Surface® Combustion

CAR BOTTOM FURNACE

The car bottom furnace is a flexible single chamber furnace design that can be customized to meet many processing requirements. Furnaces can be provided in electric, direct fired and indirect gas fired configurations to meet specific processing requirements.

The furnace is typically loaded through a single vertically opening door, but the furnace can be configured as a lift cover or with doors at both ends. Furnaces can be provided up to 75 feet long, 20 feet wide and 20 feet tall with load ratings exceeding 1,000,000 pounds.

The car bottom furnace can be combined with loading cars, companion quench tanks, and washers to form complete heat treating cells.

INSTALLED BASE

Surface Combustion has an installed base of over 175 car bottom furnaces worldwide.

TYPICAL PROCESSES

Normalizing, hardening, stress relieving, carburizing, forging, annealing, homogenizing, aging, carbon baking

PROCESSING ATMOSPHERES

Endothermic (RX®), exothermic (DX®), nitrogen, air, argon, flue products

MATERIALS PROCESSED

Steel, stainless steel, cast iron, aluminum, carbon, silicon, titanium

PRODUCTS PROCESSED

Castings, forgings, aerospace components, bars, rod coil, carbon electrodes

TYPICAL DESIGN FEATURES

Ceramic fiber or brick insulating systems.
Maximum operating temperatures up to 2400°F.
Electric, direct gas fired (recuperative and regenerative), and radiant tube systems available.
Refractory or alloy hearth systems.
Automatic and manual car drive systems.
Companion atmosphere generators, quench tanks and furnace loaders available.
Controls meeting the requirements of AMS-2750 can be supplied as requested.

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