



Customized Industrial Furnaces and Heat Treatment Plants

Excellence in Heat Treatment

Your partner for thermal processes up to 600 °C

Specific technology, industry & application

For more than 50 years, the German SCHWING Group has been developing and manufacturing customer-specific thermal process systems. As a result, our exceptionally broad industry and application know-how as well as comprehensive experience in the realization of economically and ecologically optimal product, system and process solutions are available today.



Drying

Liquid removal by evaporation



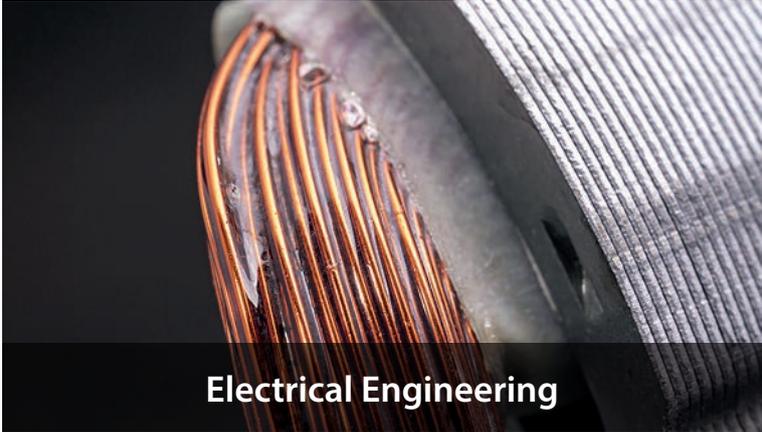
Tempering

of plastics, glass, etc. to improve properties



Hardening

of plastics, composites, silicone, rubber, etc.



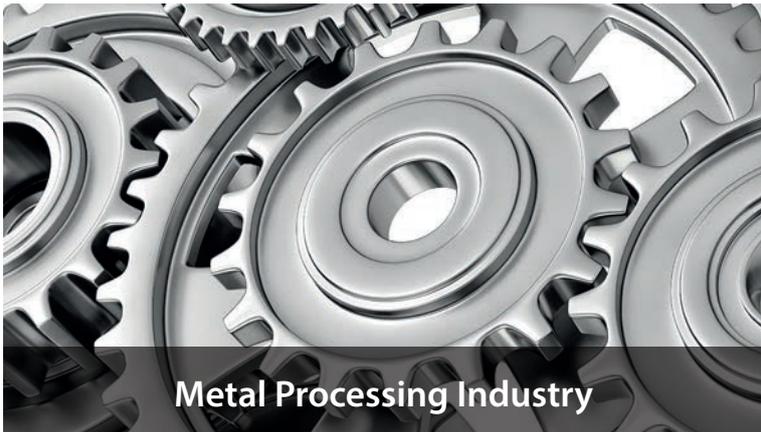
Electrical Engineering



Plastics / Rubber Industry



Composite Materials



Metal Processing Industry

On the basis of these resources, SCHWING Thermal Solutions GmbH designs simple to highly complex heat treatment systems with process temperatures up to 600 °C - individually, according to requirements and in compliance with standards (DIN EN 1539, AMS 2750

ff., CQI 9 etc.). The results are effective and energy-efficient thermal process system such as industrial furnaces, cooling chambers and any combination thereof in chamber or continuous principle, including loading or unloading and conveying technology.

