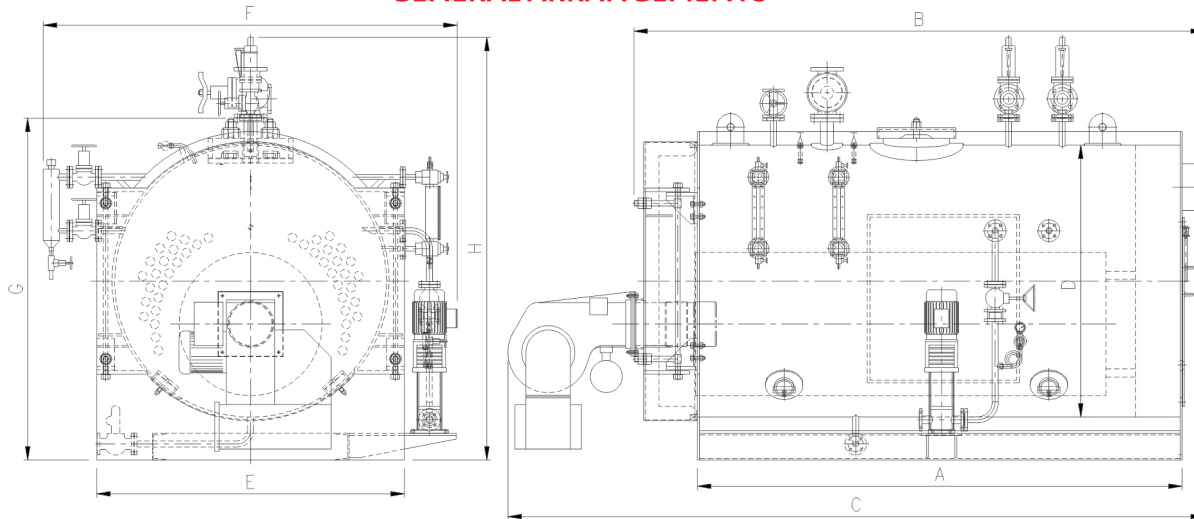


## GENERAL ARRANGEMENTS



## MSR / MSF BOILER DATA

SPECIFICATION		MSR						MSF		
Model	Unit	MSR 05	MSR 10	MSR 15	MSR 20	MSR 25	MSR 30	MSF 40	MSF 50	MSF 60
Nominal Steam Output	kg/hr.	500	1000	1500	2000	2500	3000	4000	5000	6000
Operating Pressure	Kgf/cm <sup>2</sup>	10.54	10.54	10	10	10	10	10	10	10
Operating Temperature (Steam)	°C	185	185	185	185	185	185	185	185	185
Heating Surface Area	Sq.M	15	25	35	48	58	75	98	122	144
Fuel Consumption - Light Diesel Oil	Kg/hr.	30.1	60.9	91.4	121.8	152.3	182.7	216.6	260	346.6
- Heavy Diesel Oil		31	62.2	93.3	124.4	155.5	186.6	221.3	265.5	354.2
- Natural Gas		38.3	76.6	114.9	153.2	191.5	229.8	272.6	327.1	436.1
Water content (Full)	Lits	1.82	2.26	3.40	4.20	4.50	5.72	6000	7200	8300
<b>Connection</b>										
Steam Outlet		25	65	65	80	100	100	100	100	150
Safety Valve Exhaust		50	50	50	50	50	50	80	80	100
Water Inlet		25	25	25	40	40	40	40	40	40
Drain Outlet	mm	25	25	25	40	40	40	40	40	40
Diesel Oil inlet		25	25	25	25	25	25	65	65	80
Natural Gas Inlet		25	25	25	25	25	25	65	80	100
Flue Gas Outlet		250	250	300	350	400	450	500	500	550
<b>Dimension</b>										
Shell Length - A		1550	2480	3200	3676	4045	4045	4500	5100	6750
Boiler Overall (Excl. Burner) - B		2250	3190	3700	4156	4545	4545	4755	6541	6250
Boiler Overall (Incl. Burner) - C		3000	3900	4470	4860	5260	5650	6190	7385	7279
Shell Diameter - D	mm	1270	1520	1520	1620	1670	1820	1983	1983	2395
Width Overall (Excl. Fittings) - E		1410	1720	1720	1800	1900	2020	2340	2352	2403
Width Overall (Incl. Fittings) - F		1910	2250	2350	2315	2425	2540	2940	3390	3910
Height overall (Excl. Fittings) - G		1635	1910	1910	2015	2080	2270	2470	2470	2711
Height overall (Incl. Fittings) - H		2200	2365	2365	2470	2550	2760	3370	3370	3611
<b>Power Reqd.</b>										
Feed Pump Motor		1.1	1.5	1.5	2.2	2.2	3	3	4	4
Burner Fan Motor - Diesel Oil Fired		2	2.2	3	4	5.5	5.5	12.1	12.1	12.1
Burner Fan Motor - Natural Gas Fired	KW	1	1.1	2.2	3	4	5.5	7.5	11.25	11.25
Burner Fan Motor - Combination		1	2.2	1.5	2.2	2.2	3	4	5.2	6.1
<b>Weight</b>										
Dry Weight of Boiler		2000	3200	4200	5000	5600	6400	9500	11000	12000
Wet Weight of Boiler (Hydro)	Kgs	3280	6200	8750	9950	10950	13150	23000	26500	32000
Operating weight of Boiler		2950	5600	7950	9100	9850	12000	19500	21000	24000

