



THE COMPLETE BOILER HOUSE SOLUTION LV-Pack SERIES FROM 600 KG/H TO 8400 KG/H

Babcock-Wanson has over 50 years of experience in the design and manufacture of electric boilers.

These boilers have been designed to meet the current challenges of energy optimisation and decarbonization of our industrial customers, with local authorities and governments imposing ever stricter emissions limits on greenhouse gasses.

The LV-Pack boiler has been developed by combining the best available technologies to achieve the highest level of efficiency, reliability and flexibility with zero emissions at the production site.

ENVIRONMENTALLY FRIENDLY

The LV-Pack boiler offers many environmental and operational benefits:

- It does not consume any fossil fuel and therefore does not release any gaseous effluents into the atmosphere. From this perspective, the installation is very easy: There is no requirement for chimneys, fuel supply networks or storage tanks. In addition, no periodic monitoring of atmospheric emissions is required.
- Efficiencies of over 99% can be achieved as all incoming electrical energy is converted into thermal energy (only minor heat losses through the surfaces are to be deducted).
- Precise pressure control with multiple power stages allow the boiler to react quickly to load changes. This makes it possible to make quick starts to absorb available grid power when needed.



**RELIABLE &
SAFE DESIGN**



**ENVIRONMENTALLY
FRIENDLY**



**FLEXIBLE
SOLUTION**



**FULL RANGE OF
ANCILLARY EQUIPMENT**

WHY CHOOSE THE LV-Pack FROM BABCOCK WANSON?

- Zero emission on site (CO₂ - NO_x, - SO_x)
- >99% efficiency
- High turndown ratios
- Easy maintenance
- Robust construction for long life
- Connectivity with our **navienergy** system
- Easy proprietary mode of operation
- High availability
- Easy to install
- Reduced operating costs

LV-Pack ELECTRIC INDUSTRIAL BOILERS

REDUCED OPERATING COSTS

▪ Robust construction for increased lifespan

LV-Pack boilers are constructed from steel shells and flat bottoms held in place by tie rods that accommodate immersion heaters, offering numerous advantages in terms of performance, implementation and also for periodic maintenance operations. They are designed to allow both quick start-up and quick steam production, while protecting the immersion heaters from excessive stresses.

