

Continuous Conveyor Thermal Treatment System

Mesh and Cast Belt Systems –
Energy Efficient, High Uptime



Continuous Conveyor Systems

Put Production Control in Your Hands

RELIABILITY, HIGH UPTIME, EASY TO MAINTAIN. AFC-Holcroft's continuous conveyor furnace systems are designed for a wide range of heat treat applications, including both atmosphere and non-atmosphere types for hardening, austempering, carburizing, carbonitriding, carbon restoration, annealing, tempering, stress relieving, and isothermal annealing.

Our complete line of conveyor furnace systems are ideal for stampings, fasteners, castings, forgings, and precision components.

- Process various fasteners, stampings, and forgings
- Perform different metallurgical processes such as neutral hardening, carburizing, carbonitriding, annealing, and normalizing
- Optimal energy efficiency
- High uptime >98%
- Easy to maintain

Loading Systems

- AFC-Holcroft's patented GapMiser™ cast link belt loading system provides the ability to eliminate excessive gaps between part lots without damage to the product being loaded. Product is loaded outside the furnace on a fully exposed mesh belt to ensure no part mixing. The loading and transfer devices have soft handling to avoid part damage and thread nicking.
- Various other automated loading systems are also available: ram loaders, bucket conveyor, and weigh feeders.

Capable of achieving different metallurgical processes at a high rate of productivity, while offering high uptime, energy efficiency and ease of maintenance.

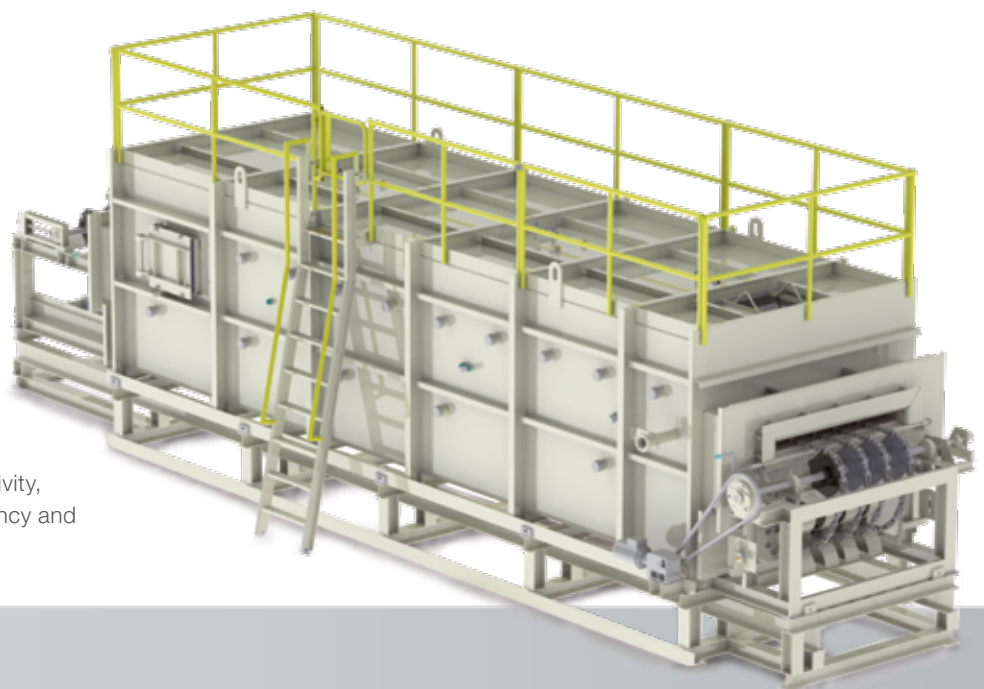


Pre- and Post-Cleaning Systems

- Multiple pre- and post-aqueous wash system designs are available to achieve the best cleaning results: spray, dunk-spray, multi-stage belt, or rotary drum.
- Aqueous wash systems are equipped with water treatment centers and high-efficiency coalescers.
- Pyro-Kleen® preheat/pre-oxidation systems clean and preheat parts, improving system efficiency and minimizing thermal distortion, while reducing the number of part transfers.



Modular design allows the configuration of the furnace line to meet particular requirements without resorting to a custom design.



Capable of achieving different metallurgical processes at a high rate of productivity, while offering high uptime, energy efficiency and ease of maintenance.

Conveyor Hardening Furnace

- Production rates from 100 to 6,000 pounds per hour for mesh belt systems and 500 to 10,000 pounds per hour for cast belt systems
- Various belt supports available: refractory tiles, herringbone, or power-driven rolls
- Various atmosphere sealing arrangements are available, including our patented incline Atmoséal™ loading system, which provides a positive atmosphere seal and utilizes the heat from the furnace atmosphere to preheat the product.
- Mesh belt systems ≥ 4,000 pounds per hour (1,814 Kg per hour) are equipped with a tension-free belt drive design using power-driven rollers at hearth level and return, with dual drives and automatic belt tracking.
- Bung-mounted, 6-5/8-inch-diameter (168 mm), centrifugally cast radiant tubes provide rapid, uniform heating with ease of maintenance.
- Silicon carbide U-type or single-ended radiant tubes with recuperative burners are also available.
- Specially designed, fully-sealed, spark-ignited burners with recuperation
- Modular, air cooled atmosphere circulating fans provide excellent temperature uniformity and atmosphere circulation.
- Large swing-type maintenance door at the discharge end for easy access
- Positive zone separation

Atmosphere Systems

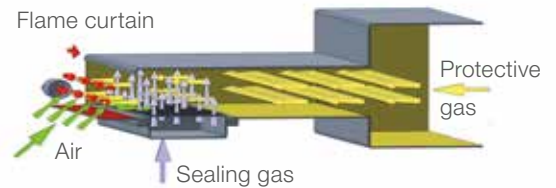
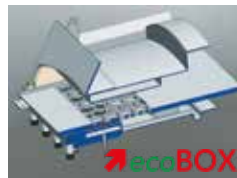
- Conventional endothermic and nitrogen-methanol atmosphere systems
- Nitrogen-natural gas atmosphere systems for neutral hardening applications

EcoBOX Diffusion Box

- Unique concept for the introduction of a sealing gas during conveyance of the load, thereby limiting the consumption of process gases. Significant cost savings resulting from the reduction in the amount of process gas and heating power needed.

Conveyor Tempering Furnace

- Our variable single-zone and multi-zone recirculating air temper furnaces are available to meet your individual requirements.
- Available with soluble oil or black oxide systems, either spray or dunk type.



EcoBOX concept offers significant savings in energy and associated costs



Dual Quench Mesh Belt

Quench Systems

- Available with heavy-duty mesh belt, cast belt, rotary drum, or magnetic quench conveyor systems
- Multiple quench media capability: oil, polymer, sodium hydroxide, nitrate-nitrite salt, and intensive water quenching
- Innovative “DualQuench” system allows for on-the-fly quench system changes under atmosphere for maximum flexibility.
- Patented “Uniflow” or “Upflow” quench agitation
- Quench systems are equipped with positive eductor and curtain to eliminate splash-back and achieve excellent atmosphere control.

Control Systems

- Fully automated and customized systems to meet your specifications and individual requirements
- Total process and quality control management provided by our computerized Belt-Master SCADA system