ELECTRICITY

Electric boilers

Industry & Real estate

VÄRMEBARONEN

The future is electric

Together with Värmebaronen, you will become an attractive and profitable key player in the energy transition thanks to our high-quality products.

With 50 years of experience from markets and partners around the world, we supply innovative and proactive solutions.

We view ourselves as part of the transition to the energy systems of the future. You will find a broad selection of solutions in our range, enabling you to create a sustainable system with confidence.

Electric heating opportunities

Moving from fossil fuels to electricity is crucial when it comes to reducing carbon emissions. Electricity from renewable sources reduces our impact on the environment and promotes sustainable energy. By electrifying more sectors, we can create a green, more sustainable future.

Industries

Electrical heating of industrial processes entails replacing fossil fuels with electricity to generate the necessary heat needed in manufacturing processes. By using electricity from renewable sources, industry can reduce carbon dioxide emissions and promote sustainable production. This method is often more energy efficient and provides better control, resulting in both economic and environmental benefits.

Transport

Many ports around the world now prohibit fossil-powered engines from generating heat at the quayside. This heating can now be replaced by electric heat, both in dock and out at sea. Just as electric cars contribute to reduced carbon emissions and improved air quality, electric heating can create a more sustainable environment.

Power grid

Power balancing for the power grid is crucial when it comes to stability, especially with an increased share of renewable energy. Electric boilers can function as monitored energy users. This helps to maximise the use of renewable sources, reduce the need for fossil-based backup power and lower electricity costs, making power grids more efficient and sustainable.

Real estate

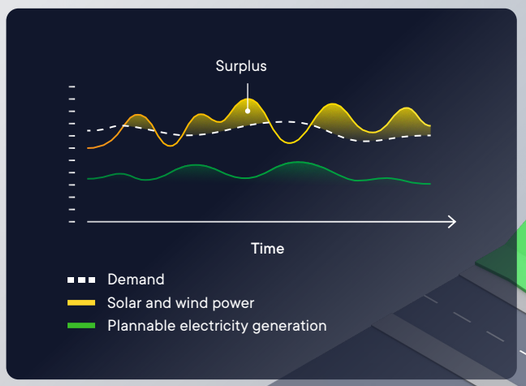
In order to achieve cost-effective investments for the heating of properties, the combination of a heat pump and an electric boiler is very efficient. Compared to existing fossil heating methods, this combination reduces emissions and leads to a stronger environmental profile. This produces future-proof buildings that meet modern sustainability and efficiency requirements.

More efficient industrial processes

For processes that require direct or indirect heat, our electric boilers offer high, precise temperatures at a low investment cost. They are easy to install, have low maintenance costs and can be placed directly adjacent to the process.

