Worldwide Service
SAET and EMMEDI customers can benefit from the resources of a global corporation. We provide worldwide assistance through our network of regional sales and service engineers. Our experienced service team is strategically placed for quick response to customers wherever they are located.

Our commitment to customer support means that SAET and EMMEDI are available to deal with emergencies at any location worldwide.

INTEGRATION
- Heating programs for automatic process control.
- Fieldbus or serial connections.
- F, I, V, P and E measurements through fieldbus of up to ±1% accuracy under working conditions.
- Power supply user interface embedded in machine PLC.
- Software tool to customize interface.

World Headquarters

INDUSTRY 4.0 ready

INDUCTION POWER SUPPLIES

SAET S.p.A. Via Torino, 213 10040 Leinì (To) Italy
Phone (+39) 011 99.77.999 Fax (+39) 011 99.74.328
www.saetemmedi.com

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- Power supply user interface embedded in machine PLC.
- Software tool to customize interface.
A power supply must allow you to focus on your business.

- A reliable induction process
- Flexibility in the application
- Energy savings
- Low maintenance
- Easy operation

The right selection of a converter makes possible a long-lasting investment performing as the first day.

**FOR APPLYING INDUCTION HEATING.**

**AN INDUCTION POWER SUPPLY IS MORE THAN POWER**

- A range of frequencies and power
- Compensated power supplies
- Serial and parallel output circuit
- Solutions for every case

**SOLUTIONS FOR EVERY CASE**

<table>
<thead>
<tr>
<th>Type</th>
<th>Frequency</th>
<th>Power (kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stationary</td>
<td>Compact</td>
<td>0.5 - 25</td>
</tr>
<tr>
<td>Mobile</td>
<td>0 - 100</td>
<td></td>
</tr>
<tr>
<td>M-POWER-S</td>
<td>0.5 - 25</td>
<td></td>
</tr>
<tr>
<td>M-POWER-P</td>
<td>25 - 2000</td>
<td></td>
</tr>
<tr>
<td>I-POWER-S</td>
<td>12 - 800</td>
<td></td>
</tr>
<tr>
<td>I-POWER-P</td>
<td>25 - 800</td>
<td></td>
</tr>
</tbody>
</table>

**COMPACT SYSTEMS**

- Ideal when the Heating Station must be extremely mobile
- Based on LLC configuration.
- For specific cases.

**HYBRID (LLC)**

- Medium frequency [50, 150] kHz.
- Single or dual outputs.
- For discontinuous heating and/or difficult access locations.

**MOBILE SYSTEMS**

- AGHILE FAMILY
  - Stationary or hand-held inductor.
  - Compact oscillator included.
  - For non-continuous applications.

- DIGIMAC
  - Portable and easy installation.
  - Monoblock (SM) and high frequency (SH).
  - For discontinuous heating and/or difficult access locations.
  - Compact oscillator included.
  - Stationary or hand-held inductor.
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<table>
<thead>
<tr>
<th>Power (kW)</th>
<th>2</th>
<th>5</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>50</th>
<th>100</th>
<th>150</th>
<th>200</th>
<th>250</th>
<th>300</th>
<th>400</th>
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<tbody>
<tr>
<td>Aghile</td>
<td>10</td>
<td>50</td>
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<tr>
<td>Digimac</td>
<td>10, 20, 60</td>
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</tr>
</tbody>
</table>

**INDUCTION POWER SUPPLIES**

- Stationary
- Compact
- Mobile

**WHAT ABOUT OUR POWER SUPPLIES?**

**Versatility**
- Different types of power supplies depending on the need.
- Customization of systems and feature development.
- Wide range of usage from very specialized to flexible applications.

**Reliability**
- Robust design and materials.
- Protection against short circuits at the output of the inverter and the inductor.
- Dropout detection and protection against over current.
- Control of the currency.

