

Cooling & Heating



THERMOPAC

Thermic fluid heaters
Ideal for indirect heating

**Improving your business
is our business**

Thermax offers products, systems and solutions in energy and environment engineering to industrial and commercial establishments around the world. Its business expertise covers heating, cooling, waste heat recovery, captive power, water treatment & recycling, air pollution control & waste management and performance chemicals. Thermax brings to customers extensive experience in industrial applications, and expertise through technology partnerships and strategic alliances.

Operating from its headquarters in Pune (Western India), Thermax has built an international sales & service network spread over South East Asia, Middle East, Africa, Russia, UK and the US. It has a full fledged manufacturing set up that is certified for ISO 9001:2000, ISO 14001 and safety management according to OSHAS (ISO 18000).

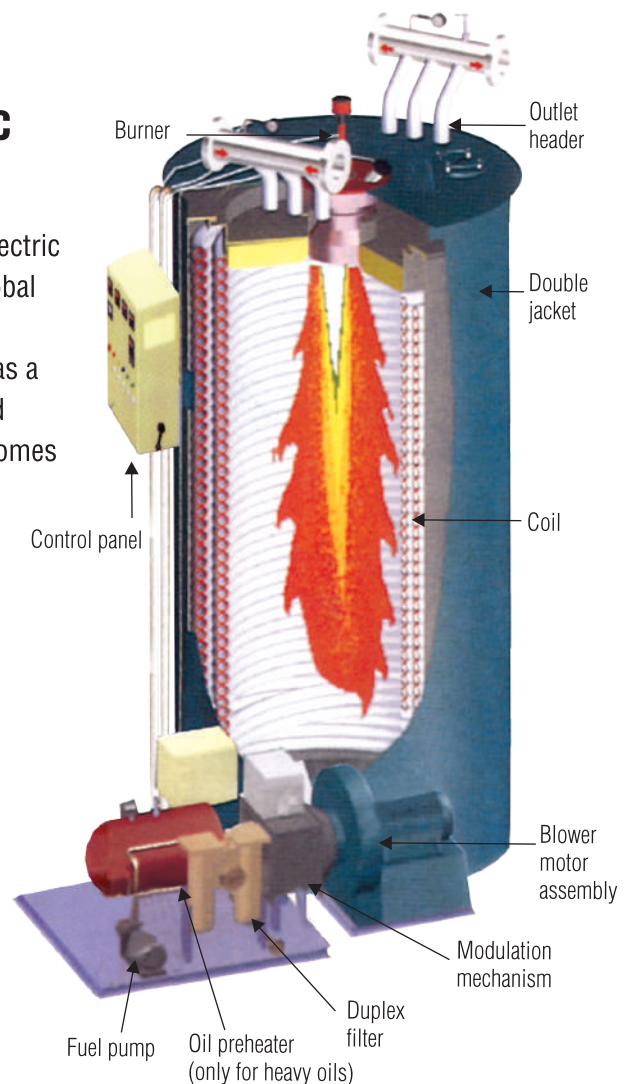
In **process heat**, Thermax offers a wide range of steam boilers, thermal oil heaters and hot water generators. It has expertise in a wide range of fuels - oil, gas, solid and agro-waste/ biomass.

Supporting a broad array of industries in generating, transferring and conserving heat across a host of applications, Thermax process heat products and systems are exported to North and South America, South East Asia, Middle East, Africa, Europe, CIS, Australia, Antarctica and SAARC.

For high efficiency and high process temperatures at low operating pressure

Thermopac

Thermic fluid heating is increasingly replacing electric and steam heating in global industries. Thermopac, recognised everywhere as a superior heat source and productivity enhancer, comes to you from Thermax - pioneers in thermic fluid heating.