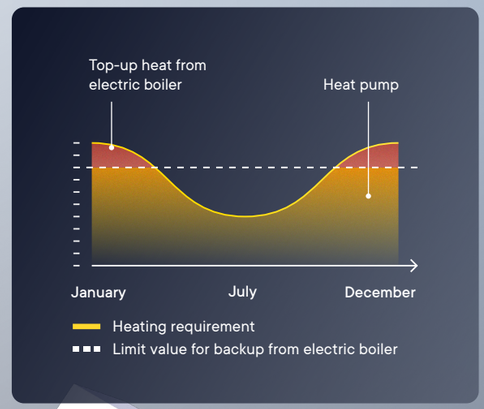
Grid balancing

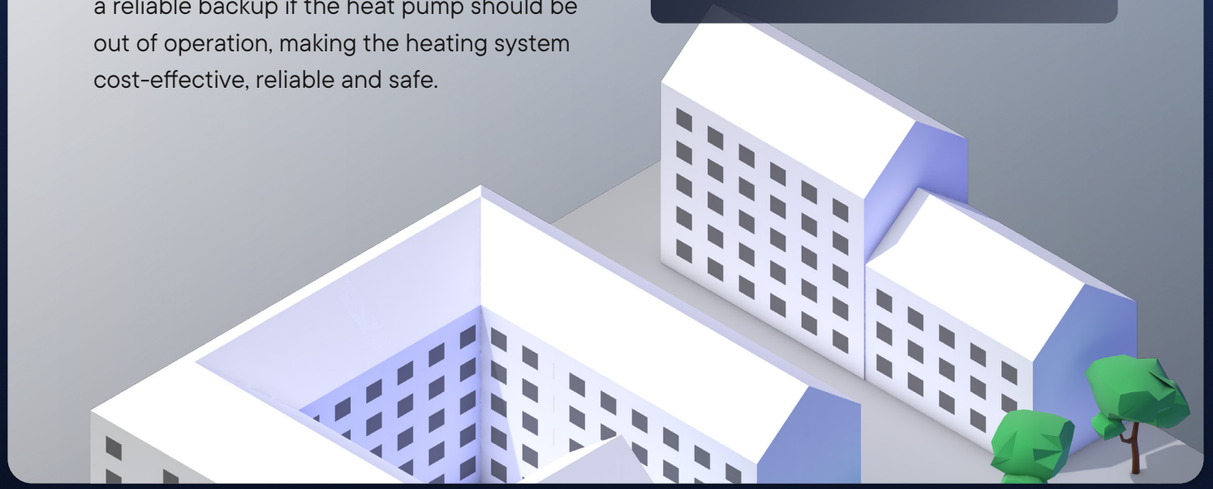
Electricity generation from renewable energy sources such as wind and solar energy is dependent on the weather and difficult to predict, leading to irregular production levels and large surpluses that disrupt the frequency of the electricity grid. This surplus electricity can be effectively balanced by electric boilers that produce heat. This heat can be stored, used directly in district heating systems for heating buildings or be used in industrial processes. This method is known as power-to-heat and is usually initiated by electricity producers.



Heating of properties

The combination of a heat pump and an electric boiler is a smart strategy for efficient heating of larger properties. When the electric boiler supports and provides top-up heating at lower outdoor temperatures, a smaller heat pump is required, which reduces the overall investment cost and extends the service life of the system. The electric boiler also acts as a reliable backup if the heat pump should be out of operation, making the heating system cost-effective, reliable and safe.



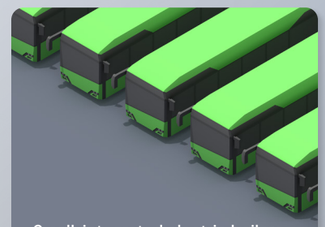


Applications in the transport sector

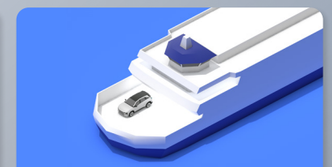
We offer heating solutions for most transport segments. The electric boilers can be adapted for a range of conditions, such as confined spaces, different voltage levels and high temperatures.

The Swedish Armed Forces' five VISBY-type corvettes are fitted with stainless, modified EP 42s that can cope with 6G.

Snow and ice on trains are removed with the aid of a de-icing system.



Small, integrated electric boilers heat the buses prior to departure.



The Öresundlinjen's electric ferry between Helsingborg and Helsingör is heated by our electric boilers while on the move.

EP G2

The EP G2 is our latest generation of electric boilers. It meets current demands without compromising on our cornerstones, such as high levels of safety and efficiency, to produce a modern heating system. With a ground-breaking and future-proof series of electric boilers that are equipped with rapid external communication and extensive logging options, we are helping our customers at every stage.

The EP G2 series offers outputs ranging from 31–1500 kW, and boilers can be connected together if higher output is required. The electric boilers have 7, 15 or 30 power stages that are activated in the event of a temperature shortfall, and they have the possibility to be limited to one power stage. Smart temperature control extends the service life of the contactors. From a safety aspect the boilers can handle zero flow.

High safety levels have always been a priority in the development of our products. The built-in safety switch, along with a safety kit (optional), provides complete protection. In addition to these functions, a level guard and element monitoring are included as standard. The EP G2 provides options for external output control. There is no need for an external energy meter, as the EP G2 measures and logs the actual energy consumption in real time.

Support

Smart control
New control board with extended logging options and an improved communication interface, such as Modbus/BACnet.

Monitoring
Several sensors measure and log that the values remain within acceptable levels, ensuring a long service life for component parts.

Installation

Pipe connections
All pipe connections are threaded or flanged. This results in cheaper valves and fewer pipe welds.