1. Conversion: 1"=25.4mm, 1b = 0.454 kg, 1 US Gal = 3.787xLits., 1Kg = 197 Kgf/cm<sup>2</sup>, 1oF=[(oC-32)/1.8] 1Kbtu/hr=2.137Kg/hr.
2. Fuel Consumption based on light oil 20, 160 Btu/lb (1120 Kcal/kg), Heavy Oil 19,729 btu/lb [10960 Kcal/kg], Natural Gas 1000 Btu/ft<sup>3</sup> [8900 Kcal/m<sup>3</sup>]
3. Specified Data's are for your reference only, The Company reserve the right to change the Data's/Specifica-cation without prior notice.
4. MSR: MAXSTEAM Reverse Flue Boiler.
5. MSF: MAXSTEAM three pass wet back Boiler.

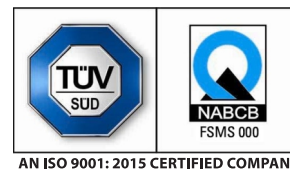
# MAXSTEAM

FULLY AUTOMATIC HORIZONTAL OIL / GAS FUEL IBR STEAM BOILER



### FULL FLEDGED SALES AND SERVICE NETWORK IN INDIA & ABROAD

Erode - Madurai - Tirupur - Bangalore - Cochin - Hyderabad - Mumbai  
New Delhi - Kolakatta - Pune - Bhubaneswar - Guwahati - Srilanka - Myanmar - Malaysia



AN ISO 9001: 2015 CERTIFIED COMPANY

#### Capacity Range

0.5 Ton / hr to 25 Tons / hr

#### Standard Operating Pressure

10.54 / 14.5 / 17.5 / 21 / 28 / 32 kgs / sq.cm

### MAXTHERM (INDIA) PRIVATE LIMITED

MAXTHERM HOUSE

New No: 28/1 Old No: 38/1 Ganpathraj Nagar Main Road, Virugambakkam, Chennai - 600 092.

Telefax: 044 - 2377 5911 / 23775912 / 2377 5913

Email : sales@maxthermindia.com web : www.maxthermindia.com



## PIONEERS IN ENERGY AND ENVIRONMENT

## DESIGN FEATURES

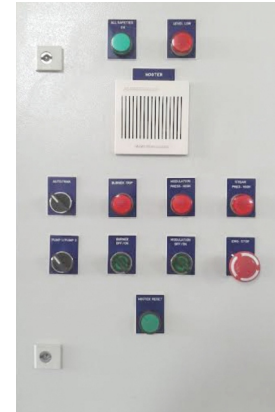
- ▶ Designed as per IBR / ASME
- ▶ Three pass full wet back design
- ▶ Capacity - 0.5 Ton/hr to 25 Tons/hr
- ▶ Maximum Working Pressure - 10.54 / 14.5 / 17.5 / 21.0 / 28 / 32 kgs/sq.cm
- ▶ Alternative Fuel Options - Light Oil, Heavy Oil, Natural Gas and LPG.
- ▶ Generous Heating Surface
- ▶ **COMPACT** Design
- ▶ **THIRD PARTY INSPECTION** Certificate available.
- ▶ **CHOICE** of make of Burners available RIELLO / ECOFLAM / WEISHAAPT



