Stress Relief Furnace

Standard Features:

• Economical operation is achieved with superior thermal process engineering practices that apply state-of-the-art insulation material, airflow management, and custom programming.
• Recirculation fans with high efficiency motors to reduce energy consumption.
• Recirculation ductwork designs provide precise airflow to specific areas of the product resulting in smaller footprint ovens thus reducing utility and factory space costs.
• High-efficiency (gas or electric) heat sources to reduce energy costs.
• Robust structural oven frames and component supports.
• Application specific insulation materials are selected to provide optimum insulating characteristics and long term energy savings.
• Design considerations for easy access to process areas and oven components.
• Private labeled and purchased components meet UL, UR, and CE standards.
• Programmable controllers with HMI (Human Machine Interface) display allows for user friendly operation and machine diagnostics.
• NEMA style control panels.
• Factory tested to ensure on time delivery and field start up.
• 24/7 factory direct technical service and spare part's group.

Additional Options:

• Inert atmosphere ovens and furnaces.
• Can construction oven and furnace bodies.
• Exhaust air to air heat recovery systems.
• Thermal and regenerative oxidizers.
• Industrial computers with Ethernet for remote diagnostic and communication capabilities.
• Advance thermal, vibratory, and dBB testing with certification.
• In-house laboratory featuring a test oven.

Stress Relief Furnaces relieve stresses in materials generated by welding, machining, or heat processing.

The purpose of a Stress Relief Furnace is to raise the temperature of a component to slightly below the transformation temperature. This elevation in temperature eliminates internal stresses caused by secondary processes such as welding, machining, or cold forming. Upon reaching completion of the heat-up and hold cycle, the parts are then cooled at a controlled rate.

Stress Relief furnaces are available in temperature ranges up to 1800°F (982°C).
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Each stress relief furnace is designed for the specific application and environment.

Typical heat processing application(s)
- Machined components
- Welded or formed assemblies
- A component that has received a secondary operation that produces internal stress.

Industry applications
- Aerospace
- Automotive
- Electronics
- and so many more

Heat source
- Electric
- LPG
- Natural gas
- Fuel oil
- Other fuel mixtures

Material handling options
- Belts: flat wire, balanced weave, mesh
- Chains: horizontal, vertical, slat and other attachments
- Walking beams
- Rotary hearth

Construction specifications
- Heavy duty welded steel exterior
- Stainless steel and various metal alloys for temperature requirements
- High-density energy-saving insulation