



# THERMAL LIQUID HEATER INDUSTRIAL HIGH TEMPERATURE Gas, Power Gas, Oil or Combination Gas/Oil Fired (Low NOx Models Available)

**Thermal  
Liquid Heater**

**126,000 to  
6,250,000  
BTU Input  
up to 650°F**

## THE PARKER DESIGN

The Parker bent steel liquid tube design offers an extremely efficient, reliable thermal fluid heater built for the long term and ease of maintenance. Low NOx burners are available. The Parker design offers many advantages. Compare ours to the competition.

## APPLICATIONS

Process heating applications which require temperatures between 350° and 650° F can frequently be serviced more dependably, efficiently, uniformly and safely with a Thermal Liquid System as opposed to a steam, water, electric or direct fired system.

Over the past 50 years, thermal liquid systems have been used in a wide variety of applications. The following are some common uses:

- Chemical Plants
- Plastic Molding
- Cooking Fish Sticks to Potatoes
- Asphalt Heating
- Laundries
- Wood Veneer Manufacturing
- Particle Board Pressing
- Soil Remediation
- Food Processing
- Oil Heating
- Adhesive Heating

## SYSTEM

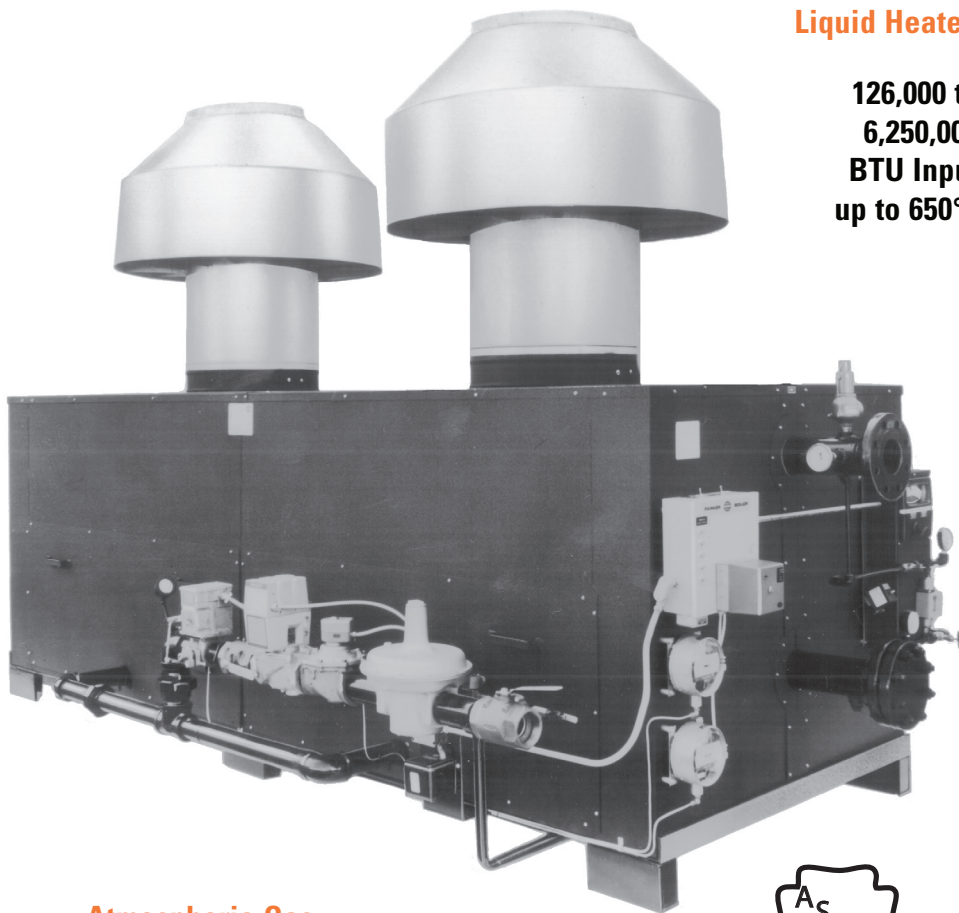
A Thermal Liquid System consists of the heater, circulating pump and expansion tank, and possibly a distribution tank, with properly sized piping to the heat utilizers, such as jacketed kettles, presses, reactors, ovens, exchangers, etc.

System distribution tanks for primary secondary pumping systems are common when flow thru the heater cannot be guaranteed with one pump system.

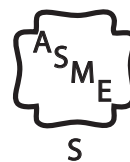
## PARKER BOILER CO.

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BROCHURE 207 1F1



## Atmospheric Gas Fired Model



Correctly engineered, a Thermal Liquid System is extremely trouble free. Operating pressures are very low permitting the use of standard pipe and fittings. The entire system can be open to atmosphere through the expansion tank. Thermal liquids specifically compounded for high temperature service are readily available.

## HEATER, FLEXIBLE TUBE DESIGN

The Parker Direct Fired Type Heater represents an ideal heating system for thermal liquids. Our all double welded, bent steel liquid tube design allows for the

continuous expansion and contraction to which the heater must be subjected without damage.