Detachable roof
Facilitates connection of power supply cables *

Safety

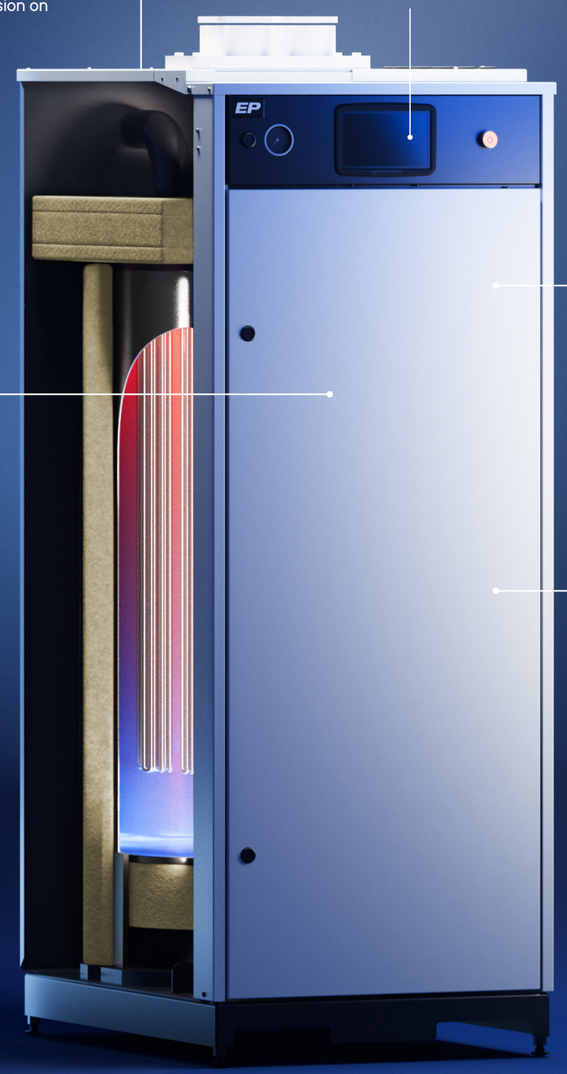
Level guard
The built-in level guard immediately produces an alarm if the boiler is not completely full of water. This eliminates the risk of boiling dry.

Safety switch
All incoming power is cut in the event of an incorrect temperature or system pressure, with the result that the electric boiler cannot produce heat.

*Applies to models from 150 kW

NEW
Element monitoring
The built-in monitoring measures imbalance between the phases and warns of possible corrosion on the immersion heaters.

NEW
Touch display
Our display clearly presents information for ease of installation and use, as well as contributing to simplified support management.



IMPROVED
All-pole breaking
The safety switch prevents the system from reaching hazardous temperature or pressure levels, as it will cut the power in the event of an alarm.

NEW
Energy measurement
The electric boiler measures and logs your energy consumption as standard.

NEW
Smart communication
An online connected EP G2 provides the potential for real-time screen sharing that facilitates support, instant information exchange in the event of alarms, as well as notifications regarding software updates etc.

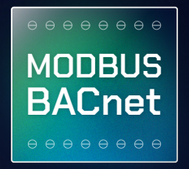
Options

For our standard model, we have developed a range of options in order to offer solutions based on various needs. These options help to optimise performance, increase user-friendliness and reduce the cost of installing your system. We also have the possibility to tailor customised solutions.

Direct Power Control (DPC)
DPC is custom software that enables immediate changes to output, known as support services, in the event of frequency deviations in the power grid. These are critical for the stability of the grid and reduce the risk of power outages. The DPC can also be used in processes that require rapid regulation.

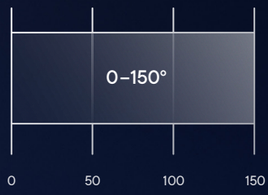
Solid State Relay (SSR)
An SSR-equipped electric boiler can pulse the power stages on and off at extremely frequent intervals, for example in systems that require high temperature accuracy. As with DPC, SSR models can be used for balancing the power grid.

Custom
We also manufacture customised electric boilers in accordance with our customers' wishes. This might entail a series of electric boilers as part of complete system deliveries, for example, or a single boiler for specific projects. Learn more about our tailored solutions at **varmebaronen.com**

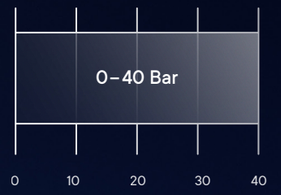


Modbus/BACnet
With digital control, it is possible to obtain information from the boiler, such as temperature, pressure, alarms, etc. The boiler can be controlled digitally via Modbus/BACnet or via a data subcentre. The boilers handle the most common Modbus/BACnet protocols, as well as TCP-IP.