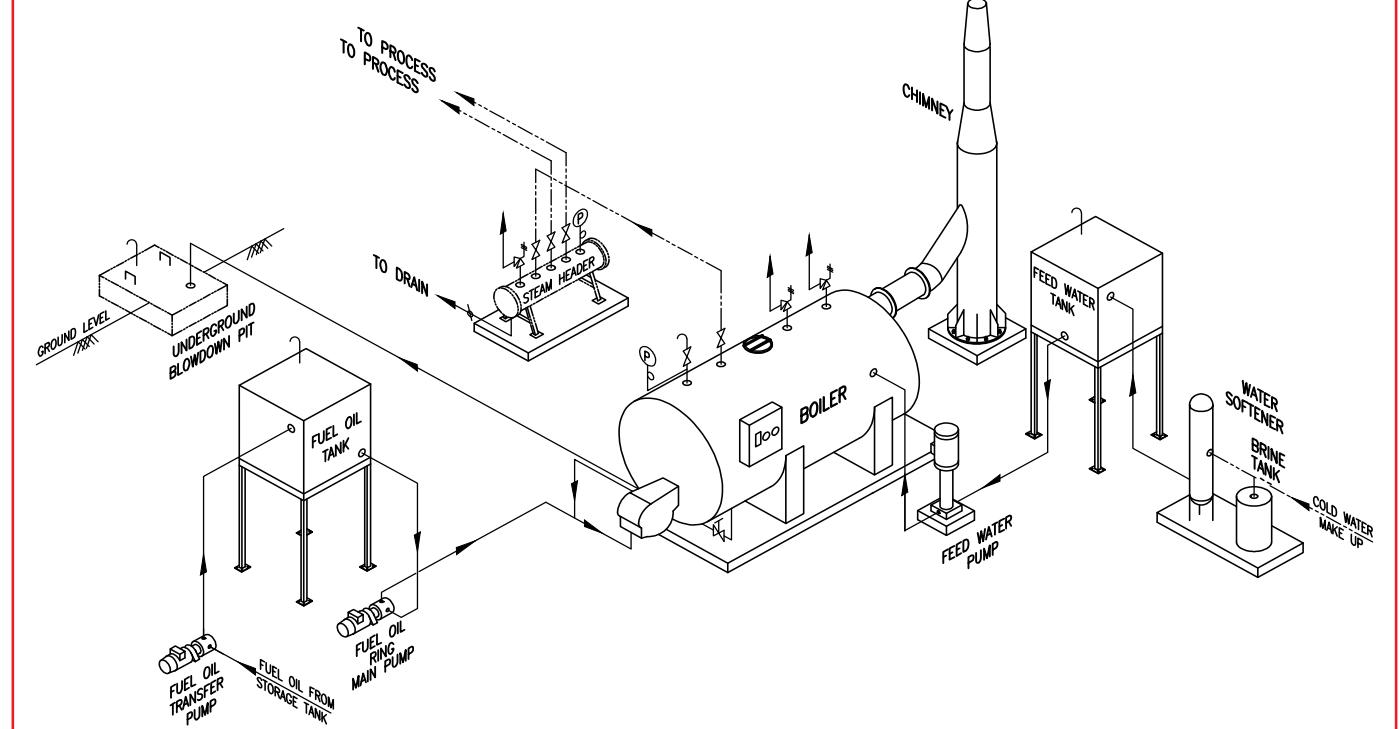
**BURNER**



**CONTROL PANEL**



## TYPICAL BOILER HOUSE ARRANGEMENT



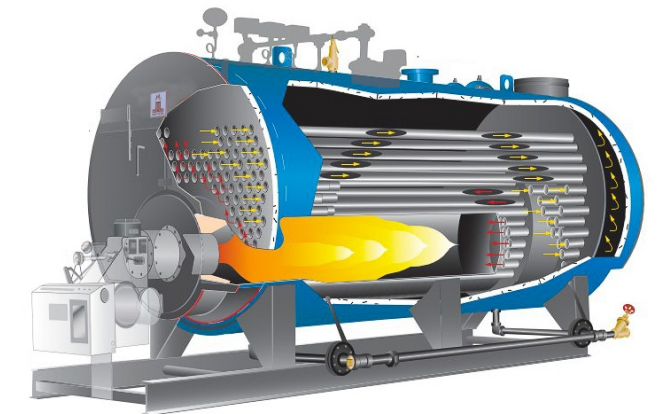
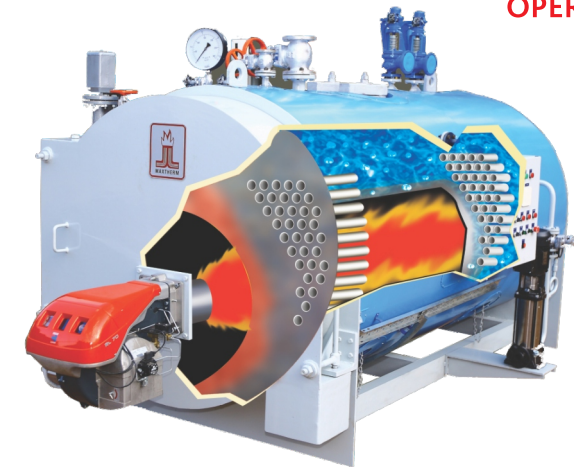
**MSR STEAM BOILER**



**MSF STEAM BOILER**



## OPERATING PRINCIPLE



### MAXSTEAM MSR REVERSE FLAME HORIZONTAL STEAM BOILER

MAXSTEAM MSR Boiler is a reverse flame horizontal boiler, in which fuel is injected from the burner into the combustion chamber, hence producing the steam as output. Heat transfer is done by radiation through long and narrow flame to the walls of combustion chamber. After hitting the furnace end plate, flue gas with high temperature recoils or reverse back. Convection and conduction process takes place to transfer the heat from flue gas to the boiler water. Then the flue gas flows into the fire tubes through front chamber, transferring residual heat to boiler water. Finally the low temperature flue gas vents out via rear chamber.

### MAXSTEAM MSF THREE PASS / WET-BACK HORIZONTAL STEAM BOILER.

MAXSTEAM MSF is a three pass, wet back boiler with bowling hoop furnace. Flame and high temperature flue gas passes from front to end of the furnace through first pass. The high temperature flue gas flows from back to front chamber, through the second pass tubes. Finally, the flue gas passes through the third pass tubes to the back of the boiler and vents out via rear chamber and ducts.

**25 TONS BI DRUM STEAM BOILER**

