

Electric heating for industry and property



VÄRMEBARONEN ELECTRIC BOILERS

FOR INDUSTRY AND PROPERTY





EP boilers can be connected together.

This makes an extremely reliable heating package that also produces heat during repair or service.



EK 13, EK 15 E, EP 26/42 E, IMMERSION HEATERS 1.5–9 kW

Wide range

The widest range of electric heating products on the market. Everything from a 1.5 kW immersion heater to the largest electric boiler with an output of 1,500 kW.

Not so long ago, electric heating was often installed as the primary heat source in houses and other properties. It is now often used as an additional heating source parallel to one or more heat pumps, for example. The cost of installing an electric boiler is low and the job is fast and easy.

When it is cold outside and the heat pump does not manage to maintain the heat, the topup heat from the electric boiler is invaluable.

Immersion heaters

Economical and reliable heaters are suitable for most heating systems. Customised solutions are also available for industry, for example.

Electric cartridges

Output 13-15 kW. Easy to connect to the heating system.

Electric boilers, EP 26 E and EP 42 E

Output 26–42 kW. Effortless backup system for heat pumps.

Electric boilers, EP 31-1500 kW

For rental properties, industrial or process use or simply as an additional or backup heat source for a heat pump system.

Combination possibility

EP electric boilers can be connected in parallel in principle without limits.

Order products

Värmebaronen manufactures custom-made boilers from different materials for different temperature and voltage ranges (230–690 V). Standard operating temperature 95 °C, 150 °C on request.

Anti-freeze

All Värmebaronen electric boilers work well with a glycol-water solution.



Additional heating, industry and processes



TELESCOPE, CHILE CUSTOMER: ESO

The world's largest telescope, VLT, was put into use in Chile in March 1999. The customer chose Värmebaronen's EP electric boilers for the telescope's heating solution.



WAVE POOL CUSTOMER: SKARA SOMMARLAND

The wave pool, Skara Sommarland. The water in the pool is heated with a titanium heat exchanger that is resistant to chlorine water. Heat is produced with two EP 255 boilers. Photo: Skara Sommarland.



ANTIFREEZING AND DEICING CUSTOMER: SWEDISH NATIONAL RAILWAYS

The heated antifreeze is sprayed on the trains' bogies and other required areas to remove ice and prevent ice formation.



STAINLESS STEAL HEAT EXCHANGER CUSTOMER: VOLVO PV

A boiler and heat exchanger are used to heat engine blocks placed on a test bench. Heating simulates different operating conditions of engines.





ADDITIONAL HEATING CUSTOMER: BÄCKASKOG

The main building is heated with three 40 kW NIBE Fighter 1320 heat pumps. The Värmebaronen EP 52 electric boiler is used when the heat demand is high.



GRAIN DRYING CUSTOMER: KLF

Drying plant. Kristianstadsortens Lagerhusförening, KLF, uses six EP 750 kW, 690 V boilers to dry grain during the harvesting season.



ADDITIONAL HEATING CUSTOMER: FORMPLAST

Formplast in Broby uses four NIBE Fighter 1330 ground source heat pumps, along with a Värmebaronen EP 112 electric boiler.



ADDITIONAL HEATING CUSTOMER: EG-BYGG

Rental property. 12 flats. Heating is provided by three NIBE Fighter 2010 air/water heat pumps and a Värmebaronen EP 42.

Save more than SEK 20,000 by making the right choice



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Factory-installed safety equipment, fully connected internally



We have unique expertise in water circulating electric heating.

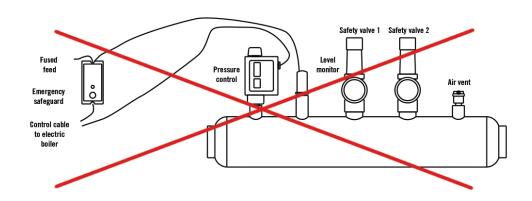
Approved for installation without a condensate drain pan

THE VÄRMEBARONEN electric boilers can be delivered with the factory-fitted safety devices, in which case a condensate drain pan with accessories is not needed.

The boilers can be installed without a condensate drain pan, level sensor, double pumps or flow guard, and there is no risk of breakage due to the flow stopping. The boilers can be supplied with the factory-fitted safety devices. The boilers meet the requirements of the standard EN 12828 and the standards AFS 2002:1, 2016:1 concerning the periodic inspection of the boiler plant (3rd party review).

