



Conveyor *Furnaces*

Continuous Conveyor Thermal Treatment System



Conveyor Furnace: Continuous Conveyor Thermal Treatment System

Continuous conveyor systems that put production control in your hands

Customer Requirements:

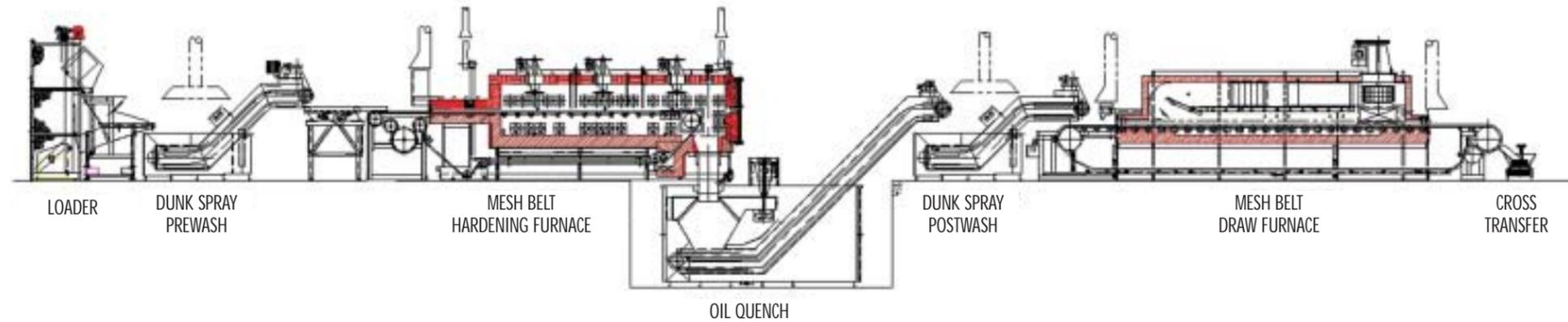
1. Process various fasteners, stampings, and forgings.
2. Perform different metallurgical processes such as neutral hardening, carburizing, carbonitriding, annealing, and normalizing.
3. Optimal energy efficiency.
4. High uptime >98%.
5. Easy to maintain.

Solution:

AFC-Holcroft's Mesh and Cast Belt Systems

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 is ideal for stampings, fasteners, castings, forgings, and precision components.

The AFC-Holcroft continuous conveyor furnace system designs offer the complete solution to today's ever-increasing demands to produce high-quality parts with dependable throughput and minimal operating costs. Our systems are available fully automated with the latest in computer controls and combined with the optional companion equipment required to meet your specific needs.



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.

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.

Conveyor Hardening Furnace

- Production rates from 100 to 6000 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 Atmosel™ loading system, which provides a positive atmosphere seal and utilizes the heat from the furnace atmosphere to preheat the product.

- Mesh belt systems \geq 4000 pounds 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, 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, water or 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.
- Our proprietary RapidGAS™ atmosphere system eliminates the necessity of a separate atmosphere generator, reduces carburizing cycle times by as much as 50%, requires less gas flow, and provides superior metallurgical properties.

Quench Systems

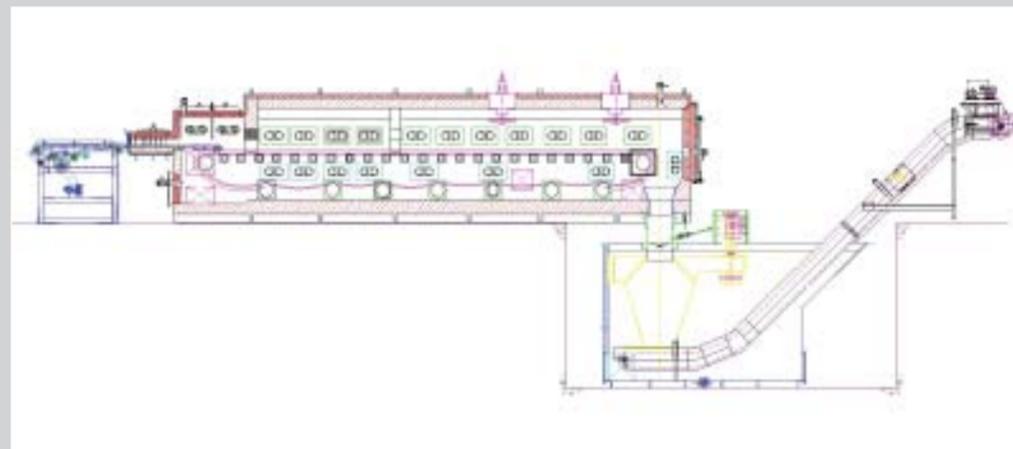
- Available with heavy-duty mesh belt, cast belt, rotary drum, or magnetic quench conveyor systems.
- Multiple quench media capability: oil, polymer, sodium hydroxide, nitrate-nitrite salt, and intensive water quenching.
- Innovative "DualQuench" system allows for on-the-fly quench system changes under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

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.

