

# Ferrolli

Kitchen Assistant K1  
Operation Instruction

43392410



- \* Reading the operation instruction carefully before using the product
- \* Keep it for reference

## Dear Customer,

Thank you for purchasing our Ferroli Instant Electric Water Heater. Ferroli Instant Electric Water Heater is designed and manufactured by Italy Ferroli Group according to international IEC standard and have world first level quality. Thus, we believe this series instantaneous electric water heater can fully satisfy your requirements and make your life convenient.

### 1 Safety Notes :

- \* Only 220-240V~50/60Hz single-phase AC power supply is allowed.
- \* Bipolar disconnect breaker for leakage protection must be used to ensure the minimum current of household equipment circuit (30A).
- \* High quality earth wire is necessary for power supply. Touching power switch with wet hands is forbidden. Cut off the power supply when it is not in use for a long time.
- \* During heating, it is normal if there appear a small amount of water drops around pressure relief vent. Don't block it.  
When pressure relief vent keeps dripping, it may be caused by high running water pressure, please adjust the water flow switch.  
If the pressure relief vent drains like spurting or with sound, please cut off the power supply immediately and notify the maintenance personnel.
- \* Don't use it for showering. Do not spray the water on human body during use of initial water. Please first adjust the position. When the highest position level, it shall be careful that too high temperature may cause burns, or may damage the water pipe. Select the desired temperature by regulating the rotary switch. Be caution of the high temperature of 3<sup>rd</sup> position, it may scald the skin or damage the water pipe.
- \* The installation without drainage is not allowed, even the outdoor or the freezing area. Empty the water in the water heater if it is not used for a long time in winter, so as to avoid frozen, resulting in damage the container.

#### **Note: CUT OFF THE POWER SUPPLY BEFORE EMPTYING!**

- \* It shall use sealing ring with filter. Remove the residual dirt from filter regularly so as to avoid being blocked.
- \* Only the Ferroli accessories and Ferroli assigned serviceman can be used for correct performance of the water heater.
- \* Without the guardian, the disabled, children or the one lacking relevant experience is not suitable for using this water heater.
- \* The guardian shall keep children from playing with the water heater.

**Notice:** As the product is equipped with non-self-resetting thermal circuit breaker, in order to avoid dangers caused by improper reset of thermal circuit breaker, the appliance shall not be connected to external power switching device, such as timer, or the circuit timely connected/disconnected by common components.

**Notice: Failure to comply with this instruction implies the risk of the accident, property loss and personal injury.**

## 2 Products characteristics

**Our design of products is characteristic of safety, energy conservation, high efficiency, beauty and convenience.**

### \* Safety

Water-electricity isolation heating technology, reliable earthing protection, over-temperature protection, over pressure protection, anti-dry heating, splash-proof, low flow and pressure protection.

### \* Energy conservation

Three-stage power regulation, applicable for all seasons. Instant-on without preheating and thermal insulation, thus saving water and power.

### \* High efficiency

Specially designed heating element has good thermal conductivity with the efficiency of 99%.  
Advanced anti-scaling technology stops scale formation and accelerates heat conduction.

### \* Convenience

No preheating is required. It can provide hot water within seconds after starting. The design makes it easier and faster for you to enjoy warm water.

### **Design targets of high technology & human-orientation**

#### \*High technology

The product has a specially designed heating element which offers better protection to acid and alkali and is suitable to various qualities of water, with less scale generated.

#### \* Human-orientation

Easy operation --- Position choosing for easily using..

## 3. Name of components

Description: K1 series including DFF-KAM3.0S/DFF-KAM3.5S/  
DFF-KAM4.5S/DFF-KAM5.0S/  
DFF-KAM5.5S



1. Outlet pipe
2. Inlet pipe
3. Pressure relief vent
4. Indicator
5. Rotary switch

Products' shape shall refer to the actual products.

## 4. Functions and operations

### General functions---

Position choosing function: turn on / off the water heater

Water pressure switch function: heating starts only when water pressure  $\geq 0.8$  bar.

Over-temperature protection: When outlet water temperature is over  $52^{\circ}\text{C}$ , heating power will be turned off automatically. When outlet water temperature is less than  $45^{\circ}\text{C}$ , heating power recovers.

Anti-dry heating: USA imported kicking thermostat with bimetallic strip is used. When reaches the setting temperature, the power supply is rapidly cut off to prevent heating element dry heating.

### Operating method of K1 Series

After installation, turn on the external water valve. No power supply is allowed until water constantly flows out of nozzle and other outlets and there is no water leakage at each connection. Before connect to the power supply, the Flow control valve must be opened until the water flow continually.

#### 4.1. Start up

Regulate the water flow valve to the properly flow,

Regulate the rotary switch to position at 1~3 can start the heating.

Note: Heating only starts when position is at 1~3 and water pressure is  $\geq 0.8$  bar.

#### 4.2. Position Regulating

Switch the rotary switch to position 1~3, water heater heats up based on corresponding rated power with a red indicator light.

#### 4.3. Shut down

Switch the rotary switch to position 0 to turn off water heater. The water heater will stay on standby and the indicator will off.

**Note:** There shall be water flow before switching the knob for start-up.

After operation, switch the knob to 0, then turn off the water valve.