The double welded construction eliminates the problems of rolled tubes, ferrill fits, retainer clips, etc, experienced in competitive units. Thermal liquids at advanced temperatures are so thin that only the finest welding can contain the fluid without leakage. Since all fluids will burn in the ambient temperature of the gas flame, this leakage can be serious.

**"Never a Compromise for Quality or Safety"**



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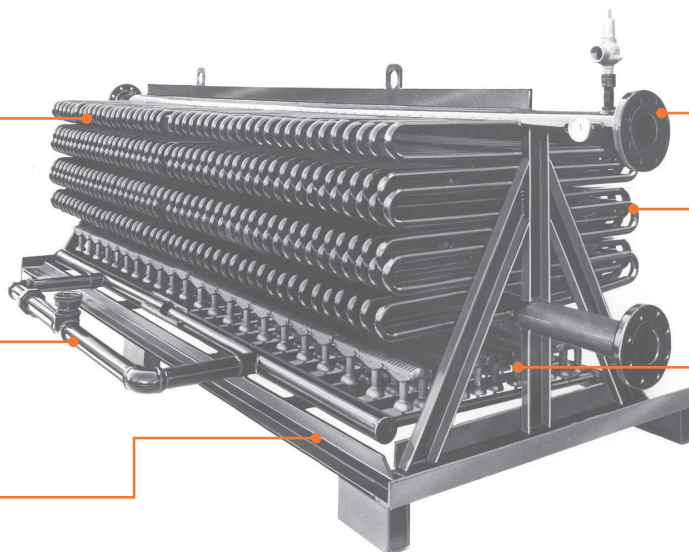
## Internal Construction of Gas Fired Models

Staggered tubes provide 10-pass self baffled heating surface for high efficiency.

Flexibility designed to permit free expansion and contraction, eliminating warping and leaking.

Tubes are 1-5/16" OD Steel, 0.12" (11GA) heavy thickness, double welded to headers with high tensile weld metal.

Heavy steel frame for mounting on concrete floor.

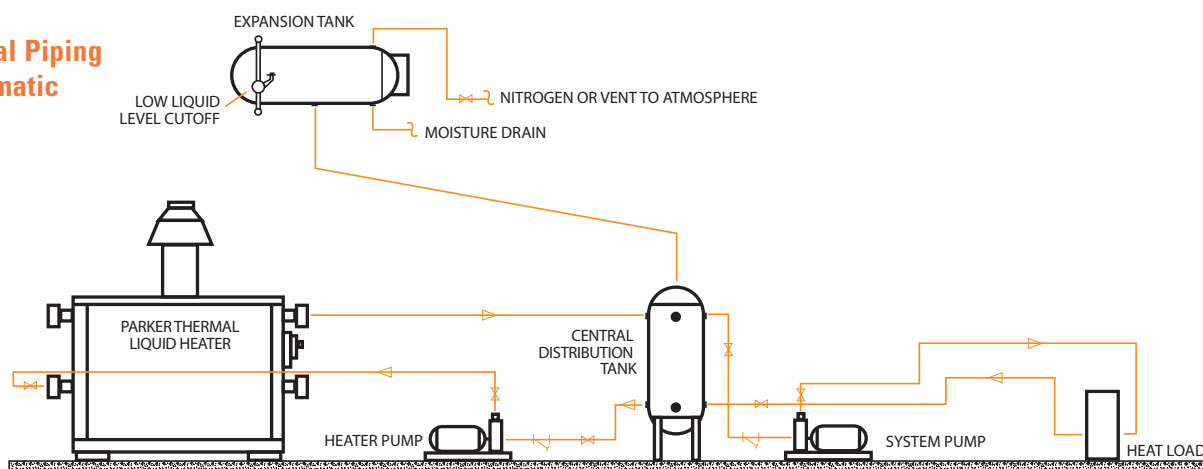


Headers internally baffled for controlled flow

Bent tube design permits each tube to expand and contract with changes of temperature

Atmospheric low pressure self aspirating gas burners provide high combustion efficiency and uniform heat distribution on entire heating surface

## Typical Piping Schematic



## THE PARKER DESIGN

A time proven product backed by one of the largest and most successful Manufacturers of packaged boilers whose name is synonymous with quality and safety. Every heater is thoroughly factory fire tested and is required to meet the highest standards in all phases of mechanical and operating efficiency before shipment.

## ADVANTAGES

### 1. Large Heating Surface

All models contain at least 5.5 sq. ft. of heating surface per equivalent boiler H.P. This low intensity heat transfer assures long tube life and maximum operating efficiency.

### 2. Controlled Flow

It is absolutely essential the thermal liquid is maintained at uniformly high velocity in every tube to prevent over-heating.

This is accomplished with baffles in the upper and lower headers directing the flow through a selected number of tubes in each pass.

### 3. Durable Cabinet

The cabinet is specifically designed and constructed for high temperature service using reinforced sheet steel effectively insulated to retain heat within the cabinet. The exterior is protected with a baked enamel finish.



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