

aichelin group

AFC **HOLCROFT**
industrial furnace solutions

UBQA – Universal Batch Quench Austemper

The Clear Leader in Integral Molten Salt Quench
Furnace Designs



Reliability at Work

UBQA – Universal Batch Quench Austemper

Modular Design, Offers Full Line of Companion Equipment

AFC-Holcroft is the clear leader of integral molten salt quench furnace design. Our integral austemper quench systems operate in a temperature range of 350-800°F (180-430°C). Our exclusive water injection system can provide quench severities similar to a water quench and can through harden up to 6-inch (152mm) thick cross sections. Our universal batch quench austemper furnaces are designed for neutral hardening, carburizing, carbo austempering, normalizing, annealing, austempering steel, and austempering ductile irons (ADI).

Metallurgical process

- Austempering
- Carbo Austempering
- Marquenching
- Neutral Hardening
- Carburizing
- Normalizing
- Annealing

Materials

- Steel
- Austempered Ductile Iron (ADI)



Complete line of companion equipment, fully automated system available



Optimal investment with incremental expansion capability

UBQA key features include

- Extreme flexibility in processing various part sizes
- Easy to maintain modular design
- Optimal investment with incremental expansion capability
- Greater than 99% reclaim of quench salts
- Under atmosphere transfer to quench
- Compliant with current NFPA safety standards

BatchMaster Controls System

AFC-Holcroft's popular BatchMaster INDIVIDUAL batch furnace management package is based upon a subset of our highly successful ProcessMaster heat-treating supervisory system. The main operator HMI interface is a NEMA 4 industrial panel PC with color LCD touch screen. This HMI communicates directly to the batch furnace PLC controller for complete operational control. A variety of standard screens are provided for viewing mechanism and recipe status, control loops, process trending and other analog and digital status. All process parameters are read every second and recorded every minute. The built-in disk storage will handle 10 years of process data.

The BatchMaster HMI communicates directly with the PLC for temperature and carbon control.



- 1 Patented water injection system provides quench severity similar to water quench
- 2 Greater than 99% reclaim of quench salts
- 3 Total process and control management from fully computerized BatchMaster system

TECHNICAL SPECIFICATIONS

	Eff. Load Size - W x L x H		Gross Load		Salt Capacity		Salt Tank Heating-Gas
	inches	mm	lbs	kg	lbs	kg	kw
UBQA 364836	36" x 48" x 36"	915 x 1,220 x 915	3,500	1,587	44,000	19,958	205
UBQA 367236	36" x 72" x 36"	915 x 1,830 x 915	6,000	2,722	120,000	54,431	470
UBQA 367256	36" x 72" x 56"	915 x 1,830 x 1422	6,000	2,722	140,000	63,503	586
UBQA 547256	54" x 72" x 56"	1,370 x 1,830 x 1422	8,800	3,991	200,000	90,718	879
UBQA 849656	84" x 96" x 56"	2,133 x 2,438 x 1422	20,000	9,072	400,000	181,437	1,641

EXTRA LARGE CAPACITY – PROVEN EFFECTIVE FOR OVERSIZED PARTS

- Extra-large capacity, working dimensions 84" x 96" x 56" (2133 x 2438 x 1422 mm), load capacity 20,000 lbs. (9071 kg)
- Allows the processing of bigger parts than ever before
- Specially designed handling system for smooth movement of parts
- More quench severity than typical systems