



MAXTHERM BOILERS

MAXSTEAM MSR / MSF RANGE
Horizontal Fuel Fired Oil / Gas Capacity 0.5 TPH - 30 TPH



Operation Principle

MAXTEAM MSR REVERSE FLAME HORIZONTAL STEAM BOILER

MAXTEAM 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 and plate, flue gas with high temperature recoils or reverses 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.



MAXTEAM MSF THREE PASS/WET- BACK HORIZONTAL STEAM BOILER

MAXTEAM 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 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.



Salient Features

- Design as ASME / IBR / BS. Horizontal three pass fully wet back shell
- Reverse flame design.
- Large furnace volume ensure high combustion efficiency.
- All stay tube design ensure long tube life,
- Large water & steam furnace resting content steam pressure during peak loads.
- Options of burner makes available.
- Fully automatic Boiler & burner control.
- Designed for consistent efficiency of 88 + 2%.
- Compact and Rurred design.
- Boiler performance monitoring system.
- Third party inspection and approved by M/s. Bureau verita's / Lloyds.

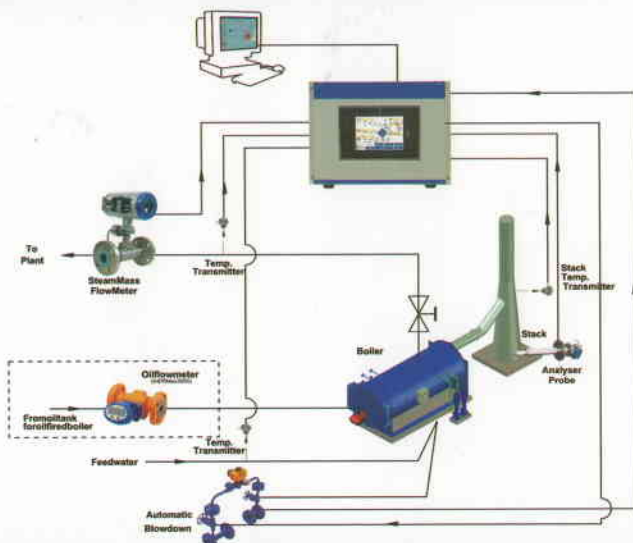


NU-WAY BURNER



GRUNDFOS VERTICAL MULTISTAGE FEED PUMP

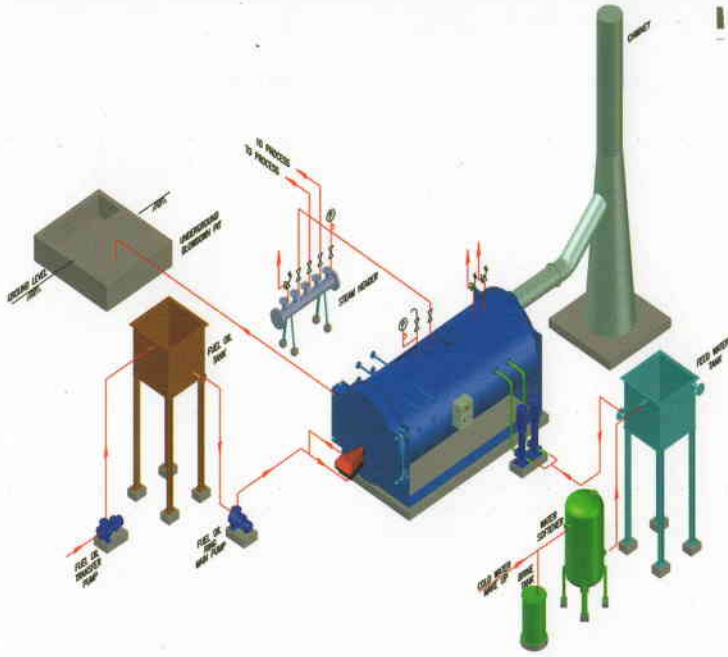
Boiler Efficiency Monitoring Packages



Packages Include

- Oxygen Analyser Probe for oxygen measurement in flue gases
- Steam temperature measurement
- Stack temperature measurement
- Automatic blowdown control system
- Feed water temperature measurement
- Computation and display unit
- Vortex type steam flowmeter
- Data acquisition and diagnostic software package
- Combustion air temperature measurement
- Oil / gas flow meter

Typical Boiler House Arrangement



Condensate recovery system



Energy saving up to 85%. Skit mounting for easy installation. Unit available up to 20 Ton.

