

# Uniflux<sup>®</sup>

High quality engineered heaters since 1957

- Unique forced draft convective heat transfer process heaters.
- The Uniflux high velocity burner's short flame extension prevents flame impingement on the tubes and eliminates tube coking and fluid degradation.
- Uniflux heaters utilize the complete circulation of exhaust gases around the process tubes resulting in uniform flux density around the tube periphery and long tube life.
- Automatic operating and safety controls meet NFPA, API or IEC requirements and are factory assembled and tested.

## Applications

- Heat Transfer Fluid
- Regeneration Gas
- Water
- Glycol-water
- Air
- Steam Superheaters
- Cryogenic
- Crude Oil
- Emulsions
- Offshore Production
- Gas Processing
- Natural Gas Liquids
- Vaporizers

## Specifications

- 1 million to 70 million Btu/Hr
- 20:1 Turndown Ratios
- High Efficiency Economizers
- Temperatures to 1,500 F
- Carbon Steel, Stainless Steel & High Alloy Heat Transfer Coils
- Natural gas or light oil fuels



# Advantages of UNIFLUX<sup>®</sup>

## FUEL REACTOR

**COMPACT:** With high heat release, the reactor is designed for compactness.

**FAST RESPONSE:** The Fuel Reactor responds instantly to process load changes with its high velocity exhaust gases.

**ALL-METAL CONSTRUCTION:** Cooling effect of inlet combustion air keeps inner and outer cones cool, even when reactor is operating at full capacity. Temperature on outer cone approaches temperature of inlet air. The need for refractories is eliminated.

**LOW PRESSURE FUEL:** With vortex at the point of fuel injection, low pressure fuels down to 6" WC can be effectively burned in the reactor.

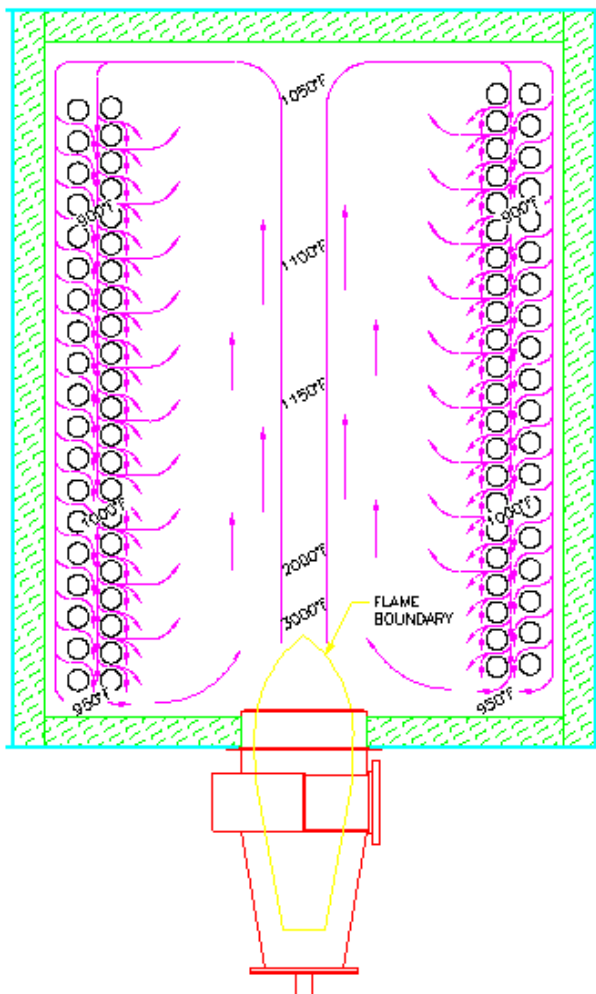
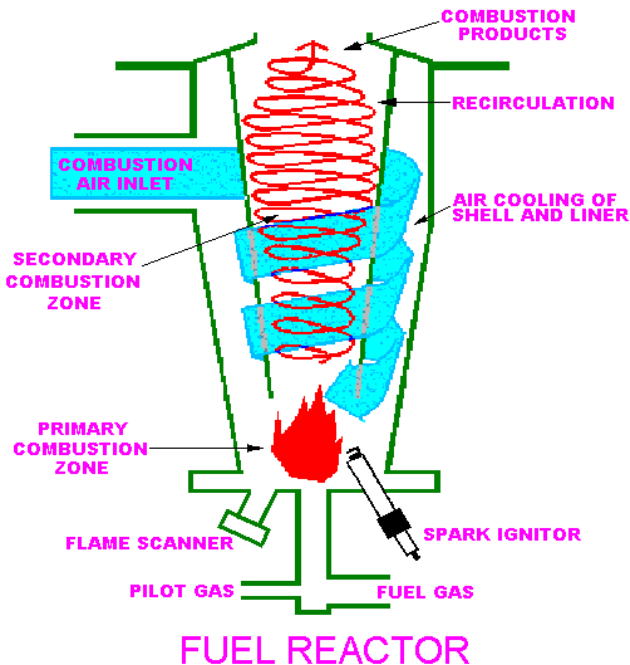
**HIGH HEAT RELEASE RATES:** About 10,000,000 BTU/Hr/ft<sup>3</sup> of combustion volume in firing natural gas.

**MINIMUM FLAME EXTENSION:** Combustion is essentially completed within the Fuel Reactor with only high temperature inert combustion products emitted.

**STOICHIOMETRIC COMBUSTION:** The reactor is adjustable to stoichiometric fuel-air ratios with complete combustion assured within the reactor. It operates over wide range of turndown with stable combustion.

**SAFE OPERATION:** The Fuel Reactor is sealed – eliminating flashbacks and the need for flame arrestors; it can be completely automated and controlled with optional safeguards and accessories.

**MULTIFUEL CAPACITY:** The fuel reactor will operate on most gaseous fuels including low heating value gases. High velocity fuel reactors are also available to operate on most liquid fuels.



## HEAT EXCHANGER

**UNIFORM HEAT FLUX:** High circulation or exhaust gases around tubes results in a convective heat transfer to the process tubes. This means lower tube wall temperatures can be used for the same average heat transfer rate as with conventional heaters.

**NO FLAME IMPINGEMENT:** Complete combustion within Fuel Reactor means no flames within the tube area. Tube walls are safe from flame. Coking of tubes is minimized.

**HIGH THERMAL EFFICIENCY:** Using Uniflux<sup>®</sup> tube banks alone, efficiencies of 80% are achieved. With an economizer unit, efficiencies to 95% are achieved. Due to the controlled fuel/air ratios, Uniflux<sup>®</sup> efficiencies increase as the heat load decreases.

**SAFE OPERATION:** No flashbacks are possible with the sealed Fuel Reactor. Inert gases in the Exchanger cannot support combustion.

**LIGHTWEIGHT INSULATION:** The wall construction of the exchanger consists of a stainless steel liner with a carbon steel outer shell and lightweight, low conductivity fiber insulation sandwiched between. This cuts weight and heat retention to less than 10% of refractory linings.

**SHOP ASSEMBLED:** Delivered completely assembled. Only process piping and electrical connections are required.