 W (0.37 kW)
Voltage	230 V (AC)
Frequency	50 Hz
Nominal Current	2.3 A
Rotation Speed	2800 rpm
Max Flow Rate	40 l/min (2.4 m <sup>3</sup> /h)
Max Delivery Head	40 m
Liquid Temperature Range	0 °C to 90 °C
Protection Index	IP44
Insulation Class	F
Dimensions (L x W x H)	26 x 12 x 15.8 cm
Weight	6 kg



Figure 3: Product nameplate showing technical specifications for the FORAS PE50F pump.

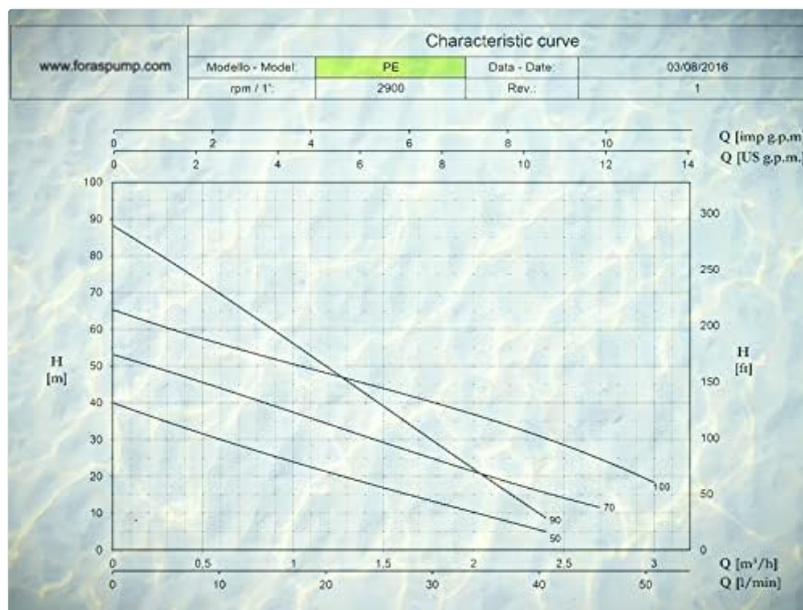


Figure 4: Characteristic curve illustrating the performance of FORAS PE pumps, showing head (H) versus flow rate (Q).

## 5. SETUP AND INSTALLATION

Correct installation is crucial for the pump's performance and longevity.

### Installation Location:

- The pump must be installed in enclosed spaces or locations protected from atmospheric influences (e.g., rain, frost, direct sunlight).
- Ensure the installation area is well-ventilated and provides sufficient space for maintenance.
- Mount the pump on a stable, level surface to minimize vibration.

## **Plumbing Connections:**

- Connect the suction and discharge pipes securely to the pump's 1-inch (25 mm) nozzles.
- Use appropriate sealing materials (e.g., PTFE tape) to ensure watertight connections.
- Install a foot valve with a strainer on the suction line if drawing water from a well or tank to prevent debris entry and maintain prime.
- Ensure the suction line is as short and straight as possible to minimize friction losses.

## **Electrical Connection:**

- Connect the pump to a 230V AC, 50Hz power supply.
- Ensure the electrical circuit is protected by a suitable circuit breaker and residual current device (RCD).
- Verify that the power supply matches the pump's specifications.
- The pump must be properly grounded.

# FORAS PE pumps

## WHAT IS IT

Peripheral positive displacement pump with frontal suction for small household systems and simple industrial applications; characterised by a considerable ratio between performance and required output.

## MAIN USES

Water supply and pressurization for domestic and residential installations.



PE / BR



PE A

\*Also available in self-priming version

## SPECIFICATIONS

<b>Pump Body</b>	Cast Iron, bronze <b>PE 50 BR</b>
<b>Motor bracket</b>	Cast iron, cast iron or bronze <b>PE 50 BR</b>
<b>Impeller</b>	Brass
<b>Mechanical seal</b>	Ceramic-Graphite
<b>Motor shaft</b>	Stainless steel AISI 416
<b>Liquid temperature</b>	0-90 °C
<b>Operating pressure</b>	Max 6bar PE50F Max 8bar PE70, PE100 Max 9bar PE90
<b>Insulation class</b>	F

## PLUS & PERFORMANCE



Motor shaft in AISI 416



High pressure at low flow



Low consumption



[www.foraspump.com](http://www.foraspump.com)

Figure 5: Example diagram of a peripheral pump integrated into a household water supply system.

## 6. OPERATING INSTRUCTIONS

Follow these steps for safe and effective operation of your FORAS PE50F pump.

### Priming the Pump:

1. Before the first start-up, or if the pump has run dry, it must be primed.
2. Open the priming plug (usually located on the top of the pump casing).
3. Fill the pump casing completely with clean water until it overflows.
4. Replace and tighten the priming plug.
5. Ensure all valves on the suction and discharge lines are open.

