

# VersaQuench<sup>®</sup>

## Quick Quench Furnace



### The VersaQuench<sup>®</sup> Quick Quench Furnace maximizes capacity while minimizing required floor space.

The VersaQuench<sup>®</sup> combines the latest technology, along with tried and true Surface engineering, to create a quick quench furnace capable of processing numerous components in a more productive fashion. Surface has designed the VersaQuench<sup>®</sup> Quick Quench Furnace using a proven, rugged, load-handling system.

The load-handling features include a custom braking system to complete faster load transfers and minimize quench delay to satisfy AMS2771 specification and Nadcap. It has also been designed for manual loading and automatic discharging from the furnace, utilizing the rear handler adapted from the standard Allcase<sup>®</sup> product line. The double-deck quench elevator design allows recharging of the furnace while work is being quenched. And the hearty elevator design is robust with fork loading onto elevator rollers.



**Solving Your  
Non-Ferrous  
Heat Treat  
Challenges**

## Equipment Design Features

- 15-second quench delay standard (10-second optional)
- Effective load sizes:
  - 48" x 48" x 48" (122 cm x 122 cm x 122 cm) 2,750 lbs. (1,247.4 kg)
  - 36" x 36" x 36" (91 cm x 91 cm x 91 cm) 1,500 lbs. (680.4 kg)
- Gas or electrical heated system
- 1200 °F and up (649 °C)
- Class 2 furnace
- PLC Control System
- Type B or C instrumentation
- Thermally-efficient round furnace casing and recirculating fan facilitates improved flow and temperature uniformity
- Radiation shields for indirect heating requirement
- Ceramic fiber insulation has desirable thermal properties allowing for faster process changes
- Compact footprint and lower overhead requirement



## Quench Design Features

- Capable of running both cast and wrought products
- Temperature rise of  $\approx 10$  °F (-12 °C) when quenching a 1,500 lb (680.4 kg) load
- Water quench tank designed specifically for non-ferrous materials processing
- Stainless steel construction
- Recipe-controlled VFD quench agitation

## Processes

- Solution Heat Treating
- Annealing
- Stress Relieving
- Aging
- Water Quench
- Air Quench (optional)

## Material/Component

- Aluminum components
- 2xxx & 7xxx series alloys
- Extrusions
- Tubing
- Plate
- High-pressure die casting
- Fittings
- Aerostructure sub-assemblies

## Companion Equipment

- Aging furnaces
- Storage tables
- Air cool station
- Charge Car
- Load/unload tables

## Get started with Surface!

Call Surface with the following information to get your furnace solution underway.

Work description and your process needed:

- 🔄 cycle
- ⚙️ operation
- 🕒 hours per year
- 📏 available space
- 🌡️ operating temperature range
- 🔥 heat source

We will work with you to develop the best processing solution for your thermal heat treating requirements. This starts with developing a complete process solution and continues through shipment, installation, and equipment commissioning.

Once your furnace is in place we continue working with you for the life of the equipment through our industry-leading aftermarket services including Field Service, After-Market Parts and Rebuild and Upgrade. We look forward to working with you.



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