

# EKOHEAT<sup>®</sup>

With VPA Technology™

**Power to 125 kW: Operation from 15 kHz to 40 kHz**

## Compact Series Induction Heating Systems

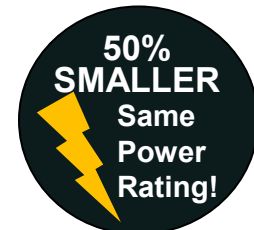
EKOHEAT induction heating systems for the 15 to 40 kHz range provide reliable and repeatable solutions for heating larger parts that require higher frequencies. Among the many typical applications are heat treating of steels, preheating for forging of steel, aluminum, copper or brass, crystal growing, and heating of graphite and metal crucibles.

With our versatile Compact Series 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, Modbus and remote E-Stop input so integration with your automated production lines is easy. All of this functionality is now available in an enclosure size that is 50% smaller than standard systems.

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.

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.

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 systems are CE marked.

## 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

Compact Series enclosures are 50% smaller in both volume and footprint compared to standard EKOHEAT enclosure sizes.

## SPECIFICATIONS

SPECIFICATION	75/25	100/25	125/25	UNITS
RF Terminal Power (continuous)	75	100	125	kW
AC Line Power	87	116	145	kVA
Power Factor	0.92			
Output Frequency	15 – 40			kHz
AC Line Voltage	360 - 520			Vac, 3Ø
AC Line Protection <sup>1</sup>	225	225	300	A
Display	LCD Monochrome, 240w x 128h Pixels			
Serial Communication	MODBUS RTU, RS485 standard (RS485/232 converter optional)			
Process Timer	0.01 – 910,799			sec
Max Ambient Temp	45 (115)			° C (° F)
Compliance <sup>2</sup>	CE, UKCA, EN55011, EN60519-1, EN60519-3			
Ingress Protection	IP52, NEMA 12			
Power Unit Dimensions	658 (25.9) x 551 (21.7) x 1561 (61.5)			WxDxH mm (in)
Weight	193 (425)			kg (lb)
WATER COOLING				
Flow <sup>3</sup>	17.8 (4.7)			l/m (g/m)
Flow including Workhead & Coil <sup>4</sup>	44.3 (11.7)	51.1 (13.5)	58.3(15.4)	l/m (g/m)
Pressure Differential (Range)	2.8 - 5.6 (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; only 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
- Heat exchanger or chiller
- Pendant station
- Auto-tap selection
- Redundant safety relays
- Multi-workhead controller
- eVIEW serial data reporting
- Footswitch
- Extended workhead cable lengths
- Optical pyrometer (closed-loop temperature control)
- External controller (plc)
- Front E-stop with retransmission



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