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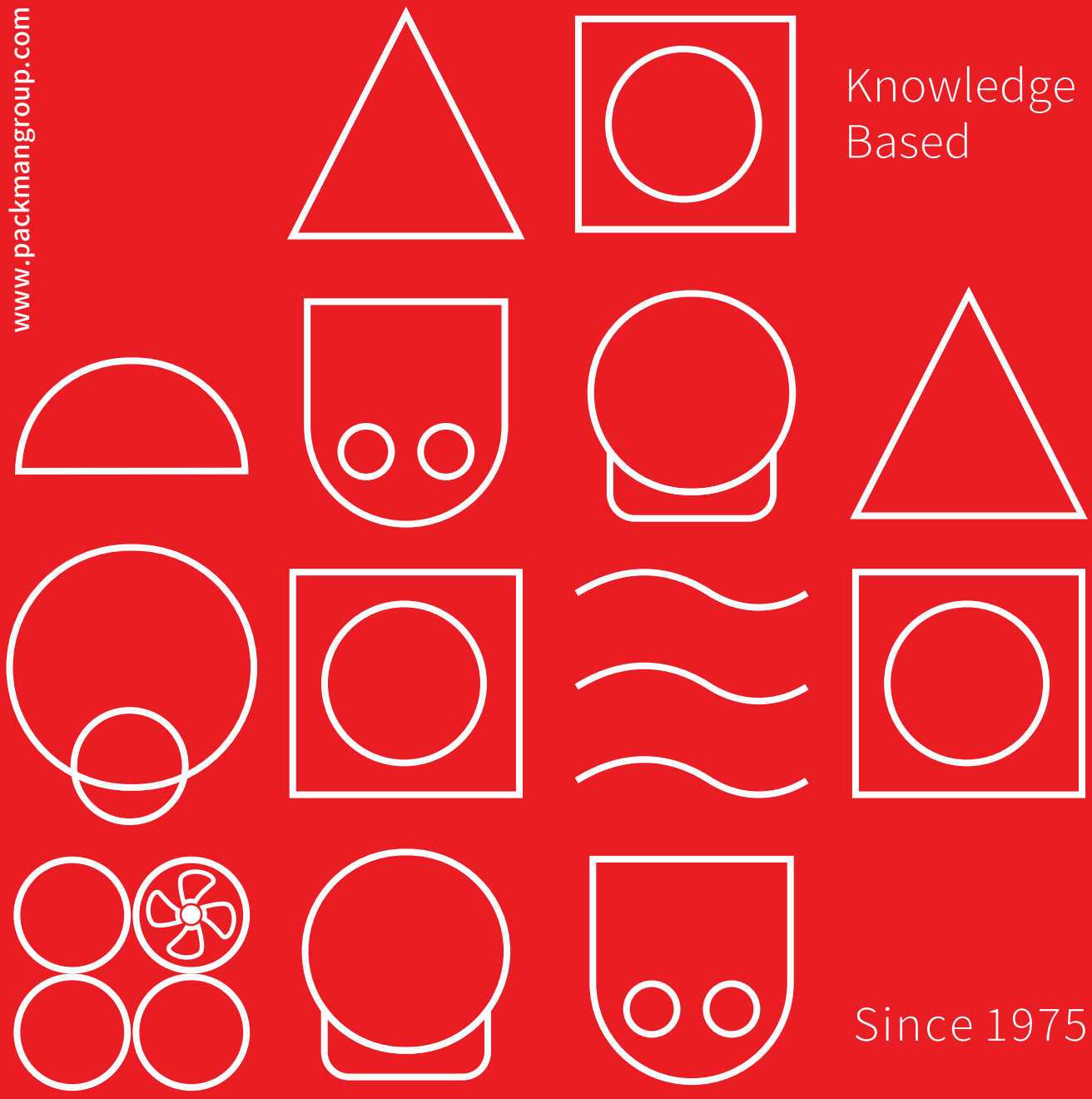
Knowledge
Based



Since 1975

PACKMAN
Industrial Group

Reverse Flame Hot Water Boiler

powered by PACKMAN industrial group

Reverse Flame Hot Water Boiler

Product Description

Reverse Flame Hot Water Boiler are designed to confirm to highest global installations standards with a permissible overall operating pressure up to 16 bar.The main design principle of Reverse flame boilers has been to provide economical products & maximum protection of the environment. Favorable base measurements has ensured that it fits into small boiler rooms where space is tight.

