

Power to 250 kW: Operation from 2 kHz to 6 kHz

# EKOHEAT

With VPA Technology™

## World-class Induction Heating Systems

EKOHEAT induction heating systems for the 2 to 6 kHz range provide reliable and repeatable solutions for heating with large coils or heating larger parts. Among the many typical applications are heating parts that require deeper heat penetration, heat treating of steels, preheating for forging of steel, aluminum, copper or brass and melting in crucibles.

With the versatile EKOHEAT power control system you get rapid tuning, efficient and precise heating of your parts, power control within 0.2% resolution and an easy-to-use, easy-to-read front panel. Remote control is accomplished with 0-10V, 4-20mA inputs, RS485 serial port, 24V controls and remote E-Stop input so integration with your automated production lines is easy.

EKOHEAT technology improves return on investment by reducing your energy usage compared to gas-fired and resistive heating techniques. Flameless, non-contact induction heating minimizes energy waste by focusing energy only on the part and zone to be heated. With very efficient power conversion and a power factor greater than 0.9, utility demand charges are reduced, lowering monthly energy bills. EKOHEAT VPA systems are designed on a host/client principle so you can add additional power should your process require it in the future.

A separate cabinet houses the resonating capacitor bank, available in several different sizes to meet customer-specific applications. This workhead may be placed up to 30 meters from the power supply.

The 2 to 6 kHz systems have additional reserve current capability for heating steels through curie.



Alternatively the resonating capacitor may be mounted in an extra bay to locate it with the power supply.

This is a water-cooled system, requiring connection to a heat exchanger or other means of dissipating heat.

## EKOHEAT AT-A-GLANCE

### Versatile

- Efficient heating of many part geometries, sizes and compositions
  - Multiple capacitor configurations
  - Multiple tap transformer configurations
  - Voltage or Power control
- Repeatable, reliable heating, agile frequency tuning
- Through-Curie heating
- Movable workhead; up to 30m (100')
- Sub-second to continuous cycle times
- Remote operation or logging with RS485 port
- Accepts international AC line voltages

### Easy to Use

- User-friendly operator front panel controls
- System configuration from front panel
- Cycle timer, peak and short-cycle data capture
- 10 ten-step heating profiles
- Overload-tolerant output management
- 7-language display suite (EN, ES, FR, DE, IT, PT, PL)
- System diagnostics displayed on front panel

EKOHEAT is CE marked and manufactured at our ISO 9001:2008 certified facility.

SPECIFICATION	75/3	100/3	125/3	150/3	200/3	250/3	UNITS
RF Terminal Power (continuous)	75	100	125	150	200	250	kW
AC Line Power	87	116	161	194	258	322	kVA
Power Factor	0.92						
Output Frequency	2 – 6						kHz
AC Line Voltage	360 - 520						Vac, 3Ø
AC Line Protection <sup>1</sup>	225	300	450	450	600		A
Display	LCD Monochrome, 240w x 128h Pixels						
Serial Communication	RS485 standard (RS485/232 converter optional)						
Process Timer	0.01 - 10000						sec
Max Ambient Temp	45 (115)						° C (° F)
Compliance <sup>2</sup>	CE EN61010 EN55011						
Ingress Protection	IP54, NEMA 12						
Power Unit Dimensions	914 x 848 x 1956 (36 x 33 x 77)						WxDxH mm (in)
Weight	313 (690)			354 (780)			kg (lb)
<b>WATER COOLING</b>							
Flow <sup>3</sup>	12.9 (3.4)			23.5 (6.2)			l/m (g/m)
Pressure Differential (Range)	2.8 - 5.51 (40 - 80)						Bar (lb/in <sup>2</sup> )
Maximum Input Pressure	5.6 (80)						Bar (lb/in <sup>2</sup> )
Max Water Temp	35 (95)						° C (° F)

- 1) Fast-acting fuses
- 2) Suitable for incorporation into equipment for compliance with Machinery Directive
- 3) Power supply; required workhead coil flow requirements vary by application
- 4) Assumes 70% coil losses

**OPTIONS AND ACCESSORIES**



**EKOHEAT** features a front panel programmable controller for monitoring, timer and power-level control, diagnostics and system configuration. Up to 10 ten-step heating profiles can be configured to control power levels over your specified timing requirements.

- Start-up assistance
- Cooling systems
- Pendant station
- Auto-tap selection
- Redundant safety relays
- Multi-workhead controller
- eVIEW serial data reporting
- Broadband frequency (2-15 kHz)
- Footswitch
- Extended workhead cable lengths
- Optical pyrometer (closed-loop temperature control)
- External controller (PLC)
- Front E-stop with retransmission
- Complete spare parts kits



[www.ambrell.com](http://www.ambrell.com)



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