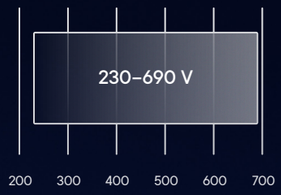
Safety kit
Factory-fitted and internally fully connected safety equipment ensures an extremely high level of safety in respect of incorrect temperatures, system pressures and low water levels. In addition, factory-fitting eliminates the need to install steam-collecting vessels, level sensors, twin pumps and flow guards, thereby reducing labour, material and planning costs.



Temperature
In the standard design, the control range is 20–95°C. As an option, this can be extended to 105°C without affecting the pressure rating. For systems with higher demands as regards media temperature, we manufacture HT (High Temperature) electric boilers with a control range of up to 150°C.



Pressure
Our electric boilers are approved for 6 bar. If higher pressures are required, the boilers can be supplemented with a heat exchanger, enabling them to handle a system pressure of up to 40 bar.



Voltage
We manufacture electric boilers for a supply voltage of 400 V as standard. If necessary, however, they can be adapted for system voltages of between 230 and 690 V.

EP G2

Värmebaronen offers the most extensive range of products for waterborne electric heating on the market, with electric boilers in the power range 31–1500 kW. The high step resolution ensures a more even temperature and reduced energy consumption.

Technical facts can be found on pages 16–20.

EP 31–63 G2

EP 70–119 G2

EP 150–350 G2

EP 450–700 G2

EP 900–1500 G2

Additional heating

Does your heating system require reinforcement? Värmebaronen offers the most extensive range of additional heating in Sweden, which supplements your heating installation when it’s cold and the system is not producing enough heat.

Technical facts can be found on pages 21–22.

VB 1510–9003 F

Immersion heaters are electrical resistance elements that are used in waterborne heating systems as well as in various industrial processes. They can be used as stand-alone heat sources or as supplementary energy sources for houses, commercial premises and industries.

EK 13

The EK 13 is a cost-effective 13 kW heating cartridge that can easily be installed as a supplement to an existing heating system. Fully equipped with an all-pole main switch, the EK 13 offers a simple and flexible solution to provide heating as an individual heat source, as well as backup to heat pumps, for example.

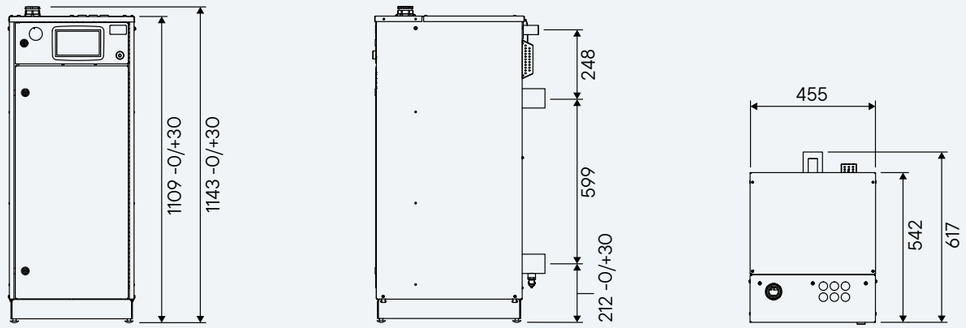
EK 15E

The EK 15E is a practical and compact heating unit with 7 power stages, and is well suited as an supplementary heater for heat pumps, for example. The output of the EK 15E can easily be controlled via an external control signal, and it also works excellently as an individual heat source.

EP 26–42E

With a power range of 26-42 kW, the EP E series offers high performance in relation to its compact design. The electric boilers regulate their output in 7 stages, ensuring economic operation and an even temperature in the heating system. The output of the EP 26–42E can easily be controlled via an external control signal, and it also works excellently as an individual heat source.