**Energy Efficiency**
- Series compensated power supplies:
  - Advanced digital control: depending on the frequency the system selects the best control strategy or their combination.
  - Alternating for heating wide range of parts.
- Different possibilities:
  - PM (Power Modulation),
  - PWM (Pulse-Width Modulation),
  - PDM (Pulse Density Modulation) and PFM-PWM mixed.
- Efficiency (η) up to 95%.
- Reduced impact in the facility supply network:
  - Load independent power factor.
  - Reduced operating expenses (OPEX).

**PARALLEL COMPENSATED POWER SUPPLIES**

- Full digital control: Closed loop (CL), to have the inverter work always at the resonant frequency that maximizing the efficiency.
- Easy load adaptation, mainly in case of low frequency and high current.
- Efficiency (η) up to 98%.
- Reduced impact in the facility supply network: compensated power factor and harmonics reduction according to load variation for precise temperature phases.

**SERIES COMPENSATED POWER SUPPLIES**

- Full digital control: Closed loop (CL), to have the inverter work always at the resonant frequency that maximizing the efficiency.
- Easy load adaptation, mainly in case of low frequency and high current.
- Efficiency (η) up to 95%.
- Reduced impact in the facility supply network: compensated power factor and harmonics reduction according to load variation for precise temperature phases.

**STATIONARY SYSTEMS**

- Ideal when the Heating Station must be extremely compact.
- Based on LLC configuration.
- Medium frequency [50, 150] kHz.

**COMPACT SYSTEMS**

- Ideal when the Heating Station must be extremely compact.
- Based on LLC configuration.
- Medium (SM) and high frequency (SH)
- Portable and manual.

**HYBRID (LLC)**

- Medium frequency 20, 70 kHz.
- For specific cases.
- Based on LLC configuration.
- Most flexible setup and can be use in a variety of applications, from integration in some machines.

**MOBILE SYSTEMS**

- AGHILE FAMILY
  - Stationary or hand-held inductor.
  - Compact oscillator included.
  - For discontinuous heating and/or difficult access locations.

- DIGIMAC
  - Mobile systems: ALL-IN-ONE-BOX.
  - Air temperature system.
  - For non-continuous applications.
  - Coolant and chiller included.
  - Single or dual versions.

**CONNECTIVITY - INDUSTRY 4.0**

- Smart frequency converters are designed to improve system connectivity.
- They are compliant with Industry 4.0 trends, with the following features:
  - Fieldbus connection makes available the generator parameters and fault messages to PLC, NC and HMI.
  - User-friendly web interface shows the generator status in real time, through Ethernet connection.
  - Advanced digital control: depending on the frequency the system selects the best control strategy or their combination.
  - Alternating for heating wide range of parts.
  - Reduced operating expenses (OPEX).
  - High efficiency for high frequencies (SH).

**DSC TRANSISTOR**

- SiC technology
- 25 - 800 kW
- Frequency extension to lower band.
- Reduced costs.
- Reduced Operating Expenses (OPEX).

**FIELDBUS CONNECTION**

- Fieldbus connection makes available the generator parameters and fault messages to PLC, NC and HMI.

**CONNECTIVITY INTEGRATION**

- Frequency extension to lower band.
- Reduced costs.
- Reduced Operating Expenses (OPEX).

**APPLICATIONS**

- For the most demanding industries.
- For the widest frequency range.

- Serial and parallel output circuit
  - Transformer solutions:
    - INPOWER P
    - INPOWER S
  - SIQNOX S
  - SIQNOX S/SM
- Modular design.
- Advanced and remote maintenance.

- Customization
  - For specific customer requirements.
  - Adaptation to concrete needs.
  - Multiple output up to 6 or dual frequency output.
  - Functionality development.

- CONNECTIVITY - INDUSTRY 4.0
  - Fieldbus connection makes available the generator parameters and fault messages to PLC, NC and HMI.
  - User-friendly web interface shows the generator status in real time, through Ethernet connection.
  - Advanced digital control: depending on the frequency the system selects the best control strategy or their combination.
  - Alternating for heating wide range of parts.
  - Reduced operating expenses (OPEX).
  - High efficiency for high frequencies (SH).
  - Extreme power density – Compact footprint.
  - High efficiency for high frequencies (SH).
  - Frequency extension to lower band.
  - Reduced costs.
  - Reduced Operating Expenses (OPEX).
A power supply must allow you to focus on your business. a reliable induction process, flexibility in the application, energy savings, low maintenance and easy operation. The right selection of a converter makes possible a long-lasting investment performing as the first day, FOR APPLYING INDUCTION HEATING.

