

ULTRA

20A3000

20 kHz MICROPROCESSOR CONTROLLED GENERATOR



The 20A3000 20kHz 3000 watt generator has been specifically designed for use with Dukane heavy-duty press/thruster systems and heavy-duty probe systems. This advanced power supply offers the latest in design technology, including I/O circuitry for access by external equipment such as programmable logic controllers (PLCs) or automated systems. The 20A3000 improves the efficiency and reliability of your ultrasonic process, increasing your C_{PK} (process capability index).

- Patented Pulse-Width Modulation design delivers power more efficiently with substantially less stress on the electrical components for superior performance, reliability, and extended life
- Unique Linear Ramp Soft Start *accelerates* the transducer and tooling up to operating amplitude eliminating mechanical and electrical starting stress
- Sophisticated full-time electronic overload protection senses overload conditions and shuts down in less than 1/1000 of a second preventing damage to vital components
- Auto-Trac tuning using phase lock loop technology automatically locks the generator to the resonant frequency of the transducer and tooling even under varying conditions of temperature and loading
- Thermal protection cutoff system protects transistors from overheating if subjected to extremely abusive conditions
- Overvoltage transducer protection prevents transducer damage caused by particularly abusive applications
- Line current in-rush limiting reduces peak current at power up eliminating abnormal stress on electronic components
- Undervoltage protection prevents damage caused by low voltage on the supply line
- 100% solid-state circuitry for superior performance and reliability
- Front panel power control for fine adjustment of power availability to the workload
- Operational control connector to allow access and connectivity with PLC logic for status and control functions such as cycle initiation, sensing overload conditions, ultrasonics ON, and frequency and amplitude monitoring during the weld cycle

SPECIFICATIONS

| | HEIGHT | WIDTH | DEPTH | WEIGHT | INPUT POWER | CURRENT DRAW* |
|--------------------------|----------------|-----------------|-----------------|------------------|---------------------|---------------|
| 20A3000 GENERATOR | 5.66" 145mm | 18.12" 460mm | 18.36" 467mm | 32 lbs 14.5Kg | 240 VAC 50/60 Hz | 22 Amps |

NOTES: Allow 5.5" (140mm) on depth dimension for cable connections and 2.0" (51mm) on each side for air circulation.

* Current draw at full-rated output.

System

Model Numbers

Description

| | |
|-----------------|---|
| 48W3001P/43T301 | 3000 Watt Heavy-Duty Microprocessor-Controlled 20 kHz Press System, Time only |
| 48W3001P/43D301 | 3000 Watt Heavy-Duty Microprocessor-Controlled 20 kHz Press System, Time and Distance only |
| 48W3001P/43E301 | 3000 Watt Heavy-Duty Microprocessor-Controlled 20 kHz Press System, Time and Energy only |
| 48W3001P/43C301 | 3000 Watt Heavy-Duty Microprocessor-Controlled 20 kHz Press System, Time, Distance, and Energy |
| 48W3001T/43T301 | 3000 Watt Heavy-Duty Microprocessor-Controlled 20 kHz Thruster System, Time only |
| 48W3001T/43D301 | 3000 Watt Heavy-Duty Microprocessor-Controlled 20 kHz Thruster System, Time and Distance only |
| 48W3001T/43E301 | 3000 Watt Heavy-Duty Microprocessor-Controlled 20 kHz Thruster System, Time and Energy only |
| 48W3001T/43C301 | 3000 Watt Heavy-Duty Microprocessor-Controlled 20 kHz Thruster System, Time, Distance, and Energy |
| 20P3000 HD | 3000 Watt Heavy-Duty Probe System |

NOTE: All specifications subject to change without notice. Please consult Dukane Corporation for any updated information.