Induction heating unit
TTH20/TTH25

Power 20kW/25kW
Frequency 70kHz-450kHz
Stationary design with one output for continuous operation
The induction heating unit TTH20/TTH25 consists of two components, the high frequency Generator and the stationary heating station with the corresponding inductor.

The TTH20/TTH25 has been designed with state of the art semiconductor technology and therefore enables an optimal overall efficiency of the unit. The generator automatically selects the resonance frequency for any inductor and thereby always achieves maximum output.

**Unit design TTH20/TTH25**

**Generator**
- on/off switch
- internal power supply
- automatic resonance recognition
- inductor short-circuit proof
- with measuring device for output power and frequency
- display of generator status with LEDs
- continuous target value regulation with potentiometer 0-100%
- remote control socket for PLC controller
- connection option for foot switch
- 1.5m connection cable between generator and heating station

**Heating station**
- matching transformer with electrical insulation
- replaceable condenser bridges
- inductor connection
- inductor rapid fastener

**Remote control inputs**
- digital input for induction unit start
- analogue input 0-10V or 0-20mA for target value

**Remote control outputs**
- digital output for standby
- digital output for power transmission at the inductor
- digital output for induction unit error state
- analogue output 0-5V for power transmission at the inductor

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## Technical data TTH20/TTH25

### Generator

<table>
<thead>
<tr>
<th>Generator</th>
<th>HF-output</th>
<th>total input power</th>
</tr>
</thead>
<tbody>
<tr>
<td>TTH20</td>
<td></td>
<td>20 kW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>23 kVA</td>
</tr>
<tr>
<td>TTH25</td>
<td></td>
<td>25 kW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>28 kVA</td>
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</tbody>
</table>

- **Power supply**: 3 x 400 V/N+PE 63A, 50-60 Hz
- **Internal control voltage**: 230 V/N AC 50-60 Hz
- **Amount of heating stations**: 1 (stationary)
- **Power-on time**: 100% (= continuous operation)
- **Frequency**: 70 kHz bis 450 kHz
- **Housing**: Tischgehäuse 7HE, 84TE HF-Ausführung
- **Dimensions (W x H x D) with handles**: 550 x 350 x 530 mm
- **Weight**: approx. 45 kg

### Heating station

- **Dimensions (W x H x D) without fan**: 310 x 180 x 600 mm
- **Dimensions (W x H x D) with fan**: 330 x 180 x 610 mm
- **Mounting holes (W1 x D1)**: 260 x 580 mm
- **Connecting system induktor (a x b)**: 4 x M6, 50 x 30 mm
- **Weight**: approx. 48 kg

### Remote control

- **Power supply**: 24V/100mA und 12V/100mA DC
- **Inputs**:
  - Digital input coil energy transfers: 24V DC
  - Digital input external reset: 24V DC
  - External performance settings: 0-10V bzw. 0-20mA DC
- **Outputs (alternatively)**:
  - Potential fee relay contacts OR: 24V/1,25A AC/DC
  - Photomos-outputs (high switching operation amounts): 24V/0,25A AC/DC
  - Outputs for generator conditions:
    - standby-state
    - power transmission to inductor
    - error state

### Water demand

- **Water quality**: Drinking water or cleaned filtered industrial water (no deionised or destilled water)
- **Water hardness**: max. 8 German degrees of hardness
- **Water connection**: 1 x flow, 1 x return
- **Water connection flow & return**: 1/2" hose clip, tube di = 12 mm
- **Pressure difference**: 4 – 6 bar
- **Supply temperature**: 18°C – 25°C (max. 30°C)
- **TTH20**
  - rate of flow generator: approx. 5 l/min
  - switchpoint of waterflow generator: approx. 4 l/min
  - rate of flow inductor: approx. 6 l/min
  - switchpoint of waterflow inductor: approx. 4 l/min
- **TTH25**
  - rate of flow generator: approx. 6 l/min
  - switchpoint of waterflow generator: approx. 4 l/min
  - rate of flow inductor: approx. 7 l/min
  - switchpoint of waterflow inductor: approx. 4 l/min
### Article numbers and accessory list

<table>
<thead>
<tr>
<th>ORDER NUMBER</th>
<th>ARTICLE DESCRIPTION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Induction heating unit – stationary design</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND0028</td>
<td>TTH20</td>
<td>continuous operation 100% with output power 20kW</td>
</tr>
<tr>
<td>IND0029</td>
<td>TTH25</td>
<td>continuous operation 100% with output power 25kW</td>
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</tbody>
</table>

**Accessories**

<table>
<thead>
<tr>
<th>ORDER NUMBER</th>
<th>ARTICLE DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>IND0200</td>
<td>industry foot switch</td>
<td>foot switch to turn on and off the induction power</td>
</tr>
<tr>
<td>IND0203</td>
<td>industry foot switch with output power control</td>
<td>foot switch to turn the induction unit on and off and also to control the power output 0...100%</td>
</tr>
<tr>
<td>IND0205</td>
<td>10turn potentiometer</td>
<td>fixed adjustment of the output power with interlock</td>
</tr>
<tr>
<td>IND0253e</td>
<td>HUB TTH20-TTH25 e</td>
<td>automatic lifting device for heating station TTH20 / TTH25 electric power version</td>
</tr>
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**Inductor**

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<tr>
<th>ORDER NUMBER</th>
<th>ARTICLE DESCRIPTION</th>
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<tbody>
<tr>
<td>IND0300</td>
<td>Inductors</td>
<td>customer specific inductors</td>
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**Optional: temperature control**

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<tr>
<th>ORDER NUMBER</th>
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<tbody>
<tr>
<td>S-REGULUSxxx</td>
<td>Regulus</td>
<td>temperature control or programm control</td>
</tr>
<tr>
<td>IND0850</td>
<td>SPS</td>
<td>automatic sequence control &amp; temperature control prepared for small devices</td>
</tr>
<tr>
<td>IND0850small</td>
<td>SPS-Small</td>
<td>automatic sequence control &amp; temperature control</td>
</tr>
<tr>
<td>S-Sirius</td>
<td>infrared pyrometer</td>
<td>infrared pyrometer 300°C…1300°C</td>
</tr>
<tr>
<td>S-Metis</td>
<td>infrared pyrometer</td>
<td>infrared pyrometer 75°C…550°C</td>
</tr>
<tr>
<td>S-xxx</td>
<td>accessories</td>
<td>accessories, mounts, air purge for pyrometer</td>
</tr>
</tbody>
</table>

**Optional: cooling systems**

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<th>ORDER NUMBER</th>
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<tbody>
<tr>
<td>RKA-Chilly 15</td>
<td>cooling system CHILLY15-Sonder 1.425kW</td>
<td>cooling system for induction heating unit and inductor</td>
</tr>
<tr>
<td>RKA-Chilly 35</td>
<td>cooling system CHILLY35-Sonder 3.5kW</td>
<td>cooling system for induction heating unit and inductor</td>
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