The 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.

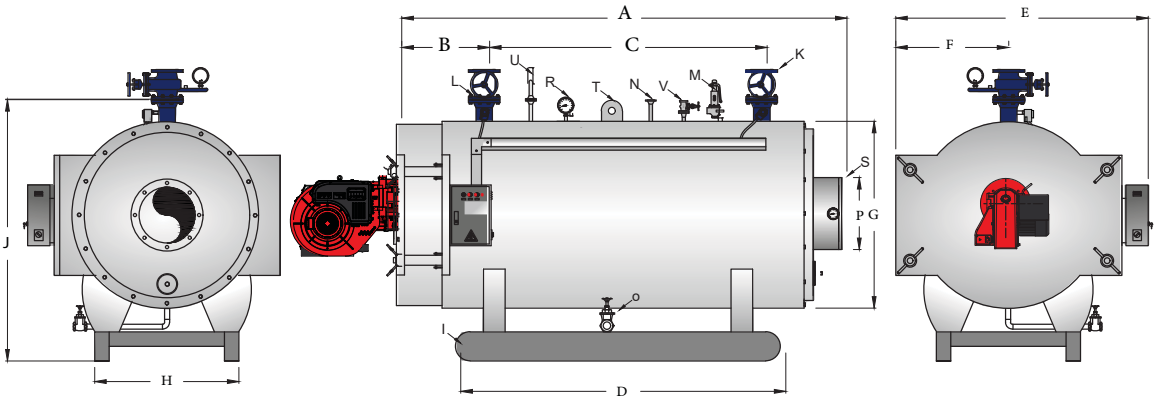
The boiler's tubes & sheets are specifically designed to eliminate heat stress, which in combination with the advantage of easy maintenance ensures a long service life. In the boiler's fire tubes (1st pass) the returning flue gases envelop the burner's flame thus ensuring complete soot-free combustion with a high CO2 content. This is one of the most important prerequisites for environmentally friendly boiler operation.

The boiler's body is covered with 100 mm heat insulation mats with a cladding of stainless steel sheets Packman's Reverse flame Hot water Boiler is produced in modern, sophisticated and well-equipped workshops.

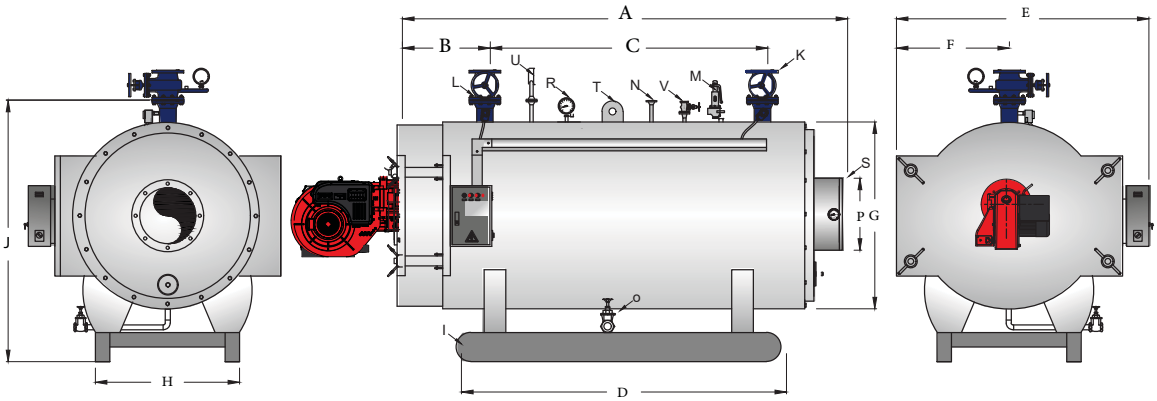
Thorough testing ensures a top level quality. The furnace is formed with fire tubes. The flue gases are directed to the top smoke tubes where they are cooled down. Most of the medium water capacity boilers are made of this type. It is compatible with liquid and gaseous fuels and light combustion oil.

