200MM

140MM

RHEKEN

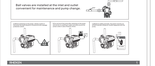
USE INSTALLATION INSTRUCTION FOR INVERTER PUMP

Quick Installation Guide

Please read this guide carefully to learn the correct installation steps and instructions before using this product.

⚠ Warning: The icon warns you how to avoid possible personal injury.

Ball valves are installed at the inlet and outlet connected for maintenance and pump change.



1 Packing list

Tips: Please check packing, in and damage in efficiency, please keep away from water and moisture.

2 Product Introduction

2.1 Product Profile

Rheken inverter pump is a kind of water booster pump, which is a self-priming water pump used in the water supply system of the pump and the water heating water circulation system. The frequency conversion pump can automatically adjust the pump operating mode, main integrated inverter, pump, pressure.

2.2 Model Description

KFR 25 - 200 J

- Inverter
- Flange
- Max head

Model	Power (W)	Flow (L/min)	Head (m)	Inlet/Outlet
JKFR-25-200	200	0-25	0-20	1" / 1"
JKFR-25-200	200	0-25	0-20	1" / 1"
JKFR-25-200	200	0-25	0-20	1" / 1"
JKFR-25-200	200	0-25	0-20	1" / 1"
JKFR-25-200	200	0-25	0-20	1" / 1"
JKFR-25-200	200	0-25	0-20	1" / 1"
JKFR-25-200	200	0-25	0-20	1" / 1"
JKFR-25-200	200	0-25	0-20	1" / 1"

2.3 Product Structure

1	Motor	9	Diffuser
2	Motor Shaft	10	Impeller
3	Motor Cover	11	Impeller Shaft
4	Fan	12	Bearing
5	Fan Cover	13	Bearing Cover
6	Capacitor	14	Mechanical Seal
7	Capacitor Cover	15	Pump Cover
8	Inverter	16	Pump Body
		17	Pressure Sensor
		18	Pressure Switch
		19	Anti-Freezing Valve
		20	Anti-Freezing Valve Cover
		21	Anti-Freezing Valve Spring
		22	Anti-Freezing Valve Ball

3 Installation

3.1 Operating Conditions

Ambient temperature	Pump: 0-40°C, Inverter: 0-40°C, Motor: 0-40°C, Max 40°C
Relative humidity	≤95%
Altitude	≤1000m
Medium	Clean water, non-corrosive, non-flammable, non-explosive, non-viscous, non-solid impurities
Medium temperature	Pump: 0-40°C, Motor: 0-40°C

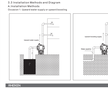
3.2 Recommended Pipe Size

Pipe Diameter	Inlet	Water side	The diameter of the water inlet pipe should be greater than or equal to the diameter of the pump inlet.
		Suction side	
	Outlet	Water side	The diameter of the water outlet pipe should be greater than or equal to the diameter of the pump outlet.
		Suction side	
Pipe Material	Water side		Stainless steel, copper, PPR, PE, PVC
	Suction side		Stainless steel, copper, PE, PVC

3.3 Installation Methods and Diagram

Installation Methods

Horizontal installation (Vertical is prohibited)



3.4 Installation Diagram

Occasion 2: Overpressure Bypassing

Occasion 3: Water Tower Replenishment

3.5 Notice of Installation

3.6 Pipelines Connections

⚠ Pay Attention

Do not connect the pump with pipelines immediately after welding, wait for the pipelines to cool down and then connect to the pump.

1. Remove the filter in the connection port before other pipelines connection.
2. Pipelines connection: the pipelines should be fixed, avoid multiple ends of water to prevent pump vibration and noise, and the pipelines should be connected firmly and tightly.

4 Operation Instruction

4.1 Control Panel

Model	Pressure adjustment
JKFR-25-200	1bar
JKFR-25-200	1bar
JKFR-25-200	1bar
JKFR-25-200	1bar

4.2 Pressure Adjustment

1. Pressure adjustment: Pressure adjustment is completed by rotating screw on the pressure switch. Clockwise rotation is to increase the pressure, and counterclockwise rotation is to reduce the pressure. Pressure adjustment range is 0.5-3.5bar.
2. Pressure adjustment: Pressure adjustment is completed by rotating the screw on the pressure sensor. Clockwise rotation is to increase the pressure, and counterclockwise rotation is to reduce the pressure.
3. If Rheken inverter pump is used in pressure boosting, the pressure adjustment should be completed by the inverter parameters.

Model	Pressure adjustment
JKFR-25-200	1bar
JKFR-25-200	1bar
JKFR-25-200	1bar
JKFR-25-200	1bar

4.3 Water Injection for Pump Body

Before the first start-up, the pump should be filled with water through the water filling port on the top of the pump body. Remove the screw cap on the water filling port, and fill the pump with water. After the water filling is completed, screw the screw cap back into the water filling port.