Due to factory-installed safety devices and simple installation, installation and project costs are kept very low.

In addition, there is no need to carry out a separate inspection for safety devices installed at the factory, the devices already meet the requirements when leaving the factory.





Advantages of EP boilers

THE BOILERS OF SERIES EP are suitable for water-circulating heating systems and industrial processes. Output range: 31–1,500 kW. Combination possibility.

The boiler's capacity is divided into 7, 15 or 30 power stages, which are switched on one at a time when the temperature drops below the target level. The flow temperature ajustment range is between 20 and 95°C. The maximum temperature for high temperature boilers is 150 °C. The boiler is supplied with a thermostat to maintain the flow temperature at the desired level. Flow temperature adjustment based on the outside temperature is available as an option.

Smart temperature control extends the lifespan of the boiler's contactors by alternating the switching of the power stages.

EP boilers are safe.

The boiler will not be damaged even if the flow is interrupted, so there is no need to install a flow quard or double pumps in the boiler.

Boiler capacity can always be limited down to one power step. A load guard* is integrated to protect the main fuse. The boilers have connections for external capacity control and blocking (current or voltage signal) as well as outputs for indicating the boiler capacity and temperature in use.

Alarms are indicated on the front panel. The boilers also have a connection for an external buzzer alarm.

When used with, for example, a plate heat exchanger, the boiler can be controlled directly based on, for example, the temperature of the secondary circuit.

If more power is required, several boilers can be controlled in series. Series control is provided as an option.

* Not including to the standard delivery of models EP 900–1500. Ask Värmebaronen for more information.

Smart solutions



1. Safety equipment

The boilers can be supplied with factory-fitted safety equipment for installation without a dry-boiling preventer, condensate drain pan, level sensor, etc. accessory.



3. Flanges or threads

All pipe connections are either threaded or flanged. The valves are inexpensive, and there is almost no need for pipe welding. Disconnecting the boiler connections is easy. Small circulation pumps can be used in coarse threaded connections.



5. Control panel

Boiler basic protection. The boiler has a clear control panel, where you can directly see all the necessary information and all the setting options.



7. Divisible flange

Installation is easy: boiler front plate and control panel can be opened, and there is a divisible flange for the power cables. The power connection is far away from other components.



2. All-pole switch

The all-pole main switch cuts all incoming power if a fault is detected by the boiler's controller. The main switch is an essential part of the operational safety of the boiler.



4. Level sensor

The built-in level sensor warns immediately if the boiler's surface level drops. This eliminates the risk of the boiler boiling dry, which can cause damage to the boiler and other consequential faults.



6. Residual current device

An earth fault meter monitors the immersion heaters so that there is an early indication of any fault. This avoids expensive emergency replacements and any consequential faults.



8. Smart control

The versatile boiler controller also has outputs for indicating temperature, pressure and alarms, for example.



31–1,500 kW _{230–690 v}

ELECTRIC BOILERS
for heating systems and
industrial processes. The capacity range of EP series boilers is
31–1,500 kW.

7, 15 or 30 power stages

The boilers' capacity is divided into 7, 15 or 30 power stages. The temperature control switches the power stages on and off individually based on the heat demand. When the boiler is used alongside the heat pump as an additional heat source, only the necessary part of the boiler's capacity can be switched on. In industrial processes, a small number of power stages

can be an advantage, because a larger boiler capacity can be used at once. In standard deliveries, the adjustment range is 20–95 °C, and the boiler capacity can always be limited to one power stage. A high-temperature model (150 °C) is also available.

Adjustment based on outside temperature available

The boilers are supplied with controller to maintain a constant boiler temperature. Flow temperature adjustment based on the outside temperature is available as an option.

Aluminium and copper

The boilers are fitted with terminals that makes it possible to connect both aluminium and copper cables. Installation is quick, and aluminum extensions are not needed.

Operational safety

The boilers are equipped with a level sensor and earth fault measurement, which provides an early indication of any fault in the immersion heaters. Faults can rapidly be dealt with without unplanned stoppages.



In series or parallel

The boilers can be connected together in series. Alternatively, boilers can be connected in parallel in principle without limits. Serial control is available as an accessory. It equalizes the operating hours of the boilers.

Stainless steel immersion heaters

The standard immersion heaters are made of stainless steel. The head of the heater is brass. There are plenty of material and customization options.