Boiler Supports, Skids

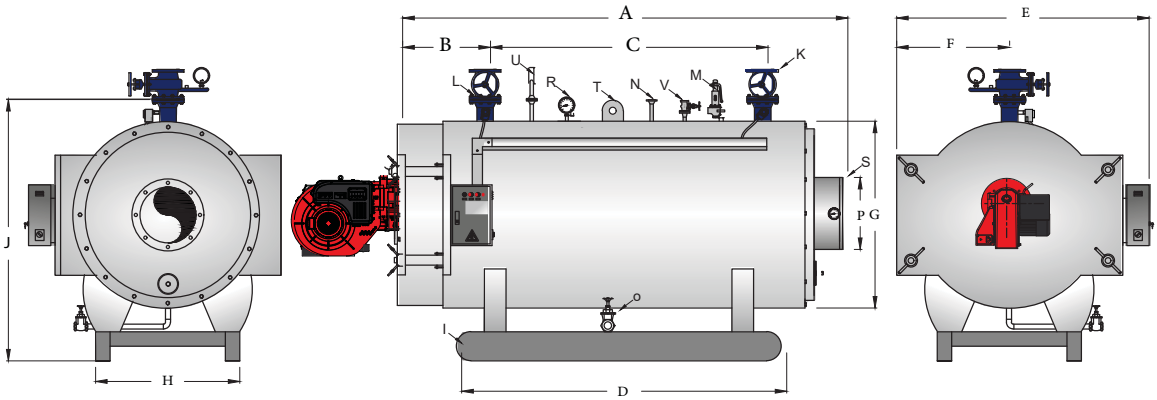
The boilers stand on supports. Most of the units are delivered with skids; So there is no need for special foundations or installation processes. Also all the accessories necessary for operation, such as oil or gas firing equipment, combustion air fan, oil pre heater, control panel or switchboard and feeding device, can be mounted on the skid.



Model	Unit	PHWB-10	PHWB-15	PHWB-20	PHWB-25	PHWB-30
Technical Data						
Thermal Capacity	kw	116	174	232	290	348
Thermal Capacity	kcal/hr	100,000	150,000	200,000	250,000	300,000
Working Pressure	bar	up to 30 bar				
Pressure Drop in Combustion Chamber	mbar	0.6	0.68	0.73	0.76	0.85
Design Standard	_	BS/EN 12953				
Max Gas Consumption @Sea Level	m^3/hr	12	18	23	29	35
Max Fuel Oil Consumption @Sea Level	liter/hr	10	16	22	27	32
Max Heavy Fuel Oil Consumption @Sea Level	liter/hr	10	15	20	26	31
Connectoins Size						
Water Outlet (L)	in	1	1 1/2	1 1/2	1 1/2	2
Water Inlet (K)	in	1	1 1/2	1 1/2	1 1/2	2
Safety Valve @ 10 bar Working Pressure (M)	in	3/4	3/4	1	1	1
Venting Valve (N)	in	1	1	1	1	1
Drain Valve (O)	in	1	1	1	1	1
Stack I.D. (P)	in	10	10	10	10	10
Boiler Dimensions						
Length (A)	mm	1,660	1,950	2,130	2,150	2,300
Width (E)	mm	1,180	1,260	1,320	1,370	1,390
Boiler Outside Diameter (G)	mm	880	960	1,020	1,070	1,090
Height (J)	mm	1,330	1,430	1,490	1,540	1,560
Min Front Clearance	mm	1,280	1,520	1,680	1,690	1,860
Min Rear Clearance	mm	1,020	1,020	1,020	1,020	1,020
Min Side Clearance	mm	1,000	1,000	1,000	1,000	1,000
Min Boiler Room Length	mm	3,960	4,490	4,830	4,860	5,180
Weight						
Shipping Weight @ 10 bar Working Pressure	kg	870	1,040	1,240	1,350	1,490