Product highlights

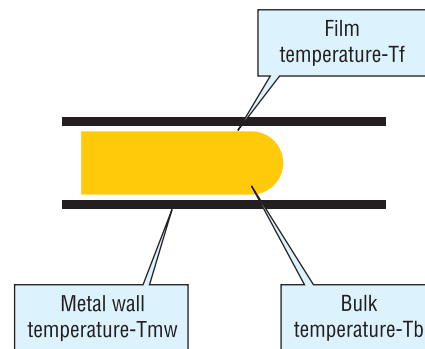
- Automatic control for maintaining predetermined thermic fluid temperature
- High system efficiency - 87%
- Centrifugal pump ensures uniform circulation, preventing over heating of thermic fluid
- Fuel - Heavy oil, light oil & gases
- Capacity - 0.1 to 25 million kcal/hour

Options available

- Monobloc burner
- Units with horizontal orientation also available
- Complete boiler house and accessories on turnkey basis

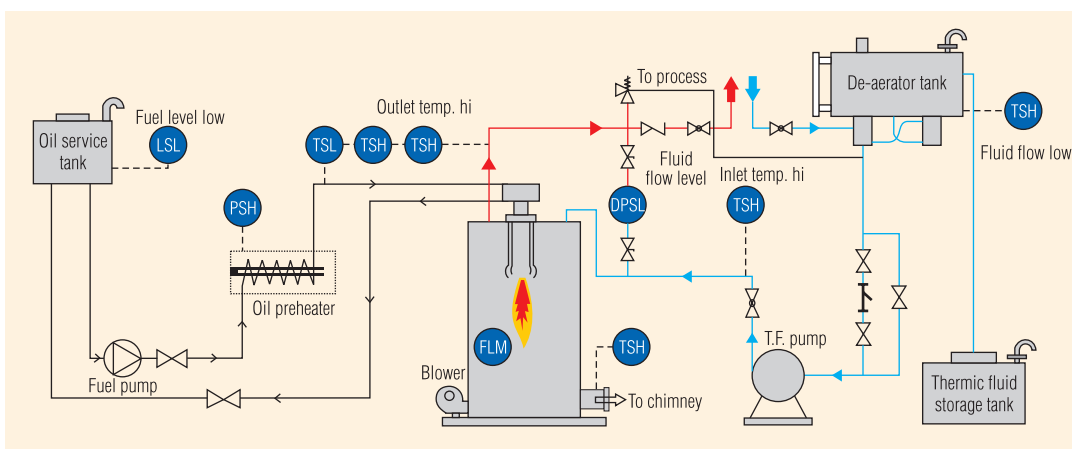
Engineered for reliability

- Designed according to DIN 4754, to ensure longer life of heater and thermic fluid
- Adequate furnace volume and heat transfer surface ensure higher thermal efficiency
- Pre-wired and pre-assembled for quick and easy installation



Thermic fluid flowing thro a tube $T_{mw} > T_f > T_b$

P & I diagram

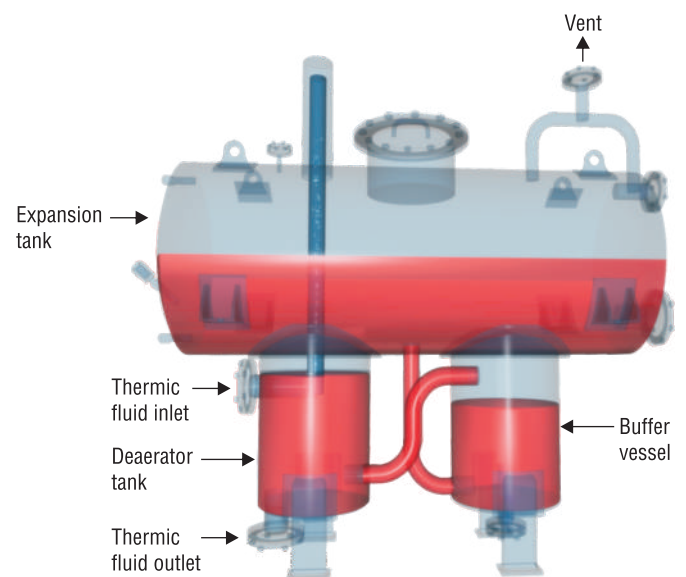


Controls and safeties

- Low thermic fluid flow cut-off
- High thermic fluid outlet temperature cut-off
- Precise thermic fluid temperature control
- Low level cut-off in deaerator tank
- High stack temperature cut-off
- Safety valve for protection against high pressure

