

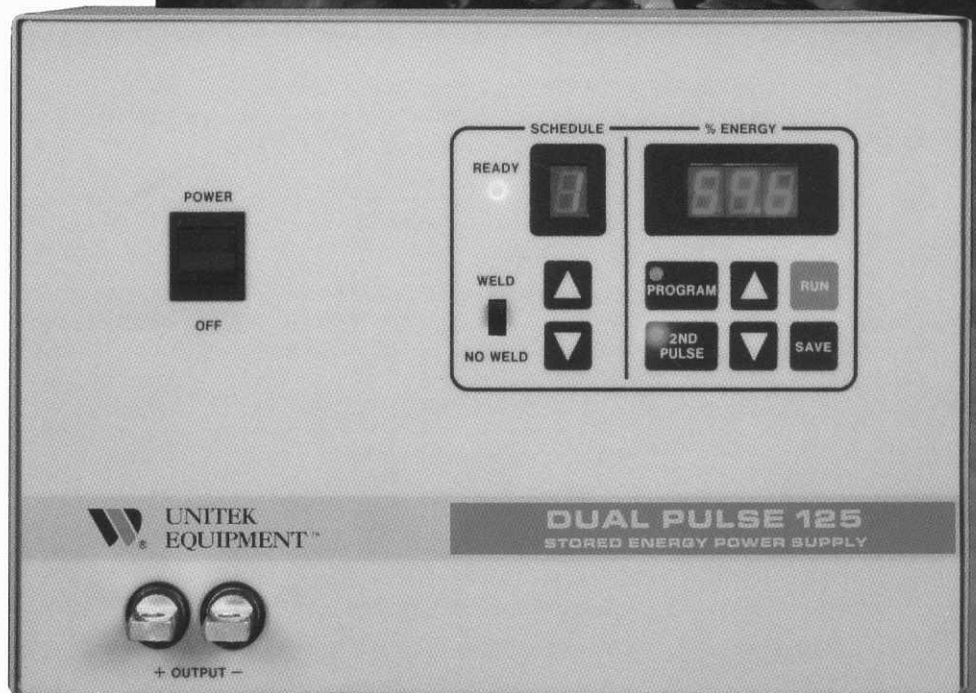
DUAL PULSE 125

Innovative CD welder

The Unitek Equipment Dual Pulse 125 (125DP) is a cost effective, 125 watt-second stored energy, capacitor discharge, power supply which can effectively solve most precision, small parts, resistance welding problems. The unit is micro-processor controlled with digital precision and can save 8 different weld schedules. Unitek Equipment's SCHEDULE PROTECTION feature protects 7 schedules from unauthorized or inadvertent changes. One schedule serves as a scratch-pad schedule which anyone can use to perform occasional or developmental jobs without jeopardizing the integrity of the production line. The REMOTE SCHEDULE feature allows weld schedules to be selected externally, independent of the front panel, which facilitates automated applications.

DUAL PULSE WELDING, an exclusive and unique feature of Unitek Equipment power supplies, improves weld quality when welding to plated materials, eliminates weld splash and improves consistency when welding small wires. Dual Pulse means each weld is performed with two pulses with independent energy levels. The 125DP uses Unitek Equipment's exclusive WELD FIRE LOCKOUT CIRCUIT which guarantees that the welding energy will be within 1% of the preset value regardless of the speed of operation.

The 125DP is value priced and continues the Unitek Equipment tradition of reliable, long life, resistance welding equipment.



FEATURES

- Microprocessor Control
- User Friendly Programming
- Weld Fire Lockout
- DUAL PULSE Capability
- 8 Discrete Weld Schedules
- Remote Schedule Selection
- Large Digital Display
- Schedule Protection
- RFI and EMI Protection

BENEFITS

- Provides repeatable process control and is compatible with air or manually actuated weld heads
- Allows 125DP to be programmed quickly and easily
- Guarantees that weld quality is independent of line voltage fluctuations and the speed at which the power supply is operated by preventing the weld process whenever the energy level is not within 1% of the preset level.
- Simplifies welding to plated materials
- Facilitates multiple applications at a single work station
- Simplifies use in automated systems
- Allows operators to set welding current accurately and quickly
- Protects weld schedules from changes by unauthorized personnel
- Ensures reliable operation in high electrical noise environments

REPRESENTED BY
**WALCH
ENGINEERING
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UNITEK EQUIPMENT®
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DUAL PULSE 125

Specifications

RATING – 0.75 to 125 watt-seconds (joules). The accuracy of the display is 0.5%. The resolution of the display ranges from 0.1% to 0.5% energy, depending upon the amount of energy selected.

LINE VOLTAGE – 100, 115, 208, 230 VAC, 50/60Hz. 1325 watts charging, 25 watts standby. Uses 4 amp at 115 V, 2 amp at 230 VAC, Circuit Breakers.

LINE VOLTAGE REGULATION – Maintains voltage on the capacitor bank within $\pm 0.25\%$ of setting for a $\pm 13\%$ change from the nominal rated line voltage.

OUTPUT PULSE CHARACTERISTICS – Pulse characteristics are measured at the Power Output terminals, across a non-inductive .001 ohm load. Rise time is measured between zero and peak amplitude, and pulse width between the 10% amplitude points.

Pulse Transformer Connections	Capacitor Bank	Rise Time	Pulse Length	Minimum Pulse Height
Parallel (SHORT)	1500 mfd	0.65 ms	2.3 ms	7.0 V
Series (LONG)	1500 mfd	1.05 ms	4.0 ms	4.5 V

WELDING SPEED – “Rep Rate,” or Repetition Rate, is the average number of welds allowable in one minute based upon the thermal rating of the system components. The averaging period used to determine the “Rep Rate” can be as long as twenty minutes. “Hit Rate,” or maximum intermittent welding speed, defines how fast the power supply can make consecutive welds on a non-continuous basis.

PERCENT FULL ENERGY		REP RATE welds/min	HIT RATE welds/min
under	2%	265	310
	25%	85	160
	50%	62	120
	100%	45	60

TURNDOWN CIRCUIT – When voltage from the error amplifier exceeds that required to turn off the charging circuit, a resistor is connected across the capacitor bank, discharging the bank to the required level. The Turndown Circuit deadband is approximately 0.6% of full scale voltage.

LINE FAILURE TURNDOWN – A safety feature in which a turndown resistor is automatically connected, discharging the capacitor bank when input power is interrupted.

WELD FIRE LOCKOUT – Output of the error amplifier inhibits the firing circuit during the charge and turndown intervals. This helps prevent poor welds caused by firing the power supply before the capacitor bank is properly charged or discharged.

FIRING CIRCUIT – Requires external contact closure or low logic level for firing. Internal filtering prevents premature firing due to radio frequency interferences (RFI).

REMOTE SCHEDULE SELECTION – Four single pole inputs which can be used to: (a) remotely select Weld Schedule #1 through #7; (b) remotely inhibit recharging the capacitor bank. The signals on the Remote Schedule Inputs over-ride the front panel selections.

PHYSICAL CHARACTERISTICS – Height: 9.50 inches (24.2 cm)
Width: 13.00 inches (33.0 cm)
Depth: 13.25 inches (33.7 cm)
Weight: 44 lbs (20.0 Kg)

ORDERING INFORMATION – SPECIFY 125DP. Add /XXX for line voltages, other than 115 VAC, where XXX is the line voltage.

REQUIRED ACCESSORIES – Welding Head, Footpedal for Manual Heads, Footswitch for Air Heads.



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