

Power Supply

High Frequency Induction Heating

Power Range: 40kW – 80kW

Frequency Range: 35kHz – 350kHz

System Features Include:

- Direct modern replacement for vacuum tube high frequency generators
- MOSFET transistor modules
- Wide matching range capability
- Ethernet data output terminal to monitor internal functions remotely
- Full compliment of direct metering for power supply operating conditions
- Single main control board
- NEC, NFPA79 compliant
- Fabricated to assist user compliance with NFPA 70e requirements
- Isolation output transformer with adjustable taps
- Series tuned output circuit with adjustable capacitance
- Sealed enclosure that does not require external air for cabinet cooling
- Single sided door access
- Control access door for easy maintenance

Operator and Systems Interface:

- Illuminated power on, heat on and ready indicator
- Enable, disable, reset pushbuttons with locking E-Stop
- Local/Remote control
- 10 turn power control potentiometer
- Graphical interface display for power, voltage, current and frequency
- Diagnostic instructions for tank voltage trip, tank circuit fault, AC current trip, DC current trip, phase fault, high and low frequency trip, water inlet/outlet temperature and water differential pressure
- Diagnostic maintenance screens and scheduling for preventative maintenance
- Main input circuit breaker
- Centrally located terminal block for customer interface connections
- Programmable, multi-step heat cycle programs for ramp and soak capabilities
- Automatic line speed compensation circuit for continuous in-line processes

MK-22

Features & Specifications



MK-22 High Frequency Power Supply
(shown without coil load matching station)

Power Supply Specifications:

- Power circuit is direct fired, series tuned, fundamental frequency output utilizing MOSFET power devices for switching
- Input power factor of .95 at full power
- Minimal power output level is less than 5% of rated power output
- All kilowatt sizes are provided with current control and voltage control
- Output regulation accuracy is +/- ½% with +/- 10% change in incoming line
- Input line to load conversion efficiency approaching 90%
- Input power requires three phase at rated voltage, 50 or 60 hertz
- Maximum 95F maximum inlet water temperature
- 30 psi minimum differential water pressure with differential switch protection
- NPT thread connections on water inlet/outlet
- Constant resonant frequency tracking throughout the heating cycle
- Induction coil load matching components located in attached or optional remote heat station
- Ground fault detection circuitry
- Main input transformer for customer line matching
- Input choke preventing line noise and provide surge protection capabilities



MK-22 Power Supply shown with attached induction coil load matching station

MK-22 Sizing and Operational Range		
Output Capacity (kW)	40	80
Output Frequency (kHz)	35, 50, 100, 200, 300, 350	
Input Voltage	400, 440, 460, 480, 575—3 Phase +/-10-%, 50/60 Hz	
Water Flow	12	17
Height	79	84
Width**	48	56
Depth	32	32
Weight	1,480	1,660

* Specifications subject to change without notice.

** Total width including coil load matching heat station.

Optional Features:

- Remote operator's panel (in addition to local panel)
- 4-20mA signal interface
- Automatic line speed compensation
- Dual-output, alternate station operation

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