

THERMTHIEF BURNERS

Precise, uniform temperatures for better process quality and longer tube life

Unique flame profile actually scrubs fire tubes clean

Designed to fire radiant and immersion tubes with inputs from 25,000 to 2,000,000 Btu/hr. ThermThief's unique nozzle creates an intense —adjustable length—flame with a vigorous spinning action. The flame scrubs the inside of the fire tubes to remove the gas film boundary layer and increase heat transfer effectiveness with outstanding temperature uniformity. Not only does this contribute to longer tube life, it also ensures consistently uniform product processing.

ThermThief delivers these additional benefits:

- Low NOx and low CO.
- Low excess air capability for high efficiency.
- Low air and gas pressure requirements.
- High heat transfer at low noise levels.
- Reliable ignition at a wide range of firing rates.
- Can be fitted with Eclipse Bayonet-Ultra recuperators for maximum system efficiency.

Versatile and adaptable; easy to install operate and service

Every ThermThief burner offers the convenience of multi-fuel capability with the same nozzle for global applica-

**High Efficiency
Radiant Tube Burners**



tion; either ambient or pre-heated combustion air; straight U, W or Trident®-type tube designs. And, ThermThief burners are user-friendly.

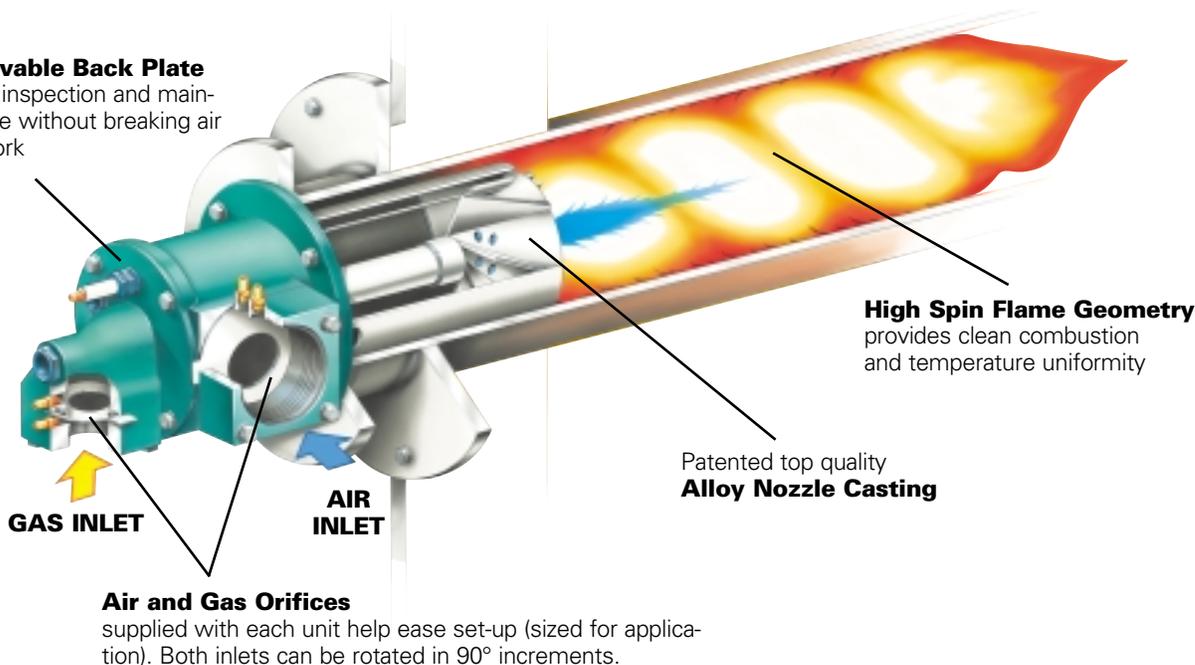
- Uncomplicated installation.
- Integrated gas/air metering make set up a snap.
- Two peepsights provide clear visual access for flame verification and adjustment.

In the Eclipse tradition, long life and low maintenance are design priorities. ThermThief burners deliver a level of safety, operating efficiency and reliability that are second to none.

ThermThief Burners

Ideal for indirect heating of tubes where tube temperature uniformity is at a premium.

Removable Back Plate
allows inspection and maintenance without breaking air pipework



High Spin Flame Geometry
provides clean combustion and temperature uniformity

Patented top quality
Alloy Nozzle Casting

Air and Gas Orifices
supplied with each unit help ease set-up (sized for application). Both inlets can be rotated in 90° increments.

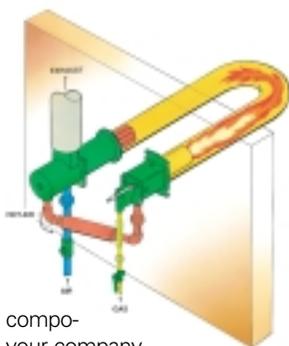
ThermThief Burners & Bayonet-Ultra Recuperators: Impressive Individually...Unsurpassed as a Team

It's a fact: As much as 65% of the heat generated in many gas furnaces doesn't do anything but cost you money. Most of the energy from the burning fuel heats the combustion air instead of the work load. When heat and fuel dollars sneak out through your stack, each load costs more to process than it should.

By combining Bayonet-Ultra Recuperators with ThermThief Burners, you can be assured of matched-performance components that will provide your company with maximum fuel savings and system efficiency.

Check out the chart on the right for the ThermThief System savings you can get at your shop.

Example: 900°F preheat from 1900°F flue gas delivers 27% fuel savings.



Pre-Heat Combustion Air Temperature (°F)

	400	600	700	800	900	1000
700	8	12	—	—	—	—
800	8	12	14	—	—	—
900	8	13	15	17	—	—
1000	9	13	15	17	19	—
1100	9	14	16	18	20	22
1200	9	14	16	19	21	23
1300	10	15	17	19	21	23
1400	10	15	18	20	22	24
1500	10	16	18	21	23	25
1600	11	16	19	21	24	26
1700	11	17	20	22	25	27
1800	12	18	21	23	26	28
1900	13	19	22	24	27	29
2000	13	20	23	26	28	31
2100	14	21	24	27	30	32

Flue Gas Exit Temperature (°F)

% Fuel Saved

ECLIPSE™
Innovative Thermal Solutions

Eclipse Combustion

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