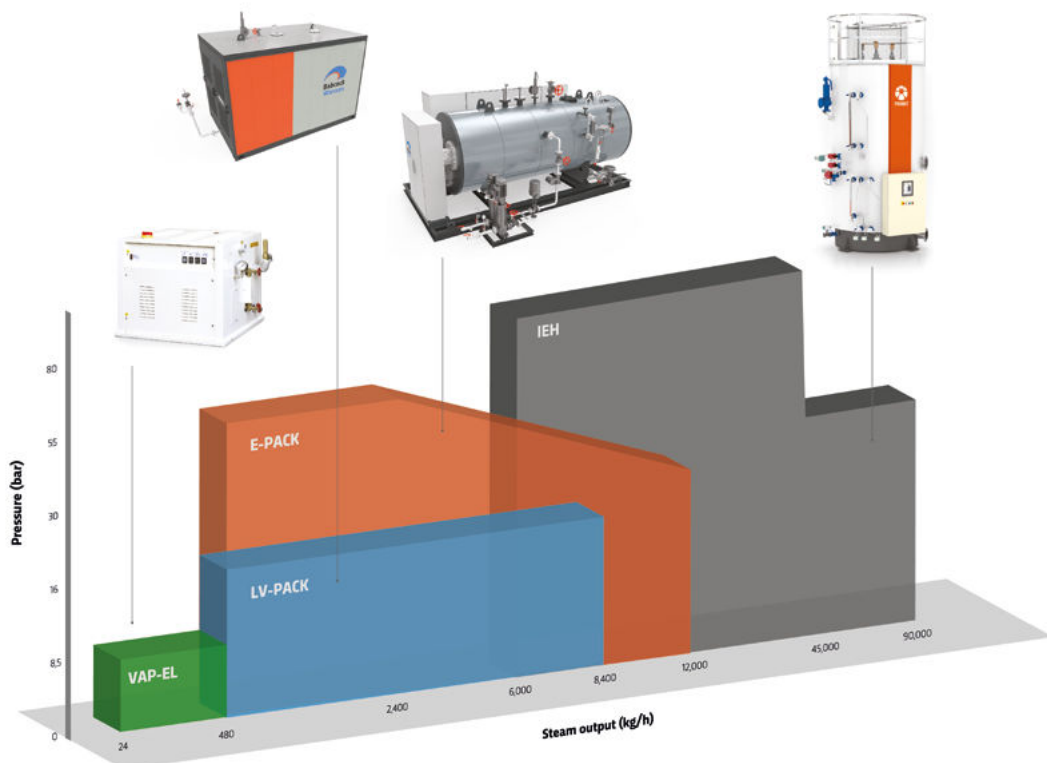


▪ Reduced operating costs

The control and instrumentation allow exclusive Babcock Wanson operating modes that adapt to the constraints of all industrial processes. The boiler is delivered with the Navinergy operating system which allows on-site and remote monitoring of operating parameters.

▪ Easy installation and commissioning

The boiler is delivered ready to operate. All that is required is to connect it to the electricity, the feed water and the steam users. Commissioning is controlled and repeatable and avoids the difficulties that can make the commissioning of a fired boiler more difficult from one site to another.



BABCOCK WANSON GROUP ELECTRIC INDUSTRIAL BOILERS RANGE

With its Babcock Wanson and Parat brands, the Babcock Wanson Group is able to offer a wide range of industrial electric boilers to meet every need, capable of producing from 24 to 90,000 kg/h of steam.

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Designers and manufacturers of Industrial Boilers, Air Heaters, Thermal Fluid Heaters, Thermal Oxidisers, Water Treatment Plant and associated equipment. Registered Number 573874 London.

Babcock Wanson's policy is one of continuous improvement and the right is reserved to change specifications and dimensions at any time without notice.



Boilers & Burners

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LV-Pack - models from 600 to 3000 - Dimensions

LV-Pack	model	600	900	1200	1500	1800	2250	3000
Steam Output ⁽¹⁾	Kg/h (+/- 5%)	600	900	1200	1500	1800	2250	3000
Power Output	kW (+/- 5%)	400	600	800	1000	1200	1500	2000
Nominal voltage	V 3P	400 or 690	400 or 690	400 or 690	400 or 690	400 or 690	400 or 690	400 or 690
Width I	mm	1973	1973	2238	2238	2238	2498	2498
Length L2	mm	3400	3400	3400	3400	3400	3400	3400
Height H2	mm	1930	1930	2250	2250	2250	2620	2620
Weight fully flooded	Kg (+/- 10%)	4424	4424	5754	5854	5854	8262	8362
Immersion heater on both side		NO	NO	NO	NO	NO	NO	NO
Steam outlet valve	DN	65	65	80	80	80	100	100
Bottom blow down	DN	40	40	40	40	40	40	40
Pressure safety valve (outlet)	DN	40	40	50	50	50	65	65
Feedwater inlet	DN	40	40	40	40	40	40	40
Surface drain	DN	25	25	25	25	25	25	25

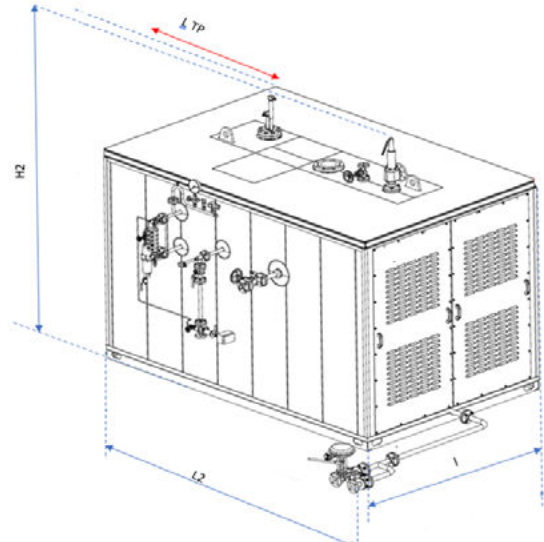
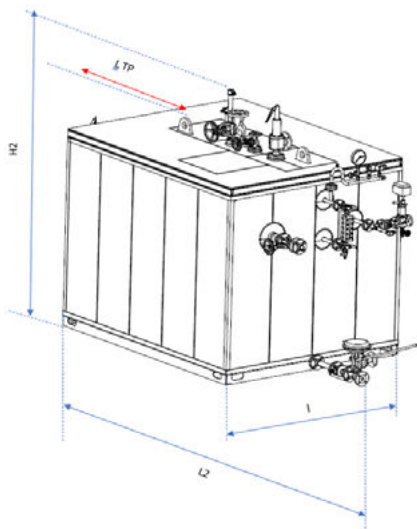
LV-Pack - models from 3600 to 8400 - Dimensions