Compact Deaerator-cum-Expansion tank

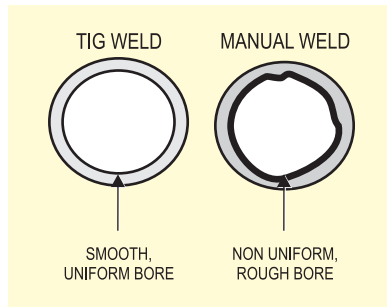
Requiring less space, it comes with a buffer vessel to prevent cooling of hot oil coming from the process, while the tangential thermic fluid entry in the deaerator ensures optimal deaeration.



Manufacturing excellence



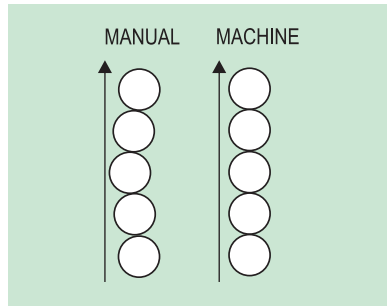
Fully automated tube to tube TIG Welding Machine



TIG Welding enables smooth uniform bore



CNC coil winding machine



SPM Winding ensures proper alignment, avoiding possibility of hot spots

Technical specifications

PARAMETERS	UNIT	TPDi04	TPDi06	TPDi10	TPDi15	TPDi20	TPDi25
Heat output (MCR)	kCal/hr	4x10 ⁵	6x10 ⁵	1x10 ⁶	1.5x10 ⁶	2x10 ⁶	2.5x10 ⁶
Burner modulation		Stepless					
Pressure at heater outlet	m/c/bar	20/1.45					
Thermic fluid flow rate	M3/hr	26	30	60	90	120	150
Thermic fluid outlet temp. (max)	Deg. C	280					
Thermic fluid temp. rise	Deg. C	33	42	35	35	35	35
Fuel consumption*							
- HSD	kg/hr	43.8	65.7	109.5	164.2	218.9	273.7
- LDO	kg/hr	46.1	69.2	115.3	173.0	230.7	288.4
- FO / LSHS	kg/hr	47.6	71.5	119.1	178.7	238.2	297.8
- Natural Gas	Nm ³ /hr	55.4	83.0	138.4	207.6	276.8	346.0
- LPG	Nm ³ /hr	18.9	28.3	47.2	70.8	94.3	117.9
Overall dimensions							
- Length	mtr	1.30	1.50	2.00	2.25	2.35	2.60
- Width	mtr	1.90	1.90	2.00	2.50	2.60	2.80
- Height	mtr	2.75	3.00	3.80	4.80	5.00	5.60
Dry weight of Thermopac	Kgs	1894	2024	4191	5271	7678	9147
Fluid hold up capacity of coil	litre	300	400	500	1025	1280	2050
D/E tank capacity	litres	500	500	1000	1500	2000	3000
Total connected load							
- LDO / HSD	kW	7.8	10.5	14.5	20.6	29.4	32.5
- FO / LSHS	kW	10.8	16.5	23.5	32.6	44.4	50.5
- Natural Gas / LPG	kW	7.8	10.5	13.8	19.5	28.3	30.3
Power supply reqd.	-	← 415 VAC ± 6%, 50Hz ± 3%, 3ph, 4 Wire →					

Note: Model TPCM01 & 02 are available with a Single Jacket & a mono-block burner and TPDi04 TPDi25 are available with a Double Jacket & a Duo-block burner. *Fuel consumption is based on NCV of HSD/LDO:10,500 kcal/h, FO/LSHS: 9,650kcal/h, Natural Gas: 8,500 kcal/nm³, LPG: 24,940 kcal/nm³.



In view of our constant endeavour to improve the quality of our products, we reserve the right to alter or change specifications without prior notice. All photographs shown in this publication are representative in purpose, and to be used for reference only. For actual details and specifications, please refer to Thermax offer document.



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