OUR GALLERY



OUR FACTORY



WELDER IN ACTION



BOWLING HOOP FURNACE



FURNACE



SHELL ASSEMBLY

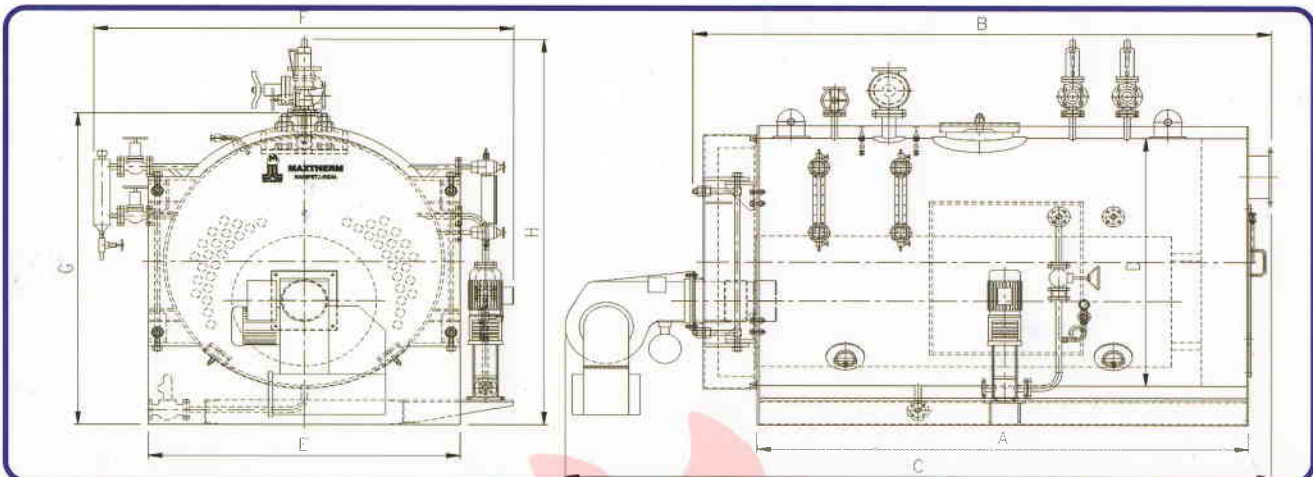


TWIN FURNACE WITH BOWLING HOOP

MSR / MSF BOILER DATA

Specification		MSR						MSF		
Model	Unit	MSR 05	MSR 10	MSR 15	MSR 20	MSR 25	MSR 30	MSF 40	MSF 45	MSF 60
Nominal Steam Output	Kg/hr	500	1000	1500	2000	2500	3000	4000	4500	6000
Operating Pressure	Kgf/cm ²	10.605	10.605	10.605	10.605	10.605	10.605	10.605	10.605	10.605
Operating Temperature [Steam]	C	185	185	185	185	185	185	185	185	185
Heating Surface Area	SQ/.M	15	25	35	45	58	75	100	110	140
Fuel Consumption-Light Diesel Oil		30.1	60.9	91.4	121.8	152.3	182.7	216.6	260	346.6
-Heavy Diesel Oil	Kg/hr.	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	321.1	436.1
Water Content [Full]	Lits	1.82	2.26	3.40	4.20	4.50	5.72	6.0	7.2	8.0
CONNECTIONS										
Steam Outlet		50	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	65	100
Fluel Gas Outlet		250	250	250	350	400	450	500	500	550
DIMENSION										
Shell Length - A		2200	2710	3350	3676	4045	4045	4500	5100	6750
Boiler Overall [Excl. Burner] - B		2690	3190	3760	4156	4545	4545	4755	6541	6250
Boiler Overall [Incl. Burner] - C		3290	3900	4470	4860	-	-	6190	7385	7279
Shell Diameter - D	mm	1200	1520	1520	1620	1670	1820	1983	1983	2395
Width Overall [Excl. Fittings] - E		1450	1720	1720	1800	1900	2020	2340	2352	2403
Width Overall [Incl. Fittings] - F		1950	2310	2310	2315	2425	2540			
Height Overall [Excl. Fittings] - G		1750	1910	1910	2015	2080	2270	2470	2470	2711
Height Overall [Incl. Fittings] - H		2200	2365	2365	2470	2550	2760	3370	3370	3611
POWER REQD										
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		1.5	2.2	1.5	2.2	2.2	3			
WEIGHT										
Dry Weight of Boiler		3100	3600	4200	5000	5600	6400	7200	7600	9120
Wet Weight of Boiler [Hydro]	kg	5800	7000	8740	9950	1095	13150	14600	15330	18300
Operating Weight of Boiler		5190	6300	7950	9100	09850	12000	13000	13650	16380

1. Conversion : 1" = 25.4mm, 1lb = 0.454 kg, 1 US Gal = 3.787xLits., 1Kg = 10.197 kg/cm², 1 F = [(C-32)/1.8] 1kBtu/hr = 2.137Kg/hr.
2. Fuel Consumption Based on Light Oil 20,160 Btu/lb [11200 Kcal/kg], Heavy Oil 19,728 Btu/lb [10960 Kcal/kg], Natural Gas 1000 Btu/ft³ [8900 Kcal/m³]
3. Specified Data's are for your reference only, The Company reserve the right to change the Data's./Specification without prior notice
4. MSR : MAXSTEAM Reverse Flue Boiler
5. MSF : MAXSTEAM three pass wet back Boiler



Maxtherm Boilers Pvt Ltd

32/12, T.S. Krishna Nagar,
 Anna Nagar West Extn., Chennai - 600 050. Tamil Nadu, India.
 Ph: 044 - 4380 6882/84/ 8939812821
 Email: sales@maxthermboilers.com Web: www.maxthermboilers.com