ENERGY PROCESS EQUIPMENTS

IBR PACKAGE STEAM BOILER

IBR approved manufacturer

proven, **safe** economical, **energy** saving,
smoke tube horizontal
steam boiler

Advantages of Steam Boiler

High Operating Safety

- Rugged and sturdy design
- Two safety valves for release of high pressure steam
- Pressure switch for cut out of boiler at high pressure steam
- Automatic water level controller
- Low water lock out of boiler
- Alarm for low water level in boiler

Optional Feature

- West heat recovery unit
- Cyclone dust collector
- Water softening plant
- Fully automatic oil/gas firing
- M.S. chimney and chimney duct
- Feed water tank
- Fuel tank

Easy Installation

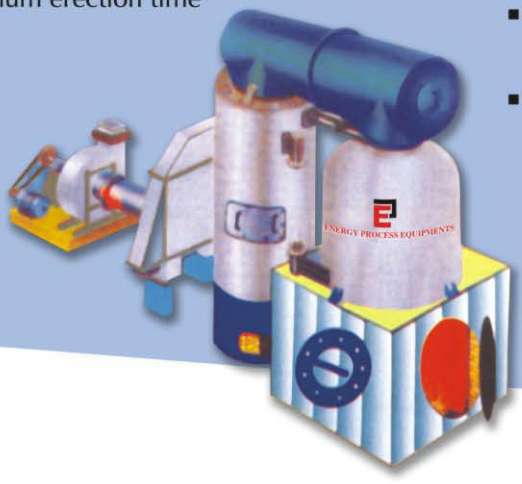
- Package type boiler
- Minimum civil work
- Minimum erection time

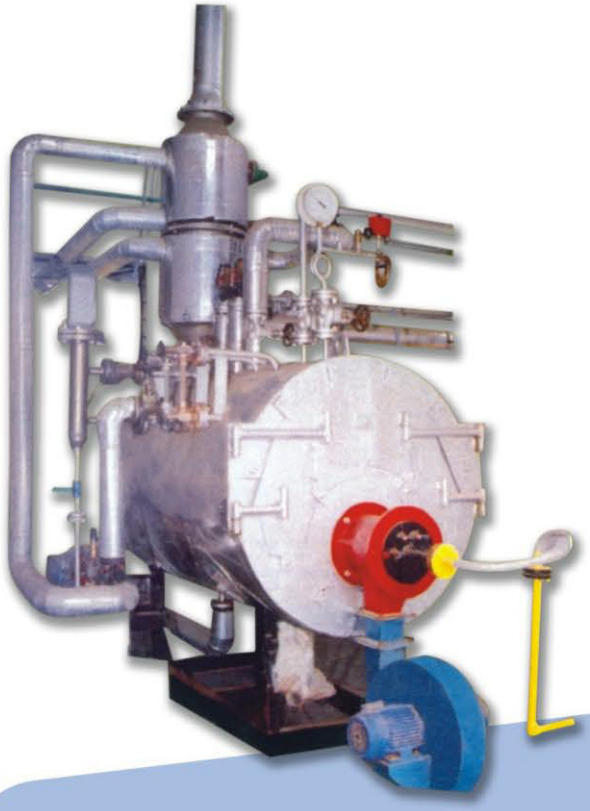
Quick start up and prompt response

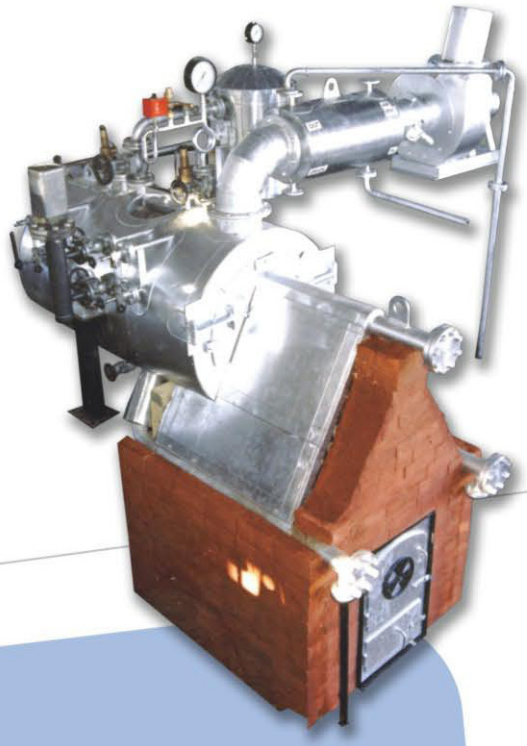
- Effective natural circulation
- Low startup time
- Excellent response to load fluctuations