Control Systems

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

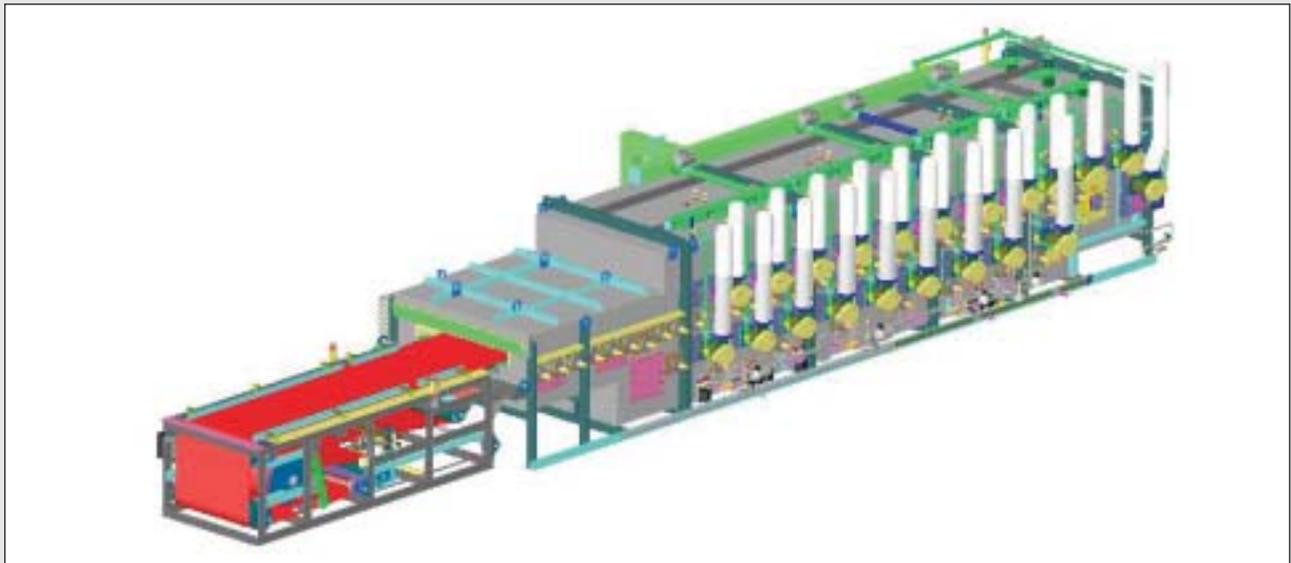


Cast Belt Furnace System with GapMiser™ Loader



Fully Automated Cast Link Belt System

Mesh and Cast Belt Continuous Conveyor Systems



Standard Mesh Belt Furnaces

	MB 30-96	MB 36-108.384	MB 54-192.456	MB 66-456
Effective Load Width	30 in.	36 in.	54 in.	66 in.
Effective Load Length	96 in.	108 – 384 in.	192 – 456 in.	456 in.
Effective Load Height	3 in.	6 in.	6 in.	6 in.
Production Capacity	500 lb/hr	750 - 3000 lb/hr	2500 - 5000 lb/hr	6,000 lb/hr

Standard Cast Belt Furnaces

	CB 36-192	CB 48-276	CB 72-600
Effective Load Width	30 in.	36 in.	72 in.
Effective Load Length	192 in.	276 in.	600 in.
Effective Load Height	6 in.	6 in.	6 in.
Production Capacity	2000 lb/hr	3500 lb/hr	10,000 lb/hr

Join the next generation today!

To learn more about how the AFC-Holcroft conveyor furnace system can give you the edge over the competition, contact us. Wherever your business is located, AFC-Holcroft can provide you access to an unparalleled level of consultation and support that ensures you get the maximum value from your investment dollar.



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