

Knowledge
Based

Since 1975



PACKMAN
Industrial Group



Electrical Steam Boiler

powered by PACKMAN industrial group



Electrical Steam Boiler



PACKMAN ELECTRICAL STEAM BOILER

This technical document provides a comprehensive overview of our electric steam boiler catalog, designed to meet the heating needs of residential, commercial, and industrial applications. It aims to assist customers in understanding the product's features, specifications, installation guidelines, operating instructions, maintenance requirements, and safety precautions.

An electric boiler is a heating device that uses electricity to generate heat and provide steam for various applications. It consists of several components that work together to convert electrical energy into thermal energy.

Electric boilers are commonly used in Industrial, commercial, and petrochemical projects where a clean and efficient energy solution is required. They offer advantages such as precise pressure control, compact size, and the absence of combustion byproducts.

Product Overview:

Our electric steam boilers are high-quality and energy-efficient heating solutions that provide a reliable and constant supply of steam. They are designed to meet various capacity requirements, ranging from small units to large-scale industrial systems.

Features and Specifications:

This section highlights the key features and specifications of our electric steam boilers, including:

- Energy efficiency ratings
- Heating capacity
- Pressure control options
- Compact design for easy installation
- Corrosion-resistant materials
- Safety features such as overheat protection, pressure switches and pressure relief valves
- Digital control panel for precise temperature adjustments
- Multiple heating elements for rapid water heating
- Insulation for heat retention and reduced energy consumption



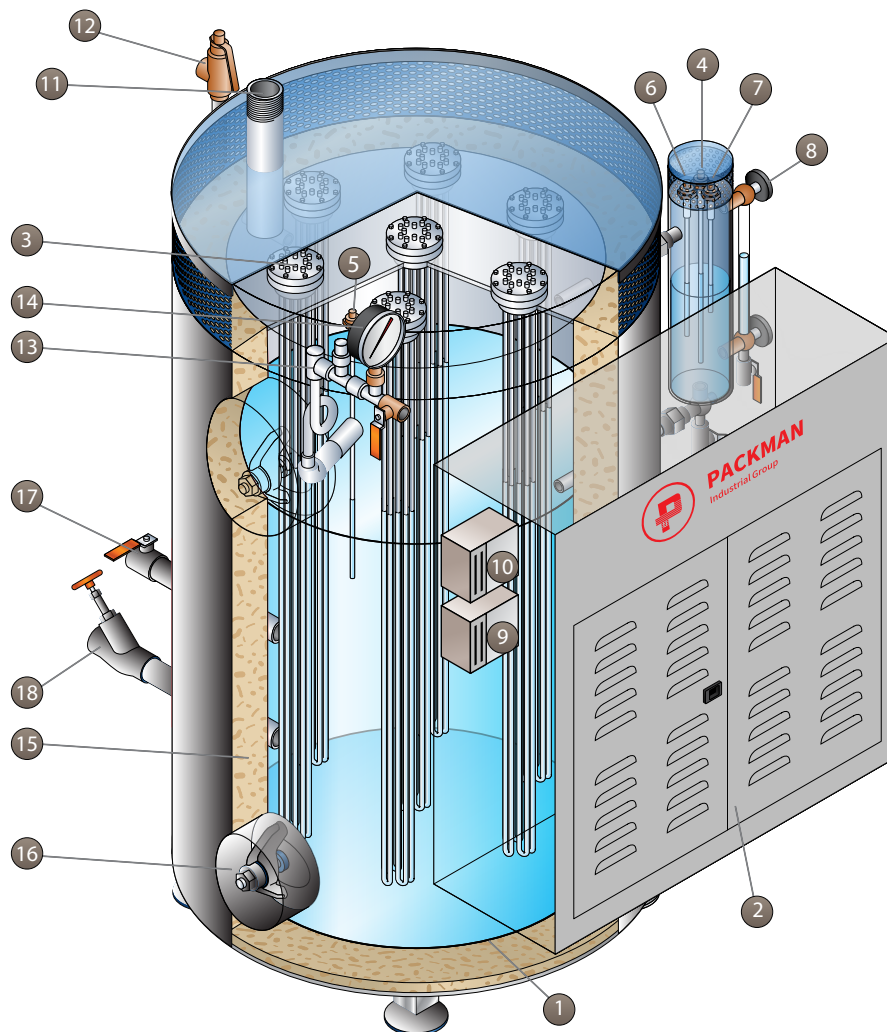
Every boiler including following parts:

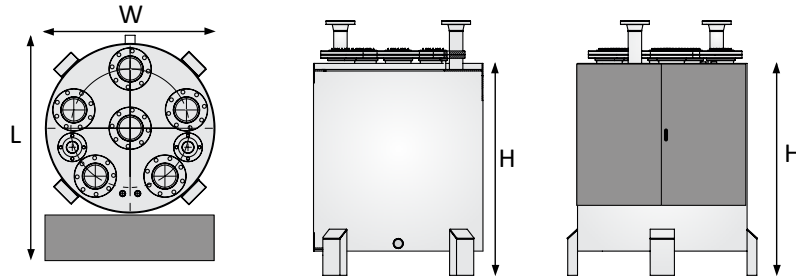
1. **Heating Element:** The heating element is the core component of an electric boiler. It is usually made of resistance wire, such as nichrome or stainless steel, which has a high electrical resistance. When an electric current passes through the heating element, it generates heat due to the resistance.
2. **Control System:** The control system regulates the operation of the electric boiler, ensuring efficient and safe performance. It includes various sensors, thermostats, and control switches that monitor and adjust the temperature, pressure, and flow rate of the water or steam.
3. **Water Tank or Heat Exchanger:** In electric boilers used for heating water, a water tank or heat exchanger is present to hold and heat the water. The heating element is immersed in the water or wrapped around the heat exchanger, transferring heat to the water.
4. **Feedwater Pump:** A centrifugal multistage pump is used to feed the water throughout the boiler. It ensures even distribution of heat and maintains a constant flow rate.
5. **Safety Devices:** Electric boilers incorporate several safety devices to prevent overheating, pressure buildup, or other potential hazards. These may include pressure relief valves, temperature limits, and automatic shutdown mechanisms.
6. **Control Panel:** The control panel provides a user interface for operating and monitoring the electric boiler. It allows users to adjust pressure settings, view system status, and diagnose any faults or issues.
7. **Energy Efficiency Features:** Modern electric boilers often include energy-saving features like programmable timers, temperature controls, and insulation to minimize heat loss and optimize energy consumption.



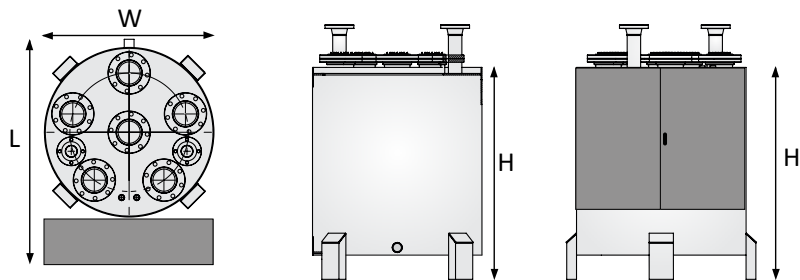
Component Locations:

- | | |
|------------------------------------|---------------------------------|
| 1. Boiler Body | 10. High Limit Pressure Control |
| 2. Electric Control Panel | 11. Steam Outlet |
| 3. Electric Heating Elements | 12. Safety Valve |
| 4. Low Water Cut Off Switch | 13. Instruments Collector |
| 5. Water Level Control | 14. Steam Pressure Gauge |
| 6. Low Low Water Cut Off Switch | 15. Boiler Body Insulation |
| 7. High Water Level Cut Off Switch | 16. Handhole |
| 8. Sight Glass | 17. Feedwater Valve |
| 9. Operating Pressure Control | 18. Blowdown Valve |