LV-Pack	model	3600	4200	4800	5400	6000	6600	7200	7800	8400
Steam Output ⁽¹⁾	Kg/h (+/- 5%)	3600	4200	4800	5400	6000	6600	7200	7800	8400
Power Output	kW (+/- 5%)	2400	2800	3000	3600	4000	4400	4800	5200	5600
Nominal voltage	V 3P	400 or 690	400 or 690	400 or 690	400 or 690	400 or 690	690	690	690	690
Width I	mm	2997	2997	2997	2997	3400	3400	3400	3400	3400
Length L2	mm	3845	3845	3845	3845	3845	3845	3845	3845	3845
Height H2	mm	3180	3180	3180	3180	3595	3595	3595	3595	3595
Weight fully flooded	Kg (+/- 10%)	11670	12670	13670	14670	18132	18232	18332	18432	18532
Immersion heater on both side		YES	YES	YES	YES	YES	YES	YES	YES	YES
Steam outlet valve	DN	100	100	125	125	150	150	150	150	150
Bottom blow down	DN	40	40	40	40	40	40	40	40	40
Pressure safety valve (outlet)	DN	65	65	80	80	100	100	100	100	100
Feedwater inlet	DN	40	40	40	40	40	40	40	65	65
Surface drain	DN	25	25	25	25	25	25	25	25	25

(1) Steam output at up to 8 barg based on feedwater at 95°C (+/- 5%).

Standard design pressure: 15 barg - Specific max. design pressure: 18 barg

LTP : 1000 mm minimum



LV-Pack – DATASHEET

Power control cabinets - Dimensions

LV-Pack model	Power cabinet (690V tri)	Power cabinet (400V tri)
600	1	1b
900	2	2b
1200	3	3b
1500	4	4b
1800	5	5b
2250	6	6b
3000	7	7b
3600	8	5b + 5b
4200	9	6b + 6b
4800	5+7	5b + 7b
5400	5+8	7b + 7b
6000	7+7	7b + 7b
6600	7+8	NA
7200	8+8	NA
7800	8+9	NA
8400	9+9	NA

Power cabinet	Power output (kW)	Voltage (V 3P+T)	Width (mm)	Height (mm)	Depth (mm)	Circuit breaker rating (A)
1	400	690	1400	2200	600	400
2	600	690	1400	2200	600	630
3	800	690	1800	2200	600	800
4	1000	690	2200	2200	600	1000
5	1200	690	2600	2200	600	1250
6	1500	690	2600	2200	600	1600
7	2000	690	3000	2200	600	2000
8	2400	690	3600	2200	600	2500
9	2800	690	4200	2200	600	3200

Power cabinet	Power output (kW)	Voltage (V 3P+T)	Width (mm)	Height (mm)	Depth (mm)	Circuit breaker rating (A)
1b	400	400	1600	2200	600	800
2b	600	400	1800	2200	600	1250
3b	800	400	2200	2200	600	1600
4b	1000	400	2600	2200	600	2000
5b	1200	400	2600	2200	600	2500
6b	1500	400	3000	2200	600	3200
7b	2000	400	4000	2200	800	4000

Nota : The dimensions of the enclosures are given excluding the air conditioning unit and confirmed during the engineering phase of the project.

Main components of the power cabinet:

- Non-removable main circuit breaker, Isc of 50 kA
- Fuse protection for each stage
- Power regulation with contactors
- Air conditioning for Ambient Temperatures $30^{\circ}\text{C} < T < 40^{\circ}\text{C}$
- Fault reports to the boiler control panel
- Cable entry and exit on the same side, either top or bottom (to be confirmed when ordering)



Options:

- Electricity meter with 4-20mA report (power+voltage)
- Earth leakage detector on the main power supply
- Earth leakage detector on each output
- Power regulation using thyristors
- Discount if power cabinet is installed in room $\leq 30^{\circ}\text{C}$

Command and control cabinet:

- 10-inches touchscreen on control panel
- Level/pressure safety control
- Surface drain and bottom blowdown monitoring
- Cabinet mounted on boiler up to model 3000

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