know-how



Cooling / Quenching

Increase of strength or resistance



Tempering metal, NF metal

Increasing the toughness of a previously hardened metal



Ageing Non-ferrous metal

Precipitation hardening of (aluminum) alloys



Solution Hardening

Homogenization of metal alloys



Stress Relief Annealing

Reduction of lattice stresses in metal materials



Preheating / Keeping Warm

Preparation of components for processing



Laquers, Coatings



Automotive Suppliers



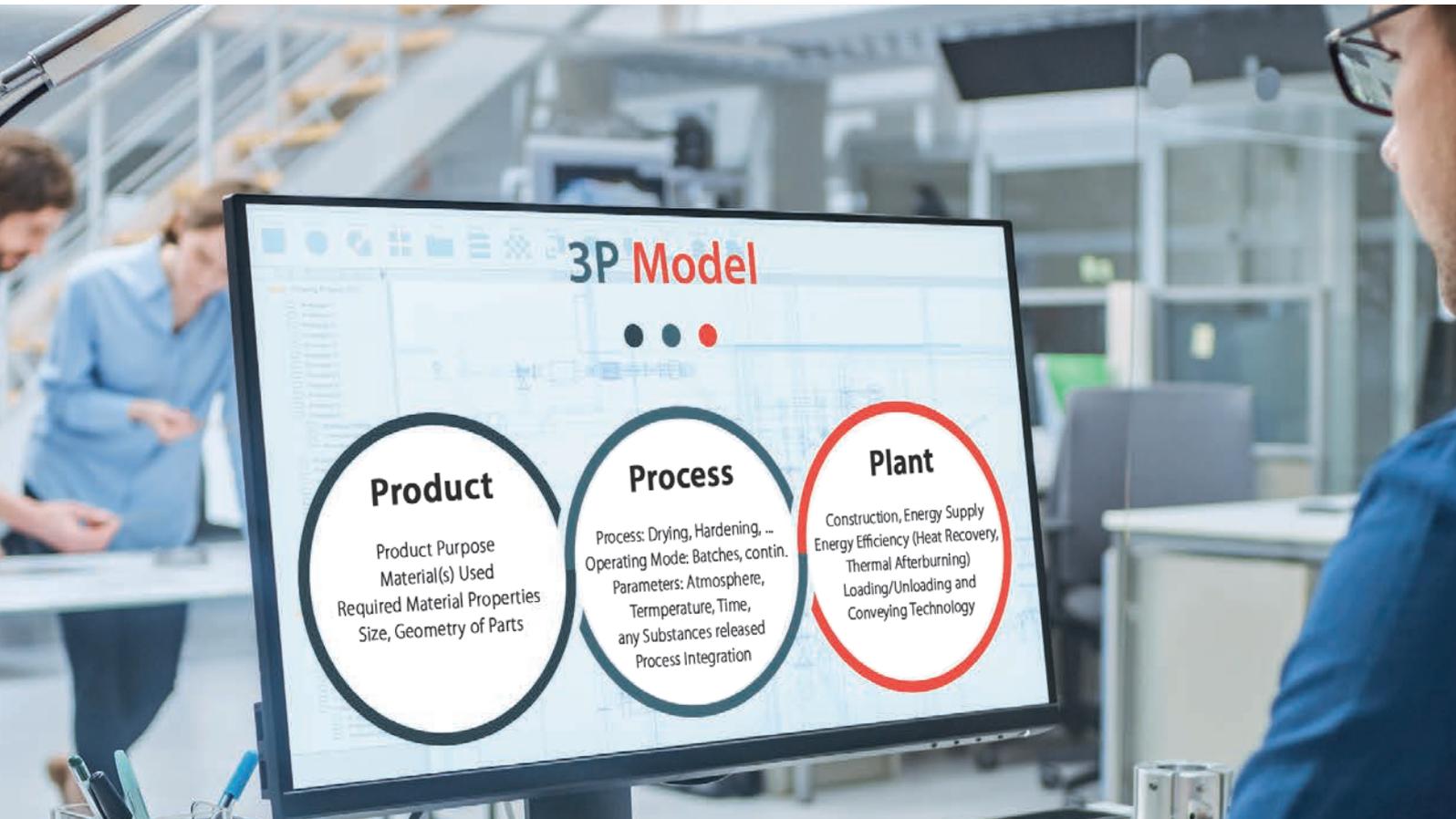
Car Manufacturers



Aerospace Industry

Your Process – Our Solution

Development, Construction, Engineering



In the design and construction of our plants, we focus on the successful implementation of our customers' individual processes and specifically address their particular requirements and wishes. At the same time, we advise our customers on optimization potential and possible energy efficiency measures.

Our technology is based on the thermal principle of recirculation and is characterized by a targeted and homogeneous air flow that ensures high temperature uniformity and energy efficiency. The desired process temperatures of SCHWING's chamber and continuous furnaces can be generated with any suitable heat source (electricity, gas, oil, steam, thermal oil, etc.). However, the typical basic design goal is to use heat sources with as little CO₂ as possible.

Our plants are controlled by modern, individually configurable programmable logic controllers (PLCs), which are operated via comfortable and user-friendly user interfaces. Functional extensions such as the generation of temperature profiles, complete batch and process documentation, remote functionality, etc. can be added as required.

