Amba Enterprises

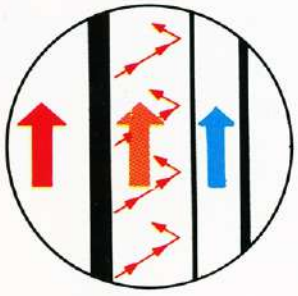
SUPER THERMAL HEATER

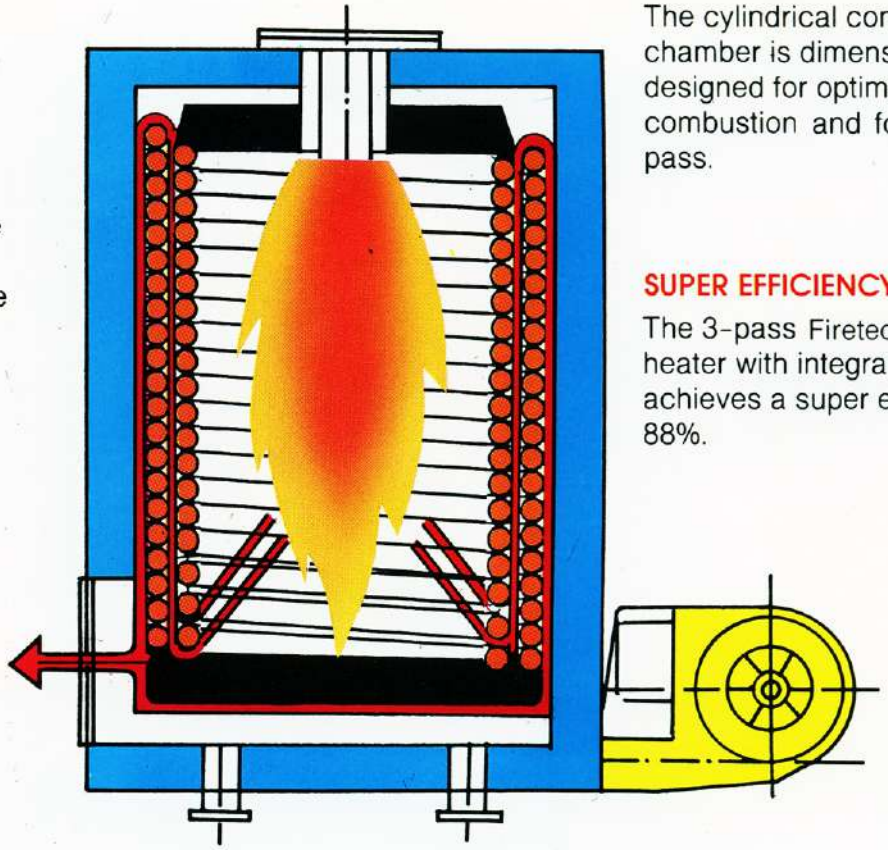
Three Pass Design
High efficiency
high reliability of operation
Long Service Life
Fully automatic operation
Temperature upto 300 C
Economical operations
Easy maintenance

SUPER THERMAL HEATER

OPTIMUM HEAT UTILIZATION

The radiation and convective helical coil absorb maximum heat from the hot flue gases in radiation zone and twice in convection zone in cross-flow pattern. The residual heat in the flue gases picked up by the incoming combustion air ensure optimum heat utilization.





COMBUSTION CHAMBER

The cylindrical combustion chamber is dimensioned and designed for optimal combustion and forms the first pass.

SUPER EFFICIENCY

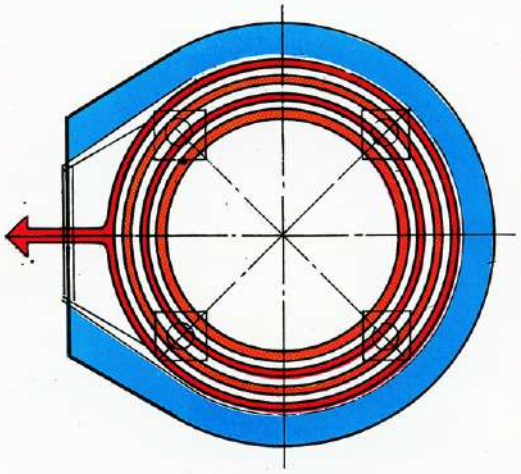
The 3-pass Firetech Supratherm heater with integral air heater achieves a super efficiency of 88%.

FLUE GAS ROUTING

The flue gases rise through the second pass formed by the space between the two cylindrical tube sections and then descend through the third pass between the outer cylindrical tube section and the gas-tight smoke box casing.

Other features are :

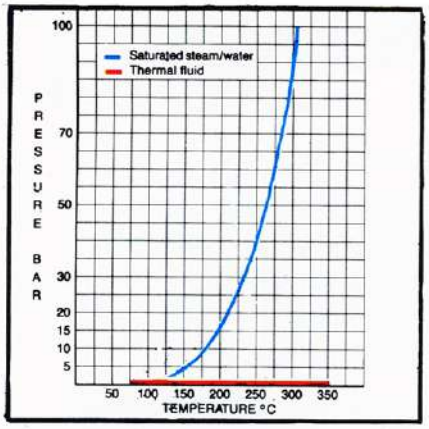
- Symmetrical load distribution
- no local overheating
- self-cleaning effect due to favourable flue gas velocity.



TUBE COIL

The radiation and heating surfaces of the heater consist of a tube coil with two concentric cylindrical section of spirally wound sections to form the combustion chamber & convection Heater.
This tube arrangement guarantees :

- optimal heat transfer
- low fluid pressure loss
- low heating surface load
- low pump drive power
- stress-free mounting of the heating surfaces.
- almost no heat loss bridges.