Low and hassle-free maintenance

- No circulation pumps
- A manhole provided at the top of the boiler
- Two manhole provided at the bottom of the boiler for cleaning/sludge removal
- Hinged doors provided on side for easy smoke tube cleaning
- No soot blowers





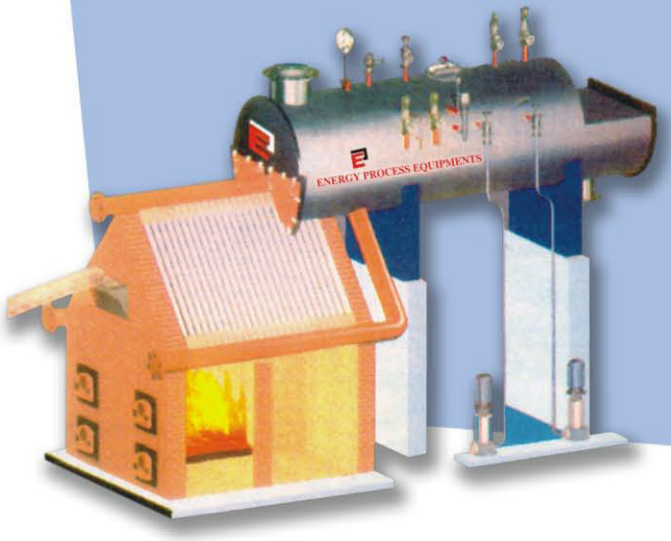


Largest Heating Surface Area

- Low fouling factor
- Better performance over extended period

Large Water Holding Capacity

- Better quality of steam
- Higher TDS permitted in boiler ensuring low frequency of blow down



Design and Manufacturing

The boilers have three pass horizontal smoke tube, shell type package wet hack design with 100% radiography and are class-1 fusion- welded. They are manufactured as per India Standards (ISO-R/831).

Quality and After Sales Service

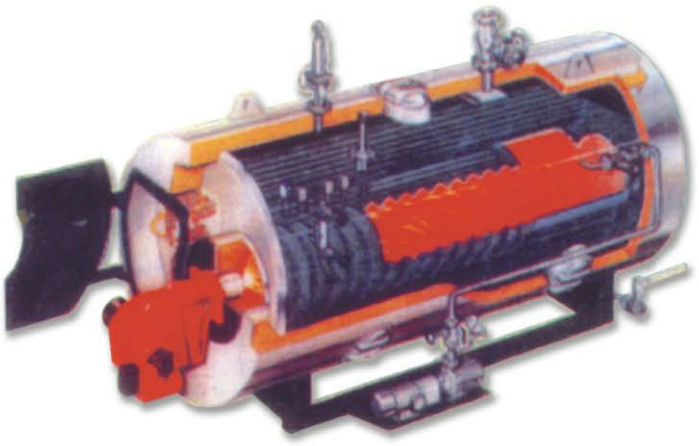
All product designed and manufactured by EPE are highly efficient due to extensive testing and actual product line application.

EPE's experienced and quality service division is always ready to offer round the clock prompt and reliable service to customers.

