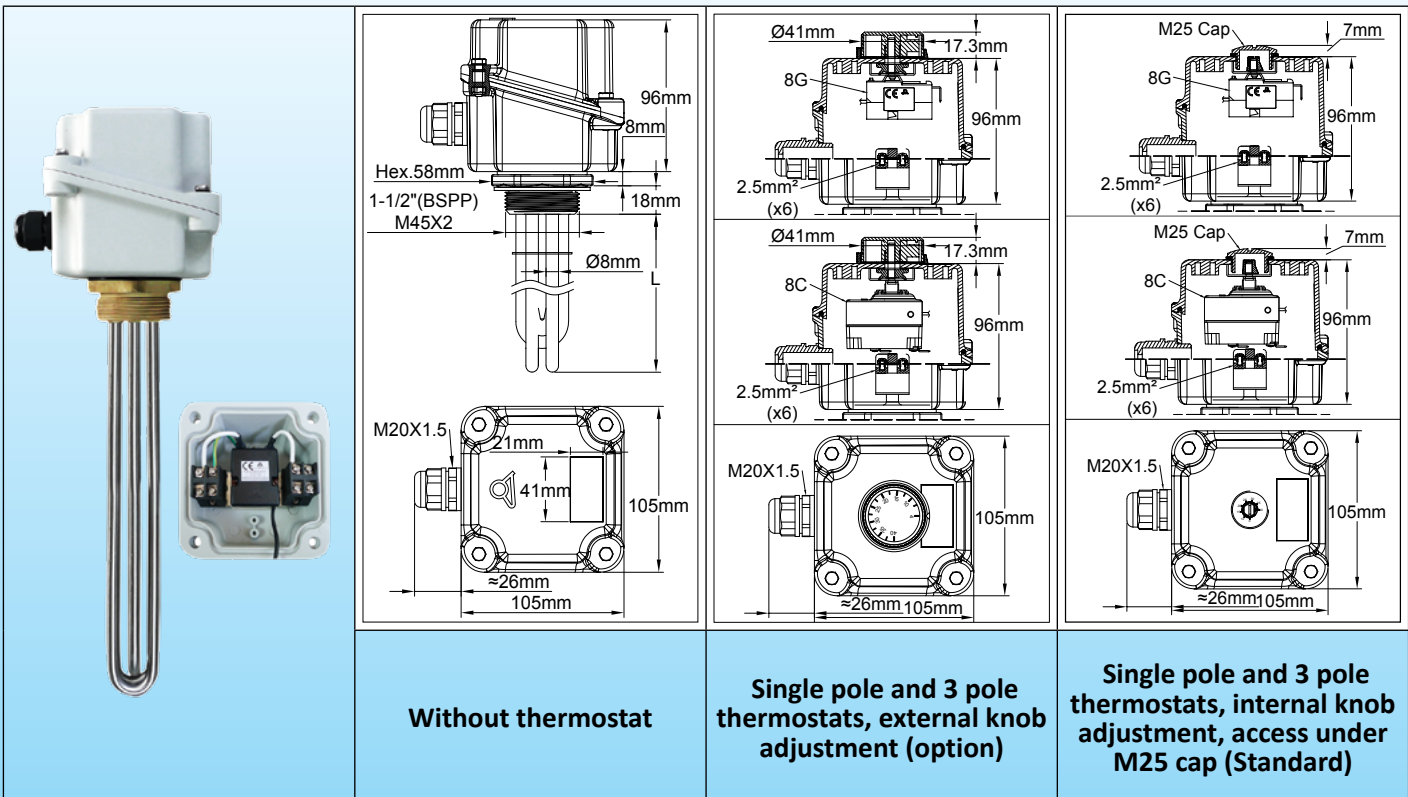


# Immersion heaters with aluminum connection box

Standard immersion heater with aluminum enclosure, 105 × 105 × 96mm, with and without thermostat. Type 9ST5



**Main applications:** liquid heating, hot water circuits, containers and buffer tanks.

These heaters with that box size are the most used because they can receive many accessories such as thermostats, limiters, pilot lights etc., with a relatively small footprint.

They exist in:

- 6 standard power levels: 1kW – 1.5kW - 2kW - 3kW - 4kW - 6kW.