External control (e.g. heat pump)

The boilers have connections for external capacity control and blocking (current or voltage signal) as well as outputs of 0–10 V for indicating the boiler capacity and temperature in use. The connection module EP VP is also available, with which the heat pump can control the boiler as a two-stage additional heat source (as a standard in models EP 31–119).

Anti-jamming of the pumps

In pump anti-jamming mode, the circulation pump (phase 1) is used for a few minutes a day when the heating is not in use.





EP 26 E, LVI (SE) 623 00 00 EP 42 E, LVI (SE) 623 00 32

EP E 26-42 kW



Compact, but high-efficiency electric boilers.

The EP E series for radiator heating, additional heating and industrial processes.

The EP E boilers are available in two capacities: 26 and 42 kW. The main features are the compact size and operational reliability. The boilers of the EP E series is used for water-circulating heating systems,

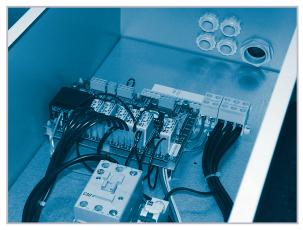
as an additional heat source for heat pumps and in various industrial processes.

The boiler capacity can be limited:

- EP 26 E, for example, to 22.5 kW, 18.75 kW or 15 kW.
- EP 42 E for example, for capacities 36 kW, 30 kW or 24 kW.

Stainless steel immersion heaters

The standard immersion heaters are made of stainless steel. The head of the heater is brass. The pressure vessel is made of sheet steel, design pressure 4 bar. The flow and return connection, the safety valve discharge pipe connection and the drain valve are on the rear of the boiler.



All electrical connections are conveniently under the same cover, so it is easy to connect the boiler to the network.



The boiler can be installed on the floor or mounted on the wall with wall brackets (accessory).



Boiler basic protection. All settings can be accessed from the control panel.



Place the boiler in place, pull the cables, lift the cover to its place and turn on the power. Installation couldn't be simpler.

Compact design

The height is only 78 cm, the width 28 cm and the depth 63 cm. Despite the handy size, there is plenty of room for electrical connections in the electronics compartment under the cover.

7 power stages

The boiler's capacity is divided into 7 power stages, which are switched on one at a time when the temperature drops below the target level. The boiler temperature can be set between 20 and 95°C.

Load guard included

A load guard and current transformers are included in the supply (measuring range: 35–125 A).

Outdoor temperature sensor

for adjusting the supply water temperature in relation to the outside temperature. Simplifies use, protects against freezing and prevents pumps from jamming on automatic use.

External control (e.g. heat pump)

The boilers have connections for external capacity control and blocking (current or voltage signal) as well as outputs of 0–10 V for indicating the boiler capacity in use. The connection module EP VP is also available, with which the heat pump can control the boiler as a two-stage additional heat source. Accessory.

Brackets for wall mounting

Boiler can be placed on the floor or mounted on the wall with brackets (accessory).

EK 13-15 kW



Electric cartridges are mainly used alongside the heat pump as an

additional heat source.

EK 13

EK 13 has an output of 13 kW, divided into three power stages (6+4+3 kW). The boiler has its own main switch and a fused voltage output for the circulating water pump (1-phase). The power stages switch on with a delay.

EK 15 E

EK 15 E has an output of 14.7 kW, divided into seven power stages, (7x2.1 kW). The boiler has its own main switch and a load guard. The power stages switch on with a delay. The cartridge has 0-10 V control signal, which means that it is suitable as backup heat source for a heat pump.

Outdoor temperature sensor

for adjusting the supply water temperature in relation to the outside temperature. Simplifies use, protects against freezing and prevents pumps from jamming on automatic use. Accessory.

External control (e.g. heat pump)

The EK 15 E have connections for external capacity control and blocking (current or voltage signal) as well as outputs of 0–10 V for indicating the boiler capacity in use.

The connection module EP VP is also available, with which the heat pump can control the boiler as a two-stage additional heat source. Accessories for EK 15 E.

Accessories

- The connection module EP VP is also available, with which the heat pump can control the boiler as a two-stage additional heat source (EK 15 E).
- VBB 12 TX, load guard (EK13).



