TruHeat MF
Series 3000 / 5000 / 7000

Spot-on performance for heating efficiency second to none.
Flexibel power for high efficiency.
TruHeat MF Series 3000 / 5000 / 7000.

TruHeat MF Series 3000 / 5000 / 7000 is a family of powerful and extremely versatile medium frequency generators for induction heating applications. Specifically designed for high performance processes, these generators are offered in a wide variety of configurations and parameters. Individual models are available with an output power of 10 Kilowatt (kW) to 250 kW over a frequency range of 3 kilohertz (kHz) to 200 kHz. They can be operated with mains voltages between 380 Volts (V) and 480 V, for ease of use all over the world. The used parallel circuit technology enables a wide range of applications. Operating frequency and output power can be quickly adapted. The broad impedance matching range allows work pieces of various shapes to be treated with consistent quality.

Features
- Extremely compact design featuring a high power density
- Wide mains voltage range
- Parallel oscillating circuit ensures quick process adaptation
- Process power control from almost 0 percent to 100 percent
- Approved reliability
- Advanced user interface

Benefits
- Easily integrates into new or existing systems
- Ready for worldwide use
- Eliminates setup-time for capacitor changeovers, improves productivity and process stability
- Ideal for temperature controlled processes
- High productivity and constant process results
- Easy to configure and to operate

White hot in seconds. Sustained for months: Trusted TRUMPF Hüttinger induction technology.
Output Parameters

Output Power
10 kW, 20 kW, 30 kW, 40 kW

Output Frequency
5 kHz – 30 kHz
20 kHz – 100 kHz
20 kHz – 200 kHz\(^1\)

Max. Output Voltage
300 V, 600 V

1) At 200 kHz max. 35 kW output power.

Mains Input

Mains Voltage
3 x 400 V – 10 % bis
3 x 480 V + 10 %

Mains Frequency
50 Hz / 60 Hz

Power Factor
0.96

Efficiency
87 %

Cooling Specifications

Max. Water Pressure
6 bar

Min. Differential Pressure
3 bar

Min. Water Flow Rate by 4 bar
Power Supply Unit
12 l/min

External Circuit
4.5 l/min

Max. Cooling Water Temperature
35 °C

Dimensions (W x H x D)

<table>
<thead>
<tr>
<th>Model</th>
<th>Dimensions (W x H x D)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>TruHeat MF Series 3000</td>
<td>483 mm x 400 mm x 754 mm</td>
<td>87 kg</td>
</tr>
<tr>
<td>TruHeat MF Series 5000</td>
<td>555 mm x 505 mm x 843 mm</td>
<td>105 kg</td>
</tr>
<tr>
<td>TruHeat MF Series 7000</td>
<td>600 mm x 1 405 mm x 825 mm</td>
<td>220 kg</td>
</tr>
<tr>
<td>External Circuit</td>
<td>215 mm x 250 mm x 400 mm</td>
<td>21 kg</td>
</tr>
</tbody>
</table>

Protection Class

<table>
<thead>
<tr>
<th>Model</th>
<th>Protection Class</th>
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</thead>
<tbody>
<tr>
<td>TruHeat MF Series 3000</td>
<td>IP 21</td>
</tr>
<tr>
<td>TruHeat MF Series 5000</td>
<td>IP 21</td>
</tr>
<tr>
<td>TruHeat MF Series 7000</td>
<td>IP 54</td>
</tr>
<tr>
<td>External Circuit</td>
<td>IP 54</td>
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</tbody>
</table>
Load and Frequency Adaptation in the External Circuit

1) By default, the pre-coil $L_{pre}$ is available for the frequency range of 20 kHz to 100 kHz.

Changing the capacitance $C_{tot}$ or the inductance $L_{tot}$

$$L_{tot} = L_{ind} + L_{pre} \quad C_{tot} = C_1 + C_2 \ldots + C_n$$

1) By default, the pre-coil $L_{pre}$ is available for the frequency range of 20 kHz to 100 kHz.

Effects due to Changes in the External Circuit

<table>
<thead>
<tr>
<th>Changed values</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacitance $C_{tot}$</td>
<td>Inductance $L_{tot}$</td>
</tr>
<tr>
<td>+ =</td>
<td>=</td>
</tr>
<tr>
<td>− =</td>
<td>=</td>
</tr>
<tr>
<td>= +</td>
<td>=</td>
</tr>
<tr>
<td>= −</td>
<td>=</td>
</tr>
</tbody>
</table>

2) No condensation.
3) Max. 2 000 above sea level.