- 3 types of standard fittings: 1"1/4; 1"1/2; M45x2.

- 2 types of surface load density: 5W/cm<sup>2</sup> and 10W/cm<sup>2</sup>. See technical introduction to optimize the surface load.

**Heater tube material:** 8mm dia. AISI 304 or Incolloy 800 (AISI 316; AISI 321; Incolloy 825 on request).

**Fitting material:** brass, swiveling on housing, brazed on tubes. (AISI 304 or AISI 316, TIG welded, or brazed, models are available on request). Supplied without gasket and without nut. See accessories below.

**Thread:** 1"1/4; 1"1/2BSPP (ISO 228); M45x2.

**Temperature control:** single pole or 3 pole thermostat, 30-90°C (85-195°F). Other temperature ranges in option.

**Enclosure:** 105 × 105 × 96mm, die-cast aluminum, 3mm wall thickness. Silicone foam gasket. Stainless steel cover screws with locking nuts, 2 inner earth terminals M4; Gray epoxy paint RAL7035. Protected against galvanic corrosion.

**Ingress protection class:** Water and dust: IP65; shock resistance: IK 10 (with metal cable glands and M25 metal plug).

**Cable glands:** M20, PA66. Nickel-plated brass on request.

**Thermowell:** in standard on thermowell in AISI304, dia.8 × 7mm, also for models supplied without thermostat.

**Electrical connections:** tubular heater terminals with stainless steel screw, nut and stainless steel washer. Switching straps on 3 phases models.

Models with thermostats have a built-in connection block, 3 × 2.5mm<sup>2</sup> for single phase units and 5 × 2.5mm<sup>2</sup> for 3 phases units. One more M4 grounding terminal available.

**Support grid:** 1 grid AISI 304 for lengths from 400 to 600mm, 2 grids above.

**Not heating immersed zone:** 50mm.

**Surface load:** standard 5W/cm<sup>2</sup> or 10W/cm<sup>2</sup>, other values on request.

**Voltage:** 220-240V single phase or three phases 380-400V (Star connection with neutral).

**Standard options:**

- 230V single phase thermostat for power up to 3kW. 3 phases thermostat for 4kW and 6kW models.

**Variants on request:**

- External thermostat knob, with waterproof shaft gasket.

- 4-40°C (40-105°F), 0-60°C (32-140°F), or 30-110°C (86-230°F) thermostat.

- Additional cable gland output for electronic control sensor.

- It is possible to deliver these devices with one or two pilot lights and a power cord.

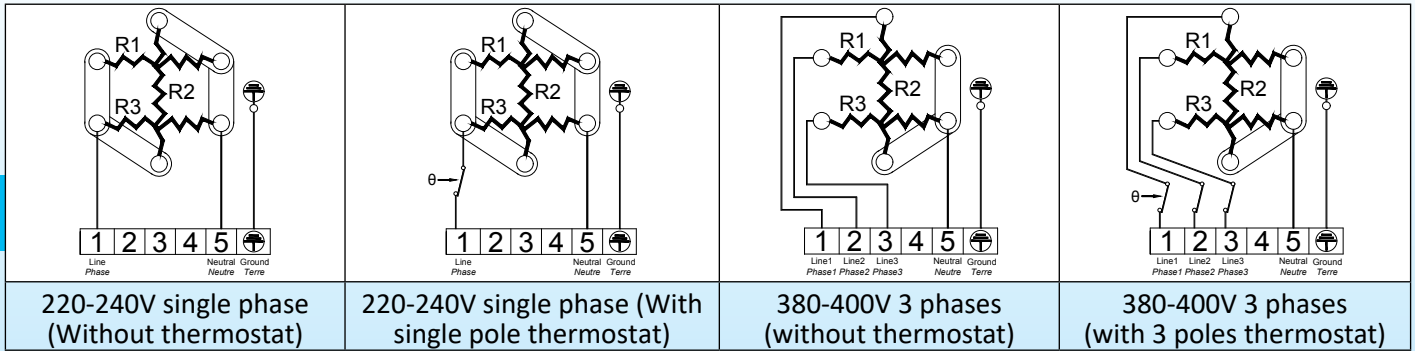
- These heaters can be assembled with fittings having threads up to 2"1/2 or M77x200, and 10mm dia. heating tubes.