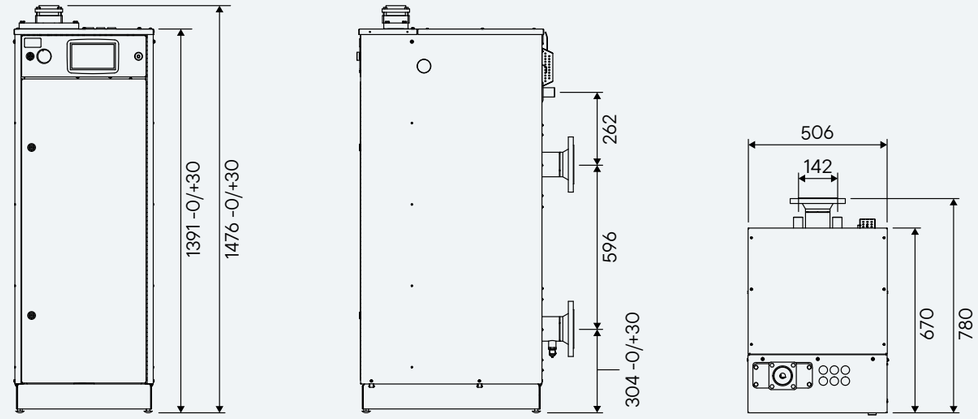
EP 31 – 63 G2



Model	EP 31 G2	EP 42 G2	EP 52 G2	EP 63 G2
Article no	5800	5802	5804	5806
Power	31,5 kW	42 kW	52,5 kW	63 kW
Power stage	7			
Power/stage	4,5 kW	6 kW	7.5 kW	9 kW
Current	45 A	61 A	76 A	91 A
Voltage *	400 V 3~ / external control 230 V ~			
Temperature	20–95° (105°, 150° **)			
Cable flange	Screwed cable joint Ø 47 mm			
Cable connection	35–95 Cu/Al			
Pipe connection, flow/return	R 50 internal			
Safety pipe	R 25 external			
Max. operating pressure	0,6 MPa (6 Bar)			
Water volume	31 liter			
Weight, empty	85 kg			
Minimum ceiling height ***	1720 mm			

* Also available in a 690 V version on selected models.
** Temperature range up to 105 °C and 150 °C is available on selected models.
*** Ceiling height may not be less than this measurement to allow any immersion heater replacement to take place.

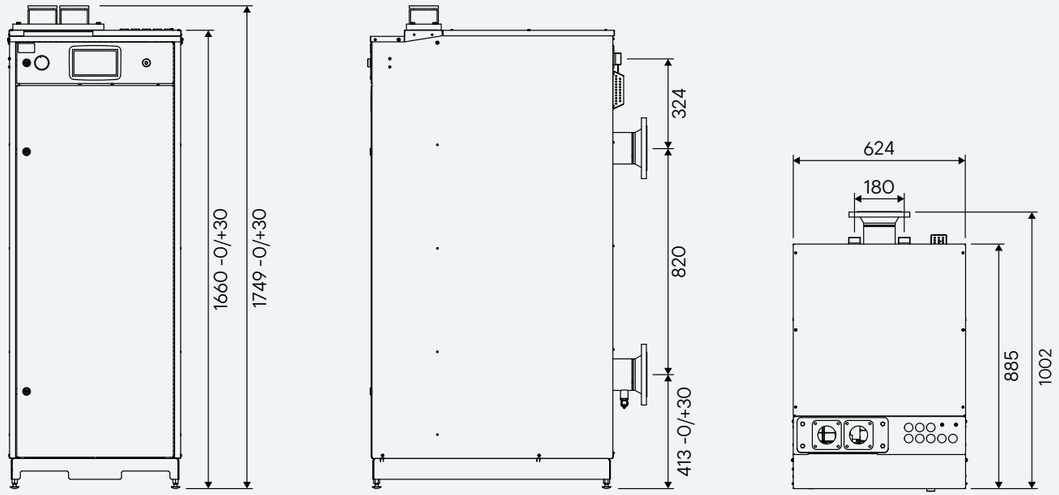
EP 70 – 119 G2



Model	EP 70 G2	EP 84 G2	EP 90 G2	EP 99 G2	EP 119 G2
Article no	5808	5810	5818	5820	5814
Power	70 kW	84 kW	90 kW	99 kW	119 kW
Power stage	7	7	15	15	7
Power/stage	10 kW	12 kW	6 kW	6,6 kW	17 kW
Current	101 A	121 A	130 A	143 A	172 A
Voltage *	400 V 3~ / external control 230 V ~				
Temperature	20–95° (105°, 150° **)				
Cable flange	FL 21 max Ø 60 mm				
Cable connection	35–95 Cu/Al	120–240 Cu/Al			
Pipe connection, flow/return	DN 80 PN 16				
Safety pipe	2 × R25 external				
Max. operating pressure	0,6 MPa (6 Bar)				
Water volume	60 liter				
Weight, empty	140 kg		145 kg		
Minimum ceiling height ***	1825 mm				

* Also available in a 690 V version on selected models.
** Temperature range up to 105 °C and 150 °C is available on selected models.
*** Ceiling height may not be less than this measurement to allow any immersion heater replacement to take place.

