

DROP BOTTOM FURNACE SOLUTION HEAT TREATING

Benefits

- Large parts capability
- Batch processing
- Low quench delay times
- Water and glycol quench options

Process

Drop bottom furnaces utilize a carriage to set heat treat containers on during the solution process. The carriage is suspended by chains and is hoisted into the furnace hydraulically. Once in the furnace, the doors close underneath the load, and the load remains in a static state until the completion of the solution cycle.

If the parts require quenching, a water or glycol quench tank will roll into position under the furnace via rails prior to the end of the solution cycle. The quench cycle begins with the furnace doors opening and the load descending into the quench tank at a controlled rate. 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 drop bottom solution heat treating process, including castings, forgings, stampings, extrusions, and weldments.

Applications

Drop bottom solution heat treating is well-suited for many applications, including:

- Large parts
- Thin-walled parts
- Thermal sand removal
- Aerospace components
- Military components