

Heating Element without Thermostatic Head with fixed wiring, nickel-plated, with G 6/4" thread

1 - In General

1.1 - Use

This electric heating element is designed to heat sanitary water in a storage water heater or heating water in an accumulation tank. It is not intended for fluid heating in stainless-steel electric boilers.

1.2 - Installation

Screw the heating element into the respective threaded sleeve (G 6/4" F) with the cable gland heading downwards. Sealing cord, hemp, Teflon tape or a semi-permanent thread sealant should be used to avoid leaks.

Should the heating element be controlled by a temperature sensor, this sensor shall be placed in the tank, above the heating element.

Should an electric heating rod be installed, plastic piping shall not be used for connecting the tank to a heating system.

1.3 - Maintenance

Clean the exterior of the heating element with a soft cloth and a suitable detergent. Never use abrasive cleaners or solvents. If the element is used in extra hard water, it is recommended to remove sediments at least once a year. Unplug the element before cleaning. Then drain water from the tank and dismount the heating element. Scratch the hard deposits on the heating rod with a plastic or wooden spatula and flush with water. Be careful not to damage the protective nickel layer on the heating rod. Then reinstall the body according to this instruction manual, fill the tank with water, air-bleed and pressurize it. Check the threaded connection for leaks. Finally, re-connect the heating element to the mains.

1.4 - Disposal

IMPORTANT INFORMATION ON PROPER DISPOSAL OF E-WASTE AS REQUIRED BY THE EC DIRECTIVE 2002/96/EC (WEEE)

Do not dispose of this product as unsorted municipal waste. Please dispose of this product by returning it to the point of sale or to your local municipal collection point for recycling. Respecting these rules will help to preserve, protect and improve the quality of the environment, protect human health and utilize natural resources prudently and rationally.

The crossed out wheeled bin with marking bar, printed either in the Manual or on the product itself, identifies that the product must be disposed of at a recycling collection site.



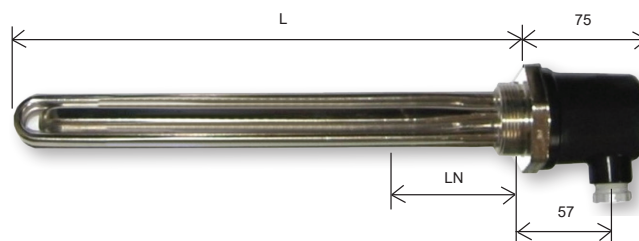
WEEE Registration Number:
02771/07-ECZ

2 - Heating Element without Thermostatic Head, fixed wiring, nickel-plated, with G 6/4" thread

2.1 - Technical Description

The electric heating element consists of a nickel-plated heating rod with G 6/4" M thread and a terminal strip.

2.2 - Dimensions



	output [kW]	el. wiring	type no.	code	LN-non-heating end [mm]	L-heating rod length [mm]	min. storage w. heater size	min. tank size	
3×230 V (1×230 V)	2	(1) 3/N/PE AC 230 V	ETT-A-2,0	8935	100	245	RBC 200	PS 200	HSK 500
	3	(1) 3/N/PE AC 230 V	ETT-A-3,0	8936	100	305	RBC 200	PS 200	HSK 500
	4.5	(1) 3/N/PE AC 230 V	ETT-A-4,5	8937	100	370	RBC 200	PS 200	HSK 500
	6	(1) 3/N/PE AC 230 V	ETT-A-6,0	8938	100	495	RBC 200	PS 200	HSK 500
3×400 V	7.5	3/N/PE AC 400 V	ETT-A-7,5	8939	100	585	RBC 400	PS 300	HSK 500
	9	3/N/PE AC 400 V	ETT-A-9,0	8940	100	680	RBC 750	PS 500	HSK 800
	12	3/N/PE AC 400 V	ETT-A-12,0	8941	100	815	RBC 750	PS 800	HSK 800

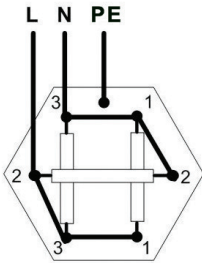
2.3 - Connection to the mains

Remove the cover of the heating rod, run the power supply cable through the cable gland, wire according to the wiring diagram for the respective model and replace the cover. The electric heating element shall be wired to 3/N/PE AC 400/230 V, fixed wiring, using a cable with leads of a cross-section respecting its load by the respective heating rod model.

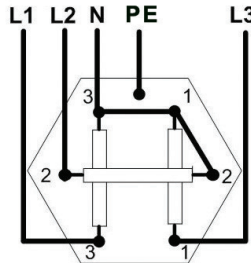
The installation shall meet valid rules and standards and shall be done by an authorized person only.

2.4 - Wiring diagram

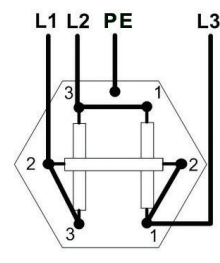
For 2 - 6 kW - 1×230 V



For 2 - 6 kW - 3×230 V



For 7.5 - 12 kW - 3×400 V



2.5 - Commissioning, operation and possible faults

Prior to commissioning, please make sure the water in direct contact with the heating element does not exceed the values given in the chart below. The manufacturer bears no responsibility for defects (e.g. limescale deposits on the heating element) caused by unsuitable operation conditions.

Table of limit values for total dissolved solids in hot water

WARNING!

THE OUTGOING HOT WATER SHALL NOT BE LEAD THROUGH COMMON PLASTIC PIPES. THE PIPING SHALL BE RESISTANT TO TEMPERATURE OF 100 °C MIN.

IF PLAIN COMMON PLASTIC PIPING IS USED, ITS SERVICE LIFE IS SIGNIFICANTLY REDUCED UNDER TEMPERATURES OVER 60 °C. WHEN COMBINED WITH IMPROPER PIPE FIXING THAT RESTRICTS DILATATION OR EVEN MAKES IT IMPOSSIBLE, THE PIPE SERVICE LIFE MIGHT BE JUST SEVERAL HOURS!

Table of limit values for total dissolved solids in hot water

Description	pH	Total dissolved solids (TDS)	Ca	Chlorides	Mg	Na	Fe
Max. value	6.5-9.5	600 mg/l	40 mg/l	100 mg/l	20 mg/l	200 mg/l	0.2 mg/l

2.5.1 - DHW heating in a storage water heater

In order to heat water in the storage water heater, open the cold water inlet, fill the tank with water and airbleed it by opening the hot-water tap. Plug in the heating element and set the desired water temperature using a thermostat or a heating system controller.

It is recommended to set the temperature to 60 °C. This temperature guarantees the best operation of the heating element and at the same time, it offers:

- protection against Legionella
- cost reduction
- slower deposit formation

2.5.2 - Heating water for space heating in an accumulation tank

Fill the heating system with heat-carrying fluid, air-bleed it and pressurize to the working pressure. Plug in the heating element and set the desired water temperature using a thermostat or a heating system controller.

2.5.3 - Heating element state during operation

For safe operation of the heating element, the contactor coil shall be wired:
either – to the output from a heating controller with a limitstat wired in series
or – to an adjustable thermostat and a limitstat wired in series.

Temperature sensors of the controller, or temperature sensors of both the thermostats shall be placed inside the tank above the heating element. Operation of the heating element is not signaled by any lamp.

2.5.4 - Possible faults

If the heating element shows signs of a defect, disconnect it from the mains immediately and call your service provider.

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