



Vertical Clean Steam Boiler



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#### **Product Description**

Vertical clean steam boilers are used to produce pure and clean steam, free of any harmful substances and impurities. Applications for pure and clean steam are found in the food, cosmetic, biochemical, and pharmaceutical industries, as well as for sterilization and any direct steam heating processes where the demands on steam quality are very high.

Our clean steam boilers has been designed to provide sterilizer grade clean steam from suitably treated water using oil or gas burners as the heating medium and can be supplied with or without an integral feed water pre-heating. Our clean steam boiler covers steam outputs from 100 kW up to 700 kW and other capacity units can be designed to order. The boiler is manufactured from AISI 304L stainless steel and all internal surfaces are passivated to provide a corrosion resistance surface and developed with high efficiencies, in rigid and reliable designs, ensuring low operation and maintenance cost. Skilled engineers provide technical support, already from the first contact within the sales department, ensuring the best individual guidance in choosing the correct product for the actual application. From initial assessment of customers clean steam needs, through design, manufacturing, documentation and validation, delivery and deployment, to maintenance and life cycle support, we ensure all elements fit perfectly to achieve the highest system performance.

#### Benefits

- 1. Short delivery times for standard Pure Steam Generators
- 2. High energy efficiency by ideal design and energy retrieval measures
- 3. Vertical design with minimal area demand
- 4. All clean steam and feed water wetted parts in AISI 304L stainless steel
- 5. Using PLC controlled to regulate generator clean steam outlet pressure, generator water level

#### **Quality Control**

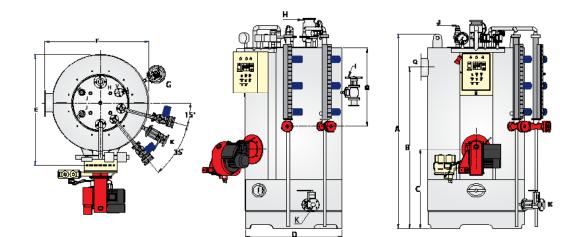
1. Strength calculation report with applied materials information.

2. 100% NDT (non-destructive inspection) report of steel plate tube and welding rod including RT and UT examination reports.

3. Hydraulic test report: ensure the standard working pressure and safety.

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Model	Unit	PSBV- 150	PSBV- 200	PSBV- 300	PSBV- 450	PSBV- 600	PSBV- 750
Technical Data							
Thermal Capacity	kw	100	150	200	300	400	500
Steam Output	kg/hr	150	220	300	450	600	750
Heating Surface	m <sup>2</sup>	4	4.4	5	6.6	7.6	9.5
WorkingPressure	bar	Up to 16 bar					
Pressure Drop in Combustion Chamber	mbar	1.6	1.8	2	2.2	3.3	3.5
Design Standard	-	BS/EN 12953					
Max Gas Consumption @Sea Level	m³/hr	10	15	20	30	40	50
Max Fuel Oil Consumption @Sea Level	liter/ hr	8.33	12.50	16.67	25.00	33.33	41.67
Max Heavy Fuel Oil Consumption @Sea Level	liter/ hr	7.14	10.71	14.29	21.43	28.57	35.71
Connection Size @ 10 bar Working Pressure							
Steam Outlet (H)	in	1	1	1	1	1	1
Safety Valve (J)	in	3/4	3/4	3/4	3/4	1	1
Feeding Valve (I)	in	1	1	1	1	1	1
Venting Valve (V)	in	3/4	3/4	3/4	3/4	1	1
Drain Valve (K)	in	1	1	1	1	1	1
Stack I.D. (Q)	in	6	6	6	8	8	8
Boiler Dimension							
Length (F)	mm	950	1035	1100	1210	1320	1420
Width (E)	mm	890	970	1030	1150	1260	1360
Height (A)	mm	2030	2030	2030	2365	2365	2365
Min Front Clearance	mm	500	500	500	500	500	500
Min Rear Clearance	mm	500	500	500	500	500	500
Min Side Clearance	mm	500	500	500	500	500	500
Min Boiler Room Length	mm	1950	2035	2100	2210	2320	2420
Weight							
Shipping Weight @ 10 bar Working Pressure	kg	660	760	860	1260	1480	1680

# 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
 ∩ Hospitally 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**





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



#### Water solution

Designer&manufacturer ReverseOsmosisPlant& Package, Water Treatment, Softener& FiltersandChemical DosingSystems&etc



Designer&manufacturer ofIndustrialMono&Dual BlockGas,LPG,Light& HeavyOilBurners, Premixed & Postmixed Burners, Watertube burners, Process burners, Specialapplication burners&Combustion Solutions&etc



Designer&manufacturer ofAir&WaterCooled Chillers, Air Handling Units, Fancoil, HVAC Equipment,Cold Storage Room & etc

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1. Isfahan Factory

2. Vilashahr Factory

3. Parand Factory

4. Parand (2) Factory

5. Bonyad Factory

## SOME OF Certificates are



## Knowledge Based



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