4.4 Start the Pump

1. Open the water inlet valve, the water outlet valve and bring the pump to operation. (Do not dry running).

4.5 Fault Diagnosis

01	Overload protection	Overload protection
02	Overcurrent protection	Overcurrent protection
03	Overvoltage protection	Overvoltage protection
04	Undervoltage protection	Undervoltage protection
05	Phase loss protection	Phase loss protection
06	Overheat protection	Overheat protection
07	Pump protection	Pump protection
08	Pump protection	Pump protection
09	Pump protection	Pump protection
10	Pump protection	Pump protection

4.6 Maintenance

1. Pump and motor are free of maintenance, but regular inspection is recommended. Check the pump and motor for any abnormal noise, vibration, or overheating. If any issues are found, promptly shut down the pump for inspection and repair. Ensure the electrical connections in the PVC cover are tight and free from loosening or corrosion. Regularly clean the pump and motor surfaces to maintain good heat dissipation.
2. Avoid prolonged dry running of the pump, as this may damage the mechanical seal. Ensure the pump is properly filled with water before operation.

4.7 Identification and Solution of Common Faults

Motor	Motor not starting	Power supply is abnormal	Check the power supply voltage and ensure it is within the rated range.
		Capacitor is damaged	Replace the capacitor.
		Motor is damaged	Contact the manufacturer for repair or replacement.
	Motor overheating	Ambient temperature too high	Improve ventilation conditions or lower the ambient temperature.
		Overload operation	Check the load and reduce the load if necessary.
		Poor heat dissipation	Clean the motor surface to improve heat dissipation.
	Motor vibration or noise	Bearing wear	Replace the bearings.
		Loosened fasteners	Tighten all fasteners.
		Impeller imbalance	Check and balance the impeller.
Pump	Pump not starting	Power supply is abnormal	Check the power supply voltage and ensure it is within the rated range.
		Impeller is jammed	Check and remove the jammed impeller.
		Capacitor is damaged	Replace the capacitor.
	Pump leakage	Mechanical seal failure	Replace the mechanical seal.
		O-ring failure	Replace O-ring.
		The shaft surface is rough	Check the shaft surface and replace if damaged.
		Water is leaking out from the water filling port	Check the water filling port and tighten the screw cap.
	Pump vibration or noise	Cavitation	Check the inlet pressure and ensure it is sufficient.
		Impeller is damaged	Replace the impeller.
		Pump is not installed horizontally	Adjust the installation to ensure the pump is installed horizontally.
		Pump is not fixed firmly	Tighten the pump fixing bolts.
	Pump not starting	Pump is jammed	Check and remove the jammed impeller.
		Pump is damaged	Contact the manufacturer for repair or replacement.
		Pressure switch is damaged	Replace the pressure switch.
		Pressure switch is not adjusted properly	Adjust the pressure switch to the appropriate pressure.
		Pressure sensor is damaged	Replace the pressure sensor.
		Pressure sensor is not adjusted properly	Adjust the pressure sensor to the appropriate pressure.
		Anti-freezing valve is damaged	Replace the anti-freezing valve.
		Anti-freezing valve is not adjusted properly	Adjust the anti-freezing valve to the appropriate pressure.
		Power supply is abnormal	Check the power supply voltage and ensure it is within the rated range.
		Overload protection	Check the load and reduce the load if necessary.
		Overcurrent protection	Check the current and ensure it is within the rated range.
		Overvoltage protection	Check the voltage and ensure it is within the rated range.
		Undervoltage protection	Check the voltage and ensure it is within the rated range.
		Phase loss protection	Check the power supply and ensure all phases are present.
		Overheat protection	Improve ventilation conditions or lower the ambient temperature.
		Pump protection	Check the pump and ensure it is not jammed or damaged.
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4.8 Other problems

1	Pump leakage	Mechanical seal failure	Replace mechanical seal
		O-ring failure	Replace O-ring
		The shaft surface is rough	Check the shaft surface and replace if damaged.
		Water is leaking out from the water filling port	Check the water filling port and tighten the screw cap.
2	Abnormal noise/vibration	Cavitation	Check the inlet pressure and ensure it is sufficient.
		Impeller is damaged	Replace the impeller.
		Pump is not installed horizontally	Adjust the installation to ensure the pump is installed horizontally.
		Pump is not fixed firmly	Tighten the pump fixing bolts.
3	Pump not start	The shaft surface is rough	Check the shaft surface and replace if damaged.
		Pump is jammed	Check and remove the jammed impeller.
		Pump is damaged	Contact the manufacturer for repair or replacement.
		Pressure switch is damaged	Replace the pressure switch.
		Pressure sensor is damaged	Replace the pressure sensor.