## 5. Technical parameters and electronic schematics

### Technical parameter:

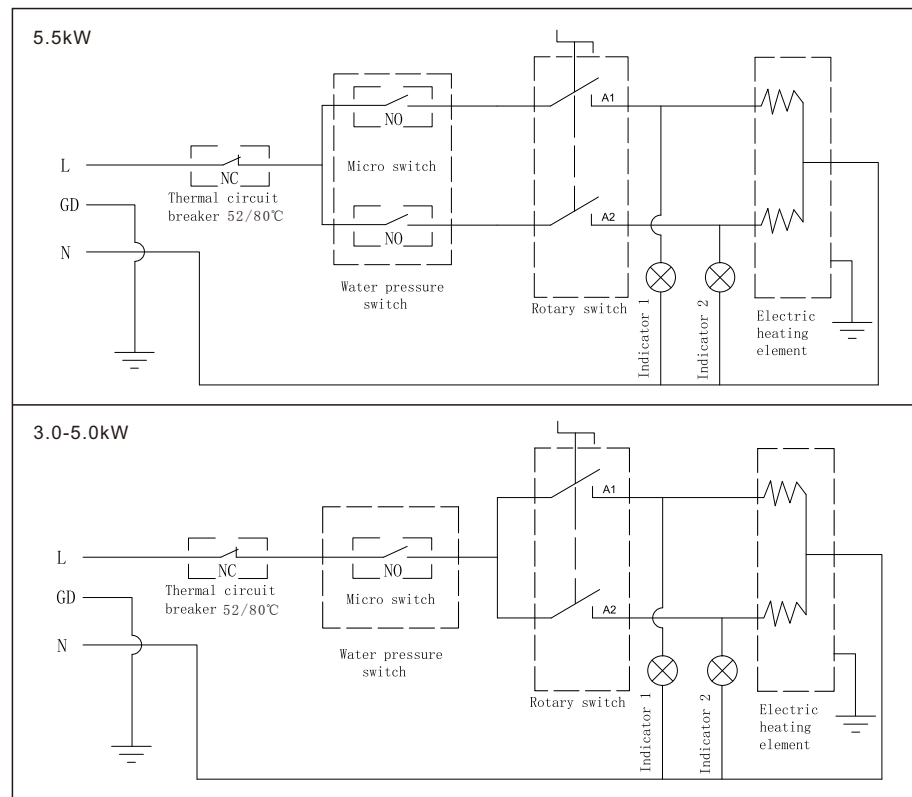
Rated voltage/frequency: 220-240V~50/60Hz Waterproof type: IPX4

Rated pressure: 6 bar Minimum starting water current: (1.8L/min)

Maximum working pressure: 6 bar Minimum working pressure: 0.8 bar

Model	Rated power	Temperature	Dimension (mm) (LxWxH)	Max. current	Cross sectional area of copper core line
DFF-KAM3.0S	3.0kW	52 $^{\circ}\text{C}$	210x197x117	13.1A	1.5mm <sup>2</sup>
DFF-KAM3.5S	3.5kW			15.2A	1.5mm <sup>2</sup>
DFF-KAM4.5S	4.5kW			19.6A	2.5mm <sup>2</sup>
DFF-KAM5.0S	5.0kW			21.8A	2.5mm <sup>2</sup>
DFF-KAM5.5S	5.5kW			25A	2.5mm <sup>2</sup>

## Electronic Schematics



## 6. Installation

This product shall be installed by those personnel from the After Sale Service Center or assigned by the Sales Department of our company. Please carry out installation as follows based on the optimum installation position prepared prior to installation.

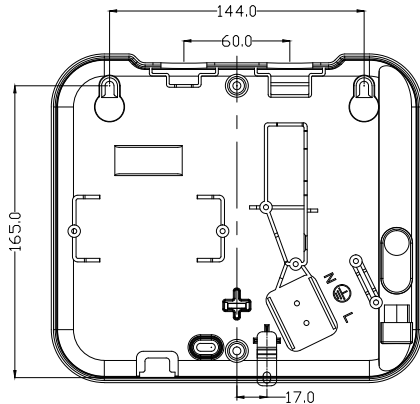
A. Connection of water pipe (before connect the electric)

1. Determine the position of water heater according to the installation dimension of outlet pipe, inlet pipe and bottom, and fix the screw holder on the wall, then fix up 2 screws on the wall.
2. Connect outlet and inlet pipe, and hang the water heater on the fixed screws, then use the 3rd screw hold on.
3. Confirming good sealing of water circuit.

## B. Installation of power supply (After the installation of water circuit)

According to the prepared connection cable, connect firewire, zero line, and ground line to the corresponding terminal.

Note: Use only special wire and bipolar leakage protection breaker for the fixed wiring and reliable earthing. The common plug or socket are not allowed to connect to water heater.



## 7. Common failure analysis and troubleshooting

Failure	Possible causes	Troubleshooting
No temperature change	Water pressure is too low	Increase water inlet flow or pressure.
	Rotary switch at 0 position.	Switch to the Position 1, 2, 3.
	Heating element is broken	Notify maintenance department for repairing.
Water is not hot enough	Water flow is too large or power is too small	Decrease the water inlet flow or switch the higher position.
	Water pressure switch is broken	Invite special personnel for repair
Indicator is broken	Water outlet temperature is too high	Increase the water inlet flow or use position 2 or 1.
	Component broken	Notify maintenance department for repairing.

Please contact Ferroli maintenance department if the problem can not be eliminated by yourself.

## 8. External cleaning and machine maintenance

- \* Power supply must be cut off before cleaning the water heater. Softly wipe the machine by wet cloth dipped with a few neutral cleaning agent, do not use gasoline or other solutions. Finally wipe water heater by cloth to keep it dry.
- \* If water is blocked and doesn't flow out smoothly during use, clean up the water scale and foreign bodies on the filter screen of water inlet and outlet pipe.
- \* Clean the foreign bodies or water scale on filter screen periodically
- \* The outlet of water heater can supply water for kitchen and laundry by multiple water pipes.

## 9 Packing List

Name	Quantity
Electric water heater	1 set
Manual	1 copy
Fixed accessories	1 bag
Warranty card	1 copy
ERP label	1 copy

<b>Certificate of Quality</b>	
Inspector	