Model	Unit	PHWB-35	PHWB-40	PHWB-50	PHWB-60	PHWB-70
Technical Data						
Thermal Capacity	kw	407	465	581	697	814
Thermal Capacity	kcal/hr	350,000	400,000	500,000	600,000	700,000
Working Pressure	bar	up to 30 bar				
Pressure Drop in Combustion Chamber	mbar	1.1	1.2	1.21	1.30	1.41
Design Standard	_	BS/EN 12953				
Max Gas Consumption @Sea Level	m^3/hr	41	47	58	70	82
Max Fuel Oil Consumption @Sea Level	liter/hr	38	43	54	65	75
Max Heavy Fuel Oil Consumption @Sea Level	liter/hr	36	41	51	62	72
Connectoins Size						
Water Outlet (L)	in	2	2 1/2	2 1/2	3	3
Water Inlet (K)	in	2	2 1/2	2 1/2	3	3
Safety Valve @ 10 bar Working Pressure (M)	in	1	1	1	1 1/4	1 1/4
Venting Valve (N)	in	1	1	1	1	1
Drain Valve (O)	in	1	1	1	1	1
Stack I.D. (P)	in	12	12	12	12	12
Boiler Dimensions						
Length (A)	mm	2,380	2,400	2,350	2,350	2,410
Width (E)	mm	1,410	1,440	1,440	1,500	1,600
Boiler Outside Diameter (G)	mm	1,110	1,140	1,170	1,230	1,300
Height (J)	mm	1,580	1,610	1,640	1,700	1,770
Min Front Clearance	mm	1,900	1,900	1,900	1,900	2,010
Min Rear Clearance	mm	1,120	1,120	1,120	1,120	1,120
Min Side Clearance	mm	1,000	1,000	1,000	1,000	1,000
Min Boiler Room Length	mm	5,400	5,420	5,370	5,370	5,540
Weight						
Shipping Weight @ 10 bar Working Pressure	kg	1,580	1,600	1,700	1,840	2,180



Model	Unit	PHWB-80	PHWB-90	PHWB-100	PHWB-125	PHWB-150	PHWB-175	PHWB-200
Technical Data								
Thermal Capacity	kw	930	1,046	1,163	1,453	1,744	2,035	2,325
Thermal Capacity	kcal/hr	800,000	900,000	1,000,000	1,250,000	1,500,000	1,750,000	2,000,000
Working Pressure	bar	up to 30 bar						
Pressure Drop in Combustion Chamber	mbar	1.50	1.70	1.85	1.95	2.05	2.15	2.45
Design Standard	_	BS/EN 12953						
Max Gas Consumption @ Sea Level	m^3/hr	93	105	117	145	175	204	233
Max Fuel Oil Consumption @Sea Level	liter/hr	86	97	107	134	161	188	214
Max Heavy Fuel Oil Consumption @Sea Level	liter/hr	82	92	102	128	153	179	205
Connectoins Size								
Water Outlet (L)	in	3	3	4	4	5	5	5
Water Inlet (K)	in	3	3	4	4	5	5	5
Safety Valve @ 10 bar Working Pressure (M)	in	1 1/4	1 1/4	1 1/2	1 1/2	2	2	2 1/2
Venting Valve (N)	in	1	1	1	1	1	1	1
Drain Valve (O)	in	1	1	1 1/4	1 1/4	1 1/4	1 1/2	1 1/2
Stack I.D. (P)	in	14	14	16	16	16	16	18
Boiler Dimensions								
Length (A)	mm	2,540	2,710	2,900	3,190	3,410	3,720	3,720
Width (E)	mm	1,650	1,650	1,730	1,760	1,880	1,940	1,990
Boiler Outside Diameter (G)	mm	1,350	1,350	1,410	1,440	1,560	1,630	1,650
Height (J)	mm	1,820	1,840	1,920	1,950	2,070	2,170	2,190
Min Front Clearance	mm	2,010	2,180	2,300	2,580	2,700	3,100	3,100
Min Rear Clearance	mm	1,180	1,180	1,280	1,280	1,280	1,280	1,400
Min Side Clearance	mm	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Min Boiler Room Length	mm	5,730	6,070	6,480	7,050	7,390	8,100	8,220
Weight								
Shipping Weight @ 10 bar Working Pressure	kg	2,280	2,480	3,000	3,420	4,020	4,680	4,750

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

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

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