

# Reverse Chamber Hot Water Boiler

Hot Water Steel Boiler PACKMAN PHWB is special oil/gas hot water steel boiler designed for use in installations conforming to highest global standards with a permissible overall operating pressure up to 16 bar.

The main prerogative in the design of the PACKMAN PHWB has been economy in conjunction with maximum protection of the environment. Favorable base measurements ensure that it fits into small heating installations where space is tight.

The reverse combustion chamber offers optimum conditions for complete combustion which, in conjunction with balanced thermal stress of all heating surfaces, guarantees a high degree of fuel and heat utilization.

Due to the concentric arrangement of all heating surfaces around the flame and streamlined shape of the turbulence pipes the intrinsic energy requirement is reduced to a minimum.



Scan this code To access the Pakman product selection application and select this product.



Scan this code to receive a 3D product file.



More info about this product.

The symmetrical construction layout means that the boiler is sufficiently elastic with heat stresses eliminated, which in combination with the advantage of easy maintenance ensures a long service life. In the cylindrical reverse combustion the returning flue gases envelop the burner flame thus ensuring complete soot-free combustion with a high CO<sub>2</sub> content, the most important prerequisite for environmentally harmless boiler operation.

The boiler body is covered with 100 mm heat insulation mats with cladding of stainless steel sheets PACKMAN PHWB is produced in modern, sophisticated and well-equipped workshops. Careful testing ensures a top level standard of quality.

The furnace is formed with fire tubes. The flue gases are directed to the top smoke tubes where they are cooled down. Most of the medium water capacity boilers are made of this type. Because of its structure the three pass boiler is also suitable for liquid and gaseous fuels, light oil combustion

### Boiler supports, skids:

The boiler body stands on supports. Most of the unit are delivered with skids; So there is no need special foundation for installation. In this case, also all the accessories 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.

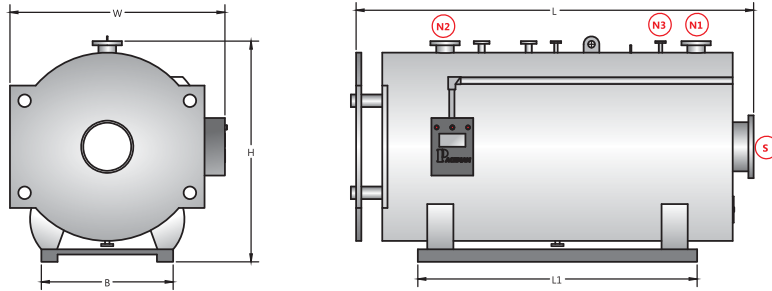
## Product Capacity Calculation & Selection:

The hot water boiler selected based on type of building, load of heating, configuration and layout to arrangement boilers.

The better way to select the capacity of the boiler is the following steps:

- 1 Calculate the maximum heat load based on your building type
- 2- Adding 20% to maximum load for coefficient of confidence
- 3- Consider the 80% average efficiency for reversal chamber hot water boiler
- 4- Determine the number of boiler you have: for 2 boiler you should normally select one boiler up to 75% full load and for 3 boiler you can select based on 50 % of full load for each boiler

Finally you can select the model from the following table.



Element	Unit	Boiler model					
		PHWB-10	PHWB-15	PHWB-20	PHWB-25	PHWB-30	PHWB-40
Thermal Output	Kcal/h	100,000	150,000	200,000	250,000	300,000	400,000
Overall Length	mm	1740	2000	2030	2040	2040	2350
Boiler Total Width	mm	1050	1050	1100	1100	1200	1200
Boiler Shell Width	mm	620	620	660	660	740	740
Boiler Height	mm	1280	1280	1330	1350	1450	1450
Flow Gas Resistance	mbar	1.20	1.20	1.50	1.50	1.70	2.60
Transport Weight	Kg	700	750	800	1000	1200	1400
Operating Weight	Kg	1000	1050	1130	1360	1600	1900

Element	Unit	Boiler model					
		PHWB-50	PHWB-60	PHWB-70	PHWB-80	PHWB-90	PHWB-100
Thermal Output	Kcal/h	500,000	600,000	700,000	800,000	900,000	1,000,000
Overall Length	mm	2450	2450	2600	2730	2830	3000
Boiler Total Width	mm	1220	1320	1400	1450	1550	1670
Boiler Shell Width	mm	780	860	900	950	1000	1120
Boiler Height	mm	1500	1600	1650	1700	1830	1940
Flow Gas Resistance	mbar	3.20	3.50	3.90	4.10	4.20	4.60
Transport Weight	Kg	1600	2000	2100	2400	3000	3500
Operating Weight	Kg	2200	2750	2975	3400	4300	5200

● The measures and weights might be different from final product by less than 10%