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## **Congratulations on your new Welldana® Inline electric heater.**

Please read this manual carefully before installing and operating the heater.

### **Standards:**

Welldana® Inline electric heaters comply with current rules and standards on safety. The products have been tested against the following standard: EN 60335 - 1 and EN 60 335-2-60. The products carry the CE mark.

### **Technical data:**

Electrical data:	220 - 240 V. 1500 / 3000 W. Hz 50-60.
Hi-limit: (all models )	49°C. Delta temperature 56-7°C, 250 V AC, 10 A, delta K 2° C. Manual reset.
Dimensions:	Length 296mm. (1,5kW) 346mm. (3kW) height 120 mm; depth 80 mm.
Enclosure:	IP X5.
Thermostat	(on 700 series only) 0-40°C; 250 V AC; 10 A; delta-K 2°C.
Power cable:	H003VV-F. 3 • 1,5 mm <sup>2</sup>
Control cable:	<b>(on 3 kW models only)</b> LIYY 4 • 0.75 mm <sup>2</sup> White - brown = hi-limit. Yellow - green = thermostat. Blue - brown = hi-limit on models without thermostat.
Signal lamp:	None
Threaded cable entries:	PG 11 / PG 9

### **Safety instructions:**

- Do not use the electric heater if it is visibly damaged or malfunctions..
- Make sure that the electrical system is adequate for a heater of the required size.
- Protection must be provided in the form of a potential equalisation connection. Use the screw on the side of the electric heater for this purpose. Use at least a 2.5 mm<sup>2</sup> copper, yellow/green conductor.
- **Warning!** The electric heater must only be installed as shown in installation diagram **1** or **2**. Check that the spa controls include all required safety features, i.e. pressure switch, flow switch and thermostat, before installing the electric heater. If an electric heater without thermostat is to be used, temperature control **must** be achieved via the spa controls.

### **Types:**

Welldana® In-line heater 34-100615 - 34-100630. With hi-limit.

Welldana® In-line heater 34-100715-34-100730. With hi-limit and thermostat.

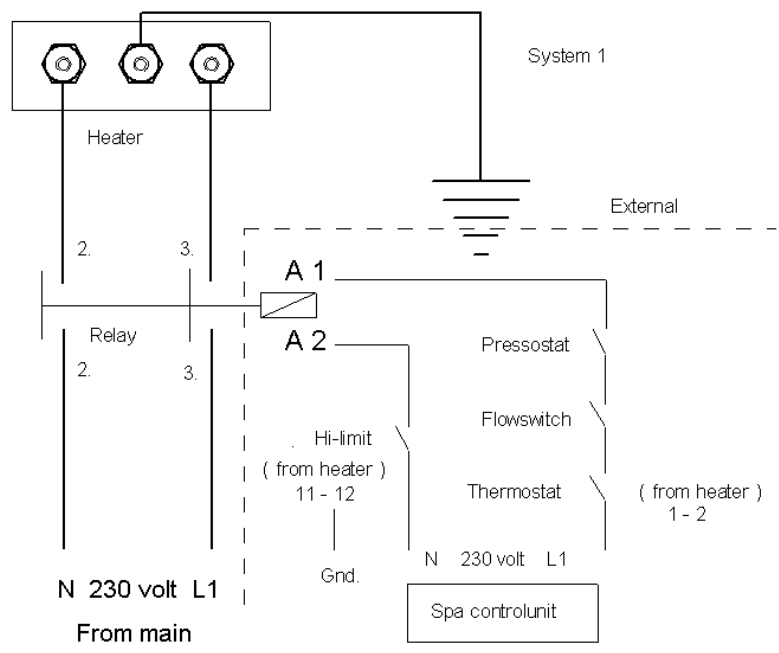
Types 34-100615 and 34-100715 are both 1.5 kW, 220-240 V AC models.

Welldana® In-line 1.5 kW electric heater models must be installed with power cables as shown in installation diagram **2**. Pressure switch and flow switch are not included.

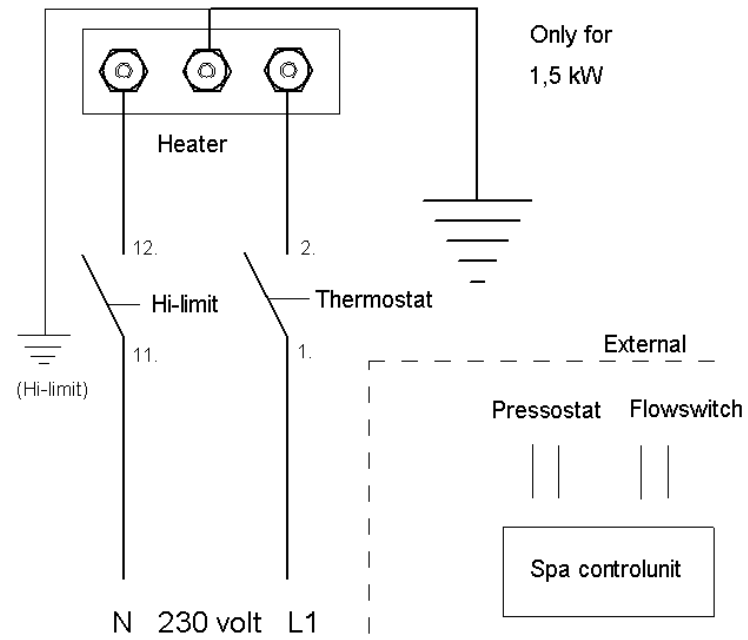
Types 34-100630 and 34-100730 are both 3.0 kW, 220-240 V AC models.

Welldana® Inline 3.0 kW electric heater models must be installed with power cables and control cables as shown in installation diagram **1**. Pressure switch and flow switch are not included.

**Installation diagram 1**



**Installation diagram 2**



## **Installation:**

The electric heater must be installed so that it receives power via the main fuse group (diagram 1) or direct from the main panel (diagram 2). If the heater is installed as shown in installation diagram 2, the panel must be rated for 1500 or 3000 W, depending on type. The pressure switch and flow switch must be fitted to the piping ahead of the electric heater.

The electric heater must be installed so that there is no risk of fire if mechanical safety equipment fails. An earth leakage circuit breaker must be installed.

The electric heater should be positioned to allow easy access for resetting hi-limit (high temperature cut-out).

The electric heater requires a minimum flow rate of 5 m<sup>3</sup>/hour.

The installation of wiring, connections, control current, etc. must only be performed by an authorised electrician. The correct tightening of terminals on the heating element is the responsibility of the electrician. Two spanners must be used when tightening terminals. Adapter locknuts must only be finger tight.

## **Main components:**