EP 150 – 350 G2

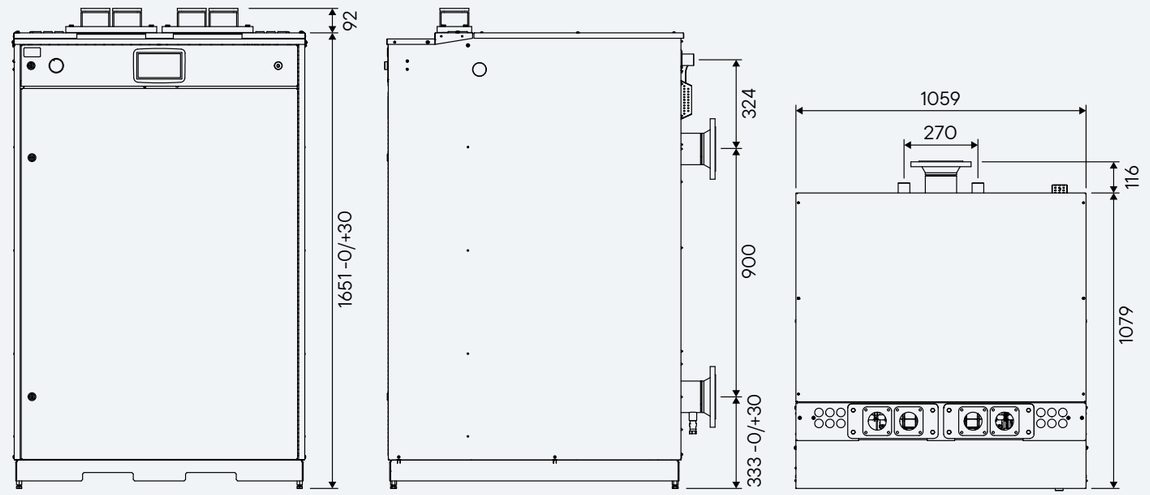


Model	EP 150 G2	EP 225 G2	EP 300 G2	EP 350 G2
Article no	5826	5830	5836	5838
Power	150 kW	225 kW	300 kW	350 kW
Power stage	15			
Power/stage	10 kW	15 kW	20 kW	23,3 kW
Current	217 A	325 A	433 A	504 A
Voltage *	400 V 3~ / external control 230 V ~			
Temperature	20–95° (105°, 150°**)			
Cable flange	FL 33 2 × Ø 60 mm			
Cable connection	120–240 Cu/Al	2 × 70–240 Cu/Al		
Pipe connection, flow/return	DN 100 PN 16			
Safety pipe	2 × R32 external			
Max. operating pressure	0,6 MPa (6 Bar)			
Water volume	180 liter			
Weight, empty	240 kg	260 kg	275 kg	280 kg
Minimum ceiling height ***	1825 mm			

* Also available in a 690 V version on selected models.
** Temperature range up to 105 °C and 150 °C is available on selected models.
*** Ceiling height may not be less than this measurement to allow any immersion heater replacement to take place.

Subject to modifications.

