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## Ziehl-abegg RH50M-4DK.6F.1R

# Instruction Manual

Ziehl-abegg RH50M-4DK.6F.1R Centrifugal Fan

Model: RH50M-4DK.6F.1R | Brand: Ziehl-abegg

### 1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of the Ziehl-abegg RH50M-4DK.6F.1R Centrifugal Fan. Please read this manual thoroughly before attempting to install or operate the fan. Retain this manual for future reference.

### 2. SAFETY INFORMATION

**WARNING: Failure to follow these safety instructions may result in serious injury, death, or property damage.**

- Always disconnect power before installation, maintenance, or servicing the fan.
- Installation and electrical connections must be performed by qualified personnel in accordance with all local and national electrical codes.
- Ensure proper grounding to prevent electrical shock.
- Keep hands, tools, and loose clothing away from rotating parts during operation.
- The fan is heavy (approximately 17 kg). Use appropriate lifting techniques and equipment to prevent injury.
- Ensure the fan is securely mounted to a stable structure to prevent vibration and detachment.
- Do not operate the fan in environments exceeding its specified operating conditions (temperature, humidity, etc.).

### 3. PRODUCT OVERVIEW AND CONTENTS

The Ziehl-abegg RH50M-4DK.6F.1R is a high-performance centrifugal fan designed for various industrial ventilation and cooling applications.

#### 3.1 What's in the Box

- 1 x Ziehl-abegg RH50M-4DK.6F.1R Centrifugal Fan unit

#### 3.2 Product Images



Figure 1: Front view of the centrifugal fan, highlighting the air intake and impeller.



Figure 2: Side profile of the fan unit.



Figure 3: Angled view, illustrating the motor and wiring harness.



Figure 4: Rear view of the fan, showing the motor assembly.



Figure 5: Close-up of the fan's identification label with technical data.

## 4. SETUP

### 4.1 Mounting

1. Select a suitable, stable, and vibration-free mounting surface capable of supporting the fan's weight (17 kg) and operational forces.
2. Ensure adequate clearance around the fan for airflow and future maintenance.
3. Use appropriate fasteners (bolts, nuts, washers) to secure the fan to the mounting surface. Refer to the fan's mounting holes for proper alignment.
4. Verify that the fan is level and securely fastened before proceeding with electrical connections.

### 4.2 Electrical Connection

**CAUTION: All electrical work must be performed by a licensed electrician.**

1. Ensure the main power supply is disconnected and locked out before making any connections.
2. Verify that the supply voltage matches the fan's nominal voltage (230/400VAC, 50Hz).
3. Connect the fan's wiring to the power supply according to the wiring diagram provided on the fan's label (refer to Figure 5) and local electrical codes. Pay close attention to phase, neutral, and ground connections.
4. Ensure all connections are tight and insulated properly.
5. Connect the fan to a dedicated circuit with appropriate overcurrent protection.
6. Confirm proper grounding of the fan unit.

## 5. OPERATING INSTRUCTIONS

1. Before starting, visually inspect the fan for any obstructions, loose connections, or damage.
2. Ensure all safety guards are in place.
3. Restore power to the fan circuit.
4. Activate the fan using the designated control switch.
5. Observe the fan's operation for any unusual noises, vibrations, or overheating. If any abnormalities are detected, immediately shut down the fan and investigate the cause.
6. To stop the fan, deactivate the control switch and disconnect power if required for maintenance.

## 6. MAINTENANCE

**WARNING: Disconnect all power before performing any maintenance.**

### 6.1 Routine Checks (Monthly)

- Inspect the fan impeller and housing for dust, dirt, or debris accumulation. Clean as necessary.
- Check all mounting bolts and fasteners for tightness.
- Examine electrical connections for signs of wear, corrosion, or loosening.
- Listen for unusual noises or vibrations during operation.

### 6.2 Cleaning

- Use a soft brush or compressed air to remove dust and debris from the impeller and housing.
- Do not use harsh chemicals or abrasive materials that could damage the fan's surfaces.

## 7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Fan does not start	No power supply Incorrect wiring Motor fault	Check power source and circuit breaker Verify wiring connections (consult electrician) Contact qualified service personnel
Excessive noise or vibration	Loose mounting Impeller imbalance/damage Debris in fan housing	Tighten mounting bolts Inspect impeller for damage or accumulation; clean Remove any foreign objects
Reduced airflow	Blocked intake/exhaust Dirty impeller Incorrect motor speed	Clear obstructions Clean impeller Verify power supply and motor settings
Overheating motor	Insufficient ventilation Overload Motor fault	Ensure adequate airflow around motor Check for obstructions or excessive back pressure Contact qualified service personnel

## 8. SPECIFICATIONS

Parameter	Value
Model	RH50M-4DK.6F.1R
Brand	Ziehl-abegg
Type	Centrifugal Fan
Part No.	111431
Nominal Voltage	230/400VAC
Frequency	50Hz
Power	1.15KW
Current Draw	3.6/2.1A
Speed	1340 RPM
Degree of Protection	IP54
Weight	17 kg
Cooling Method	Air
Material	Copper (as per product specifications)

## **9. WARRANTY AND SUPPORT**

For warranty information and technical support, please refer to the documentation provided at the time of purchase or contact your authorized Ziehl-abegg distributor or seller. Keep your purchase receipt as proof of purchase.