

Power to 500 kW: Operation from 15 kHz to 40 kHz

EKOHEAT[®]

With VPA Technology™

World-class Induction Heating Systems

EKOHEAT VPA induction heating systems for the 15-40 kHz range provide reliable and repeatable solutions for heating with large coils or for heating larger parts. Among the many typical applications are heating of hard-to-couple parts, deeper heat penetration, heat treating steel, 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. 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. The 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 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

SPECIFICATION	300/25	375/25	500/25	UNITS
RF Terminal Power (continuous)	300	375	500	kW
AC Line Power	348	435	580	kVA
Power Factor	0.92			
Output Frequency	15 – 40			kHz
AC Line Voltage	360 - 520			Vac, 3Ø
AC Line Protection ¹	300 for 1 bay, 600 for 1 bay		600 for each of 2 bays	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 ²	CE EN61010 EN55011			
Ingress Protection	IP54, NEMA 12			
Power Unit Dimensions	1718 x 848 x 1956 (67 x 33 x 77)			WxDxH mm (in)
Weight	667 (1470)		708 (1560)	kg (lb)
WATER COOLING				
Flow ³	36.3 (9.6)		47 (12.4)	l/m (g/m)
Flow including Workhead & Coil ⁴	94.9 (25.1)	104 (27.5)	130 (34.2)	l/m (g/m)
Pressure Differential (Range)	2.8 - 5.6 (40 - 80)			Bar (lb/in ²)
Maximum Input Pressure	5.6 (80)			Bar (lb/in ²)
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
- Redundant safety relays
- Multi-workhead controller
- eVIEW serial data reporting
- Complete spare parts kits
- Footswitch
- Extended workhead cable lengths
- Optical pyrometer (closed-loop temperature control)
- External controller (PLC)
- Front E-stop with retransmission



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