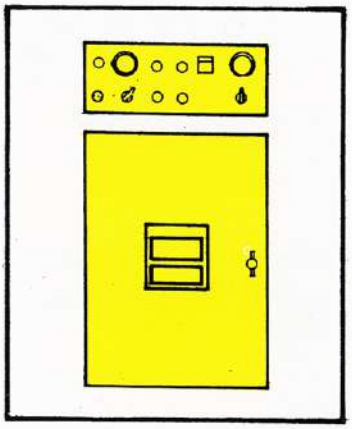


OPERATION WITHOUT PRESSURE

A thermal fluid system can function between 100°C and 350°C without any pressure increase.
By way of comparison, the use of steam at 320°C requires a pressure greater than 110 bar and far more complex equipment. Thus
low pressure system ensures high efficiency, high safety and low cost.

NON-CORROSIVE SYSTEM

The system requires mineral oil as heat transfer media which is non-corrosive and free from any foreign particles. This ensures low maintenance cost and higher reliability

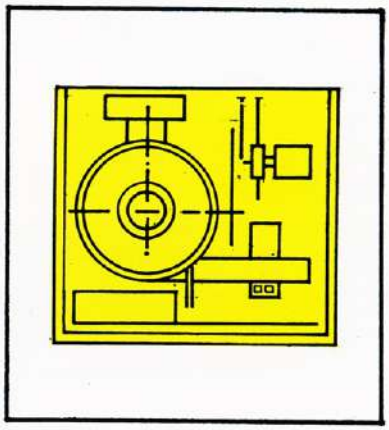


FULLY AUTOMATIC SAFE OPERATION AND INSTANT INFORMATION

A single switch controls the Heater operation. The burner cuts IN and OUT to meet process Heat loads and needs minimal attention during normal operation. Floor level, easy-to reach-and-read audio visual control and instrument panel provide instant information on heat generation.

NO EXPLOSION RISKS

offers low thermal inertia, low pressure system and with fully automatic safety trips ensures fully safe operation.



ULTRA MODERN, SLEEK & ELEGANT DESIGN

The Heater and Accessories are mounted on common skid with attractive front instrument and control panel. The unit, pre-assembled and pre-wired reduces on site erection time. The Heater can be installed close to process.

NO BOILER REGULATION

heater is outside the purview of Indian Boiler regulations and therefore eliminates the need for annual shutdown.

SAFETIES AND CONTROLS

system provides various safety interlocks, indicators and alarms against following functions :
Outlet temp high-Audio visual alarm & burner trip.
Inlet temp high-Visual alarm & burner trip

Expansion tank level low-Audio visual alarm & burner trip
Fuel temp low-Audio visual alarm & burner trip.

Flame failure-Audio visual alarm & burner trip.
Fluid pressure High-Spring loaded safety valve

Flame supervision-Monitored by burner programmer in Auto firing

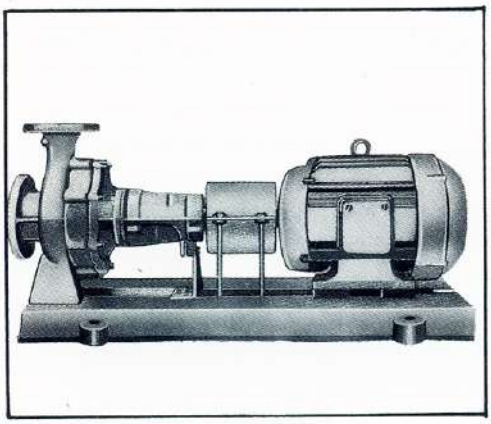
Fuel pressure low - Audio visual alarm & burner trip

Fluid flow low - Audio visual alarm & burner trip

ACCESSORIES

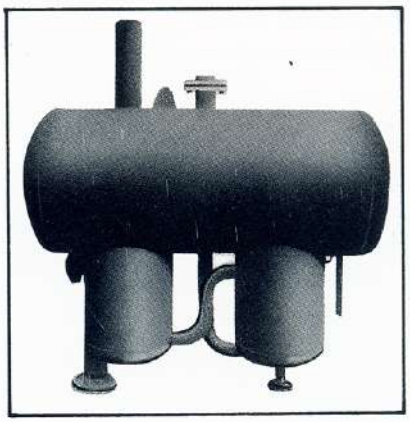
CIRCULATING PUMP

The pump is installed in the return line to ensure that it will be operated upon by the lower return temperature.
The pump is provided with pedestal, gland and bearing cooling arrangement.



EXPANSION CHAMBER CUM DEAERATOR

Continuous deaeration of the thermal fluid ensures long fluid life. The combined chamber, which has UNIQUE DESIGN also offers significant protection against oxidation of the thermal fluid.



5 STANDARD MODELS

thermal heaters are available in 5 standard models, in oil fired version with heat output ranging from 100,000 to 1000,000 K-Cal/h

Model ST-10	100,000 k-cal/h
Model ST-20	200,000 k-cal/h
Model ST-40	400,000 k-cal/h
Model ST-60	600,000 k-cal/h
Model ST-100	1000,000 k-cal/h

OTHER RANGE OF PRODUCTS

MANUAL OIL/COAL/WOOD/HUSK FIRED BOILERS, COAL/WOOD/ HUSK FIRED THERMAL HEATERS. FULLY AUTOMATIC OIL AND GAS FIRED BOILERS AIR HEATERS, WASTE HEAT BOILERS, HEAT EXCHANGERS, THERMAL DRYERS, SPACE HEATERS, TRAY DRYERS, BATCH DRYERS, SPECIAL CUSTOM MADE PROCESS HEAT PRODUCTS.

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