



Utech Projects Pvt. Ltd.

THERMIC FLUID HEATER

**Wood Chips Firing
External Furnace**



**Solid Fired TFH
with HRU**



**Oil / Gas Fired
TFH System**



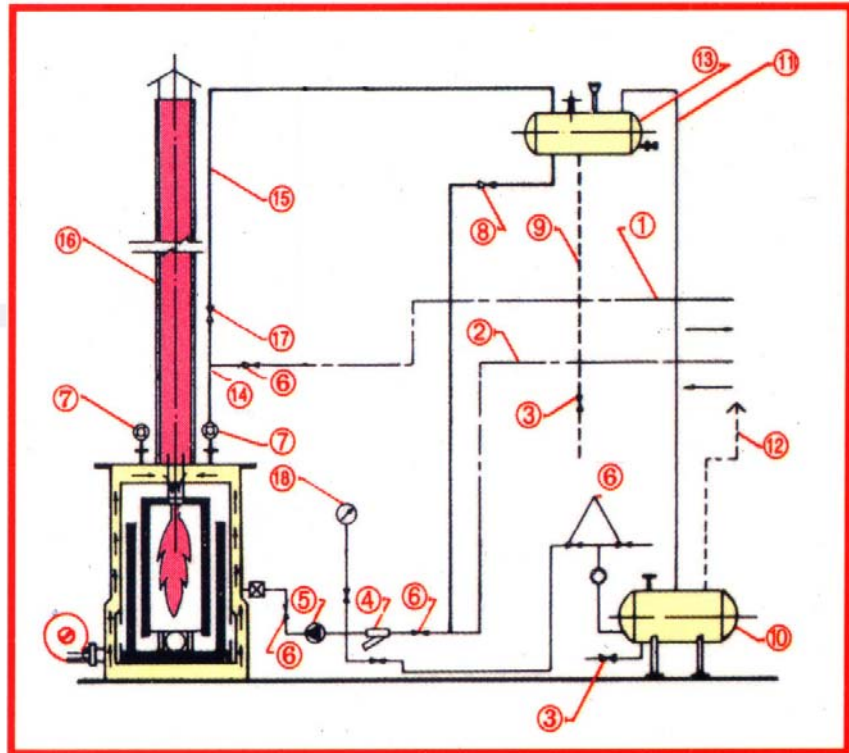
**Control Panel For
Automatic Operation**



- ◆ Higher Efficiency $88 \pm 2\%$ For Liquid & Gas, $75 \pm 2\%$ For Solid Fuel Firing
- ◆ Liquid Sealing Arrangement
- ◆ Simplex / Duplex Circulating Pump System
- ◆ Turnkey System

THERMIC FLUID HEATER

1. Outflow
2. Return Flow
3. Drain Valve
4. Strainer
5. Oil circulation Pump
6. Isolating Valve
7. Header
8. Suction Valve
9. Drain Pipe
10. Drain Tank
11. Air Expansion pipe
12. Airvent
13. Expansion Tank
14. Separator
15. Air Vent
16. Chimney
17. Airvent Valve
18. Pressure Gauge



THREE PASS VERTICAL / HORIZONTAL

Ist Pass : First pass of the flue gas is downward inside spirally wound coil through which thermic oil circulates. Exposed to maximum heating area to radiant heat.

IInd Pass : Upward in between the two spirally wound coil. Convective heating area.

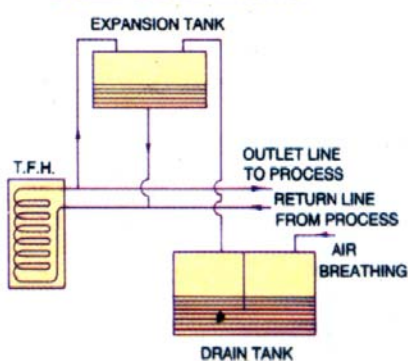
IIIrd Pass : Downward between outside coil & inner shell. Unique shell design reduces stack loss.

Insulation : Combustion air is forced between the two shells & aluminium radiator which acts as insulation for outer shell & preheats the air for better combustion efficiency.

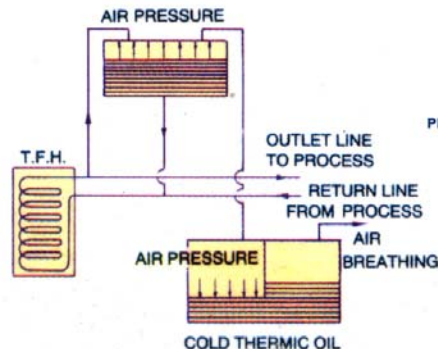
Burner & it's Controls : Fully automatic, downward firing, pressure jet, On-Off Modulation or High/Low modulation. Burner will have all safeties like flame failure device (Photocell), high temperature cut off, low flow safety, high pressure cut off. In case of abnormal condition unit will go in lockout with audio-visual alarm. The modulation is achieved by providing on-off temperature controller which will start & stop the burner according to heat load & reduces fuel consumption in proportion to heat load in plant giving best fuel efficiency for plant operation.

