



ENERGY PROCESS EQUIPMENTS

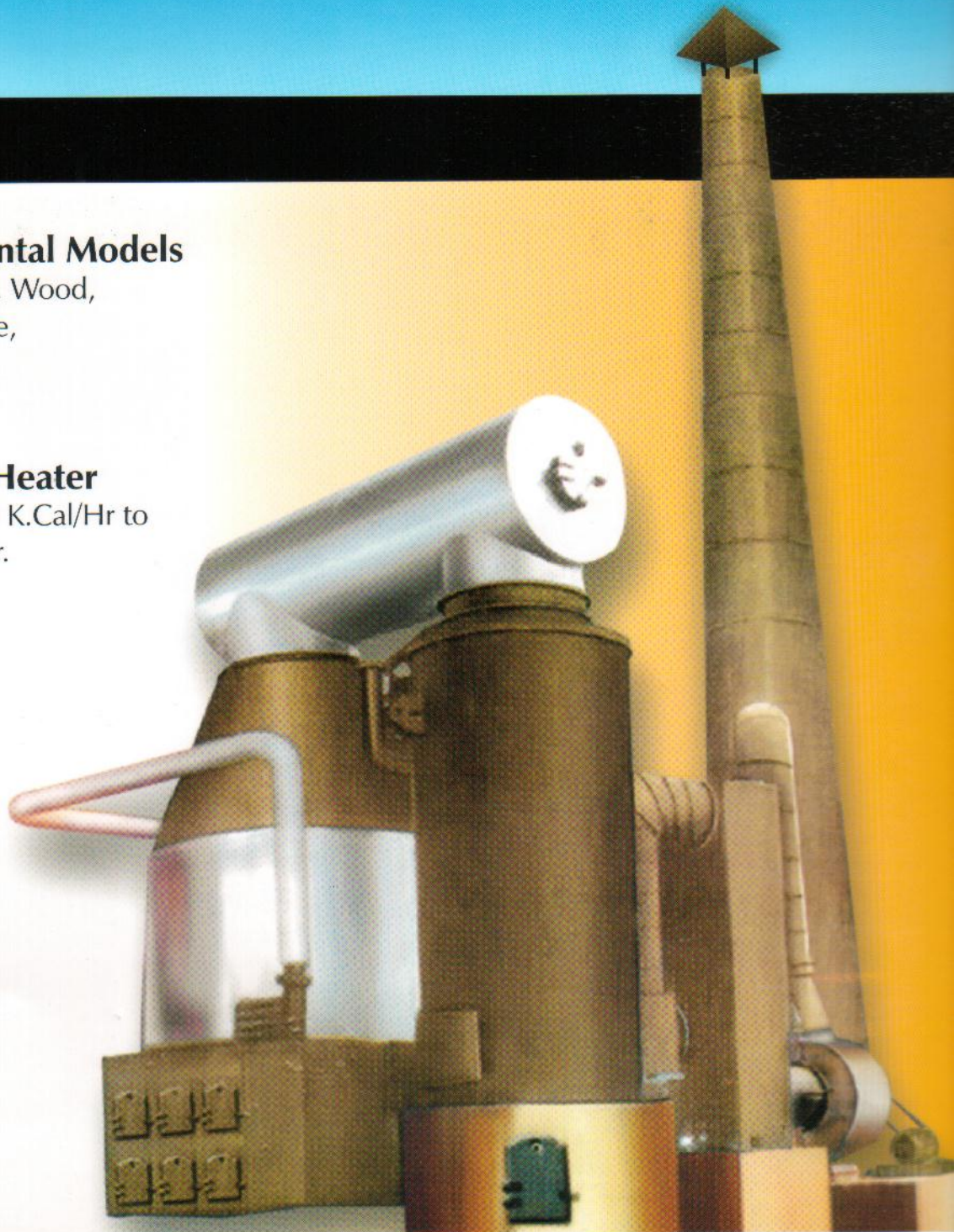
THERMIC FLUID HEATER

Vertical/Horizontal Models

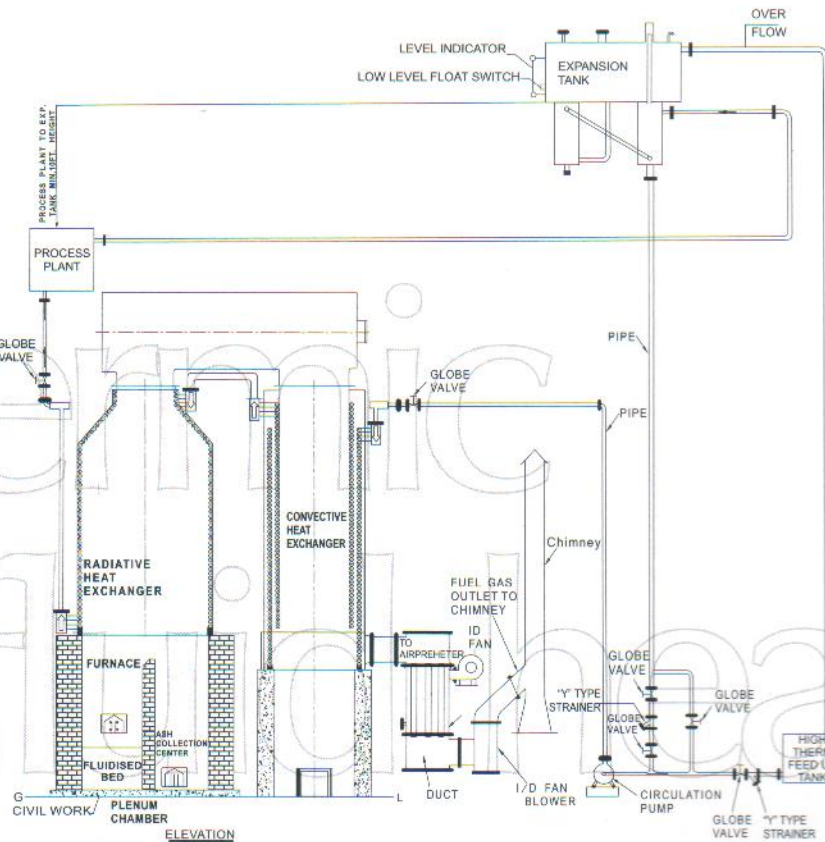
Coal, Husk, Lignite, Wood,
Agro-waste, Bagasse,
Pet-coke Fired.

Thermic Fluid Heater

Capacity: 1,00,000 K.Cal/Hr to
40,00,000 K.Cal/Hr.



