

ELECR

ENGINEERING

ELECRO B-100

Swimming Pool Heater
with Ultra Efficient Heating
Elements

18-kW – 72-kW (400 V - 3 ph)

18-kW – 54-kW (230 V - 3 ph)



Features

- Easy Installation
- Super safe operation
- Robust, durable construction
- Digital water flow signal , no pump interlock required
- Low element Watts density reduces encrustation
- Available with Titanium heating elements, - zero corrosion guaranteed
- 316 Stainless Steel flow tubes
- Dual cascade wired *Schneider* contactors on each element bank
- Digital timers for staged energisation
- Easy programming using touch screen
- Digital controls provide more accurate temperature control
- Epoxy powder coated aluminium cabinet

Construction

The Elecra B-100 is manufactured from top quality components and materials at the Elecra works in Hertfordshire, England.

Construction consists of three flow tubes which are fitted to uniquely designed manifold mouldings made from specially formulated polymer alloy material. Spiral wound heating elements provide a 'Vortex' water flow, these are positioned equidistantly along each flow tube providing ultra efficient performance, the 'Low watts density' of these elements guarantees extended life and reliability, these are available in Titanium or Incoloy 825. The outlet manifold accommodates a flow switch which provides a digital signal to the control board. The inlet manifold is equipped with a Titanium temperature pocket fitted with a temperature sensor.

The heater is supported by two stainless steel brackets, these together with durable aluminium panels form an enclosure finished in tough epoxy powder coat paint. The enclosure houses the cascade wired *Schneider* contactors (2 per element bank) timers and control board.

The heater control panel is on the front of the cabinet containing the indication and fault lights as well as the digital touch control screen. The unit can be floor or horizontal shelf mounted offering the simplest and tidiest of installations even in limited spaces.



Operation

The Elecro B-100 can be easily operated using the control panel touch screen. The inlet manifold has been designed to minimise flow imbalance between the flow tubes, greatly reducing the risks of air locking. Safety and equipment protection is provided by the highly reliable flow switch, over temperature protection is provided by the four safety thermal cut out (auto-reset) and a safety thermal cut out (manual reset).

The digital control board allows accurate control of pool water temperature thanks to its high precision. The blue digital characters on the touch screen are clearly legible, even in bright sunlight. To reduce voltage drop on start-up, the heater element banks are energised in a staged cascaded sequence, with a time delay between energising each bank.

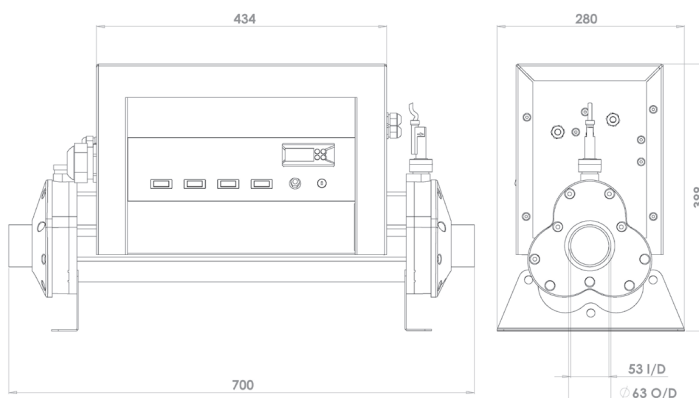
Specification & Models

Heating Elements:	Titanium or Incoloy 825, high MgO compaction - 21.4 and 25.4 Watts/cm ² at 220V 3ph and 400V 3ph resp.
Flow tubes:	BS 316 Stainless Steel
Cladding panels:	Aluminium, epoxy powder coated
Contactors:	Cascade wired dual <i>Schneider</i> contactors for each element bank
Thermostats:	1 x 60°C safety thermal cut out (auto-reset) per flow tube against over-temperature 1 x 60°C safety thermal cut out (auto-reset) against enclosure over-temperature 1 x 55°C safety thermal cut out (manual-reset)
Flow switch:	Gold tipped reed switch with titanium fulcrum pin
Wiring:	High temperature, silicone sheathed, multi-strand copper conductors
Seals:	High temperature special formula EPDM
Water connections:	63-mm spigot with adaptor for 2" NB
Working pressure:	4-barg maximum
Mounting:	Floor or horizontal shelf mounting
Standards compliance:	European Electromagnetic Compatibility directive 89/336/EEC and 93/068/EEC
Harmonised Standards:	EN 55014 – EN55104, EN 5501, EN 5502, CEI 801-4, CEI 801-2, CEI 801-3 The European Low Voltage Directive 72/23/EEC The Harmonised Standard EN 60335-2-35

400V 3 Phase Power Output	Load	Stainless Steel Flow Tube Incoloy 825 Elements	Stainless Steel Flow Tube Titanium Elements
18-kW	26-Amp	B100-18S	B100-18
24-kW	35-Amp	B100-24S	B100-24
30-kW	44-Amp	B100-30S	B100-30
36-kW	52-Amp	B100-36S	B100-36
45-kW	66-Amp	B100-45S	B100-45
54-kW	78-Amp	B100-54S	B100-54
60-kW	87-Amp	B100-60S	B100-60
72-kW	104-Amp	B100-72S	B100-72

230V 3 Phase Power Output	Load	Stainless Steel Flow Tube Incoloy 825 Elements	Stainless Steel Flow Tube Titanium Elements
18-kW	46-Amp	B100-18S-D	B100-18-D
24-kW	61-Amp	B100-24S-D	B100-24-D
30-kW	76-Amp	B100-30S-D	B100-30-D
36-kW	91-Amp	B100-36S-D	B100-36-D
45-kW	113-Amp	B100-45S-D	B100-45-D
54-kW	136-Amp	B100-54S-D	B100-54-D

Dimensions



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