### Starting the Pump:

1. After priming, connect the pump to the power supply.
2. Switch on the power. The pump should start immediately.
3. Monitor the pump for any unusual noises or vibrations. If detected, switch off the pump immediately and investigate.
4. Allow the pump to run for a few minutes to ensure stable operation and check for leaks.

### Stopping the Pump:

- To stop the pump, simply switch off the power supply.
- If the pump will be out of use for an extended period, especially in freezing conditions, drain the pump and pipes to prevent damage.

## 7. MAINTENANCE

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Regular maintenance ensures optimal performance and extends the pump's lifespan.

### Routine Checks:

- **Daily:** Check for any visible leaks, unusual noises, or excessive vibrations.
- **Weekly:** Inspect the electrical cable for damage. Ensure the pump is clean and free from debris.
- **Monthly:** Verify that the ventilation openings on the motor are clear. Check the pressure gauge (if installed) for consistent readings.

### Seasonal Maintenance:

- **Before Winter (if applicable):** If the pump is exposed to freezing temperatures, drain all water from the pump and associated piping to prevent ice damage. Store the pump in a dry, frost-free location if possible.
- **Before Extended Storage:** Clean the pump thoroughly, drain all water, and store it in a dry, protected environment.

For any complex maintenance or repairs, contact a qualified service technician.

## 8. TROUBLESHOOTING

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This section provides solutions to common issues you might encounter with your pump.

Problem	Possible Cause	Solution
Pump does not start	No power supply; Thermal overload tripped; Motor seized	Check power connection/breaker; Allow motor to cool and reset; Contact service technician

Problem	Possible Cause	Solution
Pump runs but no water flows	Pump not primed; Suction line air leak; Suction line blocked; Foot valve stuck	Prime the pump; Check all suction connections; Clear blockage; Inspect/replace foot valve
Low flow or pressure	Partial blockage; Air in system; Worn impeller; Incorrect pipe size	Check for blockages; Bleed air from system; Contact service technician; Consult installation guide
Excessive noise or vibration	Cavitation (air in water); Loose mounting; Bearing wear; Impeller damage	Ensure proper priming and no air leaks; Tighten mounting bolts; Contact service technician
Water leakage	Loose connections; Damaged mechanical seal; Cracked casing	Tighten connections; Replace mechanical seal (professional service); Replace pump

If you cannot resolve the issue using this guide, please contact customer support or a qualified technician.

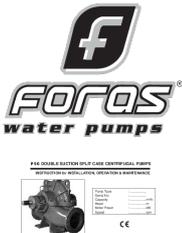
## 9. WARRANTY AND SUPPORT

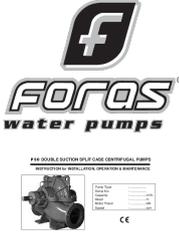
The FORAS PE50F Peripheral Electric Pump is manufactured by PENTAX INDUSTRIES S.P.A. in Italy, ensuring high quality and performance.

- **Spare Parts Availability:** Spare parts for this product are available for 20 years.
- For warranty claims or technical support, please refer to your purchase documentation or contact the retailer.
- Always provide the model number (PE50F) and serial number (found on the product nameplate) when seeking support.

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### Related Documents - PE50F

	<p><a href="#">Foras PSC Double Suction Split Case Centrifugal Pumps: Installation, Operation &amp; Maintenance Manual</a></p> <p>Comprehensive instruction manual for Foras PSC Double Suction Split Case Centrifugal Pumps, covering installation, operation, maintenance, troubleshooting, and spare parts. Includes technical specifications and safety guidelines.</p>
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	<p><a href="#">EDELRID Paragliding Carabiner User Manual: Safety, Use, and Maintenance</a></p> <p>Comprehensive user manual for EDELRID paragliding carabiners, covering safety guidelines, application notes, usage limits based on weight and flight hours, inspection procedures, storage, cleaning, and maintenance instructions. Includes model information for ALIAS, FORAS, EASE, AURA series.</p>
	<p><a href="#">Foras PSC Double Suction Split Case Centrifugal Pumps: Installation, Operation &amp; Maintenance Manual</a></p> <p>Comprehensive instruction manual for Foras PSC Double Suction Split Case Centrifugal Pumps, covering installation, operation, maintenance, troubleshooting, and spare parts. Includes technical specifications and safety guidelines.</p>
	<p><a href="#">Catálogo de Productos Nuevos 2025 - Equipos de Riego LAS BRUJAS DE TALAGANTE</a></p> <p>Descubra la última gama de equipos de riego y soluciones hidráulicas de Equipos de Riego LAS BRUJAS DE TALAGANTE para jardinería y aplicaciones profesionales. Explore programadores, aspersores, bombas, válvulas, filtros y más.</p>
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	<p><a href="#">Catálogo de Equipos de Riego Hunter 2024-2025   Soluciones de Riego e Hidráulica</a></p> <p>Explore el catálogo 2024-2025 de Equipos de Riego (EDR), distribuidor oficial de Hunter y otras marcas líderes en sistemas de riego. Encuentre aspersores, programadores, válvulas, bombas, filtros y más para riego agrícola, deportivo y residencial.</p>



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