THERMIC FLUID HEATER



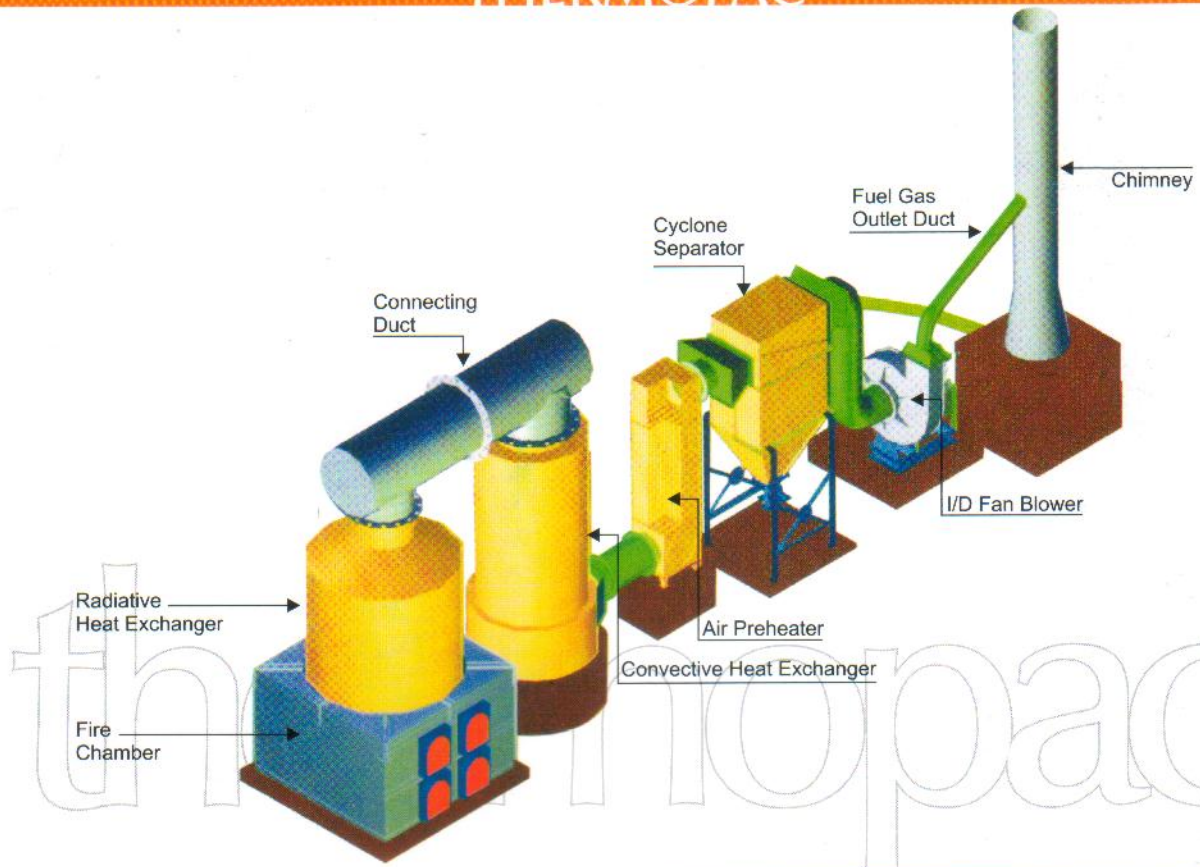
Operating Concept

The high temperature Thermic Fluid Heater is a forced Circulation water tube design in which thermic fluid under pressure circulate though a set of nested coils while draft combustion gases travel across the coils. The hot gases envelop the entire tube surface making maximum use of both Radiant & convective heat to achieve very high heat transfer rates.

A circulating pump is selected to give the proper flow rate and pressure for each application to optimize motor horse power required while maintaining low film temp. to ensure long fluid life. Temperature controls monitor the output temperature and regulates the supply of fuel & air to the furnace to provide efficient combustion of the fuel.

Technical data

Sr. No.	Thermic Fluid Heaters	Model	TVW 100	TVW 200	TVW 400	TVW 600	TVW 800	TVW 1000	TVW 1500	TVW 2000	TVW 2500	TVW 3000	TVW 4000
1.	Net Heat Output	K.Cal/hr.	1,00,000	2,00,000	4,00,000	6,00,000	8,00,000	10,00,000	15,00,000	20,00,000	25,00,000	30,00,000	40,00,000
2.	Thermic Fluid Flow Rate	Lit./hr.	9,000	15,000	26,000	40,000	55,000	75,000	1,10,000	1,35,000	1,75,000	2,10,000	2,75,000
3.	Circulation	HP	3	5	7.5	12.5	15	20	30	40	50	60	75
4.	Induced Draft Fan	HP	2	3	5	7.5	10	15	20	25	30	30	40
5.	Forced Draft Fan	HP	-	-	-	2	2	2	2	5	7.5	7.5	12.5
6.	Fuel Consumption-Coal	Kg./hr.	29	58	116	175	234	290	435	580	725	870	1160
