The MK8 is a voltage source inverter with a parallel tuned output. This power supply is designed as an economic and reliable solution for applications up to 1,250 kW. The parallel tuned circuit keeps the high currents away from the inverter thyristors (SCR), resulting in lower power loss and higher efficiency.

Operation is a combination of rectifier voltage control at lower power levels and inverter swept frequency at higher power levels. This provides consistent starting and excellent fault protection, along with constant output power over the entire melting cycle. Accurate and reliable control is achieved in extreme ambient conditions without the need for additional cooling.

Safety features include current leakage detector with meter to monitor the flow of electrical current to ground, preventing operation in the event molten metal has penetrated the refractory near the coil.

System Features Include:

- **Compact, Economical, Easy Access Package** incorporates a design with front access for convenient and logical maintenance
- **Most Efficient Coupling Method Utilized** to give the best matching capabilities over a wider range of operating conditions without the need of transformer tap or capacitor switching
- **High Efficiency** allows use of maximum inlet water temperature of 115° F.
- **Full Range Power Adjustment** from a single operator control.
- **Water Cooled Capacitors** with pressure sensitive safety switches
- **Shock Mounting** of all major electronic components for low noise and vibration
- **Space Available** for furnace selector switches
- **Positive Electronic Trip** with high speed fuses for positive back-up
- **OSHA Required Lockable Doors** and circuit breaker
- **Safety Interlock Door Switches** trip breaker if any door is opened
- **Water pressure Switches** on cabinet water inlet and each furnace water valve to prevent power from being applied if the water is off
- **Water Temperature Switches** on cabinet water inlet and each individual return for water over temperature protection
- **Fault Memory Circuits** for positive indication of all trip sources
- **Isolated Circuit Board Enclosure** with easy access
- **Diagnostic Monitor** pinpoints circuit malfunctions
- **All Wiring is Heavy Duty Industrial Quality**
- **Cabinet Lifting Eyes** are provided for easy installation
- **Oil-tight Lights** and push buttons

**Power Range:** 50kW – 1,250kW
**Frequency Range:** 200Hz – 3,000Hz

200 kW / 3,000 Hz (Size 1)
450 kW / 1,000 Hz (Size 2)
750 kW / 200 Hz (Size 5)
Cabinet Specifications

<table>
<thead>
<tr>
<th>Cabinet Size</th>
<th>Height</th>
<th>Width</th>
<th>Depth</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>(2,160 mm)</td>
<td>71&quot;</td>
<td>(1,803 mm)</td>
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<td>150&quot;</td>
<td>(3,810 mm)</td>
</tr>
</tbody>
</table>

*Line voltage options 208, 230, 277, 380, 415, 480, 575

Optional Features:
- Internal Pressurized Closed Loop Cooling System
- Modular Furnace Selector Switches complete with safety interlocks, cast aluminum handles, furnace water valves and pressure switches
- Remote Operator Panel
- Demand and Control Interface integrated with the HMI and melt monitor package.
- Temperature Control Interface to enable connection of remote temperature controller for automatic power control
- Side Power Output

Operator Interface:
- Output Power (KW) Meter
- Output Voltage Meter
- Operating Frequency Meter
- Ground Leakage Meter
- Diagnostic Monitor:
  - Inverter on, control voltage limit, frequency limit, ramp limit, turn off time limit, voltage trip, current trip, ground trip
- Operator Controls:
  - High frequency power on, high frequency power off/reset, power control potentiometer, earth ground and leakage detector test button, oil-tight lights and push buttons

Furnace Selector Switches
The knife blade switches are standard options in MK8 to allow alternate selection of furnaces. The cast aluminum handles are located in front of the power supply to permit easy access.

HMI Control Panel (Optional)
The optional HMI Control Panel replaces the standard analog metering and is ethernet enabled to facilitate factory communication.

Specifications subject to change without notice.