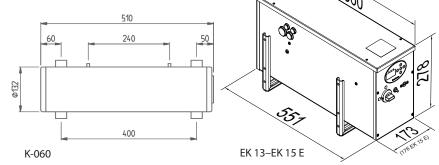
Electric boiler	LVI (SE)	Capacity (kW)	Weight (kg)	Volume (I)	Pressure (Bar)		Switch difference	Temp.	Main area (°C)	Delay switch		Outside temp. quard control
K-060	621 09 34	1.5-9***	5.7	2.6	3**							
K-060 Stainless	621 09 35	1.5-9***	5.7	2.6	10							
EK 13	621 10 08	13 (6+4+3)	12.8	4.5	3	IP X1	5°	30–85	Yes	Yes	Optional (VBB12TX)	
EK 15 E	621 10 11	14.7 (7x2.1)	12.8	4.5	3	IP X1	1 °/stage	20–95	Yes	Yes	Yes	Optional

Switching differential = the temperature difference in °C between switching the thermostat on and off

** Other pressure classes as ordered
 *** The electric cartridge K-060 requires a 1.5–9 kW immersion heater.
 Wall brackets are included with all electric cartridges.

K-060

K-060 is an insulated cartridge for immersion heaters. An immersion heater equipped with an R50 connection, up to 470 mm long, with an output between 1.5 and 9 kW can be installed in the cartridge.



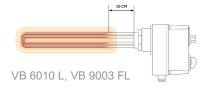
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VB 9003 F immersion heater installed in K-060

Immersion heaters VB 1510–6010 The immersion heaters are suit

The immersion heaters are suitable for locations that require a maximum heating capacity of 6 kW. The heaters can also supplement

the heating capacity of the F model immersion heaters.



For applications with a long sleeve in the heater connection.

VB 6002-9002

If you have heavily loaded main fuses and do not need more than 6 kW, VB 6002 is a good alternative. The power is divided into stages, of which only one is used most of the time.

VB 6003 F-VB 9003 F

The F models have a switching delay, after which either half the power or the full power is switched on. They can also be fitted with a BB 12 TX load guard and an UTK 2000 outside temperature control.

Customised

As standard, heaters are made of stainless steel, EN 1.4435. We are able to customise immersion heaters to suit different needs and requirements.

Accessories

- VBB 222 load guard and switching delay
- VBB 12 TX load guard
- FL 84, extension
- BBH 83, tool
- UTK 2000, outside temperature control



Immersion heater	LVI (SE)	Capacity (kW)	Length (mm)*	Enc. class	Swit. diff.**	Temp. range (°C)	Main switch	Delay #	Load guard
VB 1510	621 08 86	1.5	295	IP X1	7	30-85	Yes	Optional	Optional (VBB 222)
VB 2210	621 08 87	2.25	295	IP X1	7	30-85	Yes	Optional	Optional (VBB 222)
VB 3010	621 07 02	3	295	IP X1	7	30-85	Yes	Optional	Optional (VBB 222)
VB 4510	621 07 10	4.5	410	IP X1	7	30-85	Yes	Optional	Optional (VBB 222)
VB 6010	621 07 28	6	410	IP X1	7	30-85	Yes	Optional	Optional (VBB 222)
VB 6010 L##	621 07 27	6	490	IP X1	7	30-85	Yes	Optional	Optional (VBB 222)
VB 6002	621 07 51	6 (3+3)	410	IP X1	5	30-85	Yes	Optional	Optional (VBB 222)
VB 9002	621 08 56	9 (4.5+4.5)	415	IP X1	5	30-85	Yes		
VB 6003 F	621 07 78	6 (3+3)	410	IP X1	5	30-85	Yes	Yes	Optional (VBB 12 TX)
VB 9003 F	621 08 57	9 (4.5+4.5)	415	IP X1	5	30-85	Yes	Yes	Optional (VBB 12 TX)
VB 9003 FL##	621 07 35	9 (4.5+4.5)	480	IP X1	5	30-85	Yes	Yes	Optional (VBB 12 TX)

^{*} Cartridge installation depth ** Switching differential = temperature difference in °C between switching the thermostat on and off # Recommendation with total power over 6 kW ## With extended inactive part

