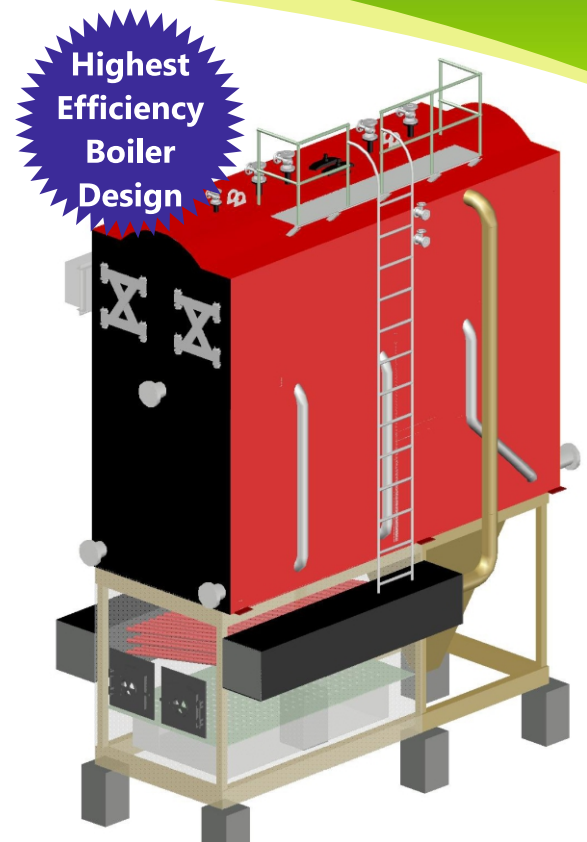


“A technological marvel in FBC Boilers”

■ Unique design features

- The incorporation of a technology breakthrough, in the form of 'inbed heat recovery' makes this steam boiler simply outstanding in its class.
- The heat recovery thus achieved brings phenomenal advantages to users in the form of:
 - Highest efficiency- 85%
 - Decrease in power consumption- by 40%
 - Reduced footprint area- by 25%
 - Multi-fuel capability
- Automatic, mechanised fuel feeding ensures consistent performance in the form of temperature and heat output. Also, the high turbulence of the bed facilitates quicker responses to changes in demand.
- Heat extraction from combustor, by cooling coils, reduces excess air requirement for combustion and controls bed temperature.
- Reduced air requirement leads to lesser handling of air which, in turn, provides the advantage of reduced power consumption.



■ Advantages of Fluidized bed combustion:

Fluidized bed system uses fluidizing bed media (sand) to catch flying away unburnt fuel particles to give enough time for complete combustion and to distribute heat evenly throughout combustion area, resulting in more than 98% combustion efficiency.

- Ability to burn high fines & low grade fuels with high ash.
- Fast response to load fluctuations like oil fired systems.
- Very low maintenance cost & high reliability.



■ Operating cost advantage

	Isotex Ecobloc CS-IF	Steam boiler Conventional FBC	Steam boiler Grate Fired
Capacity @ F & A 100 Deg C (Kg/hr)	6000	6000	6000
Thermal efficiency - NCV	85%	80%	75%
Fuel Consumption - Coal -NCV-4000 kcal/kg	953 kg/hr	1013 kg/hr	1080 kg/hr
Annual fuel (7200 hr) cost (5 INR / kg fuel)	34.3 M (INR)	36.5 M (INR)	38.8 M (INR)
Connected power	64 kW	83 kW	49 kW
Annual (7200 hr) power cost (Power 7 INR / kWh)	3.2 M (INR)	4.2 M (INR)	2.4 M (INR)
Man power required (2 shift operation)	2 operator +2 fireman +4 casuals	2 operator +2 fireman +4 casuals	2 operator +2 fireman +8 casuals
Annual (7200 hr) Man power cost (Approx)	1 M (INR)	1 M (INR)	1.26 M (INR)
Total operating Cost Per Annum In Million (INR)	38.5 M (INR)	41.6 M (INR)	42.6 M (INR)
Saving with Isotex Ecobloc CS-IF		3.1 M (INR)	4.2 M (INR)



About Isotex

- Establishment in 1978, over 35 years of excellence
- Over 7000 installations worldwide till date
- Over 400 units manufactured annually
- National wide sales, service & spares support, through branch offices & channel partners.
- Leader in design & engineering of boiler & heaters
- Technical know-how from ERK Eckrohrkessel GmbH, Germany
- Isotex manufacturing facilities are spread at various locations Ahmedabad and Dahej in over 60,000 sqm area.



State-Of-The Art Boiler Production

- ① Fully automated cutting station with plasma and oxyacetylene cutting
- ② Heat treatment furnace, Inhouse heat treatment for stress relieving
- ③ Fully automated submerged arc welding station for high quality of shell welding.
- ④ Inhouse shot blasting facility to take care of rust, corrosion resulting in high quality of surface finish
- ⑤ Automated Membrane Panel welding line for uniform quality gas tight tube-fin-tube welding
- ⑥ Hydraulic bending of tubes - Automated booster bending station
- ⑦ Boiler manufacturing facility at Dahej

Technical Specification For Ecobloc

Description	Unit	CS-IF-500	CS-IF-600	CS-IF-800	CS-IF-1000	CS-IF-1200	CS-IF-1500
Boiler type	Horizontal multitubular shell type, fire tube with water-wall furnace with FBC combustor						
Steam output F & A 100 deg C	kg/hr	5000	6000	8000	10000	12000	15000
Design pressure	kg/cm ² (g)	10.54 / 17.54					
Steam Temperature		185 / 208					
Dryness fraction		98%					
Thermal efficiency	85± 2% on NCV, Imported coal (as per BS 845 + 2%)						
Fuel consumption							
Imported coal (NCV5300 kcal /kg)	kg/hr	599	719	959	1199	1438	1798
Palm kernel (NCV 4000 kcal / kg)	kg/hr	813	976	1301	1627	1952	2440
Power supply	415 V± 6%, 50 Hz ± 3% AC 3 Phase with neutral						
Total connected load							
10.54 kg/cm ² g	kW	57	64	84	104	137	167
Above units with standard multi-cyclone dust collector option of additional bag-filter, wet-scrubber is also available							

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In view of our constant endeavour to improve the quality of our products, we reserve the right to alter or change specifications/information without prior notice.