Technical Specifications of Oil / Gas Fired IBR Steam Boiler

MODELS	UNIT	IBO-6	IBO-8	IBO-10	IBO-15	IBO-20	IBO-30	IBO-40	IBO-50	IBO-60
Evaporation Capacities F & A at 100 Deg.C	**Kg./Hr.**	600	800	1000	1500	2000	3000	4000	5000	6000
Working Pressure	**Kg./Cm²**	←	→		10.54 Kg./Cm² to 25.00 Kg./Cm²			←	→	
Ratings	**M²**	18+	24+	33+	47+	66.55+	92.5+	120+	150+	180+
Efficiency on GCV	**%**	←	→			88 ± 1%		←	→	
Fuel Consumption - LDO	**Kg./Hr.**	36	48	60	90	120	180	240	300	360
FO	**Kg./Hr.**	38.1	50.8	63.5	95	126.6	190.5	254	317.5	381
Natural Gas	**M³/Hr.**	36	48	60	90	120	180	240	300	360
Fuel Oil Pump	**HP**	0.5	0.5	0.5	0.75	0.75	1.0	1.0	1.0	1.0
Water Feed Pump	**HP**	1.0	1.0	2.0	2.0	2.0	5.0	5.0	7.5	7.5
Blower Motor	**HP**	2.0	3.0	5.0	5.0	7.5	10.0	15.0	20	20
Electric Supply		←	→		415 Volts, 50Hz, 3 Phase, 4 Wire			←	→	
Manufacturing Design Code		←	→		IBR-1950 or ISO/R-831 with latest amendment			←	→	
Dimension (Approx.) Length	**mm**	3000	3000	3500	5000	5200	5500	5500	5500	5500
Width	**mm**	1600	1800	1800	2400	2500	3000	3500	3600	4000
Height	**mm**	1600	1800	2200	3000	3000	3000	3500	3600	4000
Dry Weight (Approx.)	**Kgs.**	3000	4000	5500	8500	10000	15000	18000	22000	24000

Note : - For FO fired model up to 3000 kg/hr, loads of electric pre-heater of H&P unit, storage tank heater and service tank heater will be 2kw , 3kw and 2kw respectively.
- For FO fired model above 3000 kg/hr, loads of electric pre-heater of H&P unit, storage tank heater and service tank heater will be 4kw, 6kw and 4kw respectively.
- Designs are subject to change without prior notice due to continuous R&D.



- Gross calorific value of LDO 10,700 Kcal/Kg.
- Gross calorific value of HSD 10,900 Kcal/Kg.
- Gross calorific value of FO 10,200 Kcal/Kg.
- Gross calorific value of LSHS 10,550 Kcal/Kg.
- Gross calorific value of NG 8,500 Kcal/M³

The boiler units indicated in the above table are as per our current manufacturing range.

We also manufacture and supply customized boilers.

Technical Specifications of Solid Fuel Fired IBR Steam Boiler

MODELS	UNIT	IBO-6	IBO-8	IBO-10	IBO-15	IBO-20	IBO-30	IBO-40	IBO-50	IBO-60
Evaporation Capacities F & A at 100 Deg.C	**Kg./Hr.**	600	800	1000	1500	2000	3000	4000	5000	6000
Working Pressure	**Kg./Cm²**	←	→		10.54 Kg./Cm² to 25.00 Kg./Cm²			←	→	
Ratings	**M²**	25.5+	32+	44+	61+	84+	121+	161+	210+	242+
Efficiency on GCV	**%**	←	→		75 ± 1%			←	→	
Imported Coal Consumption	**Kg./Hr.**	75	100	125	188	250	375	500	625	750
Feed Pump	**HP**	1.0	1.0	2.0	2.0	2.0	5.0	5.0	7.5	7.5
Induced Draft Fan	**HP**	2.0	3.0	3.0	5.0	7.5	10.0	15	20	20
Electric Supply		←	→		415 Volts, 50Hz, 3 Phase, 4 Wire			←	→	
Manufacturing Design Code		←	→		IBR-1950 or ISO/R-831 with latest amendment			←	→	
Dimension (Approx.) Length	**mm**	3000	3000	3500	4000	5000	5500	6000	6500	7000
Width	**mm**	1800	2000	2100	2700	3000	3200	3500	3500	3500
Height	**mm**	2000	2300	2400	2700	2700	3500	3500	4000	4000
Dry Weight (Approx.)	**Kgs.**	4500	5000	6000	10000	13500	20000	24000	25000	30000

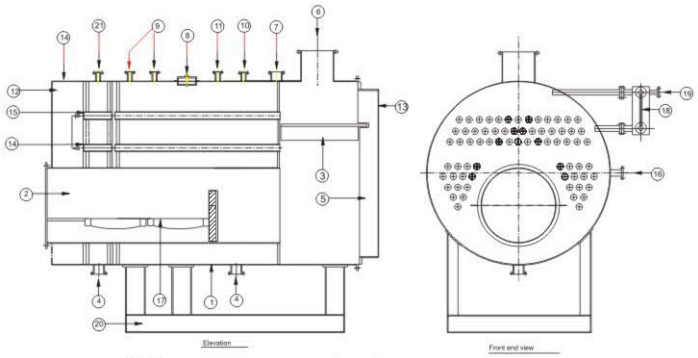
Note : Designs are subject to change without prior notice due to continuous R&D.

