



FUEL FEEDING SYSTEM

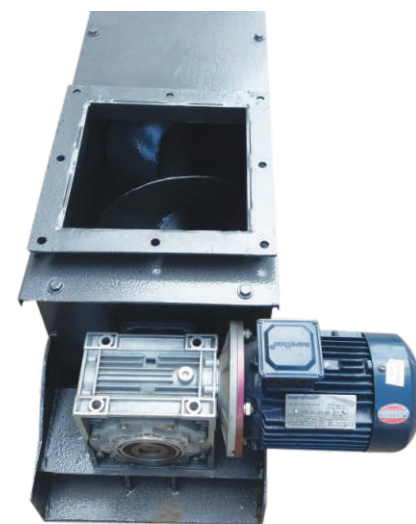
Combo (MSCF) comes with various fuel feeding options, which offer the flexibility to fire a wide variety of solid fuel in this boiler.

UNDER BED FEEDING (UBF)

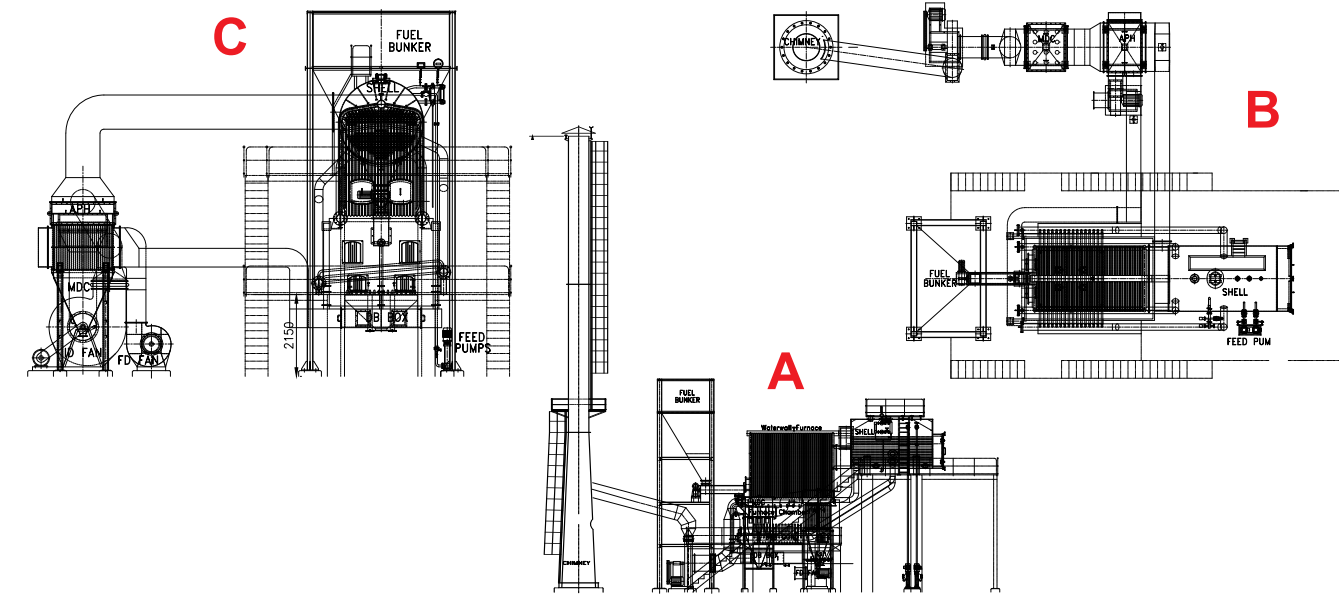
The under bed feeding system is suitable for fuels like rich husk, Indian Coal, Indonesian Coal, Lignite etc. The under bed feeding system consists of a rotary feeder and a booster fan.

OVER BED FEEDING (OBF)

The over bed feeding system in the boiler is suitable for fuels like Indian coal and paddy husk. The over bed feeding system consists of a screw feeder.