Model/ PSB-E	Unit	100	150	250	300	400	450	500
Technical Data								
Thermal Capacity	kw	70	100	170	200	270	300	350
Steam Capacity	kg/hr	100	150	250	300	400	450	500
Boiler Type	-	Electric Heater						
Thermal Efficiency	%	100	100	100	100	100	100	100
Maximum Working Pressure	bar	16	16	16	16	16	16	16
Number of Element	N	4	5	9	10	14	15	18
Boiler Water Content	Liter	147	212	212	288	477	477	589
Water Pressure Drop in Boiler (bar)	gpm	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Design Standard	Liter	ASME						
Material								
Element Material	-	Stainless Steel						
Shell Material	-	SA 516 Gr70						
Boiler Insulation	-	Rock Wool						
Base Plate	-	SA 36						
Cover	-	SS 403ba						
Connectoins Size								
Steam Output	in	1	1	1 1/2	1 1/2	2	2	2
Water inlet	in	1	1	1	1	1	1	1
Safety Valve	in	3/4	3/4	3/4	3/4	1	1	1
Drain Valve	in	1	1	1	1	1	1	1
Boiler Dimensions								
Width	mm	500	600	600	700	900	900	1,000
Lenght (with control panel)	mm	900	1,000	1,000	1,200	1,600	1,600	1,800
Height	mm	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Boiler Weight								
Shipping Weight @ 6 bar	kg	263	386	386	556	623	623	840
Service Weight @ 6 bar	kg	410	598	598	844	1,100	1,100	1,429
Electrical Data								
Electric Power Consumption	kw	70	100	170	200	270	300	350
No of Phase	-	3	3	3	3	3	3	3
Frequency	Hz	50	50	50	50	50	50	50
Voltage	v	400	400	400	400	400	400	400
Current	A	112	160	273	321	433	481	561
Control Panel IP Level	-	IP45	IP45	IP45	IP45	IP45	IP45	IP45



Model/ PSB-E	Unit	600	750	1000	1200	1500	2000
Technical Data							
Thermal Capacity	kw	400	500	700	800	1,000	1,300
Steam Capacity	kg/hr	600	750	1,000	1,200	1,500	2,000
Boiler Type	-	Electric Heater					
Thermal Efficiency	%	100	100	100	100	100	100
Maximum Working Pressure	bar	16	16	16	16	16	16
Number of Element	N	20	25	35	40	50	65
Boiler Water Content	Liter	712	904	1,061	1,385	2,010	2,010
Water Pressure Drop in Boiler (bar)	gpm	0.10	0.10	0.10	0.10	0.10	0.10
Design Standard	Liter	ASME					
Material							
Element Material	-	Stainless Steel					
Shell Material	-	SA 516 Gr70					
Boiler Insulation	-	Rock Wool					
Base Plate	-	SA 36					
Cover	-	SS 403ba					
Connectoins Size							
Steam Output	in	2	2	3	3	3	3
Water inlet	in	1	1	1	1	1	1
Safety Valve	in	1	1	11/2	11/2	11/2	2
Drain Valve	in	1	1	1	1	11/2	11/2
Boiler Dimensions							
Width	mm	1,100	1,200	1,300	1,400	1,600	1,600
Lenght (with control panel)	mm	1,900	1,950	2,000	2,200	2,400	2,400
Height	mm	1,500	1,600	1,600	1,800	2,000	2,000
Boiler Weight							
Shipping Weight @ 6 bar	kg	910	1,043	1,150	1,250	1,400	1,400
Service Weight @ 6 bar	kg	1,622	1,947	2,211	2,635	3,410	3,410
Electrical Data							
Electric Power Consumption	kw	400	500	700	800	1,000	1,300
No of Phase	-	3	3	3	3	3	3
Frequency	Hz	50	50	50	50	50	50
Voltage	v	400	400	400	400	400	400
Current	A	642	802	1,123	1,283	1,604	2,085
Control Panel IP Level	-	IP45	IP45	IP45	IP45	IP45	IP45

PACKMAN GROUP

History

The Packman Company was founded in February 1975, and was soon afterwards registered in companies Registration Office. In early years the Packman construction and service branch focused on building installations. Different mega power plants were built by cooperating with Brown Boveri and Asseck companies in 1976.

The company started its official activities in construction of High-Pressure Vessels such as Hot-Water Boilers, Steam Boilers, Storage Tanks, Softeners and Heat Exchangers from 1984.

Packman Company is one of the first companies which supplied the high quality and standard hot water boilers to the customers.

Packman has exported its products to countries such as Uzbekistan, United Arab Emirates and other countries in the Middle East. It is one of the largest producers of hot-water and steam boilers in the Middle East.