EP 31-350

Technical data







EP 99 from the front

EP 99

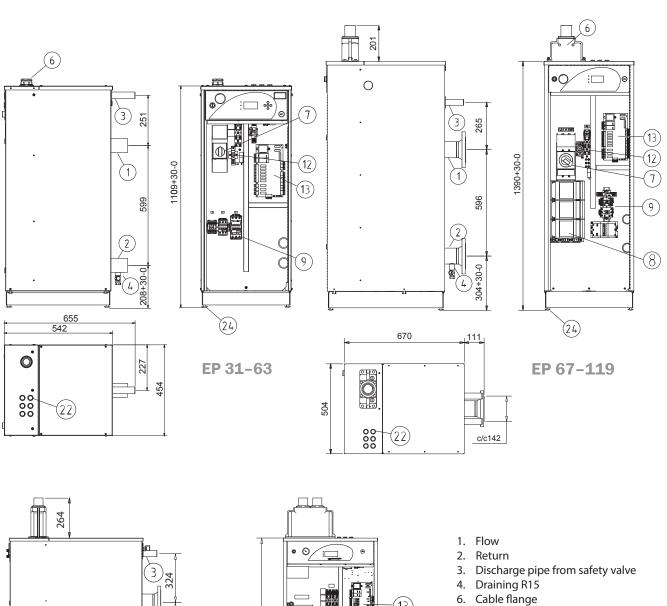
EP 31

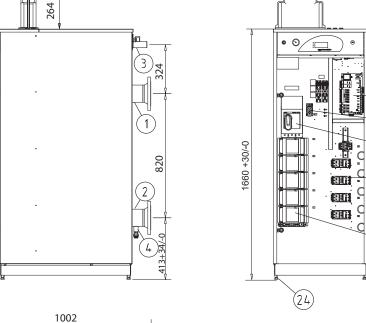
7-stage electric boiler	EP 31	EP 42	EP 52	EP 63	EP 70	EP 84	EP 98	EP 119		
LVI (SE)	6230060	6230061	6230062	6230063	6230064	6230065	6230066	6230067		
Max. capacity (kW)	32	42	53	63	70	84	98	119		
Voltage (V)		400 V 3N~ / 400 V 3~ + external control 230 V~								
The maximum capacity of the current (A)	45	61	76	91	101	121	141	172	EP 31-EP 7	
Power/stage (kW)	4.5	6	7.5	9	10	12	14	17		
Cable flange		Cable gland	l ø 34 mm		K	KF 121-60 max. ø 60 mm				
Cable size, mm²	16–95 Cu/Al 35–95 Cu/Al				70–240 Cu/Al					
Water volume / Operating pressure		31 I / 0.6 MI	Pa (6 Bar)							
Pipe connections, flow and return		R 50	int.		DN 80 PN 16					
Discharge pipe from safety valve		R25		2xR25 ext.						
Height x width x depth, mm	1,105 x	455 x 540 +	1,390 x 504 x 670 + pipe connections							
Weight empty (kg)	80	80	80	80	135	140	140	145		
Min. room height* (mm)	1720	1720	1720	1720	1825	1825	1825	1825		
Degree of protection				IP X	(1					

Degree of protection					IF	⊃ X1						
15-stage electric boilers	EP 67	EP 90	EP 99	EP 112	EP 135	EP 150	EP 180	EP 225	EP 255	EP 270	EP 300	EP 350
LVI (SE)	6230068	6230069	6230070	6230071	6230072	6230073	6230074	6230075	6230076	6230077	6230078	6230079
Max. capacity (kW)	68	90	99	113	135	150	180	225	255	270	300	350
Voltage (V)				400	V 3N~ / 40	00 V 3~ +	external c	ontrol 230	V~*			
The maximum capacity of the current (A)	97	130	143	162	195	217	260	325	368	390	433	505
Power/stage (kW)	4.5	6	6.6	7.5	9	10	12	15	17	18	20	23.3
Cable flange		KF 121	-60 max. 6	0 mm				FL 3	33 2 x Ø 60) mm		
Cable size, mm²	35–95 Cu/Al		70)–240 Cu/ <i>i</i>	Al	2 x 95–240 Cu/Al, PEN or 5-wire						
Water volume (I)		60 I / 0.6 M	Pa (6 Bar)					180 / 0.6	МРа (6 Ва	ır)		
Pipe connections, flow and return		DN 80	PN 16		DN 100 PN 16							
Discharge pipe from safety valve		2xR2	5 ext.					2xR	32 int.			
Height x width x depth, mm	1,390 x	504 x 670 -	+ pipe con	nections	1,655 x 622 x 885 + pipe connections							
Weight empty (kg)	140	140	140	140	230	230	260	260	270	270	275	275
Min. room height** (mm)	1,825	1,825	1,825	1,825	2,185	2,375	2,185	2,375	2,185	2,185	2,375	2,375
Degree of protection						IP.	X1					

^{*}Also available with different voltage (max. 690 V).

