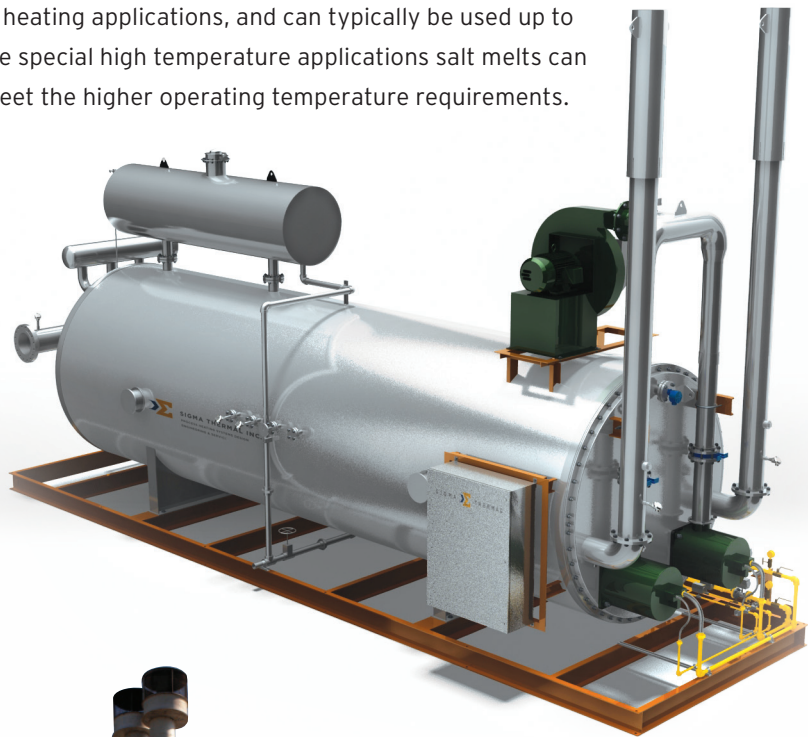# Process Bath Heaters

A process bath heater allows a user to indirectly heat process liquids and gasses by submersing a process coil into a heated bath solution.

Typical applications

» Natural Gas Heating
» Crude Oil Heating
» Amine Reboiler
» Glycol Reboiler
» In Line Liquid Heating
» In Line Gas Heating

The bath solution is heated by a fire tube style burner submerged at the bottom of the heater vessel. Water-glycol mixtures are very common solutions for most low temperature heating applications, and can typically be used up to 250F. In some special high temperature applications salt melts can be used to meet the higher operating temperature requirements.

Process Bath Heater *Design Features*

Coil Configuration Flexibility: Coil flow path and metallurgy are engineered for each customer's process requirements. Sigma Thermal has extensive experience in process coil design for multi-phase fluids, viscous hydrocarbons, suspended solids, and various gaseous mixtures.

Fuel Source and Burner Flexibility: Standard or engineered burner configurations are available for use with both traditional and alternative fuel sources. Low emissions burners can be supplied to meet all emission requirements (e.g., Low NOx, Best Available Control Technology).

Advanced Control Systems: Complete control systems are engineered to optimize system safety and performance. Sigma thermal can supply simple and cost effective standard panels, as well as full process automation and PLC based combustion control / BMS.
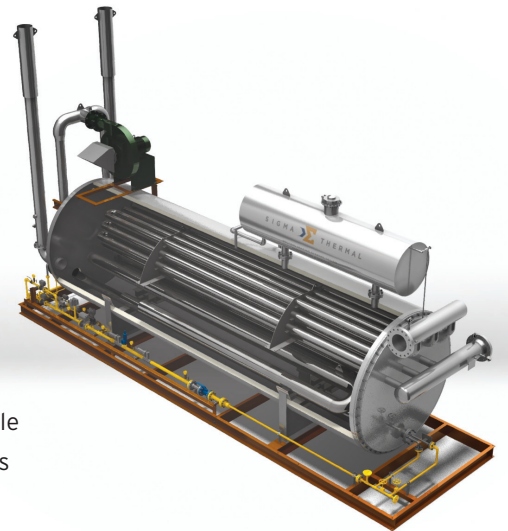
Weir Bath

The Weir Bath heater is a slight variation of a traditional water bath heater that does not utilize a process coil. This type of heater is most commonly used as a reboiler for amine and glycol solutions. The bath vessel contains a fire-tube and a weir at the end of the fire-tube. The process fluid is circulated through the bath vessel in direct contact with the fire-tube. After the process fluid is heated, it falls over the weir where the return line sends it back to the process user.