



Pulsar Series

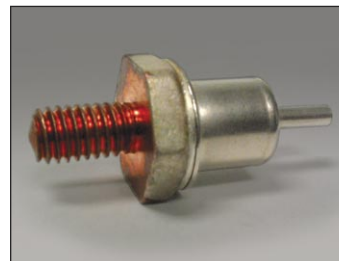
Capacitive Discharge Projection Welding System

The Pulsar Series capacitor discharge welding power supplies, combined with model KN-II weld heads provide dependable, field proven system solutions for hermetic sealing of microelectronic packages and joining of a variety of metal parts. The Pulsar Series offers a broad range of precision power choices and can be easily integrated into atmospheric enclosures to ensure high yield hermetic sealing results.

KEY FEATURES

- Capacitor discharge (CD) technology supplies short, high energy welding pulses which localize heat in the weld zone, reducing heat build-up in sensitive microelectronic packages.
- Wide range of models offer from 1000-9000 joules of energy. Hermetically seal diverse packages ranging from the smallest TO, UM and HC styles to hybrids up to 5 linear inches (127 mm) depending on package design.
- “Weld inhibit” function accepts input from atmospheric enclosure instruments, such as oxygen analyzers and moisture monitors for integrated process control.
- “Weld fire” lockout monitors the capacitor bank charge and prevents firing if the energy level differs from the set point, ensuring repeatable weld pulses.
- Efficient stored energy design provides stable, consistent output pulses which are not affected by AC input power fluctuations.
- Single Phase AC Power

TYPICAL APPLICATIONS



Power devices



Laser / photonic devices



RF and hybrid devices



Automotive components

PROJECTION WELDING SYSTEM – DESIGN AND OPERATIONS

- Straightforward operation and control is easy to learn and understand.
 - All weld parameters are accessed, set, and displayed on the front panel of the SS-1 Weld Head Controller.
 - Optimized digital control of charging and discharging rates decreases cycle times.
 - KN-200A Weld Head provides fast follow-up allowing for complete metal fusion without weld splatter.
 - Standard one-inch (25.4 mm) diameter electrodes for KN-II Single
- Range weld head and two-inch (50.4 mm) diameter electrodes for KN-200A Dual Range weld heads. Custom designed electrodes and holders are available to suit your application.
- Two anti-tie-down palm buttons safely initiate the weld cycle (foot switch optional).
 - Adjustable electrode approach pressure and speed guarantee safe handling and avoid damage to fragile parts.
 - Weld pressure, forge time and hold time are adjustable over a wide range of settings.

TECHNICAL SPECIFICATIONS

	P-1000	P-3000	P-6000	P-9000
Energy range	1-999 J	100 - 3000 J	100 - 6000 J	100 - 9000 J
Capacitance	Calibration set	9300 uF	18600 uF	27,900 uF
Maximum potential	430 VDC max	50 - 800 VDC	50 - 800 VDC	50 - 800 VDC
Input voltage	90 - 138 VAC or 180 - 264 VAC 50/60 Hz	Single phase, 208/240/480 VAC 50/60 Hz		
Input current	15 A	Adjustable between 15 - 30 A 50/60 Hz		
Circuitry	All solid-state/charge and discharge			
Control circuit protection	Zener-referenced closed-loop circuit			
Weld transformer	High-efficiency matched weld transformer			
Energy repeatability	5% of energy set point			

KN-II WELD HEAD

Forge force	
Single range	Adjustable between 120 - 1200 lbs. (534 - 5340 newtons)
Dual range	Adjustable between 120 - 4000 lbs. (534 - 18000 newtons)
Stroke	47 mm (1.875 in) standard, 100 mm (4 in) optional, custom lengths available
Electrode holders	Quick change
Alignment	Zero alignment die set
Kinetic expander	Expansion >6.4 mm (0.25 in)

SS-1PNEUMATIC WELD HEAD CONTROLLER

Approach time	Adjustable from 50 msec to 3 seconds
Forge time	Adjustable from 50 msec to 3 seconds
Hold time	Adjustable from 50 msec to 3 seconds
Weld initiate circuit	Automatic
Locking regulators	Adjustable from 10 psi (72 kpa) to 120 psi (827 kpa)
Cycle status	Visual illuminated indicators

WEIGHT & DIMENSIONS

	P-1000	P-3000/P-6000/P-9000	Controller
Dimensions (W x D x H)	9.9 in x 11.5 in x 13.8 in (251.5 mm x 292.1 mm x 350.5 mm)	22.0 in x 34.0 in x 16.0 in (558.8 mm x 863.6 mm x 406.4 mm)	15 in x 12 in x 24 in (381.0 mm x 304.8 mm x 609.6 mm)
Weight	Depends on options selected; contact factory		



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