16 ** The room height must not exceed the value, because otherwise the heating cartridges cannot be changed in the event of a problem.





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EP 135-350

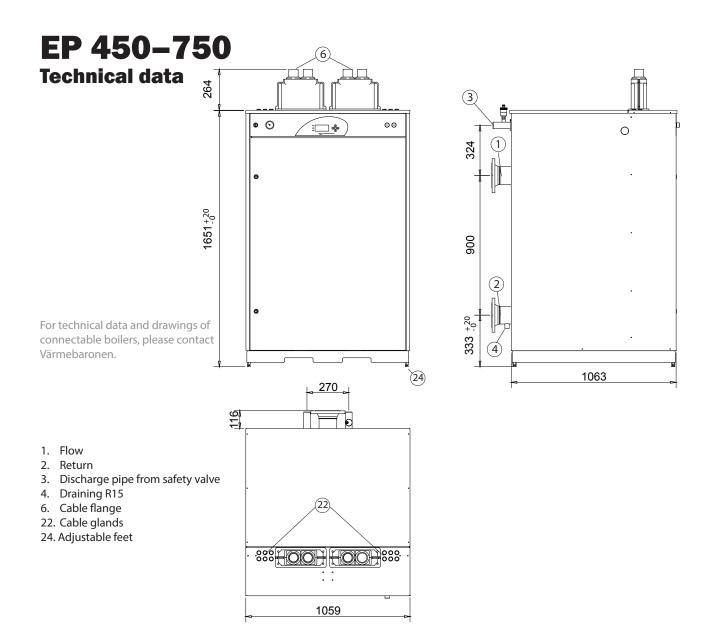
- Main switch and shunt release
- Power stage fuses
- Contactors
- 12. Control fuse
- 13. Motherboard
- 22. Cable glands
- 24. Adjustable feet

Accessories

(8)

- Safety equipment
- Outside temperature control UTK
- Series control
- Secondary circuit temp. control
- Internal cooling fan





30-stage electric boilers	EP 450	EP 510	EP 540	EP 600	EP 750			
LVI (SE)	6230056	6230057	6230058	6230059	_			
Capacity (kW)	450	510	540	600	750			
Voltage (V)		400 V 3N	~ / 400 V 3	~*	690 V 3~			
Current (A)	648	735	778	865	628			
Power/stage (kW)	15	17	18	20	25			
Cable flange	2 x FL 33 2 x Ø 60 mm							
Cable size, mm²	4 x 95–240 Cu/Al, PEN or 5-wire							
Water volume / Operating pressure		31	5 I / 0.6 MF	a (6 Bar)				
Pipe connections, flow and return		DN 100 PN 16						
Discharge pipe from safety valve	2xR32 int.							
Height x width x depth, mm	See drawing							
Weight empty (kg)	467	470	470	485	480			
Min. room height** (mm)			2,430)				
Degree of protection			IP X	1				

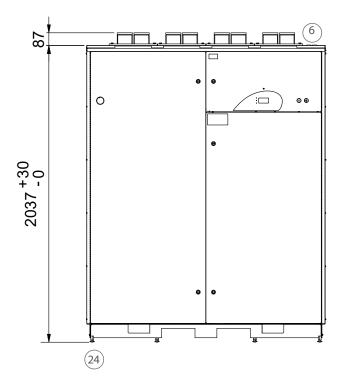
^{*} Also available with different voltage (max. 690 V).
** The room height must not exceed the value, because otherwise the heating cartridges cannot be changed in the event of a problem.