Whether batch operation, continuous flow production with high quantities or discontinuous series production with several production stages: Each heat treatment plant is equipped with all the necessary technical fixtures, furnace door and feed systems, conveyor technology, etc.

Our Services – Your Advantages

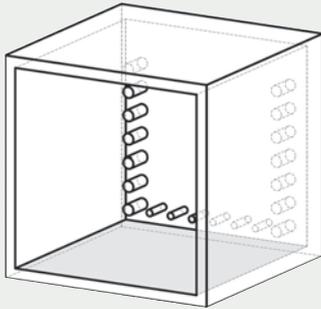
- **Maximum Temperature Homogeneity**
for precise process stability in the working chamber
- **Green Design & Processing**
Customer- and application-specific solutions, CO₂-minimizing engineering, exhaust air purification, thermal afterburning
- **Energy Efficiency**
Optimal thermal insulation, heat recovery, exhaust air volume control
- **Convenient Loading / Unloading**
Manual and automated door or lid opening, charging and conveying technology
- **Simple Operation**
Intuitive plant control, targeted training, video guides
- **Optimized Loading Devices**
Specific loading baskets and tables, tray trolleys, racks, hanging / rolling systems, etc.
- **Operational Safety**
Safe handling, discharge and neutralization of flammable and harmful process gases
- **Standard Conformity**
Integration of DIN EN 1539, AMS 2750 ff., CQI-9, DIN EN 12100, 2006/42/EG, etc.
- **Digital Interface**
Logging and documentation of the entire process; remote diagnosis, remote maintenance
- **On-site / Onsite Support**
Global availability of highly qualified service technicians and mechatronic engineers
- **Spare Parts Service**
Prompt, worldwide supply of spare parts
- **Optional Remote Support**
Step-by-step instructions, instructor feedback, education and training via remote guidance

For your specific demand:

Customized industrial furnaces and heat

Chamber Furnaces

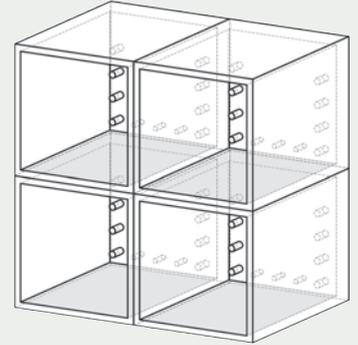
for batch processes



Chamber Furnaces are characterized by a compact, simple design. For batch operation, the products are fed in and out of the oven chamber through one and the same opening (front loader).

Multi-Chamber Furnaces

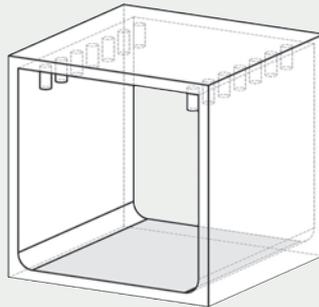
for multi-stage processes



Continuous Furnaces

incl. integrated conveyor technology

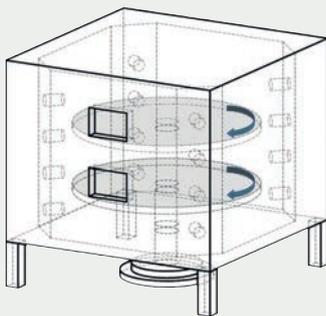
In **Continuous Furnaces**, a transport system automatically conveys the products through one or more furnace chambers, enabling a discontinuous/continuous flow of products through different temperature zones, for example.



Top Loader Furnaces are chamber furnaces with a furnace lid that can either be opened sideways (chest furnace), pushed open or lifted for vertical loading and unloading (e.g. by crane). Side loading/unloading is also possible.

Rotary Plate Furnaces

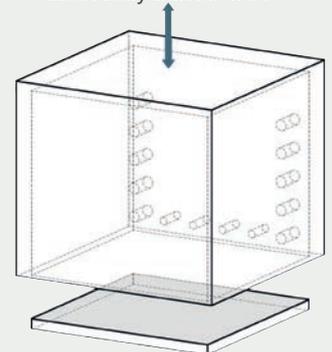
for different dwell times



The products are placed on a rotary plate in the chamber of the **Rotary Plate Furnace**. The rotary movement ensures uniform product temperature control and, in addition to a first in / first out mode of operation, also enables different product dwell times with targeted loading/unloading.