Contact us for feasibility.

# Immersion heaters with aluminum connection box



## Electric Wiring



## Main references

5W/cm<sup>2</sup>; 1"1/2\*\* brass fitting, without thermostat.

Power	1kW	1.5kW	2kW	3kW	4kW	6kW
Length (mm)	170	240	300	440	570	840
AISI 304 Reference	9ST5G5E1010U8170	9ST5G5E1015U8240	9ST5G5E1020U8300	9ST5G5E1030U8440	9ST5G5E1040U8570	9ST5G5E1060U8840
Incolloy 800 reference	9ST5G5E1010UK170	9ST5G5E1015UK240	9ST5G5E1020UK300	9ST5G5E1030UK440	9ST5G5E1040UK570	9ST5G5E1060UK840

10W/cm<sup>2</sup>, 1"1/2\* brass fitting, without thermostat.

Power	1kW**	1.5kW	2kW	3kW	4kW	6kW
Length (mm)	135	135	170	240	300	440
AISI 304 Reference	9ST5G5E1010B8130	9ST5G5E1015U8130	9ST5G5E1020U8170	9ST5G5E1030U8240	9ST5G5E1040U8300	9ST5G5E1060U8440
Incolloy 800 reference	9ST5G5E1010BK130	9ST5G5E1015UK130	9ST5G5E1020UK170	9ST5G5E1030UK240	9ST5G5E1040UK300	9ST5G5E1060UK440

5W/cm<sup>2</sup>, 1"1/2\* brass fitting, with 30-90°C (86-195°F) thermostat, adjustment under M25 cap (single phase up to 3kW, 3 phases for 4kW and 6kW models)

Power	1kW	1.5kW	2kW	3kW	4kW	6kW
Length (mm)	170	240	300	440	570	840
AISI 304 Reference	9ST5G5ES010V8170	9ST5G5ES015V8240	9ST5G5ES020V8300	9ST5G5ES030V8440	9ST5G5ES040U8570	9ST5G5ES060U8840
Incolloy 800 reference	9ST5G5ES010VK170	9ST5G5ES015VK240	9ST5G5ES015VK300	9ST5G5ES030VK440	9ST5G5ES040UK570	9ST5G5ES060UK840


10W/cm<sup>2</sup>, 1"1/2\* brass fitting, with 30-90°C(86-195°F) thermostat, adjustment under M25 cap (single phase up to 3kW, 3 phases for 4kW and 6kW models)

Power	1kW**	1.5kW	2kW	3kW	4kW	6kW
Length (mm)	135	135	170	240	300	440
AISI 304 Reference	9ST5G5ES010B8130	9ST5G5ES015V8130	9ST5G5ES020V8170	9ST5G5ES030V8240	9ST5G5ES040U8300	9ST5G5ES060U8440
Incolloy 800 reference	9ST5G5ES010BK130	9ST5G5ES015VK130	9ST5G5ES020VK170	9ST5G5ES030VK240	9ST5G5ES040UK300	9ST5G5ES060UK440

\* 1"1/4 brass fitting instead of 1"1/2, replace G5 by G4 in the reference. M45x2 brass fitting instead of 1"1/2, replace G5 by G9 in the reference.  
\*\* This model has only 2 heating elements.

## References of accessories in option (not included in the product, must be ordered separately):

### Nuts

	Thread	1"1/4	1"1/2	M45x200
	Brass	9BRRA3000ELH302A	9BRRA3000ELH303A	9BRRA3000ELH305A
	AISI304	9BRRA3000ELH032A	9BRRA3000ELH006A	9BRRA3000ELH049A
	AISI316	9BRRA3000ELH202A	9BRRA3000ELH203A	9BRRA3000ELH205A

### Gaskets

	Thread	1"1/4	1"1/2 - M45x200
	NBR	9BRJ03000ELH206A	9BRJ03000ELH205A
	Fiber	9BRJ03000ELH052A	9BRJ03000ELH007A
	PTFE	9BRJ03000ELH032A	9BRJ03000ELH033A

Other accessories and drawings: see last section of this catalogue.