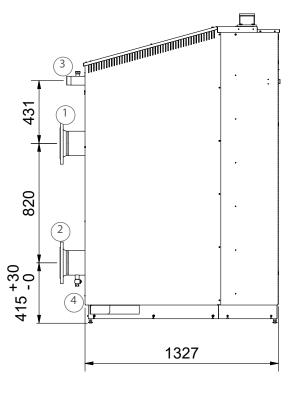


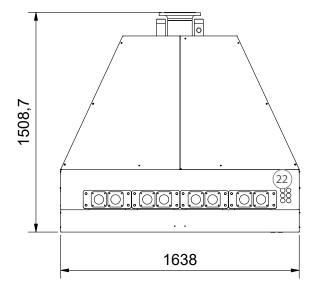
EP 900-1400 (1500 kW / 690 V)

Technical data

Туре	EP 900	EP 1080	EP 1200	EP 1400							
Product number	4630	4632	4634	4636							
LVI (SE)											
Voltage opera- tion control		400 V 3~ 230 V~									
Voltage tolerance		≤	±10		%						
Frequency		50 / 60									
Degree of protection		IP x1									
Capacity	900	1,080	1,200	1,400	kW						
Current	1,299	1,559	1,732	2,021	Α						
Fuse operation, s	8 groups, each 200	8 groups, each 250	8 groups, each 300	8 groups, each 315	Α						
contro			6		Α						
Power stages		30, can be lir	nited to 1 stage								
Power/stage	30	36	40	46.6	kW						
Current/stage	43.3	52	57.7	67.3	Α						
Cable flange		_	2 x Ø60 mm	21.12							
Cable size			240 Al/Cu								
Cable 3ize			round end sleeve)								
Volume		6	310		liters						
Design pressure		0.6									
	6										
Test pressure	0.86										
Decima tempo eneturo		8.6 110									
Design temperature					°C						
Operating temperature											
Ambient temperature			30		°C						
Connections, flow and return		DN15	50 PN16								
Safety valve pipeline		2 x F	R50 ext.								
Required flow											
recommendatior ∆t=10 °C min./max	8.6/26.9	25.8 10.3/32.3	28.7 11.5/35.9	35.9 14.4/44.9	liters/s liters/s						
Weight empty filled with water			930 540		kg kg						
Pressure drop	kPa 12 10 8 6 4 2 05 11	0 15 20 25	30 35 40	l/s 45 50							
Room height required for cartridge replacement			2 500		mm						
Manufactured according to the following standards:		PED 2014/6	8/EU article 4.3								







- 1. Flow
- 2. Return
- 3. Discharge pipe from safety valve4. Draining R15
- 6. Cable flange
- 22. Cable glands
- 24. Adjustable feet

For technical data and drawings of connectable boilers, please contact Värmebaronen.

EP 26 E, EP 42 E

EP 26 E: LVI (SE) 623 00 00 • EP 42 E: LVI (SE) 623 00 32.

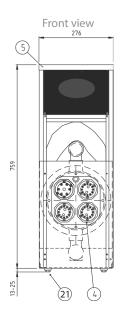
Technical data

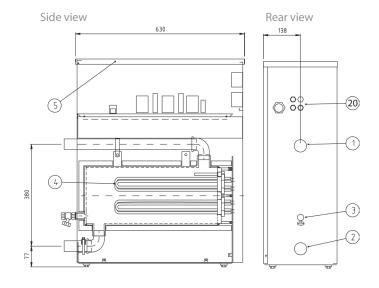
Common data

Туре	EP26E	EP 42 E		Voltage 400 3 N~	V		Degree of protection		IP X1
Capacity	26.25	42	kW	Frequency	50	Hz	Pipe connection	R32 ext.	
Current	37.9	61	Α	Cable gland	Ø37	mm	Height	775	mm
Power/stage	3.75	6	kW	Water volume	17	I	Width	280	mm
Current/stage	5.4	8.7	Α	Test pressure	5.2	bar	Depth	630	mm
Cable area	16	25*	mm²	Operating pressure	4**	bar	Weight	50	kg

^{*} When using a 5-wire cable, remove the bridge from the neutral bar ** Other pressure classes as ordered.



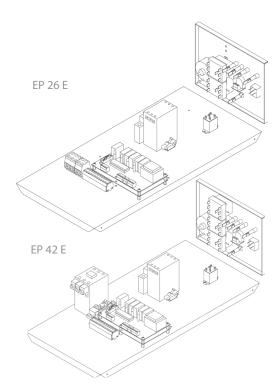




- 1. Flow line and safety valve line, R32 ext. 2. Return, R32 ext.
- 3. Drain valve R15 int.
- 4. Immersion heaters
- Openable cover of the coupling space.
- 20. Cable glands
- 21. Adjustable feet

Accessories

- EP VP, heat pump control
- Outdoor temperature sensor
- Brackets for wall mounting





VB Brochure 210527 • The manufi is not responsible for possible pri writing errors in the brochure.