Now we are proud to announce that the Packman industrial group has five major sub-brands that have product titles in all field of HVAC equipment and engineering services, and we do not know this success except with the help and support of our customers.

1. Construction Services Industry Association
2. Industry Association
3. Construction Companies' Syndicate
4. Technical Department Association
5. Mechanical Engineering Association
6. Engineering Standard Association

Departements:

Sales Deps:

- ⌒ Power Plant & Petrochemical
- ⌒ Industrial
- ⌒ Hospitality Service
- ⌒ Commercial & Residential
- ⌒ Sport Complex & Pool

Technical Deps:

- ≡ Manufacturing R&D
- ≡ Innovation Center
- ≡ EPC Execute Unit
- ≡ Product Develop Unit
- ≡ Sales Engineering Dep.

Others:

- ≈ After Sales Service
- ≈ Project Control
- ≈ Financial Office
- ≈ Commercial Office
- ≈ Marketing Department



PACKMAN GROUP Brands



PACKMAN
Industrial Group

Designer&manufacturer of Condensing, Hot Water, Steam, Hot Oil & Waste Heat Boilers, Heat Exchangers, Autoclave Pressure & Storage Vessels & etc



GREENMAN
Green mindset, green future

Engineering & Designing Commercial Greenhouse Plant, CO2 Dosing System, Flue gas Condenser & Special HVAC Systems, Sustainable Agriculture & etc



ROMAN
Water solution

Designer&manufacturer Reverse Osmosis Plant & Package, Water Treatment, Softener & Filters and Chemical Dosing Systems & etc



RAADMAN
a look to the future

Designer&manufacturer of Industrial Mono & Dual Block Gas, LPG, Light & Heavy Oil Burners, Premixed & Postmixed Burners, Watertube burners, Process burners, Special application burners & Combustion Solutions & etc



CHILLMAN
Coolest hvac around

Designer&manufacturer of Air & Water Cooled Chillers, Air Handling Units, Fancoil, HVAC Equipment, Cold Storage Room & etc



1. Isfahan Factory



2. Vilashahr Factory



3. Parand Factory



4. Parand (2) Factory



5. Bonyad Factory

The collage consists of 20 individual framed documents arranged in a 5x4 grid. The documents are as follows:

- Row 1:**
 - 1. A yellow certificate with a blue circular logo and text in English and Urdu.
 - 2. A white certificate with a blue header, text in English and Urdu, and a diagram of a building.
 - 3. A white certificate with a blue header, text in English and Urdu, and a blue circular logo.
 - 4. A green certificate with a white header, text in Urdu, and a blue circular logo.
- Row 2:**
 - 5. A blue certificate titled "Registration Certificate" for Packman Co., ISO 14001:2015.
 - 6. A blue certificate titled "Registration Certificate" for Packman Co., ISO 19001:2012.
 - 7. A blue certificate titled "Registration Certificate" for Packman Co., ISO 10000:2004.
 - 8. A blue certificate titled "Registration Certificate" for Packman Co., ISO 9001:2008.
- Row 3:**
 - 9. A blue certificate with a white header, text in Urdu, and a blue circular logo.
 - 10. A white certificate with a blue header, text in English and Urdu, and a blue circular logo.
 - 11. A white certificate with a blue header, text in English and Urdu, and a blue circular logo.
 - 12. A white certificate with a blue header, text in English and Urdu, and a blue circular logo.
- Row 4:**
 - 13. A white certificate titled "CERTIFICATION" with a blue header, text in English and Urdu, and a blue circular logo.
 - 14. A white certificate with a blue header, text in English and Urdu, and a blue circular logo.
 - 15. A white certificate with a blue header, text in English and Urdu, and a blue circular logo.
 - 16. A white certificate with a blue header, text in English and Urdu, and a blue circular logo.
- Row 5:**
 - 17. A green certificate with a white header, text in Urdu, and a blue circular logo.
 - 18. A blue certificate with a white header, text in Urdu, and a blue circular logo.
 - 19. A white certificate with a blue header, text in English and Urdu, and a blue circular logo.
 - 20. A white certificate with a blue header, text in English and Urdu, and a blue circular logo.

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GREENMAN



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+9821 42 362

www.packmangroup.com

No 14, 10th Alley, Beihaghi St., Argentina Sq., Tehran-Iran