



## ADVANTAGES

Ultraflex SmartPower™ Compac Systems are a breakthrough innovation in the induction heating technology, featuring the Direct Digital Step™ control algorithm and a unique configurable modular approach.

- Configurable and field upgradable power supplies with output power from 50kW to 400kW.
- Wide output frequency range – two ranges available from 6kHz to 60kHz and from 40kHz to 200kHz.
- Zero down time can be achieved if additional module (N+1) is installed in the system.
- Latest SiC transistor technology and proprietary digital control algorithms ensure optimal performance and maximum efficiency in a wide frequency range.
- Ultra-flexible, wide range load impedance matching by utilizing multiple transformer ratios and configurable capacitor banks.
- Configurable to work with a single or multiple, independently controlled RF outputs from one cabinet.
- Can operate with optional heat stations allowing the load coils to be placed remotely.
- Durable and reliable design with built-in tuning, safety and diagnostics features.

## FEATURES

### Operation

- Precise power control from 0 to 100% of rated power
- Output regulation: Voltage, Power, Current
- Parameter Monitoring: Current, DC Volts, Output Volts, Power, Frequency
- Control modes: Automatic, Remote or Local control
- RF Amplifier modules operating in a wide frequency range (6kHz – 200kHz)
- Automatic frequency scanning and load tuning
- Fast dynamic response and ramp-up time for short heating cycles
- Variable ratio transformer for matching to a wide range of loads and coils

### User Interface

- Industrial control panel – 12" LCD touch, full color
- Advanced and intuitive user interface
- Multiple heating programs and profiles for automatic process control
- High accuracy cycle-by-cycle energy monitoring
- Built-in temperature control and monitoring features
- Data logging of process and operating parameters

### Control

- 0-10V or 4-20mA external control and remote Start/Stop operation
- Ethernet and USB connectivity for firmware upgrades and diagnostics
- R485 (MODBUS) serial interface for remote control and monitoring



# INDUCTION HEATING SYSTEMS

## SMART POWER COMPAC SPECIFICATIONS

| SMARTPOWER SYSTEM MODEL           | USP-C-100                                                     |            | USP-C-200                                                     |            | USP-C-400                                                     |            | USP-CD-100                                                       |            |
|-----------------------------------|---------------------------------------------------------------|------------|---------------------------------------------------------------|------------|---------------------------------------------------------------|------------|------------------------------------------------------------------|------------|
| Description                       | Single Output Full Rack                                       |            | Dual Output Full Rack                                         |            | Quad Output Full Rack                                         |            | Single Output Double Rack                                        |            |
| Number of PA Modules              | 2 - 8                                                         |            | 2 - 8                                                         |            | 2 - 8                                                         |            | 10 - 16                                                          |            |
| RF Outputs                        | 1                                                             |            | 2                                                             |            | 4                                                             |            | 1                                                                |            |
| Power Amplifier Type              | MF 25/60                                                      | WF 25/200  | MF 25/60                                                      | WF 25/200  | MF 25/60                                                      | WF 25/200  | MF 25/60                                                         | WF 25/200  |
| Frequency Range                   | 6-60 kHz                                                      | 40-200 kHz | 6-60 kHz                                                      | 40-200 kHz | 6-60 kHz                                                      | 40-200 kHz | 6-60 kHz                                                         | 40-200 kHz |
| Output Power Range                | 50 kW<br>(2x25kW Modules)<br>to<br>200 kW<br>(8x25kW Modules) |            | 50 kW<br>(2x25kW Modules)<br>to<br>200 kW<br>(8x25kW Modules) |            | 50 kW<br>(2x25kW Modules)<br>to<br>200 kW<br>(8x25kW Modules) |            | 250 kW<br>(10x25kW Modules)<br>to<br>400 kW<br>(16x25kW Modules) |            |
| AC Line, VAC<br>3-phase (50/60Hz) | 380/480±10%                                                   |            | 380/480±10%                                                   |            | 380/480±10%                                                   |            | 380/480±10%                                                      |            |
| Dimensions<br>(WxDxH)             | 23.6"x28.3"x72"<br>(600 x 720 x 1820mm)                       |            | 23.6"x28.3"x72"<br>(600 x 720 x 1820mm)                       |            | 23.6"x28.3"x72"<br>(600 x 720 x 1820mm)                       |            | 47.2"x28.3"x72"<br>(1200 x 720 x 1820mm)                         |            |
| Weight                            | 400lb – 660lb<br>(180kg - 300kg)                              |            | 400lb – 660lb<br>(180kg - 300kg)                              |            | 400lb – 660lb<br>(180kg - 300kg)                              |            | 1050lb – 1320lb<br>(480kg - 600kg)                               |            |

| PA Modules Installed                         | PA1  | PA2  | PA3   | PA4   | PA5   | PA6   | PA7   | PA8   | Voltage Range |
|----------------------------------------------|------|------|-------|-------|-------|-------|-------|-------|---------------|
| Input Current maximum<br>[A] (RMS per Phase) | 34.7 | 69.4 | 104.1 | 138.8 | 173.5 | 208.3 | 243.0 | 277.7 | min 380V-10%  |
| Input Current maximum<br>[A] (RMS per Phase) | 31.5 | 62.9 | 94.4  | 125.9 | 157.4 | 188.8 | 220.3 | 251.8 | max 480V+10%  |

| REMOTE HS MODEL       | HSP-50M                                   | HSP-100M                                  | HSP-200M                                    | HSP-50W                                   | HSP-100W                                    | HSP-200W                                    |
|-----------------------|-------------------------------------------|-------------------------------------------|---------------------------------------------|-------------------------------------------|---------------------------------------------|---------------------------------------------|
| Output Power Range    | 40 – 50kW                                 | 50 – 100kW                                | 100 – 200kW                                 | 50kW                                      | 50 – 100kW                                  | 100 – 200kW                                 |
| Frequency Range       | 6 – 60 kHz                                | 6 – 60 kHz                                | 6 – 60 kHz                                  | 40 – 200 kHz                              | 40 – 200 kHz                                | 40 – 200 kHz                                |
| Dimensions<br>(WxDxH) | 15" x 24.5" x 19.1"<br>(38,2x62,4x48,5cm) | 15" x 24.5" x 19.1"<br>(38,2x62,4x48,5cm) | 22.9" x 26.5" x 19.1"<br>(58,2x67,4x48,5cm) | 15" x 24.5" x 19.1"<br>(38,2x62,4x48,5cm) | 22.9" x 26.5" x 19.1"<br>(58,2x67,4x48,5cm) | 22.9" x 26.5" x 19.1"<br>(58,2x67,4x48,5cm) |
| Weight                | 176 lb. (80kg.)                           | 200 lb. (90kg.)                           | 215 lb. (98kg.)                             | 176 lb. (80kg.)                           | 200 lb. (90kg.)                             | 215 lb. (98kg.)                             |

## HEADQUARTERS

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