

Recirculation Furnaces

Batch Heat Treatments

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Recirculation Furnaces - En

INSERTEC manufactures and supplies high quality Recirculation Furnaces in various fields of applications for batch heat treatment that require tight temperature uniformity, specially aimed at industrial sectors, such as:

- Aeronautics.
- Automotive.
- Metalworking.
- Energy (Wind, Hydraulic, etc.).

and combined with our own professional Technical Assistance on site.

Recirculation Furnaces can be mainly divided into the following series:

- TCRG Series, Chamber type, or TSCRG, Bogie Hearth type, are directly or indirectly gas fired convection Furnaces.
- TCRE Series, Chamber type, or TSCRE, Bogie Hearth type, are electrically heated convection Furnaces.



Chamber type Recirculation Furnaces.



Bogie Hearth type Recirculation Furnace provided with sliding front door.

General Description:

Recirculation Furnaces are often provided with one only front door, hinged or sliding type, for batch loading and unloading, being manual or automatically operated.

In general, these Furnaces are also provided with door tightening system in order to improve not only the sealing against the heating chamber frame, but also against the perimeter joint of the transfer car-bottom if used.



Chamber type Recirculation Furnace provided with hinged front door.

Available Heat Treatments:

- Stress relieving (Aluminium, Titanium...).
- Tempering.
- Dehydrogening.
- Annealing and artificial ageing (Aluminium).
- Curing (Ceramic composites and paints).

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Recirculation Furnaces Batch Heat Treatments

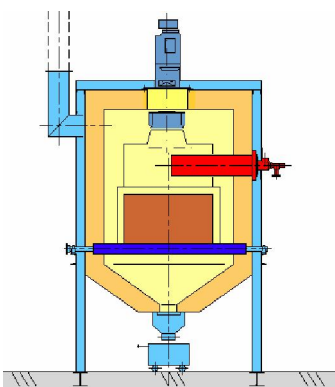
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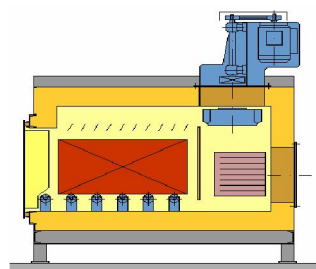
Chamber type Recirculation Furnace.

Main Features:

- Furnace dimensional and constructive design based on load physical characteristics, such as; dimensions, shape, weight, construction material,...in strict compliance with process technical requirements defined by Customer.
- Excellent temperature uniformity during the heating process, by means of accurate temperature control system and forced internal recirculation.
- Heating elements located at centrifugal fan suction side, so as to get a flow across the load under low overpressure.
- After-sales and skilled site services related to all Furnace matters throughout its service life.



Gas fired Furnace cross section.



Electrically heated Furnace cross section.

Supply Options:

- Furnace constructive design according to maximum working temperature (750°C).
- Manual or automatic door driving mechanisms.
- Directly or indirectly gas fired heating system by means of open burners (provided with load protection against direct flame radiation if required), or electrical heating by means of armoured resistances, or pre-shaped ones when appropriate.
- Forced internal recirculation in vertical, longitudinal or cross flow by means of centrifugal fans.

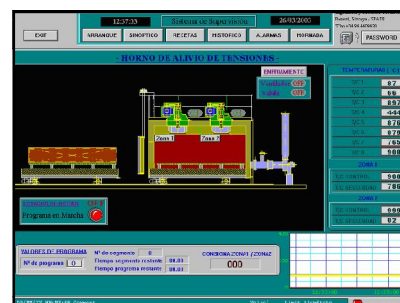


Heating elements assembly detail for easy access from the outside of Furnace .



Furnace heating chamber inside view.

- Load cooling process by means of forced ambient air recirculation system can be optionally supplied.
- Electric control panel equipped with process temperature program, safety and record devices in accordance with current Standards.



Bogie hearth type Recirculation Furnace diagram.

Ingeniería y Servicios Técnicos S.A.

Avda. Cervantes, 6 – 48970 Basauri, Vizcaya, Spain • Tel.: +34-944 409 420 / Fax: +34-944 496 624

e-mail: insertec@insertec.biz / www.insertec.biz