

CONTINUOUS FURNACE SOLUTION HEAT TREAT

Benefits

- High volume parts capability
- Low quench delay times
- Water and air quench options

Process

Continuous roller hearth furnaces are typically designed to process high volume products that require the same process time and temperature. Parts are loaded in containers that are specifically designed for the furnace. The heat treat containers travel through the furnace via a conveyor which is PLC controlled. Continuous furnaces have multiple zones of control, which typically consist of entry/heat-up zones, soak zones and an exit zone. The furnace controls are set at a specified cycle time and solution temperature.

At the completion of the solution process, the containers of parts exit the furnace to the quench process. Water and air quench capabilities are available. The parts are in the T4 condition upon completion of the quench process and can be moved to an age oven if precipitation hardening is required.

Materials

All solution heat treated aluminum alloys can benefit from the continuous solution process, including castings, forgings, stampings, extrusions, and weldments.

Applications

Continuous solution heat treating is a good choice for a variety of applications, including:

- Control arms
- Steering knuckles
- Oil pans
- Oil filter adapters
- Coolant housings
- Turbocharger housings