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Since 1975



**PACKMAN**  
Industrial Group

 Vertical Steam Boiler  
powered by PACKMAN industrial group



# Vertical Steam Boiler

[www.packmangroup.com](http://www.packmangroup.com)



## Product Description

Packman vertical steam boiler PSB series are designed with simple mechanical structure via modern machinery and equipment to confirm to the latest regulations of EN and DIN standards. The PSB series are user friendly, and use the latest technology to meet every customers needs.

The vertical steam boiler is robust and economical. The furnace is formed by the fire tube. The flue gases are directed through topped smoke tubes.

Constructional design boiler is especially suitable for the combustion of liquid or gaseous fuels. It can, however, as well be used for solid fuels. Coal or wood performances.

## Fire Tube

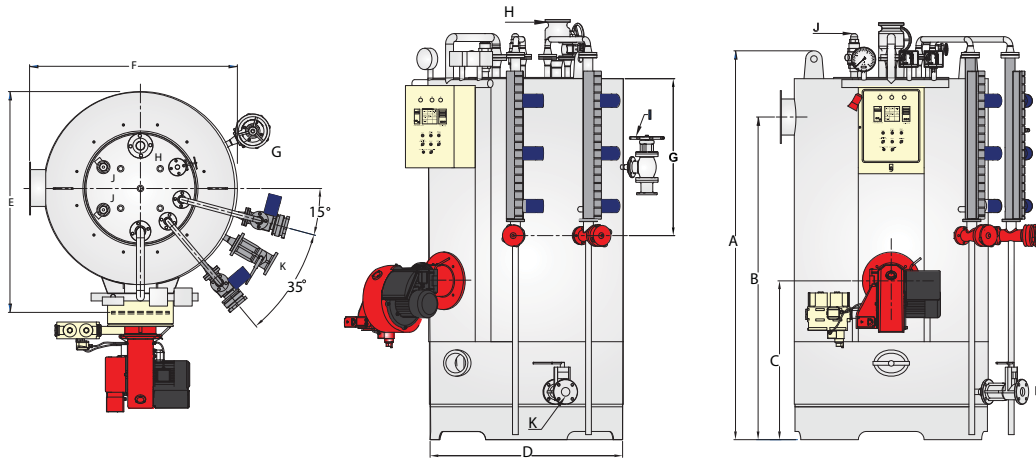
The chosen diameter makes sure that an unobjectionable flame can develop and a complete burnout is guaranteed. The decision whether plane or spiral fire tubes are to be used depends on the diameter and the working pressure. The arrangement in the inferior part of the water space has an especially favorable effect on the heat exchange and the water circulation, and allows a clear arrangement of the remaining flue gas passes. Boiler supports, skids: The boiler body is based on supports. Most of the unit are delivered on skids; by that special foundations for the installation are not required. In this case all accessories which are necessary for operation, such as oil or gas firing equipment, combustion air fan, oil preheater, control panel or switchboard and feeding device, can be mounted on the skid, too.

## Product Capacity Calculation & Selection

The Steam boiler selected based on maximum require capacity and type of process. The better way to select the capacity and pressure of the boiler is following below steps:

- 1- Calculate the maximum heat load based on your process.
- 2- Adding 20% to maximum load for coefficient of confidence.
- 3- Consider the 80% average efficiency for vertical steam boiler.
- 4- Calculate pressure based on your project and distance between boiler and consumer.
- 5- Determined the number of boiler you have: it is better you choose number of boiler for 100% of full load.

Finally you can select the model from the table in bellow.



Model	Unit	PSBV-100	PSBV-150	PSBV-200	PSBV-300	PSBV-400	PSBV-500
<b>Technical Data</b>							
Thermal Capacity	kw	80	100	150	200	250	350
Steam Output	kg/hr	100	150	200	300	400	500
Heating Surface	m <sup>2</sup>	4.8	6.3	7.8	11.1	14.1	17.1
Working Pressure	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	m <sup>3</sup> /hr	8	10	15	20	25	35
Max Fuel Oil Consumption @Sea Level	liter/hr	7.4	9.2	13.8	18.4	23	32.2
Max Heavy Fuel Oil Consumption @Sea Level	liter/hr	7	8.8	13.2	17.6	22	30.8
<b>Connection Size @ 10 bar Working Pressure</b>							
Steam Outlet (H)	in	1	1	1 1/2	1 1/2	2	2
Safety Valve (J)	in	2*3/4	2*3/4	2*3/4	2*3/4	2*1	2*1
Feeding Valve (I)	in	1	1	1	1	1	1
Venting Valve (V)	in	3/4	3/4	3/4	3/4	3/4	1
Drain Valve (K)	in	1	1	1	1	1	1
Stack I.D. (Q)	in	6	6	6	8	8	8
<b>Boiler Dimension</b>							
Length (F)	mm	950	1040	1100	1210	1320	1420
Width (E)	mm	890	970	1030	1150	1260	1360
Height (A)	mm	2030	2030	2030	2370	2370	2370
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	2040	2100	2210	2320	2420
<b>Weight</b>							
Shipping Weight @ 10 bar Working Pressure	kg	800	950	1100	1300	1700	1900

# 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, Water tube 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

# SOME OF Certificates are



# Knowledge Based



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