GENERAL ARRANGMENT



TECHNICAL SPECIFICATIONS

DESCRIPTION	UNIT	FBC BOILER WITHOUT BED COIL			FBC BOILER WITH BED COIL				
		MSCF-50	MSCF-60	MSCF-80	MSCF-60	MSCF-80	MSCF-100	MSCF-120	MSCF-140
Max. Steam Output F&A 100 Deg. C	Kg/hr.	5000	6000	8000	6000	8000	10000	12000	14000
Max. Working Pressure	Kg/Sq.cm	10.54	10.54	10.54	10.54	10.54	10.54	10.54	10.54
Max. Working Temperature	°C	185	185	185	185	185	185	185	185
Overall Width [A]	mm	3400	3400	3750	3800	4250	4250	4550	4650
Overall Length [B]	mm	8600	9150	9500	9150	9500	9500	11000	11500
Overall Height [C]	mm	8260	8300	8600	8300	8600	8600	11000	11500
Space for Tube Maintenance	mm	4000	4000	4000	4000	4000	4000	5250	5250
Boiler House - Width	mm	11500	11500	12750	12000	13250	13250	13750	14000
Boiler House - Length	mm	17000	18000	19000	18000	19000	19000	22000	22500
Boiler House - Height [Clear]	mm	10000	10000	10500	10000	10500	10500	13000	13500
Weight of Boiler - Hydro	kg	41150	49450	55450	51950	59700	61450	76000	79000
Weight of Boiler - Operating	kg	39650	47250	53450	49750	57700	59450	72250	75250
Safety Valve In/Out & Qty	NB/Nos.	40/80-2Nos	40/80-2Nos	50/100-2Nos	40/80-2Nos	50/100-2Nos	50/100-1 No, 80/100-1 No,	80/100-2Nos	80/100-2Nos
Main Steam Stop Valve	NB	100	150	150	150	150	200	200	200
Blowdown Valve - Shell	NB	40	40	40	40	40	40	40	40
Blowdown Valve - WWL	NB	25 - 2 Nos.	25 - 2 Nos	25 - 2 Nos	25 - 2 Nos	25 - 2 Nos	25 - 2 Nos	25 - 2 Nos	25 - 2 Nos
Auxiliary Steam Valve	NB	25	25	25	25	25	25	25	25
Water Level Gauge	NB	20	20	20	20	20	20	20	20
Feedwater Inlet Stop Valve	NB	40	40	50	40	50	65	65	65
Feedwater Inlet Check Valve	NB	40	40	50	40	50	65	65	65
Pressure Gauge Isolation Valve	NB	15	15	15	15	15	15	15	15

Note : Design Code IBR, Efficiency is calculated based on NCV of Paddy Husk as 2900 kcal/kg, Imp. Coal as 5570 kcal/kg, Ind. Coal as 4290 kcal/kg, Biomass briquette as 3600 kcal/kg & Biomass pellets as 4300 kcals/kg. Above mentioned details are subjected to vary with Actual, kindly refers the offer document for more details required.

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COMBO

Multi Fuel Fired Steam Boiler with Fluidised Bed Combustion



Capacity Range
5000 to 20000 kgs/hr

Standard Operating Pressure
10.54, 14.5, 17.5kgs & 24.5 / sq.cm

PIONEERS IN ENERGY AND ENVIRONMENT

MAXTHERM (INDIA) PRIVATE LIMITED

MAXTHERM HOUSE

New No: 28/1 Old No: 38/1 Ganpathraj Nagar Main Road, Virugambakkam, Chennai - 600 092.
Tele: 044 - 2377 5911 / Mobile: +91 94983 70061 Email: sales@maxthermindia.com / info@maxthermindia.com
Web : www.maxthermindia.com