EP 450 – 700 G2

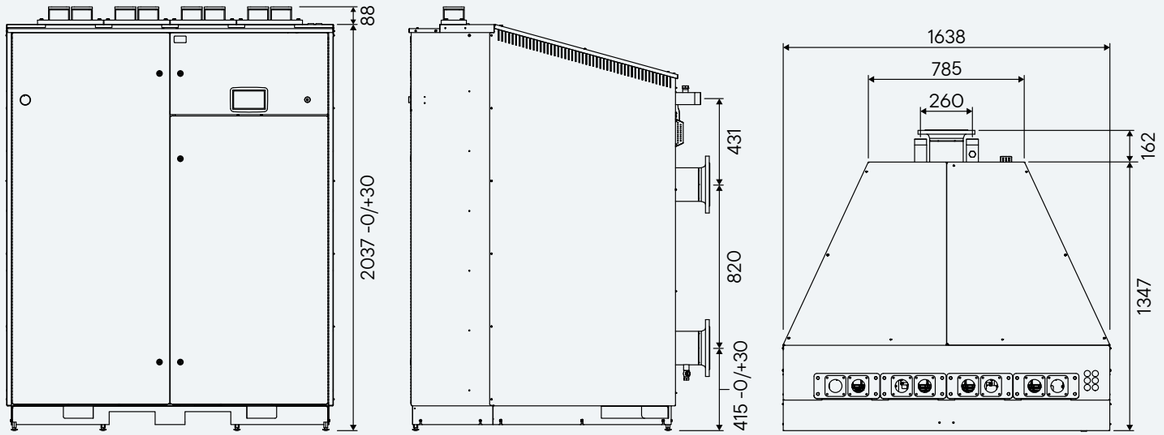


Model	EP 450 G2	EP 510 G2	EP 600 G2	EP 700 G2
Article no	5840	5842	5846	5848
Power	450 kW	510 kW	600 kW	700 kW
Power stage	30			
Power/stage	15 kW	17 kW	20 kW	23,3 kW
Current	648 A	735 A	865 A	1009 A
Voltage *	400 V 3~ / external control 230 V ~			
Temperature	20–95° (105°, 150°**)			
Cable flange	2 × FL 33 2 × Ø 60 mm			
Cable connection	4 × 70–240 mm²			
Pipe connection, flow/return	DN 100 PN 16			
Safety pipe	2 × R32 external			
Max. operating pressure	0,6 MPa (6 Bar)			
Water volume	315 liter			
Weight, empty	470 kg	470 kg	485 kg	485 kg
Minimum ceiling height ***	2430 mm			

* Also available in a 690 V version on selected models.
** Temperature range up to 105 °C and 150 °C is available on selected models.
*** Ceiling height may not be less than this measurement to allow any immersion heater replacement to take place.

Subject to modifications.

EP 900 – 1500 G2

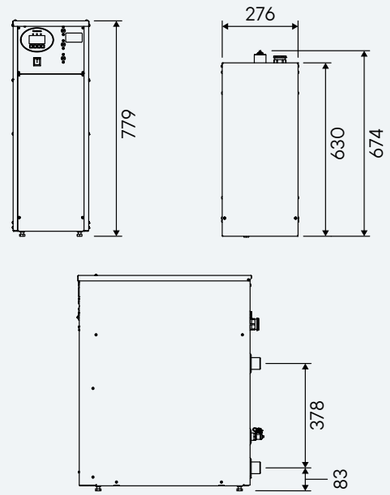


Model	EP 900 G2	EP 1080 G2	EP 1200 G2	EP 1400 G2	EP 1500 G2
Article no	5850	5852	5854	5856	5860
Power	900 kW	1080 kW	1200 kW	1400 kW	1500 kW
Power stage	30				
Power/stage	30 kW	36 kW	40 kW	46,6 kW	50 kW
Current	1299 A	1559 A	1732 A	2021 A	1255 A
Voltage	400 V 3~ * / external control 230 V ~				690 V 3~ **
Temperature	20–95° (105°, 150° ***)				
Cable flange	4 × FL 33,2 × Ø 60 mm				
Cable connection	8 × 95–240 mm²				
Pipe connection, flow/return	DN150 PN16				
Safety pipe	2 × R50 external				
Max. operating pressure	0,6 MPa (6 Bar)				
Water volume	610 liter				
Weight, empty	840 kg	880 kg	900 kg	920 kg	930kg
Minimum ceiling height ****	2 370 mm				

* Also available in a 690 V version on selected models.
** External control 230 V ~.
*** Temperature range up to 105 °C and 150 °C is available on selected models.
**** Ceiling height may not be less than this measurement to allow any immersion heater replacement to take place.

Subject to modifications.

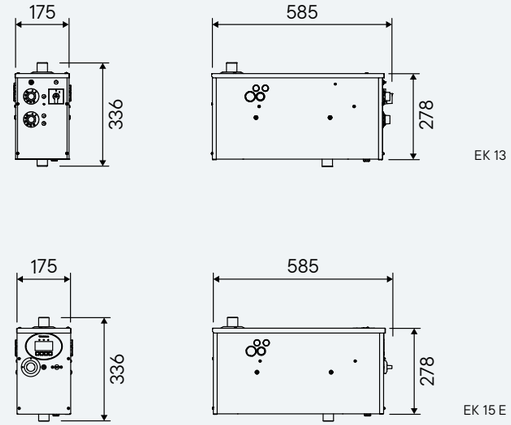
EP 26 – 42 E



Model	EP 26 E	EP 42 E
Article no	1410	1412
Power	26,25 kW	42 kW
Power stage	7	7
Power/stage	3,75 kW	6 kW
Current	37,9 A	61 A
Voltage	400 V 3N~	
Cable flange	Screwed cable joint Ø 37 mm	
Cable connection	16 mm²	25 mm²
Pipe connections	R 32 external	
Max. operating pressure	4 bar *	
Water volume	17 liter	
Weight, empty	42 kg	
Height x width x depth	779 x 276 x 630 mm + pipe connections	

* Other pressure classes on request.