	Husk	Kg./hr.	43	86.5	173	260	344	435	650	870	1087	1305	1740
7.	Total Load Electrical	KW	3.7	6	9.4	16.5	20.25	27.75	39	52.5	65.62	73.12	95.62



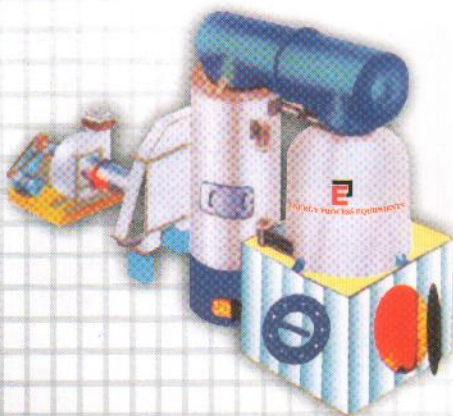
Salient Features

Excess Air Reduction : Radiant Heat Exchange above the furnace cooled. Hence, less excess air is required and ultimately increase efficiency.

Air preheating : combustion air from FD fan passes through air preheater that absorbs the waste heat in the fuel gases. It ultimately results into efficiency increase.

Balanced Draught System : It means reduction of infiltration of unwanted air though fire gates of minimum level. It results into maximum heat recovery from air preheater and assures greater efficiency.

Multifuel Option : Energy Thermopak is most suitable for Coal, Wood Waste, Bagasse, Lignite etc. for optimum level output with some modification in combustion chamber. Service is extended on client's demand.



Abnormal Condition	Safety Action
Power Failure	Diesel Engine keeps thermic fluid moving to avoid overheating
Low Thermic Fluid Flow	Differential pressure switch across inlet and outlet headers cuts off the fans, slowing down combustion
Low Thermic Fluid Level in Expansion Tank	Level switch cuts off the fans
Thermic Fluid level in beyond set limits	Temperature switch cuts off the fans
Thermic Fluid pump motor trip	Electrical interlock cuts off fans