- Gross calorific value of imported coal 5,500 Kcal/Kg.
- Gross calorific value of steam coal 4,500 Kcal/Kg.
- Gross calorific value of lignite 3,500 Kcal/Kg.

The boiler units indicated in the above table are as per our current manufacturing range.

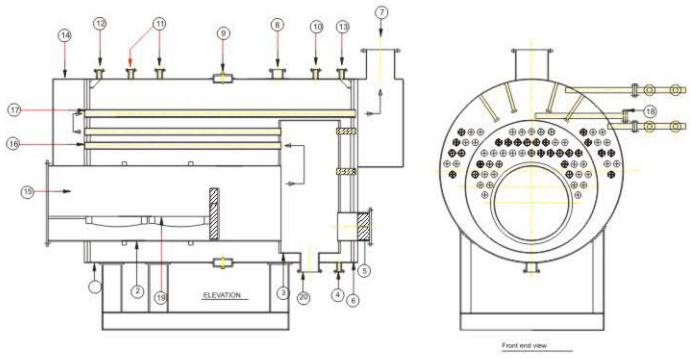
We also manufacture and supply customized boilers.

DRY BACK MODEL



Part No.	Part Name	Part No.	Part Name
1	Economiser Shell	11	Hot Water Outlet
2	Firing Furnace Chamber	12	Front Door
3	Partion Plate	13	Back Door
4	Blow Down Valve	14	2" Pass Tube
5	Refrectory	15	3" Pass Tube
6	Flue Gas Outlet To Chimney	16	Water Inlet
7	Steam Stop Valve	17	Fire Bar
8	Man Hole	18	Water Level Indicator
9	Safety Valve	19	Pressure Switch
10	Air Vent	20	Base Frame
21	Pressure Guage		

WET BACK MODEL



Part No.	Part Name	Part No.	Part Name
1	Economiser Shell	11	Safety Valve
2	Firing Furnace Chamber	12	Pressure Guage
3	Reversal Chamber	13	Air Vent
4	Blow Down Valve	14	Front Smoke Box
5	Rear Access. Hole	15	Combustion Firing Head
6	Rear Refactory	16	IInd Pass Tube
7	Flue Gas Outlet To Chimney	17	IIIrd Pass Tube
8	Main Steam Stop Valve	18	Water Inlet
9	Man Hole	19	Fire Bars
10	Auxiliary Valve	20	Ash Disposal

We also manufacture:

Oil Fired Thermic Fluid Heating System

Solid Fuel Fired IBR Steam Boiler

Oil/Gas Fired SIB Boiler

Smoke Tube Type, Horizontal Oil/Gas Fired Boiler

Oil Fired Fully Automatic Coil Type Steam Boiler

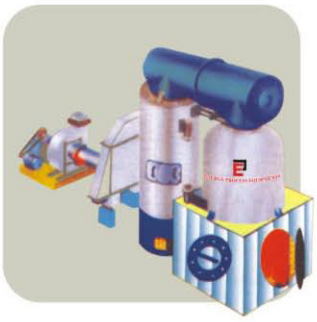
Oil Fired IBR Steam Boiler

Solid Fuel Fired External Firing Hot Air Generator

Solid Fuel Fired Water Wall Smoke Cum Water Tube Boiler

Smoke Tube Type, Horizontal Solid Fuel Fired Boiler

Solid Fuel Fired Horizontal Thermic Fluid Heater



Solid Fuel Fired Vertical Four Pass Thermic Fluid Heater

Electrical Heated Dual Type Thermic / Boiler

Marketed & Manufactured by

ENERGY PROCESS EQUIPMENTS

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