Additional services:

Worldwide service

Training and seminars

Economic efficiency calculations

Powerful
down to the smallest detail.

From powerful versatility to the short-circuit proof high-performance generator for the most demanding induction applications, TRUMPF Hüttinger offers everything the industry needs. But that is not enough. At TRUMPF Hüttinger we go a step farther and offer you all of the components required for a functioning system environment. Inductor, coaxial transformer, re-cooler or pyrometer with controller – we consider every detail and guarantee an integrated, complete solution developed by our technology experts and tested in practice.

Pioneering technologies.
Our Standard.

The history of TRUMPF Hüttinger is defined by technical developments and patents, offering sophisticated solutions to practical challenges, consistently developed in close cooperation with our customers. Here the concrete application or problem always takes center stage. With its pioneering spirit and expertise accumulated over decades, TRUMPF consistently helps bring efficient and lasting innovations to the market. Numerous processes worldwide have been intensified, accelerated, improved and made more environmentally friendly by TRUMPF Hüttinger developments. You can benefit from this and challenge us.

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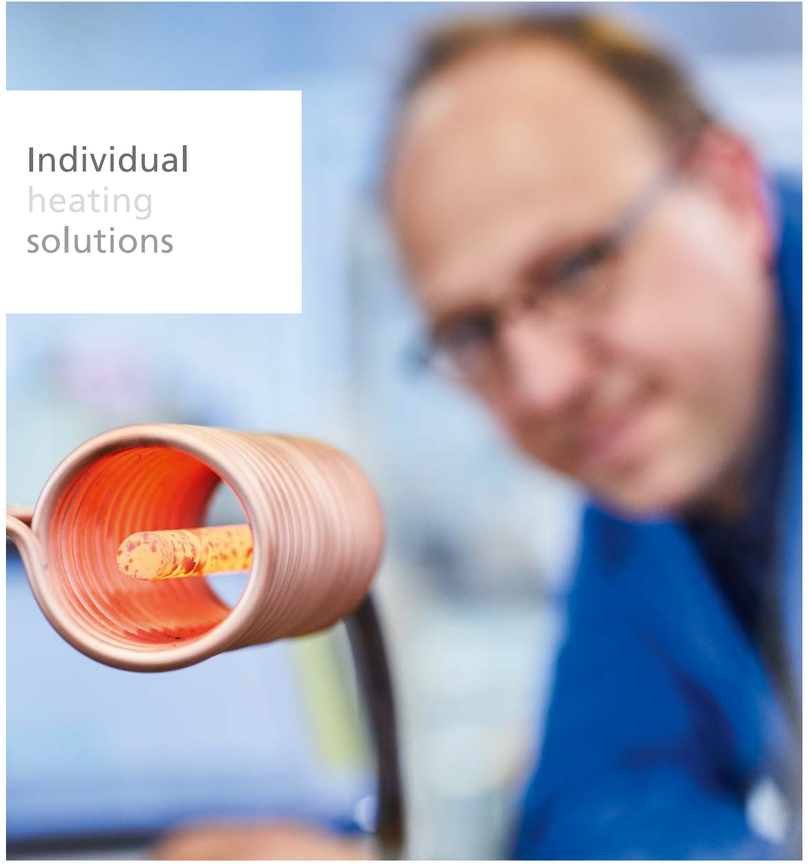
TRUMPF

Individual heating solutions



Development of inductive heating processes.
We are just getting warmed up where others give up.

TRUMPF Hüttinger
generating confidence

TRUMPF

Induction heating: Your individual needs **are our motivation**

You have the idea. **We develop the solution.**

It typically starts with the question of whether and how induction technology can make a manufacturing step more productive. Here TRUMPF Hüttinger offers you an individual solution concept in several steps. This leads to maximum transparency and reliability from the outset and allows you to first verify feasibility without having to buy a system directly. Initially the requirements and process temperature are defined. Solutions are developed and tested on this basis with analytical methods.
The approach is as individual as your process.

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Our expertise is your advantage.

- **Low investment cost**
  Feasibility study with minimal investment cost
- **Cost-optimized production processes**
  Efficiency improvement and cost reduction through an optimized heating process
- **Tailor-made solutions**
  Solutions tailored specifically for your production
- **Decades of experience**
  You can rely on our experienced engineers

The purposeful use of induction heating offers great benefits in numerous production processes within many industrial sectors thanks to the attractive combination of speed, consistency, control and energy efficiency. There are virtually no limits to the fields of application and capabilities. TRUMPF Hüttinger is your experienced partner for the planning and development of efficient, individual heating processes. No matter how complex the requirements – we jointly develop optimum solutions and are only satisfied when you are.

Industry solutions

Automotive industry
Packaging industry
Medical technology
Glass industry
Aviation and aerospace
Semiconductor industry
Telecommunication
Mechanical engineering
Science and research

And other industries where heating processes are used in production

Classic applications

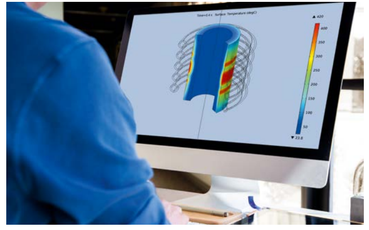
Hardening, annealing, tempering
(Cable) heating
Melting
Shrinking
Drying
Gluing
Sealing
Tube welding
Soldering
Heat treatment
Bonding
Forging
Softening

Special applications

Crystal pulling
Epitaxy
Zone floating
Skull melting
Inductive coupled plasma

Step 1
Analysis

- Analysis of the material properties and process environment
- Analysis of the process parameters such as the start and end temperature, surface characteristics, geometry, heating and cycle time, thermal insulation etc.
- Analysis of other constraints for the overall system such as floor space, target unit cost, etc.



Step 2
Preparing approaches

Basic trials:

- Definition and inclusion of the constraints
- Preparation and setup of application tests
- Adaptation of the power supply
- Adjustment of temperature measurement and control systems
- Fabrication of a test inductor

Numeric simulation:

- Creation of a 2D or 3D model under consideration of the component and surrounding geometry

Step 3
Test phase and optimization

Laboratory tests:

- Adaptation and optimization of the test inductor
- Determination of the electrical and thermal parameters
- Determination of the inductor geometry

Numeric simulation:

- Performing the calculations
- Adaptation and optimization of the model
- Preparation of field patterns (temperature, magnetic field, etc.)
- Determination of the electrical and thermal parameters
- Determination of the inductor geometry

Step 4
Implementation

- Economic efficiency calculation
- Documentation of the results
- Implementation of the individually developed application in your production process
- On request: commissioning on site