LIQUID SEALING SYSTEM PREVENTS THERMIC OIL OXIDATION

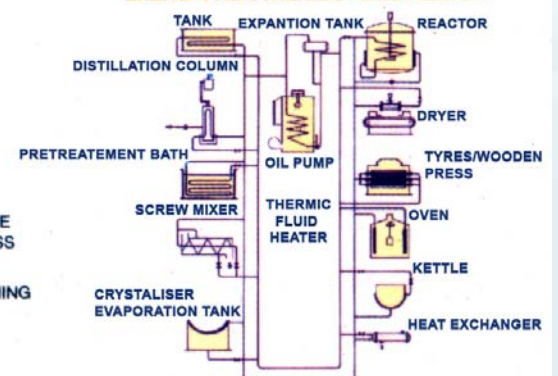
OIL LEVELS AT COLD CONDITIONS



OIL LEVELS AT HOT CONDITIONS



APPLICATIONS OF ENERGOPACK THERMIC FLUID HEATER



MODEL	HEAT OUTPUT KCAL / HR	GAS NM ³ / HR	FUEL CONSUMPTION		MODEL	COAL KGS / HR	BRI- QUETTE KGS / HR	WOOD KGS / HR
			L.D.O. KGS / HR	F.O. KGS / HR				
EPT/05	50,000	7	5.5	5.9	EPT-EXT-05	13	17	21
EPT/10	1,00000	14	11	11.8	EPT-EXT-010	26	34	42
EPT/20	2,00000	28	22	23.6	EPT-EXT-020	52	68	84
EPT/30	3,00000	42	33	35.4	EPT-EXT-030	78	102	126
EPT/40	4,00000	56	44	47.2	EPT-EXT-040	104	136	168
EPT/50	5,00000	68	55	59	EPT-EXT-050	130	170	210
EPT/60	6,00000	84	66	72.8	EPT-EXT-060	156	204	252
EPT/100	10,00,000	136	110	118	EPT-EXT-100	260	340	420
EPT/150	15,00,000	204	165	177	EPT-EXT-150	390	510	630
EPT/200	20,00,000	272	220	236	EPT-EXT-200	520	680	840



CALORIFIC VALUE	
FURNACE OIL - 9650 KCAL/HR	WOOD - 3200 KCAL/KGS
LDO - 10,250 KCAL/HR	BRIQUETTE - 4000 KCAL/KGS
COAL - 5400 KCAL/KGS	GAS - 8500 NM ³ /HR

KEY FEATURES OF ENERGYPACK THERMIC FLUID HEATERS

1. HEAVY CONSTRUCTION

Energypack Thermic Fluid Heaters are fabricated as per latest engineering practice to ensure safety in operation along with a comparatively high efficiency level.

2. THREE PASS FORCED CIRCULATION. Thermic Fluid circulates through Double Vertical Coil having Single/Double/Triple start depending on capacity. Three pass circulation guarantees a higher efficiency level which helps to enhance the most of the energy from the fuel.

3. ABILITY TO USE WASTE AS A FUEL

4. FULLY AUTOMATIC CONTROL To enhance the performance and to reduce operator involvement, Energypack thermic fluid heaters are supported with fully automatic control system including efficiency controls, safety controls and alarm notification. Specifically the high flue gas temperature control, controls demand set points such as temperature & pressure to supply energy depending on the plant demand.

5. AIR PRE-HEATER TO ENHANCE THE EFFICIENCY To achieve utmost absorption of heat from the fuel, ENERGYPACK thermic fluid heaters are featured with air pre heater to heat the inlet air for the combustion process.

6. COST EFFECTIVE DESIGNS Energypack provides cost effective design for chimneys, piping for TFH to reduce the cost involved with the TFH accessories. Energypack is capable to construct guy wire rope & self supported chimneys as per the latest available standards and to the client's specification.

OTHER PRODUCTS

IBR & NON IBR STEAM BOILERS

- ◆ Self Supported Chimneys.
- ◆ Hot water Boilers.
- ◆ Heat Exchangers (TEMA).
- ◆ Pressure Vessels (ASME).
- ◆ Waste Heat Boilers.
- ◆ Electrode Boilers.
- ◆ Dewaxing Autoclave Boilers.
- ◆ Incinerators.



2 Nos. Circulating Pump Assy.



Circulating Pump



Steam Generator



M/S ENERGYPACK BOILERS PVT LTD

Exclusively Marketed By



Utech Projects Pvt. Ltd.

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