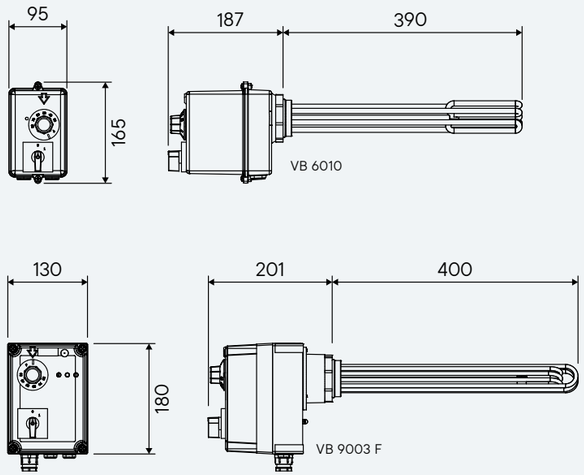
EK 13, EK 15 E



Model	EK 13	EK 15 E
Article no	1210	1212
Power	13 kW	15 kW
Power stage	3	7
Power/stage	6+4+3 kW	2,1 kW
Current	18,8 A	21,2 A
Voltage	400 V 3N~	
Main switch	Yes	
Time delay	Yes	
Load monitor	Accessory	Yes
Max. operating pressure	3 bar	
Water volume	4 liter	
Weight, empty	13 kg	
Height x width x depth	278 × 175 × 585 mm + pipe connections	

Subject to modifications.

Immersion heaters



Model	1510	2210	3010	4510	6010	6010 L	6002	9002	6003 F	9003 F	9003 FL
Article no	1001	1002	1003	1004	1005	1008	1020	1021	1032	1034	1036
Power	1,5 kW	2,25 kW	3 kW	4,5 kW	6 kW	6 kW	6 kW	9 kW	6 kW	9 kW	9 kW
Power stage	1						2				
Power/stage	1,5 kW	2,25 kW	3 kW	4,5 kW	6 kW	6 kW	3 kW	4,5 kW	3 kW	4,5 kW	4,5 kW
Voltage	400V 3~								400V 3N~		
Current maximum power	2,2 A	3,25 A	4,3 A	6,5 A	8,7 A			13 A	8,7 A	13 A	
Temp. Area	30 – 85 °										
Main switch	Yes										
Enclosure class	IP X1										
Weight	1,9 kg	1,9 kg	1,8 kg	2 kg	2,1 kg	2,6 kg	3,2 kg				
Length*	285 mm	285 mm	285 mm	385 mm	400 mm	400 mm	345 mm	400 mm	345 mm	400 mm	470 mm

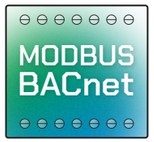
* The insertion length of the immersion heater.

Accessories

Fan kit

Lowers the temperature in the cabinet on the electric boiler when the ambient temperature is too high.

Suitable for: EP G2 series



Modbus/BACnet

Digital control with many smart features. Presents information from the boiler regarding temperature, pressure and alarms.

Suitable for: EP G2 series

Room unit

Room thermostat with alarm.

Suitable for: EK 15 E, EP 26 E and EP 42 E

Outdoor sensor

Required in case of UTK function (climate control depending on outdoor temperature).

Suitable for: EP G2 series, EK 15 E, EP 26 E and EP 42 E.

BBH83-500

Sleeve tool 500 mm. Suitable for installation of immersion heaters with 2" thread connection.

Secondary control

External temperature sensor. Enables the measurement of temperature from a location other than where the electric boiler is located.

Suitable for: EP G2 series

Safety kit

Factory-fitted and fully connected safety equipment.

Suitable for: EP G2 series

EPVP

Dialogue box for converting a three-bit binary control signal from the heat pump to a 0-10 V signal that controls the electric boiler's output control.

Suitable for: EP G2 series*

* EPVP is integrated as standard in EP 31 G2 – EP 119 G2.


Swedish-made heating solutions since 1975
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