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## Arionyx YWF(K) 4E450-GH

# Arionyx YWF(K) 4E450-GH Air Conditioning Indoor Centrifugal Fan User Manual

Model: YWF(K) 4E450-GH

Brand: Arionyx

## 1. INTRODUCTION

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This manual provides essential information for the safe and efficient installation, operation, and maintenance of your Arionyx YWF(K) 4E450-GH Air Conditioning Indoor Centrifugal Fan. Please read this manual thoroughly before installation and operation, and retain it for future reference. This centrifugal fan is designed for various industrial and commercial applications requiring efficient air movement.

## 2. SAFETY INFORMATION

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

- **Electrical Safety:** Ensure the power supply matches the fan's specifications (230V 50Hz). All electrical connections must be performed by a qualified electrician in accordance with local and national electrical codes. Disconnect power before performing any installation, maintenance, or repair.
- **Installation:** Securely mount the fan to a stable structure. Ensure adequate clearance for airflow and maintenance. Do not operate the fan without proper guards if there is a risk of contact with moving parts.
- **Operation:** Do not insert objects into the fan's inlet or outlet while it is operating. Avoid operating the fan in environments with excessive dust, corrosive gases, or flammable materials unless specifically designed for such conditions.
- **Maintenance:** Only use genuine replacement parts. Refer to the maintenance section for proper procedures.

## 3. KEY FEATURES

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- **Convenient Installation:** Designed for easy integration into various equipment or piping systems.
- **Low Noise Operation:** Engineered for minimal vibration and reduced operational noise levels.

- **Strong Reliability:** Features effective motor heat dissipation, contributing to a long service life and suitability for continuous operation.
- **Wide Applicability:** Suitable for use in diverse industries including HVAC, cold storage, refrigeration equipment, electric control boxes, and communication equipment.

## 4. INSTALLATION

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Follow these general guidelines for installing the Arionyx YWF(K) 4E450-GH centrifugal fan. Specific installation requirements may vary based on your application.

### 4.1 Unpacking and Inspection

1. Carefully remove the fan from its packaging.
2. Inspect the fan for any signs of shipping damage. Report any damage to your supplier immediately.
3. Verify that all components are present.

### 4.2 Mounting

The fan should be securely mounted to a rigid, flat surface capable of supporting its weight and operational forces. Use appropriate fasteners for your mounting surface.



Figure 4.1: Top-down view of the Arionyx YWF(K) 4E450-GH centrifugal fan, illustrating the motor and circular housing. This view is useful for understanding mounting points.

