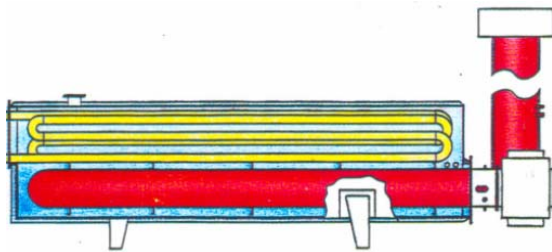


Indirect Water Bath Heaters

**Indirect Water Bath Heaters:
Designed to meet the precise requirement of any process
application**

Grand Prix delivery program includes Indirect Water Bath Heaters for many different applications and duties using Water and Water-Glycol as heat transfer media.

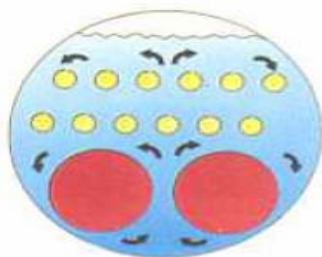
Grand Prix Bath Heaters are specifically designed to meet the precise requirements of any process application and customer or regulatory specifications such as API 12K and/or other national/international codes.



WATER BATH HEATER

Grand Prix Bath Heaters are designed and constructed to heat gases or liquids safely using the required heat transfer medium without the necessity for a high pressure vessel design.

Principles of Operation



Bath Heaters consist of three basic components:

- Fire Tube
- Shell
- Process/Flow Coil

The "U" Shaped fire tube is located in the lower half of the shell fully immersed in the water bath. Fuel gas is burned within the fire tube releasing heat through the wall of the fire tube to the water bath maintaining temperature up to 190°F (88°C).

The heated water bath then transfers heat through the tube wall to the fluid flowing through the process/flow coil or a series of tubes which are located in the upper half of the vessel. Typical fluids to be heated are well streams, oil, natural gas etc.

The fire tube gas supply is controlled by a temperature controller in order to maintain the required bath temperature for the actual inlet and/or outlet conditions.

Performance

In Grand Prix Bath Heaters, the design flux rate for the fire tube is selected carefully based on the application in order to ensure long life time, elimination of fouling and burnout problems.

Great emphasis is placed on optimum flow coil design to satisfy heat transfer surface area, pressure drop and uniform heating requirements.

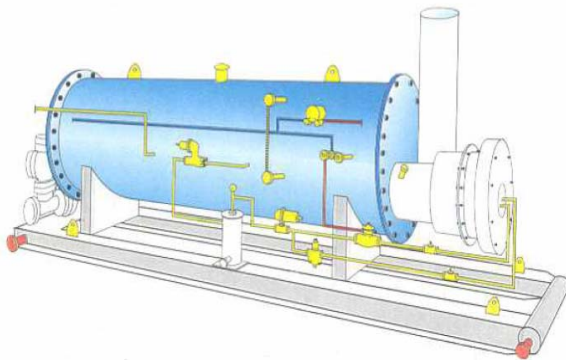
Burner and stack design, firing controls and accessories are carefully selected and matched to achieve maximum efficiency, energy conservation and to provide safe and dependable operation even in adverse conditions.

Indirect Water Bath Heaters

Features: Design & Construction Advantages

Standard Features

- Removable fire tube
- Natural draft burner
- Fire tube stack
- Removable flow coil
- Fuel gas preheat coil
- Fuel gas system c/w piping, filter, valves & instruments
- Thermostat
- High efficiency burner system
- Flame arrestors
- Pilot guard safety shut down
- Fuel shut down valve
- Insulation
- Primer (1 Coat) + Enamel Paint (2 Coats)



Optional Features

- Forced draft burners
- Electric heating element
- Spark arrestors
- Alarm systems
- Dual temperature control
- Skid mounting

Applications

The Indirect Heaters are used in a variety of applications and are recommended for:

- Heating high pressure gas and/or oil in oilfield production
- Heating high pressure gas from well-heads and main gas distribution stations prior to pressure reduction to prevent hydrate formation
- Heating natural gas at city gas stations from main gas pipelines
- Heating highly viscous oils to reduce pumping pressures and to boost efficiency
- Heat oil producing well streams

For more information on other Grand Prix products viz. Pressure Vessels, Strainers, Cartridge Filters, Dry Gas Filters, Cyclone Scrubbers, Filter Separators, Silencers and Skid Mounted Packages contact:

GRAND PRIX ENGINEERING PVT. LTD.

Plot No. 82 , Sector 25, Faridabad, Haryana-121004, INDIA

Tel: +91-129-4151820/4097700 Fax: +91-129-4151821

E-mail: mail@grandprixfilters.com; Website: <http://www.grandprixfilters.com>