INDUCTION POWER SUPPLIES

- A RANGE OF FREQUENCIES AND POWER FOR APPLYING INDUCTION HEATING.
- A reliable induction process, flexibility in the application, energy savings, low maintenance and easy operation.
- The right selection of a converter makes possible a long-lasting investment performing as the first day.

WHAT ABOUT OUR POWER SUPPLIES?

- Frequency
- Different types of power supply depending on the need.
- Customization of systems and feature development.
- While range of options from very specialized process to flexible applications.

Energy Efficiency

- SERIES COMPENSATED POWER SUPPLIES
- COMPACT SYSTEMS
- MOBILE SYSTEMS
- Advanced digital control: depending on the frequency the system selects the best control strategy or their combination.
- Adaptation for heating wide range of parts.
- Different possibilities: PM (Frequency Modulation), PDM (Pulse Density Modulation) and PM-PDM mixed.
- Efficiency (η > 95%).
- Reduced impact in the facility supply network: local independent power factor (cos φ > 0.95).

STATIONARY SYSTEMS

- I & M POWER
- For the most demanding industries.
- The widest frequency range.
- Serial and parallel output circuit
- Transformer solutions: LPPOWER-P, LPPOWER-S, LPPOWER-SP, LPPOWER-M.
- Modular design.
- Advanced and remote maintenance.

MOBILE SYSTEMS

- AGHILE FAMILY
- Mobile system ALL-IN-ONE-BOX.
- ANAHEMPS system.
- For non-continuous applications.
- Gas-lifter and chiller included.
- Single or dual-voltage.

COMPACT SYSTEMS

- HYBRID LLC
- For specific cases.
- Based on LLC configuration.
- Ideal when the Heating Station must be extremely compact.
- Based on LLC configuration.
- Medium (SM) and high frequency (SH)
- Portable and manual.
- For discontinuous heating and/or difficult access locations.
- Multipurpose system.

CONNECTIVITY - INDUSTRY 4.0

- Smart frequency converters are designed to improve system connectivity.
- They are compliant with Industry 4.0 trends, with the following features:
  - Fieldbus connection makes available the generator parameters and fault messages to PLC, NC and HMI.
  - USER-friendly web interface shows the generator status in real time, through Ethernet connection.
  - Alarm log and basic statistics can be used for predictive maintenance or remote diagnostics.
- The system can be installed on new LLC frequency converters or existing ones equipped with I&M motor.

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<td>I-POWER-P</td>
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<tr>
<td>Hybrid LLC</td>
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<td>Digital</td>
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INTEGRATION
Heating programs for automatic process control.
Fieldbus or wired connections.
F, I, V, P and E measurements through fieldbus of up to ±1% accuracy under working conditions.

POWER SUPPLIES

OPERATION
Auto-Scan function for easy inductor change.
The working frequency is automatically identified without operator interaction.
Ready heating programs for different parts.
Local or remote control.
Load adaptation that allows the same power supply for a wide range of parts.

MAINTENANCE
Sliding and front power module for easy access (series).
Remote data access (Industry 4.0).
Troubleshooting features.

PROCESS CONTROL
Parameter monitoring: Frequency, Current, Voltage, Power and Energy.
High accuracy energy monitoring (1ms sample time). An alarm is generated when an energy threshold is exceeded at the end of a heating cycle.
Heating graphics and tables.

PROCESS ACCURACY
Repeatability. True RMS measurement.
Short cycle times. Fast starting ramps.
Temperature control. Power regulation from 0 to 100% for precise temperature phases.

SOFTWARE TOOL
To customize interface.
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