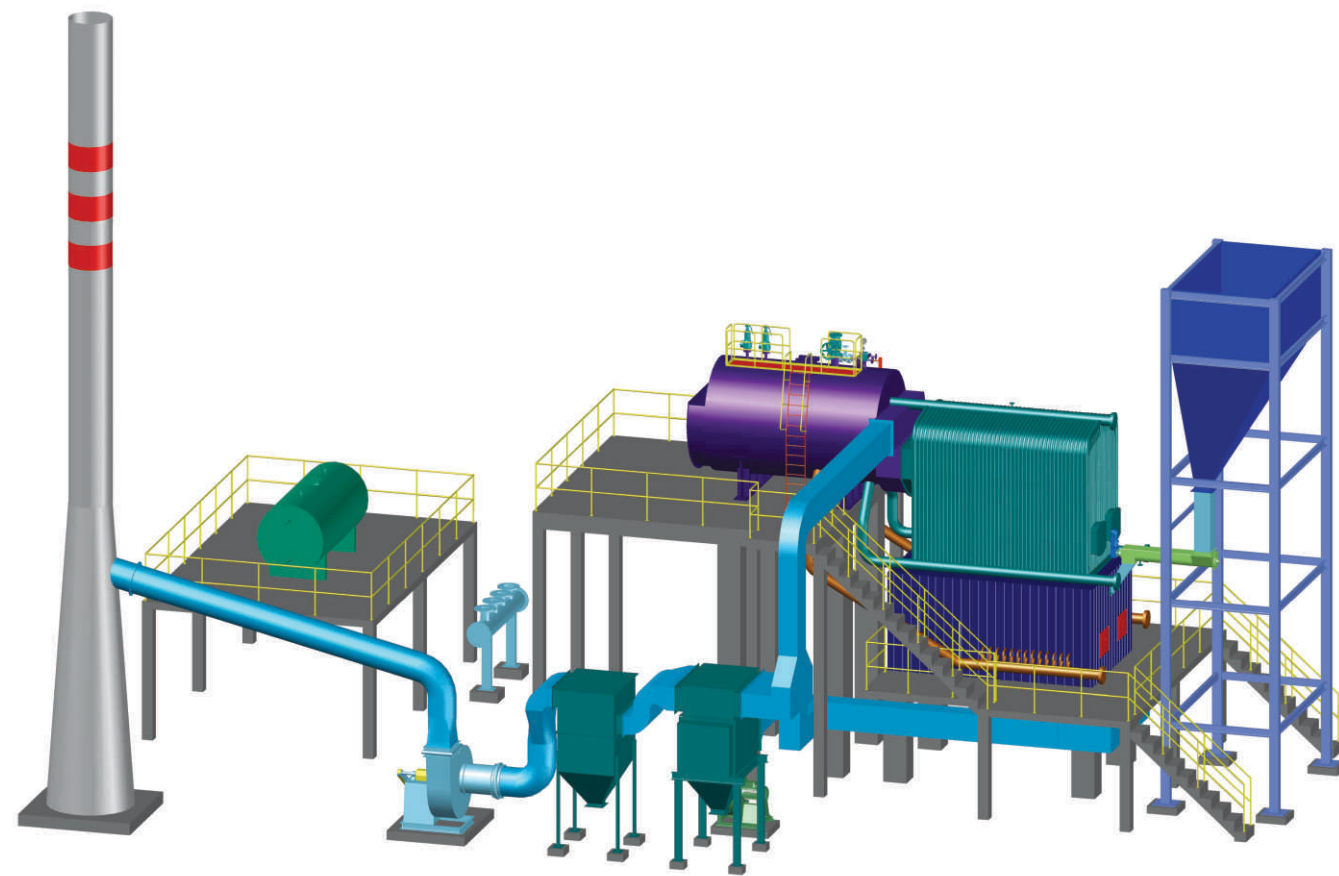
PIONEERS IN ENERGY AND ENVIRONMENT

The COMBO (MSCF) smoke and water tube design boiler, with the combustion based on the principle of fluidised bed combustion (FBC). The fuel bed is fluidised by the injection of air from the bottom of the bed, through a set of air nozzles using an FD fan. This produces a fuel bed resembling a boiling fluid, which helps achieve uniform mixing and efficient combustion.

In this combustion FBC range of boilers, the higher turbulence levels, better residence time, low excess air and uniform distribution of air and fuel improve overall combustion efficiency.

Combo boilers also offer the flexibility of firing a wide variety of low cost agro waste and other low grade solid fuels efficiently.

GA DRAWING



MEMBRANE PANEL

The furnace enclosure in the combo has a unique "5 Side" membrane panel design, with integrated in-bed tubes, for optimized heat transfer in the radiation zone.



SALIENT FEATURES "5 SIDE" MEMBRANE PANEL

The combo has a special 5 sides membrane panel assembly, which connects the in-bed header assembly circulation and circulating water velocity.

SHELL ASSEMBLY

SALIENT FEATURES EFFICIENT CONVECTIVE PASS DESIGN

The combo shell is of **TWO PASS** design, with tubes of optimally sizes diameters eliminating the turning of flue gas in the convective bank, thus reducing tube and tube plate erosion.

BETTER STEAM QUALITY & LOAD RESPONSE

Higher Steam / Water interface area and higher free board ensure better steam quality. The combo (MSCF) shell is also designed for large water holding capacity, thus ensuring better response to fluctuating loads.

WIRE COIL INSERTS

The convective bank tubes are provide with wire coil inserts to improve flue gas turbulence and velocity near the tube wall, thereby improving heat transfer performance.



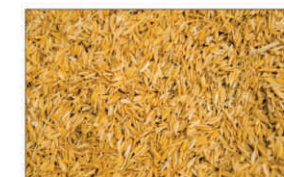
MULTI FUELS



Imported Coal



Wood Chips



Paddy Husk



Petcoke

TUBE-STRIP-TUBE CONSTRUCTION

Membrane panel assembly tubes are joined with strips to provide additional heat transfer area and to eliminate flow restriction. Also reduction in the number of tubes yields higher circulation velocity and avoids phase stratification.



BED COIL ASSEMBLY

The membrane panel in the combo (MSCF) is provided with integrated in-bed tubes to recover heat from the radiation zone and maintain uniform bed temperature.

SALIENT FEATURES

In the combo MSCF in bed header design, all bends have been placed outside the fuel bed zone. This helps eliminate erosion problem.

The in-bed header tube in the combo (MSCF) with its higher pitch, helps to achieve lower air and particle velocity between in-bed header tubes. This also helps to reduce erosion problems.

The (MSCF) in-bed header has been designed with very high circulation ratio and water velocity, to eliminate tube over heating problems.

