

# ECLIPSE ER

## INDIRECT AIR HEATERS

**Best in class indirect air heaters deliver clean, heated process air and ultra-low emissions with impressive fuel efficiency.**

Eclipse ER Indirect Air Heaters produce clean hot air, free of combustion combustion by-products. They are ideal for heating and drying applications that require contaminant free process air.

### Typical Applications

- Food production, including spray drying operations in the dairy industry.
- Pharmaceutical and chemical heating and drying operations.
- Tobacco drying operations.
- Hydrated lime drying in cement production.

The heater incorporates a sinusoidal heat exchanger which transfers heat from the combustion chamber to the clean process air side of the unit. A recirculation fan improves the effectiveness of the heat exchanger for more fuel efficient operation. The ER is engineered to deliver maximum fuel efficiency, without the need for a secondary heat exchanger. ER Indirect Air Heaters can transfer 90% of the heat energy to process.

### Best in Class Components

The heat exchangers, burners and controls in all ER Indirect Air Heaters are engineered by Eclipse, the leader in industrial combustion technology for over 100 years. End users can be confident our global service network will support them long after the sale.

The ER Indirect Air Heater is a completely packaged system that includes the heat exchanger, recirculation fan, combustion chamber, burner,



"L" Design Configuration Shown

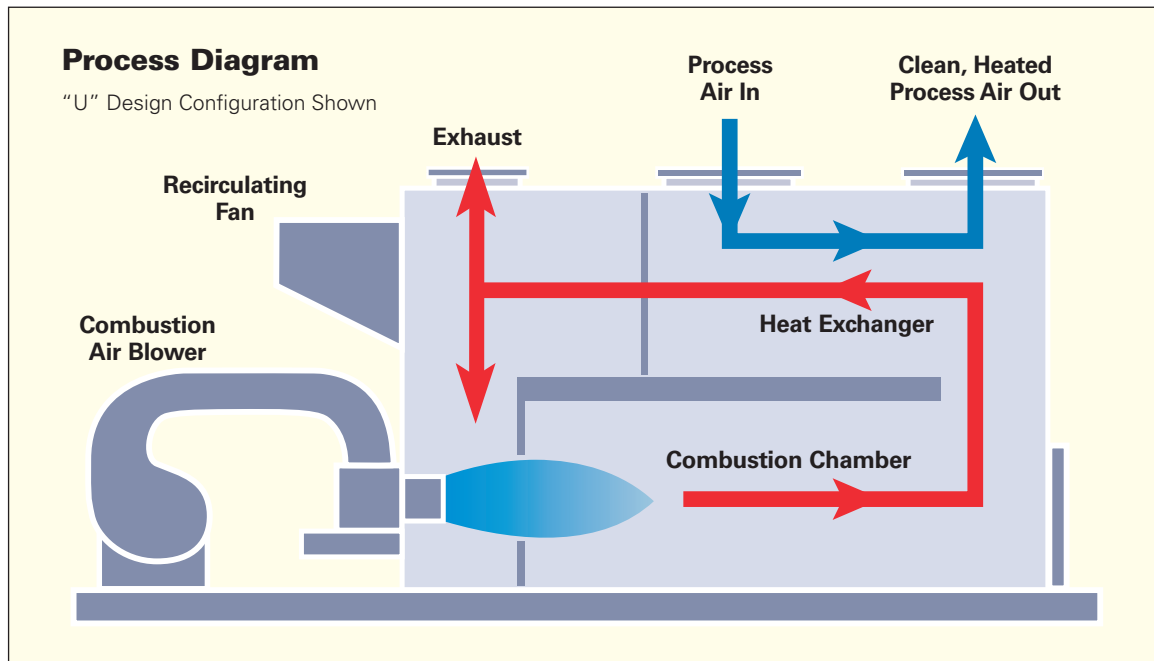
combustion air blower, gas train and control panel. Ingress Protection ratings are available to suit all environments. The gas train and burner safety system are NFPA 86 or EN 746-2 compliant. The heater unit is built with high quality 304 stainless steel.

### Standard Features

- The compact ER system is mounted on a painted carbon steel skid. The combustion air blower is mounted to the skid, ready for installation direct from the factory.
- The burner package includes a combustion air blower, air/fuel ratio regulator, bypass piping, gas trim valves, UV flame detection and a combustion air modulating valve.
- Gas train includes double blocking safety valves, pressure switches, pressure regulation, isolation valves and junction box for component wiring.
- All controls and instrumentation are located on the operator side of the unit.
- Maximum process air flow is 47,000 ACFM (79,860 Am<sup>3</sup>/h) at 70°F (21°C).

# Eclipse ER Indirect Air Heaters

*Superior design delivers low emissions and high efficiency.*



## Standard Options

- Eight different sizes are available to suit a wide range of process air flow rates and delivery temperatures.
- Standard design provides up to 750°F (400°C) at the outlet, with an inlet condition of 70°F (21°C). Higher temperature lifts are available on request.
- The Eclipse Winnox Burner (Bulletin 111C) comes as standard. Winnox burners are simple to set up and operate, while delivering very low emissions.
- For applications with ultra-low emissions requirements, the Eclipse Minnox Burner (Bulletin 158C) is also available.
- Heat exchangers can be specified with either standard performance 1/2" (12.7mm) plate spacing or 3/8" (9.5mm) high performance plate spacing.
- Process air flow configurations are available in "L" (in top, out end) or "U" (in top, out top).
- Combustion air blower is available with inlet filter/silencer to reduce noise. Inlet filter only is standard.
- Process transitions are available for air inlets and outlets.