

Heat treatment systems

Tasks

Forplan heat treatment systems are used for all types of preheating, tempering and curing processes, as well as solution annealing and artificial ageing of aluminium components.

Using customer-specific automated conveyor systems, bulk materials or individual components are subjected to a defined, controlled temperature process.

For furnace processes in which flammable materials are released, systems are carried out according to EN1539.

Principle of operation

The products which are continuously or intermittently fed into the continuous flow dryer are heated via an air-circulation volume flow and then uniformly kept at temperature. Circulating air is directly or indirectly heated via electric heating elements, gas or oil burners.

Hot air is conveyed through air ducts and evenly distributed across the useful space in order to obtain the required temperature accuracy. In the course of this, the air-circulation volume flow is directed at high speed onto the product, which results in optimal heat transfer and, as a result, fast and effective heating.

Advantages

- Temperature accuracy by high air-circulation volume flow
- Intensive heat transfer and fast product heating through targeted, turbulent convective heat transfer
- High energy efficiency with low insulation and exhaust leakage
- Defined temperature control via freely programmable and parameterisable control sequences
- Customer-specific conveyor systems and automation solutions for high throughput rates and flexible production
- A wide variety of system principles for individual production processes such as chain and pass-through conveyors, turntables or overhead conveyor systems
- Sturdy construction for continuous industrial use

Examples of use

- Solution annealing and artificial ageing of aluminium components (T6 / T7)
- Preheating for forming processes
- Drying ovens and metal melting furnaces for foundries
- Hydrogen calcination
- Tempering and heat treatment processes of plastic components
- Curing of adhesives and resins
- Preheating and curing of composite materials

Part range

- Aluminium components
- Plastic components
- Fasteners such as screws, nuts and rivets
- Springs
- Composite materials, adhesive substances and grouting compounds
- Metal and plastic semi-finished products

