



The use of electric boilers in Dutch greenhouse horticulture is receiving a lot of attention. Electric heating is relatively new in our country and therefore installing an electric boiler raises the necessary questions, which we have now included in a document that is regularly updated.

This document is undoubtedly not complete. We assume that you, as the installing party, are much more aware of the local requirements for installing and connecting these products.

Practice shows that the room in which the boilers are installed in particular deserves extra attention, whereby, in addition to the aspects that we have already incorporated in the document, safety is a factor that should not be underestimated.

Electric boilers are industrial products, designed to be installed in a dry and well-ventilated boiler room or technical room, which can and may only be entered by qualified persons who can be considered capable of properly estimating the safety aspects in a technical room.

The installation of electric boilers in the Netherlands must be carried out in accordance with the applicable regulations of the Dutch Standardization Institute (NEN), including those laid down in the standard sheets NEN 1010 and 3028.

## **Frequently Asked Questions:**

### **Q: Is there an instruction manual available?**

A: Yes; see [Operating instructions SB 180 – 1200 kW](#)

### **Q: Is there a neutral connection required?**

A: No, not for the 400V connection. When connecting the boiler, you don't need the zero conductor, so it's best to use three-core cables. There is no place/clamps for connecting a zero conductor.

### **Q: Is a control voltage required?**

A: Yes, for the temperature controller and boiler controls you need a separate external single phase 230 VAC / 50 Hz (1/P/N AC230V) supply.

### **Q: Can we tap into the high-power supply for the control voltage?**

A: No, when you are performing maintenance on the boiler, you need to disconnect from the high-power supply. If you tap the control voltage into the busbars / high power, you will lose the control voltage, which you need for servicing as well.

### **Q: Can we use single core cables as well?**

A: Yes, that is possible. But if you intend to pass multiple single core cables through one cable gland, please inform us and we will supply a better suitable cable gland plate (SS or Lexan) to avoid induction noise.

### **Q: Are there tightening torques?**

A: Yes, the right tightening torques for the cables can be found in the manual; see [Operating instructions SB 180 – 1200 kW](#).

### **Q: Is the connection box always on the right-hand side?**

A: SB boilers are delivered with a connection box (or boxes  $\geq 375$  kW) for connecting the power cables. The connection box can be installed on the right- or left-hand side with cable entry from the top or from the bottom. As standard the boiler is prepared for right side connection. If you wish to install the connection box on the left side, please inform us when ordering.

For more information see manual: [Operating instructions SB 180 – 1200 kW](#).



**Q: How much free space around the boiler is required?**

A: The required space around the boiler depends on its capacity and is described in the [Operating instructions SB 180 – 1200 kW](#).

**Q: Which protection class does the boiler have?**

A: The boiler's protection class is IP21.

**Q: What water side safeties must be installed?**

A: The manufacturer recommends installing 2 safety valves, as close as possible to the boiler and without shut-off valves between the overflows and the boiler. In addition, we recommend installing an extra minimum & maximum pressure safety device (pressure switches) and a low water safety device (2x 3/4" side connection) on the piping. An additional socket is fitted to the flange connection of the supply line for connecting an expansion vessel.

**Q: How is the temperature controlled?**

A: The boilers are equipped with an electronic temperature controller (PID). The supply temperature is adjustable between 5 – 95°C and the boiler controls are designed to keep a constant water temperature. The boiler is factory set to a flow temperature of 80°C and equipped with a built-in maximum temperature safety (110°C).

**Q: How is the power switched up and down?**

A: The boiler power is switched up in 7, 15 or 30 steps, depending on its capacity. The switch-up time per stage is adjustable between 1 and 250 seconds. By default, the switch-up time is set to 40 seconds, with 4 to 8 relays controlling the circuit breakers. When the system will switch up or down depends on the function of the boiler or how its temperature is controlled: for example, based on the outside temperature, available electrical energy, in conjunction with other boilers/CHPs, etc.

The switch-down time per stage is adjustable between 1 and 20 seconds and is set to 5 seconds by default.

⇒ **Short switching up and down times will contribute to faster wear & aging of the elements.**