Hood Furnaces

absolutely barrier-free



Only physics sets our limits.

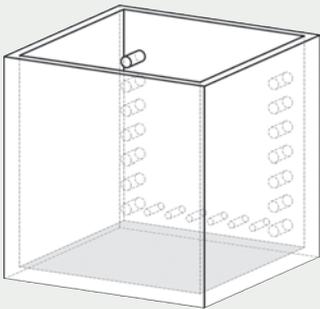
Customer and application-specific designs and dimensions are an integral part of our industrial furnace solutions. The combination of different designs also enables particularly space-saving, multifunctional systems.

treatment plants

Multi-Chamber Furnaces consist of adjacent or successive furnace chambers which, in the case of separable chamber systems, can also be operated at different temperatures.

Top Loader Furnaces

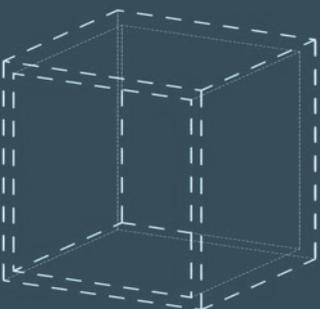
vertical loading and unloading



In **Hood Furnaces**, the entire furnace chamber slips over the products like a hood. This chamber furnace design allows 360° access to the products or components.

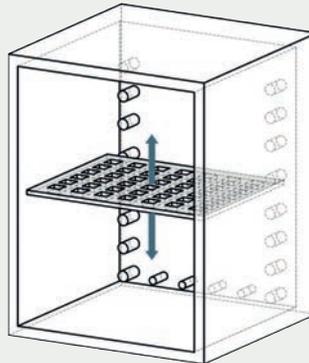
Special Furnaces

Individual developments and function combinations



Deck Furnaces

optional with integrated lifting system

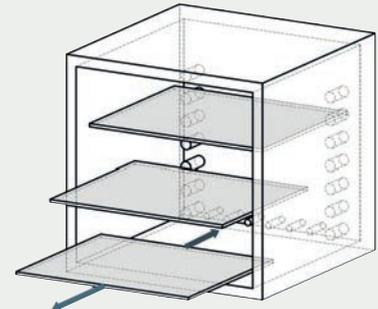


The space-saving **Deck Furnaces** enable multi-stage heat treatment of products in superimposed process chambers by front-loading per chamber or by means of an integrated lifting/conveying system.

The products are placed on the pull-out inserts of the **Drawer Furnaces** and moved into the oven chamber. This design is suitable for smaller batches and, in the case of several oven chambers, for treatments with different temperatures.

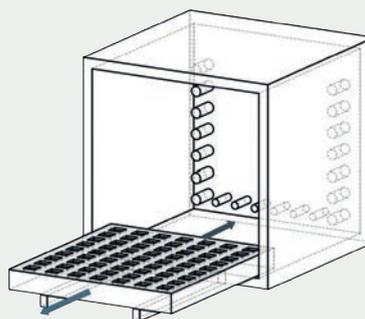
Drawer Furnaces

compact for smaller batches



Bogie Hearth Furnaces

optional with roller systems



Large products or complex components are moved into and out of the **Bogie Hearth Furnace** on a manually or electrically operated trolley with specific holders, supports, racks (bogie hearths) or roller systems for component rotation. Can be loaded by crane or forklift.

SCHWING Thermal Solutions

The Heat Treatment Experts

The SCHWING Group, headquartered in Germany, has been successfully developing, producing and selling customer and application-specific oven systems and thermal processing equipment internationally since 1969.

SCHWING Technologies is known worldwide for its excellent thermal cleaning systems for production tools and components of the international plastics and fiber industry.

Just as successfully, the Process Technology division has for decades been developing and manufacturing both application-specific gas-solid reactors up to 1100 °C for customers from the chemical and other industries

on the basis of fluidized bed technology, as well as fluidized bed furnaces in the heat treatment market for the paint/lacquer, automotive, aerospace and medical technology industries, among others.

Based on this profound know-how and experience, SCHWING Thermal Solutions GmbH was founded together with a group of innovative heat treatment experts in the fall of 2021.

Here, the experts, in close cooperation with the thermal process and plant engineering specialists of the SCHWING group of companies, develop and implement any desired circulating air heat treatment system according to application and customer specifications.



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 **SCHWING**
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