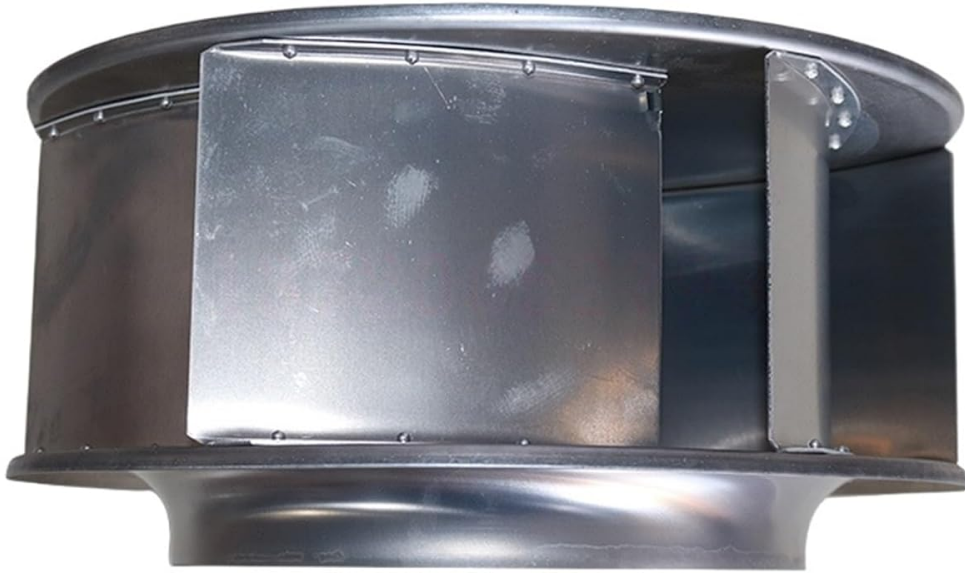


Figure 4.2: Side view of the Arionyx YWF(K) 4E450-GH centrifugal fan, highlighting the impeller blades and overall profile for spatial planning.

### 4.3 Electrical Connection

**WARNING:** Electrical connections must be performed by a qualified electrician. Ensure power is disconnected before wiring.

Refer to the motor label for specific wiring details. The fan operates on 230V, 50Hz power. The motor label indicates wiring colors for connection.



Figure 4.3: Close-up of the motor label, displaying critical electrical specifications (230V 50Hz, 0.83KW, 4.1A, 1340r/min, IP54, CL. F, 14uF/450V) and wiring color codes (Blue, Brown, Black) for proper electrical connection.

- Connect the fan to a dedicated circuit with appropriate overcurrent protection.
- Ensure proper grounding.
- Verify all connections are secure before restoring power.

## 5. OPERATION

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Once installed and wired correctly, the fan is ready for operation.

1. **Initial Start-up:** After ensuring all safety checks are complete, apply power to the fan.
2. **Monitoring:** Observe the fan during its initial operation for any unusual noises, vibrations, or overheating. If any anomalies are detected, immediately shut down the fan and investigate the cause.
3. **Continuous Operation:** The fan is designed for continuous use. Ensure the operating environment remains within specified parameters.

## 6. MAINTENANCE

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Regular maintenance ensures optimal performance and extends the lifespan of your fan. Always disconnect power before performing any maintenance.

### 6.1 Cleaning

- Periodically inspect the fan blades and housing for dust and debris accumulation.
- Clean the fan blades and internal surfaces using a soft brush or compressed air. Avoid using harsh

chemicals that could damage components.

- Ensure the motor's cooling fins are free from obstruction to maintain proper heat dissipation.

## 6.2 Inspection

- Check all mounting bolts and fasteners for tightness.
- Inspect electrical connections for signs of wear, corrosion, or loose terminals.
- Listen for any unusual noises during operation that might indicate bearing wear or imbalance.

## 7. TROUBLESHOOTING

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This section provides solutions to common issues. For problems not listed here, contact qualified service personnel.

Problem	Possible Cause	Solution
Fan does not start	No power supply Loose electrical connections Motor fault	Check power source and circuit breaker Inspect and tighten all wiring connections Consult a qualified technician
Excessive noise or vibration	Loose mounting Debris in impeller Worn bearings	Tighten mounting bolts Clean impeller and housing Contact service for bearing replacement
Reduced airflow	Blocked inlet/outlet Dirty impeller	Clear obstructions Clean impeller blades
Motor overheating	Insufficient ventilation Overload Motor fault	Ensure clear airflow around motor Verify fan is not operating against excessive resistance Consult a qualified technician

## 8. SPECIFICATIONS

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Attribute	Value
Model Number	YWF(K) 4E450-GH
Brand	Arionyx
Voltage	230V
Frequency	50Hz
Power	0.83KW
Current	4.1A
Rotational Speed	1340 r/min
IP Rating	IP54
Insulation Class	CL. F
Capacitor	14uF/450V
Package Dimensions	0.39 x 0.39 x 0.39 inches
Item Weight	6.61 Pounds

## 9. WARRANTY AND SUPPORT

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For warranty information or technical support, please refer to the documentation provided at the point of purchase or contact your authorized Arionyx dealer. Keep your purchase receipt as proof of purchase.